WELCOME TO THE 8TH ANNUAL...

Florida Residency Conference
In partnership with the FSHP Research & Education Foundation

MAY 16-17, 2019
UNIVERSITY OF SOUTH FLORIDA
TAMPA, FL
Wireless Guest Access

Wireless access is provided to guests of USF who do not have a NetID. Please follow the instructions below to connect to the Guest Wireless network. This process will work on all devices, including mobile devices.

1. Please open your list of wireless connections, and select "USF-Guest".
2. Once you are connected to USF-Guest, please open your web browser and attempt to navigate to a website. You will be automatically redirected to our Guest Registration page.
3. Once you have successfully navigated to the Guest Registration page, please select your preferred method of contact, whether "Call me on the phone" or "Send me a text message".
4. After a short waiting period, <5 minutes, you will receive a temporary access code. Please select the option 'I have my access code'. You will need to agree to the acceptable use policy to continue.
5. Enter your mobile phone number, and the Registration code you received and hit 'submit'.
6. You are now connected to USF-Guest. This registration will last for 24 hours, and is valid for 1 device.

If you require any further assistance, please contact the help desk at (813) 974-1222 or by email at help@usf.edu

https://netid.usf.edu/AccountTools/Network_Registration/

UNIVERSITY OF SOUTH FLORIDA

If you have a USF NetID, please use the EDUROAM wireless network

Connect to EDUROAM

Android users please note: During EDUROAM setup, you may be prompted to install "untrusted" software. This is expected behavior and can be safely ignored.

For more information, please visit http://www.usf.edu/wireless

USF Network Registration

To access the USF wireless network as a guest, you are required to register your device. The registration is a simple four step process:

1. Tell us how to contact you: either by text message or a phone call.
2. Input your mobile phone number.
3. Check your phone.
4. Enter the access code we provide.
Welcome to the 8th Annual Florida Residency Conference (FRC). We are grateful to all in attendance and we are looking forward to another great conference full of high quality resident presentations, as well as the opportunity to network with colleagues throughout the state.

The FRC Steering Committee values your feedback and has used this information in the development and updates to your conference.

**Thursday night social event:** Our Thursday night social event will be held at the USF School of Music which is within walking distance from the conference. This social event will start immediately following the conference and last until 6:30 pm.

**Excellence in Research Award:**Applications for the Excellence in Research Awards are reviewed in a blinded manner by an outside panel of clinical specialists not affiliated with any Florida pharmacy residency programs. The six finalists will present their presentations during Opening Session. The six finalists consist of four PGY-1 residents and two PGY-2 residents. One PGY-1 finalist and one PGY-2 finalist will receive the 2019 FRC Excellence in Research Award which consists of a plaque and a $250 honorarium on Friday at 10:10 am.

**Congratulations to our six finalists!**

**PGY-1 Finalists:**
Refat Noor, St. Vincent’s Healthcare
Melissa Johnson, South Florida Baptist Hospital
Kirubel Hailu, St. Vincent's Healthcare
Joshua Tyler, Florida Hospital Orlando

**PGY-2 Finalists:**
Justin Miller, Lakeland Regional Health
Hannah Cawoski, UF Health Jacksonville

We would like to extend a special thanks to the following organizations. Without their support, the FRC would not be possible!

**FSHP Research and Education Foundation:** We are grateful to FSHP and the FSHP Research and Education Foundation for their continued support of the FRC. The FSHP Research and Education Foundation provided funding again this year for the 2019 FRC Excellence in Research Awards.

**University of South Florida College of Pharmacy:** The FRC Steering Committee would like to thank the University of South Florida College of Pharmacy for the use of their top-notch facilities and provision of parking for the conference attendees.

**FSHP Office Staff:** Thank you FSHP Office Staff, Tamekia Bennett and Brooke Ferrell, for their long hours and patience as we strive to make each conference better.
Florida Residency Conference Steering Committee Structure

**Chair:** consists of a three (3) year term; first year as Chair-elect, second year as Chair, and third year as Immediate Past Chair

**FSHP Foundation Representative:** appointed yearly by the FSHP Foundation Board of Directors; serves as a liaison between the Steering Committee and FSHP Foundation

**Pharmacy Resident Member:** a second year pharmacy resident (PGY-2), serving one term; supports the Steering Committee

**Ad Hoc Members (4 to 6 members):** these members serve to support the Chair, Chair-elect, and Immediate Past Chair in their responsibilities in those positions; at least one Ad Hoc Member will be from the same geographic location of the next FRC meeting

*We are pleased to announce that Marlena Fox from Orlando Health was elected as Chair-Elect. Congratulations, Marlena!*

We are currently accepting applications for Ad Hoc Members. Applications can be found on the FSHP website and are due on June 1st. Please see one of the current FRC Steering Committee members for additional information.
2018 – 2019 Florida Residency Conference Steering Committee

Katlynd M. Sunjic, PharmD
Chair
Assistant Professor, Department of Pharmacotherapeutics & Clinical Research
Coordinator of Postgraduate Training Programs
USF College of Pharmacy, Tampa, FL
(813)974-1884 | ksunjic@health.usf.edu

Kristen Zeitler, BS, PharmD, BCPS
Chair-Elect
Pharmacotherapy Specialist, Infectious Diseases
Tampa General Hospital, Tampa, FL
(813)844-7292 | kzeitler@tgh.org

Rebecca Rich, PharmD, BCPS, BCACP, FCCM
Immediate Past Chair
Clinical Pharmacy Specialist, Critical Care
Director, PGY 2 Critical Care Residency
Lakeland Regional Health, Lakeland, FL
(863)687-1100 x7781 | rebecca.rich@mLRH.org

Marlen Fox, PharmD, BCPS, BCACP
Ad Hoc Member
Clinical Pharmacy Specialist, Critical Care
Director, PGY 2 Critical Care Residency
Orlando Regional Medical Center, Orlando, FL
(321)843-9232 | marlena.Fox@orlandohealth.com

Shane Chordas, PharmD, BCPS
Ad Hoc Member
Clinical Pharmacy Educator
Director, PGY 1 Pharmacy Residency
Sacred Heart Hospital, Pensacola, FL
(850)416-5479 | shane.chordas@ascension.org

Tamekia Bennett
FSHP Operations Director
FSHP, Tallahassee, FL
(850)906-9333 x2 | tamekia@FSHP.org

Mark Ninno, PharmD
FSHP Foundation Representative
FSHP Research and Education Foundation
Vizient, Inc., Oviedo, FL
(407)359-1128 | mark.ninno@vizientinc.com

Marc DeLOSSANTOS, PharmD, BCPS, BCCCP
Ad Hoc Member
Cardiology Pharmacy Practitioner
Director, PGY 2 Critical Care Residency
UF Health Jacksonville, Jacksonville, FL
(904)244-4157 | marci.delossantos@jax.ufl.edu

Bao Anh C. Tran, PharmD, BCPS, BCCCP
Ad Hoc Member
Assistant Professor
Dept of Pharmacotherapy & Clinical Research
USF College of Pharmacy, Tampa, FL
(813)974-5204 | baoanht@health.usf.edu

Michael Semanco, PharmD, BCPS, BCCCP
Ad Hoc Member
Clinical Pharmacy Specialist, Critical Care
Lakeland Regional Health, Lakeland, FL
(863)687-1100 x5883 | michael.semanco@myLRH.org

Shane Chordas
FSHP, Tallahassee, FL
(850)906-9333 x2 | tamekia@FSHP.org
**8th Annual Florida Residency Conference Agenda**

All sessions will be held at the University of South Florida, College of Pharmacy.

**Thursday May 16, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 am - 1:45 pm</td>
<td>Registration/ Packet Pick Up</td>
<td>USF Health Nursing Rotunda</td>
</tr>
<tr>
<td>9:00 - 10:00 am</td>
<td>Opening Session</td>
<td>1209 ABCD Auditorium</td>
</tr>
<tr>
<td>9:00 - 9:10 am</td>
<td>Welcome</td>
<td>Overflow in A1096</td>
</tr>
<tr>
<td>9:00 - 9:10 am</td>
<td>Welcome</td>
<td>1209 ABCD Auditorium</td>
</tr>
<tr>
<td>9:10 - 9:20 am</td>
<td>FRC Steering Committee Report</td>
<td>Katlynd Sunjic, PharmD</td>
</tr>
<tr>
<td>9:20 - 9:50 am</td>
<td>Opening Session Keynote Address</td>
<td>Calvin Tucker, PharmD, MBA, FCCM, BCPS, BCCCP</td>
</tr>
<tr>
<td>9:50 - 10:00 am</td>
<td>FSHP Membership Affairs Council Presentation</td>
<td>Jeff Bush, PharmD, CRPh</td>
</tr>
<tr>
<td>10:00 - 10:20 am</td>
<td>Refreshment Break</td>
<td>USF Health Nursing Rotunda</td>
</tr>
<tr>
<td>10:20 am - 12:10 pm</td>
<td>FRC Excellence in Research Finalist Presentations</td>
<td>1209 ABCD Auditorium</td>
</tr>
<tr>
<td>10:25 - 10:40 am</td>
<td>PGY-1 Finalists</td>
<td>Refat Noor, PharmD – St. Vincent’s Healthcare</td>
</tr>
<tr>
<td>10:40 - 10:55 am</td>
<td>PGY-1 Finalists</td>
<td>Melissa Johnson, PharmD – South Florida Baptist Hospital</td>
</tr>
<tr>
<td>10:55 - 11:10 am</td>
<td>PGY-1 Finalists</td>
<td>Kirubel Hailu, PharmD – St. Vincent’s Healthcare</td>
</tr>
<tr>
<td>11:10 - 11:25 am</td>
<td>PGY-1 Finalists</td>
<td>Joshua Tyler, PharmD – Florida Hospital Orlando</td>
</tr>
<tr>
<td>11:30 - 11:45 am</td>
<td>PGY-2 Finalists</td>
<td>Hannah Cawoski, PharmD – UF Health Jacksonville</td>
</tr>
<tr>
<td>11:45 am -12:00 pm</td>
<td>PGY-2 Finalists</td>
<td>Justin Miller, PharmD – Lakeland Regional Health</td>
</tr>
<tr>
<td>12:10 - 1:00 pm</td>
<td>Boxed Lunch</td>
<td>USF Health Nursing Rotunda</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>12:35 - 12:50 pm</td>
<td><strong>Moderators/Evaluators Meeting</strong></td>
<td>A1096</td>
</tr>
<tr>
<td></td>
<td><em>All preceptors must attend</em></td>
<td></td>
</tr>
<tr>
<td>1:10 - 2:10 pm</td>
<td><strong>Session I</strong></td>
<td>1209 ABCD, N1022, N2005, N2008, L1003, L1005, CLC</td>
</tr>
<tr>
<td></td>
<td>Concurrent Sessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>CE SWITCH</em></td>
<td></td>
</tr>
<tr>
<td>2:20 - 3:20 pm</td>
<td><strong>Session II</strong></td>
<td>1209 ABCD, N1022, N2005, N2008, A1122, L1003, L1005, CLC</td>
</tr>
<tr>
<td></td>
<td>Concurrent Sessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>CE SWITCH</em></td>
<td></td>
</tr>
<tr>
<td>3:30 - 4:30 pm</td>
<td><strong>Session III</strong></td>
<td>1209 ABCD, N2005, N2008 A1122, L1003, L1005, CLC</td>
</tr>
<tr>
<td></td>
<td>Concurrent Sessions</td>
<td></td>
</tr>
<tr>
<td>4:45 - 6:30 pm</td>
<td><strong>Social Networking Reception</strong></td>
<td>USF School of Music Concert Hall</td>
</tr>
</tbody>
</table>
**FRIDAY MAY 17, 2019**

7:30 - 8:20 am  
Registration  
USF Health Nursing Rotunda

7:30 - 8:00 am  
Light Continental Breakfast  
USF Health Nursing Rotunda

8:00 - 9:00 am  
Session IV  
Concurrent Sessions  
1209 ABCD, A 1096, A 1097  

---

**CE SWITCH**

9:10 - 10:10 am  
Session V  
Concurrent Sessions  
1209 ABCD, A1096, A1097  

10:10 - 10:30 am  
Refreshment Beverage Break  
USF Health Nursing Rotunda

FRC Excellence in Research Awards Presentation  
Moderator: Kristen Zeitler, PharmD, BCPS

10:40 - 11:40 am  
Session VI  
Concurrent Sessions  
1209 ABCD, A1096, A1097  

11:40 am - 12:40 pm  
Lunch Buffet  
USF Health Nursing Rotunda

12:50 - 1:50 pm  
Session VII  
Concurrent Sessions  
1209 ABCD, L1003, L1005, N2002  
N2008, N1032, CLC

---

**CE SWITCH**

2:00 - 3:00 pm  
Session VIII  
Concurrent Sessions  
1209 ABCD, L1003, L1005, N2002  
N2008, CLC

3:00 pm  
Adjourn

---

See you next year at the 2020 Florida Residency Conference!

*Tentative 2020 FRC Information*  
May 14-15, 2020  
University of South Florida College of Pharmacy  
Tampa, FL
CONTINUING EDUCATION AND EVALUATIONS

The Florida Society of Health-System Pharmacists is accredited by the Accreditation Council for Pharmacy Education as a provider of pharmacy continuing education. This program contains Knowledge Based CPE.

CE INSTRUCTIONS

Request for Continuing Education Forms: CE credit is only available for those who attend a session in its entirety. Please keep track of the sessions you attend using the Session Tracker Form.

Note: Your NABP eProfile ID and birth month and date are required. CE will not be issued without this information.

EVALUATION INSTRUCTIONS

Speaker Evaluations for resident feedback: All attendees (residents and preceptors) are expected to complete an evaluation for each resident and submit to the session moderator immediately following the resident’s presentation. This evaluation is used to provide constructive and immediate feedback to the resident.

Overall Meeting Evaluations: Immediately following the meeting all attendees will be emailed an electronic evaluation to evaluate the overall meeting, including individual presenters. We encourage you to complete the evaluation as it assists in future planning. The evaluations will be sent to the email on file. If you do not receive the link to complete the evaluation, and wish to provide feedback, please contact a FSHP staff member.

FSHP Designated Reviewer-Moderator Responsibilities Form: The session moderator is responsible for completing his/her portion of this form for each speaker during the session and submitting the completed forms to the FSHP representative at the completion of the session.
## FRC 2019 Session Tracker Form

Use this form to keep track of sessions attended in order to complete an electronic evaluation that will be emailed after conference. We appreciate your constructive feedback to continue to improve the FRC!

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic Area</th>
<th>Presenter</th>
<th>Overall Strength(s)</th>
<th>Overall Area(s) for Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session V</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session VI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session VII</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session VIII</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Presenter</td>
<td>Practice Site</td>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------</td>
<td>--------------------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>10:40-10:55</td>
<td>Melissa Johnson (PGY1)</td>
<td>South Florida Baptist Hospital</td>
<td>Impact of a pharmacist-driven steroid step-down protocol for the treatment of acute exacerbations of COPD in hospitalized patients</td>
<td></td>
</tr>
<tr>
<td>10:55-11:10</td>
<td>Kirubel Hailu (PGY1)</td>
<td>St. Vincent's Healthcare</td>
<td>Impact of adjuvant use of midodrine in septic patients receiving vasopressors in the ICU setting</td>
<td></td>
</tr>
<tr>
<td>11:10-11:25</td>
<td>Joshua Tyler (PGY1)</td>
<td>Florida Hospital Orlando</td>
<td>Assessing impact of an interdisciplinary erythropoietin stimulating agent dosing protocol at an outpatient community hospital dialysis unit</td>
<td></td>
</tr>
<tr>
<td>11:30-11:45</td>
<td>Hannah C. Cawoski (PGY2)</td>
<td>UF Health Jacksonville</td>
<td>Retrospective study comparing the clinical and economic outcomes of injection drug users versus non-injection drug users with endocarditis at a tertiary care center</td>
<td></td>
</tr>
<tr>
<td>11:45-12:00</td>
<td>Justin Miller (PGY2)</td>
<td>Lakeland Regional Health</td>
<td>Broad-spectrum combination antibiotic utilization for urinary tract infections and skin and soft tissue infections after implementation of the SEP-1 bundle</td>
<td></td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------</td>
<td>-------------------</td>
<td>--------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Ambulatory Care I</td>
<td>N1022</td>
<td>Elizabeth Powell</td>
<td>Macie Kent</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Anticoagulation I</td>
<td>L1005</td>
<td>Robert Kraljevich</td>
<td>Kerry Marr</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Critical Care I</td>
<td>1209-A</td>
<td>William Carothers</td>
<td>Beatrice Adams</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Critical Care II</td>
<td>1209-B</td>
<td>Michael Sanchez</td>
<td>Shalonda Barnes Warren</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Infectious Diseases I</td>
<td>1209-C</td>
<td>Emmanuel Markakis</td>
<td>Melissa Holloway</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Infectious Diseases II</td>
<td>1209-D</td>
<td>Natalie Robertson</td>
<td>Steven Tran</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Internal Medicine I</td>
<td>L1003</td>
<td>Karin Thatcher</td>
<td>Nghi Le</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Pain Management I</td>
<td>N2008</td>
<td>Kristen Heiner</td>
<td>Lindsey Bates</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Transitions of Care I</td>
<td>N2005</td>
<td>Christine Corsberg</td>
<td>Amy Rumore</td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:50 - 2:10</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------</td>
<td>--------------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Administration / Managed Care I</td>
<td>N2008</td>
<td>John Armitstead</td>
<td>Jennifer Wheeler</td>
<td>2:20 - 2:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:50 - 3:20</td>
</tr>
<tr>
<td>Anticoagulation II</td>
<td>L1005</td>
<td>Jacob Tillmann</td>
<td>Nicole Brooks</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Critical Care IV</td>
<td>1209-B</td>
<td>Randi Searcy</td>
<td>Kacey Barnett</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Emergency Medicine II</td>
<td>A1122</td>
<td>Melanie Solone</td>
<td>Kyle Mains</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Infectious Diseases IV</td>
<td>1209-D</td>
<td>Sharjeel Khan</td>
<td>Kathryn Hernandez</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Internal Medicine II</td>
<td>L1003</td>
<td>Josephine Jean-Postell</td>
<td>Tatiana Hernandez</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Oncology I</td>
<td>CLC</td>
<td>Michael Magee</td>
<td>Bren Magruder</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Pain Management II</td>
<td>N1022</td>
<td>Carmela Jean</td>
<td>Lawrence Davila</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Transitions of Care II</td>
<td>N2005</td>
<td>Stephanie Brown</td>
<td>Luis Alfonso</td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:00 - 3:20</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>------------</td>
<td>------</td>
<td>-------------------</td>
<td>--------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Administration / Managed Care II</td>
<td>N2008</td>
<td>Christian Calderon</td>
<td>Cher Enderby</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Ambulatory Care II</td>
<td>N2005</td>
<td>Amy Henneman</td>
<td>Jason Willman</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Anticoagulation III</td>
<td>L1005</td>
<td>Tim L'Hommedieu</td>
<td>Diana Carolina Andrade</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Critical Care V</td>
<td>1209-A</td>
<td>Suzanne Turner</td>
<td>Kim Russillo</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Critical Care VI</td>
<td>1209-B</td>
<td>Michael Semanco</td>
<td>Christine Price</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Infectious Diseases V</td>
<td>1209-C</td>
<td>Christopher Froczek</td>
<td>Anastasia Knecht</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Infectious Diseases VI</td>
<td>1209-D</td>
<td>Bryan Allen</td>
<td>Ashley MacWhinnie</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Internal Medicine III</td>
<td>L1003</td>
<td>Melissa Marshall</td>
<td>Doug Brown</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Oncology II</td>
<td>CLC</td>
<td>Khusbu Patel</td>
<td>Ryan Morgan</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Internal Medicine IV</td>
<td>A1122</td>
<td>Jovino Hernandez</td>
<td>Valerie Elder</td>
<td>3:30 - 3:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3:50 - 4:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4:10 - 4:30</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>------------</td>
<td>------</td>
<td>-----------</td>
<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>Administration / Managed Care III</td>
<td>N2008</td>
<td>Royce Cyriac</td>
<td>Josh Gilmore</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Anticoagulation IV</td>
<td>L1005</td>
<td>Maria Conover</td>
<td>Elizabeth Powell</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Critical Care VII</td>
<td>1209-A</td>
<td>Nishika Patel</td>
<td>Tracy Rosenblum</td>
<td>8:20 - 8:40</td>
</tr>
<tr>
<td>Critical Care VIII</td>
<td>1209-B</td>
<td>Stephen Lemon</td>
<td>Joyce Lee</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Emergency Medicine III</td>
<td>CLC</td>
<td>Anthony Pazanese</td>
<td>Danielle Moore</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Infectious Diseases VII</td>
<td>1209-C</td>
<td>Emmanuel Markakis</td>
<td>Amanda Atherton</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Infectious Diseases VIII</td>
<td>1209-D</td>
<td>Jay Pauly</td>
<td>Christopher Fronczek</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Internal Medicine V</td>
<td>L1003</td>
<td>Bradley Stein</td>
<td>Erika Fant</td>
<td>8:20 - 8:40</td>
</tr>
<tr>
<td>Medication Safety I</td>
<td>A 1096</td>
<td>Lindsey Bates</td>
<td>Amy Knoblock</td>
<td>8:20 - 8:40</td>
</tr>
<tr>
<td>Pain Management III</td>
<td>A 1097</td>
<td>Carrie Lagasse</td>
<td>Joseph Cammilleri</td>
<td>8:20 - 8:40</td>
</tr>
<tr>
<td>Transitions of Care III</td>
<td>N2002</td>
<td>ladette Belgado-Darby</td>
<td>Christian Calderon</td>
<td>8:00 - 8:20</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------</td>
<td>-------------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Administration / Managed Care IV</td>
<td>N2008</td>
<td>Les Louden</td>
<td>Craig MacDonald</td>
<td>9:10 - 9:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9:30 - 9:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9:50 - 10:10</td>
</tr>
<tr>
<td>Ambulatory Care III</td>
<td>CLC</td>
<td>Stephanie McCormick</td>
<td>Justin Tinsley</td>
<td>9:10 - 9:30</td>
</tr>
<tr>
<td></td>
<td>A 1096</td>
<td>Karin Thatcher</td>
<td>Moira Stevenson</td>
<td>9:30 - 9:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9:50 - 10:10</td>
</tr>
<tr>
<td>Anticoagulation V</td>
<td>L1005</td>
<td>Nicole Brooks</td>
<td>Nicole Rivera-Torres</td>
<td>9:30 - 9:50</td>
</tr>
<tr>
<td>Critical Care IX</td>
<td>1209-A</td>
<td>Michael Ruble</td>
<td>Marci DelosSantos</td>
<td>9:30 - 9:50</td>
</tr>
<tr>
<td></td>
<td>1209-B</td>
<td>Rebecca Rich</td>
<td>Calvin Tucker</td>
<td>9:50 - 10:10</td>
</tr>
<tr>
<td>Critical Care X</td>
<td></td>
<td></td>
<td></td>
<td>9:10 - 9:30</td>
</tr>
<tr>
<td>Infectious Diseases IX</td>
<td>1209-C</td>
<td>Melissa Levesque</td>
<td>Damien Alpizar</td>
<td>9:30 - 9:50</td>
</tr>
<tr>
<td></td>
<td>1209-D</td>
<td>Stephanie Brown</td>
<td>Ashley Lockwood</td>
<td>9:50 - 10:10</td>
</tr>
<tr>
<td>Infectious Diseases X</td>
<td></td>
<td></td>
<td></td>
<td>9:10 - 9:30</td>
</tr>
<tr>
<td>Internal Medicine VI</td>
<td>L1003</td>
<td>Natalie Verbosky</td>
<td>Dawn Sollee</td>
<td>9:30 - 9:50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9:50 - 10:10</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------</td>
<td>--------------------</td>
<td>-----------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Anticoagulation VI</td>
<td>L1005</td>
<td>Jacob Tillmann</td>
<td>Jordan Bowmaster</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Ambulatory Care V</td>
<td>N2008</td>
<td>Carmela Jean</td>
<td>Marcie Kent</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Critical Care XI</td>
<td>1209-A</td>
<td>William Carothers</td>
<td>Joseph Trang</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Emergency Medicine IV</td>
<td>1209-B</td>
<td>Kevin Pacheco</td>
<td>Kayla Wilson</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Infectious Diseases XI</td>
<td>1209-C</td>
<td>Bryan Allen</td>
<td>Ripal Jariwala</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Infectious Diseases XII</td>
<td>1209-D</td>
<td>Shane Chordas</td>
<td>Brian Morini</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Pain Management IV</td>
<td>CLC</td>
<td>Anthony Pazanese</td>
<td>Kirsten Parker</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Pediatrics II</td>
<td>N2002</td>
<td>Blake Shay</td>
<td>Ashley Siryk</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Pediatrics III</td>
<td>A 1096</td>
<td>Janesha Thomas</td>
<td>Jeanine Brizardine</td>
<td>10:40 - 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:00 - 11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11:20 - 11:40</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>-----------------</td>
<td>--------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Ambulatory Care VI</td>
<td>N2008</td>
<td>Mitchell Harris</td>
<td>Martina Holder</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Anticoagulation VII</td>
<td>L1005</td>
<td>Bradley Stein</td>
<td>Carrie Leichtweis</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Critical Care XII</td>
<td>1209-A</td>
<td>Beatrice Adams</td>
<td>Marlena Fox</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Infectious Diseases XIII</td>
<td>1209-C</td>
<td>Kyle Brown</td>
<td>Veena Venugopalan</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Infectious Diseases XIV</td>
<td>1209-D</td>
<td>Gina Seitz</td>
<td>Kelly Rodrigue</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Infectious Diseases XV</td>
<td>1209-B</td>
<td>Luis Alfonso</td>
<td>Melissa Marshall</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Internal Medicine VII</td>
<td>L1003</td>
<td>Sharjeel Khan</td>
<td>Elizabeth Espinel</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Internal Medicine VIII</td>
<td>CLC</td>
<td>Duane Ashe</td>
<td>Jaymes Dean</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Pain Management V</td>
<td>N1032</td>
<td>Michael Verbosky</td>
<td>Worth Kloman</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Pediatrics IV</td>
<td>N2002</td>
<td>Janesha Thomas</td>
<td>Naomi House</td>
<td>12:50 - 1:10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:10 - 1:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1:30 - 1:50</td>
</tr>
<tr>
<td>Topic Area</td>
<td>Room</td>
<td>Moderator</td>
<td>Evaluator</td>
<td>Time</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Critical Care XIII</td>
<td>1209-A</td>
<td>Jason Ferreira</td>
<td>Kacee Barnett</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Infectious Diseases XVI</td>
<td>1209-C</td>
<td>Brian Morini</td>
<td>Melissa Marshall</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Infectious Diseases XVII</td>
<td>1209-D</td>
<td>Ashley Lockwood</td>
<td>Benjamin Philip</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Infectious Diseases XVIII</td>
<td>1209-B</td>
<td>Natalie Verbosky</td>
<td>Daniel Miller</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Medication Safety II</td>
<td>L1003</td>
<td>Craig MacDonald</td>
<td>Joanna Caranante</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Oncology III</td>
<td>L1005</td>
<td>Bren Magruder</td>
<td>Jennifer Mejia</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Pain Management VI</td>
<td>CLC</td>
<td>Katherine Sims</td>
<td>Weilliam Braun</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
<tr>
<td>Pediatrics V</td>
<td>N2002</td>
<td>Bryan Blackwelder</td>
<td>Catherine Storms</td>
<td>2:00 - 2:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:20 - 2:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2:40 - 3:00</td>
</tr>
</tbody>
</table>
FRC Excellence in Research Award

Abstract Review Judges

On behalf of the FRC Steering Committee, Thank You for assisting in reviewing and scoring the Research Finalist submissions to select the Excellence in Research Award finalists.

Rali N. Amin, PharmD
ED Clinical Pharmacist
Sentara Norfolk General Hospital

Amanda M. Ball, PharmD, BCPS, BCCCP
Clinical Manager, Clinical and Patient Care Services
Department of Pharmacy, Duke University Hospital

Jason Brady, PharmD, BCPS
Assistant Director of Clinical Services
Residency Program Director, PGY-1 and PGY-2 Emergency Medicine
Maimonides Medical Center

P. Brandon Bookstaver, PharmD, FCCP, FIDSA, BCPS, AAHIVP
Associate Professor & Director of Residency & Fellowship Training
Department of Clinical Pharmacy & Outcomes Sciences, University of South Carolina College of Pharmacy
Infectious Diseases PGY2 & Clinical Fellowship Director, USC/Palmetto Health

Jolie Gallagher, PharmD
Clinical Pharmacist II, Critical Care
Emory University Hospital

Jaime Robenolt Gray, PharmD, BCCCP
Residency Program Director, Critical Care
Clinical Pharmacy Specialist, Surgical Critical Care
Hospital of the University of Pennsylvania

Carrie L. Griffiths, Pharm.D., BCCCP
Assistant Professor of Pharmacy
Wingate University School of Pharmacy
Clinical Pharmacy Specialist – Critical Care
Virtual Critical Care

Peter (Pete) N. Johnson, Pharm.D., BCPS, BCPPS, FPPAG, FCCM
Associate Professor of Pharmacy Practice
Director, PGY2 Pediatric Pharmacy Residency
Director, Clinical and Translational Science Fellowship in Pediatric Pharmacotherapy
Director, Pediatric Pharmacotherapy Degree Option
The University of Oklahoma College of Pharmacy

Clinical Pharmacy Specialist—Pediatric Critical Care
The Children’s Hospital at OU Medical Center
John Koerber, PharmD  
Coordinator, Investigational Drug Service  
Beaumont Hospital, Royal Oak

Daniel Timko, PharmD, MBA, BCPS, AQ-ID  
Medical Science Director, Melinta Therapeutics

Kristina Thurber, PharmD, BCPS  
Internal Medicine Clinical Pharmacist  
Assistant Program Director, PGY-2 Pharmacy Residency in Pharmacotherapy  
Mayo Clinic Hospital — Rochester
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Excellence In Research Finalists

May 16, 2019
10:20am-12:10pm
ABSTRACT REPRODUCTION FORM

Time: 10:25 - 10:40 Room: 1209 ABCD Auditorium Category: Excellence in Research PGY1

IMPACT OF ADJUVANT USE OF KETOROLAC IN OPIOID DOSE REDUCTION IN PATIENTS UNDERGOING VALVE REPLACEMENT/REPAIR PROCEDURE

Refat Noor-St. Vincent's Healthcare

Purpose/Background: Analgesia is a cornerstone of post-operative therapy to reduce complications and hospital length of stay. Opioids are the mainstay of therapy, but result in increased rates of nausea/vomiting, constipation, respiratory depression and addiction. Adjuvant NSAIDs have been found to improve post-operative pain control, reduce opioid use and opioid related adverse events. NSAIDs provide the additional benefit of reducing inflammation associated with pain, whereas opioids alone only mask pain. Intravenous ketorolac has been used in patients undergoing surgical procedures as an adjunct to opioids, reducing opioid consumption by 20-50%. However, intravenous ketorolac has not been studied in patients with pain secondary to a valve replacement/repair procedure. The purpose of this study is to determine the therapeutic efficacy and safety of intravenous ketorolac in patients undergoing open valve replacement/repair.

Methodology: A retrospective chart review was conducted at Ascension St. Vincent’s Riverside. Adult patients that underwent open valve replacement/repair surgery were included and separated into the control or ketorolac group. Patients that received at least one dose of ketorolac within 24 hours of the procedure were assigned to the ketorolac group. Patients undergoing CABG, history of peptic ulcer and anaphylactic reaction to NSAIDs were excluded. The primary outcome was total opioid utilization in morphine equivalents during first 48-hour post-operative period. Secondary outcomes were AKI rates, ICU length of stay, hospital length of stay and abnormal bleeding using BARC criteria type 3.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Identify the role of ketorolac as an adjuvant analgesic in opioid use reduction

Self Assessment: Which of the following is not a benefit of ketorolac as adjuvant therapy in acute post-op pain management? A. Provide opioid sparing effect B. Direct anti-inflammatory effects C. Cost effective D. Reduce acute kidney injury incidences

ABSTRACT REPRODUCTION FORM

Time: 10:40 - 10:55 Room: 1209 ABCD Auditorium Category: Excellence in Research PGY1

IMPACT OF A PHARMACIST-DRIVEN STEROID STEP-DOWN PROTOCOL FOR THE TREATMENT OF ACUTE EXACERBATIONS OF COPD IN HOSPITALIZED PATIENTS

Melissa Johnson-South Florida Baptist Hospital

Purpose/Background: The administration of systemic corticosteroids have been a mainstay of treatment for acute exacerbations of chronic obstructive pulmonary disease (COPD). Although the Global Initiative for Chronic Obstructive Lung Disease guidelines recommends using 40 mg oral prednisone per day for five days, it has become common practice to utilize high-dose intravenous (IV) steroids or a tapered course of IV steroids. Numerous meta-analyses have suggested that lower doses and shorter courses of steroid therapy are just as effective. In an effort to decrease the use of high-dose steroids at South Florida Baptist Hospital, a pharmacist-driven protocol outlining specific criteria for use of oral prednisone 40 mg per day for five days in hospitalized patients has been implemented. The purpose of this study is to evaluate clinical outcomes related to our hospital's steroid step-down protocol.

Methodology: This was a pre-post non-inferiority cohort study conducted at South Florida Baptist Hospital. Subjects were divided into pre-protocol and post-protocol groups. Data was obtained from August 2017 to July 2018 and August 2018 to February 2019 for the pre and post groups respectively. Subjects that met study requirements were obtained from the electronic medical record. The primary outcome is 30-day hospital readmission rates with primary diagnosis of COPD. Secondary outcomes include hospital length of stay, glycemic control, duration of steroid therapy, average dose of steroid given during hospital admission, steroids prescribed upon discharge, number of emergency department visits within 30 days and readmission rates within 3 months of index visit.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the impact of a pharmacist-driven steroid step-down protocol in hospitalized patients treated for acute exacerbations of COPD

Self Assessment: Which of the following are advantages for using oral steroid therapy compared to intravenous steroid therapy for acute exacerbations of COPD? A. Decreased length of stay B. Patient convenience C. Decreased risk of infection D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 10:55 - 11:10 Room: 1209 ABCD Auditorium Category: Excellence in Research PGY1

IMPACT OF ADJUVANT USE OF MIDODRINE IN SEPTIC PATIENTS RECEIVING VASOPRESSORS IN THE ICU SETTING

Kirubel Hailu-St. Vincent's Healthcare

Purpose/Background: Early hemodynamic stability and appropriate antimicrobials have been shown to decrease mortality rates in septic patients. Longer intensive care unit (ICU) length of stay (LOS), hospital LOS, and reduced mobility are known to increase adverse outcomes including mortality. Adjunctive treatments investigated in recent years include the use of midodrine, an oral alpha-1 adrenergic agonist. Previous studies evaluating the effectiveness of midodrine in weaning patients from vasopressors and reducing the ICU LOS yielded mixed results. Data is limited on the timing of midodrine administration and the average dose used in correlation to ICU LOS. The purpose of this study is to provide clarity on the use of midodrine in septic shock and its impact on ICU LOS and hospital LOS.

Methodology: This multi-centered, IRB-approved, retrospective observational study evaluated patients admitted between June 2013 and August 2018. Subjects with a medical diagnosis of sepsis, vasopressor use > 24 hours, admitted to the ICU or progressive care unit were included. Subjects with home use of midodrine and those expiring prior to ICU discharge were excluded. Qualifying subjects were divided into midodrine treatment and control groups based on use of midodrine and matched based on sepsis source, SOFA score, mineralocorticoid use and number of vasopressors used. Groups were then evaluated for the primary outcome, ICU length of stay (LOS). Hospital length of stay, ICU LOS when midodrine initiated within <48hrs or >48hrs and vasopressor duration were assessed as secondary outcomes.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the efficacy of midodrine as adjunctive treatment in patients with septic shock

Self Assessment: The benefit of discontinuing use of intravenous (IV) vasopressors and restoring hemodynamic stability include: A. Decreased intensive care unit length-of-stay B. Decreased hospital length of stay C. Increased mobility D. Lesser risk of delirium E. All

ABSTRACT REPRODUCTION FORM

Time: 11:10 - 11:25 Room: 1209 ABCD Auditorium Category: Excellence in Research PGY1

ASSESSING IMPACT OF AN INTERDISCIPLINARY ERYTHROPOIETIN STIMULATING AGENT DOSE PROTOCOL AT AN OUTPATIENT COMMUNITY HOSPITAL DIALYSIS UNIT

Joshua Tyler-Florida Hospital Orlando

Purpose/Background: Kidney Disease Improving Global Outcomes (KDIGO) guideline for anemia management in chronic kidney disease suggests initiating erythropoietin stimulating agents (ESA) when hemoglobin (Hb) concentration is between 9-10 g/dL, and not exceeding target Hb of 11.5 g/dL. This narrow therapeutic window requires individualized and structured approach, to ensure safe and effective ESA dosing. Guidelines do not endorse specific dosing strategy. ESA dosing protocol was implemented at an outpatient dialysis unit. The objective of this study is to determine the impact of protocol on anemia management.

Methodology: This retrospective cohort study was approved by the IRB as a quality improvement project. Intervention group of ESA protocolized dosing will be compared to pharmacist-driven protocol outlining specific criteria for use of oral prednisone 40 mg per day for five days in hospitalized patients has been implemented. The purpose

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe impact of erythropoietin stimulating agent dosing protocol has on anemia in end stage renal disease patients in the outpatient setting

Self Assessment: Which of the following is a correct statement referring to management of ESA therapy anemic patients on dialysis? A. Maintain the hemoglobin to a target of 13 g/dL to improve anemia symptoms and quality of life B. Use an individualized approach to ESA dosing accounting for hemoglobin trends, patient-specific symptoms/factors, current ESA dose and Hb target range C. Adjust ESA doses based on pre-determined increments to save on ESA-associated costs D. Raise a patient hemoglobin above 9 g/dL as soon as possible with the highest recommended ESA dose.
ABSTRACT REPRODUCTION FORM

RETROSPECTIVE STUDY COMPARING THE CLINICAL AND ECONOMIC OUTCOMES OF INJECTION DRUG USERS VERSUS NON-INJECTION DRUG USERS WITH ENDOCARDITIS AT A TERTIARY CARE CENTER

Hannah C. Cawoski-UF Health Jacksonville

Purpose/Background: Injection drug users (IDUs) are at an increased risk for infections such as infectious endocarditis (IE). Unlike non-injection drug user (non-IDU) IE, which is primarily left-sided, most IE cases among IDUs involve the tricuspid valve. The purpose of this study is to compare the clinical and economic outcomes of hospitalized patients diagnosed with IDU associated IE versus non-IDU IE.

Methodology: This is a single-center, retrospective cohort study comparing patients diagnosed with IE who are IDU versus non-IDU. The primary outcome was to determine the economic impact of IDU associated IE, through total hospital charges based off of length of stay.

Results/Conclusions: A preliminary analysis of 62 patients (20 IDU, 42 non-IDU) was completed. The sample included 34 females and 28 males with an average age of 49. In the IDU population, 86% of patients were diagnosed with right-sided endocarditis compared to 41% in the non-IDU group. The economic impact of treating IE, through total hospital charges, was not statistically different when comparing IDU (median: $162,474, range: $34,476-$916,036) versus non-IDU (median: $130,035, range: $19,673-$1,098,218) (p = 0.764). The median total length of stay, in days, was shorter in the non-IDU arm (median: 14, range: 3-245) compared to the IDU arm (median: 31, range: 4-241). In the preliminary analysis, there was no difference in economic impact when comparing total hospital charges in IDU versus non-IDU associated IE. Further data collection and analysis is warranted.

Presentation Objective: Describe the economic impact of IDU associated IE in order to demonstrate the need to further address the underlying disease of drug addiction

Self Assessment: Which of the following anatomical sides is associated with injection drug user infective endocarditis? A. Left sided B. Right sided C. Both sided D. Unknown
Session I

May 16, 2019
1:10-2:10pm
IDENTIFY FACTORS ASSOCIATED WITH BLEEDING EVENTS IN VETERANS PRESCRIBED ANTICOAGULANTS IN THE OUTPATIENT SETTING
David T. Smith-Orlando VA Medical Center

**Purpose/Background:** While approximately 4,000 Veterans receive anticoagulants at a Veterans Affairs Medical Center (VAMC) annually, a subset of Veterans subsequently present with bleeding events. The VAMC recently implemented a dashboard which identifies Veterans prescribed anticoagulants presenting to the emergency room or inpatient admission with a bleeding event or clotting event identified by International Classification of Disease (ICD-10) code. This quality improvement project aimed to identify factors that influence bleeding events in Veterans prescribed anticoagulants that were identified by the dashboard. Bleeding events were evaluated for precipitating factors to identify trends with intervention potential.

**Methodology:** The dashboard identified Veterans with bleeding events who were prescribed direct oral anticoagulants (DOACs), warfarin, or low molecular weight heparin. All Veterans prescribed anticoagulants presenting to the VAMC emergency room or inpatient admission with a bleeding event and identified by the dashboard between 5/1/2018 and 12/31/2018 were included. Data points included age, race, weight, height, body mass index, serum creatinine, creatinine clearance, aspartate aminotransferase, alanine aminotransferase, hemoglobin, hematocrit, platelets, prothrombin time, international normalized ratio, ICD-10, indication for anticoagulation, duration of therapy, anticoagulation agent and dose, refill history, bleed assessment score, concurrent use of non-steroidal anti-inflammatory drugs, aspirin, P2Y12 inhibitors, alcohol use, drug interactions, and disease state interactions. Anticoagulation management was assessed per national VA criteria, FDA product labeling for use, and local VAMC policy. Data points were collected by data extraction and manual chart review. Based on potential trends in factors potentiating bleeding events, possible interventions were considered.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Present factors that influence bleeding events in Veterans prescribed anticoagulation and apply interventions as appropriate

**Self Assessment:** Which of the following modifiable factors are associated with bleeding events in Veterans prescribed anticoagulants? A. Concurrent use of non-steroidal anti-inflammatory drugs B. Drug interactions C. Choice of anticoagulant D. Appropriate monitoring of therapy.

ABSTRACT REPRODUCTION FORM

**Time:** 1:10 - 1:30  **Room:** N1022  **Category:** Ambulatory Care I

**Title:** EVALUATION OF TELEPHONIC MEDICATION THERAPY MANAGEMENT WITHIN A PHARMACIST-RUN AMBULATORY CARE CLINIC

**Elizabeth Ingari-Florida Hospital-Celebration Health**

**Purpose/Background:** Pharmacist-delivered medication therapy management (MTM) is increasingly important in a variety of practice settings. Successful delivery of MTM services positively affects patient health and improves Centers for Medicare & Medicaid Services star ratings, a measure of health plan quality. As MTM services continue to grow, there is an increased need for efficient and effective care models. The objective of this presentation is to evaluate the impact of telephonic MTM services within an ambulatory care clinic setting. The service was designed to help both patients and prescribers by promoting safer and more effective medication use, selecting the most therapeutic and cost-effective medications, improving coordination of care, and documenting patient clinical situations.

**Methodology:** The primary investigator performed a retrospective single center chart review of MTM services at AdventHealth Celebration Clinical Pharmacy Services. Patient data was collected from October 2018 to April 2019. In order to be included for MTM services, patients must be identified in OutcomesMTM for a review of MTM services at AdventHealth Celebration Clinical Pharmacy Services.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Evaluate the impact of telephonic medication therapy management (MTM) services in an ambulatory care clinic setting

**Self Assessment:** What percentage of patients were successfully billed for medication therapy management services?
ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: L1005 Category: Anticoagulation I

EVALUATING THE USE OF ANTI-XA LEVELS TO MONITOR ENOXAPARIN IN OBSE & MORBIDLY OBSE PATIENTS
Mario Pedraza-Florida Hospital Orlando

Purpose/Background: Enoxaparin is an anticoagulant of choice in many clinical settings because of its favorable pharmacokinetics, safety, and the lack of necessary monitoring. Current guidelines recommend the use of INJECTIVE CARE UNIT (ICU) anti-Xa levels in patients treated with enoxaparin. Despite lack of robust data, enoxaparin is increasingly being used in this setting. The primary outcome will be all-cause re-admission within one year of discharge. Safety endpoints will include major and minor bleeding.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the utility of anti-Xa monitoring for dosing enoxaparin in obese patients

Self Assessment: What patient factors may cause changes in the dose-response of enoxaparin as measured by anti-Xa levels? A. Age B. BMI C. Renal function D. All the above

ABSTRACT REPRODUCTION FORM

Time: 1:50 - 2:10 Room: L1005 Category: Anticoagulation I

USE OF APIXABAN IN VALVULAR ATRIAL FIBRILLATION IN CARDIOThoracic SURGEONS' PATIENTS
Hetal Patel-Florida Hospital Orlando

Purpose/Background: Anti-thrombotic therapy for stroke or systemic embolism prevention in atrial fibrillation patients with concomitant valvular heart disease remains challenging. Despite lack of robust data, many anticoagulants are increasingly being used in this setting. This retrospective cohort study has been approved by the IRB as a quality improvement project. Apixaban medication use evaluation performed at AdventHealth Orlando from January 1 to October 31, 2017 identified patients discharged on apixaban for atrial fibrillation after valvular heart surgery. Data will be collected on patient demographics, stroke and bleeding risk factors, apixaban therapy, and hospital readmission within one year of discharge. The primary outcome will be all-cause re-admission within one year of discharge. Safety endpoints will include major and minor bleeding.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the utility of anti-Xa monitoring for dosing enoxaparin in obese patients

Self Assessment: What patient factors may cause changes in the dose-response of enoxaparin as measured by anti-Xa levels? A. Age B. BMI C. Renal function D. All the above

ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: 1209-A Category: Critical Care I

IMPLEMENTATION OF A STANDARDIZED HYPERGLYCEMIA PROTOCOL COMPARED TO THE CURRENT STANDARD OF PRACTICE FOR MANAGEMENT OF HYPERGLYCEMIA IN INTENSIVE CARE UNIT PATIENTS
Kyle Pierce-Manatee Memorial Hospital

Purpose/Background: Sliding scale insulin (SSI) is commonly used for the management of hyperglycemia in our intensive care unit (ICU). Current guidelines discourage the use of SSI as monotherapy for glycemic control. A retrospective chart review was performed of hospitalized patients >18 years of age, who were admitted to the ICU with at least one blood glucose (BG) reading >180 mg/dL. Two groups were compared, a control group during a two month period prior to implementation of the glycemic control protocol and an interventional group during the two month period utilizing the glycemic control protocol. The primary outcome will be all-cause re-admission within one year of discharge. Safety endpoints will include major and minor bleeding.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the impact of a standardized glycemic control protocol for patients in the intensive care unit

Self Assessment: If an NPO patient on intermediate sliding scale insulin has subsequent BG levels of 184 mg/dL, 224 mg/dL, and 210 mg/dL and received 11 units of insulin in the past 24 hours, what is the appropriate next step towards escalating therapy according to the proposed protocol presented? A. Stay on intermediate sliding scale insulin B. Change to high sliding scale insulin C. Change to continuous intravenous insulin infusion D. Add insulin detemir 10 units BID

ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: 1209-A Category: Critical Care I

COMPARISON OF A MULTIMODAL STEPWISE SHIVERING MANAGEMENT STRATEGY TO A NEUROMUSCULAR BLOCKER-FIRST STRATEGY FOR TARGETED TEMPERATURE MANAGEMENT AFTER CARDIAC ARREST
Andrew Schwartz-Orlando Health

Purpose/Background: Targeted temperature management (TTM) after cardiac arrest is associated with increased shivering which negates the neuroprotective benefits. Many shivering management protocols have utilized neuromuscular blocking agents as they significantly reduce shivering incidence, however they can cause polyneuropathy and myopathy with prolonged use. This study was an IRB approved chart review of all patients initiated on TTM after cardiac arrest at Orlando Regional Medical Center between 01/01/2018 and 05/31/2019. Patients included in the historical retrospective group 01/01/2018 to 09/03/2018 were managed with a neuromuscular blocking-focused shivering protocol while patients in the prospective observational intervention group 12/2/2018 to 05/31/2019 were managed with a multimodal stepwise shivering protocol. The primary objective of efficacy was measured as time to achieve a core temperature of 33°C after TTM was initiated. Secondary endpoints include cumulative doses of sedatives, opioids, and neuromuscular blockers required by each protocol, incidence of shivering during TTM, time to motor recovery after rewarming, ICU and hospital length of stay, and hospital discharge disposition.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Assess the efficacy of a multimodal stepwise shivering protocol compared to a neuromuscular blocker-first shivering protocol during targeted temperature management after cardiac arrest

Self Assessment: All of the following are considered benefits to the use of targeted temperature management after cardiac arrest EXCEPT:

- Reduced shivering incidence
- Reduced sedative and opioid requirements
- Reduced length of stay
- Increased patient comfort
- Increased patient mobility
INSTITUTION-SPECIFIC STANDARD VERSUS LOW DOSE PROTHROMBIN COMPLEX CONCENTRATE FOR WARFARIN-ASSOCIATED INTRACRANIAL HEMORRHAGE WITH AN INR LESS THAN 2.0

Kristen Dominick-UF Health Shands

Purpose/Background: Therapeutic anticoagulation is utilized for various indications, including deep vein thrombosis, pulmonary embolism, and stroke risk reduction in atrial fibrillation. The most significant bleeding complication of oral anticoagulation is intracranial hemorrhage (ICH). Treatment for patients with warfarin-associated ICH is withholding therapeutic anticoagulation, administration of Vitamin K, and repletion of clotting factors with commercial products such as prothrombin complex concentrate (PCC). A recent study evaluated the safety and efficacy of PCC in 15 units/kg to patients with an INR <2 and warfarin-associated ICH. They observed that 95% of patients achieved INR reversal after PCC administration (p<0.001). This limited data suggests using lower doses of PCC; however, there is not a comparison of dosing regimens for patients with an INR <2.

Methodology: A retrospective chart review will be conducted on patients that followed institution-specific standard dosing of PCC for an INR of 1.6-1.9 in the setting of warfarin-associated ICH that presented from December 1, 2011 through August 31, 2018. The goal of this quality improvement project is to evaluate if utilizing a 15 units/kg dosing strategy of PCC in patients with an INR of 1.6 to 1.9 results in similar INR reversal as institutional dosing strategies, 25 units/kg or no PCC. The primary outcome is the ability to achieve INR reversal, defined as an INR <1.5 on the first recheck. Secondary outcomes include time to initial INR recheck after administration of PCC, INR reversal at 24-hours, hematoma expansion and occurrence of thromboembolic events.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate PCC dosing strategies in patients with an INR of 1.6-1.9 in the setting of warfarin-associated intracranial hemorrhage

Self Assessment: What is standard treatment for patients with warfarin-associated ICH? A. Withholding therapeutic anticoagulation B. Administration of Vitamin K C. Repletion of clotting factors D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 1:50 - 2:10 Room: 1209-A Category: Critical Care I

IMPACT OF MODERATE HYPERCHLOREMIA ON TRAUMA PATIENTS TREATED WITH CONTINUOUS INFUSION HYPERTONIC SALINE

Caroline Haver-Sarasota Memorial Hospital

Purpose/Background: Hypertonic saline (HTS) reduces cerebral edema and intracranial pressure in patients following stroke or traumatic brain injury (TBI). The development of moderate hyperchloremia (defined as serum chloride equal to or greater than 115 mmol/L) during continuous intravenous infusion (CIV) 3% HTS in patients with intracranial hemorrhage has been associated with increased inpatient mortality, increased median ICU and hospital lengths of stay, and increased incidence of acute kidney injury (AKI). This study seeks to determine if TBI patients who develop moderate hyperchloremia while receiving CIV 3% HTS have a higher rate of inpatient mortality than those who do not develop hyperchloremia.

Methodology: This multicenter, retrospective, matched cohort study included all patients from January 2016 to September 2018 who were admitted to the trauma service with a diagnosis of TBI and received CIV 3% HTS therapy for a minimum of 12 hours. Patients were excluded if they were less than 16 years old, had end-stage renal disease, creatinine clearance less than 15 mL/min, hemodialysis, continuous renal replacement therapy, transition to comfort measures within 48 hours of admission, and inconsistent documentation of 3% HTS administration or laboratory values. The primary outcome was the association of inpatient mortality in patients who developed moderate hyperchloremia during CIV 3% HTS. Secondary outcomes were prevalence of AKI, length of hospital stay, and length of trauma ICU stay. Appropriate statistics will be utilized to characterize data and evaluate the primary and secondary outcomes.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Discuss the clinical impact of moderate hyperchloremia in traumatic brain injury patients receiving continuous 3% hypertonic saline

Self Assessment: Continuous infusion of hypertonic saline is used in patients with TBI in order to: A. Provide volume resuscitation B. Reduce cerebral edema C. Induce hyperchloremia D. Reduce incidence of acute kidney injury

ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: 1209-B Category: Critical Care II

IMPACT OF VITAMIN C, HYDROCORTISONE, AND THIAMINE ON MORTALITY IN CRITICALLY ILL PATIENTS WITH SEVERE SEPSIS AND SEPTIC SHOCK

Daniela Fernandez-Morton Plant Hospital

Purpose/Background: Severe sepsis is a life-threatening organ dysfunction caused by a dysregulated host response to an infection. It is a common cause of death in critically ill patients and remains a leading cause of death in the United States overall. As such, researchers continue to evaluate novel therapies for severe sepsis and septic shock. Vitamin C has been among these therapies, as a potent antioxidant believed to play a role in downregulating pro-inflammatory mediators. Various studies have assessed the use of vitamin C in critically ill patients, but Mark et al first studied the synergistic effect of vitamin C, hydrocortisone, and thiamine, reporting an 8.5% reduction in atrial fibrillation. The most significant bleeding complication of oral anticoagulation is intracranial hemorrhage (ICH). Treatment for patients with warfarin-associated ICH is withholding therapeutic anticoagulation, administration of Vitamin K, and repletion of clotting factors with commercial products such as prothrombin complex concentrate (PCC). A recent study evaluated the safety and efficacy of PCC in 15 units/kg to patients with an INR <2 and warfarin-associated ICH. They observed that 95% of patients achieved INR reversal after PCC administration (p<0.001). This limited data suggests using lower doses of PCC; however, there is not a comparison of dosing regimens for patients with an INR <2.

Methodology: A retrospective chart review will be conducted on patients that followed institution-specific standard dosing of PCC for an INR of 1.6-1.9 in the setting of warfarin-associated ICH that presented from December 1, 2011 through August 31, 2018. The goal of this quality improvement project is to evaluate if utilizing a 15 units/kg dosing strategy of PCC in patients with an INR of 1.6 to 1.9 results in similar INR reversal as institutional dosing strategies, 25 units/kg or no PCC. The primary outcome is the ability to achieve INR reversal, defined as an INR <1.5 on the first recheck. Secondary outcomes include time to initial INR recheck after administration of PCC, INR reversal at 24-hours, hematoma expansion and occurrence of thromboembolic events.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the efficacy and safety of a vasopressin dosage reduction in critically ill patients with septic shock

Self Assessment: Which of the following best describes the role of vitamin C in severe sepsis or septic shock? A. Scavenger of free radicals B. Downregulator of pro-inflammatory mediators C. Preserves endothelial function D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: 1209-B Category: Critical Care II

EVALUATION OF VASOPRESSIN DOSAGE AND DURATION: A QUALITY IMPROVEMENT STUDY IN CRITICALLY ILL PATIENTS WITH SEPTIC SHOCK - THE VANQUISH STUDY

Morgan Barnes-Holmes Regional Medical Center

Purpose/Background: Resuscitation in septic shock involves the use of intravenous fluids and vasopressors to achieve an initial mean arterial pressure (MAP) of 65 mmHg. The Surviving Sepsis Guidelines recommend norepinephrine as a first line vasopressor and vasopressin as a second line option. Levels of endogenous vasopressin may be low in septic shock and with supplementation it increases systemic vascular resistance and MAP. Guidelines recommend a vasopressin dose of 0.03 units/minute, however in clinical practice infusion rates of up to 0.04 units/minute are commonly used. The purpose of this study is to compare the effect of vasopressin 0.03 versus 0.04 units/minute on total duration of vasopressor use in critically ill patients with septic shock.

Methodology: This retrospective chart review was conducted at an integrated delivery network consisting of 102 intensive care unit (ICU) beds at four hospitals. Patient cohorts were evaluated before and after implementation of a default vasopressin infusion rate change from 0.04 to 0.03 units/minute. Adult patients admitted to an ICU with septic shock who received vasopressin were included. Excluded patients included pregnancy, incarceration, or receipt of either angiotensin II or intravenous vitamin C. The study was powered to 85% with an alpha of 0.05 for a sample size of 150 patients per group. The primary outcome was total vasopressor duration from the start of vasopressin therapy. Secondary outcomes included drug cost, in-hospital mortality, ICU and hospital length of stay, acute kidney injury, and incidence of adverse drug effects.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the efficacy and safety of a vasopressin dosage reduction in critically ill patients with septic shock

Self Assessment: According to the 2016 Surviving Sepsis Guidelines which of the following vasopressors are recommended to be added to norepinephrine with the intent of increasing MAP to goal? A. Vasopressin B. Phentylephrine C. Epinephrine D. A & C
IMPACT OF INTRAVENOUS FUROSEMIDE TIME-TO-ADMINISTRATION ON CLINICAL OUTCOMES IN PATIENTS WITH ACUTE HEART FAILURE
Payal Patel-St. Vincent's Healthcare

Purpose/Background: Acute heart failure (AHF) requires immediate medical intervention to prevent morbidity and mortality. Patients present with signs and symptoms of fluid overload and early treatment with intravenous (IV) loop diuretics provide symptomatic relief. Current literature is conflicting on the effect of early versus delayed IV furosemide on in-hospital length of stay and in-hospital mortality. Timely decongestion with diuretic therapy may decrease length of stay (LOS), hospital cost, and possibly increase survival. The aim of this study was to evaluate the impact of IV furosemide time-to-administration on clinical outcomes.

Methodology: A retrospective chart review was conducted across three Ascension St. Vincent's sites. Subjects were divided into two groups; early IV furosemide (administration <120 min after emergency department [ED] arrival) and delayed IV furosemide (>120 min after ED arrival). Inclusion criteria included: age > 18 years, AHF diagnosis based on Framingham criteria, treatment with at least one dose of IV furosemide within 24 hours of ED arrival, and initial presentation in the ED followed by an inpatient admission. Patients with acute coronary syndrome requiring emergent revascularization, acute myocarditis, history of heart transplant, b-type natriuretic peptide level < 100 pg/mL or unmeasured, receiving dialysis, pregnant or incarcerated were excluded. All data was collected via the electronic medical record. The primary outcome compared the difference in hospital LOS between groups. Secondary outcomes included 30-day readmission rate, in-hospital mortality, admission to intensive care unit, and discharge to higher level of care.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Identify the potential benefits of early intravenous loop diuretic administration in patients presenting to the emergency department with acute heart failure
Self Assessment: Some literature on early versus delayed intravenous furosemide administration suggests a positive association between early intravenous furosemide administration with which clinical outcomes? A. In-hospital mortality B. Length of stay C. Hospital readmission D. A and B

POSSIBLE IMPACT OF A PHARMACY DRIVEN PROTOCOL FOR LOW RISK DEEP VEIN THROMBOSIS IN THE EMERGENCY DEPARTMENT
Mia Choi-Jackson Memorial Hospital

Purpose/Background: Deep vein thrombosis (DVT) is commonly encountered in the Emergency Department (ED), with a reported incidence of 1 per 1,500 adults annually. A study using the Nationwide Inpatient Sample database from 2011, found a mean charge of $30,051 and 4.7 day hospital length of stay for a primary diagnosis of DVT. Patients who present to the ED with low risk DVT may not need hospitalization, potentially reducing hospital costs. Previous studies have shown success with outpatient treatment of DVT for patients presenting to the ED. These studies have shown low rates of DVT recurrence and incidences of bleeding. A pharmacist driven protocol was initiated in the emergency department at a large tertiary academic center. This protocol allows pharmacists to assist with anticoagulant therapy and provide follow-up for 60 days.

Methodology: A retrospective chart review of patients presenting to the ED between 10/1/2016 and 10/1/2018 with a primary diagnosis of DVT was evaluated to identify the potential impact of this protocol. Patients were included if they met criteria for low risk DVT. This criteria excluded extensive thrombosis (iliofemoral, entire extremity), associated chest pain or dyspnea, pregnancy, active cancer or hematologic disorders, recent surgery, active gastrointestinal bleed, intracranial hemorrhage, platelets <50, acute renal failure, or patients who required 3 or more doses of intravenous opioids. The primary outcome is number of prevented admissions. Secondary outcomes include: length of stay, 30 day readmissions, venous thromboembolism recurrence, and bleeding events.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify the potential impact of a pharmacy driven protocol for low risk deep vein thrombosis in the emergency department
Self Assessment: What are some potential benefits of implementing a pharmacy driven protocol for low risk deep vein thrombosis in the emergency department? A. Decrease hospital admissions B. Cost effective management of DVT C. Improve outpatient follow up D. All of the above
A RETROSPECTIVE STUDY ON THE IMPACT OF LOCAL SPECIALTY PHARMACISTS ON PROPORTIONS OF DAYS COVERED OF MEDICATIONS IN PATIENTS LIVING WITH HIV AND COMORBID CONDITIONS
Maria E. Pulido-Walgrens and Nova Southeastern University COP

Purpose/Background: Community pharmacists working in a specialty pharmacy setting have the opportunity to affect health outcomes of susceptible populations. One such population includes HIV positive patients whose adherence to antiretroviral therapy must be at least 95% to prevent disease progression and virologic failure. Consequently, HIV positive patients have a high risk of developing comorbidities such as diabetes, dyslipidemia, and hypertension as a result of long-term antiretroviral therapy and/or lifestyle and genetic factors.

Methodology: A retrospective chart review was conducted from November 30, 2017 to December 1, 2018. Patients included in the study are HIV positive patients; at least 18 years of age with one or more of the following comorbidities: diabetes, dyslipidemia, and hypertension; currently on oral medications for at least one of the aforementioned comorbidities; patients of the specialty community pharmacy for at least one year. The specialty community pharmacy’s dispensing system was used to calculate the Proportion of Days Covered (PDC) of all antiretroviral therapies and the oral medication regimens for the comorbidities during the study period. Patient demographic data from the pharmacy’s clinical platform will include: gender, years since HIV diagnosis, number of comorbidities, number of antiretroviral therapy regimens taken during the study period, and number of changes in oral medication regimens for the comorbidities. To describe and quantify pharmacists’ interventions, data collected will include: pharmacist completed financial assistance, adherence services provided, initial counseling conducted by the pharmacists, and completed Comprehensive Medication Reviews.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Describe the impact of interventions conducted by a pharmacist working in a specialty pharmacy setting on the Proportion of Days Covered (PDC) of HIV positive patients taking antiretrovirals and oral medications used to treat, diabetes, dyslipidemia, and hypertension, and

Self Assessment: Which of the following community pharmacist interventions was associated with the greatest impact on the proportion of days covered of antiretroviral therapy? A. Comprehensive Medication Reviews (CMRs) B. Financial assistance C. Initial medication therapy regimen counseling D. Adherence/refill reminder calls

IMPACT OF PENICILLIN ALLERGY SKIN TESTING ON ANTIMICROBIAL STEWARDSHIP IN HOSPITALIZED PATIENTS
Cailyn Caselli-St. Anthony's Hospital

Purpose/Background: Penicillin allergies are often misdiagnosed, leading to increased use of broad-spectrum antibiotics. Currently in this facility, there are no means to rule out a patient-reported hypersensitivity to penicillin or penicillin derivatives. Due to the reported allergy, the patient may receive a broader spectrum agent or be subject to alternate therapies. Penicillin allergy skin testing is a rapid and sensitive test to evaluate patient-reported allergies to penicillin. By initiating a pharmacist-driven penicillin allergy skin test protocol within the antimicrobial stewardship program, the goal will be to reduce the use of broad-spectrum antimicrobials in the acute setting and at discharge.

Methodology: This is a prospective observational study conducted at St. Anthony’s Hospital. Subjects eligible for penicillin allergy skin testing were identified via electronic medical record through the inpatient antimicrobial stewardship program, interviewed if deemed a candidate, and subsequently tested. Data was obtained from November 2018 to November 2019. The primary outcome was to evaluate the number of patients affected post-implementation of penicillin allergy skin testing. Secondary outcomes include the type and number of antibiotics discontinued and de-escalated.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Assess the outcomes of pharmacist-driven penicillin allergy skin testing in the acute setting.

Self Assessment: Which patient would be eligible for penicillin allergy skin testing? A. Patient A: reaction of hives to penicillin VK B. Patient B: took Claritin 1 day prior to evaluation, C. Patient C: unknown reaction - family member told patient they had a reaction as a child, D. Patient D: Shortness of breath

EVALUATION OF ANTIBIOTIC THERAPY DURATION AND PHARMACIST INTERVENTIONS PRE- AND POST-IMPLEMENTATION OF AN IN-HOUSE PROCALCITONIN UTILIZATION IN A COMMUNITY HEALTH SYSTEM
Olven Campos-Martin Health System

Purpose/Background: Procalcitonin is an amino acid precursor to the calcium regulatory hormone, calcitonin. Healthy individuals have low concentrations of procalcitonin, while levels are significantly elevated in patients with a bacterial infection. The use of procalcitonin in guiding the initiation and duration of antibiotic therapy can potentially improve antimicrobial stewardship, leading to a more optimal utilization of antibiotics. The purpose of this study is to evaluate the impact of in-house procalcitonin utilization on antibiotic duration for patients with sepsis and lower respiratory tract infections. This study will also evaluate the role of pharmacists in making recommendations based on procalcitonin levels.

Methodology: The evaluation of pre-implementation data will be completed as a retrospective analysis of patients who reached a procalcitonin level was ordered using outsourced testing from January 1st, 2018 to August 31st, 2018. System-wide education will be performed for providers, pharmacists, and nursing staff concerning procalcitonin in-house availability and appropriate utilization prior to implementing the procalcitonin policy. Post-implementation data will be evaluated as a retrospective analysis with a timeframe from December 1st, 2018 to February 28th, 2019. The primary outcome will be duration of antibiotic therapy during admission. Secondary outcomes will include length of hospital stay, rates of antibiotic re- initiation after discontinuation, 28-day readmission rates due to same infection, and the percentage of accepted pharmacist recommendations. Data analysis will be conducted using descriptive statistics.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the effectiveness of in-house procalcitonin policy implementation on antibiotic duration

Self Assessment: Which of the following clinical situations could a procalcitonin level be utilized to guide antimicrobial therapy? A. Patient is on day 7 of vancomycin treatment for osteomyelitis B. Patient received ceftriaxone and azithromycin as empiric therapy for potential pneumonia. C. Urine cultures returned resistant to the patient's current antibiotic D. Patient is experiencing worsening pain and swelling on a wound. E. A and B

SAFETY, EFFICACY, AND QUALITY OF DOCUMENTATION OF PHARMACIST-DIRECTED VANCOMYCIN DOSING AND MONITORING USING DOSEMERX PROGRAM
Vicky Kang-Fisher-St. Joseph's Hospital

Purpose/Background: Vancomycin is the drug of choice for treatment of methicillin-resistant Staphylococcus aureus which requires close therapeutic drug monitoring. Individualized drug dosing has been shown to improve patient outcomes and reduce adverse drug events. Several computer softwares have been designed to help clinicians determine optimum drug dosage. DoseMeRx uses Bayesian dosing, which adjusts pharmacokinetic parameters of a published population model to establish a patient-specific individualized drug model. Patient-specific data and lab results are populated from an electronic medical record, then utilized to estimate kinetics and find optimal doses that increase the probability of achieving desired trough concentrations. The purpose of this study is to evaluate the safety, efficacy, and quality of documentation of vancomycin dosing and monitoring using DoseMeRx program at St. Joseph's Hospital compared to the standard dosing practice using the hospital protocol or previous practice.

Methodology: This IRB-approved retrospective study compared vancomycin dosing practices hospital-wide between July 1st and August 31st, 2018 to patients prospectively managed by a pharmacist-directed vancomycin dosing using DoseMeRx pilot program between March 1st and April 30th, 2019. The primary objective was to compare the number of hours to therapeutic trough from initiation of therapy and number of dose manipulations between two groups. The secondary objectives were to evaluate safety and quality of documentation.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Discuss the current therapeutic drug monitoring recommendations regarding vancomycin

Self Assessment: True or False: Using Bayesian software, vancomycin serum levels need to be collected at the intended times in order to estimate the time to steady state and the AUC upon reaching steady state.
ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: N2008 Category: Pain Management I

OPIOID STEWARDSHIP INTERVENTIONS THROUGH AUTOMATIC INJECTABLE TO ORAL INTERCHANGES IN THE INPATIENT SETTING
Meghan Lem-Sacred Heart Health System

Purpose/Background: Two out of three drug overdose deaths in the United States involve an opioid and overdose deaths from opioids have increased almost six times since 1999. In an effort to combat this epidemic, nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for pain control. Clinicians should consider opioid therapy only if expected benefits for both pain and function are anticipated to outweigh the risks to the patient. When benefits outweigh risks, and opioids are utilized, oral opioid formulations are just as effective in the treatment of mild to severe pain for most pain syndromes and should be utilized first before considering use of injectable opioids. The purpose of this study is to demonstrate the advantages for choosing the oral route compared to injectable, including limiting the duration of opioid usage, facilitating discharge planning, and overcoming injectable opioid drug shortages.

Methodology: Prospective interventional study utilizing Sentri7®, a clinical surveillance tool, to alert pharmacists of patients who meet criteria to be automatically converted from either intravenous (IV) morphine or hydromorphone to oral (PO) oxycodone or hydromorphone, respectively. The above conversion was approved by the Pharmacy and Therapeutics Committee and is incorporated into the hospital IV to PO policy. The conversion will be made if the patient meets inclusion criteria defined by the policy. The primary outcome is IV morphine and hydromorphone usage in the inpatient setting.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the impact of automatic IV to PO opioid conversions

Self Assessment: Which of the following is NOT a goal of an automatic IV to PO opioid policy? A. Combat injectable opioid drug shortages B. Eliminate opioid use only in the inpatient setting C. Limit the duration of injectable opioid use D. Facilitate discharge planning

ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: N2008 Category: Pain Management I

ADVERSE EFFECTS ASSOCIATED WITH THE INPATIENT USE OF KETOROLAC
Nicole Lucia-UF Health Jacksonville

Purpose/Background: In light of the opioid epidemic the use of non-opioid analogues has increased, however these agents are not without risk. Ketorolac, a non-steroidal anti-inflammatory drug (NSAID) can cause a reduction in prostaglandin formation reducing renal perfusion, leading to reduced kidney function. Additionally, an increased risk of bleeding occurs due to the reversible inhibition of platelet aggregation. Current literature supports that an increased dose is not associated with increased analgesia, only with potential increased adverse drug reactions. The purpose of this study is to assess how ketorolac dose selection and duration correlates to frequency of ADRs.

Methodology: This is a single center, retrospective chart review comparing patients receiving a total daily dose of 30 mg. Primary outcome is a composite of an occurrence of acute kidney injury or major bleed. Secondary outcomes include nephrology consultation and need for renal replacement therapy after ketorolac initiation.

Results/Conclusions: A preliminary analysis of 124 patients (59 patients 30 mg) was completed. There was no difference in the composite primary endpoint of acute kidney injury (23.7% vs. 29.2%, p=0.55) or major bleed (16.9% vs. 26.3%, p=0.28). There was no difference in renal function in a preliminary analysis, adverse events related to need for nephrology consultation, initiation of renal replacement therapy, or major bleed were not influenced by total daily ketorolac dose or duration. However, further analysis is needed to elucidate

Presentation Objective: Identify potential dose and duration related adverse events with ketorolac administration

Self Assessment: Which of the follow is a way to reduce the risk of renal impairment while a patient is receiving ketorolac?

ABSTRACT REPRODUCTION FORM


IMPACT OF ENTERAL METHADONE ON POSTOPERATIVE PAIN AND OPIOID UTILIZATION
Erin Maxwell-UF Health Jacksonville

Purpose/Background: A majority of surgical patients experience postoperative pain which can have long-term impact on morbidity and functionality. With its long half-life and dual mechanism as an opiate agonist and NMDA antagonist, a single intravenous dose of preoperative methadone is a prevalent option for managing postoperative pain. Following the 2018 opioid shortage, our institution has used enteral methadone for various surgical procedures. The purpose of this study was to evaluate the efficacy of enteral methadone for postoperative pain management.

Methodology: This was a single-center, retrospective review of patients receiving preoperative enteral methadone compared with those receiving standard therapy. The primary outcome was postoperative opioid requirement as oral morphine equivalents (ME) in the first 24 hours following surgery. Secondary outcomes included patient-reported pain scores 24 hours after surgery as reported by visual analog scale (VAS), cumulative opioid requirements at 48 hours, and time to successful extubation.

Results/Conclusions: A preliminary analysis of 156 patients (97 methadone, 59 control) was completed. There was no difference in median postoperative ME requirements at 24 (37.5 vs 53.7 mg ME; p=0.189) or 48 hours (67.5 vs 86.3 mg ME; p=0.655). There was no difference in med in a preliminary analysis, methadone was not associated with reduced postoperative opioid requirements or pain scores compared with standard therapy, but was associated with longer time to extubation. Data collection is ongoing.

Presentation Objective: Discuss the role of adequate perioperative analgesia in managing postoperative pain scores and reducing opioid utilization

Self Assessment: Which of the following is NOT a goal of adequate perioperative pain management? A. Achieve early mobilization B. Reduce hospital length of stay C. Eliminate opioid use completely D. Prevent chronic pain or complications

ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: N2005 Category: Transitions of Care I

EVALUATION OF PHARMACY-LED DISCHARGE COUNSELING IN PATIENTS AT HIGH RISK OF READMISSION
Kristen Mendoza-Bayfront Health St. Petersburg

Purpose/Background: Patients transitioning among different levels of acuity are at risk for medication errors. One in five patients discharged suffer an adverse event, 72% of which relate to medications. Risk factors contributing to readmission from medication errors include lack of patient education, lack of adherence, patient misunderstanding instructions, drug interactions and duplication of therapy. Top three high risk medications associated with readmission at Bayfront Health include hypoglycemics, anticoagulants and opiates. This initiated a new process in discharge counseling by pharmacy students and a program evaluation on readmission rates.

Methodology: This is a retrospective chart review for program evaluation of readmission rates between patients who received standard of care discharge counseling versus pharmacy student discharge education in addition to standard of care discharge counseling. Data was obtained from November 2017 to March 2018 and November 2018 to March 2019 in the pre and post groups. Subjects were included if they were discharged home on a hypoglycemic, anticoagulant or opiate. The primary outcome was to assess 30-day readmission rate of patients who received medication counseling at discharge via standard of care versus pharmacy student plus standard of care. Secondary outcomes include comparing reason for readmission and quantify the average number of patients per week on high-risk medications requiring discharge education, and time required for education counseling.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize risk factors associated with readmission

Self Assessment: Which of the following put a patient at high risk of readmission? A. ≥ 80 years of age B. ≥ 3 comorbidities C. Depression D. A and B E. A and C
## IMPACT OF PHARMACIST FACILITATED DISCHARGE MEDICATION RECONCILIATION ON HOSPITAL READMISSIONS

**Virginia Davis-Florida Hospital Altamonte**

### Purpose/Background:
Hospital readmissions are often attributed to preventable adverse drug events occurring after discharge. Approximately 11-23% of patients have an adverse drug event following discharge and nearly 50-60% of these adverse drug events are preventable. These errors can lead to increased hospital readmissions, lower reimbursement rates for hospitals, and poor patient outcomes. Inadequate discharge medication reconciliations are responsible for many of the medication errors resulting in adverse drug events. The purpose of the study was to evaluate the impact of implementing a pharmacist-facilitated discharge medication reconciliation process on hospital readmission rates.

### Methodology:
This pre-post quasi-experimental quality improvement pilot study was conducted from October 2018 through January 2019 at AdventHealth Altamonte, on the 36-bed cardiac patient care unit. Adult Medicare patients with one or more high risk medications, delineated by the hospital administration, were eligible for enrollment. High risk medications were defined as antihyperglycemics, opioids, or anticoagulants. Those medications were identified from the admission medication list or medication administration record. Discharge medication reconciliations were only performed during the prospective period by day shift pharmacists. The primary outcome included 30-day readmission rates after the point of discharge in both the control and intervention group. Secondary outcomes included number of recommendations made, percentage of accepted recommendations, and the types of recommended interventions.

### Results/Conclusions:
Results and conclusions will be presented at the Florida Residency Conference.

### Self Assessment:
True or False: Most interventions were not accepted by physicians?

---

## ASSESSING PHARMACIST DISCHARGE MEDICATION REVIEWS ON 30-DAY HOSPITAL READMISSION RATES IN PATIENTS DISCHARGED TO SKILLED NURSING FACILITIES

**Justin Silangil-Holy Cross Hospital**

### Purpose/Background:
Quality-based incentives for both hospitals and skilled nursing facilities (SNF) promote improvements in patients' transitions of care from acute care to long-term care settings. Studies assessing the impact of pharmacist interventions on 30-day readmissions for patients discharged to SNFs are limited. A pharmacist intervention involving comprehensive reviews of discharge medications were implemented at Holy Cross hospital with the goal of improving transitions of care.

### Methodology:
This was an IRB approved retrospective cohort study designed to determine the effect of pharmacist discharge medication reviews on 30-day all-cause readmission rates for patients discharged to a SNF. Patients who were 18 years and older, admitted to the hospital, and being discharged to a SNF were included in the study. Prior to interventions, data was collected on 89 patients who were admitted in October 2017. Medications reviews were conducted on 89 patients (October 2018 to January 2019). Data was collected using the electronic health records on these 178 patients. The primary outcome were 30-day all-cause readmission rates. The secondary outcome were 30-day emergency department (ED) rates.

### Results/Conclusions:
Prior to interventions, 30-day readmissions were 21% and 30-day ED visits were 7%. After implementation of interventions, 30-day readmissions decreased and were found to be 13% while 30-day ED visits were 1%. Significant medication errors identified included. The impact of pharmacist discharge medication reviews on patients being discharged to a SNF may have led to a decrease in 30-day readmission rates and ED visits.

### Self Assessment:
What was the most common medication error identified?
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session II

May 16, 2019
2:20-3:20pm
Another outcome evaluated was ADRs related to warfarin. Each of these timepoints was calculated and averaged between all study patients. HCV treatment, and 12 weeks following HCV treatment. Differences between WSI at INR reading. WSI was calculated at each patient's initiation of DAA, at completion of average daily warfarin dose from the 7 days of cumulative warfarin doses prior to 22x180 resumption of warfarin. For the purpose of this study was to determine the impact of selected DAA medications on INR and risk of warfarin related adverse drug reactions (ADRs) during HCV treatment course and twelve weeks after HCV treatment has been completed.

**Methodology:** This was a retrospective cohort study conducted within the Bay Pines Veterans Affairs Healthcare System. This study consists solely of data extraction and retrospective chart review. A sampling of up to 50 patients was collected. The primary endpoint was change in warfarin dose during HCV treatment. The secondary endpoint was WSI at INR reading. WSI was calculated at each patient's initiation of DAA, at completion of HCV treatment, and 12 weeks following HCV treatment. Differences between WSI at each of these timepoints was calculated and averaged between all study patients.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Evaluate the financial and clinical opportunities for the adoption of a nebulizer-based formulary in place of metered-dose inhalers and dry powder inhalers. Studies assessing the effectiveness of 4-factor prothrombin complex concentrate (PCC) for factor Xa inhibitor-associated major bleeding are limited. Currently, there is no head-to-head data comparing the two treatment strategies. The purpose of this study is to assess the safety and efficacy of andexanet alfa vs 4-factor PCC for the reversal of factor Xa inhibitor-related bleedings in the setting of intracranial hemorrhage (ICH).

**Methodology:** This multicenter, retrospective, matched cohort, IRB-approved study includes patients 18 years and older on a factor Xa inhibitor (apixaban, edoxaban, or rivaroxaban) that developed an ICH and received andexanet alfa or 4-factor PCC for anticoagulation reversal. Andexanet alfa patients have been matched with historical controls based on age and type of bleed. The primary outcome is the percent of patients with a hemostatic effectiveness rating categorized as excellent or good on repeat head CT scan using criteria from the ANNEXA 4 trial. Patients transferred to hospice or expiring prior to a repeat scan are classified as poor responders. Secondary efficacy outcomes include in-hospital mortality, ICU length of stay (LOS), hospital LOS, proportion of patients requiring surgical intervention to treat ICH at 72 hours, and patient disposition. Safety outcomes include thromboembolic events occurring before day 7 and discharge, and 30-day readmission rates due to a thromboembolic event.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Discuss the differences between andexanet alfa and 4-factor PCC for the reversal of factor Xa inhibitors in the setting of intracranial hemorrhage. Andexanet alfa is the first FDA approved reversal agent for life-threatening or uncontrolled bleeding associated with factor Xa inhibitors. Studies assessing the effectiveness of 4-factor prothrombin complex concentrate (PCC) for factor Xa inhibitor-associated major bleeding are limited. Currently, there is no head-to-head data comparing the two treatment strategies. The purpose of this study is to assess the safety and efficacy of andexanet alfa vs 4-factor PCC for the reversal of factor Xa inhibitor-related bleedings in the setting of intracranial hemorrhage (ICH).

**Methodology:** This multicenter, retrospective, matched cohort, IRB-approved study includes patients 18 years and older on a factor Xa inhibitor (apixaban, edoxaban, or rivaroxaban) that developed an ICH and received andexanet alfa or 4-factor PCC for anticoagulation reversal. Andexanet alfa patients have been matched with historical controls based on age and type of bleed. The primary outcome is the percent of patients with a hemostatic effectiveness rating categorized as excellent or good on repeat head CT scan using criteria from the ANNEXA 4 trial. Patients transferred to hospice or expiring prior to a repeat scan are classified as poor responders. Secondary efficacy outcomes include in-hospital mortality, ICU length of stay (LOS), hospital LOS, proportion of patients requiring surgical intervention to treat ICH at 72 hours, and patient disposition. Safety outcomes include thromboembolic events occurring before day 7 and discharge, and 30-day readmission rates due to a thromboembolic event.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Discuss the differences between andexanet alfa and 4-factor PCC for the reversal of factor Xa inhibitors in the setting of intracranial hemorrhage. Andexanet alfa is the first FDA approved reversal agent for life-threatening or uncontrolled bleeding associated with factor Xa inhibitors. Studies assessing the effectiveness of 4-factor prothrombin complex concentrate (PCC) for factor Xa inhibitor-associated major bleeding are limited. Currently, there is no head-to-head data comparing the two treatment strategies. The purpose of this study is to assess the safety and efficacy of andexanet alfa vs 4-factor PCC for the reversal of factor Xa inhibitor-related bleedings in the setting of intracranial hemorrhage (ICH).

**Methodology:** This multicenter, retrospective, matched cohort, IRB-approved study includes patients 18 years and older on a factor Xa inhibitor (apixaban, edoxaban, or rivaroxaban) that developed an ICH and received andexanet alfa or 4-factor PCC for anticoagulation reversal. Andexanet alfa patients have been matched with historical controls based on age and type of bleed. The primary outcome is the percent of patients with a hemostatic effectiveness rating categorized as excellent or good on repeat head CT scan using criteria from the ANNEXA 4 trial. Patients transferred to hospice or expiring prior to a repeat scan are classified as poor responders. Secondary efficacy outcomes include in-hospital mortality, ICU length of stay (LOS), hospital LOS, proportion of patients requiring surgical intervention to treat ICH at 72 hours, and patient disposition. Safety outcomes include thromboembolic events occurring before day 7 and discharge, and 30-day readmission rates due to a thromboembolic event.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.
Purpose/Background: Improper dosing of intravenous unfractionated heparin (IV-UFH) leads to increased morbidity and mortality. The variability of the pharmacokinetic profile and testing methods of IV-UFH has led to research focused on identifying a unified dosing and monitoring strategy that optimizes efficacy while diminishing adverse outcomes. Recent studies suggest that indication specific weight-based dosing and anti-factor Xa level monitoring are a safe and reliable way to decrease time to therapeutic range and rate of negative outcomes. The current protocol for IV-UFH dosing and monitoring at North Florida/South Georgia Veterans Health System (NFSG VHS) utilizes a patient specific estimated blood volume (EBV) calculation and recommends dose adjustments based on anti-factor Xa levels. The purpose of this study is to evaluate the safety and efficacy of the IV-UFH protocol for management of various thromboembolic disorders and compare current practices to available literature.

Methodology: This was a retrospective chart review conducted at multiple sites within NFSG VHS (Gainesville and Lake City campuses). Data was obtained from April 2018 to July 2018 from the electronic medical record. Subjects were included if they received IV-UFH for at least twenty-four hours. The primary outcomes are rate of thromboembolic event recurrence and number of patients who reached therapeutic range within the first 24 hours of IV-UFH initiation. Secondary outcomes include: anticoagulation status before and after hospitalization, number of supra-therapeutic anti-factor Xa levels, and time to pharmacist verification of IV-UFH order. Analyzed data will be compared to current evidenced-based literature on IV IV-UFH management practices.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Compare outcomes between EBV dosing and indication specific weight-based dosing of UFH

Self Assessment: Which of the following is the reasonable IV-UFH dosing adjustments based on anti-factor Xa levels? A. Conflicting literature findings B. Patient demographic variability C. Variability of laboratory testing results D. Lack of reliable source of guidance

ABSTRACT REPRODUCTION FORM

IMPACT OF EARLY VERSUS LATE INITIATION OF CISATRACURIUM IN PATIENTS DIAGNOSED WITH ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS)

Nayeli Montes-St. Vincent's Healthcare

Purpose/Background: Acute respiratory distress syndrome (ARDS) is considered a life-threatening disease characterized by diffuse, inflammatory lung injury leading to impaired pulmonary oxygenation. Treatment modalities focus on lung-protective ventilation strategies and can include proning patients to reduce mortality. Cisatracurium has been shown to increase lung-recruitment and improve oxygenation, decrease volutrauma and the production of pro-inflammatory mediators. Currently, studies have emphasized the use of cisatracurium in the early phases of ARDS but have not evaluated its effect on the later stages of ARDS. This study was designed to measure the impact of early versus late initiation of cisatracurium on ICU mortality.

Methodology: A multicenter, retrospective study conducted at St. Vincent's Healthcare included patients from July 2013 through October 2018. Patients greater than 18 years of age that were admitted to the ICU were included. Patients were stratified into the early (within 48 hours) or late (after 48 hours) group of ARDS based on the time from their first PaO2/FIO2 ratio of <150 to cisatracurium initiation. Patients were matched based on their APACHE II score and ARDS classification. Patients with pre-existing neuromuscular disease, cerebral edema, intracranial hemorrhage, stroke, lung transplant, pregnancy, or incarceration were excluded. The primary outcome was the comparison of the rate of ICU mortality in early versus late initiation of cisatracurium. Secondary outcomes include ventilation duration, ICU length of stay, and ventilator free days.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the benefits of cisatracurium continuous infusion in ARDS

Self Assessment: Which of the following is not an effect associated with cisatracurium use? A. Improvement in lung-recruitment strategies B. Decreases risk of volutrauma C. Prevention of lung fibrosis D. Decreases production of pro-inflammatory mediators
**Purpose/Background:** The administration of enteral nutrition (EN) early in the course of critical illness has demonstrated: reduction in disease severity, diminished complications, decreased length of stay in the ICU, and favorable patient outcomes. While evidence exists suggesting the safety of EN in most of these conditions, there is an absence of information evaluating the influence of NMB medications on enteral nutrition tolerance as well as the incidence of adverse events. The purpose of this study is to compare adverse effects associated with EN in critically ill patients receiving NMB to patients that are not receiving NMB.

**Methodology:** This is a single center retrospective chart review of patients diagnosed with sepsis or acute respiratory distress syndrome (ARDS) receiving EN comparing those who received vasopressors versus those who received both vasopressors and NMBs. Primary outcome is a composite of vomiting, ileus, bowel ischemia, and acute colonic pseudo obstruction. Secondary outcomes include hospital length of stay (LOS), ICU LOS, 28-day vasopressor-free days, and 28-day ventilator-free days.

**Results/Conclusions:** A preliminary analysis of 74 total patients (13 NMB with vasopressors, 61 vasopressors) was completed. There was no difference in the combined primary endpoint of adverse events in the NMB vs vasopressor arm vs. vasopressor (69.2% vs. 50.8%, p=-0.359). Second In a preliminary analysis, NMBs were not associated with an increase in adverse events and administration of EN should not be delayed. Data collection is ongoing.

**Presentation Objective:** Describe the effects of early administration of enteral nutrition in critical illness

**Self Assessment:** Which of the following has early administration of enteral nutrition not been associated with? A. Reduction in disease severity B. Diminished complications C. Decreased length of ICU stay D. Increased vasopressor requirements

**Purpose/Background:** Diabetic ketoacidosis (DKA) is a potentially life-threatening complication of diabetes. The most common precipitating factors for DKA include infection, medication non-compliance, and inadequate dosing of insulin. Often times patients admitted to an ICU bed, utilizing ICU resources, will experience rapid closure (within 24 hours) of their acidosis and ketosis but remain in the ICU for a prolonged period. The purpose of this study is to identify predictors for patients who may experience rapid closure of their acidosis in the emergency department (ED) with the intent to improve triage, care and ICU resource utilization.

**Methodology:** This is a single center, retrospective chart review study over three years. Inclusion criteria were adult patients diagnosed with DKA in the ED. Exclusion criteria included pregnancy, patients on hemodialysis, those with severe infections, and pancreatitis. The primary endpoint is to identify predictors of patients that may resolve their acidosis and ketosis within 24 hours of presentation.

**Results/Conclusions:** A preliminary analysis of 103 patients was completed, of which 59 had resolution of acidosis within 24 hours. Patients who resolved acidosis within 24 hours had significantly lower initial blood glucose levels (p<0.006) and anion gap (p=0.012) compared with patients whose DKA resolved within 24 hours of presentation were found to have a lower initial blood glucose levels and anion gap. Data collection is ongoing.

**Presentation Objective:** Identify factors associated with DKA resolution within 24 hours of hospital presentation

**Self Assessment:** Which is NOT a common precipitating factor of DKA? A. Infection B. Insulin non-compliance C. Insulin overdose

**Purpose/Background:** Vasopressin receptor antagonists (VRAs), namely tolvaptan and conivaptan, are considered viable treatment options in the management of hypervolemic and euvolemic hyponatremia. These medications promote the excretion of free water without loss of serum electrolytes, resulting in elevated serum sodium. Currently, only oral VRA (i.e., tolvaptan) is on the hospital formulary at the study site. Major safety concerns associated with tolvaptan include the risk of serious liver injury and osmotic demyelination syndrome when sodium is overcorrected. To ensure patient safety, tolvaptan prescribing criteria were developed and implemented. The purpose of this study is to assess compliance with the tolvaptan prescribing criteria and to determine if these criteria improved hyponatremia management.

**Methodology:** A single-centered bi-phasic study was conducted within a community hospital. In phase I, a retrospective chart review of patients who received tolvaptan between July 1, 2017 to December 31, 2017 was conducted to determine the prevalence of free water diuresis with tolvaptan prescription. In phase II, a prospective chart review of patients who received tolvaptan was performed after implementation of the prescribing criteria. A pharmacist was on-call for the prospective chart review who worked in conjunction with the ordering physicians to assess the compliance of tolvaptan orders with the prescribing criteria. Furthermore, clinical outcomes for safety and efficacy during inpatient admission were evaluated. Data was analyzed to determine clinical impact of the prescribing criteria and compliance rates.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Understand the role of tolvaptan in the management of hyponatremia and discuss the clinical impact of pharmacist interventions during implementation of prescribing criteria in a community hospital

**Self Assessment:** Self-Assessment Question: What are the monitoring parameters a pharmacist should assess when verifying an order for tolvaptan? Select all that apply: A. Serum sodium levels B. Urine osmolality C. Urine sodium levels D. Patient's ability to respond to thirst
ABSTRACT REPRODUCTION FORM

Time: 2:40 - 3:00 Room: A1122 Category: Emergency Medicine II

WEIGHT-BASED FLUID RESUSCITATION IN SEPSIS: A COMPARISON BETWEEN TOTAL BODY WEIGHT VERSUS IDEAL BODY WEIGHT
Corey Finnell-Florida Hospital-Celebration Health

Purpose/Background: Changes of SEP-1 CMS core measures now allows medical providers to administer weight-based fluid resuscitation of crystalloid fluids utilizing ideal body weight rather than actual body weight in obese patients that present with sepsis. The aim of this study is to assess for potential changes in hemodynamic effects and reduction in complications that result from excessive fluid administration. The purpose of this study is to help provide guidance in weight-based fluid resuscitation in the early treatment of sepsis in obese and morbidly obese patients.

Methodology: This is an IRB approved multi-centered retrospective chart review conducted at seven sites within the AdventHealth system (Altamonte, Apopka, Celebration, East Orlando, Kissimmee, Orlando, and Winter Park). Subjects were divided based on weight used to calculate fluid resuscitation allowing for dosing based on total body weight and ideal body weight. Data was obtained from December 1st, 2018 to December 31st, 2018. The primary outcome was to evaluate key clinical differences in hemodynamic changes including change in mean arterial pressure and time to initiation of vasopressors. Secondary outcomes include changes in incidence rates of short-term complications of fluid overload such as development of congestive heart failure exacerbation, pulmonary edema, hyperchloremic acidosis, or need for hemodialysis.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify key clinical differences between weight-based fluid resuscitation utilizing ideal body weight as compared to total body weight

Self Assessment: Which of the follow is a requirement in order to utilize weight-based fluid resuscitation by current SEP-1 guidelines? A. Body Mass Index greater than 30 kg/m2 B. Documentation that fluid resuscitation was dosed utilizing ideal body weight C. Documentation of the calculated ideal body weight used D. All of the above are correct

ABSTRACT REPRODUCTION FORM

Time: 2:20 - 2:40 Room: 1209-C Category: Infectious Diseases III

CARBAPENEM-SPARING AGENTS IN THE MANAGEMENT OF LOWER URINARY TRACT INFECTIONS CAUSED BY EXTENDED-SPECTRUM BETA-LACTAMASE-PRODUCING ESCERICHIA COLI
Laleh Emami-AdventHealth Tampa

Purpose/Background: E. coli is a common pathogen both in community-acquired and hospital-acquired urinary tract infection (UTI). The spread of extended-spectrum beta-lactamase (ESBL)-producing organisms has increased in both community and health care settings, reducing the number of therapeutic options for those infections. Carbapenems are generally considered the drug of choice for ESBL-producing organism infections due to their stability against ESBLs and are thus utilized frequently in practice. However, the judicious use of carbapenems is in the interest of antimicrobial stewardship programs to combat emergence of carbapenem-resistant gram-negative organisms. The objective of this study is to review the utilization of carbapenems in lower UTI at our institution and assess carbapenem sparing options in selected patients by creating an ESBL E. coli treatment algorithm supported by the available literature for treatment of ESBL in lower UTI.

Methodology: PowerSight will be used to identify patients who grew ESBL E. coli from their urine culture. The electronic medical record (EMR) will then be reviewed and subjects of age >=18 with a lower UTI and no other source of infection will be included. The following data will be collected when available: susceptibility to amikacin, gentamicin, tobramycin, ciprofloxacin, meropenem, nitrofurantoin, piperacillin/tazobactam, sulfamethoxazole/trimethoprim, fosfomycin and all antimicrobials used for treatment. The carbapenem-sparing ESBL E. coli treatment algorithm recommendations will be compared to actual treatment utilized in practice. Differences will be documented, and the result of the study will be used to estimate the reduction in carbapenem days of therapy.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the carbapenem sparing agents in the management of lower urinary tract infections caused by extended-spectrum beta-lactamase-producing Escherichia coli

Self Assessment: True or False: Regardless of the source of infection and antimicrobial sensitivity, ESBL producing E.coli should be treated with a carbapenem.

ABSTRACT REPRODUCTION FORM

Time: 3:00 - 3:20 Room: A1122 Category: Emergency Medicine II

CLINICAL PHARMACIST INTEGRATION INTO THE RAPID RESPONSE TEAM AT A COMMUNITY HOSPITAL
Kihara P. Couvertier-St. Anthony’s Hospital

Purpose/Background: The purpose of the Rapid Response Team (RRT) is to provide prompt therapy to patients to prevent a cardiac or pulmonary arrest. As a member of the RRT, pharmacists can make a huge impact through facilitating medication delivery, optimizing pharmacotherapy, and reducing medication errors. As the drug experts, they can make medication-specific recommendations regarding drug selection, doses, rate of administration, and omissions. They can also give general drug information and help promptly dispense medications that are not easily accessible on the unit. The purpose of this investigation is to measure the impact of a pharmacist on the RRT.

Methodology: This is a retrospective observational pre and post clinical intervention study aimed to evaluate the addition of clinical pharmacy services into the RRT for patients admitted to St. Anthony's Hospital. Data were collected from rapid responses that occurred between January-July 2017 to January-July 2018 to compare and evaluate time of medication administration, and pharmacist time at rapid during pre and post-intervention. The primary outcomes are the time to medication administration, defined as the time from medication order entry during a rapid response to medication administration, with a goal turnaround time of less than 20 minutes, and duration of pharmacy services at rapid responses. Secondary outcomes include number of rapid responses that resulted in an initial ICU admission, type of pharmacy intervention (defined as patient safety, medication-related, therapeutic recommendation, or no clinical intervention needed), total length of hospital stay, and survival to hospital discharge for patients involved in a rapid response event.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the impact of pharmacist on the RRT

Self Assessment: What is the goal time of medication order to administration? A. 30 minutes B. 25 minutes C. Less than 20 minutes D. 30-60 minutes

ABSTRACT REPRODUCTION FORM

Time: 2:40 - 3:00 Room: 1209-C Category: Infectious Diseases III

ASSESSMENT OF PROCALCITONIN UTILIZATION IN LOWER RESPIRATORY TRACT INFECTIONS: A RETROSPECTIVE CHART REVIEW
Barbara Sub-Adventhealth Winter Park

Purpose/Background: Procalcitonin (PCT) is a peptide precursor of the hormone calcitonin released in response to bacterial infections via direct stimulation of toxins or pro-inflammatory mediators. It rapidly increases within 2-4 hours in response to a bacterial infection and decreases by 50% as the infection becomes controlled. The 2016 HAP/VAP IDSA guidelines recommend PCT as a biomarker to aid in antimicrobial de-escalation. The beneficial Impact of PCT utilization is well described in literature, including previous studies at AdventHealth that evaluated a PCT algorithm in pneumonia and sepsis/septic shock patients in the ICU setting. However, there is paucity in the comprehension of the appropriate use of PCT as a diagnostic marker. The objective of this study was to investigate PCT utilization in patients with lower respiratory tract infections and to assess the potential benefits of discontinuing antibiotics in patients with negative procalcitonin levels.

Methodology: This was a retrospective chart review from December 2017- March 2018 conducted at multiple sites of AdventHealth system (Altamonte, Apopka, Celebration, East Orlando, Kissimmee, Orlando, Winter Park). Adult patients admitted with lower respiratory tract infections (LRTI), a negative PCT level (< 0.25 ng/ml), and respiratory polymerase chain reaction (PCR) were included. The primary endpoint was to evaluate potential antibiotic days saved and potential cost savings. Secondary endpoints include, hospital length of stay (LOS), total cost of care, and cost of antibiotic therapy.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the role of PCT as a tool for antimicrobial stewardship in a Health System

Self Assessment: How can PCT in addition to clinical assessment be used in optimizing patient care? A. Increase duration of therapy B. Save the hospital money C. Initiate antibiotics D. De-escalate antibiotics
**ABSTRACT REPRODUCTION FORM**

**Impact of Pharmacist-Led Rapid Diagnostic Antimicrobial Stewardship Interventions on Patient Outcomes**

Adia Adkins-Tallahassee Memorial Healthcare

**Purpose/Background:** The American Society of Health-System Pharmacists (ASHP) strongly advocates for the role of pharmacists in antimicrobial stewardship programs to improve patient outcomes. It is known that rapid diagnostic testing (RDT) provides details about the patient's infection more quickly than traditional blood cultures. However, it is equally important that these results are promptly acted on. Rapid diagnostic testing with an active antimicrobial stewardship program in higher success rates, but there are also studies that show that sending results specifically to a pharmacist provides additional benefit. Qualified pharmacists can assist in the assessment of the RDT results and provide recommendations to the provider as soon as these results are available to potentially reduce the time to appropriate therapy. This project seeks to explore the pharmacist's role in the use of rapid diagnostic testing to facilitate early appropriate treatment of bloodstream infections to improve patient outcomes.

**Methodology:** A retrospective chart review was performed between October and December 2018 of patients admitted to TMH. The intervention was initiated in mid-December 2018 and continued until February 2019. The primary outcome was the time to initiation of appropriate therapy and secondary outcomes included time to organism identification and duration of therapy.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe the potential role of having a pharmacist actively intervene upon results of rapid diagnostic tests

**Self Assessment:** What is the primary role of the pharmacist in assessing the results of RDT?

---

**ABSTRACT REPRODUCTION FORM**

**Impact of Short-Term Antibiotic Duration for Bacteremia Secondary to Intra-Abdominal Infection (IAI) Prophylaxis and Treatment**

Khushboo Patel-UF Health Shands

**Purpose/Background:** A common source of bloodstream infections in the intensive care unit includes intra-abdominal infections (IAIs). The appropriate management of IAIs is source control and antibiotic therapy. Guidelines recommend a 7-day antibiotic duration after source control for bacteremia secondary to IAIs. The purpose of this study is to compare patient outcomes between patients receiving a short course of antibiotics (< 7 days) versus a longer course of antibiotics (> 7 days).

**Methodology:** Patients admitted to surgical ICUs from January 2014 to July 2017 with a diagnosis of an IAI requiring surgical intervention as well as a bloodstream infection were eligible for inclusion. Exclusion criteria included Staphylococcal or fungal bloodstream infections, bacteremia from non-intra-abdominal sources, no source control achieved, pregnant women, or prisoners. The primary outcome was the incidence of recurrent of IAIs.

**Results/Conclusions:** A total of 47 patients met inclusion criteria; 18 patients received < 7 days of antibiotics compared to 29 patients that received > 7 days of antibiotics. There was no statistical difference between the incidence of recurrent IAIs [1/18 (5.6%) vs. 4/29 (13.8%)]. Despite the difference in antibiotic days after source control, there was not a statistically significant difference in rates of recurrent IAI or recurrent SSI in patients with bacteremia secondary to IAI. This study adds to existing data supporting the g

**Presentation Objective:** Compare outcomes between patients receiving short-term antibiotics vs. long-term antibiotics for bacteremia secondary to intra-abdominal infections

**Self Assessment:** Which of the following is true comparing short versus longer course of antibiotics in regards to recurrent IAI? A. Longer course of antibiotics reduce rate of recurrent IAI B. Shorter course of antibiotics is associated with increased rate of recurrent IAI C. No difference seen in the rate of recurrent IAI between short vs longer course of antibiotics

---

**ABSTRACT REPRODUCTION FORM**

**Evaluation of Risk Factors Associated with Candidemia in Adult and Pediatric Patients**

Lisa Clark-Tampa General Hospital

**Purpose/Background:** Candidemia is a life-threatening bloodstream infection caused by the fungus Candida that requires urgent treatment. The Infectious Disease Society of America (IDSA) reports that candidemia is the fourth most common healthcare-associated bloodstream infection in the United States. Prompt initiation of antifungals in patients who develop candidemia has been shown to significantly reduce mortality compared to delayed initiation. IDSA guidelines have identified common risk factors for candidemia; however, evaluation of candidemia has yet to be completed at Tampa General Hospital (TGH) and may highlight the significance in early detection in our patient population.

**Methodology:** This was a retrospective chart review of patients who presented to TGH with positive blood cultures for Candida species between January 1, 2012 and December 31, 2017. Patients were excluded if they presented to TGH with recurrent candidemia or if they were transferred to TGH with a positive blood culture for Candida species at an outside facility. The primary outcome was to evaluate risk factors in patients who developed candidemia at our institution. Secondary outcomes included annual incidence rates per 1,000 patient days, Candida species distribution, and a comparison of T2Candida® panel results to blood culture results. Descriptive statistics and risk factor analyses were performed on the data using STATA version 15.1, as appropriate.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize the risk factors for candidemia

**Self Assessment:** Which of the following was the most commonly isolated Candida species at TGH? A. Candida glabrata B. Candida albicans C. Candida tropicalis D. Candida parapsilosis

---

**ABSTRACT REPRODUCTION FORM**

**Pharmacovigilance of Preoperative Antimicrobial Prophylaxis in Patients Undergoing Abdominal Hysterectomy and Colon Resection Procedure**

Felix Sanchez-Winter Haven Hospital

**Purpose/Background:** Surgical Site infections are a major contributor to patient injury, mortality, and healthcare cost. The effectiveness of preoperative antimicrobials for the prevention ofSSI has been established since the 1960s and is one of the most widely accepted practices in surgery. Despite the evidence, inappropriate use of antimicrobials prior to surgical procedures continues. Ideally an antimicrobial agent should be active against the pathogens, be administered in an appropriate dose and time to ensure tissue concentrations during the period of potential contamination.

**Methodology:** Study Design: Single center retrospective, ongoing medical chart review. Patients: This study will be completed at the Winter Haven Hospital facility where data will be collected from patients of two different cohorts only after hospital discharge. It will include patients undergoing colorectal surgeries and hysterectomies. The first cohort will be the control group and it will range from the dates of December 1st 2017 to May 31st 2018. The control group will not be impacted by pharmacist-led interventions and will serve as a direct comparison to the second cohort. The second cohort will range from June 1st 2018 to December 31st 2018. The second cohort will serve as the intervention arm and will be utilized to measure the impact of pharmacist-led interventions. The quantitative discrete data comparing the outcomes of the control and intervention arm will be measured utilizing the Wilcoxon signed-rank test where a p-value less than 0.05 will be considered statistically significant.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Evaluate the impact of pharmacist led intervention to ensure the appropriate utilization of perioperative antibiotics for elected surgical procedures

**Self Assessment:** What was the overall impact of the pharmacy team at Winter Haven Hospital in ensuring the appropriate selection of perioperative antibiotics prior to abdominal hysterecrtomies or colon resection procedures? A. There was a decrease in inappropriate perioperative antibiotic prescribing for elective surgeries with an increase in hospital acquired infection. B. There was an increase in the inappropriate perioperative antibiotic prescribing for elective surgeries with a decrease in hospital acquired infection. C. There was a decrease in the inappropriate perioperative antibiotic prescribing for elective surgeries with a decrease in hospital acquired infection. D. The pharmacist led intervention resulted in no changes in patient outcomes

---
**ABSTRACT REPRODUCTION FORM**

**Time:** 2:20 - 2:40 Room: L1003 Category: Internal Medicine II

**TO EVALUATE THE OVERALL USAGE OF INTRAVENOUS IMMUNOGLOBULIN (IVIG) (DOSE, INDICATION, PRODUCT SELECTION) AND STANDARDIZED DOING TO AN ADJUSTED WEIGHT**

Kasraie Williamson-Memorial Regional Hospital

**Purpose/Background:** Intravenous immunoglobulin (IVig) is a solution of human plasma protein with a broad spectrum of antibody activities. IVig is prepared from large pools of human plasma collected from several thousand blood donors and contains the typical IgG antibodies found in the normal population. To date, its use has expanded beyond the treatment of primary immunodeficiency to include a wide range of autoimmune and inflammatory conditions such as idiopathic thrombocytopenia purpura (ITP), Guillain-Barre syndrome, and Kawasaki disease. More recently, studies have demonstrated benefits when IVig is used in combination with rituximab in the setting of solid organ transplant. IVig is thought to exert its immunomodulatory effects by downregulating B-cell proliferation and blocking Fc receptor mediated activities.

**Methodology:** This retrospective single center analysis was conducted at an acute care community hospital in Hollywood, Florida during the months of June 1st 2017 to June 30th, 2018. One hundred patients between the ages of 18 and 65 who received IVig were identified using the institution's electronic medical record. Characteristics of interest include patient demographics; indications; location of patient; dosing weight; baseline studies of immunology, renal, and hematologic function; dispensing and administration practices; and monitoring of adverse reactions (thrombocytopenia, neutropenia, anaphylaxis). The primary objectives of this study is to examine the clinical use of IVig, determine its criterion for selection, and to assess current dosing strategies at a large tertiary medical center.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Examine the clinical use of IVig, determine its criterion for selection, and to assess current dosing strategies at a large tertiary medical center.

**Self Assessment:** What are some practical considerations that practitioners can use to reduce the risk of acute renal failure with IVig administration? A. Reduce the rate of administration B. Do not exceed recommended dose C. Provide adequate hydration prior to infusion D. Assess patient's renal function after each treatment E. All of the above

**ABSTRACT REPRODUCTION FORM**

**Time:** 2:40 - 3:00 Room: L1003 Category: Internal Medicine II

**ASSOCIATION OF TIME TO THERAPEUTIC CALCINEURIN INHIBITOR (CNI) LEVELS TO BIOPSY-PROVEN ACUTE REJECTION (BPAR) AFTER HEART TRANSPLANTATION**

Alicia Patel-Mayo Clinic Florida

**Purpose/Background:** The primary objective was freedom from BPAR at 1, 3, 6 and 12 months. Secondary objectives included time to first rejection; renal function via serum creatinine (SCr) pre-transplant, pre- and post-CNI initiation, and at discharge; and one-year survival.

**Methodology:** This single-center, observational, retrospective review included 83 adult patients who underwent heart transplantation between January 2012 - October 2017 and received induction therapy with rATG. Patients were stratified into four groups by time to therapeutic CNI levels post-transplant: < 7 days (Group 1), < 30 days (Group 2), < 60 days (Group 3), and > 60 days (Group 4). Patients who did not receive a CNI as maintenance immunosuppression, received a multi-organ transplant, alemtuzumab or basiliximab as part of induction therapy, a CNI minimization strategy using everolimus or sirolimus, or no induction therapy were excluded.

**Results/Conclusions:** BPAR rates at 12 months were statistically lower in Groups 1 and 4 at 25% and 13%, respectively (p = 0.02). Time to first rejection and SCr were not significantly different, however, trends towards an increase in SCr post-CNI initiation (1.3 mg/dL) in G While a strategy of early time to therapeutic CNI levels had an associated risk of renal injury and infection, delayed time to therapeutic CNI levels (> 30 days post-transplant) was not associated with an increased risk of BPAR.

**Presentation Objective:** Evaluate freedom from BPAR at 1, 3, 6 and 12 months.

**Self Assessment:** True or False: Patients who achieved therapeutic CNI levels more quickly (< 7 days) had the lowest rejection rates among all four groups.

**ABSTRACT REPRODUCTION FORM**

**Time:** 3:00 - 3:20 Room: L1003 Category: Internal Medicine II

**COMPLIANCE RATES OF AN INPATIENT ALCOHOL WITHDRAWAL ASSESSMENT AND TREATMENT PROTOCOL**

Whitney D. Nichols-Baptist Hospital

**Purpose/Background:** The Clinical Institute Withdrawal Assessment for Alcohol-Revized (CIWA-Ar) is a validated assessment tool designed to provide an efficient and effective quantification of alcohol withdrawal. The symptoms of alcohol withdrawal range from mild to life-threatening and benzodiazepines are considered the gold standard to treat withdrawal symptoms. The revised (CIWA-Ar) is a validated assessment tool designed to provide an efficient and effective quantification of alcohol withdrawal. The symptoms of alcohol withdrawal range from mild to life-threatening and benzodiazepines are considered the gold standard to treat withdrawal symptoms. The CIWA-Ar scale to determine appropriate doses of benzodiazepines to be administered as prevent alcohol withdrawal symptoms from progressing. Baptist Health Care utilizes the STAW protocol before and after implementation of process changes and to identify other withdrawal symptoms.

**Methodology:** This study examines the CIWA-Ar scores for patients admitted to Baptist Hospital or Gulf Breeze Hospital and initiated on the STAW protocol were identified by the electronic medical record (EMR). Audits assessing compliance to the protocol were performed before and after implementing the nursing and administration education and EMR updates. The primary outcome evaluated was the number of appropriately administered benzodiazepine doses corresponding to CIWA-Ar scores. Secondary outcomes included assessment of CIWA-Ar scores at least every 4 hours, completion of reassessment following administration doses of benzodiazepines, and appropriate administration of magnesium supplementation.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize areas for improvement in Symptom Triggered Alcohol Withdrawal protocol assessment/medication administration processes

**Self Assessment:** Based on the results of this evaluation, which of the following compliance audit outcomes was determined to be in greatest need of improvement at Baptist Health Care? A. Assessment of patients using CIWA-Ar scale at least every 4 hours B. Reassessment of patients using CIWA-Ar scale following administration of benzodiazepines C. Appropriate administration of magnesium supplementation D. Number of appropriately administered benzodiazepine doses

**ABSTRACT REPRODUCTION FORM**

**Time:** 2:20 - 2:40 Room: CLC Category: Oncology I

**EVALUATION OF ANTIBIOTIC ADMINISTRATION TIMES AFTER THE STANDARDIZATION OF A FEBRILE NEUTROPHILIC ELECTRONIC ORDER SET**

Zakary Doran-St. Joseph's Hospital

**Purpose/Background:** Several studies have looked into the implementation of a standard treatment protocol to aid in early identification and standardization of the treatment of febrile neutropenia (FN). These interventions have shown positive results in the management of FN by decreasing time to antibiotic administration, vancomycin overuse, length of hospital stay, and in some cases mortality. The purpose of this study is to investigate if the implementation of an electronic order set for FN is associated with a reduction in antibiotic administration times.

**Methodology:** This IRB-approved, single center, ongoing retrospective chart review examines the antibiotic administration times in patients from January 2018 to March 2018 prior to a standardized electronic order set compared to patients presenting from January 2019 to April 2019 after the initiation of the electronic order set. Patients who were 18 years of age, admitted to the hospital, have a diagnosis of FN, and diagnosis of cancer will be included. Patients will be excluded if they are a direct admission already receiving treatment for FN, receiving an antipseudomonal beta-lactam for another indication, or if refusing treatment of oncologic emergencies. The primary objective of this study is to compare antibiotic administration times prior and post implementation of the electronic order set. The secondary objectives will include assessing physician compliance to the electronic order set, appropriate continuation of antimicrobials at 48 hours, vancomycin appropriateness and length of hospital stay.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Compare the antibiotic administration times after the standardization of a febrile neutropenia electronic order set

**Self Assessment:** True or False: The use of an electronic order set can significantly decrease time to administration of antibiotics?
**ABSTRACT REPRODUCTION FORM**

**Time: 2:40 - 3:00 Room: CLC Category: Oncology I**

**STANDARD VERSUS EXTENDED INTERVAL DENOSUMAB IN ONCOLOGY PATIENTS**
Eric Gaskill-Orlando Health

**Purpose/Background:** Skeletal-related events (SRE) are a significant cause of morbidity in oncology patients. Intravenous bisphosphonates or denosumab are used for the prevention of SRE in patients with bone metastases. Denosumab has shown superiority to zoledronic acid for prevention of SRE in breast and prostate cancer populations. Studies support extending the dosing interval of zoledronic acid from monthly to every 3 months in these populations after 1 year without adversely affecting outcomes. Little data is available supporting usage of denosumab extended interval dosing. This IRB approved retrospective cohort study evaluated oncology patients who received denosumab at Orlando Health.

**Methodology:** Primary objective: Compare the rate of SRE between patients on denosumab every 28 days and patients receiving extended interval denosumab (every 8 to 12 weeks). Secondary objectives: Incidence of osteonecrosis of the jaw (ONJ), electrolyte abnormalities, and comparison of the incidence of SRE in patients receiving denosumab every 4 weeks for 1 year then receiving extended intervals versus denosumab every 4 weeks Design: Patients were included for each interval of denosumab they received for at least 1 year. Patients were excluded if they received denosumab for other indications, at 5 to 7 week intervals, at intervals > 12 weeks, or if their intervals changed multiple times within a year.

**Results/Conclusions:** SREs did not differ statistically in the extended interval denosumab group compared to the standard interval group (9/77 vs 22/101, p = 0.079). Incidence of electrolyte abnormalities and ONJ did not differ significantly between groups. Conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Review the available evidence for extended interval dosing of denosumab

**Self Assessment:** Denosumab does not have prospective trial data supporting its use in which of the following scenarios? A. For prevention of skeletal related events in solid tumor patients every 4 weeks B. For prevention of skeletal related events in multiple myeloma patients C. For prevention of skeletal related events in breast cancer patients every 12 weeks D. For treatment of giant cell tumor of the bone

---

**ABSTRACT REPRODUCTION FORM**

**Time: 3:00 - 3:20 Room: CLC Category: Oncology I**

**ORAL SODIUM BICARBONATE ADMINISTRATION PRIOR TO ADMISSION IN PATIENTS RECEIVING HIGH DOSE METHOTREXATE**
Diana Martinez-Florida Hospital Orlando

**Purpose/Background:** High dose methotrexate (HDMTX) is used to treat certain cancers and can aggravate toxicities. Supportive care for HDMTX includes urinary alkalization (goal pH greater than or equal to seven). Few studies identify oral sodium bicarbonate as a method to achieve alkalization. Adopting standard urine alkalization practices may improve patient outcomes, decrease hospital LOS and cost. The purpose of this study is to evaluate the process of urine alkalization for patients receiving HDMTX in our institution by assessing the time to goal urine pH when comparing patients who received oral sodium bicarbonate prior to hospital admission with those who did not.

**Methodology:** This single-centered quality improvement project evaluates urine alkalization practices at Advent Health Orlando. Eligible patients include age greater than 18 years old receiving HDMTX for ALL, NHL, or PCNL. A retrospective chart review will be conducted between January 1st, 2018 and June 30th, 2018. The following data will be collected: patient demographics, admission/discharge dates, HDMTX administered, elapsed time in hours to chemotherapy green light, actual time of MTX administration, number of doses of PO/JV leucovorin given, number of doses of PO/JV sodium bicarbonate to achieve a pH of seven or above, and time to safe MTX level for discharge. The primary endpoint is the time to achieve urine alkalization, defined as a pH greater than or equal to seven. Secondary endpoints include hospital length of stay and average cost of hospital stay.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Assess the impact of standardizing urine alkalization practices at a large community hospital setting in patients receiving HDMTX

**Self Assessment:** What are the benefits of standardizing urine alkalization practices in the setting of HDMTX? A. To prevent delays in chemotherapy administration upon admission B. To ensure proper urinary alkalization practices C. To decrease hospital length of stay D. All of the above
ABSTRACT REPRODUCTION FORM

ABSTRACT REPRODUCTION FORM

Time: 3:00 - 3:20 Room: N1022 Category: Pain Management II
IMPLEMENTATION OF EMERGENCY DEPARTMENT OPIOID FREE PAIN MANAGEMENT ORDER SETS WITHIN A DIVISIONAL COMMUNITY HEALTHCARE SYSTEM
Deven Andrew Dunlop-West Florida Hospital

Purpose/Background: With our country suffering from an opioid epidemic, it has become difficult for healthcare providers in the emergency department (ED) to treat pain while combating the current public health crisis. Traditionally, opioids have been viewed as an efficacious and popular treatment for acute pain in the ED. Opioids carry a high risk for abuse, adverse events, and have been found to be ineffective for select patients. The purpose of this study is to optimize pain management in the ED by focusing on clinician education, prescribing habits, and the implementation of opioid free pain management order sets.

Methodology: This multicenter, quasi-experimental study focused on opioid free pain management order set implementation in the ED, clinician education, and changes in prescribing patterns. The initiation of the opioid free pain management order sets occurred in October 2018, and education to all ED healthcare professionals occurred prior to this launch date. Data collection includes an assessment of opioid usage, patient satisfaction, and safety outcomes. The study incorporates pre-implementation data from November 2017 to April 2018, and the post-implementation data from November 2018 to April 2019. All patient data utilized in this study is unidentifiable.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Identify opioid free alternative strategies in the treatment of pain
Self Assessment: True or False: A 37 year old male presents to the emergency department with a left lower extremity fracture after a motorcycle accident. PMH includes heroin abuse. Patient does not have IV access established and is screaming in pain. Ketamine 50 mg intranasal administered by a physician would be an acceptable treatment for his acute pain.

ABSTRACT REPRODUCTION FORM

ABSTRACT REPRODUCTION FORM

Time: 2:40 - 3:00 Room: N2005 Category: Transitions of Care II
IMPACT OF A PHARMACIST-LED TRANSITION OF CARE SERVICE ON READMISSION RATES FOR HEART FAILURE PATIENTS
Jeremy Sparks-Manatee Memorial Hospital

Purpose/Background: Heart failure is a leading cause of hospitalization in the United States. Medicare data suggests 25% of patients hospitalized with heart failure are readmitted within 30 days. This research was designed to evaluate the effect of pharmacist-driven patient education on 30-day readmission rates and direct inpatient costs for patients admitted with heart failure.

Methodology: This was a prospective quality improvement study. Patients were screened if their admission diagnosis included acute heart failure or if they had a history of heart failure, an elevated NT-proBNP, or symptoms suggestive of heart failure. Patients were excluded if discharge to a skilled nursing facility or hospice was planned or if the admission was not due to heart failure. Before discharge, patients were educated by a pharmacist or student pharmacist and provided paper educational materials.

Results/Conclusions: From September to December 2018, 179 patients were screened; 24 patients were ineligible, 30 were educated, and 125 were unable to be assessed prior to discharge. Four patients were readmitted within 30 days (13.3%); 1 readmission was due to heart failure Pharmacist-led discharge education for heart failure patients can lead to a reduction in readmissions and hospital costs.

Presentation Objective: Discuss the important role of the pharmacist in transitions of care for patients discharged with a diagnosis of heart failure
Self Assessment: According to the results of this study, what impact can a pharmacist have on patients admitted to the hospital with a heart failure exacerbation? A. Reduced readmission rates B. Reduced costs for the hospital C. Improved HCAHPS scores D. A and B

ABSTRACT REPRODUCTION FORM

ABSTRACT REPRODUCTION FORM

Time: 3:00 - 3:20 Room: N2005 Category: Transitions of Care II
IMPACT OF DECENTRALIZED CLINICAL PHARMACISTS ON THE DISCHARGE OF PATIENTS WITH HIGH RISK MEDICATIONS
Janay Bouza-Martin Health System

Purpose/Background: According to the Institute for Healthcare Improvement, 20 percent of the adverse events related to medications occur in a transition of care phase. Multiple studies have shown the role of pharmacists in the discharge process suggesting a reduction of preventable adverse events, 30-day readmission rates, and costs related to subsequent emergency department visits. The purpose of this study is to assess the clinical impact of decentralized pharmacists at the time of discharge on patients with high risk medications in a community hospital setting.

Methodology: Transition of care pharmacists developed an initiative to conduct medication reviews, at the time of discharge, performed by decentralized clinical pharmacists. Participating pharmacists reviewed discharge medications to evaluate appropriateness of therapy and potentially reduced adverse events related to high risk medications. For the purpose of this study, the high risk medications included anticoagulants, insulins, and antibiotics. From November 1st to December 31st of 2018, a retrospective chart review was conducted to identify patients discharged on high risk medications from the general medicine ward. The primary outcome was the number and type of interventions performed by pharmacists at discharge. Secondary outcomes included the probability that a patient would experience an adverse event in the absence of pharmacy intervention and the impact in the 30-day readmission rates and subsequent ED visits.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the clinical impact of decentralized pharmacists in the discharge process
Self Assessment: Based on the literature, which of the following medication classes have been associated with the most readmission rates? A. Electrolytes B. Opioids C. Antineoplastics D. Insulins
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session III

May 16, 2019
3:30-4:30pm
ABSTRACT REPRODUCTION FORM

Time: 3:30 - 3:50 Room: N2008 Category: Administration / Managed Care II

DEVELOPMENT AND IMPLEMENTATION OF PHARMACY VETERANS AFFAIRS LEARNING OPPORTUNITIES RESIDENCY PROGRAM AT A VETERANS AFFAIRS MEDICAL CENTER

Katelyn Shatz-Bay Pines VA Healthcare System - Bay Pines

Purpose/Background: Veterans Affairs Learning Opportunities Residency (VALOR) is an honors program that provides opportunities for academically successful students to develop proficiencies in pharmacy practice while working at an approved Veterans Affairs (VA) Healthcare System program site. Additionally, the program helps Veterans Healthcare Administration (VHA) meet its workforce succession needs. VA interns gain experience in and explore all areas of VA pharmacy practice including a wide range of patient care activities, including inpatient, outpatient, ambulatory care services, and administrative areas of clinical pharmacy practice. The VALOR program focuses on the development of skills and knowledge required for pharmacy practice by providing competency-based practice experiences under the supervision of a clinical pharmacist preceptor. Ultimately, the goal of this competitive program is to attract, train, and retain exceptional clinical pharmacists who desire to build their career within the VA healthcare system. Due to the increased demand for VA-trained clinical pharmacists and the limited training programs available, Bay Pines Veterans Affairs Healthcare System (BPVAHCS) will develop and implement a VALOR intern program.

Methodology: To be considered as a VA program site, BPVAHCS will submit a proposal in accordance with guidance from the VA Scholarships and Clinical Education (S&C&E) division by December 2018. If selected, program sites will be notified early January 2019 and may begin recruiting and appointing students who have completed their second professional year in an Accreditation Council of Pharmaceutical Education (ACPE) accredited Doctor of Pharmacy Program. A formal announcement will be disseminated electronically in February 2019. Students must submit a formal application by March 1, 2019 for interview consideration. By mid-March/early April, an interview will be extended to select applicants. The interview panel will consist of the VALOR Program Administrator, Assistant Chief of Pharmacy Clinical Services, the Post-Graduate Year 2 (PGY2) Health-System Pharmacy Administration Resident, and a clinical pharmacist (depending on availability). Applicants will be notified of their appointment no later than two weeks after the interviews conclude. Start dates will coincide with new employee orientation beginning mid-May and ending in August. Each VALOR intern must complete a minimum of 400 hours during their three-month appointment. This project is exempt from the facilities Institutional Review Board.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.


ABSTRACT REPRODUCTION FORM

Time: 3:50 - 4:10 Room: N2008 Category: Administration / Managed Care II

PATIENT COUNSELING ON HIGH-RISK MEDICATIONS TO IMPROVE HOSPITAL CONSUMER ASSESSMENT OF HEALTHCARE PROVIDERS AND SYSTEMS (HCAHPS) SCORES AND REDUCE HOSPITAL READMISSION RATES

Ashley Fahmy-Boca Raton Regional Hospital

Purpose/Background: Patient education by pharmacists and pharmacy students help increase patients’t understanding of their medications and thereby improve hospital consumer assessment of healthcare providers and systems (HCAHPS) scores. Additionally, patient counseling improves medication safety, particularly when patients are on high-risk medications such as anticoagulants. These medications are associated with a higher rate of hospital readmission when compared to other medications due to adverse events and compliance issues. At our facility, 20% of readmitted patients are on an anticoagulant at home.

Methodology: This is an open-label, prospective, interventional pre-post pilot study that will be conducted from August 2018 to April 2019 at Boca Raton Regional Hospital. Patients ready for discharge on high-risk medications, particularly anticoagulants, will be targeted. Patient counseling will be standardized by utilizing a step-by-step guide and a patient counseling checklist to ensure all important points are addressed. Following discharge, patients will receive a follow-up phone call to answer any additional questions and receive their feedback on our service. The primary outcome is an increase to 80% in the medication education related HCAHPS scores. Secondary outcomes include hospital readmission within 30 days, the relation of each readmission to a medication-related issue, and usefulness of counseling session based on patients’t feedback. Statistical analysis assessing the differences in HCAHPS scores will be reported using descriptive statistics.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Self Assessment: Which provider(s) play a key role in increasing scores on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey? A. Pharmacists B. Nurses C. Physicians D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 4:10 - 4:30 Room: N2008 Category: Administration / Managed Care II

STANDARDIZATION OF DRUG ENTRIES IN THE OUTPATIENT AUTOMATION SYSTEM AT THE MIAMI VA

Brenda L. Mendez-Miami VA Healthcare System

Purpose/Background: Currently the Miami VA utilizes OptiFill® as the main automation dispensing system for the outpatient pharmacy. This automation system has the capacity of storing hundreds of medications and employs advanced validation and digital imaging processes to help ensure appropriate medication dispensing. The system is customized to meet the stakeholders needs and drugs are manually entered into the inventory, which introduces the possibility of human error to the automated process. In order to minimize these errors, a standardized drug entry process was implemented on August 2018 to ensure all drugs are named appropriately and linked to the right entries. VISTA is the Veterans Affairs (VA) nationwide information system for clinical, financial, and administrative functions, and is also used for formulary management and order processing. Drug entries in OptiFill® should match VISTAbv® and VA National Drug File (NDF) names. The purpose of this project is to validate current entries in the automation system and standardize them to match the VISTA and NDF names and ensure all products are appropriately matched to the right drug.

Methodology: A report of all automation’s drug entries will be generated. All items will be cross-referenced with VISTA drug names, internal drug numbers and the National Drug File to ensure accuracy of dispensed products.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Self Assessment: True or False: Drug names are manually entered in the automation system, which increases the risk of errors.
**ABSTRACT REPRODUCTION FORM**

**Time:** 3:50 - 4:10 Room: N2005 Category: Ambulatory Care II

**POPULATION HEALTH: EVALUATION OF TELEPHONIC PHARMACIST INVOLVEMENT ON IMPROVING QUALITY CARE MEASURES IN DIABETES PATIENTS**

Marisa Trautsch-Florida Hospital-Celebration Health

**Purpose/Background:** The Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) began the shift from fee for service to value based payment system. As a result of this legislation, the Merit Based Payment System (MIPS) began tying payments to outcomes in four categories with the largest weight on quality care. In 2019, payments will be adjusted up to 4% based on data from 2017, and by 2022, payments will be adjusted up to 9%. The purpose of this project was to evaluate the impact of pharmacist involvement on MIPS quality measures of A1c in the previous year, urine protein screening, and initiation of statin therapy in a diabetic population.

**Methodology:** Single center, retrospective chart review of patients who were contacted by a pharmacist to address diabetic quality measures of A1c in the previous year, urine protein screening, and initiation of statin therapy. Secondary outcomes included the potential number of quality measures available to satisfy within a patient population, number of patients enrolled, number of patients who completed each lab test, number of patients who began an ACEi/ARB, and number of patients who began a statin. Data was analyzed using descriptive statistics.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe the impact of a telephonic pharmacy service on improving the following MIPS quality measures in a diabetic population: A1c in the previous year, urine protein screening, initiation of a statin

**Self Assessment:** How many quality measures were satisfied?

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 4:10 - 4:30 Room: N2005 Category: Ambulatory Care II

**INVESTIGATION OF ADVERSE OUTCOMES OF EMPAGLIFLOZIN USE IN AN ELDERLY VETERAN POPULATION**

Sarah Rinchart-James A. Haley Veterans Hospital

**Purpose/Background:** Sodium-glucose co-transporter 2 (SGLT2) inhibitors, including empagliflozin, are newer antidiabetic agents. Combined safety data from SGLT2 inhibitor phase II trials concluded patients age 75 years or greater were at increased risk of adverse drug events and there is increasing concern for groin infections, including Fournier’s gangrene. Veterans generally have more complex medical profiles than the civilian population and an increased risk for adverse events.

**Methodology:** This retrospective database and chart review study utilized the Veterans Health Administration Corporate Data Warehouse to identify patients within the Sunshine Healthcare Network age greater than 18 years old, diagnosed with type 2 diabetes mellitus, and receiving a prescription for empagliflozin between January 1, 2015 and June 1, 2018. Baseline data collected includes age, race, weight, HbA1c at start of empagliflozin therapy, empagliflozin dosage, complications of diabetes, comorbidities, and concomitant antidiabetic and antihypertensive medications. Data collected for patients admitted to the emergency room for volume deplelational adverse effects includes admitting diagnosis, labs, and vitals. Development of groin infections while taking empagliflozin was assessed via documented adverse drug events, emergency room admissions, and chart review of patients with empagliflozin prescriptions stopped during the study period. The objective of this study is to compare empagliflozin volume deplelational adverse events (composite of hypotension, syncope, dehydration, fall, or fracture) and groin infections in veterans age 65 years or greater to less than 65 years.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize the potential for increased adverse drug events in elderly patients receiving SGLT2 inhibitors.

**Self Assessment:** Which of the following is NOT a potential volume deplelational adverse event? A. Hypotension B. Syncope C. Groin infections D. Fall

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 3:30 - 3:50 Room: L1005 Category: Anticoagulation III

**FIXED VERSUS WEIGHT-BASED DOSING OF 4- FACTOR PROTHROMBIN COMPLEX CONCENTRATE FOR THE REVERSAL OF VITAMIN-K ANTAGONIST: A MULTI-CENTER, RETROSPECTIVE ANALYSIS**

Britanny Heuser-St. Anthony's Hospital

**Purpose/Background:** Current treatment of warfarin toxicity, and reversal, requiring 4-factor prothrombin complex concentrate (4FCC) is a weight-based dosing strategy. Newer research suggests that a fixed-dose 4FCC dosing strategy may be as efficacious in managing warfarin-associated hemorrhage, while additionally reducing time to repeat INR.

**Methodology:** A single center, retrospective chart review of patients who were contacted by a pharmacist to address warfarin-associated hemorrhage. Secondary outcomes included the potential number of quality measures available to satisfy within a patient population, number of patients enrolled, number of patients who completed total INR lab test, number of patients who began an anticoagulant, and number of patients who began a statin. Data was analyzed using descriptive statistics.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe the efficacy of fixed-dose 4FCC to the standard weight-based dosing

**Self Assessment:** True or False: Fixed-dosing 4FCC resulted in statistically significant earlier administration times in patients requiring reversal for warfarin.

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 3:50 - 4:10 Room: L1005 Category: Anticoagulation III

**DIRECT ORAL ANTICOAGULANTS: AN EVALUATION OF THE SAFETY AND EFFICACY IN SOLID ORGAN TRANSPLANT RECIPIENTS**

Taylot Pasley-Tampa General Hospital

**Purpose/Background:** The use of direct oral anticoagulants (DOACs) has not been fully adopted by the solid organ transplant (SOT) community due to factors including, fluctuating renal function, drug-drug interactions, routine biopieses, limited availability of reversal agents, and the paucity of literature in this population. The purpose of this study is to assess the safety and efficacy of DOAC therapy in SOT recipients.

**Methodology:** A single center, retrospective study of all SOT recipients who received DOAC therapy between 1/1/2011-6/31/2018. Patients lost to follow-up or receiving a DOAC for less than one month were excluded. The primary outcome was the composite of safety (bleeds) and efficacy (thromboembolic events) between apixaban versus non-apixaban DOAC (NA-DOAC) treated patients.

**Results/Conclusions:** A total of 109 SOT recipients were included in this study with 80 (73%) receiving apixaban and 29 (27%) receiving NA-DOAC therapy (dabigatran n=8; rivaroxaban n=21). Baseline demographics were similar between the two cohorts (Table 1). There was no difference to date, this is the largest retrospective study analyzing the role of DOAC therapy in SOT recipients. Patient-specific characteristics should be taken into consideration when initiating DOAC therapy in SOT patients.

**Presentation Objective:** Describe safety (bleeds) and efficacy (thromboembolic events) between apixaban versus non-apixaban DOAC (NA-DOAC) treated patients

**Self Assessment:** Do you consider DOACs to be safe and efficacious in solid organ transplant recipients?
different dosing regimens of quetiapine and its efficacy in delirium resolution. Safety
routine use of antipsychotics in the treatment of delirium, the use of atypical
cognitive impairment. Small studies support treatment with antipsychotics to reduce
stay, ICU length of stay, duration of mechanical ventilation and continuation of
period. Secondary endpoints will consist of delirium resolution, hospital length of
quetiapine in delirium resolution will be assessed based on total daily dose of

Fluctuating level of consciousness D. b and c only

ANALYSIS OF DOSE DIFFERENCES OF QUETIAPINE IN THE MANAGEMENT
OF DELIRIUM IN THE INTENSIVE CARE UNIT
Judith Misa-Florida Hospital Orlando

Purpose/Background: Delirium, a frequent event in critically ill patients, has been
associated with increased mortality, increased hospitalization, and long-term
cognitive impairment. Small studies support treatment with antipsychotics to reduce
the duration of delirium; however, these results have not been consistent in the
literature. While the 2018 Pain, Agitation and Delirium Guidelines discourage the
routine use of antipsychotics in the treatment of delirium, the use of atypical
antipsychotics remains frequent. This study will aim to assess correlation with
different dosing regimens of quetiapine and its efficacy in delirium resolution. Safety
data will also be evaluated based on the dosing regimen.

Methodology: A retrospective chart review approved by the institutional review
board will be conducted between September 1st, 2017 to September 1st, 2018. Adult
patients admitted to the intensive care unit with the diagnosis of delirium who
received quetiapine for at least 48 hours for the treatment of delirium will be
reviewed for inclusion in this study. Patients will be excluded if they were receiving
antipsychotics for other indications before or during index hospitalization. Efficacy of
quetiapine in delirium resolution will be assessed based on total daily dose of
quetiapine administered. The primary safety endpoints will include adverse events
such as extrapyramidal symptoms, neuroleptic malignant syndrome, and torsades de
pointe. Secondary endpoints will consist of delirium resolution, hospital length of
stay, ICU length of stay, duration of mechanical ventilation and continuation of
quetiapine after hospital discharge.

Results/Conclusions: Results and conclusions will be presented at the Florida
Residency Conference.

Presentation Objective: Discuss appropriate use of DOACs in anticoagulation
therapy and the clinical implications associated with their inappropriate use

Self Assessment: What are the consequences of inappropriate DOAC use?

IMPLEMENTATION OF A MULTIDISCIPLINARY APPROACH TO
MANAGING PATIENTS WITH ICU DELIRIUM
Nathaniel Cordova-Florida Hospital Orlando

Purpose/Background: Previous studies demonstrated that a multi-disciplinary
approach to patient care in the intensive care unit (ICU) leads to improved outcomes and
decreased healthcare costs. Specifically, critical care pharmacy services have
been shown to optimize clinical outcomes related to pain, agitation, and delirium. The
objective of this study is to determine if application of a pharmacist-led
multidisciplinary approach to managing delirium among ICU patients will have an
impact on time to delirium resolution.

Methodology: This was a single-center, post-post interventional quality improvement
study that was IRB-exempt and conducted at a community teaching hospital.
The electronic medical record was used to identify and include Confusion Assessment
Method (CAM)-ICU positive patients admitted to a mixed medical and surgical ICU.
Patients were excluded if they received benzodiazepines for alcohol withdrawal, had a
history of dementia or Parkinson's disease, or received antipsychotic medications for
indications other than ICU delirium. Prospectively, a pharmacist identified patients
with ICU delirium for potential interventions, and with the collaboration of a
multidisciplinary team, provided both nonpharmacologic and pharmacologic
recommendations which are aligned with best-practice guidelines. The primary
endpoint was time to delirium resolution. Secondary endpoints include hospital length of
stay, ventilator days, all cause 28-day mortality, and benzodiazepine and
capnopeptide use during the study.

Results/Conclusions: Results and conclusions will be presented at the Florida
Residency Conference.

Presentation Objective: Determine if pharmacist-led multidisciplinary approach to
managing patients with ICU delirium will have a positive impact on delirium related
morbidity and mortality

Self Assessment: Which of the following is a modifiable risk factor associated with
delirium in critically ill adults? A. Greater age B. Benzodiazepine use C. Prior coma D. High APACHE score
Self Assessment: burden patients with elevated intracranial pressure based upon their intracranial pressure combination of both agents. The secondary objective of this study will include burden between patients treated with either mannitol, hypertonic saline, or a
The primary objective is to determine the cumulative ICP burden and daily ICP burden between patients treated with either mannitol, hypertonic saline, or a

Injury recommends hypertonic saline, however, the Guidelines for Management of Severe Traumatic Brain Injury in adults currently states that there is insufficient evidence to support the use of hypertonic saline over mannitol. While both agents

Purpose/Background: The Society of Critical Care Medicine guidelines recommend an interdisciplinary, protocol-based approach to pain, agitation, and delirium management in the intensive care unit (ICU). To assist with implementation of these guidelines, the ABCDEF bundle was developed. Studies have demonstrated the benefit of the ABCDEF bundle in increasing ventilator-free days and reducing the incidence of delirium and hospital length of stay (LOS). The purpose of this study is to evaluate the efficacy of implementing an ABCDEF light sedation protocol targeting a RASS of 0 to -1 in improving outcomes in mechanically ventilated, critically ill patients.

Methodology: This is a single-center, IRB approved, retrospective cohort evaluation. Patients will be divided into pre- and post-implementation groups with data obtained from January 1, 2016 to August 31, 2016 and January 1, 2018 to August 31, 2018, respectively. This study will include patients ≥ 18 years of age admitted under a Critical Care Medicine provider who were mechanically ventilated at the time of order set initiation. Patients will be included once per admission with data collected from the first ICU stay only. Analgesia, sedation, and delirium data will be collected until the order set is discontinued or up to seven days (whichever occurs first). Patients with an ICU LOS ≤ 24 hours, target RASS of -4 to -5, or those admitted to the Trauma or Cardiovascular Surgery service will be excluded. The primary outcome is to compare duration of ventilator-free days. Secondary outcomes include hospital and ICU LOS.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the role of the ABCDEF bundle in improving outcomes in mechanically ventilated, critically ill patients.

Self Assessment: Which of the following has NOT been associated with implementation of the ABCDEF bundle elements? A. Shortened duration of mechanical ventilation B. Reduced incidence of delirium C. Shortened ICU length of stay D. Reduction in ventilator-free days

Presentation Objective: Discuss the potential role of enteral clonidine in ICU patients receiving dexmedetomidine infusions.

Self Assessment: True or False: When comparing clonidine and dexmedetomidine in this setting, the incidence of side effects are less than or equal to those observed with dexmedetomidine.

Purpose/Background: The management of elevated intracranial pressure (ICP) is often done through the utilization of hyperosmolar therapy, such as mannitol and hypertonic saline. The Guidelines for the Management of Pediatric Traumatic Brain Injury recommends hypertonic saline, however, the Guidelines for Management of Severe Traumatic Brain Injury in adults currently states that there is insufficient evidence to support the use of hypertonic saline over mannitol. While both agents have proven to be effective, the optimal agent has not been definitively supported with data. Therefore, the purpose of this study is to evaluate the efficacy and safety of hyperosmolar therapy in patients with elevated intracranial pressure based upon their intracranial pressure burden.

Methodology: This IRB-approved retrospective chart review compares the safety and efficacy of hyperosmolar therapy in patients with elevated intracranial pressure. Patients who have an elevated ICP, defined as ≥ 20mmHg and are treated with either hypertonic saline, mannitol, or both are included. Those who had a Glasgow Coma Scale score of 3 with bilateral fixed and dilated pupils or death on day 1 are excluded. The primary objective is to determine the cumulative ICP burden and daily ICP burden between patients treated with either mannitol, hypertonic saline, or a combination of both agents. The secondary objective of this study will include incidence of adverse effects, number of days in the intensive care unit, and fourteen day mortality.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the efficacy and safety of hyperosmolar therapy in patients with elevated intracranial pressure based upon their intracranial pressure burden

Self Assessment: True or False: There is not a statistically significant difference in cumulative ICP burden and daily ICP burden between patients treated with mannitol versus mannitol and hypertonic saline.

Purpose/Background: Patients who are otherwise medically stable and receiving dexmedetomidine infusions may remain in the intensive care unit (ICU) due to the need for continuous hemodynamic monitoring. When the discontinuation of dexmedetomidine becomes difficult, ICU length of stay (LOS) is often prolonged. Transitioning patients to enteral clonidine may alleviate the need for ICU monitoring and expedite transfer to a general medical floor thereby reducing ICU LOS. The purpose of this study was to identify the impact of enteral clonidine on the duration of dexmedetomidine infusions in ICU patients.

Methodology: This was a single center retrospective cohort study. In effort to assist providers in the transitioning of patients to enteral clonidine, a dexmedetomidine-to-clonidine order set was implemented in October 2018. All patients ≥ 18 years of age meeting the following criteria were included: functional and accessible gastrointestinal tract, ≥ 24 hours of dexmedetomidine infusion, and ICU admission between October 1, 2018 and March 31, 2019. Patients with clonidine documented as a home medication were excluded. The primary outcome was the difference in duration of dexmedetomidine infusions in patients who were and those who were not transitioned to enteral clonidine. Secondary outcomes included ICU LOS, Richmond Agitation-Sedation Scale scores, and use of adjunct agents for pain and agitation between the two groups. Additionally, time to discontinuation and re-initiation of dexmedetomidine after successful discontinuation were evaluated only in the post-group. Safety outcomes included incidence of bradycardia, tachycardia, and hypotension.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Discuss the potential role of enteral clonidine in ICU patients receiving dexmedetomidine infusions.

Self Assessment: True or False: When comparing clonidine and dexmedetomidine in this setting, the incidence of side effects are less than or equal to those observed with dexmedetomidine.

Purpose/Background: In response to the nationwide intravenous (IV) fluid shortages that was exacerbated by Hurricane Maria in 2017, our health-system began to administer cefepime and ceftriaxone intravenous push (IVP) over 5 minutes in place of the traditional 30-minute infusion as an IV piggyback (IVPB). Since cephalosporins exhibit time-dependent bactericidal activity, there is concern that this shortage mitigation strategy could have an adverse impact for critically-ill patients with sepsis. While pharmacokinetic data illustrates benefits of prolonged beta-lactam infusion times, limited data evaluates the impact of infusion times on clinical success. The purpose of this study is to assess the clinical impact of a change from traditional infusion to IVP cefepime or ceftriaxone in patients with sepsis of confirmed infective source.

Methodology: This IRB-reviewed, multicenter retrospective review compared septic patients treated with IVP ceftriaxone or cefepime during an IV fluid storage (2017-2018) to a historical cohort of patients treated with traditional infusion ceftriaxone or cefepime prior to the IV fluid storage. Adult patients admitted to AdventHealth Central Florida campuses ICU and receiving appropriately indicated cephalosporin for the treatment of sepsis were included in the study. The primary endpoint was 28-day clinical cure, defined as resolution of fever, leukocytosis, and sterilization of blood cultures. Secondary endpoints included duration of therapy, ICU and hospital length of stay, and 30-day morbidity and mortality. Statistical significance will be assessed using the appropriate parametric or non-parametric analog.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Understand pharmacokinetic/pharmacodynamic characteristics of cephalosporins


Presentation Objective: COMPARING THE EFFICACY OF INTRAVENOUS PUSH VERSUS STANDARD INFUSION CEPHALOSPORIN ADMINISTRATION IN PATIENTS WITH SEPSIS

Han Le-Florida Hospital Orlando

Purpose/Background: In response to the nationwide intravenous (IV) fluid shortages that was exacerbated by Hurricane Maria in 2017, our health-system began to administer cefepime and ceftriaxone intravenous push (IVP) over 5 minutes in place of the traditional 30-minute infusion as an IV piggyback (IVPB). Since cephalosporins exhibit time-dependent bactericidal activity, there is concern that this shortage mitigation strategy could have an adverse impact for critically-ill patients with sepsis. While pharmacokinetic data illustrates benefits of prolonged beta-lactam infusion times, limited data evaluates the impact of infusion times on clinical success. The purpose of this study is to assess the clinical impact of a change from traditional infusion to IVP cefepime or ceftriaxone in patients with sepsis of confirmed infective source.

Methodology: This IRB-reviewed, multicenter retrospective review compared septic patients treated with IVP ceftriaxone or cefepime during an IV fluid storage (2017-2018) to a historical cohort of patients treated with traditional infusion ceftriaxone or cefepime prior to the IV fluid storage. Adult patients admitted to AdventHealth Central Florida campuses ICU and receiving appropriately indicated cephalosporin for the treatment of sepsis were included in the study. The primary endpoint was 28-day clinical cure, defined as resolution of fever, leukocytosis, and sterilization of blood cultures. Secondary endpoints included duration of therapy, ICU and hospital length of stay, and 30-day morbidity and mortality. Statistical significance will be assessed using the appropriate parametric or non-parametric analog.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Understand pharmacokinetic/pharmacodynamic characteristics of cephalosporins

**ABSTRACT REPRODUCTION FORM**

**Time:** 3:50 - 4:10 **Room:** 1209-C **Category:** Infectious Diseases V

**PHARMACIST IMPACT ON HIV MANAGEMENT IN A PSYCHIATRIC PATIENT POPULATION**
Alice Margulis-Jackson Memorial Hospital

**Purpose/Background:** Patients with mental illness exhibit a higher incidence of human immunodeficiency virus (HIV), estimated to be over four times greater than the general population. Furthermore, HIV management can be especially challenging in patients with psychiatric comorbidities due to potential concurrent substance abuse, drug-drug interactions, and medication non-adherence. These factors can lead to HIV disease progression, increased risk of opportunistic infections, and development of resistance. The purpose of this study was to determine the impact of pharmacist management of antiretrovirals in patients with psychiatric comorbidities.

**Methodology:** This is an institutional review board-approved single-center, retrospective study. A report of patients admitted to a 150-bed psychiatric hospital with an order for one or more antiretroviral medications(s) between October 2016 and March 2017 (prior to pharmacist involvement), October 2017 and March 2018 (during partial pharmacist involvement), and November 2018 and January 2019 (during consistent pharmacist involvement) was obtained using computerized decision support software. Patients were excluded if less than 18 years of age, pregnant, incarcerated, or taking antiretroviral medication(s) for an indication other than HIV. The primary outcome was to determine the difference in appropriateness of antiretroviral therapy prior to and during pharmacist involvement. Secondary outcomes were to assess appropriateness of opportunistic infection prophylaxis and laboratory testing. The U.S. Department of Health and Human Services guidelines were utilized to assess appropriateness of treatment regimens, prophylactic medications, and laboratory testing.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Determine the impact of pharmacist involvement on HIV management in patients with psychiatric comorbidities.

**Self Assessment:** Which of the following may contribute to the challenging nature of HIV management in a psychiatric patient population? A. Concurrent substance abuse B. Drug-drug interactions C. Medication non-adherence D. All of the above

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 4:10 - 4:30 **Room:** 1209-C **Category:** Infectious Diseases V

**IMPACT OF ANTIMICROBIAL STEWARDSHIP FOLLOW-UP ON POSITIVE BLOOD CULTURES POST-DISCHARGE**
Axel Vazquez Deida-Jackson Memorial Hospital

**Purpose/Background:** Blood cultures are the gold standard in the identification of bloodstream infections, which remain a major cause of morbidity and mortality. However, 35% to 50% of positive blood culture results are falsely positive due to contamination. Culture follow-up programs, especially in emergency departments (EDs), have been described as a way to expand antimicrobial stewardship services to patients undergoing transitions of care. Antimicrobial stewardship programs can assist with providing guidance on antimicrobial therapy selection and preventing unnecessary interventions among patients with contaminated positive blood cultures.

**Methodology:** This is a two-phase retrospective cohort study at a tertiary care, academic hospital in southeast Florida. Phase 1 will assess interventions made on adult patients discharged from the ED or a hospital observation unit with a positive blood culture result after discharge from March 2018 to July 2018. Phase 2 will be conducted from December 2018 to February 2019 and will assess appropriate patient follow-up and management via a pharmacist-led blood culture review in collaboration with ED physicians and a callback nurse. Statistical analysis will include descriptive statistics for demographics, two-group t-test for continuous data and chi-square for categorical variables.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Assess the number of unwaranted interventions in patients with contaminated blood cultures post-discharge and at low risk for bloodstream infection, number of interventions made by a pharmacist to optimize antimicrobial therapy, and the number of untreated blood cultures.

**Self Assessment:** Which of the following scenarios meets criteria for a bloodstream infection and warrants further follow-up? A. Positive blood cultures with E. coli (2 of 2) with no signs or symptoms of fever, chills or hypotension B. Positive blood culture with MRSA (1 of 2) with no signs or symptoms of fever, chills or hypotension in an intravenous drug user C. Positive blood cultures with S. epidermidis (2 of 2) with a Tmax of 38.1 degrees Celsius and chills but no hypotension D. Positive blood cultures with viridans group streptococci (2 of 2) with no signs or symptoms of fever or chills but blood pressure of 80/50 mmHg E. All of the above

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 3:30 - 3:50 **Room:** 1209-D **Category:** Infectious Diseases VI

**EVALUATION OF MASS SPECTROMETRY IMPLEMENTATION ON ADULT INPATIENTS WITH CONTAMINATED BLOOD CULTURES AT A COMMUNITY-BASED HEALTH CARE SYSTEM**
Courtney Pitts-Baptist Hospital

**Purpose/Background:** Baptist Health Care implemented a mass spectrometer in May of 2018. This technology is able to identify pathogens more rapidly than traditional methods which have been shown in previous studies to impact patient and financial outcomes. The purpose of this study will be to evaluate the impact of utilizing the mass spectrometer data in our health care system.

**Methodology:** This was an IRB approved, prospective chart review conducted at Baptist Health Care Pensacola and Gulf Breeze campuses. Data was collected for all inpatients with contaminated blood cultures between November 1, 2017 and April 30, 2018 for the pre-implementation group and May 15, 2018 and November 14, 2018 for the post-implementation group. All data was recorded without patient identifiers and maintained confidentially. The primary outcomes were to evaluate the time to laboratory results and hospital length of stay. Secondary outcomes include expense of vancomycin therapy, time to antimicrobial therapy adjustment, and duration of antimicrobial therapy.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize the impact of mass spectrometry on antimicrobial stewardship in a community based health care system.

**Self Assessment:** Utilizing a mass spectrum to measure mass-to-charge ratios, a mass spectrometer can reduce the time to identify a sample by... hours greatly enhancing the ability to timely treat empiric infections with the right anti-infectives while at the same time incurring a cost saving from reducing unnecessary treatment of contaminant samples. A. 12-18 B. 18-24 C. 24-36 D. 36-48

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 3:50 - 4:10 **Room:** 1209-D **Category:** Infectious Diseases VI

**IMPACT OF THE FILMARRAY® RESPIRATORY VIRAL PANEL ON MANAGEMENT OF HOSPITALIZED PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE EXACERBATION**
Victoria Baker-Orlando Health

**Purpose/Background:** Exacerbations of chronic obstructive pulmonary disease (COPD) are commonly treated with antibiotics in hospitalized patients, but both bacteria and viruses have been identified as causative agents. Viruses have been implicated as the cause in 30-40% of cases, for which antibiotic therapy likely has little value. The FilmArray® respiratory viral panel (RVP) is a polymerase chain reaction test that can identify respiratory pathogens including 17 viruses and three atypical bacteria with high sensitivity and specificity. The objective of this study is to determine the impact of the RVP in patients diagnosed with a COPD exacerbation.

**Methodology:** This was a retrospective chart review of adult patients admitted to Orlando Regional Medical Center from January 1, 2018 to December 31, 2018. The institution's clinical surveillance system identified patients with the international classification of diseases (ICD-10) code for COPD exacerbation for whom the RVP was ordered. The primary endpoint is antibiotic duration in patients with a viral positive vs. viral negative result. Secondary outcomes will include differences in length of hospital stay; duration of exposure to atypical antibiotics, anti-pseudomonal β-lactams, non-antipseudomonal β-lactams, and MRSA antimicrobials; and incidence of Clostridium difficile in the following groups: influenza positive vs. viral negative result. Secondary outcomes will include differences in length of hospital stay; duration of exposure to atypical antibiotics, anti-pseudomonal β-lactams, non-antipseudomonal β-lactams, and MRSA antimicrobials; and incidence of Clostridium difficile in the following groups: influenza positive vs. other virus positive vs. virus negative. Statistical analysis included is the student t-test for continuous data and the one-way ANOVA test to determine the statistically significant differences between > 3 groups. Statistical significance was p <0.5.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Evaluate the impact of the RVP in patients diagnosed with a COPD exacerbation.

**Self Assessment:** Viruses have been identified in what percentage of patients during a COPD exacerbation? A. < 10% B. 10-20% C. 20-30% D. 30-40%
ABSTRACT REPRODUCTION FORM

Time: 4:10 - 4:30 Room: 1209-D Category: Infectious Diseases VI

EFFECTIVENESS OF USING ORAL VANCOMYCIN AS PROPHYLAXIS FOR CLOSTRIDIUM DIFFICILE INFECTIONS IN HIGH-RISK PATIENTS
Lacey Nilles-Wolfson Children's Hospital/Baptist Health

Purpose/Background: Clostridium difficile infections (CDI) are associated with significant morbidity and mortality. Reducing the incidence of CDI is a desirable goal of many hospitals across the country. Oral vancomycin has been used at low doses with the intention of preventing CDI. The effectiveness of oral vancomycin as secondary CDI prophylaxis has been studied in patients who have had a prior CDI and received broad-spectrum antibiotics, but more research is needed to determine which populations may derive benefit from CDI prophylaxis. At this institution, oral vancomycin is currently being utilized as both primary and secondary prophylaxis in patients who are deemed to be at high risk of developing CDI since June 2017. The purpose of this study was to determine the effectiveness of oral vancomycin prophylaxis on the incidence of CDI compared to no prophylaxis.

Methodology: This quasi-experimental, retrospective cohort study examined patients 18 years or older who were admitted to a Baptist Health-System hospital from June 2016 to November 2018 and met one of the high-risk criteria for CDI prophylaxis. Patients admitted from June 2017 to November 2018 were given oral vancomycin as CDI prophylaxis and compared to patients admitted before June 2017 prophylaxis practice. Propensity score matching (PSM) was used in a 1:1 ratio to balance the demographic data and clinical characteristics between the two prophylaxis groups. The primary outcome was the incidence of CDI, diagnosed anytime from the initiation of antibiotics until discharge.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Based on recent literature and guidelines, identify risk factors for Clostridium difficile infection.

Self Assessment: Which of the following is NOT a risk factor for Clostridium difficile infection? A. Older age B. Lactobacillus administration C. Broad spectrum antibiotic administration D. Prior history of CDI E. Immunocompromised state

ABSTRACT REPRODUCTION FORM

Time: 3:50 - 4:10 Room: L1003 Category: Internal Medicine III

IMPACT OF SERIAL BLOOD GLUCOSE MONITORING AND TREATMENT IN PATIENTS WITH CORTICOSTEROID-INDUCED HYPERGLYCEMIA IN THE INPATIENT SETTING
Monica Tadros-Baptist Hospital of Miami

Purpose/Background: Corticosteroid use has been reported in approximately 12% of hospitalized patients. Hyperglycemia, defined as a blood glucose level greater than or equal to 180 mg/dL, is a significant complication of corticosteroid use, particularly at high doses. Basal-bolus insulin regimens are well-established for the treatment of steroid-induced hyperglycemia (SIH). Steroids primarily raise post-prandial blood glucose (BG) levels with minimal effect on fasting BG. Ideally, pre-meal and 2-hour post prandial BG monitoring is recommended in these patients. Since routine inpatient BG monitoring consists of fasting BG, SIH can go unnoticed and untreated in this setting. The purpose of this study is to evaluate the impact of serial BG testing and a corresponding treatment guide on patients experiencing SIH in the inpatient setting.

Methodology: This was a single-center, IRB-approved, bi-phasic study of adult patients receiving high doses of steroids (greater than or equal to prednisone 30 mg/day or its equivalent). Phase I was a retrospective chart review of 50 patients from July 2018 to September 2018. Phase II is a prospective review of 50 patients from February 2019 to April 2019, utilizing a monitoring and treatment guide adapted from the institution’s insulin protocol to make clinical recommendations. The primary endpoints include a comparison of BG monitoring, incidence of hyperglycemia, and BG levels between the two phases. Secondary endpoints include presence of common risk factors for SIH and number of pharmacy interventions accepted in phase II. Descriptive and comparative statistics will be utilized in the data analysis.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Describe the impact of pharmacist interventions on the monitoring and management of corticosteroid-induced hyperglycemia in the inpatient setting.

Self Assessment: Which of the following is true regarding SIH? A. Male patients are more likely to experience SIH B. SIH is associated with a decreased risk of cardiovascular events C. SIH is generally self-resolving D. SIH often prevents patients from reaching ultrafiltration goals

ABSTRACT REPRODUCTION FORM

Time: 4:10 - 4:30 Room: L1003 Category: Internal Medicine III

IMPACT OF AN INTRAVENOUS OPIOID DRUG SHORTAGE ON POSTOPERATIVE PAIN MANAGEMENT AND MEDICATION SAFETY
Madeline VanDaele-North Florida/South Georgia Veterans Health System

Purpose/Background: Recent parenteral opioid shortages have the potential to have a large impact on the treatment of acute pain syndromes and medication safety. One contributing factor for these shortages may be the aggregate production quotas determined by the DEA for opioid manufacturing. In response to the shortages, the North Florida/South Georgia Veterans Health System has created a criterion for use, requiring pharmacist approval before using certain parenteral opioids. The objective of this study is to determine if the shortage and criteria for use have created differences in the effectiveness and safety of pain management in a post-operative patient sample.

Methodology: A retrospective cohort study is being performed with a study population of patients that underwent surgical procedure and were admitted to an acute care surgical ward from January 1, 2018 until June 30, 2018. The pre-shortage cohort will include patients treated entirely before March 28, 2018 (the day the criteria for use was approved and became active) and the post-shortage cohort will be patients treated entirely after this date. The cohorts will be compared to assess for effectiveness outcomes including pain scores, type/route/dose of pain medication, length of stay, and mortality. Safety outcomes will be assessed by comparing measures including adverse drug reactions, need for opioid reversal, and medication allergies. Descriptive statistics and inferential statistical methods will be used as appropriate to report findings of this study.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Understand potential implications of an IV opioid shortage on post-operative pain treatment and medication safety.

Self Assessment: Which agency is in charge of setting production quotas for IV opioids?
Purpose/Background: The impact of non-compliance with the Beers Criteria on the health outcomes of patients undergoing Stem Cell Transplant (SCT) has not previously been examined. Studies have evaluated the effect of polypharmacy in solid malignancies; however, compliance with the Beers criteria was not assessed in these studies. The purpose of this study is to determine if patients 65 years or older who undergo SCT had medication lists consistent with the Beers criteria. The study will examine if there is a relationship between Beers compliance and incidence of adverse drug reactions and/ or the need for physical rehabilitation services post-SCT.

Methodology: The study will consist of a retrospective chart review of patients who underwent SCT between November 1, 2007 and July 1, 2017 in a community hospital. The information will be accessed via electronic medical records. The inclusion criteria consist of patients 65 to 88 years of age who underwent SCT at an oncology center in South Florida. The exclusion criteria includes non-treatment-related death while undergoing the SCT. The data to be analyzed includes home medication list, laboratory parameters (Scr, CrCl, among others), length of hospital stay, performance status, and other pertinent baseline parameters. Descriptive statistics will be used for demographics and outcomes.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Determine if the non-compliance with Beers criteria impacts the incidence of ADR or the patients' ability to perform ADL

Self Assessment: Which of the following statements in regards to Beers criteria is true? A. PIM (potentially inappropriate medication) may prevent the administration of full doses of chemotherapy and decrease FFS (progression free survival) and OS (overall survival). B. Polypharmacy does not influence the risk for severe non-hematologic toxicity in patients receiving chemotherapy. C. NCCN guidelines suggest the use of Beers criteria in patients undergoing SCT. D. Older adults undergoing SCT do not need a medication review neither a Beers criteria analysis.

Purpose/Background: Patients with acute myeloid leukemia (AML) who achieve complete remission with induction therapy require consolidation therapy. The standard of care consolidation is HIDAC or IDAC depending on age and risk stratification. Consolidation therapy has historically been administered in the inpatient setting. The rising cost of AML care has prompted institutions to consider shifting therapy to the outpatient setting. However, the safety and feasibility of outpatient HIDAC/IDAC consolidation therapy has not been established. Moffitt Cancer Center (MCC) developed an Inpatient/Outpatient (IPOP) program to facilitate administration of complicated regimens in the outpatient setting. We hypothesized that IPOP administration of HIDAC/IDAC consolidation therapy is safe and may have cost-savings implications.

Methodology: We conducted a retrospective chart review on AML patients who were 18 years or older and received HIDAC/IDAC consolidation therapy at MCC following induction therapy from January 1, 2015 to November 1, 2018. Data collected included age, risk stratification, treatment history, clinic visits, number of cycles received in the IPOP versus inpatient setting, supportive care, hospitalizations, and chemotherapy related adverse events.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the safety and feasibility of administering HIDAC/IDAC consolidation therapy in the outpatient setting

Self Assessment: The dose of cytarabine in HIDAC/IDAC is adjusted for: A. Liver function B. Renal function C. Concurrent midostaurin use D. Concurrent voriconazole use

Purpose/Background: Chemotherapy-induced nausea and vomiting (CINV) is one of the most distressing side effects of cancer treatment and occurs in up to eighty-percent of patients, consequently impacting a patient's quality of life. To date, studies have identified risk factors for chemotherapy-induced nausea and vomiting in various cancer populations and chemotherapy regimens such as age, gender, brain metastases and more. The objective of this study is to evaluate significant risk factors that have impacted the efficacy of antiemetic prophylaxis in cancer patients receiving high, moderate and low emetogenic chemotherapy across an outpatient cancer center.

Methodology: A single-center, retrospective chart review was performed on fifty cancer patients who were on current standard-of-care antiemetic treatment with cisplatin, FOLFOX and gemcitabine between January 1, 2018 and September 30, 2018. The primary endpoint was evaluating significant risk factors in patients who experienced controlled versus uncontrolled emesis with their respective chemotherapy regimens. Secondary endpoints included the number of patients uncontrolled despite antiemetic prophylaxis, the average number of risk factors per patient group and more.

Results/Conclusions: Overall, 62% of patients experienced uncontrolled-emesis despite prophylactic treatment. Specifically 85%, 67% and 38% of patients experienced uncontrolled-emesis with cisplatin, FOLFOX and gemcitabine regimens respectively. Risk factors most associated w This present study demonstrated that a majority of cancer patients at Cleveland Clinic Florida experience uncontrolled emesis despite standard antiemetic prophylaxis and that no significant risk factors could be attributed with uncontrolled emesis.

Presentation Objective: Discuss possible risk factors of chemotherapy induced nausea and vomiting with various emetogenic chemotherapies

Self Assessment: Identify possible risk factors that could make this patient refractory to emesis associated with their chemotherapy despite appropriate antiemetic prophylaxis.
OUTCOMES OF PHARMACY BASED PROGRAM TO DECREASE USE OF SULFONYLUREAS IN HOSPITALIZED PATIENTS
Rebecca Sankhi-Winter Haven Hospital

Purpose/Background: Sulfonylureas stimulate the pancreatic beta cells to secrete insulin, therefore are associated with a hypoglycemia risk. The purpose of this retrospective study is to evaluate the impact of a pharmacy based intervention to decrease use of sulfonylureas on the occurrence of hypoglycemic episodes among adult patients admitted to Winter Haven Hospital.

Methodology: The study utilized data collected from patient electronic medical records after discharge to compare the number of hypoglycemic events in hospitalized patients prior to and after the launch of the pharmacy based program to monitor use of sulfonylureas in patients. The pre-intervention time frame was from October 1, 2017 to March 31, 2018 and the post intervention time frame was from October 1, 2018 to March 31, 2019. The primary outcome of this study was to evaluate the change in rate of hypoglycemic episodes on total number of patient days following the implementation of the pharmacy based program to decrease use of sulfonylureas in adult patients admitted to Winter Haven Hospital. A hypoglycemic episode was defined as at least one blood glucose level less than 70 mg/dL per patient day. A patient day was synonymous with a calendar day. Reoccurrence of a hypoglycemic episode post 12 hours following the previous episode constituted as an additional episode in the same patient. The secondary outcome measured the severity of hypoglycemic episodes, with clinically significant hypoglycemia defined as blood glucose less than 54 mg/dL.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the impact of the pharmacy based intervention to decrease the use of sulfonylureas on the occurrence of hypoglycemic episodes in hospitalized patients
Self Assessment: True or False: Decreasing the use of sulfonylureas in hospitalized patients reduces the number of hypoglycemic episodes.

IMPACT OF INJECTABLE OPIOID RESTRICTIONS ON OPIOID CONSUMPTION DURING CRITICAL DRUG SHORTAGE
Samantha A. Brokenshire-UF Health Shands

Purpose/Background: Critical shortages of injectable fentanyl, hydromorphone and morphine products in 2017 created a national public health emergency. Despite the frequency and severity of recent drug shortages, limited literature has evaluated the strategies utilized to optimize patient care during times of medication scarcity. The purpose of this study is to investigate the impact of different ordering restrictions on the utilization of opioid products during the national opioid shortage.

Methodology: A single-center retrospective pre/post study was conducted to evaluate adult patients admitted to UF Health Shands Hospital from July 2017 to June 2018 who received at least one opioid product outside of the operating room. Opiate orders were represented as milligram of intravenous morphine equivalents (MME) and stratified as oral, intermittent injectable and continuous infusion route of administration. A segmented interrupted time series regression analysis was used to quantify the impact of consecutive medication ordering restrictions on the administration of intermittent opioid products and on the dispensing of continuous opioids over the study period.

Results/Conclusions: 259,210 unique medication orders were analyzed and incorporated into the regression analysis. A preliminary analysis was conducted to investigate the impact of ordering restrictions on intermittent intravenous and oral products over the study period. Inte Conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Investigate the impact of ordering restrictions instituted by UF Health Shands Hospital on overall opioid consumption during the critical drug shortage of injectable opioid products
Self Assessment: Which of the following is not a strategy to directly combat drug shortages of critical medications? A. Convert to oral equivalent B. Modify relevant order sets to include alternative medications C. Change location of scarce medications to areas of highest utilization D. Prompt practitioners to order alternative agents within CPOE
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session IV

May 17, 2019
8:00-9:00am
**ABSTRACT REPRODUCTION FORM**

**Time:** 8:00 - 8:20 Room: N2008 Category: Administration / Managed Care III

**PHARMACOECONOMIC ANALYSIS OF ANTIPSYCHOTIC MEDICATIONS FOR THE MANAGEMENT OF SCHIZOPHRENIA IN A MANAGED CARE SETTING**

Kattrina Tam-WellCare

**Purpose/Background:** Long acting injectable (LAI) antipsychotic medications served to solve the adherence problem patients with schizophrenia face and in turn, reduce symptoms, risk of relapse, and rehospitalizations. Clinical practice guidelines last updated in 2004 and a guideline watch posted in 2009 recommend LAIs in those at risk for nonadherence or the severely ill. It is recommended to start with oral antipsychotics and maintain a stable level before treatment with an LAI. LAIs have a dosing frequency which might confer better adherence, stability, and tolerability however, clinical evidence yield inconsistent results in comparison to oral therapy.

The purpose of this study is to examine the clinical and cost comparisons of long acting injectable and oral antipsychotic therapy.

**Methodology:** A retrospective cohort study was conducted to analyze members who received oral, LAI, or combination antipsychotic therapy for schizophrenia management. Members were included if enrolled in a Medicaid or Medicare Advantage-Prescription Drug plan continuously from January 2016 through December 2018 and had at least six months of paid claims for oral, LAI, or combination antipsychotic therapy. Members were excluded if they were on antipsychotics for other diagnoses. Outcomes evaluated included adherence, emergency department visits, hospital admissions, and readmissions. The cost of therapy included pharmacy costs, provider visits and hospitalization or emergency department visits related to behavioral health. Costs will be reported as average cost per-member-per-month. Statistical differences between outcomes and costs will be determined with a T-test and a chi-squared test.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Analyze antipsychotic medication outcomes in the Medicaid and Medicare population

**Self Assessment:** What is the Proportion of Days Covered (PDC) threshold in which a patient is considered adherent because there is a reasonable likelihood of achieving the most clinical benefit from an antipsychotic in the management of schizophrenia? A. 50%, B. 75%, C. 85%, D. 80%

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 8:40 - 9:00 Room: N2008 Category: Administration / Managed Care III

**COMPARING PATIENT REPORTED OUTCOMES IN PATIENTS USING CGRP ANTAGONISTS OR ONABOTULINUMTOXINA FOR CHRONIC MIGRAINE**

Leonard Deleon-WellDyneRx

**Purpose/Background:** Calcitonin gene-related peptide (CGRP) antagonists are a new drug class indicated for chronic migraine prevention and currently include three self-injectable therapies. Prior to the approval of these medications, onabotulinumtoxinA was the only long-acting therapy for chronic migraine prevention that did not require daily administration. Currently, there is little data that compares patient reported outcomes (PROs) of CGRP antagonists to onabotulinumtoxinA for chronic migraine prophylaxis.

**Methodology:** This observational study looked at patients on either CGRP antagonist (CGRP) (including erenumab-aooe, galcanezumab-gnlm, and fremanezumab-vrft) or onabotulinumtoxinA (ONA) for chronic migraine prophylaxis from January 2018 through December 2018. Endpoints included migraine headache days (MHD), average pain severity, average hourly duration of migraines, and HIT-6 questionnaire scores. Responders were identified if they had at least a 50% reduction in baseline MHD during the study period and had at least one severity class improvement.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe how patient reported outcomes are used in clinical practice to evaluate program effectiveness and improve quality of care

**Self Assessment:** Which of the following is/are considered barriers to using PROs in clinical practice? A. Patient and provider buy-in B. Integration with Electronic Health Record (HER) C. Variability of PROs D. All of the above

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 8:00 - 8:20 Room: L1005 Category: Anticoagulation IV

**EVALUATION OF DIRECT ORAL ANTICOAGULANT (DOAC) TREATMENT FAILURE AND ASSOCIATED RISK FACTORS IN PATIENTS WITH CLASS III OBESITY**

Sonnia Zambrano-North Florida Regional Medical Center

**Purpose/Background:** Non-vitamin K antagonist therapies for prevention of stroke and systemic thromboembolic events have significantly expanded in recent years. Increased DOAC utilization has prompted questions on the role obesity plays in altered drug kinetics and/or clinical effects. The purpose of this study is to determine the incidence of treatment failure (i.e. development of venous thromboembolism or stroke) with DOACs in patients with class III obesity (BMI ≥40), to explore patient-specific risk factors (i.e. past medical history, demographics) that may be associated with treatment failure, and to evaluate the incidence of major bleeding as defined by authors of HAS-BLED risk score.

**Methodology:** Subjects meeting inclusion criteria were identified using clinical surveillance platform, Vigilan, and the electronic health record system. A retrospective chart review was conducted of subjects admitted to NFRMC with BMI ≥40 and active medication order for DOAC between January 1, 2015 and December 31, 2018. The primary outcome was to determine the incidence of treatment failure across all DOACs in study sample. Secondary outcomes include the incidence of major bleeding and risk factors present for the development of venous thromboembolism/stroke.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe factors may influence selection of appropriate anticoagulation therapy

**Self Assessment:** True or false: When selecting appropriate anticoagulation pharmacotherapy, one should consider patient-specific factors including but not limited to renal function, age, and weight.
Time: 8:20 - 8:40 Room: L1005 Category: Anticoagulation IV

DEVELOPMENT AND IMPLEMENTATION OF A PERIPROCEDURAL PROTOCOL FOR THE MANAGEMENT OF ANTIITHROMBOTIC AGENTS IN AN ACUTE CARE COMMUNITY HOSPITAL

Ikponmwosa O Uroghide-Palmetto General Hospital

Purpose/Background: Perioperative management of antithrombotic agents in patients undergoing surgical procedures has limited high quality evidence to guide decision making. Current guidelines do not address all high-risk surgical procedures and are not up to date with new antithrombotic agents. The purpose of this study is to develop and implement a protocol for the management of antithrombotic agents in patients undergoing surgical procedures and evaluate its impact on the rate of post-operative bleeding.

Methodology: This study consists of two phases. In Phase I, a perioperative protocol for the management of antithrombotic agents was developed, presented to, and approved by the Pharmacy and Therapeutics (P&T) Committee. A retrospective evaluation of post-operative bleeding rates and thrombotic events in patients who underwent inpatient surgical procedures was performed for the period of January and February of 2018, prior to implementation of protocol. Bleeding was defined as a decrease in hemoglobin of ≥2 g/dL within 48 hours of a procedure. Retrospective evaluation of post-operative bleeding rates and thrombotic events post implementation of protocol was performed in Phase II for the period of January and February 2019. Results from Phase II will be compared to Phase I.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the importance for implementing a perioperative protocol for the management of antithrombotic agents in an acute care community hospital

Self Assessment: Which of the following is a valid reason to have a perioperative protocol for the management of antithrombotic agents? A. To decrease perioperative bleeding. B. To give physicians one less thing to worry about. C. To reduce the workload of the pharmacists. D. To ensure all patients on anticoagulants are bridged

Time: 8:40 - 9:00 Room: L1005 Category: Anticoagulation IV

IMPACT OF AN INPATIENT PHARMACIST-MANAGED WARFARIN MAINTENANCE PROTOCOL ON TIME IN THERAPEUTIC RANGE

Jessica Alexander-Sarasota Memorial Hospital

Purpose/Background: One element of the Joint Commission's National Patient Safety Goal 03.05.01 is to implement standardized protocols for initiation and maintenance of anticoagulant therapy in hospitalized patients. However, managing inpatient warfarin dosing is challenging due to multiple factors that can affect warfarin therapy and time in therapeutic range (TTR). The purpose of this study was to determine if an inpatient pharmacist-managed warfarin maintenance protocol would improve time in therapeutic range.

Methodology: This quasi-experimental pre-test/post-test, IRB-approved study included adults on warfarin maintenance therapy prior to admission with a pharmacy consult to dose warfarin and at least five consecutive doses of warfarin administered. Data was collected for the pre-group from November 2017 to March 2018 and from November 2018 to March 2019 for the post-group. Patients who received vitamin K or prothrombin complex concentrate (human) for reversal before a procedure or for bleeding upon admission were excluded. The primary outcome was time in therapeutic range (TTR) + 0.2. Secondary outcomes included incidence of major or minor bleeding events, critical INR values of less than 1.5 and greater than 5, percentage of patients achieving therapeutic INR before discharge, time to therapeutic range if patient had subtherapeutic INR upon admission, compliance with new dosing protocol, total number of INRs drawn, and TTR + 0.2 in a subgroup of patients who, based on the new protocol, would qualify for extended time between INR measurements. Primary and secondary outcomes were analyzed using descriptive statistics.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Discuss the potential impact of an inpatient pharmacist-managed warfarin maintenance protocol on time in therapeutic range

Self Assessment: The primary goal of an inpatient pharmacist-managed warfarin maintenance protocol is to: A. Increase time to therapeutic range B. Increase physician productivity C. Increase time in therapeutic range

Time: 8:00 - 8:20 Room: 1209-A Category: Critical Care VII

NICARDIPINE VERSUS CLEVIDIPINE AND NIPODURPRSIDE IN POSTOPERATIVE HYPERTENSION AFTER OPEN HEART SURGERY

Eduardo Diaz-Orlando Health

Purpose/Background: Patients undergoing open heart surgery can develop acute postoperative hypertension (APH). Complications associated with APH include myocardial infarction, arrhythmias, and vascular anastomoses failure. Although there are studies on safety and efficacy of nicardipine in treating hypertension in patients with neurological emergencies, there is less data on nicardipine compared to clevidipine and nitroprusside in treating hypertension after open heart surgery. The objective of this study was to assess safety, efficacy, and cost effectiveness of nicardipine when used in treating hypertension after open heart surgery.

Methodology: This was a retrospective chart review of cardiovascular surgery patients who underwent open heart surgery for CABG, valve procedures, or combined CABG and valve procedures at Orlando Health between October 1, 2016 and October 1, 2018. The primary endpoint evaluated the safety of nicardipine compared to a control group consisting of both clevidipine and nitroprusside in treating postoperative hypertension. The primary endpoint was a composite of safety outcomes including hypotension, bradycardia, tachycardia, and incidence of atrial fibrillation. The secondary endpoints assessed the efficacy of nicardipine compared to clevidipine and nitroprusside in managing hypertension after open heart surgery. Secondary endpoints included the percentage of time blood pressure was above the established blood pressure range, time required to establish blood pressure control, and failure of therapy (required use of alternative antihypertensive agent). Finally, medication costs associated with the use of the individual antihypertensive agents were also assessed.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the safety and efficacy of nicardipine compared to clevidipine and nitroprusside in treating hypertension after open heart surgery

Self Assessment: Complications associated with acute postoperative hypertension include which of the following? A. Myocardial infarction B. Arrhythmia C. Vascular anastomoses failure D. All of the above

Time: 8:20 - 8:40 Room: 1209-A Category: Critical Care VII

EVALUATION OF COMPLICATIONS ASSOCIATED WITH PERIPHERAL ADMINISTRATION OF HYPERTONIC SALINE (3% SOLUTION)

Jennifer Marsh-Tampa General Hospital

Purpose/Background: Hypertonic saline is a hyperosmolar agent commonly used to treat cerebral edema and hyponatremia. Central administration of this medication has historically been preferred due to the high osmolarity to prevent extravasation, phlebitis, infiltration, tissue ischemia, and thrombosis. Current practice at Tampa General Hospital is that 3% hypertonic saline is preferentially administered via a central line, but there are no restrictions on rates or duration of peripheral administration in the intensive care units or emergency department. At our institution there is minimal guidance for peripheral administration regarding infusion rate, site of access, gauge, and duration of therapy. The purpose of this study was to retrospectively evaluate peripheral administration of 3% hypertonic saline and identify complications with the goal of quality improvement.

Methodology: This was a single-center retrospective chart review conducted on all adult patients who received 3% saline through a peripheral line as a bolus or as a continuous infusion for greater than 4 hours between July 1, 2016 and June 30, 2018. The primary outcome of this study is the incidence of line-related complications, including extravasation, infiltration, phlebitis, tissue ischemia, and thrombosis. Secondary outcomes include infusion duration, average and maximum infusion rate, indication, peripheral access site, catheter gauge/size, use of 3% saline or 3% sodium as 50:50 chloride acetate, age, race, gender, vascular comorbidities, infection, time to central venous access, hospital length of stay, intensive care unit length of stay, and discharge disposition.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the risks of peripheral administration of 3% saline

Self Assessment: Which of the following is NOT a perceived risk of peripheral administration of 3% saline? A. Extravasation B. Phlebitis C. Infiltaration D. Hyperglycemia
either rATG or basiliximab, in heart transplant recipients.

induction with rATG and basiliximab, compared to monotherapy induction with
infections, and survival, this study investigated the efficacy and safety of dual
transplant: Culture confirmed bacterial, viral, or fungal infection, humoral rejection,
transitioned to basiliximab, resulting in dual induction. The combined use of rATG
properties, C. Resolve leukocytosis, D. Improve cardiac function.

- dose corticosteroids

Critical Care VII

ALCOHOL WITHDRAWAL SYNDROME IN THE CRITICALLY ILL
Angeleke Vakiaros-Medical Center of Trinity

Benzodiazepine-sparing protocols utilizing adjunctive
pharmacotherapy regimens, including alpha-2-agonists plus calcium-channel
modulators, can play an important role and need further research.

self-tolerance with alcohol due to similar mechanisms of action. This allows
them to serve as a substitute, however, benzodiazepine use in alcohol-dependent
patients can pose serious safety concerns and further addiction. Adjunctive
pharmacotherapy regimens, such as alpha-2-agonists and calcium-channel
modulators, can play an important role and need further research.

Methodology: A retrospective chart review conducted at the Medical Center of
Trinity (MCT). Adult inpatients ages eighteen and older that were admitted to the intensive
care unit (ICU) suffering from alcohol dependence and displaying severe alcohol
withdrawal symptoms according to the Clinical Index of Alcohol Withdrawal-Revised
(CIWA-AR), between January 1, 2017 and December 31, 2018, were included. Patient data
from 2017 was compared to data from 2018, when protocols utilizing adjunctive therapies,
including alpha-2-agonists plus calcium-channel modulators, for symptom prophylaxis
were approved. The primary outcome was the total number of benzodiazepine doses given
as needed. Secondary outcomes include the percentage of patients initiated on various
adjunctive therapy regimens per MCT protocol, incidences of delirium tremens and
seizures, ICU and total hospital length of stay, use of scheduled benzodiazepines, use of
dexmedetomidine, and alcohol withdrawal severity per CIWA-AR.

- do not provide guidance on the optimal dosing strategy. Previous studies have only
compared intermittent dosing with a continuous infusion of hydrocortisone.
Therefore, the purpose of this study is to evaluate the effectiveness of different
intermittent hydrocortisone dosing regimens in patients with septic shock.

Methodology: Retrospective cohort study conducted in Morton Plant Hospital's
intensive care units (ICU). Patients at least 18 years of age who presented with a
diagnosis of septic shock were categorized into either one of two groups: those who
received 300 mg of hydrocortisone per day or those who received less than or equal
to 200 mg per day. The primary outcome was the time to resolution of shock defined
as the time from the first dose of hydrocortisone administration until the achievement
of a mean arterial pressure greater than or equal to 65 mmHg without requiring
vasopressor therapy. Secondary outcomes were 28 day all-cause in-hospital mortality,
ICU length of stay, total duration of hydrocortisone use, incidence of hyperglycemia,
and recurrence of shock.

Results/Conclusions: Results and conclusion will be presented at the Florida
Residency Conference.

Presentation Objective: Recognize potential alternative hydrocortisone dosing
regimens in patients with septic shock
Self Assessment: Which of the following is not a mechanism which supports the use
of hydrocortisone in septic shock? A. HPA axis activation, B. Anti-inflammatory
properties, C. Resolve leukocytosis, D. Improve cardiac function.

Purpose/Background: Corticosteroids are commonly used in septic shock as
adjunctive therapy for their anti-inflammatory effects and ability to restore
cardiovascular homeostasis. Hydrocortisone is one of the most widely studied
corticosteroids; however, the clinical evidence surrounding patient outcomes is
controversial. Current guidelines recommend using low dose corticosteroids but do

- indicate the potential correlation between bleeds or bleed severity and statin use.

The current gold standard treatment approach is benzodiazepines, as
they are cross-tolerant with alcohol due to similar mechanisms of action. This allows
them to serve as a substitute, however, benzodiazepine use in alcohol-dependent
patients can pose serious safety concerns and further addiction. Adjunctive
pharmacotherapy regimens, such as alpha-2-agonists and calcium-channel
modulators, can play an important role and need further research.

Methodology: This was a retrospective chart review conducted at the Medical Center of
Trinity (MCT). Adult inpatients ages eighteen and older that were admitted to the intensive
care unit (ICU) suffering from alcohol dependence and displaying severe alcohol
withdrawal symptoms according to the Clinical Index of Alcohol Withdrawal-Revised
(CIWA-AR), between January 1, 2017 and December 31, 2018, were included. Patient data
from 2017 was compared to data from 2018, when protocols utilizing adjunctive therapies,
including alpha-2-agonists plus calcium-channel modulators, for symptom prophylaxis
were approved. The primary outcome was the total number of benzodiazepine doses given
as needed. Secondary outcomes include the percentage of patients initiated on various
adjunctive therapy regimens per MCT protocol, incidences of delirium tremens and
seizures, ICU and total hospital length of stay, use of scheduled benzodiazepines, use of
dexmedetomidine, and alcohol withdrawal severity per CIWA-AR.

Results/Conclusions: Results and conclusion will be presented at the Florida
Residency Conference.

Presentation Objective: Recognize the risk of intracranial bleeding associated with
benzodiazepine use
Self Assessment: Which of the following would be considered a contraindication to
receiving a statin? A. Age over 75 years B. Acute ischemic stroke C. Hemorrhagic
troke D. Acute myocardial infarction E. None of the above

Purpose/Background: Statins are one of the most commonly prescribed classes
amongst adults with cardiovascular disease. Recent literature suggests pleiotropic
effects of statins may include an increased risk of bleeding risk with their use. Several
hypothesized mechanisms. The purpose of this study is to compare clinical outcomes in
patients that had a major bleeding event while concurrently taking statins. Results of
this study will provide insight into a potential correlation between bleeds or bleed
severity and statin usage.

Methodology: The study is a multiple site, retrospective study. Patients were
identified using ICD 9 or ICD 10 codes for major bleeding events. Patients were
included if they had a diagnosis of a major bleeding event between January 2016 and
August 2018. Patients less than 18 years of age were excluded. Information
pertaining to demographics, medical history, laboratory data, statin use, and bleed
severity was collected for analysis. Corresponding radiology results were recorded
for each patient. Clinical outcomes evaluated include correlation between bleed
severity and statin use, comparison of bleed severity in patients receiving hydrophilic
versus lipophilic statins, hospital length of stay, discharge disposition, and
development of thrombotic events during hospitalization. Mean medication doses,
length of stays, and incidence of adverse events will be compared using Student's-
tests. Nominal data will be compared using Pearson's chi-square. P-values less than
0.05 will be considered statistically significant. Statistical analysis will be completed
utilizing Microsoft Excel.

Results/Conclusions: Results and conclusion will be presented at the Florida
Residency Conference. Results and conclusions will be presented at the Florida
Residency Conference

Presentation Objective: Recognize the risk of intracranial bleeding associated with
benzodiazepine use
Self Assessment: Which of the following would be considered a contraindication to
receiving a statin? A. Age over 75 years B. Acute ischemic stroke C. Hemorrhagic
troke D. Acute myocardial infarction E. None of the above

Purpose/Background: Statins are one of the most commonly prescribed classes
amongst adults with cardiovascular disease. Recent literature suggests pleiotropic
effects of statins may include an increased risk of bleeding risk with their use. Several
hypothesized mechanisms. The purpose of this study is to compare clinical outcomes in
patients that had a major bleeding event while concurrently taking statins. Results of
this study will provide insight into a potential correlation between bleeds or bleed
severity and statin usage.

Methodology: The study is a multiple site, retrospective study. Patients were
identified using ICD 9 or ICD 10 codes for major bleeding events. Patients were
included if they had a diagnosis of a major bleeding event between January 2016 and
August 2018. Patients less than 18 years of age were excluded. Information
pertaining to demographics, medical history, laboratory data, statin use, and bleed
severity was collected for analysis. Corresponding radiology results were recorded
for each patient. Clinical outcomes evaluated include correlation between bleed
severity and statin use, comparison of bleed severity in patients receiving hydrophilic
versus lipophilic statins, hospital length of stay, discharge disposition, and
development of thrombotic events during hospitalization. Mean medication doses,
length of stays, and incidence of adverse events will be compared using Student's-
tests. Nominal data will be compared using Pearson's chi-square. P-values less than
0.05 will be considered statistically significant. Statistical analysis will be completed
utilizing Microsoft Excel.

Results/Conclusions: Results and conclusion will be presented at the Florida
Residency Conference. Results and conclusions will be presented at the Florida
Residency Conference

Presentation Objective: Recognize the risk of intracranial bleeding associated with
benzodiazepine use
Self Assessment: Which of the following would be considered a contraindication to
receiving a statin? A. Age over 75 years B. Acute ischemic stroke C. Hemorrhagic
troke D. Acute myocardial infarction E. None of the above

Purpose/Background: Statins are one of the most commonly prescribed classes
amongst adults with cardiovascular disease. Recent literature suggests pleiotropic
effects of statins may include an increased risk of bleeding risk with their use. Several
hypothesized mechanisms. The purpose of this study is to compare clinical outcomes in
patients that had a major bleeding event while concurrently taking statins. Results of
this study will provide insight into a potential correlation between bleeds or bleed
severity and statin usage.

Methodology: The study is a multiple site, retrospective study. Patients were
identified using ICD 9 or ICD 10 codes for major bleeding events. Patients were
included if they had a diagnosis of a major bleeding event between January 2016 and
August 2018. Patients less than 18 years of age were excluded. Information
pertaining to demographics, medical history, laboratory data, statin use, and bleed
severity was collected for analysis. Corresponding radiology results were recorded
for each patient. Clinical outcomes evaluated include correlation between bleed
severity and statin use, comparison of bleed severity in patients receiving hydrophilic
versus lipophilic statins, hospital length of stay, discharge disposition, and
development of thrombotic events during hospitalization. Mean medication doses,
length of stays, and incidence of adverse events will be compared using Student's-
tests. Nominal data will be compared using Pearson's chi-square. P-values less than
0.05 will be considered statistically significant. Statistical analysis will be completed
utilizing Microsoft Excel.

Results/Conclusions: Results and conclusion will be presented at the Florida
Residency Conference. Results and conclusions will be presented at the Florida
Residency Conference

Presentation Objective: Recognize the risk of intracranial bleeding associated with
benzodiazepine use
Self Assessment: Which of the following would be considered a contraindication to
receiving a statin? A. Age over 75 years B. Acute ischemic stroke C. Hemorrhagic
troke D. Acute myocardial infarction E. None of the above
ABSTRACT REPRODUCTION FORM

Time: 8:00 - 8:20 Room: CLC Category: Emergency Medicine III

EFFECT OF IMPLEMENTATION OF SUCCESSIVE ADMINISTRATION OF STANDARD STOCK VANCOMYCIN IN THE EMERGENCY DEPARTMENT FOR DOSES GREATER THAN TWO GRAMS ON TIME TO VANCOMYCIN DOSE

Jon Shaffer-Florida Hospital Orlando

Purpose/Background: The Surviving Sepsis Campaign 2016 guidelines recommend initiation of intravenous antibiotics within one hour of recognition for sepsis and septic shock. Every hour that antibiotics are delayed is associated with an additional increase in mortality. Doses greater than two grams are not stocked in our emergency department, which may result in a delay in administration. The objective of this study is to determine if successive administration of standard stock vancomycin doses reduces time to administration in comparison to preparing the dose in the pharmacy cleanroom.

Methodology: A protocol was implemented to allow the successive administration of standard stock vancomycin doses in place of preparing these doses in the pharmacy cleanroom. Nursing education was provided on how to safely administer the successive doses. Electronic chart review identified patients at AdventHealth Orlando who received doses of vancomycin greater than two grams in the emergency department. The study period consisted of one month following implementation of the new protocol and compared to patients during the same month of the previous year. Data was collected on time of order verification, time of administration, dose of vancomycin administered, and other antibiotics ordered. The primary endpoint is the average time from order verification to time of vancomycin administration. Provider and nursing documentation was reviewed for any reasoning for delayed administration of vancomycin.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Summarize a protocol for administering successive doses of vancomycin to provide a total loading dose and its effect on time to first vancomycin dose

Self Assessment: Which of the following is a risk of administering intravenous vancomycin at a rate of greater than one gram per hour?

ABSTRACT REPRODUCTION FORM

Time: 8:40 - 9:00 Room: CLC Category: Emergency Medicine III

OUTCOMES AFTER USE OF FOUR-FACTOR PROTHROMBIN COMPLEX CONCENTRATE FOR REVERSAL OF DOAC-ASSOCIATED BLEEDING

Jennifer Vazquez Perez-St. Joseph's Hospital

Purpose/Background: Factor Xa inhibitors are commonly used agents for the prophylaxis and treatment of venous thromboembolism and for stroke prevention in patients with atrial fibrillation. When compared to warfarin, factor Xa inhibitors have a more rapid onset, predictable anticoagulant effect, and fewer drug-drug interactions. However, the risk of bleeding with these agents remains an ongoing safety concern. Currently, the main approach to treating a bleed caused by factor Xa inhibitors is supportive measures. The suggested strategies for reversal include the administration of prothrombin complex concentrates (PCCs), activated prothrombin complex concentrates, or recombinant factor VIIa. Four-factor PCCs (4FPCCs) have been tested in vitro with favorable results. The National Comprehensive Care Society, in conjunction with the Society of Critical Care Medicine, recommends the administration of PCCs to correct anti-factor Xa-associated coagulopathy; even though the data are not sufficient to support the efficacy of these agents.

Methodology: This IRB-approved retrospective chart review analyzed the efficacy and safety advantages of a 4FPPC product (KCentra®) in treating factor Xa inhibitor reversal. Data was obtained from January 2014 through July 2018. The primary objective of this study was to determine whether 4FPPC was effective in factor-Xa inhibitor reversal using a modified version of the International Society on Thrombosis and Haemostasis (ISTH) criteria for evaluating effective hemostasis. The secondary objectives were to evaluate reversal success in sub-populations categorized by dose, type of major bleed, and between agents.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Determine whether the use of prothrombin complex concentrate is effective in reversing DOAC-related bleeding

Self Assessment: True or False: Four-factor PCC has demonstrated effectiveness for emergent DOAC reversal.

ABSTRACT REPRODUCTION FORM

Time: 8:20 - 8:40 Room: CLC Category: Emergency Medicine III

EVALUATION OF THE USE OF INDIVIDUALIZED PATIENT CARE PLANS FOR REDUCING EMERGENCY DEPARTMENT VISITS IN FREQENT EMERGENCY DEPARTMENT VISITORS

Ashley Johnson-Lakeland Regional Health

Purpose/Background: Pain is often a major complaint of patients reporting to the emergency department (ED). The medical management program at Lakeland Regional Health (LRH) targets patients frequently utilizing the ED with a chief complaint of pain, providing them with individualized care plans. The purpose of this program is to improve quality and consistency of care through interventions such as minimization of inappropriate opioid prescribing or limiting unnecessary repeat radiographic imaging. Once developed by a multidisciplinary team, the plans become a permanent part of the medical record to provide guidance on subsequent ED visits for chronic complaints. The purpose of this study was to evaluate the effectiveness of this program in reducing emergency department visits.

Methodology: This was a single center, retrospective cohort evaluation. Individuals were eligible for inclusion if she had a documented, enacted care plan as part the of the medication management program on or before September 17, 2017. Data was collected in the 12 months prior to date of plan implementation and in the 13 months following implementation, minus a 1 month washout period immediately post plan implementation. Exclusion criteria consisted of patients discussed in the quarterly medication management meetings in whom no plan was enacted and patients who passed away prior to the end of the study period as documented within the medical record. The primary outcome was the number of ED visits per year. Secondary outcomes consisted of number of inpatient admissions per year and cost savings (as available).

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the impact of individual care plans on number of emergency room visits by frequent emergency department users

Self Assessment: Frequent emergency department users may: A. Report subjectively poorer health B. Believe their complaints deserve immediate attention C. See the emergency department as an alternative to primary care D. A and C E. All of the above

ABSTRACT REPRODUCTION FORM

Time: 8:00 - 8:20 Room: 1209-C Category: Infectious Diseases VII

COMPARISON OF THE EFFICACY AND SAFETY OF GUIDELINE RECOMMENDED ANTIBIOTICS IN THE TREATMENT OF INTRA-ABDOMINAL INFECTIONS

Celestino Zayas-Morales-Broward Health Medical Center

Purpose/Background: Treatment of intra-abdominal infections (IAI) commonly requires surgical intervention and broad-spectrum antibiotics. With a rising prevalence of multidrug resistant organisms, selection of effective empiric therapy has become increasingly difficult. This creates the potential for use of inappropriate regimens as well as overuse of broad-spectrum agents. The purpose of this study was to evaluate cure response rates with piperacillin-tazobactam, cephalexin plus metronidazole, and fluoroquinolone plus metronidazole compared to meropenem in hospitalized patients with IAI.

Methodology: Adult patients with clinical evidence of IAI who received antibiotic therapy for at least 48 hours were included in the study. The primary outcome was cure response rate among all four groups. Secondary outcomes included antibiotic-related adverse events, duration of treatment, length of stay, rates of extra-abdominal infection and in-hospital mortality.

Results/Conclusions: The final analysis included 100 patients with 97% achieving the primary outcome. Those receiving fluoroquinolone/metronidazole had significantly shorter treatment duration (6.1 vs. 9.5 days; p=0.0019) and hospital lengths of stay (6.5 vs. 12.2 days; p=0. Results from this study indicate that antibacterial selection at this teaching institution appeared to be safe and effective for the treatment of IAI.

Presentation Objective: Evaluate the cure response rates with piperacillin-tazobactam, a cephalosporin plus metronidazole, or a fluoroquinolone plus metronidazole compared to meropenem in hospitalized patients with intra-abdominal infections

Self Assessment: What is the recommended duration of therapy for uncomplicated cases of IAI according to 2010 IDSA guidelines?
Usage of ceftriaxone for various open fracture types.

This study aims to evaluate the overall appropriateness of antibiotic utilization for acute respiratory tract infections in the emergency department. Data was collected from no more than 200 patients who were prescribed ceftriaxone during the year prior to the study period. The electronic medical record system was used to identify patients 18 years and older who were prescribed antibiotics upon discharge from the emergency room. The primary outcome of overall appropriate antibiotic utilization was 64% (124/194). Results/Conclusions: A total of 244 patients were included in this study, 194 of which were prescribed antibiotics upon discharge from the emergency room. The primary outcome of overall appropriate antibiotic utilization was 64% (124/194). Amongst patients for whom treatment this study demonstrated that a significant amount of patients who present to the emergency department at Cleveland Clinic Florida and are diagnosed with acute-upper respiratory tract infections, are inappropriately prescribed antibiotics.

Presentation Objective: Recognize appropriateness and trends related to antibiotic prescribing and utilization for treatment of acute respiratory tract infections

Self Assessment: What areas prove to offer the greatest opportunity for pharmacist intervention of discharge antibiotic prescriptions in patients presenting with acute upper respiratory tract infections?

A. Dosing, B. Indication, C. Selection, D. All of the above.

Presentation Objective: Assess if there is an increase in adverse events when patients with a documented Type I penicillin allergy receive a first-generation cephalosporin.

Self Assessment: In this retrospective chart review, was there an increased number of adverse events in patients with a Type I penicillin allergy that received a first-generation cephalosporin versus patients with no documented penicillin allergy that received a first-generation cephalosporin?

Presentation Objective: Recognize appropriateness and trends related to antibiotic therapy with ceftriaxone.

Self Assessment: In which open-fracture type is antibiotic therapy with ceftriaxone most appropriate?

A. Type I, B. Type II, C. All fracture types, D. Type III
Time: 8:00 - 8:20 Room: L1003 Category: Internal Medicine V  
**INSULIN PROTOCOL FOR INPATIENT MANAGEMENT OF HYPERGLYCEMIA IN NON-CRITICALLY ILL HOSPITALIZED PATIENTS**  
Whitney B. Graham-North Florida/South Georgia Veterans Health System  

**Purpose/Background:** Glycemic control in hospitalized patients is an essential component of clinical care to decrease incidence of negative outcomes. Subcutaneous basal/bolus insulin is the recommended regimen for management of hyperglycemia in hospitalized patients outside of critical care areas. The goal of therapy is to maintain blood glucose values below 180 milligrams per deciliter. Non-insulin therapies and sole use of correctional (sliding-scale) insulin regimens are generally discouraged. Due to the complexity of insulin management, order sets and protocols are often utilized to assist clinicians and improve adherence to best practices. The Malcom Randall VAMC Department of Endocrinology and Pharmacy Service has proposed a protocol to standardize hyperglycemic management for hospitalized, non-intensive care unit level of care patients to improve efficacy and safety.

**Methodology:** This was a retrospective chart review conducted at the Malcom Randall VAMC. Data was obtained from June 2018 to August 2018 from the electronic medical record. Subjects were included if they were hospitalized for at least 48 hours and had a blood glucose reading greater than 180 milligrams per deciliter. The primary outcome was to evaluate the anti-hyperglycemic regimens ordered for patients and their impact on glycemic control. Secondary outcomes include: rates of hypoglycemia, length of hospital stay, hemoglobin A1c level monitoring, and utilization of steroids or dextrose-containing medications during hospital stay.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize the goals of glycemic control of non-critically ill patients with hyperglycemia

**Self Assessment:** Which of the following is NOT a potential side effect of long-term PPI therapy?  
A. Peptic ulcer disease  
B. Gastroesophageal reflux disease  
C. Thrombocytopenia  
D. Pneumonia  
E. Hyperkalemia

**Time: 8:40 - 9:00 Room: L1003 Category: Internal Medicine V**  
**COMPARISON OF THE RATE OF INTRAVENOUS PHARMACOLOGIC REVERSAL FOLLOWING MYOCARDIAL PERFUSION IMAGING STUDY WITH DIPYRIDAMOLE VERSUS REGADENOSON**  
Cassandra Schultheis-St. Vincent's Healthcare  

**Purpose/Background:** The current guidelines for SPECT nuclear cardiology procedures list adenosine, dipyridamole, and regadenoson for chemical stress tests without preference. Due to its selectivity, regadenoson was expected to be associated with fewer adverse effects and subsequently a lower rate of pharmacologic reversal. One study found a lower rate of adverse effects with dipyridamole compared to regadenoson, demonstrating that this would be a safe alternative to regadenoson. All three campuses of St. Vincent's Medical Center recently transitioned to using dipyridamole for stress tests, as it is expected to be a more cost-effective option. The purpose of this study was to compare the use of intravenous pharmacologic reversal following a chemical stress test with dipyridamole and regadenoson.

**Methodology:** This was a multicenter, observational, non-inferiority, IRB-approved retrospective cohort study of patients who received a pharmacologic stress test with dipyridamole or regadenoson. Patients were identified by a pharmacy order for dipyridamole or regadenoson then randomized according to a random sequence generator. Patients age 18 and older were included if they completed a stress test with dipyridamole or regadenoson. Exclusion criteria were pregnancy, incarceration, or past medical history of migraine. The primary outcome evaluated the use of an intravenous pharmacologic reversal agent following a stress test with dipyridamole or regadenoson. Secondary outcomes included reported adverse events, IV reversal rate following oral caffeine administration, and the cost of therapy.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Explain the purpose of reversal agents following a pharmacologic stress test

**Self Assessment:** Why is aminophylline or caffeine used following a pharmacologic stress test?  
A. To induce stress B. To manage symptoms C. For imaging purposes D. None of the above

**Time: 8:00 - 8:20 Room: A 1096 Category: Medication Safety I**  
**DEVELOPMENT AND EVALUATION OF A PHARMACY HAZARDOUS DRUGS COMPETENCY PROGRAM AT A VETERANS AFFAIRS MEDICAL CENTER**  
Dan-Tam Nguyen-Orlando VA Medical Center  

**Purpose/Background:** The USP Chapter 800 establishes standards for hazardous drug (HD) handling with the goal of protecting healthcare workers, patients, and the environment. The objective of this quality improvement project is to develop and evaluate a training program for pharmacy personnel to ensure full compliance with USP Chapter 800 prior to the enforceable date in 2019.

**Methodology:** A self-led training program was developed to include a summarized version of USP Chapter 800, a written manual on HD handling, an instructional video, and a practical training session. Areas of focus include an overview of HDs and associated risks, standard operating procedures, and proper HD handling techniques. A written assessment and self-evaluation questionnaire were used to assess competency and confidence in HD handling, respectively. Prior to training, inpatient pharmacists and technicians completed the baseline written assessment and self-evaluation questionnaire. Subsequently, the pharmacy staff had two weeks to review the training program. Following completion of training, a timed written assessment and self-evaluation questionnaire was re-administered along with a practical assessment using ChemoTest. The training program was evaluated by comparing the difference in overall written assessment scores, as well as scores in predesignated areas of focus, with the primary endpoint being change in pass percentage pre- and post-training. Furthermore, the difference in self-evaluation questionnaire scores pre- and post-training assessed the program's impact on personnel comfort in handling HDs. Training program development and administration took place from September 2018 through March 2019.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Identify components of a USP 800 hazardous drug handling competency program

**Self Assessment:** Which of the following should be included in a hazardous drug handling training program?  
A. Proper use of PPE.  
B. Spill management  
C. Overview of HDs and associated risks, standard operating procedures, and proper HD handling techniques  
D. Review of SOPs related to hazardous drug handling  
E. All of the above
Purpose/Background: The Miami Veterans Affairs Healthcare System is home to a variety of specialties designed to improve outcomes and the quality of life for its patients. Several specialty services, including, but not limited to gastroenterology, dermatology, rheumatology, and special immunology are available to assess and treat patients. All the aforementioned services utilize a special class of medications, which are known as biologics. These types of medications are designed to treat a variety of immune-mediated conditions and disease states. Additionally, when these biologics lose their initial original patent, pharmaceutical companies may create biosimilar agents. Biosimilars are defined as biological products that are highly similar to and have no clinically meaningful differences from an existing FDA-approved reference product. One such medication is infliximab.

Methodology: A retrospective analysis will be conducted on patients who had outpatient orders for infliximab from January 2017 to January 2019. This review will follow the progress of patients as they were transitioned through two biosimilars, infliximab-dyyb, and infliximab-abda. The review of patient profiles will include the following information: indication for therapy, administration history, prior therapy, adverse effects, reason for discontinuation, and dates of discontinuation. This review may lead to the development of an infliximab biosimilar conversion protocol in addition to added clinical guidance.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference. 

Presentation Objective: Discuss the efficacy, safety and interchangeability of infliximab and its biosimilars in treating various disease states and conditions

Self Assessment: Infliximab and its biosimilars are FDA approved to treat the following conditions EXCEPT? A. Ankylosing Spondylitis B. Crohns Disease C. Atopic Dermatitis D. Psoriatic Arthritis E. Ulcerative Colitis

Purpose/Background: The management of postoperative pain remains a clinical challenge. Ineffective pain management may result in higher postoperative pain scores; longer hospital stays, as well as increases the risk of progression from acute to chronic pain. Studies have shown that the use of intravenous (IV) acetaminophen compared to equivalent oral doses achieve equal plasma drug levels two hours after administration. Recent studies comparing oral versus IV acetaminophen for post-operative pain management showed no differences in outcomes among patients undergoing total hip or total joint arthroplasty surgery. The purpose of this study is to compare patient outcomes in those patients who received IV acetaminophen in a postoperative setting compared to patients who did not.

Methodology: This study is a single-center, retrospective cohort study conducted in adult patients (18 years of age or older) who underwent a surgical procedure at UF Health Shands Hospital. A simple random sampling method was used to screen patients from an internal database, and eligible patients were enrolled until the desired sample size of 150 was reached. Patients were entered into a pre-cohort group (January 1 to June 30, 2011) and post-cohort group (January 1 to June 30, 2017) relative to the time point of when intravenous acetaminophen was added to the hospital formulary. Only patients in the post-cohort group received intravenous acetaminophen intraoperatively. The primary endpoint was the difference in 24-hour post-operative opioid consumption.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the effect of intravenous acetaminophen on postoperative pain outcome

Self Assessment: Which of the following statements are true regarding postoperative pain management modalities? A. A multimodal approach, combining both regional anesthetics, pharmacological agents, with the goal of reducing opioid consumption and unwanted side effects B. Both oral and IV formulations have been studied and shown to be safe additions to a multimodal pain management regimen. Analgesic effects may be more rapid with IV administration, but currently, there is limited evidence that IV acetaminophen is superior to oral formulations. C. Factors that affect patient recovery include surgical technique, preoperative and postoperative protocols, as well as pharmacologic interventions. D. Pain management through a multimodal approach is necessary; however selection of pain modalities should be individualized by considering patient and surgery-specific factors to optimize patient outcomes. E. All of the above are true statements

Purpose/Background: This IRB-approved, prospective study determines the impact of pharmacy interventions on the accuracy of inpatient medication reconciliation.

Methodology: Face-to-face medication reconciliation interviews were performed by a PGY1 pharmacy resident on approximately 150 patients admitted to the 3-North unit of a large community hospital from January 7th through February 28th, 2019. The objective was to develop a patient-provided medication list in the electronic medical record and to adjust reconciled medications with provider consult. Patients were included if they were admitted with inpatient status within twenty-four hours of resident on-duty hours and claimed at least one outpatient medication during the interview. The primary endpoint was the total number of discrepancies between the admission nurse’s and the pharmacy resident’s medication history lists. The secondary endpoint was a comparison of the percentages of severe, moderate, and minimal errors corrected by the pharmacy interview. Additional collected data included: type of intervention, number of interventions involving high-risk medications, and patient descriptive markers.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Review the results of pharmacy interventions on the accuracy of inpatient medication reconciliation.

Self Assessment: True or False: Within this study, medication histories collected by pharmacists were more accurate than those collected by admission nurses.

Purpose/Background: Appropriate pain management during hospitalization remains an ongoing challenge. More recent data has shown that opioids may be ineffective, have a high incidence of adverse effects, and can contribute to abuse/misuse in select patients. The purpose of this study is to evaluate the overall quality of acute inpatient pain management with opioid free alternative therapies. Specifically focused on appropriate clinician education, rational prescribing, and improvement of safety outcomes through implementation of alternative to opioid (ATLO) initiatives along with pain management order sets catered to different opioid tolerance levels and indications.

Methodology: This descriptive, quasi-experimental study involves the implementation of clinician education and order sets containing options for alternative to opioid (ALTO) pre-set regimens. Application of this initiative, including education and technology employment, occurred October 2018. The multi-modal non-opiate approach to analgesia was specified in clinician order sets by indications including renal colic, extremity fracture, headache/migraine, abdominal, and musculoskeletal pain along with optional, conservative opiate-containing regimens available for either opioid tolerant or opioid naive patients. Participation is voluntary. Data collection includes opioid usage, patient satisfaction, and safety outcomes. Sites have provided retrospective data for the baseline five-months (November 2017 & April 2018) and the five-month interval after implementation (November 2018 & April 2019). All patient data gathered and assessed for study purposes will be de-identified and approved by the ethics and compliance committee.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the overall quality of acute inpatient pain management with opioid free alternative therapies

Self Assessment: What does ALTO stand for? A. Alternative Treatment Options B. Addiction Legalities with Treatment of Opioids C. Alternative to Opioids D. None of the above
**ABSTRACT REPRODUCTION FORM**

**Time:** 8:40 - 9:00 **Room:** A 1097 **Category:** Pain Management III

**IMPACT OF A PHARMACIST-LED PROTOCOL ON REDUCING THE UTILIZATION OF INTRAVENOUS OPIOID ANALGESICS IN THE EMERGENCY DEPARTMENT**  
Luke Pompous-Winter Haven Hospital

**Purpose/Background:** Various guidelines oppose the use of intravenous and intramuscular opioids in the emergency department for relief of acute pain exacerbations. This is because of their addictive euphoria and shorter duration compared to oral opiates. The objective of this study was to educate emergency department physicians on an established protocol for reducing intravenous opiate use in the emergency department.

**Methodology:** Through a pharmacy analytics database, the orders of all the intravenous and oral opiates ordered in the emergency department were compiled. A list of the emergency department physicians was obtained and the opiates were stratified by month for each emergency department physician to formulate a scorecard. This scorecard was then presented to the physicians and education was provided on the established protocol for converting intravenous opiates to oral opiates. The control group included the opiate data from before the intervention of education of the protocol and providing the scorecards. Data was obtained from March 2018 to September 2018 and October 2018 to February 2019 for the control and treatment groups respectively. The primary outcome was the ratio of intravenous to oral opiates ordered in the emergency department. The secondary outcome was the total amount of opiates ordered at the institution's emergency department per number of visits.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Demonstrate the need for protocols to reduce intravenous opiate use

**Self Assessment:** Which of the following is NOT a goal of instituting a protocol to reduce intravenous opiate use? A. Encourage the use of opiate stewardship B. Reduce readmissions to the emergency department C. Monitor the ordering of opiates in general to gather data on ways to improve processes in the future D. Follow guideline recommendations for the use of opiates in the emergency department

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 8:00 - 8:20 **Room:** N2002 **Category:** Transitions of Care III

**IMPLICATIONS OF PHARMACIST-LED MEDICATION RECONCILIATION ON DISCHARGE ORDER ACCURACY**  
Jennifer Kight-Tallahassee Memorial Healthcare

**Purpose/Background:** In the hospital setting, transitions in care has long been understood as a vulnerable period for the continuity of patient safety and care. Numerous studies have demonstrated pharmacy-led admission medication reconciliation as a viable strategy to mitigate medication errors which can improve medication history accuracy, improve patient safety, and reduce hospital admissions. In contrast, pharmacist-led discharge medication reconciliation is presently not as widespread as admission practices, nevertheless, evidence for its utility in reducing both order errors and readmission rates is growing. Many institutions are starting to incorporate pharmacy into the discharge process. At Tallahassee Memorial HealthCare, initiatives to improve admission medication reconciliation generated the establishment of pharmacy-led admission medication reconciliation as the standard of care. However, the role of pharmacy regarding discharge medication reconciliation is unknown. This project seeks to determine the implications of pharmacist-led medication reconciliation on discharge order accuracy at Tallahassee Memorial HealthCare.

**Methodology:** This was a single-center, quality improvement, prospective study conducted onsite at Tallahassee Memorial Healthcare. Impatients pending discharge who were eligible for study inclusion were identified via communication with case management or the medical resident. Discharge orders were reviewed from December 2018 to January 2019. Identified discrepancies were communicated to the provider in person or via text message. The primary outcome was to quantify clinically relevant discrepancies identified post intervention. Secondary outcomes included impact on readmission rates, categorization of discrepancies by potential harm, and evaluation of potential cost savings.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Evaluate the potential impact of pharmacist-led medication reconciliation on discharge order accuracy in the hospital setting

**Self Assessment:** What are potential benefits of pharmacist-led medication reconciliation upon patient discharge? A. reduced readmission rates B. poor-quality medication histories C. cost-savings D. options A and C

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 8:20 - 8:40 **Room:** N2002 **Category:** Transitions of Care III

**IMPACT OF MEDS TO BEDS PROGRAM ON HOSPITAL READMISSIONS**  
Nathalie See-UF Health Jacksonville

**Purpose/Background:** Hospital readmissions is an established measure of quality of care. Patients being discharged from the hospital are at a high risk for readmission due to various factors (e.g. difficulty accessing medications, medication non-adherence) that can interrupt their continuum of care. Establishing transition of care programs aim to transition patients effectively upon discharge to prevent hospital readmissions. A large academic institution established a meds to bed (MTB) program in its Cardiac Care Unit (CCU) where eligible patients are offered to receive bedside delivery of their medications at the time of discharge. The objective of this study is to evaluate the impact of the MTB program on 30-day readmission rates.

**Methodology:** A retrospective study comparing patients discharged from the CCU who received MTB and those that did not. The primary outcome is 30-day readmission rates. Secondary outcomes include time to readmission and diagnosis on readmission.

**Results/Conclusions:** A preliminary analysis of 88 patients (69 MTB and 19 control) was completed. Hospital readmissions in ≤ 30 days was 26% (18/69) in the MTB group and 11% (2/19) in the control group (p=0.22). Among those readmitted, the median time to readmission was 29 da Preliminary analysis shows no difference in 30-day readmission rates among patients that received meds to beds at discharge and those that did not. Further data collection and analysis of confounding variables are warranted.

**Presentation Objective:** Describe the impact of a meds to beds program on 30-day readmissions

**Self Assessment:** What are barriers that can hinder a hospital to implement a program to maximize medication adherence upon discharge? A. Patient was unaware or forgot about discharge prescriptions B. Patient had no means of transportation to the pharmacy C. Prescriptions were sent to the wrong pharmacy D. All of the above

---

**ABSTRACT REPRODUCTION FORM**

**Time:** 8:40 - 9:00 **Room:** N2002 **Category:** Transitions of Care III

**READMISSION RATE REDUCTION OF BEDSIDE PRESCRIPTION DELIVERY SERVICE AND PHARMACIST APPROVED DISCHARGE MEDICATION RECONCILIATION PROGRAMS**  
Michelle Estevez-Lee Health

**Purpose/Background:** Medication non-adherence is a growing issue for healthcare. Patients are frequently discharged from acute care facilities with new or continuing medications. Low medication adherence and primary non-adherence increase a patient's risk for hospitalization and increase in healthcare costs. Barriers to adherence may include poor understanding of medication changes, cost, and transportation to the pharmacy. Transitions of care programs, such as medication reconciliation, bedside discharge medication delivery, and enhanced discharge education, are on the rise to improve patient outcomes, adherence, and reduce healthcare costs. The purpose of this retrospective analysis was to determine if pharmacist-led services of a bedside prescription medication delivery program (Meds-to-Beds, M2B) and/or pharmacist approved discharge medication reconciliation (PADMR) would have an impact on 30-day all-cause readmission rates.

**Methodology:** This retrospective cohort study included all patients admitted to Lee Health, a multi-hospital health-system composed of 1426 beds across 4 acute care facilities and two specialty hospitals in southwest Florida. This study evaluated two transitions of care programs, bedside prescription medication delivery program (Meds-to-Beds) and a discharge medication review and approval by pharmacists (PADMR). The primary outcome of the study was to compare the 30-day all-cause readmission of patients who participated in M2B, PADMR, both M2B and PADMR and neither M2B nor PADMR. The secondary outcome was to compare time to all-cause readmission for study groups and discharge diagnosis.

**Results/Conclusions:** Results and conclusion will be presented at FRC

**Presentation Objective:** Determine if pharmacist-led services of a bedside prescription medication delivery program (Meds-to-Beds, M2B) and/or pharmacist approved discharge medication reconciliation (PADMR) would have an impact on 30-day all-cause readmission rates

**Self Assessment:** Based on research, which of the following has the potential to alleviate barriers to medication access and decrease the risk of readmission? A. Sending prescriptions at discharge to patient's primary care provider for review before filling B. Arranging for discharge transportation to home C. Delivering discharge medications to the patient's bedside prior to discharge D. Documenting medication renal adjustments in the electronic health record (EHR)
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session V

May 17, 2019
9:10-10:10am
ABSTRACT REPRODUCTION FORM

Time: 9:10 - 9:30 Room: N2008 Category: Administration / Managed Care IV

STANDARDIZATION OF INTRAVENOUS MEDICATION CONCENTRATIONS IN THE MIAMI VA HEALTHCARE SYSTEM
Manuel Del Rio-Miami VA Healthcare System

Purpose/Background: A healthcare system policy for standardization of intravenous (IV) medication concentrations promotes proper prescribing and dispensing of parenteral medications, reduces medication errors, and cuts medication expenditures and waste. ASHP guidance purports that IV medication standardization goals for hospitals should encompass continuous, intermittent, PCA, and epidural medications. Hospitals that utilize intelligent infusion pumps must also ensure that the electronic IV medication library is in accordance with the concentrations and dosing units provided under the hospitals IV standard concentration policy.

Methodology: The Miami VA pharmacy service conducted a review of the current IV standard concentration formulary and intravenous infusion device/pump library to ensure completeness, accuracy, and applicability. The service assessed for additional information that would better meet the goals of the policy including reviewing and documenting the availability of commercial premixed products, diluents, standard dilution, recommended dilution and concentration for patients with fluid restrictions, drug stability, and vital notes for each IV medication to be included in the final formulary reference.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify the goals and benefits of establishing a healthcare system policy for standardization of intravenous medication concentrations.

Self Assessment: True or False: When developing a standard concentration formulary, the target number of concentrations for any drug should be one whenever possible.

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: N2008 Category: Administration / Managed Care IV

CLINICAL IMPACT OF PHARMACIST INTERVENTION ON PRIOR AUTHORIZATION SUCCESS RATE AT A UNIVERSITY CALL CENTER: A RETROSPECTIVE STUDY
Huy Pham-Nova Southeastern University College of Pharmacy

Purpose/Background: The American Medical Association (AMA) reported that 92% of physicians say that the high wait times for Prior Authorization (PA) approval have a negative impact on patient care. The objective of this study is to determine the clinical impact of pharmacist intervention on PA processing wait time at a University Call Center.

Methodology: This study will be submitted to the Nova Southeastern University Institutional Review Board for approval. This is a retrospective observational study comparing mean PA wait time before the patients contact the call center and after pharmacist™s involvement in the case between April 1st, 2017 and September 30th, 2018. Inbound and Outbound call data during that time period will be obtained from ICUBaCare's Pharmacist Advocate Program call center. All inbound calls requesting pharmacist™s assistance in resolving PA issues will be included in the study. All outbound calls and inbound calls related to #extra-formulary# management, medication adherence, and brand-to-generic switch, drug information inquiries will be excluded from the study. Patient confidentiality will be maintained and all collected data will be de-identified prior to analysis. Mean PA wait time will be calculated using insurance claim data. Paired t-test is used to compare the wait time before and after pharmacist™s involvement. Secondary outcomes such as PA approval rates and patient™s satisfaction after pharmacist™s involvement will also be examined. PA approval rates and patient™s survey results will be obtained from ICUBaCare's data report.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the burdens current prior authorization processes place on health care professionals and patients.

Self Assessment: What are the time burdens and clinical outcomes of Prior Authorization on the US healthcare system?
ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: CLC Category: Ambulatory Care III
COORDINATED PHYSICIAN-PHARMACIST COLLABORATION IN GERIATRIC ANNUAL WELLNESS VISITS AND FOLLOW-UP CARE
Rachel Cofield-BayCare Health System

Purpose/Background: The Medicare Annual Wellness Visit (AWV) is an under-utilized resource. The purpose of the AWV is to understand the patient's overall health through a comprehensive health risk assessment, evaluate areas of high risk that if unaddressed could lead costly emergency department visits and preventable hospital stays, many of which are related to inappropriate medication use. The AWV is an ideal platform for comprehensive medication management and chronic disease state management. There is limited published literature about coordinated annual wellness visits, between a physician and pharmacist, within a patient-centered medical home or outcomes-related data for chronic disease states after a pharmacist involvement.

Methodology: This is a single-site prospective study comparing physician-pharmacist collaborative care to usual care. Patients included in this study are ≥65 yrs. and seen within the Geriatric Workforce Enhancement Program clinic at the Turley Family Health Center. Patients with cognitive impairment or underlying psychiatric impairment, without a caregiver, were excluded from the study. In the collaborative care group, the pharmacist reviewed the patient's medication list and provided comprehensive medication management; documenting identified medication-related problems (MRPs). MRP tracking and categorization is based on appropriateness, effectiveness, safety, and adherence. The primary endpoint is the number of identified and resolved MRPs in the collaborative care group versus the usual care group. For chronic disease state management, the pharmacist focused on control of hypertension. The secondary endpoint of this study change in blood pressure from baseline through follow-up.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the added benefit of pharmacist involvement in the Medicare AWV, highlighting an often missed opportunity for pharmacists in the ambulatory care setting

Self Assessment: What aspect of the AWV is a pharmacist uniquely capable of providing to patients?

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: CLC Category: Ambulatory Care IV
ENSURING APPROPRIATE GLUCAGON-LIKE PEPTIDE-1 (GLP-1) RECEPTOR AGONIST UTILIZATION AMONG VETERANS WITH TYPE 2 DIABETES MELLITUS: A FOLLOW UP STUDY
Nicole Doyle-Bay Pines VA Healthcare System - Lee County HCC

Purpose/Background: GLP-1 agonists are indicated as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. There are currently 7 FDA-approved GLP-1 agonists on the market in the United States. Within the Bay Pines VA Healthcare System (BPVACS) formulary, GLP-1 agonists are recommended after oral anti-diabetic agents and patients not being considered for initiation or titration of insulin. In a previous pharmacy resident project, an evaluation of GLP-1 agonist use was conducted to assess whether prescribing was congruent with local guidelines. When appropriate, recommendations were made for discontinuation and switching to alternative, preferred agents or intensifying an existing insulin regimen. The purpose of this study is to evaluate the outcomes of patients who were recommended to be converted from GLP-1 agonists to alternative therapies based on last year’s resident project.

Methodology: A retrospective chart review was performed on 43 type 2 diabetic patients identified during last year’s resident project as candidates for conversion from GLP-1 agonists to alternative therapies. Electronic medical records were evaluated to determine if GLP-1 agonists were discontinued as recommended, identify alternative therapies patients were prescribed, assess clinical outcomes including HbA1c and weight, and evaluate the impact of changes made to the patient’s drug regimen on the projected annual cost of therapy. Patients who have since transferred their care to another facility or have expired since recommendations were made were excluded from review.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Discuss the clinical outcomes of appropriate GLP-1 prescribing and monitoring within the BPVACS

Self Assessment: Which of the following is NOT one of the alternative strategies recommended for patients identified as being candidates for conversion from their GLP-1 agonist regimen? A. Change from Byetta to Bydureon B. Change to empagliflozin C. Initiate insulin D. Titrate insulin

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 10:10 Room: CLC Category: Ambulatory Care III
POPULATION HEALTH: EVALUATION OF A PHARMACIST RUN TELEPHONIC INSULIN TITRATION SERVICE
Bradley Phillips-Florida Hospital-Celebration Health

Purpose/Background: Recent studies show that the hospitalization rate for patients with a diagnosis of diabetes was estimated to be 14-23%, which is much higher than the rate for all hospitalized patients. In 2014, a total of 7.2 million hospital discharges and 14.2 million emergency department visits contained diabetes as a listed diagnosis. Of those visits, over 500,000 were due to episodes of hypoglycemia or hyperglycemia. One strategy to prevent these hospital admissions due to glycemic crisis is the incorporation of a pharmacist in the therapy management of diabetic patients. Literature suggests that having a pharmacist involved in the management of patients with diabetes improves patient outcomes, reduces glycated hemoglobin, and reduces hospital readmissions.

Methodology: This was a retrospective single center chart review conducted through the AdventHealth Orlando Diabetes Institute. Patient data was obtained from November 2018 and subjects were followed until April 2019. Patients were contacted via telephone to discuss their blood sugars and current lifestyle. Through a collaborative practice agreement, patients were provided with insulin titration instructions and lifestyle modifications to target guideline recommended blood sugar levels. The primary outcome was percentage change in glycated hemoglobin. Secondary outcomes included hospital readmission rate, changes to insulin regimen, average corrections per medication list, and average amount of supplies ordered.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the impact of a pharmacist led insulin titration service in patients with a diagnosis of Type 2 diabetes

Self Assessment: Which of the following was NOT assessed during a patient's follow-up visit? A. Medication compliance B. Oral antihyperglycemic medications C. Therapeutic lifestyle modifications D. Incidence of hypoglycemia or hyperglycemia

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: A 1096 Category: Ambulatory Care IV
SHORT-TERM OUTCOMES OF HIGH-DOSE STEROIDS FOR INPATIENT USE
Chris Piszczatoski-Putnam Community Medical Center

Purpose/Background: Chronic Obstructive Pulmonary Disease (COPD) exacerbations often require the administration of steroids such as methylprednisolone or prednisone as part of the inpatient stay. The long-term adverse effects of steroid usage are well known, but very little is known about the short-term effects. The observed total daily dosage at the practice site was noticed to greatly exceed the guideline-recommended prednisone daily dose of 40 milligrams (equivalent to 50 milligrams of methylprednisolone) by margins of three- to ten-fold. Such high doses of steroids over a relatively short period of time (average length of stay is four days) could place patients at risk for adverse effects that are not sufficiently studied.

Methodology: This was a retrospective chart review conducted at Putnam Community Medical Center. Subjects were divided into high-dose and low-dose steroid groups. Data was obtained from January 2011 through December 2018 for both groups. Subjects that met the requirements for the study were obtained from the electronic medical record. The primary outcome was to evaluate the short-term effect of steroid use on blood glucose levels. Secondary outcomes include the short-term effects on insulin use in insulin dose requirements, anti-hypertensive medication use requirements, weight blood cell levels, calcium levels, hospital length of stay and 30-day readmission rates.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the effects of high-dose, short-term steroid use on lab parameters typically affected by long-term use

Self Assessment: What are three major lab values potentially impacted by short-term, high dose steroids?
Objective: The objective of this study was to evaluate the current risk stratification of VTE used in the setting of antithrombin III (AT III) deficiency. Bivalirudin is a direct thrombin inhibitor that does not depend on AT III to exert its effects. Limited evidence is available regarding its use in ECMO. This study was designed to determine the rate of composite thrombotic events in patients who received heparin and bivalirudin during ECMO.

Methodology: A retrospective analysis was conducted on patients who were supported by ECMO at Mayo Clinic Florida from 1/1/2015 to 9/1/2018. The primary objective of this study was to ascertain the seven-day rate of composite thrombotic episodes. The secondary objectives of this study were to determine the rates of venous thromboembolism (VTE), arterial thromboembolism (ATE), and ECMO in-circuit thrombosis, to assess rates of major bleeding events, and to examine the incidence of organ impairment.

Results/Conclusions: The rate of the primary outcome was 33.3% in the heparin group, as compared with 26.3% in the bivalirudin group (p=0.60). The rate of ECMO in-circuit thrombosis was 27.3% in the heparin group, as compared with 26.3% in the bivalirudin group (p=0.94). ATE Bivalirudin resulted in lower rates of thrombotic complications as compared with heparin during ECMO. Further research may be warranted to confirm superiority.

Presentation Objective: Describe the incidence of hematologic complications and organ impairment associated with heparin- and bivalirudin-based anticoagulation among patients receiving ECMO therapy

Self Assessment: Based on the results of this study, which parenteral anticoagulant exhibited a higher risk of thrombotic and bleeding complications, respectively? A. Heparin, B. Heparin, Bivalirudin C. Bivalirudin, Bivalirudin D. Bivalirudin, Heparin
prescribing in the intensive care unit pre and post-implementation of the albumin stewardship initiative with corresponding prescribing criteria prescribed in 57.8% of adult and 52.2% of pediatric patients. To help curtail its sub-optimal use, an albumin stewardship initiative with corresponding prescribing criteria was implemented at our hospital. The purpose of this study is to examine albumin use and to assess pertinence of albumin use found that it was inappropriately prescribed in 57.8% of adult and 52.2% of pediatric patients. To help curtail its sub-

Methodology: Ongoing cohort study in patients at least 18 years of age transitioning off of IVI to long-acting insulin in the critical care units at Morton Plant Hospital. Our hospital utilizes Glucose Stabilizer to manage IVI. Data was collected from January 2017 to December 2017 and included blood glucose readings, amount of insulin utilized, timing of transitions, length of stay in units and hospital. The primary outcome was average blood glucose control 24 hours after the discontinuation of IVI infusions. A retrospective pre/post intervention study was performed comparing transitions of patients between three different time frames (0-4 hours, greater than 4 and up to 12 hours, and greater than 12 hours) following long-acting insulin administration.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify the target time to transition patients off an insulin infusion after the administration of long-acting insulin

Self Assessment: What time period does the American Diabetes Association recommend overlap between insulin infusion and long-acting insulin administration?

A. No time specification B. 2-4 hours C. Greater than 4 hours D. Greater than 12 hours

ABSTRACT REPRODUCTION FORM

Time: 9:10 - 9:30 Room: 1209-A Category: Critical Care IX

EVALUATION OF TIME-TO-TRANSITION FROM INSULIN INFUSIONS TO SUBCUTANEOUS INSULIN ADMINISTRATION IN MEDICAL INTENSIVE CARE UNITS

Lairyn Kenney-Morton Plant Hospital

Purpose/Background: Achieving target blood glucose (BG) levels is vital in critically ill patients to avoid adverse events including mortality, infection, cardiovascular events and death. The American Diabetes Association (ADA) specifies that the glycemic target in most hospitalized patients should be a BG between 140-180 mg/dL. While there is substantial evidence for optimal blood glucose targets in critically ill patients, as well as the amount of subcutaneous insulin (SQI) to administer once a patient is able to step-down in care, there is limited published literature on the appropriate timing of discontinuation of intravenous insulin (IVI) after the administration of the SQI. The ADA recommends discontinuing the IVI 2-4 hours after the long-acting insulin has been administered, however, there is a paucity of data demonstrating blood glucose control with this transition technique.

Methodology: Ongoing cohort study in patients at least 18 years of age transitioning off of IVI to long-acting insulin in the critical care unit at Morton Plant Hospital. Our hospital utilizes Glucose Stabilizer to manage IVI. Data was collected from January 2017 to December 2017 and included blood glucose readings, amount of insulin utilized, timing of transitions, length of stay in units and hospital. The primary outcome was average blood glucose control 24 hours after the discontinuation of IVI infusions between three different time frames (0-4 hours, greater than 4 and up to 12 hours, and greater than 12 hours) following long-acting insulin administration.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify the target time to transition patients off an insulin infusion after the administration of long-acting insulin

Self Assessment: What time period does the American Diabetes Association recommend overlap between insulin infusion and long-acting insulin administration?

A. No time specification B. 2-4 hours C. Greater than 4 hours D. Greater than 12 hours

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: 1209-A Category: Critical Care IX

OPID STEWARDSHIP THROUGH A PHARMACIST-INITIATED INTRAVENOUS TO ORAL OPIOID PROTOCOL

Amy Streesie-St. Joseph's Hospital North

Purpose/Background: Intravenous (IV) opioid shortages became a national issue in late 2017. These shortages catalyzed the creation of a protocol under which a pharmacist substituted oral (PO) opioids for IV opioids in patients who qualified. This protocol, in addition to mitigating the shortage, may have introduced unanticipated benefits in pain control and opioid safety measures. The purpose of this study is to discover the opioid safety and efficacy benefits of the pharmacist-directed IV to PO opioid protocol.

Methodology: This IRB-approved retrospective chart review compared patients whose pain regimen was entirely managed by a physician to patients whose opioid regimen was adjusted per pharmacist protocol. Electronic medical records were utilized to identify post-protocol patients whose hydromorphone or morphine orders were transitioned to oxycodone by a pharmacist from January to June 2018. A matched pre-protocol group for the study was selected using inclusion and exclusion criteria. The primary outcome is to compare overall average pain scores between groups. Secondary outcomes include occurrences of respiratory depression or naloxone use, average number of morphine equivalents per day, total days of opioid therapy, and length of stay. A subgroup analysis will be conducted on patients with a history of chronic opioid therapy and recreational narcotic use.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the impact of a pharmacist-directed IV to PO opioid protocol on pain control and opioid safety in opioid-receiving patients

Self Assessment: Did a pharmacist transitioning a patient from IV to oral opioids affect pain control?

ABSTRACT REPRODUCTION FORM

Time: 9:50 - 10:10 Room: 1209-A Category: Critical Care IX

IMPACT OF AN ALBUMIN STEWARDSHIP INITIATIVE IN THE INTENSIVE CARE UNIT OF A COMMUNITY HOSPITAL

Kamarena Sankar-Baptist Hospital of Miami

Purpose/Background: Thus far, only a few clinical indications for albumin are supported by robust scientific evidence; routine albumin administration in many common conditions is still under debate and has been discouraged by the clinical guidelines. Despite very narrow therapeutic utility and proven clinical benefit, albumin persistently is over-utilized in the critical care setting. A national multicenter study assessing pertinence of albumin use found that it was inappropriately prescribed in 57.8% of adult and 52.2% of pediatric patients. To help curtail its sub-optimal use, an albumin stewardship initiative with corresponding prescribing criteria is being implemented at our hospital. The purpose of this study is to examine albumin prescribing in the intensive care unit pre and post-implementation of the albumin stewardship initiative.

Methodology: This was a single-center bi-phasic study conducted at a community hospital. Phase I, a retrospective, randomized patient chart review included patients at least 18 years of age who were admitted to the intensive care unit at our institution and prescribed at least one dose of albumin prior to the implementation of the stewardship initiative. Phase II used an identical approach in patients receiving albumin post-implementation of the stewardship initiative. The primary outcome of this study is the percent compliance with albumin prescribing criteria pre and post-implementation of the albumin stewardship initiative. Secondary outcomes include documentation of indication, appropriateness of indication, dose of albumin, and albumin expenditure.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Recognize appropriate indications for albumin in the intensive care setting

Self Assessment: Which of the following is not an appropriate indication for albumin in the intensive care unit? A. Replacing fluid after large volume paracentesis B. spontaneous bacterial peritonitis C. synergy with diuretics D. plasmapheresis fluid replacement

ABSTRACT REPRODUCTION FORM

Time: 9:10 - 9:30 Room: 1209-B Category: Critical Care IX

IMPACT OF PHARMACIST LED SEDATION ROUNDS ON DURATION OF MECHANICAL VENTILATION AND OVERALL CLINICAL OUTCOMES IN INTENSIVE CARE UNIT

Bora Na-Florida Hospital East Orlando

Purpose/Background: The Society of Critical Care Medicine has developed a patient-centered guideline for preventing and treating pain, agitation, and delirium in critically ill patients. The evidence-based pain, agitation/sedation, delirium protocol has been implemented in our medical intensive care unit (ICU) and previous studies have showed that consistent interventions by pharmacist to promote adherence to sedation guideline have shown to improve patient clinical outcomes.

Methodology: A retrospective pre/post intervention study was performed comparing post-intervention group who received interventions by daytime and overnight pharmacists to pre-intervention group who only received intervention by a daytime pharmacist. During each intervention, pharmacists participated in assessing RASS scores, viewing trends of sedation, evaluating barriers of weaning sedation, assessing use of as needed (PRN) medications, and discussing sedation goals to encourage light sedation. Based on previous database, we expect a mean of 5 days of duration of mechanical ventilation in the control group. We calculated that a sample size of 156 patients (78 in each group) would be needed to detect a decrease of 18 hours in duration of mechanical ventilation in the intervention group with 80% power and a two-sided alpha level of 0.05. Patients who received continuous sedation for >24 hours between August -November 2017 (control) and August - November 2018 (experimental) were included. The primary endpoint was the duration of mechanical ventilation. Secondary endpoints were ICU length of stay, total amount of continuous sedation used, total amount of as needed sedation medication used, percentage time in target RASS range, and number of self-extrusion.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate if incorporating overnight sedation rounds led by pharmacists in addition to daytime pharmacist intervention to enforce adherence to the institution's sedation guideline will decrease mechanical ventilation and improve overall clinical outcomes

Self Assessment: Which of the following is (are) outcome(s) of poor sedation management? A. Increase duration of mechanical ventilation B. Increase incidence of VAP C. Low probability of successful extubation D. Longer ICU length of stay E. All of the above
ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: 1209-B Category: Critical Care X

OPTIMIZING TRANSITIONS OF CARE IN MECHANICALLY VENTILATED PATIENTS FROM THE EMERGENCY DEPARTMENT TO A MEDICAL INTENSIVE CARE UNIT

Vanessa C. Perez-Jackson Memorial Hospital

Purpose/Background: The majority of transitions of care initiatives focus on the transition from an inpatient hospital setting to the outpatient setting. Ensuring continuity of care is also a high priority for critically ill patients transitioning from the emergency department (ED) to the intensive care unit (ICU). Medication discrepancies occur in up to 70% of patients which place patients at risk of significant harm. As a result, the Joint Commission 2018 National Patient Safety Goals address the importance of coordinating medication reconciliations. Moreover, critically ill patients following rapid sequence intubation require close monitoring for administration of anesthesia and sedation when appropriate. According to current research, less than 50% of patients receive post intubation sedation. Septic patients also require high levels of communication to prevent transitions of care errors such as delays in second dose antibiotics. This study was designed to evaluate the transitions of care process from the ED to the ICU setting.

Methodology: This is a 2-phase study performed at a large single-center, tertiary care hospital. The first phase is a retrospective chart review from April-June 2018. The primary outcome is assessment of post intubation analgesia and sedation. Secondary outcomes include completion of medication reconciliation, compliance of the mechanical ventilation bundle and timing of antibiotic administration. Results from the first phase will be used to develop a standardized protocol to address transition of care post intubation practices. The second phase will also include education to key transitions of care personnel.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the transitions of care process during high-risk scenarios for patients transitioning from an emergency department to a medical intensive care unit

Self Assessment: Adequate sedation and analgesia post-intubation may lead to which of the following: A. Decreased oxygen consumption B. Improved ventilator synchrony C. Decreased stress response D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 9:10 - 9:30 Room: 1209-C Category: Infectious Diseases IX

SURVEILLANCE OF ANTIBIOTIC PRESCRIBING FOR ACUTE UNCOMPLICATED CYSTITIS IN THE AMBULATORY CARE SETTING

Sarah Fawaz-Tampa General Hospital

Purpose/Background: Acute uncomplicated cystitis (AUC) describes a common indication for antibiotic exposure in otherwise healthy, premenopausal women. However, studies suggest that up to one-half of outpatient antibiotic prescribing for AUC does not align with current guidelines. Describing patterns for AUC have not been previously evaluated at Tampa General Medical Group (TGMG) clinics.

Methodology: This was a retrospective chart review including patients diagnosed with AUC at TGMG outpatient clinics between January 1, 2018 and June 30, 2018. Patients with signs of infection outside the bladder, uncontrolled diabetes, immunocompromising conditions, or a history of urological abnormalities were excluded. The primary objective was to determine the outpatient antibiotic prescribing practices for AUC. Secondary objectives included determining if prescribing practices align with current guidelines for treatment of AUC, as well as describing and distributing organisms. The data was analyzed using descriptive statistics.

Results/Conclusions: Results and conclusion will be presented at FRC

Presentation Objective: Identify appropriate prescribing practices for AUC

Self Assessment: Which of the following is/are considered pharmacy-driven antimicrobial stewardship interventions according to the CDC? (select all that apply) A. Renal adjustments B. IV to PO conversions C. Dose optimization D. Detection of drug interactions E. Audit/feedback

ABSTRACT REPRODUCTION FORM

Time: 9:50 - 10:10 Room: 1209-B Category: Critical Care X

INTRAVENOUS POTASSIUM REPLACEMENT IN CRITICALLY ILL PATIENTS WITH RENAL INJURY

Rebecca Conley-Lakeland Regional Health

Purpose/Background: In critically ill patients, maintaining adequate potassium concentrations requires careful supplementation in order to correct hypokalemia, but avoid hyperkalemia and the associated adverse outcomes. At Lakeland Regional Health a standing protocol exists for electrolyte replacement in ICU patients with a serum creatinine (Scr) ≤ 2 mg/dl. Based on the Scr cutoff, patients may not qualify for replacement at some point during their ICU stay. The purpose of this study is to determine if standardized potassium supplementation per protocol is safe in critically ill patients with renal injury.

Methodology: This is an IRB-approved, singe-center, retrospective cohort evaluation of critically-ill patients receiving intravenous potassium replacement per protocol. Subjects admitted and discharged between August 1, 2107 and July 31, 2018 will be screened and assigned to one of two groups based on Scr ≤ 2 mg/dl or Scr > 2 mg/dl at the time of replacement. Exclusions include: receiving hyperkalemia treatment within 24 hours of replacement, having a nephrology consult for electrolyte management, having diabetic ketoacidosis, or requiring continuous renal replacement therapy or hemodialysis. The primary outcome is to compare the incidence of hyperkalemia following potassium replacement in patients with a Scr ≤ 2mg/dl versus Scr > 2 mg/dL. Secondary outcomes include a subgroup analysis of the primary outcome in patients with acute kidney injury and chronic kidney injury as well as to describe the change in serum potassium, need for hyperkalemia treatment, and incidence of EKG changes associated with hyperkalemia.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Provide supporting evidence for standardized potassium replacement across ICU populations not receiving hemodialysis, regardless of Scr

Self Assessment: Based on findings, a standardized potassium replacement protocol can be utilized in all non-hemodialysis ICU patients regardless of Scr.

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: 1209-B Category: Infectious Diseases IX

REPEATED CROSS-SECTIONAL EVALUATION OF THE IMPACT OF PHARMACIST DRIVEN ANTIMICROBIAL STEWARDSHIP INTERVENTIONS ON PIPERACILLIN/TAZOBACTAM DEFINED DAILY DOSES

Mary Jo Cruz Marrero-NCH Healthcare System

Purpose/Background: The use of broad-spectrum antimicrobials, such as piperacillin/tazobactam, has been correlated with increased antimicrobial resistance and institutional costs. National agencies such as the Centers for Disease Control and Prevention (CDC) and the Infectious Diseases Society of America (IDSA) have developed antimicrobial stewardship standards and recommendations in order to improve antimicrobial use, antimicrobial resistance and overall institutional costs. Implementation of antimicrobial stewardship may be a challenge due to restricted resources and limited time. Incorporation of stewardship activities into pharmacist’s daily responsibilities has been one of the strategies used by community hospitals to fulfill antimicrobial stewardship standards. NCH Healthcare System has integrated piperacillin/tazobactam into pharmacist daily tasks including appropriate indication, final microbiology culture review and renal adjustments. The primary purpose of this study is to evaluate the impact of pharmacist-driven antimicrobial stewardship interventions on piperacillin/tazobactam utilization.

Methodology: This study was approved by the Institutional Review Board in January 2019. All eligible patients from both NCH Healthcare System campuses were identified utilizing a real-time surveillance tool and electronic health records. Retrospective data collected from January 1st through March 31st, 2018 included number of billed piperacillin/tazobactam doses and patient census. The same data was collected from January 1st through March 31st, 2019. Piperacillin/tazobactam utilization was measured in defined daily doses (DDD) during these predetermined time periods. Additionally, utilizing a randomized sample, piperacillin/tazobactam indications, intervention types, the number of interventions and acceptance of pharmacy interventions were also assessed.

Results/Conclusions: Results and conclusion will be presented at FRC

Presentation Objective: Evaluate the impact of pharmacist-driven antimicrobial interventions on piperacillin/tazobactam defined daily doses (DDD)

Self Assessment: Of the following is/were considered pharmacy-driven antimicrobial stewardship interventions according to the CDC? (select all that apply) A. Renal adjustments B. IV to PO conversions C. Dose optimization D. Detection of drug interactions E. Audit/feedback
IMPACT OF ANTIMICROBIAL STEWARDSHIP INTERVENTIONS ON TREATMENT OUTCOMES FOR UNCOMPlicated SKIN AND SOFT TISSUE INFECTIONS IN HOSPITALIZED PATIENTS

Justin Mudelewicz-Sarasota Memorial Hospital

Purpose/Background: Recent studies have shown that patients hospitalized with uncomplicated skin and soft tissue infections (SSTIs) are often treated with unnecessarily broad-spectrum antibiotic therapy and for extended durations. A recent medication use evaluation conducted at this institution identified similar discrepancies. The objective of this study is to determine if targeted antimicrobial stewardship interventions improved antibiotic selection and duration of therapy for patients who received treatment for uncomplicated SSTIs.

Methodology: This IRB-approved, retrospective, quasi-experimental pre/post study included patients 18 years and older admitted to the hospital with the diagnosis of uncomplicated SSTIs before and after implementation of targeted stewardship interventions. Exclusion criteria included patients with complicated SSTIs. Stewardship interventions included: 1) Development of an institutional SSTI treatment pathway; 2) Education to key provider groups; and 3) Prospective audit and feedback through bi-weekly antimicrobial stewardship rounds with a pharmacist and an infectious diseases physician. The primary outcome is the percentage of patients who received a total duration of antibiotic therapy exceeding 10 days. Secondary outcomes include total duration of antibiotic therapy, percentage of patients who received broad-spectrum antibiotics, number of blood cultures ordered, length of hospital stay, and 30-day infection-related readmission. A minimum sample size of 62 patients in each group will be required to detect a 25% reduction in the primary outcome between the pre-intervention and post-intervention periods with a power of 80%. Descriptive and inferential statistics will be used to analyze primary and secondary outcomes.

Results/Conclusions: Results and conclusions will be presented at FRC.

Presentation Objective: Describe common antimicrobial stewardship interventions targeting the management of uncomplicated skin and soft tissue infections.

Self Assessment: According to the IDSA Guidelines, which of the following are routine recommendations for the treatment of uncomplicated skin and soft tissue infections? a. 10-14 days of total antibiotic therapy b. Empiric anti-MRSA antibiotic therapy for purulent infections c. Blood cultures d. Empiric gram-negative and gram-positive antibiotic therapy

ABSTRACT REPRODUCTION FORM

IMPACT OF ANTIMICROBIAL STEWARDSHIP INTERVENTIONS ON TREATMENT OUTCOMES FOR UNCOMPlicated SKIN AND SOFT TISSUE INFECTIONS IN HOSPITALIZED PATIENTS

Justin Mudelewicz-Sarasota Memorial Hospital

Purpose/Background: Recent studies have shown that patients hospitalized with uncomplicated skin and soft tissue infections (SSTIs) are often treated with unnecessarily broad-spectrum antibiotic therapy and for extended durations. A recent medication use evaluation conducted at this institution identified similar discrepancies. The objective of this study is to determine if targeted antimicrobial stewardship interventions improved antibiotic selection and duration of therapy for patients who received treatment for uncomplicated SSTIs.

Methodology: This IRB-approved, retrospective, quasi-experimental pre/post study included patients 18 years and older admitted to the hospital with the diagnosis of uncomplicated SSTIs before and after implementation of targeted stewardship interventions. Exclusion criteria included patients with complicated SSTIs. Stewardship interventions included: 1) Development of an institutional SSTI treatment pathway; 2) Education to key provider groups; and 3) Prospective audit and feedback through bi-weekly antimicrobial stewardship rounds with a pharmacist and an infectious diseases physician. The primary outcome is the percentage of patients who received a total duration of antibiotic therapy exceeding 10 days. Secondary outcomes include total duration of antibiotic therapy, percentage of patients who received broad-spectrum antibiotics, number of blood cultures ordered, length of hospital stay, and 30-day infection-related readmission. A minimum sample size of 62 patients in each group will be required to detect a 25% reduction in the primary outcome between the pre-intervention and post-intervention periods with a power of 80%. Descriptive and inferential statistics will be used to analyze primary and secondary outcomes.

Results/Conclusions: Results and conclusions will be presented at FRC.

Presentation Objective: Describe common antimicrobial stewardship interventions targeting the management of uncomplicated skin and soft tissue infections.

Self Assessment: According to the IDSA Guidelines, which of the following are routine recommendations for the treatment of uncomplicated skin and soft tissue infections? a. 10-14 days of total antibiotic therapy b. Empiric anti-MRSA antibiotic therapy for purulent infections c. Blood cultures d. Empiric gram-negative and gram-positive antibiotic therapy

ABSTRACT REPRODUCTION FORM

MEROPENEM/VABORBACTAM VERSUS CEFTAZIDIME/AVIBACTAM FOR TREATMENT OF CARBAPENEM-RESISTANT ENTEROBACTERIACEAE INFECTIONS

Amanda Elchynski-Florida Hospital Orlando

Purpose/Background: Antibiotic resistance is an increasing threat to public health, and in 2013, the Centers for Disease Control and Prevention identified carbapenem resistant Enterobacteriaceae (CRE) as an urgent threat with an estimated 9,000 infections per year. Prior to 2015, optimal management of CRE infections was limited by the paucity of treatment options, which included carbapenems, aminoglycosides, polymyxin B, colistin, tigecycline, and fosfomycin. Furthermore, these agents were used in combination and at higher doses to optimize antibiotic therapy. Despite using combination therapy with these agents, mortality rates remained high. However, two new drugs with activity against CRE have been FDA-approved: ceftazidime/avibactam in February 2015 and meropenem/vaborbactam in October 2017.

Methodology: A multicenter, retrospective cohort study evaluating patients with CRE infections who received either ceftazidime/avibactam or meropenem/vaborbactam between February 2015 and November 2018 at Atrium Health and Florida Hospital facilities. The electronic medical record will be used to identify patients who received either ceftazidime/avibactam or meropenem/vaborbactam for treatment of a CRE infection for at least 72 hours. The following data will be collected: baseline demographics, infection type, comorbidities, disease severity score, lab values, vitals, renal replacement therapy status, microbiological data, antimicrobial regimen, adverse events, hospital length of stay, recurrence of CRE infection, 30-day and 90- day mortality. Descriptive statistics will be used to assess primary objective and the secondary objectives will be analyzed using the Student's t-test, the Wilcoxon rank sum test, and the Chi-square test.

Results/Conclusions: Results and conclusions will be presented at FRC.

Presentation Objective: Describe the outcomes of patients who have received meropenem/vaborbactam or ceftazidime/avibactam for CRE infections.

Self Assessment: Meropenem/vaborbactam is FDA approved for use in the following infections? (select all that apply) a. MRDRO Pseudomonas in cystic fibrosis B. CRE UTI C. CRE infections in pneumonia D. CRE infections in intra-abdominal infections

ABSTRACT REPRODUCTION FORM

QUALITY ASSURANCE EVALUATION OF A CLINICAL DECISION-SUPPORT TOOL FOR VANCOMYCIN PHARMACOKINETIC DOSING

Nora Baiangdar-North Florida/South Georgia Veterans Health System

Purpose/Background: Pharmacist-managed vancomycin dosing services have achieved greater proportions of initial trough concentrations that are therapeutic, less nephrotoxicity, and fewer total days of treatment. The purpose of this quality assurance project was to assess the validity of the North Florida/South Georgia Veterans Health System (NF/SG VHS) vancomycin clinical decision-support tool by measuring the proportion of vancomycin trough levels within goal therapeutic range.

Methodology: This was a retrospective chart review of 205 NF/SG VHS patients from May-July 2018 who received vancomycin. The primary objective was to determine the proportion of vancomycin trough levels within goal range, both after the first check and following any initial dose adjustment required. A previous study served as a benchmark regarding proportion of initial vancomycin troughs that were therapeutic under a pharmacist-managed vancomycin protocol. Secondary measures included proportion of troughs drawn on time, total number of vancomycin dose adjustments, duration of therapy, total number of supratherapeutic levels, and acute kidney injury (AKI) occurrence.

Results/Conclusions: 120 NF/SG VHS patients were included. 37.5% had an initial therapeutic trough. This was less than the comparator study wherein their pharmacist-driven vancomycin protocol resulted in 46.1% of initial troughs being therapeutic. Only 35/75 NF/SG VHS patient The current NF/SG VHS vancomycin clinical-decision support tool has potential for improvement given the lower percentage of patients initially achieving a therapeutic trough compared to other pharmacist-driven vancomycin protocols.

Presentation Objective: Evaluate the validity of the North Florida/South Georgia Veterans Health System vancomycin clinical decision-support tool and identify areas for improvement.

Self Assessment: Which of the following is a benefit of a pharmacist-managed vancomycin dosing service? A. Greater proportion of initial trough concentrations that are therapeutic B. Less vancomycin-associated nephrotoxicity C. Fewer total days of treatment D. All of the above
ABSTRACT REPRODUCTION FORM

Time: 9:10 - 9:30 Room: L1003 Category: Internal Medicine VI

CLINICAL EVALUATION OF ACUTE HYPERKALEMIA MANAGEMENT AND CREATION OF AN ORDER SET TO IMPROVE PATIENT CARE

Neisy Vazquez-University of Miami Hospital

Purpose/Background: Elevated potassium is a common life-threatening electrolyte disturbance among hospitalized patients. Risk factors for hyperkalemia include acute and chronic kidney disease, diabetes mellitus, cardiac conditions and different medication classes. Management depends on the severity of the acute hyperkalemia and involves cardiac monitoring, pharmacology therapy divided into medications that shift potassium into cells or remove potassium from the body and/or emergency dialysis. At UHealth Tower, there is currently no order set for the treatment of acute increases in potassium. In our efforts to optimize and streamline management of hyperkalemia while minimizing adverse events, a new order set will be created and implemented into the electronic record system for prescriber use. Before it is established, a pharmacist-led clinical evaluation of the current management of acute hyperkalemia is being conducted for comparison of outcomes before and after implementation of order set

Methodology: This is a single-center, retrospective, observational chart review study. The study population includes adult patients > 18 years of age with at least one documented potassium level > 5.6 mmol/L during their hospital admission between July 2018 and December 2018. The primary outcome is to quantify reversal agents given for the treatment of hyperkalemia based on hyperkalemia severity: potassium level: 5.6-6.0 mmol/L, 6.1-6.5 mmol/L and > 6.6 mmol/L. Secondary outcomes include assessment of underlying cause of high potassium level, glyceremic events as a result of insulin/dextrose use and time to normalization of potassium level. A follow-up study will be completed after implementation of the new order set

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Describe acute hyperkalemia events and steps for the creation of a new order set at UHealth Tower

Self Assessment: The onset of action of sodium polystyrene sulfonate is: A. 30 seconds B. 15-30 minutes C. 1 hour D. Greater than 2 hours

ABSTRACT REPRODUCTION FORM

Time: 9:30 - 9:50 Room: L1003 Category: Internal Medicine VI

HYPOGLYCEMIA IN NON-CRITICALLY ILL ADULT HOSPITALIZED PATIENTS RECEIVING ANTIDIABETIC TREATMENT

Victoria Nguyen-Wolfson Children’s Hospital/Baptist Health

Purpose/Background: Hypoglycemic events have been reported as one of the most preventable adverse drug events in hospitalized patients. These events are associated with increased cost, longer hospital stay, increased risk of drug-induced hypoglycemic coma, and increased morbidity and mortality. Current guidelines for managing hyperglycemia in hospitalized patients recommend that oral hypoglycemic agents be discontinued and insulin therapy initiated upon hospital admission. Continuation of home oral hypoglycemic agents in addition to patient specific factors such as impaired renal function and sepsis contribute to increased hypoglycemic events. At Baptist Medical Center, oral hypoglycemic agents may be continued during the hospital stay which warranted an evaluation of current practice to identify areas of improvement for management of blood glucose. The purpose of this study was to identify the risk factors associated with hypoglycemic events in adult hospitalized patients with type II diabetes.

Methodology: This was a retrospective chart review conducted at Baptist Medical Center Jacksonville. Subjects were divided into two groups, cases (patients receiving antidiabetic treatment who experienced at least one hypoglycemic event during the hospital stay) and control (patients receiving antidiabetic treatment who did not experience a hypoglycemic event). Data was obtained from June 2017 to June 2018 which included patient demographics, renal function, insulin therapy, hypoglycemic agent(s), blood glucose readings, and hospital length of stay. The data was then evaluated for risk factors associated with hypoglycemic events.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Identify three risk factors for hypoglycemia in adult hospitalized patients

Self Assessment: Which of the following may potentiate the risk for hypoglycemia in a hospitalized patient with type II diabetes?

ABSTRACT REPRODUCTION FORM

Time: 9:50 - 10:10 Room: L1003 Category: Internal Medicine VI

RETROSPECTIVE REVIEW OF PRESCRIBER ADHERENCE TO UPDATED MEDICAL GROUP POLICY REGARDING TREATMENT OF ACUTE AND NON-ACUTE PAIN

Justin M. Powell-Sacred Heart Health System

Purpose/Background: On average, 130 Americans die daily from an opioid overdose according to the Centers for Disease Control and Prevention. In July 2018 a new Florida law came into effect to help combat the opioid epidemic. In response to this law, Sacred-Heart-Medical-Group implemented an updated acute and non-acute pain medication prescribing policy. This policy's aim is to protect both prescribers and patients. This policy coincides with state law requiring prescribers to monitor the state prescription drug database, have an established plan for aberrant behavior risk evaluation and monitoring, limit days supply prescribed/dispensed, and outlines proper documentation that must be readily available in the patients electronic-medical-record. The objective is to determine if prescribers within the medical group are compliant with the new administrative policy. These results may also help guide efforts if further education or training is appropriate.

Methodology: This local Institutional-Review-Board approved retrospective chart review is designed to assess policy adherence of patients ≥ 16 years of age that received a prescription for a controlled substance from a medical group provider. Primary outcome is overall adherence to policy. Secondary outcomes include adherence with its individual aspects including: documentation of Prescription-Drug-Monitoring- Program being reviewed or inability to do so; if follow-up, monitoring frequencies and urine drug screens were utilized followed the aberrant behavior workflow protocol, and if the patient has a controlled substance agreement on file with their current provider that has been updated within the past 12 months.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate provider adherence to the updated policy and identify gaps in compliance with state law

Self Assessment: What is the recommended day supply for a CII acute pain prescription? A. 3 Days B. 7 Days C. 9 Days D. 30 Days

ABSTRACT REPRODUCTION FORM


IMPACT OF TIMING OF PREOPERATIVE ANTIBIOTIC PROPHYLAXIS ON THE INCIDENCE OF POSTOPERATIVE INFECTION IN THE PEDIATRIC POPULATION

Robert Sheridan-Lee Health

Purpose/Background: Surgical procedures compromise the naturally protective barrier of the skin, increasing the risk of postoperative infections. Administration of preoperative antibiotics within a specified time frame has demonstrated a significant decrease in postoperative infections. Guidelines recommend antibiotics to be administered within 60 minutes or 120 minutes of surgery, depending on antibiotic class. Studies regarding timing of preoperative prophylactic antibiotics in pediatric patients are limited, and as a result recommendations have been extrapolated from adult data. The purpose of this study was to compare the incidence of postoperative infections in pediatric patients who received preoperative antibiotics within the guideline-recommended time frame of 60 or 120 minutes to those who received antibiotics outside the recommended time frame.

Methodology: This was a retrospective chart review conducted within a community-based pediatric hospital. Patients included were younger than 18 years of age and had undergone a surgical procedure requiring antimicrobial prophylaxis per guideline recommendations. Patients were excluded if they did not require preoperative antimicrobial prophylaxis as per guideline recommendations. To eliminate other potential confounding variables for postoperative infections, this study excluded patients who received an incorrect selection or dosage of preoperative antibiotic.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Determine if current guideline recommendations regarding timing of preoperative prophylactic antibiotics are appropriate for pediatric patients

Self Assessment: What is the recommended time frame for cefazolin to be administered prior to surgical incision per the Clinical Practice Guidelines for Antimicrobial Prophylaxis in Surgery? A. 120 minutes B. 24 hours C. 60 minutes D. 30 minutes
INVESTIGATING OUTCOMES OF HIGH-DOSE VERSUS STANDARD-DOSE CORTICOSTEROID USE IN A PEDIATRIC ASTHMA EXACERBATION
Terique McKenzie-UF Health Shands

Purpose/Background: According to the current guidelines for management of an asthma exacerbation, the recommended dosing for corticosteroids is 1-2 mg/kg/day with a maximum daily dose of 60 mg. A survey of pediatric intensivists from 2013 revealed 66% used higher doses of steroids (4 mg/kg/day) in the pediatric critically ill asthma population. This higher dosing regimen is not supported by literature. The purpose of this study is to determine if higher dosing of corticosteroids in pediatric asthma exacerbation leads to better outcomes than standard guideline-recommended dosing.

Methodology: A retrospective chart review was conducted at University of Florida Health Shands Children's Hospital. This project was IRB-approved by the University of Florida. Patients admitted for asthma between 2015 and 2018 were included. Patients who were started on high-dose then switched to standard-dose within 24 hours and vice versa, died during treatment, and those who were readmitted due to asthma exacerbation within 30 days of admission were excluded. Data was obtained from the electronic medical record. The patients were evaluated in two groups: high-dose (>2mg/kg/day or >60mg/day) or standard-dose (≤2mg/kg/day or ≤60mg/day). The primary outcome was time to every four-hour albuterol between the two groups. Secondary outcomes include intensive care unit and hospital length of stay, need for concomitant therapies, blood pressure, and blood glucose.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Discuss the differences in outcomes between standard-dose and high-dose corticosteroids in pediatric asthma exacerbation

Self Assessment: Which of the following is NOT a potential adverse effect of high-dose corticosteroids? A. Increased blood glucose B. Longer time to every four hour albuterol C. Increased use of dexmedetomidine D. Higher blood pressure

COMPARISON OF TWO SEDATION ASSESSMENT SCALES ON THE DOSE AND DURATION OF ANALGESIA AND SEDATION MEDICATIONS IN CRITICALLY ILL VENTILATED PEDIATRIC PATIENTS
Elizabeth Faville-Lee Health

Purpose/Background: To compare two pediatric sedation assessment scales (the State Behavioral Scale and the modified COMFORT scale) on the dose and duration of fentanyl, midazolam, and dexmedetomidine in mechanically ventilated patients in the pediatric intensive care unit

Methodology: This study is a retrospective chart review including patients admitted to a community-based, pediatric intensive care unit (PICU) who received mechanical ventilation with analgesia and sedation. The Modified COMFORT Scale (MCS) was phased out in September of 2017, and the State Behavioral Scale (SBS) was then integrated into practice. The primary outcome of this study was to compare the average daily dose (in mg/kg or mcg/kg) and duration (in days) of fentanyl and midazolam, with or without the use of dexmedetomidine, in patients who were assessed and managed using the MCS or the SBS. Secondary outcomes included length of stay in the PICU (days), number of hours on mechanical ventilation, in-hospital mortality rate, and the number of fentanyl, midazolam, and dexmedetomidine bolus doses administered to patients (daily cumulative dose). Patients included were less than 18 years of age and admitted to the PICU for a first occurrence within the current hospital admission. Patients were on mechanical ventilation for at least 24 hours, while receiving continuous infusion combination fentanyl and midazolam, with or without the use of dexmedetomidine.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Compare the State Behavioral Scale and the Modified COMFORT Scale on the dose and duration of analgesia and sedation medications

Self Assessment: What is the net result of the State Behavioral Scale and Modified COMFORT Scale on the dose and duration of analgesia and sedation medications? A. The dose and duration were reduced when utilizing the State Behavioral Scale B. The dose and duration were reduced when utilizing the modified COMFORT scale C. The dose and duration remained the same when using either the State Behavioral Scale or the modified COMFORT scale
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session VI

May 17, 2019
10:40-11:40am
Reducing the incidence of VTE events after THA or TKA

Different drug doses used. Institution specific review of prophylaxis regimens may be necessary to reduce the incidence of VTE events, enrollment inconsistency, different timing of administration, and potential cost differences. Current guidelines reviewing need for bridge therapy are based on observational studies and expert opinion rather than the findings of most recent evidence from randomized trials. The aim of this quality assurance project is to assess for unnecessary bridging in patients with atrial fibrillation and the risk of adverse effects associated with anticoagulants.

**Methodology:** A guidance to support clinical decision was developed using American College of Cardiology, Veterans Affairs Pharmacy Benefit Management, and University of Washington's current guidance and recommendations. Patients receiving a therapeutic dose of UFH and LMWH for the indication of bridging while off oral anticoagulants were analyzed. Inappropriate bridging was determined based on the developed guidance. Measured outcomes included: (1) proportion of patients receiving unnecessary bridge therapy, (2) incidence of bleeding attributable to parenteral anticoagulation, and (3) proportion of patients on direct oral anticoagulants (DOACs) receiving bridge therapy.

**Results/Conclusions:** Results and conclusion will be presented at FRC.

**Presentation Objective:** Recognize inappropriate perioperative anticoagulation bridge therapy in patients with atrial fibrillation

**Self Assessment:** Mr. J is a 76 y/o male with atrial fibrillation. He has no history of major bleeding. In which situation would he likely benefit from anticoagulation bridge therapy? (CrCL: 57 mL/min; Hgb: 13.2 g/dL; Hct: 36%; Plt: 208 10^9/L) A. Initial agent: apixaban; Procedure: implantation of a pacemaker; CHA2DS2-VASc: 6; CHADS2: 5 B. Initial agent: warfarin; Procedure: small colonic polyp resection; CHA2DS2-VASc: 5; CHADS2: 4 C. Initial agent: rivaroxaban; Procedure: tumor ablation; CHA2DS2-VASc: 3; CHADS2: 2 D. Initial agent: warfarin; Procedure: open heart surgery; CHA2DS2-VASc: 7; CHADS2: 6

**ABSTRACT REPRODUCTION FORM**

**Time:** 10:40 - 11:00 Room: L1005 Category: Anticoagulation VI

**EVALUATING INAPPROPRIATE ANTIHYPERCOAGULATION BRIDGE THERAPY DURING TEMPORARY INTERRUPTION OF ORAL ANTIHYPOTHROMBOTIC AGENTS**

**Purpose/Background:** Patients with atrial fibrillation often require invasive or surgical procedures that may require interruption of oral anticoagulation. Interruption of oral anticoagulation may place patients at an increased risk for thromboembolism. Bridging with short acting agents such as unfractionated heparin (UFH) and low-molecular weight heparin (LMWH) is used in the preoperative setting as a method to maintain full anticoagulation, but can lead to significant adverse events. Increasing evidence suggests that an estimated 90% of patients receive unnecessary bridge therapy, which poses an increased risk of bleeding without providing any or minimal benefit with regards to reducing the risk of thromboembolism. Current guidelines reviewing need for bridge therapy are based on observational studies and expert opinion rather than the findings of most recent evidence from randomized trials. The aim of this quality assurance project is to assess for unnecessary bridging in patients with atrial fibrillation and the risk of adverse effects associated with anticoagulants.

**Methodology:** A guidance to support clinical decision was developed using American College of Cardiology, Veterans Affairs Pharmacy Benefit Management, and University of Washington's current guidance and recommendations. Patients receiving a therapeutic dose of UFH and LMWH for the indication of bridging while off oral anticoagulants were analyzed. Inappropriate bridging was determined based on the developed guidance. Measured outcomes included: (1) proportion of patients receiving unnecessary bridge therapy, (2) incidence of bleeding attributable to parenteral anticoagulation, and (3) proportion of patients on direct oral anticoagulants (DOACs) receiving bridge therapy.

**Results/Conclusions:** Results and conclusion will be presented at FRC.

**Presentation Objective:** Recognize inappropriate perioperative anticoagulation bridge therapy in patients with atrial fibrillation

**Self Assessment:** Mr. J is a 76 y/o male with atrial fibrillation. He has no history of major bleeding. In which situation would he likely benefit from anticoagulation bridge therapy? (CrCL: 57 mL/min; Hgb: 13.2 g/dL; Hct: 36%; Plt: 208 10^9/L) A. Initial agent: apixaban; Procedure: implantation of a pacemaker; CHA2DS2-VASc: 6; CHADS2: 5 B. Initial agent: warfarin; Procedure: small colonic polyp resection; CHA2DS2-VASc: 5; CHADS2: 4 C. Initial agent: rivaroxaban; Procedure: tumor ablation; CHA2DS2-VASc: 3; CHADS2: 2 D. Initial agent: warfarin; Procedure: open heart surgery; CHA2DS2-VASc: 7; CHADS2: 6

**ABSTRACT REPRODUCTION FORM**

**Time:** 10:40 - 11:00 Room: L1005 Category: Anticoagulation VI

**ENOXAPARIN VERSUS ASPIRIN FOR VENOUS THROMBOEMBOLISM PROPHYLAXIS IN POST-OPERATIVE ORTHOPEDIC SURGERY PATIENTS**

**Purpose/Background:** In the United States, total hip arthroplasty (THA) and total knee arthroplasty (TKA) are being performed more frequently, with over one million procedures performed each year. Venous thromboembolism (VTE) is a complication of orthopedic surgery, including THA and TKA. In patients undergoing THA or TKA, both the American Association of Orthopedic Surgeons (AAOS) and the American College of Chest Physicians (ACCP) recommend the use of anti-thrombotic prophylaxis rather than no anti-thrombotic prophylaxis. Conclusions

**Methodology:** This retrospective chart review was approved as a quality improvement project by IRB and was conducted at multiple sites within the AdventHealth system (Orlando and East Orlando campuses). Subjects were divided into enoxaparin and aspirin groups. Data was obtained from June 2016 to December 2018. Subjects that met the requirements for the study were obtained from the electronic medical record. The primary outcome was to evaluate the impact of a pharmacist-run diabetes management service on improving quality measures.

**Methodology:** Single-center, retrospective chart review of diabetic patients who completed a visit with pharmacist during the study period. The primary outcome was improvement in the MIPS quality measure of hemoglobin A1c poor control (>9%). Secondary outcomes included improvement in eight additional quality measures.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Demonstrate the impact of a pharmacist-run diabetes management service on improving quality measures.

**Self Assessment:** Which of the following quality performance measures can pharmacists help providers improve? A. diabetes: HbA1c poor control B. diabetes: medical attention for nephropathy C. diabetes: foot exam D. statin therapy for the prevention and treatment of cardiovascular disease E. All of the above
EVALUATION OF PHARMACY SERVICES PROVIDED AT A CARDIOLOGY OFFICE
Britney George-Memorial Hospital Pembroke

Purpose/Background: The American College of Cardiology predicts that by 2035, over 130 million American adults will have some form of cardiovascular disease, with an associated cost of $1.1 trillion. The need to reduce cardiac related complications will require a comprehensive team-based approach with enhanced continuity of care. The goal of this program evaluation is to improve patient care through the expansion of pharmacy services in a cardiology office.

Methodology: This is a prospective evaluation to assess the pharmacist's impact at an outpatient cardiology office. The primary objective is to evaluate pharmacy initiated interventions conducted. The secondary objective is to determine the reduction in total patient medication costs through pharmacy initiated interventions. An extension of pharmacy services provided at Memorial Hospital Pembroke were implemented at the cardiology office. Services included: medication reconciliation, medication therapy review, assistance with compliance barriers, and patient education.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Self Assessment: What pharmacy initiated intervention was found to have the most impact at the cardiology office?

ABSTRACT REPRODUCTION FORM

EVALUATING THE IMPACT OF PATIENT ALIGNED CARE TEAM PHARMACISTS IN THE MANAGEMENT OF OSTEOPOROSIS
Diana C. Kirste-Miami VA Healthcare System

Purpose/Background: The Miami Veterans Affairs Medical Center's Patient Aligned Care Team (PACT) Pharmacy service recently incorporated osteoporosis as a new disease state that will be managed in pharmacist-led medication management clinics. The purpose is to evaluate the impact of CPS specialized in the management of osteoporosis as compared to patients managed by other health care providers within the Veteran population.

Methodology: A retrospective analysis was conducted on 72 patients who were managed by CPS following diagnosis by bone mineral density scan with osteoporosis or osteopenia with high FRAX® score (a 10-year hip fracture probability >3% or major osteoporosis-related fracture probability >20%). After bone mineral density scans were read by Endocrinology, the ordering provider had 30 days in which to initiate pharmacologic therapy, if indicated. If no action had been taken by the ordering provider after 30 days, then CPS initiated pharmacotherapy and monitored these patients throughout the duration of therapy for up to 1 year. Variables assessed include: appropriateness of medication management based on the National Osteoporosis Foundation 2013 guidelines, follow up care at months 1, 3, 6, and 12, medication compliance, concomitant disease states and medications, fracture risk assessment utilizing FRAX® scoring, and rate of fractures. Data results suggests that pharmacist-led intervention in osteoporosis management and continuation of care to the veteran population is greater than other health care providers. As a result; an additional 175 patients will be reviewed to support a larger data analysis.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Self Assessment: Identify the impact of CPS in the management of osteoporosis

ABSTRACT REPRODUCTION FORM

EVALUATION OF PHARMACY SERVICES PROVIDED AT A CARDIOLOGY OFFICE
Britney George-Memorial Hospital Pembroke

Purpose/Background: Hyponatremia is the most common electrolyte abnormality in US hospitals. It is challenging to diagnose and treat due to a substantial amount of confounding factors and unspecified treatment options. If left untreated, it can lead to seizures, coma or death; however, if rapidly corrected, it can lead to osmotic demyelination and irreversible neurologic deficits. In an effort to minimize adverse effects associated with hyponatremia, UHealth Tower implemented a hyponatremia best practice alert (BPA) in the electronic medical record (EMR) system that will send an alert each time a patient's serum sodium drops below a predetermined concentration. In addition, an overcorrection BPA will display for nurses whenever a patient's serum sodium rises greater than 0.5 mmol/L during any two consecutive serum sodium laboratory results; prompting them to contact patient's provider. The purpose of this study is to determine the efficacy of the best practice alerts.

Methodology: This was a retrospective chart review conducted at UHealth Tower using an EMR report. The study included two groups: pre-BPA and post-BPA. The EMR was reviewed for baseline serum sodium level, appropriateness of treatment selection, and changes in sodium level after treatment initiation. Data from March 2018 until September 2018 was analyzed. The primary endpoints were difference in time from first sodium below 130 mmol/L to the start of treatment and incidence of overcorrection between pre-BPA and post-BPA groups. Secondary endpoints were percentage of hyponatremia events managed by providers in each group and treatment appropriateness.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the effect of two hyponatremia best practice alerts on a hospital's provision of care

Self Assessment: Did the best practice alerts improve outcomes in hyponatremic patients?

ABSTRACT REPRODUCTION FORM

ENTERAL NUTRITION IN CRITICALLY ILL PATIENTS WITH CONCURRENT VASOPRESSORS: IS IT SAFE
Kristina Finnell-Orlando Health

Purpose/Background: The concomitant use of enteral nutrition (EN) and vasopressors is controversial. The American Society for Parenteral and Enteral Nutrition states that in patients who are hemodynamically unstable, EN is discouraged, but it can be considered with caution in patients on stable or decreasing doses of vasopressors. This study aims to assess the safety and tolerance of EN in critically ill patients on concurrent vasopressors.

Methodology: This study was an IRB approved, retrospective chart review of ICU patients at Orlando Regional Medical Center who received concomitant EN and vasopressors between February 2017 and September 2018. Patients were identified through the pharmacy surveillance system (VigiLanz®). Patients were included if age was >= 18 years, and EN and vasopressors were overlapped for >/<= 1 hour. Patients were excluded if patients had history of gastroparesis or home use of prokinetic agents, pregnant, or a prisoner. The primary outcome is to determine the incidence of EN intolerance measured by a composite of emesis, abdominal distention, high gastric residual (>500 ml), and bowel ischemia or perforation confirmed by imaging or an operative note. Secondary objectives include identifying risk factors associated with EN intolerance such as post-pyloric versus gastric tube placement, medical versus surgical admissions, and high versus low dose vasopressors.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the safety and tolerance of enteral nutrition in critically ill patients on concurrent vasopressors

Self Assessment: Which of the following endpoints may be associated with enteral nutrition intolerance in patients on concurrent vasopressors? A. Emesis B. Imaging indicating bowel perforation C. Abdominal distension D. All of the above
**ABSTRACT REPRODUCTION FORM**

**Time:** 11:20 - 11:40  
**Room:** 1209-A  
**Category:** Critical Care I  
**Title:** LACTATED RINGERS VERSUS NORMAL SALINE IN CRITICALLY ILL PATIENTS AND THE INCIDENCE OF ACUTE KIDNEY INJURY  
**Michelle Henninger-Lee Health**

**Purpose/Background:** Chloride-excessive crystalloids, such as normal saline (NS), have been the mainstay of fluid resuscitation despite studies showing an increased risk of acute kidney injury (AKI), use of renal replacement therapy (RRT) and death when compared to balanced crystalloids like lactated rings (LR). However, several studies have contradicted these findings and suggest there is no difference in outcomes between these crystalloid solutions. The purpose of this retrospective study was therefore to compare the incidence of AKI between critically ill patients who received LR to patients who received NS for fluid resuscitation.

**Methodology:** This was a retrospective chart review that included adult patients with a direct intensive care unit (ICU) admission who received a minimum of two liters of either NS or LR in the first 48 hours of hospital admission between June 2017 and October 2018. The primary objective was the difference in the incidence of AKI between both groups. Secondary outcomes included the number of mechanical ventilation days, in-hospital and ICU mortality rates, ICU length of stay, total number of vasopressor days, and incidence of new RRT during ICU admission. Propensity score matching was used to match patients on a 1:1 basis to adjust for differences in baseline demographics.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Determine if lactated ringers reduces the incidence of acute kidney injury compared to normal saline in critically ill patients

**Self Assessment:** Which of the following crystalloids showed a reduction in the incidence of acute kidney injury? A. Lactated ringers B. Normal Saline C. Plasma-Lyte D. None of the above

**ABSTRACT REPRODUCTION FORM**

**Time:** 11:00 - 11:20  
**Room:** 1209-B  
**Category:** Emergency Medicine IV  
**Title:** EFFECTS OF A PHARMACIST ON TIME TO TPA ADMINISTRATION  
**Daniel Marquis-Florida Hospital Orlando**

**Purpose/Background:** According to the most recent 2018 AHA/ASA guidelines, restoring blood flow to the affected area in the brain is time critical. Rapid reperfusion can limit the amount of irreversible brain tissue damage and reduce negative outcomes. Tissue plasminogen activator is a fibrinolytic agent which can help dissolve a clot and restore the blood flow and is indicated in ischemic strokes within 4.5 hours of onset of stroke symptoms. Upon arrival to the emergency department, the door-to-needle time for tPA administration is recommended to be less than 60 minutes with optional goals of less than 45 minutes. Multiple studies have demonstrated the presence of a pharmacist on the acute stroke team may significantly reduce door-to-needle times. This reduction in administration times can potentially improve patient outcomes, costs, and length of stay.

**Methodology:** A single center retrospective analysis will be conducted comparing tPA administration times for patients with ischemic strokes when a pharmacist is present versus not present for patients presenting to the emergency department for acute ischemic stroke from January 1st, 2016 to December 31st, 2018. Dosing weight will be compared to ICU admission weight and a categorization of post-tPA hemorrhages will occur.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Analyze the door-to-needle times and accuracy of weight-based dosing of tPA when a pharmacist is present versus not present

**Self Assessment:** What is the goal door-to-needle time for tPA administration? A. Less than 3 hours B. Less than 60 minutes C. Less than 4 hours D. Less than 2 hours

**ABSTRACT REPRODUCTION FORM**

**Time:** 10:40 - 11:00  
**Room:** 1209-B  
**Category:** Emergency Medicine IV  
**Title:** TIME TO SECOND ANTIBIOTIC ADMINISTRATION IN SEPSIS UTILIZING PUSH-DOSE ANTIBIOTICS  
**Brittany DeOliveira-Florida Hospital Orlando**

**Purpose/Background:** Sepsis serves as a major public health problem, as well as a significant contributor to healthcare expenditure. As the burden of sepsis continues, several state and national initiatives have been implemented to improve timing and quality of care within healthcare facilities. The objective of this study is to determine the impact of using intravenous (IV) push versus IV piggyback antibiotic administration on delays in care for septic patients presenting to the emergency department (ED).

**Methodology:** This was an Institutional Review Board (IRB) approved retrospective cohort study conducted at Advent Health Orlando. Electronic health records were used to identify patients that presented to the ED and were diagnosed with sepsis or septic shock. Those patients that received their first dose of broad spectrum antibiotic therapy with cefepime, as well as a subsequent second antibiotic, were stratified into two groups. Group one included those patients who received cefepime via IV push, and group two IV piggyback, respectively. Using the medication administration record (MAR), the time from initial presentation to the ED until the time of second antibiotic administration was recorded. Data was then reviewed and analyzed to determine timing trends and delay frequency. This data was then compared to current recommendations set forth by Centers for Medicare and Medicaid Services (CMS) and Surviving Sepsis Campaign (SSC). Collected data was used to determine the impact of utilizing IV push administration of antibiotics to more closely meet these standards.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize the impact of different routes of administration on timing and delays in care for patients with sepsis or septic shock presenting to the ED

**Self Assessment:** Which of the following are potential advantages of using IV push cefepime over IV piggyback? A. More rapid initiation of broad spectrum antimicrobial therapy B. Greater time over MIC C. Reduced need for multiple IV lines to run multiple antibiotics D. A and B E. A and C

**ABSTRACT REPRODUCTION FORM**

**Time:** 11:20 - 11:40  
**Room:** 1209-B  
**Category:** Emergency Medicine IV  
**Title:** IMPACT OF PHARMACIST-PHARMACY TECHNICIAN DIRECTED MEDICATION HISTORY IN THE EMERGENCY DEPARTMENT OF A COMMUNITY HOSPITAL  
**Cleon-Paul Blake-Indian River Medical Center**

**Purpose/Background:** Transition from outpatient to inpatient settings can create opportunities for medication discrepancies. Inaccurate or inconsistent medication histories could lead to unintentional patient harm. Previous studies provide evidence for the positive impact of obtaining medication histories on patient care, such as reducing potential adverse drug events (43% - 84% relative risk reduction), reducing readmissions, and detecting drug-related pathology. This study aims to determine the impact of utilizing pharmacists and pharmacy technicians to obtain medication histories in the emergency department.

**Methodology:** This retrospective analysis obtains data from medication histories performed between March 1, 2018 to June 30, 2018. All medication histories are collected by an emergency room pharmacy technician or an emergency room pharmacist. Patient data is recorded on a spreadsheet tracking time spent in obtaining information, verification methods, number of medications reviewed, changes made to medication history and number of critical medication discrepancies. Medication discrepancies are any variances found in documentation that contradicts what a patient is taking. Critical medication discrepancies are variances that if not identified has the potential to cause significant patient harm. Critical discrepancies are categorized into four groups (anticoagulants/antiplatlets, insulin/antidiabetic agents, cardiac/antihypertensive agents and antibiotics/antivirals) based on the Institute of Safe Medication Practices (ISMP) list of high risk medications. The primary endpoints are the total number of discrepancies and number of critical discrepancies identified. The secondary endpoint is financial impact of critical discrepancies identified.

**Results/Conclusions:** Results and conclusion will be presented at the FRC

**Presentation Objective:** Understand the impact of utilizing pharmacists and pharmacy technicians to obtain medication histories in the emergency department

**Self Assessment:** Which of the following statement is NOT true about the impact of pharmacist-pharmacy technician directed medication history? A. Pharmacist-pharmacy technician obtained medication histories help to improve patient care
IMPROVING VANCOMYCIN DOSING ON NEPHROTOXICITY
Samuel S. Solone-Bay Pines VA Healthcare System - Bay Pines

Purpose/Background: The purpose of this medication use evaluation is to estimate the incidence of nephrotoxicity between a trough-based vancomycin dosing method and a revised two-point sampling dosing protocol for AUC-targeted calculations.

Methodology: Any patient who received an inpatient order for vancomycin hospital-wide during the time period of October, 2017 through February, 2018 or October, 2018 through February, 2019 will be reviewed for inclusion or exclusion from the study. If the patient is deemed appropriate for inclusion, a chart review will be performed extracting the data points listed below. Study endpoints include incidence of nephrotoxicity, defined as increase of >0.5 mg/dl or a >50% increase in serum creatinine over baseline, in consecutively obtained daily serum creatinine values in the absence of an alternative justification. The difference in achievement of therapeutic target attainment between both groups will be collected. Total daily vancomycin dose and duration of vancomycin therapy will also be collected. Additionally, 30-day readmission between the pre- and post-intervention arms, the duration of ICU admission (if applicable), total inpatient duration of hospitalization will be reported. In September, 2018, an educational in-service will be delivered to pharmacy staff detailing vancomycin AUC-based dosing and calculating AUC/MIC using the vancomycin pharmacokinetic calculator. The two-point sampling dosing protocol will utilize the linear trapezoidal rule during infusion with the logarithmic trapezoidal rule during elimination for calculating AUC.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Review the difference in the incidence of nephrotoxicity between a trough-based vancomycin dosing method and a revised two-point sampling dosing protocol for AUC-targeted calculations

Self Assessment: True or false: Trough-based vancomycin dosing has a higher incidence of nephrotoxicity than two-point AUC-based vancomycin dosing.

EFFECT OF A RESPIRATORY MULTIPLEX PANEL ON ANTIMICROBIAL USE IN HOSPITALIZED PATIENTS AT A VETERANS AFFAIRS MEDICAL CENTER
Christopher D. Espinosa-Orlando VA Medical Center

Purpose/Background: The respiratory multiplex panel is a polymeerase chain reaction test using a nasopharyngeal swab. It can detect 20 of the most common respiratory pathogens in about an hour with high sensitivity and specificity. Previous evaluations have shown using this type of diagnostic tool can reduce antibiotic treatment duration, days in ICU, and overall healthcare costs. The objective of this quality improvement project is to evaluate whether respiratory multiplex panel results lead to changes in inpatient antimicrobial treatment.

Methodology: Patients with respiratory multiplex results from February 2018 to June 2018 were identified through laboratory results. Patients not admitted to the hospital or that had coinfections were excluded. A retrospective chart review was conducted to collect the following data from the electronic health record: patient age, patient gender, presence of beta-lactam allergy, time from respiratory symptom complaint to multiplex collected, antibiotic use prior to multiplex results, multiplex panel results in categories and species, and antibiotic use after multiplex results obtained. Other data points that were collected were duration of antibiotic therapy, sputum culture results with correlation to multiplex results, and hospital length of stay. The duration of antibiotic treatment was compared between the group that had a positive viral multiplex and the group that had a negative multiplex.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference

Presentation Objective: Identify treatment outcomes related to respiratory multiplex panel results

Self Assessment: Which of these outcomes is associated with the use of a respiratory multiplex panel? A. Increased antibiotic resistance rates B. Overall reduced antibiotic use C. Increased antibiotic use D. Longer hospital length of stay
**ABSTRACT REPRODUCTION FORM**

**Time: 11:00 - 11:20 Room: 1209-D Category: Infectious Diseases XII**

**EFFECTS OF A THREE-DAY ANTIMICROBIAL TIME-OUT AT A COMMUNITY TEACHING HOSPITAL**

Alexandra Wilson-Sacred Heart Health System

**Purpose/Background:** Antimicrobial "time-outs" have been recommended to decrease resistance, the incidence of superinfections, drug related adverse reactions, and cost by encouraging active patient reassessment and evaluation of the need for treatment continuation to prevent unnecessarily long therapy. An antimicrobial time-out was implemented using automatic 3-day stop orders at a community teaching hospital. The purpose of this study is to describe utilization of the antimicrobial time-out, and evaluate clinical cure before and after implementation, in addition to effects of inappropriate discontinuation of antimicrobials.

**Methodology:** A descriptive, retrospective chart review was performed, including adults greater than 18 years of age who met sepsis criteria, were on antimicrobials for greater than 24 hours and wereadmitted to the hospital during two separate three-month periods, December through February in 2016-2017 and 2017-2018 years, respectively. The following patients were excluded: cystic fibrosis or febrile neutropenia diagnosis; on antimicrobials only for surgical prophylaxis; had monotherapy with vancomycin or aminoglycosides; were pregnant, postpartum, or incarcerated. The primary endpoint is clinical cure rate before and after implementation of the antimicrobial timeout. Secondary endpoints include mortality, 30-day readmission rates, antibiotic stopped prematurely, and hospital length of stay.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Understand the value of anti-microbial timeouts in relation to an inpatient hospital setting

**Self Assessment:** What are the benefits of instituting an antimicrobial timeout in an inpatient setting? A. Reduction in superinfections B. Reduction in resistance C. Fewer adverse drug effects D. All of the above

---

**ABSTRACT REPRODUCTION FORM**

**Time: 10:40 - 11:00 Room: CLC Category: Pain Management IV**

**EXAMINE THE IMPACT OF INTRAVENOUS ACETAMINOPHEN ON OPIOID USE FOR POSTOPERATIVE CESAREAN SECTION PATIENTS IN A COMMUNITY HOSPITAL**

Lorenzo M. Porras Jr.-South Miami Hospital

**Purpose/Background:** opioids are widely used in the perioperative period to prevent, decrease and manage pain. Opioids however, have a potential for abuse as individuals may develop tolerance and may require higher doses to alleviate pain.

The guidelines recommend a multimodal approach for optimal pain management that utilizes different mechanisms. Using medications with different mechanisms of action may reduce the frequency use of opioids. The purpose of this study is to evaluate if the administration of intravenous acetaminophen will assist in decreasing the total quantity of opioids (in morphine equivalents) administered postoperatively in patients who underwent a cesarean section.

**Methodology:** This is a retrospective chart review evaluating electronic medical administration records (eMARs) at South Miami Hospital. The study will analyzed fifty eMARs, of adult (18 years of age and older) that underwent a cesarean section from 02/01/2018 and 10/01/2018. Subjects were divided into two groups; twenty-five were administered intravenous acetaminophen and the remaining twenty-five were not. The primary objective is to compare the use of opioids postoperatively (in morphine equivalents) among both groups. Other study objectives are to assess length of stay and compare the reported pain scale postoperatively.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Compare the use of opioids in postoperative patients that were administered intravenous acetaminophen versus patients that did not receive intravenous acetaminophen

**Self Assessment:** True or False: For optimal pain management a multimodal approach is recommended that utilizes different mechanisms of action.

---

**ABSTRACT REPRODUCTION FORM**

**Time: 11:20 - 11:40 Room: 1209-D Category: Infectious Diseases XII**

**IMPACT OF A MULTIPLEX POLYMERASE CHAIN REACTION MENINGITIS/ENCEPHALITIS PANEL AND ANTIMICROBIAL STEWARDSHIP INTERVENTION ON ANTIMICROBIAL USE IN PATIENTS WITH SUSPECTED MENINGITIS OR ENCEPHALITIS**

Katelyn Woodbury-Sarasota Memorial Hospital

**Purpose/Background:** Optimal initial treatment of meningitis relies on prompt diagnostic evaluation and initiation of appropriate emergent antimicrobial therapy. The meningitis/encephalitis (ME) panel is a multiplex rapid polymerase chain reaction (PCR), which has the ability to detect 14 common community-acquired pathogens within one hour. The purpose of this study is to evaluate the impact of the ME Panel on de-escalation of antimicrobial therapy in adult inpatients with suspected meningitis at a large community teaching hospital.

**Methodology:** This single center, retrospective quasi-experimental pre/post study includes all adults admitted for at least 48 hours with suspected meningitis and initiated on antimicrobial therapy. Exclusion criteria include healthcare-associated meningitis, immunosuppression, initiation of antimicrobial therapy more than 8 hours prior to lumbar puncture, admission to trauma service, and treatment with antimicrobials for another documented indication. The pre-intervention group includes patients admitted prior to the introduction of the ME panel. The post-intervention period will be conducted in two phases; Phase 1: ME Panel without stewardship intervention, Phase 2: post implementation of a meningitis order set, provider education, and use of real-time meningitis alert in the hospital's clinical decision support software. The primary outcome is the percent of patients who had de-escalation of antimicrobial therapy within 48 hours of lumbar puncture. Secondary outcomes include time to de-escalation, percent of patients who experienced de-escalation or escalation of antimicrobial therapy, length of hospital stay, and antimicrobial drug costs.

**Results/Conclusions:** Results and conclusion will be presented at FRC

**Presentation Objective:** Discuss the importance of stewardship intervention when implementing new rapid diagnostic tests

**Self Assessment:** True or False: Implementation of rapid diagnostic tests is equally effective without the involvement of antimicrobial stewardship.

---

**ABSTRACT REPRODUCTION FORM**

**Time: 11:00 - 11:20 Room: CLC Category: Pain Management IV**

**COMPARATIVE STUDY OF SINGLE DOSE LIPOSOMAL BUPIVACAINE VERSUS CONTINUOUS PARAVERTICAL BLOCK FOR PAIN CONTROL FOLLOWING VIDEO-ASSISTED AND ROBOTIC-ASSISTED THORACIC SURGERIES**

Gabbie Massoglia-Mayo Clinic Florida

**Purpose/Background:** The purpose was to compare analgesic efficacy of single dose liposomal bupivacaine infiltration versus continuous ropivacaine paravertebral block (PVB) in patients who underwent unilateral video-assisted thoracic surgery (VATS) or robotic-assisted thoracic surgery (RATS).

**Methodology:** This IRB-approved retrospective study included patients at Mayo Clinic Florida from January 1, 2016 to August 14, 2018 who were ≥18 years undergoing VATS or RATS who received either liposomal bupivacaine or ropivacaine PVB. The objectives were to compare total postoperative morphine milligram equivalent (MME) opioid dose, average numeric rating scale (NRS) pain scores, time to first opioid dose, length of stay, and postoperative antiemetic medication administration.

**Results/Conclusions:** There was no significant difference in total MME administered from time of Post-Anesthesia Care Unit (PACU) discharge in patients who received liposomal bupivacaine versus patients who received PVB (30 vs. 26.25, respectively; \( p = 0.087 \)). Patients in the 1 The data show a potential benefit of using continuous PVB over liposomal bupivacaine in the postoperative setting, with reduced opioid use on POD0 and POD2, lower average pain scores on POD1 and POD2, reduced antiemetic use, and longer time to first opioid.

**Presentation Objective:** Compare the difference between single dose liposomal bupivacaine and continuous ropivacaine paravertebral block on opioid administration, patient-reported pain scores, postoperative antiemetic requirement, and length of hospital stay

**Self Assessment:** True or False? Patients who received a continuous ropivacaine paravertebral block were administered significantly more MME opioid doses during their postoperative hospitalization as compared to patients who received intraoperative liposomal bupivacaine.
Time: 10:40 - 11:00 Room: A 1096 Category: Pediatrics III

COMPARISON OF N-PASS SCORES FOR MILD, MODERATE, AND SEVERE PAIN IN HOSPITALIZED NEONATES

Victoria Frame-UF Health Shands

Purpose/Background: NICU patients are exposed to a variety of painful conditions ranging from mild to severe, but there is no universally recommended assessment tool. Recognizing and controlling pain in newborns is critical for improved physiologic and behavioral outcomes. Unnecessary exposure to analgesics can also compromise neurodevelopment. The Neonatal Pain, Agitation, and Sedation Scale (N-PASS) is a commonly utilized 10-point tool designed by expert opinion, which recommends treatment for scores greater than 3. Limitations include inability to distinguish pain from agitation, lack of data correlating score to severity, and no score-based interventions.

Methodology: This was a retrospective chart review of NICU patients at UF Health Shands Hospital between July 2012 and July 2018 who received N-PASS scores and fit criteria for one of three pain groups: mild (standard care), moderate (mechanically-ventilated), or severe (post-operative). The primary outcome was to compare N-PASS scores between 3 groups. Secondary outcomes included pharmacologic interventions completed for N-PASS scores greater than 3, and receipt of pain medication for N-PASS scores less than 3.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the reliability of the N-PASS pain assessment tool

Self Assessment: Which of the following is NOT a graded criteria associated with the N-PASS scoring tool? A. Crying/irritability B. Behavior/state C. Facial expression D. Breathing patterns

Time: 11:00 - 11:20 Room: A 1096 Category: Pediatrics III

PALIZVUMAB IN PEDIATRIC TRANSPLANT PATIENTS

Stephanie M. Machin-Jackson Memorial Hospital

Purpose/Background: Respiratory syncytial virus (RSV) is a common cause of lower respiratory tract infections in children. Immunocompromised patients are at a higher risk of developing serious complications. Palizumab is indicated for RSV prophylaxis given monthly throughout the RSV season. The American Academy of Pediatrics recommends a maximum of five doses per season. However, according to Florida Health the RSV season compromises the entire year for Southeast Florida. At Holtz Children's Hospital (HCH), current guidelines recommend the administration of palizumab to pediatric transplant patients less than two years of age. However, there is lack of data on the efficacy of RSV prophylaxis in pediatric transplant patients. The purpose of this project is to evaluate the use of palizumab in pediatric transplant patients at HCH.

Methodology: Data was collected retrospectively via electronic medical record in patients receiving palizumab at HCH and at the outpatient transplant clinics during July 2015 to June 2018. Microbiology data will be reviewed to identify RSV trends. A questionnaire assessing RSV prophylaxis in pediatric transplant patients was sent to transplant centers across the country. Based on the responses and available literature, we will evaluate and modify our current guidelines if needed. The primary objective of this study is to evaluate the use of palizumab in pediatric transplant patients. Secondary objectives include developing a transition of care process at the outpatient clinics, optimizing dose rounding, identifying RSV trends and determining the overall financial impact.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Results and conclusion will be presented at the Florida Residency Conference.

Self Assessment: True or False: The RSV season in Florida is from July to March, regardless of the region, and the AAP recommends patients to receive a dose of palizumab per month during this time.


TOXICITY OF NICOTINE-CONTAINING PRODUCTS IN PEDIATRIC PATIENTS REPORTED TO FLORIDA POISON INFORMATION CENTERS

Madison Blaise Schwartz-UF Health Jacksonville

Purpose/Background: Nicotine toxicity can cause a range of effects including nausea, vomiting, tachycardia, hypertension, weakness, paralysis, fasciculations, arrhythmias, seizures, and death. The introduction of electronic cigarettes (e-cigarettes) and nicotine-containing e-liquids to the United States market in 2006 has provided a new avenue for nicotine exposures and resulting toxicity. In August 2016, the FDA finalized a rule to include regulation of e-nicotine products and accessories. Despite these regulatory actions, there has been a reported 582.6% increase in electronic vaping activity in 11-17 year old middle school and high school students in Florida from 2012 to 2018. Nicotine-containing e-liquids are available in concentrations as high as 42 mg/mL and in a variety of flavors that can be enticing to a child. These newer, widely available concentrated nicotine products pose a significant risk of toxicicity from both accidental and intentional exposures in pediatric and adolescent populations. This study aims to characterize nicotine exposures in children and adolescents 18 years old or younger based on reports to the Florida Poison Information Center Network. In addition, the quantity of cases reported, clinical manifestations, and medical outcomes of nicotine exposures secondary to e-cigarettes, e-liquids, and e-cigarette cartridges to all other nicotine-containing substances in this population were compared.

Methodology: This was a retrospective chart review of nicotine exposures in pediatric patients reported to the three poison control centers comprising the Florida Poison Information Center Network from August 2014 to August 2018.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Describe the clinical signs and symptoms associated with nicotine toxicity

Self Assessment: Which of the following clinical signs and symptoms is not associated with nicotine toxicity? A. Nausea/vomiting B. Tachycardia C. Miosis D. Fasciculations E. Paralysis
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session VII

May 17, 2019
12:50-1:50pm
**IMPLEMENTATION OF A PHARMACIST-LED DIABETES MANAGEMENT OUTPATIENT SERVICE IN A RURAL SENIOR COMMUNITY**

Mallory Belcher-Florida Hospital Heartland Medical Center

**Purpose/Background:** With the incidence of type 2 diabetes mellitus (DM) on the rise, the demands for managing uncontrolled diabetes have become increasingly challenging in the primary care platform. These demands include minimizing disease progression and complications. Such control of diabetes presents an opportunity for pharmacists to take a frontline role in patient care as providers shift toward an interdisciplinary approach. The study's objective is to evaluate the implementation and initial impact of a pharmacist-led outpatient diabetes management service on senior patients in a rural community. This project is the first collaborative agreement established between pharmacy and outpatient physician offices in our local hospital network.

**Methodology:** The collaborative practice agreement was created and established with hospital affiliated primary care physician offices. The outpatient electronic medical record system will identify type 2 DM patients who are 55 years and older with an A1c above 1% of goal who were previously established with a primary care physician. Patients included in this group will be compared to a standard of care group without pharmacist intervention. All data will be collected and recorded confidentially without patient identifiers. The pharmacist will conduct an initial patient interview and make evidence-based changes to medication regimens with physician oversight. Patient follow up will occur for a duration of 3 months after the initial interview. The primary outcome is the change in hemoglobin A1c at 3 and 6 months. Secondary outcomes include the impact on hyperglycemic crises admission rates and average fasting blood glucose.

**Results/Conclusions:** Results and conclusions will be presented at APhA.

**Presentation Objective:** Describe the steps in implementation of an outpatient diabetes management service by a pharmacist

**Self Assessment:** Which of the following is NOT included in the pharmacist's role in improving multi-disciplinary outpatient diabetes management?

A. Intensifying or reducing doses
B. Diagnosing new-onset diabetes
C. Providing education
D. Consulting with physician regarding diabetes related care

---

**IMPACT OF A PHARMACIST IN THE OUTPATIENT CLINIC OF A COMMUNITY HOSPITAL**

Lissette Bauza-South Miami Hospital

**Purpose/Background:** Growth of pharmacists services in ambulatory care settings is strongly supported by an array of pharmacy organizations and non-pharmacy organizations. Pharmacist integration into outpatient care clinics can provide improvements in prescribing practices, adverse event rates, clinical outcomes, and hospitalization rates. Impact is measured directly through report of hospitalization and/or disease exacerbation rates or indirectly through reports of other measures such as patient adherence/compliance rates, interventions, efficiency scores, and patient satisfaction. South Miami Hospital outpatient services are provided by the Heart & Rhythm Center, an ambulatory care clinic that provides care for patients with a wide range of conditions. Routinely, pharmacists do not have a high degree of direct interaction with the clinic. The purpose of this study is to measure the impact of the pharmacists' presence at the outpatient clinic.

**Methodology:** This study was conducted from February 25th, 2019 to March 22nd, 2019. A pharmacy resident was integrated with the healthcare team at the ambulatory care clinic. The objectives were to assess and quantify interventions provided by the pharmacist, to assess the impact of the interventions on cost avoidance, and to assess patient satisfaction. A literature review was conducted in order to correlate interventions with the estimated cost avoidance. All interventions provided by the pharmacist were documented in the patients' electronic health record. Patients who had direct interaction with the pharmacist were asked to take an anonymous patient satisfaction survey.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Measure the impact of the pharmacists' presence at an ambulatory care clinic

**Self Assessment:** Which of the following are ways that pharmacists' impact can be measured?

A. Hospitalization/Disease Exacerbation Rates
B. Adherence/Compliance Rates
C. Interventions and Efficacy Scores
D. Patient Satisfaction Surveys
E. All of the above

---

**PRESCRIBING PATTERNS OF MULTIPLE CHRONIC MEDICATIONS THAT CAN PROLONG THE QTc INTERVAL IN AN INDIGENT POPULATION IN SOUTH FLORIDA**

Rucha Acharya-Nova Southeastern University College of Pharmacy

**Purpose/Background:** Studies have shown that the addition of more than one drug that can prolong the QTc interval causes an increased risk in the possible development of torsades de pointes, a potentially fatal ventricular tachyarrhythmia. The purpose of this study is to determine the prevalence of unsafe prescribing patterns in an indigent population by analyzing the percentage of patients prescribed two or more drugs with a known risk of causing torsades de pointes.

**Methodology:** This was a retrospective analysis of patient profiles at the NSU Clinic pharmacy. A list was generated of patients who were receiving medical care at a rural community health center and were receiving therapy with apixaban or warfarin between June 1, 2019 and May 31, 2018. Patients who had been prescribed 2 or more medications known to cause torsades de pointes and had filled these drugs for 3 months or more were included in the study. The number of indigent patients included in the study will be compared to the total number of indigent patients who have filled prescriptions at the pharmacy over the study time frame. Statistical analysis will be conducted using the Fisher's exact and chi-squared tests.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Assess the prevalence of indigent patients receiving multiple drugs that can prolong the QTc interval

**Self Assessment:** True or False: Use of multiples medications that can prolong the QTc interval does not increase the patient's risk of developing torsades de pointes.

---

**INVESTIGATION OF APIXABAN EFFICACY AND SAFETY IN PATIENTS WITH END-STAGE RENAL DISEASE**

Emily McElhaney-James A. Haley Veterans Hospital

**Purpose/Background:** Apixaban is the only direct oral anticoagulant approved for use in patients with end-stage renal disease (ESRD). The approval was based on a small pharmacokinetic study demonstrating similar plasma concentrations of reduced-dose apixaban in ESRD patients compared to full-dose apixaban in patients with preserved renal function. It is unknown whether these pharmacokinetic similarities correlate to similar clinical efficacy and bleeding rates.

**Methodology:** This study is a case-control retrospective database and chart review analysis. National data will be collected to identify patients 18 years or older with ESRD, defined as creatinine clearance less than or equal to 15 mL/min or on dialysis for at least 3 months, receiving therapy with apixaban or warfarin between June 1, 2014 and May 31, 2018. Patients on apixaban will be matched to those on warfarin in a 1:2 fashion. Patients will be excluded if they are on long-term injectable anticoagulation, receiving a direct oral anticoagulant other than apixaban, or have a spinal cord injury. The primary objective is to identify the difference in bleeding rates for patients with ESRD receiving apixaban versus warfarin. The secondary endpoints will identify differences in thrombotic events and bleeding rates per indication.

**Results/Conclusions:** Planned statistical analysis includes Student's t-tests and chi-square tests to evaluate overall differences in incidence of bleeding events, thrombotic events, and cohort demographics.

**Presentation Objective:** Explain recommendations regarding the use of apixaban in ESRD

**Self Assessment:** Which of the following is false regarding the use of apixaban in ESRD?

A. Many prospective studies have been published in patients with ESRD
B. Approved by the FDA C. No dosage adjustment recommended
D. All of the above

---
ABSTRACT REPRODUCTION FORM

**Presentation Objective:** Evaluate the effect of erythropoietin stimulating agents (ESAs) on blood optimization in cardiac surgery

**Methodology:** This was a retrospective chart review from May 2017 to May 2018 which utilized the electronic medical record system, the study institution’s cardiothoracic surgery patient database and registry, and the clinical pharmacist workflow software, Vigilanz©, to identify patients for the study. Per the institution-based ESA protocol, the target hemoglobin level is >12 grams/deciliter post-ESA administration. This study primarily evaluated the change in hemoglobin after ESA administration, blood products used in addition to ESA, pro-coagulants used intraoperatively and/or use of reversal agents, newly diagnosed thrombus, and hospital length of stay.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Describe the results of an interdisciplinary algorithm on the management of venous thromboembolism in the acute care setting

**Methodology:** This retrospective chart review was conducted within a health system of three community hospitals and a tertiary medical center totaling 886 beds. Inclusion criteria consisted of adults at least 18 years of age with a diagnosis code of VTE. Patients were further stratified by risk using the Simplified Pulmonary Embolism Severity Index (SPESI) score and ability to take oral medications. The intervention group included VTE patients from July 2018 through December 2018, compared to the control group from July 2017 through December 2017. The primary outcome was to evaluate the mean length of stay. Secondary outcomes included 30-day hospital readmission rates and ED visits, anticoagulant prescribed at discharge, use of diagnostic exams, and patient satisfaction survey scores.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Determine if there was a safe rise in serum sodium 24 hours after patients

**Methodology:** A retrospective chart review will be conducted from February 1, 2017 to September 30, 2018. Subjects will be divided into high dose (10 mg or greater) and low dose (less than 10 mg) warfarin groups. The primary outcome is the proportion of patients with a supratherapeutic INR of 4.5 or above. Secondary outcomes include time to therapeutic range, number of consecutive days within range, documented bleed and/or use of reversal agents, newly diagnosed thrombus, and hospital length of stay.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Describe the results of an interdisciplinary algorithm on the management of venous thromboembolism in the acute care setting

**Self Assessment:** True or False: Per the 2016 Antithrombotic Therapy for VTE Disease CHEST Guideline, DOACs are recommended over vitamin K antagonists for VTE patients without a cancer diagnosis.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Determine if there was a safe rise in serum sodium 24 hours after patients

**Methodology:** This was a retrospective chart review from May 2017 to May 2018 which utilized the electronic medical record system, the study institution’s cardiothoracic surgery patient database and registry, and the clinical pharmacist workflow software, Vigilanz©, to identify patients for the study. Per the institution-based ESA protocol, the target hemoglobin level is >12 grams/deciliter post-ESA administration. This study primarily evaluated the change in hemoglobin after ESA administration and secondarily evaluated the risks and adverse effects associated with ESA administration. The following data was collected: patient demographics, complete blood count, type of cardiac surgery, ESA dose and timing of administration, blood products used in addition to ESA, pro-coagulants used intraoperatively and/or postoperatively, time to hemoglobin and hematocrit changes, and the cost of ESA.

**Results/Conclusions:** Results and conclusion will be presented at FRC

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Describe the results of an interdisciplinary algorithm on the management of venous thromboembolism in the acute care setting

**Self Assessment:** True or False: Per the 2016 Antithrombotic Therapy for VTE Disease CHEST Guideline, DOACs are recommended over vitamin K antagonists for VTE patients without a cancer diagnosis.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Determine if there was a safe rise in serum sodium 24 hours after patients

**Methodology:** This retrospective chart review was conducted within a health system of three community hospitals and a tertiary medical center totaling 886 beds. Inclusion criteria consisted of adults at least 18 years of age with a diagnosis code of VTE. Patients were further stratified by risk using the Simplified Pulmonary Embolism Severity Index (SPESI) score and ability to take oral medications. Current guidelines recommend a safe sodium correction of less than or equal to 10 mEq/L in the first 24 hours to prevent these adverse events. Therefore, the purpose of this study was to determine if there was a safe rise in serum sodium 24 hours after patients received 3% HTS for TBI between higher (>30 ml/hr) and lower (≤30 ml/hr) initial rates of HTS.

**Methodology:** This was a retrospective chart review conducted at a community hospital surgical-trauma intensive care unit (STICU) between September 2015 and September 2018. Patients were included if they were at least 16 years old, admitted to the STICU, received 3% hypertonic saline for at least 6 hours, and were diagnosed with a TBI diagnosis. Primary outcome was the rise of serum sodium in a 24 hour period. Secondary outcome was the occurrence of AKI, severe hypokalemia (>4.5 mmol/L), and hypernatremia (>160 mmol/L), hyperkalemia (<3.5 mmol/L), in-hospital mortality and VTE events.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Describe the results of an interdisciplinary algorithm on the management of venous thromboembolism in the acute care setting

**Self Assessment:** True or False: Per the 2016 Antithrombotic Therapy for VTE Disease CHEST Guideline, DOACs are recommended over vitamin K antagonists for VTE patients without a cancer diagnosis.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Determine if there was a safe rise in serum sodium 24 hours after patients

**Methodology:** This retrospective chart review was conducted within a health system of three community hospitals and a tertiary medical center totaling 886 beds. Inclusion criteria consisted of adults at least 18 years of age with a diagnosis code of VTE. Patients were further stratified by risk using the Simplified Pulmonary Embolism Severity Index (SPESI) score and ability to take oral medications. Current guidelines recommend a safe sodium correction of less than or equal to 10 mEq/L in the first 24 hours to prevent these adverse events. Therefore, the purpose of this study was to determine if there was a safe rise in serum sodium 24 hours after patients received 3% HTS for TBI between higher (>30 ml/hr) and lower (≤30 ml/hr) initial rates of HTS.

**Methodology:** This was a retrospective chart review conducted at a community hospital surgical-trauma intensive care unit (STICU) between September 2015 and September 2018. Patients were included if they were at least 16 years old, admitted to the STICU, received 3% hypertonic saline for at least 6 hours, and were diagnosed with a TBI diagnosis. Primary outcome was the rise of serum sodium in a 24 hour period. Secondary outcome was the occurrence of AKI, severe hypokalemia (>4.5 mmol/L), and hypernatremia (>160 mmol/L), hyperkalemia (<3.5 mmol/L), in-hospital mortality and VTE events.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Describe the results of an interdisciplinary algorithm on the management of venous thromboembolism in the acute care setting

**Self Assessment:** True or False: Per the 2016 Antithrombotic Therapy for VTE Disease CHEST Guideline, DOACs are recommended over vitamin K antagonists for VTE patients without a cancer diagnosis.

**ABSTRACT REPRODUCTION FORM**

**Presentation Objective:** Determine if there was a safe rise in serum sodium 24 hours after patients

**Methodology:** This retrospective chart review was conducted within a health system of three community hospitals and a tertiary medical center totaling 886 beds. Inclusion criteria consisted of adults at least 18 years of age with a diagnosis code of VTE. Patients were further stratified by risk using the Simplified Pulmonary Embolism Severity Index (SPESI) score and ability to take oral medications. Current guidelines recommend a safe sodium correction of less than or equal to 10 mEq/L in the first 24 hours to prevent these adverse events. Therefore, the purpose of this study was to determine if there was a safe rise in serum sodium 24 hours after patients received 3% HTS for TBI between higher (>30 ml/hr) and lower (≤30 ml/hr) initial rates of HTS.
**ABSTRACT REPRODUCTION FORM**

**Time:** 1:30 - 1:50  **Room:** 1209-A  **Category:** Critical Care XII

**EVALUATION OF THE RELIABILITY OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS NASAL SCREENS IN ICU PATIENTS UNDERGOING UNIVERSAL DECOLONIZATION**

Anna Chaudhry-St. Vincent's Healthcare

**Purpose/Background:** Nasal surveillance screens are utilized to detect nasal colonization of methicillin-resistant Staphylococcus aureus (MRSA). Recent evidence indicates that negative MRSA nasal screens may be used to de-escalate anti-MRSA antibiotics in patients with pulmonary infections. In the ICU setting, universal decolonization with intranasal mupirocin is widely implemented to reduce MRSA infection risk. MRSA PCR nasal screening has high negative predictive value, as it measures the DNA of viable and non-viable organisms to detect colonization. However, it is unknown whether the administration of mupirocin affects the ability of the PCR nasal screen to predict culture-confirmed MRSA pneumonia. The purpose of this study was to determine the reliability of the MRSA PCR nasal screen in the setting of universal decolonization.

**Methodology:** This retrospective study was conducted at three campuses of Ascension St. Vincent's, with a total of 82 ICU beds. Subjects were divided into two groups based on the timing of intranasal mupirocin administration in relation to the MRSA PCR nasal screen before and after screen. Subjects with concurrent infection requiring vancomycin use or MRSA infection in the prior 30 days were excluded. The primary outcome was the negative predictive value of the MRSA PCR nasal screen. Secondary outcomes were the positive predictive value, sensitivity, and specificity of the MRSA nasal screen as well as the duration of vancomycin therapy.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe the reliability of MRSA screens in patients with pulmonary infections

**Self Assessment:** What can be concluded regarding the reliability of nasal MRSA screens in patients with pulmonary infections? A. The MRSA screen has a high negative predictive value B. The MRSA screen has a low negative predictive value C. The MRSA screen has a high positive predictive value D. The MRSA screen results are always inconclusive

**ABSTRACT REPRODUCTION FORM**

**Time:** 1:10 - 1:30  **Room:** 1209-C  **Category:** Infectious Diseases XIII

**IMPACT OF PROVIDER EDUCATION AND ANTIMICROBIAL STEWARDSHIP ON THE UTILIZATION OF SYSTEMIC FLUOROQUINOLONES WITHIN A VETERANS AFFAIRS HEALTHCARE SYSTEM**

Bionqua S. Lynch-Bay Pines VA Healthcare System - Bay Pines

**Purpose/Background:** Fluoroquinolones (FQ) are a popular antibiotic choice for infectious diseases, however, resistance to this class has increased significantly over time. FQs also threaten patient safety due to the risk of disabling or potentially irreversible adverse reactions. Therefore, FQs have a black box warning stating they should generally be reserved for patients without alternative treatment options. In the early part of Fiscal Year 2018, Bay Pines VA Healthcare System's use of FQ antibiotics was an average of 35 days of therapy (DOT) per 1,000 patient days. This data indicates there is ample opportunity for improvement in FQ prescribing practices in order to optimize treatment outcomes and increase patient safety.

**Methodology:** This is a single-center pre- and post-intervention study. The utilization of FQ antibiotics for the treatment of common bacterial infections on a general medical ward will be compared before and after the intervention using DOT per 1,000 patient days as the antibiotic consumption metric. The intervention will include an educational in-service for inpatient physicians detailing a FQ criteria for use and prescribing reference guide developed through the Antimicrobial Stewardship Program. Additionally, a prospective audit of patients receiving a systemic FQ on the ward will be reviewed by inpatient clinical pharmacy specialists and the antimicrobial stewardship program director. Providers will be contacted with alternatives to the FQ if clinically appropriate. The pre- and post-intervention periods are October 2017- January 2018 and October 2018- January 2019 respectively.

**Results/Conclusions:** Results and conclusions will be presented at a future event.

**Presentation Objective:** Highlight the benefits of pharmacist involvement in antimicrobial stewardship through provider education and antimicrobial surveillance and intervention

**Self Assessment:** Which of the following is NOT a benefit of pharmacist involvement in antimicrobial stewardship? A. Discontinuation of unnecessary antibiotic therapy B. Optimize treatment outcomes and increase patient safety C. Increase the utilization of fluoroquinolone antibiotics in the hospital setting D. Improve provider - pharmacist relationships in the inpatient setting

**ABSTRACT REPRODUCTION FORM**

**Time:** 12:50 - 1:10  **Room:** 1209-C  **Category:** Infectious Diseases XIII

**IMPROVING PENICILLIN ALLERGY DOCUMENTATION AND ITS EFFECT ON ANTIBIOTIC PRESCRIBING AT A COMMUNITY HOSPITAL**

Rita Chamoun-Baptist Hospital of Miami

**Purpose/Background:** A retrospective chart review demonstrated a high prevalence of incomplete or inaccurate penicillin (PCN) allergy documentation, corresponding with increased prescribing of non-beta-lactam alternatives. Beta-lactams (BL), including cephalosporins, are commonly avoided in patients who report a PCN allergy due to potential cross-reactivity. Recent literature demonstrates minimal cross-reactivity between PCN and cephalosporins, therefore obtaining accurate medication and allergy histories may improve allergy documentation and decrease the use of non-BL alternatives in patients who report a PCN allergy. The purpose of this study is to improve allergy documentation and reduce broad-spectrum, non-BL antibiotic use via an allergy assessment by a pharmacist.

**Methodology:** This IRB-approved, prospective study will evaluate patients admitted between February 6, 2019 and April 30, 2019 with a documented PCN allergy, a diagnosis of an infection for which a PCN or BL antibiotic can be used, and for whom a non-BL antibiotic was ordered. The clarification of the allergy will initiate communication between the pharmacist and the prescriber to further optimize antibiotic selection. The primary outcome is the number of patients with a reported PCN allergy for whom the assessment led to treatment with a BL antibiotic. Secondary outcomes include cost of therapy with the antibiotic recommended by the pharmacist compared to the agent initially selected by prescriber, prescribing trends before and after the allergy assessment, and adverse events.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Discuss the impact of a pharmacy-driven allergy assessment on allergy documentation and antibiotic selection

**Self Assessment:** Which of the following statements is true? A. Patients with a penicillin allergy cannot be treated with a cephalosporin antibiotic B. Approximately 90% of patients with a true penicillin allergy lose sensitivity after 10 years C. True penicillin allergies are IgM-mediated D. All the above

**ABSTRACT REPRODUCTION FORM**

**Time:** 1:30 - 1:50  **Room:** 1209-C  **Category:** Infectious Diseases XIII

**COST-CONSEQUENCE ANALYSIS OF SINGLE-DOSE DALBAVANCIN VERSUS STANDARD OF CARE FOR THE TREATMENT OF ACUTE BACTERIAL SKIN AND SKIN STRUCTURE INFECTIONS IN A MULTI-SITE HEALTHCARE SYSTEM**

Julia Gonzalez-Memorial Hospital West

**Purpose/Background:** Acute bacterial skin and skin structure infections (ABSSSI) accounted for more than 200,000 hospital admissions between 2011 and 2014, costing $161 million to the US health care system. The 2014 Infectious Disease Society of America guidelines recommend the use of systemic antibiotics with coverage against staphylococci and Staphylococcus aureus including methicillin-resistant strains (MRSA) for treatment of ABSSSI. Dalbavancin, a long-acting parenteral lipoglycopeptide with activity against MRSA, streptococci and vancomycin-resistant enterococci, was approved as a single dose 30-minute infusion for the treatment of ABSSSI. This single-dose strategy aims to create a novel cost savings opportunity by preventing hospitalizations for IV antibiotic therapy. Recent studies comparing the cost-effectiveness of dalbavancin have shown mixed results; however, few of these studies have been conducted in the US.

**Methodology:** Internal Review Board approval was obtained to use the electronic health record to identify adult patients with ABSSSI treated with oral or parenteral antibiotics between April 2016 and June 2018. Eligible patients who received dalbavancin were matched 1:1 based on age and Body Mass Index (BMI) to patients who received standard of care (SoC). The primary outcome was the average cost of care to the healthcare system for the treatment of ABSSSI with dalbavancin versus SoC. The cost of care included direct and indirect costs. Secondarily, the ABSSSI related 30-day readmission rates were also compared.

**Results/Conclusions:** Results and conclusion will be presented at the Florida Residency Conference.

**Presentation Objective:** Describe dalbavancin's place in therapy for the treatment of acute bacterial skin and skin structure infections

**Self Assessment:** What patient factors should be considered when using dalbavancin? A. Insurance status B. Causative organisms C. Location at the time of administration D. Hepatic function
ABSTRACT REPRODUCTION FORM

Time: 12:50 - 1:10 Room: 1209-D Category: Infectious Diseases XIV

EFFECT OF AN INDICATION-BASED DEFAULT ANTIBIOTIC STOP-DATE INITIATIVE ON THE DURATION OF TREATMENT FOR INTRA-ABDOMINAL INFECTIONS
Jessica Lambert-Mease Countryside Hospital

Purpose/Background: The inappropriate selection and overuse of antibiotics has contributed to the worldwide emergence of antibiotic resistant bacteria and decreased antibiotic efficacy. The Diagnosis and Management of Complicated Intra-Abdominal Infection (IAI) Guidelines released by the Surgical Infection Society and the Infectious Diseases Society of America, rapid restoration of intravascular volume, timely administration of antibiotics, and quickly achieving source control is crucial for successful resolution of infection and improved clinical outcomes. The guidelines state that antimicrobial therapy for established IAIs should be limited to 4 - 7 days. Despite updates to the guidelines, and studies demonstrating success with shorter treatment durations, it remains common practice to treat IAIs for 7 - 14 days or longer. Currently there are no studies evaluating the impact of an electronic medical record system in limiting the duration of treatment for IAIs. Therefore, the purpose of this study is to evaluate if the implementation of an indication-based default antibiotic (IBDA) stop-date initiative shortens the duration of treatment for IAIs.

Methodology: This is a multicenter retrospective chart review that will quantify the duration of therapy for patients admitted with complicated IAIs before and after the implementation of the IBDA stop-date initiative. Patients must have undergone a procedure to achieve source control and were admitted with one of the pre-specified inpatient diagnosis codes. The primary objective is to determine if the IBDA stop-date initiative resulted in shorter treatment durations.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Recognize the utility of an indication-based default antibiotic stop-date initiative on the duration of treatment for intra-abdominal infections.

Self Assessment: Which of the following has the greatest impact on the time to resolution of an intra-abdominal infection? A. Antibiotic therapy B. Source control C. Aggressive fluid resuscitation D. Gastrointestinal prophylaxis

ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: 1209-D Category: Infectious Diseases XIV

USE OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) SURVEILLANCE SCREEN TO DE-ESCALATE EMPIRIC VANCOMYCIN THERAPY IN PATIENTS WITH SUSPECTED PNEUMONIA
Marina Haroon-Medical Center of Trinity

Purpose/Background: Multiple studies have demonstrated that negative Methicillin-Resistant Staphylococcus aureus (MRSA) nasal PCR screening in patients with suspected pneumonia reduced the duration of MRSA-targeted therapy. It is often difficult to obtain a good-quality lower respiratory cultures because of poor quality specimens or difficulty of producing causative organisms. Because PCR screenings have 96-99% negative predictive value for MRSA pneumonia, these rapid results provide objective information that providers can use to guide therapy. The purpose of this research study is to assess the use of MRSA PCR screening for the de-escalation of empiric vancomycin therapy in patients with suspected MRSA pneumonia.

Methodology: This is a retrospective, single-center, pre- and post-implementation study performed at Medical Center of Trinity, a 288-bed tertiary hospital in Trinity, Florida, USA. The study was approved by MCT institutional Review Board (IRB). After the implementation of a pharmacist-driven policy for MRSA surveillance screen, adult inpatient initiated on vancomycin consults with indication of pneumonia between 3/1/18 and 2/28/19 are screened for enrollment. Patients are included if they are initiated on vancomycin therapy for the indication of pneumonia and tested with MRSA nasal swab within 24-48 hours of admission. Patients with severe beta-lactam allergies, previous decoloniation, positive cultures for MRSA during current admission, complicated pulmonary infections, and concomitant infections requiring MRSA coverage are excluded. Before the study was conducted, education was provided to providers and pharmacists on the role of using the MRSA nasal PCR assay as a tool of anti-MRSA de-escalation via in-service presentations. If the result of the test is negative and there is no evidence of MRSA infection elsewhere, the pharmacist is to communicate with providers and make the recommendation for de-escalation of vancomycin therapy as appropriate. Primary outcome is days of therapy of anti-MRSA regimen and secondary outcome is length of stay.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the use of negative MRSA surveillance screening for the de-escalation of empiric vancomycin therapy in patients with suspected pneumonia.

Self Assessment: What opportunity does MRSA surveillance screen provide? A. Reduce the unfavorable consequences of antibiotics overuse B. Reduce risk of adverse events C. Minimize antibiotic resistances D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: 1209-D Category: Infectious Diseases XIV

EVALUATION OF PATIENTS ON HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART) IN A COMMUNITY BASED SETTING
Kenny Navarrete-Memorial Hospital Pembroke

Purpose/Background: The use of highly active antiretroviral therapy (HAART) has resulted in a significant reduction in morbidity and mortality in patients with human immunodeficiency virus (HIV). Optimization and minimization of medication variances within this medication class, is key to better patient outcomes. Literature review on this topic, has shown the importance of HAART optimization in an inpatient hospital setting. Development and implementation of a stewardship strategy and process, based on current guideline directed medical therapy (GDMT), at Memorial Hospital Pembroke may result in better clinical outcomes for our patients.

Methodology: This was an IRB-approved retrospective chart review evaluating 200 patients from Memorial Hospital Pembroke from July 2017 to July 2018. Data will be assessed and analyzed using a computer-generated report from Epic. The primary objective is to evaluate HAART regimens of HIV patients at Memorial Hospital Pembroke and to determine the extent of medication variances. The secondary objectives are to categorize the types and extent of interventions identified by documented medication variances and to identify the number of patients with consultations by Infectious Disease physicians. Data will be analyzed by descriptive statistics.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Assess whether an HIV protocol and medication evaluation process is needed at Memorial Hospital Pembroke

Self Assessment: Which type of medication variances, were the most frequently identified in this investigation?

ABSTRACT REPRODUCTION FORM

Time: 12:50 - 1:10 Room: 1209-B Category: Infectious Diseases XV

SHORT-TERM OUTCOMES IN RENAL TRANSPLANT RECIPIENTS 65 YEARS OF AGE AND OLDER
Jillian Sullivan-Jackson Memorial Hospital

Purpose/Background: Elderly patients comprise more than 20% of the kidney transplant waiting list. Studies show no difference in death censored allograft survival in patients over the age of 65 compared to younger patients. Additionally, elderly kidney transplant recipients (KTRs) have improved quality of life and survival compared to those remaining on the transplant list; however, this benefit was not evident until after the first post-transplant year due largely to infectious complications. The results of these studies raise questions regarding the most appropriate induction and maintenance immunosuppression for KTRs older than 65 years. The purpose of this study is to identify short-term infection and rejection outcomes in kidney transplant patients aged 65 and older at Jackson Memorial Hospital/Miami Transplant Institute compared to younger patients. Additionally, results of this study will be used to identify areas for protocol improvement at our center in elderly KTRs.

Methodology: A single-center retrospective chart review was conducted to include 286 KTRs, with index hospitalization between January 1, 2017 and December 31, 2017. Patients 65 years and older were compared to those between 18 and 65 years of age. Patients were excluded if they were less than 18 years of age or multi-organ transplant recipients. The primary outcome is bacterial infection within 6 months from transplant. Secondary outcomes include the rate of viral infections, patient and graft survival at 6 months and 12 months after transplant.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify short-term infection and rejection outcomes in kidney transplant patients aged 65 and older at Jackson Memorial Hospital/Miami Transplant Institute compared to younger patients.

Self Assessment: True or False: Patients over the age of 65 comprise more than 20% of the kidney transplant waiting list.
EVALUATION OF VANCOMYCIN AREA UNDER THE CONCENTRATION-TIME CURVE (AUC) DOSE EQUATIONS IN PATIENTS WITH METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) BACTEREMIA

Nathan Smith-Mayo Clinic Florida

Purpose/Background: Vancomycin is commonly used to treat methicillin-resistant staphylococcus aureus. Vancomycin dosing has been debated because of patient specific pharmacokinetic parameters impacting the dose and frequency of administration. According to Vancomycin Therapeutic Monitoring Guidelines from Infectious Diseases Society of America, a vancomycin target trough level of 15 to 20 micrograms per milliliter is recommended to achieve optimal bactericidal activity in infections such as bacteremia, endocarditis, osteomyelitis, meningitis, and hospital acquired pneumonias caused by staphylococcus aureus. Recent studies have suggested AUC/MIC as a preferred method over trough guided dosing. This study will compare three AUC equations to determine which vancomycin dosing equation is best correlated with bacterial clearance.

Methodology: An observational, retrospective chart review of patients with confirmed methicillin-resistant staphylococcus aureus (MRSA) bacteremia from April 2015 to June 2018 was conducted. Patients meeting the inclusion criteria were obtained from the Mayo Clinic in Florida's electronic medical record (EMR). The primary objective was to evaluate the three AUC dosing equations. The vancomycin MIC was then utilized to determine the AUC/MIC ratio. Secondary outcomes included: percent of therapeutic trough levels on first draw, number of days to negative blood cultures, rate of recurrence of bacteremia within 60 days, and rate of acute kidney injury.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify the vancomycin AUC dosing equation best correlated with bacterial clearance

Self Assessment: Which of the following is/are potential benefit(s) of AUC/MIC based vancomycin dosing? A. Improved pharmacokinetics of vancomycin B. Reduced need for therapeutic monitoring of vancomycin C. Reduced nephrotoxicity D. Cost Savings

EVALUATION OF APPROPRIATE CORTICOSTEROID REGIMENS IN ACUTE EXACERBATIONS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE: A RETROSPECTIVE REVIEW IN A LARGE COMMUNITY HOSPITAL

Zachary Hagen-Florida Hospital Orlando

Purpose/Background: An acute exacerbation of COPD (AECOPD) is defined as acute worsening of respiratory symptoms that results in the need for additional systemic corticosteroids. Systemic corticosteroids have shown to improve oxygenation, risk of early relapse, treatment failure and length of hospitalization in patients with an AECOPD. Per current treatment guidelines, the recommended systemic corticosteroid regimen is 40 mg of prednisone per day for 5 days. Higher doses of corticosteroids have been associated with longer hospital stay with no proven benefit of decreased 30 day relapse. Furthermore, a common side effect of high dose corticosteroid administration is hyperglycemia in both diabetic and non-diabetic patients. Hyperglycemia may result in increased hospital or ICU length stay, infections and impaired wound healing. The purpose of our study is to further investigate the clinical benefit and safety of corticosteroid regimens with doses higher than recommended by guidelines.

Methodology: A retrospective study was performed among nine distinct hospital sites within a single health system. This study included patients >18 years of age with diagnosed pneumonia and a positive respiratory culture with multi-drug resistant Pseudomonas aeruginosa admitted between January 2016 and December 2018. Data will be collected utilizing a comprehensive electronic chart review process. The primary outcome of this study is rate of clinical cure by day 14 of definitive therapy. Secondary exploratory outcomes include 30-day re-admission, total length of stay, ICU days post definitive treatment, days of antibiotic exposure for pneumonia diagnosis, and total cost of admission. Other data that will be collected includes patient age, weight, gender, creatinine clearance at start of therapy, type of respiratory culture obtained, pertinent past medical history, and dose of ceftolozane/tazobactam utilized.

Results/Conclusions: Results and conclusion will be presented at FRC

Presentation Objective: Compare the clinical cure rates for patients treated with ceftolozane/tazobactam versus alternative therapies for multi-drug resistant Pseudomonas aeruginosa pneumonia

Self Assessment: What is the recommended dosing strategy for ceftolozane/tazobactam when utilized for treatment of pneumonia?

EVALUATING THE USE OF CEFTOLOZANE/TAZOBACTAM FOR THE TREATMENT OF MULTI-DRUG RESISTANT PSEUDOMONAS PNEUMONIA

Matthew Mills-Florida Hospital East Orlando

Purpose/Background: Ceftolozane/tazobactam is an advanced generation cephalosporin and beta-lactam inhibitor antibiotic that has shown to have potent activity against Pseudomonas aeruginosa including strains exhibiting multi-drug resistance. While currently FDA approved for use in both complicated intra-abdominal and urinary tract infections, it has also been utilized for other serious infections such as pneumonia. A large clinical trial evaluating its use in nosocomial pneumonias is currently ongoing, however current evidence evaluating its efficacy in pneumonia due to multi-drug resistant P. aeruginosa is lacking. The purpose of this study is to evaluate ceftolozane/tazobactam efficacy in multi-drug resistant P. aeruginosa pneumonia compared to historical standard of care.

Methodology: A retrospective study was performed among nine distinct hospital sites within a single health system. This study included patients >18 years of age with diagnosed pneumonia and a positive respiratory culture with multi-drug resistant Pseudomonas aeruginosa admitted between January 2016 and December 2018. Data will be collected utilizing a comprehensive electronic chart review process. The primary outcome of this study is rate of clinical cure by day 14 of definitive therapy. Secondary exploratory outcomes include 30-day re-admission, total length of stay, ICU days post definitive treatment, days of antibiotic exposure for pneumonia diagnosis, and total cost of admission. Other data that will be collected includes patient age, weight, gender, creatinine clearance at start of therapy, type of respiratory culture obtained, pertinent past medical history, and dose of ceftolozane/tazobactam utilized.

Results/Conclusions: Results and conclusion will be presented at FRC

Presentation Objective: Compare the clinical cure rates for patients treated with ceftolozane/tazobactam versus alternative therapies for multi-drug resistant Pseudomonas aeruginosa pneumonia

Self Assessment: What is the recommended dosing strategy for ceftolozane/tazobactam when utilized for treatment of pneumonia?
ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: L1003 Category: Internal Medicine VII

EVALUATION OF PARENTERAL NUTRITION THERAPY: EFFECT OF FULL CARBOHYDRATE CALORIE DELIVERY SAFETY AND OUTCOMES ASSESSMENT
Nicole Siciliano-Florida Hospital Orlando

Purpose/Background: Hyperglycemia can be a common adverse effect associated with initiation of parenteral nutrition. According to the A.S.P.E.N. Guidelines, excess calories may cause hyperglycemia, hepatic dysfunction, infections and respiratory compromise. However, there are some studies that support the use of full calories rather than titration to goal. Recommendations will vary based on indication and disease state, for example, when looking at initiation of parenteral nutrition in the critically ill, it is recommended to initiate hypocaloric parenteral nutrition and titrate. This practice is thought to reduce the risk for hyperglycemia, electrolyte imbalances and infections. The purpose of this study is to evaluate the institution's current practice of initiation of full nutrition which includes full support carbohydrates without titration and assess outcomes and adverse effects.

Methodology: This retrospective chart review has been approved as a quality improvement project by the institutional review board. Electronic medical records were used to identify patients greater than or equal to eighteen years of age at Florida Hospital Orlando on parenteral nutrition at full caloric goal from January 1, 2018 to June 30, 2018. Primary objective is percentage of hyperglycemia and secondary objectives include number of line infections and percentage of electrolyte imbalances. Data will be collected on age, weight at initiation, blood glucose levels, electrolyte levels, calories from dextrose, total calories, presence of line infections and presence of steroid or insulin utilization. The results will be analyzed using descriptive statistics.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the concerns that exist when initiating total parenteral nutrition at full calorie delivery

Self Assessment: Which of the following is a concern(s) of initiation of total parenteral nutrition at full calorie delivery? A. Hyperglycemia B. Refeeding syndrome C. Increased risk of infections D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: CLC Category: Internal Medicine VIII

ASSESSING THE USE OF LOOP DIURETICS ALONE AND IN COMBINATION WITH THIAZIDE DIURETICS AND ALBUMIN IN PATIENTS WITH ACUTE DECOMPENSATED HEART FAILURE
Alexa Marrese-UF Health Jacksonville

Purpose/Background: The current recommendations for initial treatment of volume overload status is to use loop diuretics. Patients may experience diuretic resistance when they lose response to loop diuretic therapy alone. Guidelines recommend the addition of a thiazide/thiazide-like diuretic to improve patient response; however, albumin use to improve diuresis is not addressed. The purpose of this study is to compare the effectiveness of the different diuretic regimens in patients hospitalized with ADHF.

Methodology: This is a single-center retrospective chart review of patients hospitalized for ADHF who received diuretic therapy with loop diuretics alone (L), loop diuretics + thiazide diuretics (L+T), or loop diuretics + albumin (L+A). Primary outcome is diuretic effectiveness defined as 24 hour total urine output in milliliters after categorization into one of three groups, L, L+T, or L+A. Secondary outcomes include 30-day readmission rate and escalation of therapy.

Results/Conclusions: A preliminary analysis of 41 total patients (26 loop diuretic, 11 loop diuretic + thiazide, 4 loop diuretic + albumin) was completed. There was no difference in the primary endpoint of 24 hour urine output in mL expressed as medians (2555mL vs. 2375mL vs. In a preliminary analysis, there was no difference in urine output between the three groups. Further analysis is needed to form appropriate conclusions.

Presentation Objective: Describe the efficacy of loop diuretics alone, loop diuretics plus thiazide diuretics, and loop diuretics plus albumin on diuresis in patients with ADHF

Self Assessment: What is a proposed mechanism or cause of diuretic resistance? A. Patients aren't taking diuretic therapy as prescribed B. Patients are not taking an adequate dose of diuretic C. The glomerulus does not filter appropriately D. Cellular hypertrophy in the DCT can lead to increased sodium reabsorption

ABSTRACT REPRODUCTION FORM

Time: 12:50 - 1:10 Room: CLC Category: Internal Medicine VIII

EVALUATION OF BILLING FOR INPATIENT PHARMACY CONSULTS
Michael Carulli-Florida Hospital-Celebration Health

Purpose/Background: Pharmacists at AdventHealth Celebration are consulted for parenteral nutrition (PN), vancomycin, and glycemic management in hospitalized patients. These consultations are performed without compensation for time and clinical knowledge. This project was designed to evaluate a newly implemented billing process for inpatient pharmacy consults utilizing MTM billing codes 99605-99607. The purpose of this study is to help establish a precedent in the pharmacy community to help pave the way for future of billing for inpatient pharmacy consults.

Methodology: A retrospective quality review of a newly initiated service was conducted for patients within AdventHealth Celebration. Clinical pharmacy consults that had a physician consult for PN, vancomycin, or glycemic management and face-to-face time with the pharmacist was included. Information collected included pharmacist time, code billed, and amount billed per patient.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe opportunities for inpatient billable consults by clinical pharmacy staff

Self Assessment: Which billable codes are utilized for inpatient pharmacy consults?

ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: CLC Category: Internal Medicine VIII

SWIFT ACTION MITIGATING UNSUSPECTING RENAL INJURY
Michael Luu-Largo Medical Center

Purpose/Background: Acute kidney injury (AKI) is a sudden and dramatic decrease in kidney function that can lead to increased length of stay, healthcare costs, and mortality. Preventing AKI related deaths is a global initiative set by the International Society of Nephrology. Although AKI can be multifactorial, one possible cause is AKI induced by the concomitant use of nephrotoxic medications. Any one agent may harm the kidneys without diagnosis level detection but it is the collective action of multiple agents that can cause AKI. This continuous quality improvement study aims to reduce the incidence of AKI in the adult patient population caused by concomitant use of 3 or more medications within the same inpatient stay by utilizing pharmacist driven monitoring and mitigation strategies. This study acts on a targeted group of commonly used medications at Largo Medical Center.

Methodology: This is a retrospective chart review of post implementation of a pharmacist driven program at Largo Medical Center. The study reviewed two groups of data. One group includes pre-implementation incidence of AKI for March 2017 and 2018 averaged over a month. The second group is post-implementation in March 2019. Data that met study criteria was collected from the electronic health records. The primary outcome was to evaluate the incidence of AKI caused by concomitant use of 3 or more nephrotoxic medications between the two groups. Secondary outcomes include identification of most common agents.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Implement AKI mitigation strategies after identifying concomitantly administered nephrotoxic medications

Self Assessment: Which of the following is the most appropriate action for mitigating possible AKI for the following identified drug regimen: Piperacillin/Tazobactam (Empiric), Vancomycin (Empiric, MRSAs+), Iodinated contrast? A. Switch piperacillin/tazobactam to ceftepime B. Discontinue Piperacillin/tazobactam or vancomycin C. Escalate piperacillin/tazobactam to meropenem D. Always recommend against use of iodinated contrast
ABSTRACT REPRODUCTION FORM

Time: 12:50 - 1:10 Room: N1032 Category: Pain Management V

PARENTERAL OPIOID SHORTAGE CRISIS: IS AN AUTOMATIC THERAPEUTIC INTERCHANGE SAFE AND EFFECTIVE IN MANAGING PAIN IN POSTOPERATIVE PATIENTS

Christine Zhang-Boca Raton Regional Hospital

Purpose/Background: The national parenteral opioid shortage is a serious dilemma adversely impacting the health care system across the United States. Hospitals have struggled to maintain sufficient supply of these critical drugs used to provide adequate pain control in postoperative patients. In order to deal with this issue, in March of 2018, Boca Raton Regional Hospital decided to implement an automatic therapeutic interchange from intravenous hydromorphone and intravenous morphine to oral hydromorphone, intravenous meperidine or intravenous fentanyl. The objective of this study is to assess the safety and effectiveness of this interchange in postoperative patients at Boca Raton Regional Hospital.

Methodology: This retrospective study will be conducted at Boca Raton Regional Hospital. All postoperative patients who had an intravenous hydromorphone or intravenous morphine order interchanged between March 2018 and October 2018 will be included in this analysis. Patients are able to tolerate oral medications were interchanged to oral hydromorphone. Patients unable to tolerate oral medications were interchanged to intravenous meperidine, or to intravenous fentanyl if patients were equal or greater than 75-years old, or had a creatinine clearance less than 30 mL/minute. The primary outcome of this study is the percentage of patients with a numeric pain rating scale of 3 or less assessed within 2 hours after administration of an opioid. The secondary outcomes will include incidents of respiratory depression, nausea, vomiting, ileus, or naxolone use. Descriptive statistics will be used to analyze all outcomes.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

ABSTRACT REPRODUCTION FORM

Time: 1:10 - 1:30 Room: N1032 Category: Pain Management V

IMPLEMENTATION OF AN OPIOID-FREE MULTIMODAL ANALGESIA PROTOCOL IN A TEACHING HOSPITAL

Heba Younes-Larkin Community Hospital

Purpose/Background: The Joint Commission implemented new and revised pain assessment and management standards that came into effect in 2018. The standards require hospitals to establish their own policies for the treatment of pain, including the use of multi modal analgesia (SMA). Using an SMA pain management approach has been shown to optimize efficacy with a lower dose of each respective drug, reduce the doses of opioids, reduce the risk of opioid related adverse effects, decrease hospital length of stay, and improve patient satisfaction. An SMA protocol was created and implemented. A focus was to include an opioid-free multimodal treatment regimen for opioid naive and opioid tolerant surgical and non-surgical patients.

Methodology: A retrospective evaluation of patients treated with opioids for acute pain was conducted. Based on the analysis, an SMA protocol was developed. A prospective study was designed to evaluate the effects of protocol implementation on both opioid naive and opioid tolerant patients treated by the medical team. Education was conducted on the utilization of the MMA protocol for patients experiencing acute pain. Data collection began from February 18, 2019 and is currently ongoing. The primary outcome of the study is patient pain control. Secondary outcomes include the number of morphine milligram equivalents and overall patient satisfaction.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

ABSTRACT REPRODUCTION FORM

Time: 1:30 - 1:50 Room: N1032 Category: Pain Management V

INTRA- AND POST- OPERATIVE PAIN MANAGEMENT IN ROBOTIC-ASSISTED LAPAROSCOPIC PROSTATECTOMY

Brittany E. Ball-Miami VA Healthcare System

Purpose/Background: The Miami Veterans Affairs Medical Center's Urology and Pharmacy Services recently collaborated to evaluate expanding the traditional process for optimizing therapeutic pain management in patients undergoing a Robotic-Assisted Laparoscopic Prostatectomy (RALP). Previous literature has demonstrated that patients receive excessive amounts of opioids post-urologic procedures which potentially contributes to chronic opioid use in opioid-naive patients. The objective of this review is to determine if a completely opioid-free RALP pathway feasibly provides adequate pain control while advantageously reducing post-operative morbidity and/or hospital length of stay.

Methodology: A retrospective analysis was conducted on patients who received Robotic-Assisted Laparoscopic Prostatectomy with or without any opioids for intra- and post-operative pain control. Data analysis of the retrospective portion of the review will be conducted to quantify the benefit of shifting from traditional opioid usage to an opioid-free pathway utilizing acetaminophen and ketorolac. The following variables will be assessed: which pathway was followed (determined by the operating surgeon and date of surgery), baseline characteristics, comorbidities, opioid-use prior to surgery via the Electronic-Florida Online Reporting of Controlled Substance Evaluation Program (E-FORCSE), daily pain scores, surgical complications, pain treatment, morphine equivalents, discharge regimen, readmissions or emergency room visits within two weeks of surgery, time to regular diet and discharge.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

ABSTRACT REPRODUCTION FORM

Time: 12:50 - 1:10 Room: N2002 Category: Pediatrics IV

RETROSPECTIVE STUDY ON THE USE OF INTRAVENOUS FISH OIL AND PLANT-BASED FAT EMULSIONS IN PREMATURE INFANTS IN THE NEONATAL INTENSIVE CARE UNIT

Aubrey Utley-Sacred Heart Health System

Purpose/Background: Intravenous fat emulsion, as part of parenteral nutrition has the potential to adversely affect liver function. Fat emulsions have traditionally been plant based, but more recent lipid formulations have mixed plant base and fish oil. The newer formulations have been associated with a decreased incidence of cholestasis, although not all studies have confirmed these results. The objective of this study is to compare the impact of these lipid formulations on cholestasis diagnoses, liver function tests, and triglyceride levels as observed in clinical practice.

Methodology: This study will be submitted to the Institutional Review Board for approval. A retrospective cohort study will be conducted using the hospital's electronic medical record system to identify patients who received parenteral nutrition. Infants who were inpatients of Neonatal Intensive Care Unit and on parenteral nutrition receiving at least 14 consecutive days of either SMOFlipid 20% or Intralipids 20% from July 2017 to August 2018 will be included in this study. The following data will be collected: patient gestational age, gender, body weight, dose of lipids, duration of lipid therapy, primary diagnosis, liver function tests, triglyceride levels, mortality, and conditions and medications associated with hepatic dysfunction or hypertriglyceridemia. All data will be recorded without patient identifiers and maintained confidentially.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the clinical differences between SMOFlipid and Intralipids

Self Assessment: Which of the following is NOT an example of a multimodal

- Ibuprofen, Acetaminophen, and Ketorolac
- Percocet, Morphine, Ibuprofen, and Ketorolac
- B. Ketorolac, Acetaminophen, and Ibuprofen
- C. Ibuprofen 600mg q8hrs and naproxen 250mg q8hrs

D. Ibuprofen, Acetaminophen, and Ketorolac

Presentation Objective: Describe the process of implementing an opioid-free multimodal analgesia protocol in surgical and nonsurgical patients and access the implantation on patient outcomes

Self Assessment: Which of the following is NOT an example of a multimodal analgesia regimen? A. Acetaminophen 650mg q4hrs prn B. Gabapentin 300 TID, celecoxib 200 BID, acetaminophen 650mg q4hrs prn C. Ibuprofen 600mg q8hrs and naproxen 250mg q8hrs D. Cyclobenzaprine 5mg TID, meloxicam 5 mg QD, and acetaminophen 500 mg q6hrs
**IMPACT OF THE IMPLEMENTATION OF A CLOSTRIDIUM DIFFICILE GUIDELINE AND ORDER SET ON THE MANAGEMENT OF CLOSTRIDIUM DIFFICILE IN A PEDIATRIC HOSPITAL**

Leslie Rosa Morales-Memorial Regional Hospital

**Purpose/Background:** The incidence of Clostridium difficile infection (CDI) and its associated morbidity and mortality have increased significantly over the last two decades in the pediatric population. CDI is associated with longer hospital stays, increased healthcare costs, and higher risk of acquiring other nosocomial infections. The absence of a C. difficile protocol at our institution led to provider-specific testing and treatment decisions, thus increasing the risk of suboptimal CDI management.

**Methodology:** The electronic health record was queried to identify patients tested for C. difficile. An institutional C. difficile guideline was developed and implemented in May 2018 followed by an order set introduced in August 2018. Pediatric patients 0-18 years old tested for C. difficile from April 1, 2017 to March 31, 2018 and from September 1, 2018 to February 28, 2019 were included in the pre and post-implementation phases, respectively. The following variables were compared between groups: number of diagnostic tests and treatment courses ordered, adherence to evidence-based guidelines, order set utilization rate, number of CDI recurrences, and severity category for each episode.

**Results/Conclusions:** Pre-implementation data revealed that 430 tests were performed, of which 85 (20%) were positive; of the positive 67 tests included, 18 (23%) did not meet guideline criteria for testing, with the most common reason being patient age less than 1 year. Of those patients, 9 (26%) were admitted to the hospital. The guideline and order set implementation led to a significant decrease in the number of tests and treatment courses ordered, improved adherence to evidence-based guidelines, increased order set utilization, and a decrease in CDI recurrences.

**Presentation Objective:** Describe the impact of a C. difficile guideline and order set on the evidence-based management of CDI and patients' outcomes

**Self Assessment:** True or False: Clostridium difficile guideline and order set help to optimize treatment selection and decrease CDI recurrences.

---

**SAFETY AND EFFICACY OF IRON SUCROSE VERSUS FERRIC GLUCONATE IN THE MANAGEMENT OF IRON DEFICIENCY ANEMIA IN THE PEDIATRIC POPULATION: A SINGLE INSTITUTION STUDY**

Caroline Taylor-Memorial Regional Hospital

**Purpose/Background:** Microcytic anemia due to iron deficiency is the most common type of anemia in children. The safest and most efficacious form of intravenous iron in pediatric patients with IDA is unknown. The objectives of this study are to compare the safety and efficacy of iron sucrose vs ferric gluconate for the treatment of iron deficiency anemia (IDA) in pediatric patients.

**Methodology:** Electronic health records (EHR) were queried to identify patients with IDA receiving at least one dose of iron sucrose or ferric gluconate during the study period. The number and type of documented adverse events (AEs) as well as hemoglobin concentrations before and after treatment were recorded for each group.

**Results/Conclusions:** AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs during and after iron sucrose infusion were documented in 8.3% (1/12) and 16.7% (2/12) of patients, respectively. AEs during and after iron sucrose infusion were associated with 6.8% (3/44) and 11.4% (5/44) of doses administered, respectively. AEs dur Conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Compare the safety and efficacy of iron sucrose to that of ferric gluconate for the treatment of iron deficiency anemia

**Self Assessment:** True or False: Based on the results of this study, ferric gluconate is safer and more effective than iron sucrose.
8TH ANNUAL FLORIDA RESIDENCY CONFERENCE

Session VIII

May 17, 2019
2:00-3:00pm
Time: 2:00 - 2:20 Room: 1209-A Category: Critical Care XIII

AMIODARONE FOR ATRIAL FIBRILLATION IN SEPTIC SHOCK
Irene Capistrano-UF Health Jacksonville

Purpose/Background: Pharmacological management of new-onset atrial fibrillation (NOAF) in septic shock is commonly employed, utilized in as many as 75% of NOAF cases. Several, current recommendations advocate for treatment of NOAF in the setting of shock with cardiac neutral agents such as amiodarone. However, these recommendations are made strongly on the basis of theoretical opinions and not clinical findings. The purpose of this study is to evaluate the impact of amiodarone infusions on hemodynamics among patients experiencing NOAF in septic shock in comparison to a non-septic population.

Methodology: This was a single-centered, retrospective chart review of patients diagnosed with NOAF receiving IV amiodarone compared to a non-septic population. The primary endpoint was worsening hematodynamic status within 72 hours of amiodarone administration. Secondary endpoints included 30-day mortality, conversion to normal sinus rhythm, and recurrence of atrial fibrillation (AF) within 72 hours.

Results/Conclusions: A preliminary analysis of eight patients (3 septic, 5 control) was completed. No difference in the primary endpoint of hemodynamic worsening was identified between septic and non-septic patients (0% vs. 60%, p=0.20). There were no differences in seco In a preliminary analysis, there has been no difference in worsening hemodynamic status between septic and non-septic patients receiving amiodarone. Similarly secondary endpoints have not been different between the two groups. Further data collection and analysis would be needed to draw any conclusions.

Presentation Objective: Evaluate the hemodynamic effect of initiation of IV amiodarone in septic patients in comparison to non-septic patients experiencing atrial fibrillation

Self Assessment: What is the reported incidence of new-onset atrial fibrillation in the setting of septic shock? 6% 15% 45% 75%
restricted erythropoiesis anemia and concurrent bacteremia impacts microbiological

Purpose/Background: Ketamine has been used for a variety of indications, in a variety of doses. Memorial Regional Hospital has recently introduced new order sets for ketamine used for the treatment of pain. The purpose of this project is to assess the overall utilization of ketamine including indication, dose, and adverse effects, and to compare these data against guideline recommendations.

Methodology: A list was compiled of all patients who received at least 1 dose of ketamine at Memorial Regional Hospital between January 1, 2018 and September 30, 2018. Retrospective data was collected from the electronic medical records (EMRs), including blood pressures, chief complaints, patient weights, doses of ketamine used, concomitant medications used during the hospitalization, and rates of death and intubation. The outcomes were reported with descriptive statistics.

Results/Conclusions: Of the 183 administrations of ketamine, 67 (36.6%) were for sedation, 61 (33.3%) for pain, 52 (28.4%) for agitation, and 3 (1.6%) for asthma. The dosing of ketamine for agitation was highly variable. The doses of ketamine used to treat pain were predomina Overall usage of ketamine with select clinical outcomes will be presented at the Florida Residency Conference.

Presentation Objective: Assess the overall utilization of ketamine including indication, dose, and adverse effects, and to compare these data against guideline recommendations.

Self Assessment: Which of the following statements is false regarding the use of ketamine at Memorial Regional Hospital?

Which of the following statements is false regarding the use of ketamine at Memorial Regional Hospital?

-oversaturation free iron can enhance bacterial growth B. Microorganisms with in-vitro data indicating that parenteral iron can be harmful include: Escherichia coli, Staphylococcus aureus, Staphylococcus epidermidis, Pseudomonas species, Klebsiella species, Haemophilus influenzae C. Intravenous iron should be administered to all patients during active infections D. The risk vs benefit of intravenous iron supplementation in non-dialysis patients should be further studied in prospective randomized-control trials.

Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Identify various prescribing strategies for pain management in the ED including opioid monotherapy, opioid adjuncts, and alternatives to opioids.

Self Assessment: Which of the following disease states has literature to support the use of alternatives to opioids for pain management in the ED? A. Multisystem trauma B. Subdural hemorrhage C. Renal colic D. Spinal cord injury.

Time: 2:00 - 2:20 Room: 1209-C Category: Infectious Diseases XVI

ASSESSING EFFECT OF INTRAVENOUS IRON SUPPLEMENTATION IN NON-DIALYSIS PATIENT POPULATION WITH IRON RESTRICTED ERYTHROPOIESIS ANEMIA AND CONCURRENT SERIOUS SYSTEMIC INFECTION

Natalie Sirven-Florida Hospital Orlando

Purpose/Background: The Kidney Disease Improving Global Outcomes (KDIGO) Clinical Practice Guideline for Anemia in chronic kidney disease (CKD) recommend avoiding administration of intravenous (IV) iron to patients with active systemic infections. In the absence of data, the effects of IV iron exposure on infectious sequelae in active infections is controversial. There is in-vitro data indicating potential harm of IV iron, but there is limited data addressing the safety of IV iron in non-end stage renal disease patients with active infections. The objective of this study is to determine if supplementation of IV iron to non-dialysis patients with iron restricted erythropoiesis anemia and concurrent bacteremia impacts microbiological failure and clinical cure rates compared to patients not supplemented with IV iron.

Methodology: This multicenter, retrospective cohort study compared non-dialysis patients with iron-deficiency anemia and concomitant bacteremia who received IV iron to those who did not receive IV iron. Exclusion criteria included end stage renal disease and contamination. Data was collected on patient demographics, iron therapy, microbiological, and clinical outcomes. The primary endpoint was microbiological failure defined as positive repeat blood culture with the same pathogen ≥24 hours from first positive blood culture. Secondary endpoints included time to microbiological clearance, recurrent bacteremia, clinical cure, duration of antibiotic therapy, length of hospital stay, 30-day mortality, iron indexes, and red blood cell transfusions. Statistical significance will be assessed using the appropriate parametric or non-parametric analogs.

Results/Conclusions: Results and conclusions will be presented at FRC.

Presentation Objective: Describe the relationship between intravenous iron and infection in-vitro and understand the impact in patient care.

Self Assessment: Which of the following statements is false regarding the use of intravenous iron during active infections? A. When intravenous iron is given despite oversaturation free iron can enhance bacterial growth B. Microorganisms with in-vitro data indicating that parenteral iron can be harmful include: Escherichia coli, Staphylococcus aureus, Staphylococcus epidermidis, Pseudomonas species, Klebsiella species, Haemophilus influenzae C. Intravenous iron should be administered to all patients during active infections D. The risk vs benefit of intravenous iron supplementation in non-dialysis patients should be further studied in prospective randomized-control trials.

Characteristics of opioid prescribing for acute pain in the emergency department

Alison Switzer-Orlando Health

Purpose/Background: Due to the national and state opioid epidemic, strategies have been developed to optimize patient care while minimizing detrimental effects of opioids. Previous studies have highlighted the use of opioid adjuncts and alternatives to opioids for pain management in the emergency department (ED). However, few studies have compared the groups or examined the impact of opioid monotherapy, adjunctive opioid therapy, and alternative to opioid (ALTO) therapy on acute pain management in the ED.

Methodology: This retrospective chart review evaluated adult patients who presented to the ED between September 1, 2017 and October 31, 2018 for management of acute pain associated with headache/migraine, renal colic, or isolated long bone fracture. Patients were excluded if they were a protected population, had documentation of outpatient use of scheduled opioids, or a history of opioid use disorder at the time of presentation to the ED. The primary outcome was the proportion of patients classified as receiving opioids, adjuncts to opioids, or ALTO for acute pain. Secondary outcomes included pain scores, patient satisfaction scores, ED length of stay, return to the ED within seven days for similar pain complaints, classification of discharge medications, and comparison of prescribing habits surrounding the national hydromorphone shortage occurring in 2018.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify various prescribing strategies for pain management in the ED including opioid monotherapy, opioid adjuncts, and alternatives to opioids.

Self Assessment: Which of the following disease states has literature to support the use of alternatives to opioids for pain management in the ED? A. Multisystem trauma B. Subdural hemorrhage C. Renal colic D. Spinal cord injury.

Time: 2:20 - 2:40 Room: 1209-C Category: Infectious Diseases XVI

UTILITY OF AZITHROMYCIN IN HOSPITAL ACQUIRED PNEUMONIA IN THE INTENSIVE CARE UNIT

Tracey L Smith-Florida Hospital Orlando

Purpose/Background: Evidence has shown beneficial outcomes with azithromycin use in Intensive Care Unit (ICU) patients with community acquired pneumonia and in several pro-inflammatory disease states. Afshar et. al. reported an improvement in ICU-free days in patients with severe sepsis, with or without pneumonia who received azithromycin. However, there is a gap in evidence for use in hospital acquired pneumonia (HAP) in the ICU setting. The aim of this study is to analyze the outcomes associated with azithromycin use in addition to standard of care antibiotics in patients admitted to the ICU with HAP.

Methodology: This is a retrospective, cohort study of patients admitted to the ICU with HAP, that were administered standard of care antibiotics plus or minus azithromycin. Adult patients (greater than 18 years old) admitted to an ICU floor with a hospital length of stay greater than 48 hours, a diagnosis for pneumonia, and chest radiography positive for infiltrates were included in the study. Patients were excluded for having underlying respiratory disease (i.e. acute respiratory distress syndrome, COPD, asthma, cystic fibrosis), autoimmune disease, immunosuppression, actively receiving chemotherapy, and pregnancy. The primary objective will be a comparison of time to symptom resolution between two cohorts based on the following clinical criteria: decrease in white blood cell count to less than 11 x10^9/L, afebrile less than 100.4 degrees Fahrenheit, and return to baseline of oxygen requirements. Secondary objectives include duration of mechanical ventilation, ICU length of stay, ICU mortality and adverse events.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Understand the role of azithromycin in addition to standard of care antibiotics in critically ill patients with hospital acquired pneumonia.

Self Assessment: Which of the following are potential concerns with azithromycin use?
ABSTRACT REPRODUCTION FORM

EVALUATION OF A TESTING BUNDLE

Melissa Martin-Miami VA Healthcare System

Purpose/Background: Miami Veterans Affairs Medical Center’s Antimicrobial Stewardship Program recently implemented a campaign to target the use of antimicrobials, including fluoroquinolones and cephalosporins, for recent respiratory tract infections as fluoroquinolones are receiving new safety alerts and warnings. Previous literature has shown that FQ carry the following boxed warnings: tendonitis, tendon rupture, peripheral neuropathy, CNS effects, and exacerbation of myasthenia gravis. Two new safety alerts released during 2018 warn against glycosicemic events, altered mental status, and aortic dissections or ruptures. Our objective is to evaluate fluoroquinolone use through a chart review for a 60-day period from October through December 2018 during influenza season.

Methodology: A retrospective analysis will be conducted on FQ prescribed during October through December 2018 at the Miami Veterans Affairs Healthcare System. Patients’ charts will be reviewed and assessed to evaluate the diagnosis that led to FQ prescriptions. This chart review will seek to identify cases where a FQ was prescribed for the following conditions that the Food and Drug Administration does not have an indication: acute bronchitis, acute uncomplicated urinary tract infections, and acute sinusitis. Data will be assessed for opportunities to improve practices. Variables to be assessed will be duration of therapy and the number of fluoroquinolone prescriptions, penicillin allergies, unique patients, unique providers, prescriptions prescribed by infected disease physicians, prescribers with more than 50 FQ prescriptions during October through December 2018, and the number of prescriptions for acute bronchitis, acute uncomplicated urinary tract infections, and acute sinusitis.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify the three diagnostic conditions for which the FDA does not carry FQ prescribing indications

Self Assessment: Select all of the diagnostic conditions that do not carry FDA prescribing indications: A. Acute uncomplicated urinary tract infections B. Acute bronchitis C. Acute short bowel obstruction D. Acute sinusitis

ABSTRACT REPRODUCTION FORM

ANALYZING FLUOROQUINOLONE PRESCRIBING TRENDS: A MEDICATION UTILIZATION EVALUATION

Melissa Martin-Miami VA Healthcare System

Purpose/Background: Finally fluoroquinolone resistance in hospital settings is a growing concern for public health and healthcare professionals. In the Internal Medicine Residency Program at our institution, residents and faculty are interested in the impact of implementing a FQ prescribing bundle. This project seeks to determine if implementing a hospital protocol aimed to help identify true CDI, to help distinguish community-acquired (and asymptomatic carriers) from hospital-acquired CDI. Primary objective is to compare the incidence of hospital-acquired C. difficile infections (HA-CDI) and its treatment between the pre and post-hospital protocol groups. Secondary objective is to compare the incidence of true HA-CDI infection of patients with and without known causes of non-HA-CDI diarrhea (receiving laxatives within 48 hours or change in feeding protocol) of C. difficile suspected patients in the post-hospital protocol group.

Methodology: This study is a retrospective chart review of hospitalized adults at Bayfront Health St. Petersburg with suspected C. difficile infection (CDI) to evaluate the safety and efficacy of a new hospital protocol aimed to help identify true hospital-acquired CDI.

Results/Conclusions: Results and conclusion will be presented at FRC.

Presentation Objective: Understand the difference between community-acquired and hospital-acquired C. difficile infections

Self Assessment: Which is considered a hospital-acquired C. difficile infection (HA-CDI)? A. A hospitalized patient, positive for C. difficile in the ER B. A hospitalized patient, newly testing positive for C. difficile during hospital day 4 or later C. A hospitalized patient, testing positive for C. difficile in ER and while inpatient D. A hospitalized patient, newly testing positive for C. difficile during hospital day 3 or earlier

ABSTRACT REPRODUCTION FORM

REDUCING HOSPITAL-ACQUIRED CLOSTRIDIUM DIFFICILE INFECTIONS IN THE INPATIENT SETTING: IMPLEMENTATION AND EVALUATION OF A TESTING BUNDLE

Naima Jahan-Boca Raton Regional Hospital

Purpose/Background: Clostridium difficile infection (CDI) diagnosis and management remain a major challenge to hospitals as CDI is associated with significant morbidity, mortality and financial burden. At BRRH, the standardized infection ratio (SIR) for hospital-acquired CDI (HACDI), which is a measure used to track healthcare-associated infections (HAIs), shows CDI is one of the major targets for improvement. Our previous CDI testing method consisted of PCR assay, which is a very sensitive method to confirm the presence of the C. difficile toxin B gene; however, it picks up asymptomatic C. difficile carriage, which negatively impacts our SIR score. In the updated 2017 CDI guideline by IDSA, specific recommendations involving stool testing algorithms were made. The purpose of this study is to evaluate the effect on SIR after implementation of a guideline-recommended multistep algorithm for CDI testing.

Methodology: In this open-label, prospective cohort study, we implemented a bundle consisting of hospital-wide multistep algorithm for C. difficile toxin testing in stools (GDH plus toxin ELISA, with confirmatory PCR as necessary), Hospital-Acquired Condition Committee formation, nursing education, and provider feedback. We conducted the study over an 8-month period from July 2018 to March 2019 and compared to the rate of HACDI pre and post-implementation. We included all patients for stool testing who were suspected to have HACDI. The primary outcome measure was changes in SIR score of HACDI. Secondary outcomes were a reduction in the number of patients tested, compliance to testing protocol and cost savings from appropriate stool testing.

Results/Conclusions: Results and conclusion will be presented at FRC.

Presentation Objective: Evaluate the use of a guideline approved stool testing algorithm for Clostridium difficile infection

Self Assessment: Which of the following statements is NOT correct regarding Clostridium difficile infection stool testing? A. Stool culture is the most sensitive test B. Test of cure is recommended C. Patients with 3 or more loose unexplained and new-onset stools in 24 hours are the preferred target population for testing D. ELISA detects free C. difficile toxins, whereas PCR detects toxin genes
ABSTRACT REPRODUCTION FORM

Time: 2:00 - 2:20 Room: 1209-B Category: Infectious Diseases

ASCORBIC ACID AND PREVENTION OF URINARY TRACT INFECTIONS IN SPINAL CORD INJURY PATIENTS
Colleen Lewellyan-James A. Haley Veterans Hospital

Purpose/Background: Most spinal cord injury (SCI) patients develop some degree of neurogenic bladder, or bladder dysfunction, due to neurologic damage which disrupts communication between the bladder and brain. Patients with neurogenic bladder often experience urinary incontinence, frequency, and urgency along with complications like nephrolithiasis and urinary tract infections (UTIs). The high incidence of recurrence makes UTI prevention and treatment important for this population. Ascorbic acid (AA) is theorized to prevent recurrent UTIs via a bacteriostatic effect on the urine through a reduction of urinary nitrites to reactive nitrogen oxides and acidification of the urine. The objective of the study is to determine if ascorbic acid reduces UTI recurrence in the SCI population.

Methodology: A retrospective self-controlled case series utilizing database and chart review was conducted on SCI patients within the Veterans Integrated Services Network 8 Hospitals treated with AA from June 1st, 2008-May 31, 2018. To be included in the study, each SCI patient must have received the medication consistently for greater than 90 days and had at least one UTI within the study period. Each patient will serve as their own control. Total time on AA (exposure period) will be compared to total time off AA (observational period) for each patient. Chi-square and student's t-test will be used to analyze baseline characteristics depending on the type of variable. An incident rate ratio will be used to evaluate the association of UTIs and AA use.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the role of ascorbic acid in the prevention of urinary tract infections in spinal cord injury patients
Self Assessment: Which of the following potential side effects of ascorbic acid is of greater concern in spinal cord injury patients? A. Fatigue B. Oxalate kidney stones C. Flushing D. Heartburn

ABSTRACT REPRODUCTION FORM

Time: 2:20 - 2:40 Room: 1209-B Category: Infectious Diseases

IMPACT OF REFLEX FOSFOMYCIN E-TESTING ON THE UTILIZATION OF CARBAPENEMS FOR TREATMENT OF DEFINITIVE EXTENDED SPECTRUM BETA-LACTAMASE PRODUCING E. COLI IN URINARY TRACT INFECTIONS
Kevin Deemer-Measey Countryside Hospital

Purpose/Background: Urinary tract infections (UTIs) caused by extended spectrum beta-lactamase (ESBL) producing Enterobacteriaceae are commonly treated with carbapenem antibiotics (meropenem or ertapenem). However, overuse of carbapenems may result in bacterial resistance, Clostridium difficile infection, and delays in discharge planning since they are only available in intravenous formulations. Fosfomycin is an oral non-carbapenem alternative that has demonstrated in several studies to have a susceptibility greater than 95% in urinary ESBL producing E. coli isolates. Fosfomycin is also an alternative option for those patients who have an allergy or intolerance to the other susceptible agents. Despite these advantages, the usage of fosfomycin within our health-system has been low, possibly due to its omission from our automated Vitek susceptibility reporting. To promote more fosfomycin use, our health-system implemented a reflex fosfomycin susceptibility testing for ESBL producing E. coli urinary isolates for patients in the inpatient and emergency room settings, with the ultimate goal of decreasing carbapenem utilization.

Methodology: This is a multicenter retrospective chart review that aims to assess the impact of reflex fosfomycin susceptibility testing on carbapenem usage for the treatment of uncomplicated ESBL E. coli UTI. The primary outcome is the proportion of patients who received definitive carbapenem therapy. Key secondary outcomes include the average total days of carbapenem therapy in patients receiving carbapenems and the proportion of patients receiving fosfomycin. Cost and adverse events will also be evaluated.

Results/Conclusions: Results and conclusion will be presented at FRC
Presentation Objective: Assess the response in prescribing patterns after implementing a protocol to plate an ideal, oral alternative to carbapenems
Self Assessment: True or False: Intravenous antibiotic therapy for UTI allows for greater penetration to the bladder and, subsequently, results in higher efficacy and cure rates.
USE OF PATIENT AND DISEASE CHARACTERISTICS AS PREDICTIVE INDICATORS OF RITUXIMAB INFUSION RELATED REACTIONS (R-IRR) IN ADULT HEMATOLOGY/ONCOLOGY PATIENTS

Kaitlyn Kowalski-UF Health Shands

Purpose/Background: Infusion related reactions are one of the most common adverse effects associated with rituximab with an incidence of up to 77% during the first infusion in patients with lymphoid malignancies. Several retrospective studies in patients with B-cell malignancies have reported an increased risk of rituximab infusion related reactions (R-IRR) with the following: bone marrow involvement, low-grade lymphomas, bulky disease, and other factors. However, this data has not been consistently replicated.

Methodology: This retrospective single-center observational study evaluated 173 adult hematology/oncology patients who received the first dose of rituximab inpatient from July 31, 2015 to July 31, 2018. Patients were excluded if they received prior rituximab and/or induction chemotherapy. The primary outcome was to access the overall incidence of R-IRR at UF Health Shands Hospital. The secondary outcome was to determine the association between specific patient and disease characteristics and R-IRR.

Results/Conclusions: Of the 173 patients evaluated, 109 met inclusion criteria and 64 were excluded. The overall incidence of R-IRR was 31/109 (28.4%). Preliminary data analysis found the following patient and disease characteristics to be statistically significant on univariate analysis: Patient and disease characteristics may be utilized as potential predictive indicators of R-IRR.

Presentation Objective: Understand the clinical impact of rituximab infusion related reactions

Self Assessment: Which of the following statements regarding rituximab infusion related reactions is false? A. Incidence of reaction is >75% for patients with lymphoid malignancies during the first infusion B. The first infusion is slowly titrated as a preventative measure C. Standard premedications include acetylaminoephine, diphenhydramine, and +/- steroid D. Patients who react during the first infusion will likely react for subsequent infusions

DEVELOPMENT OF AN HIV DASHBOARD TO IDENTIFY VETERANS AT RISK FOR LOSS TO FOLLOW-UP AND IMPROVE THE HIV CARE CONTINUUM

Tho Nguyen-Orlando VA Medical Center

Purpose/Background: In Veterans infected with human immunodeficiency virus (HIV), research shows that those who are adherent to treatment, maintain undetectable viral loads, and remain engaged with their healthcare providers sustain longer lives with reduced transmission of HIV. Diagnosed Veterans who have prolonged breaks in care are more likely to lose virologic control. Currently, there is no routine process to identify Veterans who are at risk for loss to follow-up. The development of a clinical tool that detects vulnerable Veterans early in the process of falling out of care may improve outcomes for these Veterans in this quality-improvement project.

Methodology: A dashboard will be developed using local information within the Corporate Data Warehouse (CDW) that is specific to a Veterans Affairs Medical Center. For inclusion within the dashboard, a query will be designed to return all Veterans who are receiving antiretroviral therapy (ART) associated with an HIV-based diagnosis code. At-risk Veterans will be filtered based on adherence to medications and date of last HIV viral load labs. The results will be organized into a viewable dashboard and will include other patient characteristics including patient identifiers, ART regimen, medication possession statistics, lab results, and upcoming appointments. The clinical pharmacy specialist will use this tool to help Veterans by ordering refills, placing lab orders, scheduling appointments, and consulting for social work services. The number of interventions for prevention of loss to follow-up will be recorded for this quality-improvement project.

Results/Conclusions: Results and conclusion will be presented at FRC

Presentation Objective: Recognize a novel method using health informatics to identify Veterans at risk for loss to follow-up with HIV regimens

Self Assessment: Which of these is not a goal of the Joint United Nations Programme on HIV/AIDS for 2020? A. 90% of people with HIV know their status B. 90% of HIV-infected individuals are on treatment C. 90% of HIV-infected individuals on treatment are virally suppressed D. 90% of HIV-infected individuals who know their status follow-up with an Infectious Disease specialist

PREDICTIVE FACTORS FOR CARBOPLATIN HYPERSENSITIVITY REACTIONS IN GYNECOLOGIC CANCERS: EFFECT OF BRCA STATUS

Melanie Rolfe-Lee Health

Purpose/Background: Carboplatin hypersensitivity reactions have been reported to occur in up to 16% of patients with gynecologic cancers. Several predisposing factors have been suggested including presence of BRCA1/2 mutation, however, contribution of these mutations to reaction development has not extensively studied. This study will aim to determine if there is an association between BRCA1/2 mutation status and the development of carboplatin hypersensitivity reactions by comparing the prevalence of hypersensitivity reactions in patients with a documented BRCA1/2 mutation to those with no mutation.

Methodology: This retrospective chart review was conducted within a multi-hospital community health system between the dates of January 1st 2015 and November 1st 2018. Eligible patients were women aged 18 years or older with a diagnosis of ovarian, fallopian tube, uterine, endometrial, or primary peritoneal cancer who attempted to receive at least one dose of carboplatin. Documentation of BRCA status must have been available. Presence or absence of hypersensitivity reaction was collected and used to divide patients into the two groups for comparison, matched in a 2:1 ratio, negative for hypersensitivity reaction to positive. The primary outcome was the effect of BRCA1/2 status on the development of carboplatin hypersensitivity reactions with regard to: reaction frequency, timing, and severity. Secondary outcomes included identification of additional risk factors that may help identify predisposition to carboplatin hypersensitivity reaction.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Identify factors potentially predisposing patients to experiencing hypersensitivity reactions during carboplatin therapy

Self Assessment: What is the incidence of carboplatin hypersensitivity reactions in patients with gynecologic cancers? A. 5% B. 16% C. 1% D. 45%
ABSTRACT REPRODUCTION FORM

Time: 2:40 - 3:00 Room: L1005 Category: Oncology III
IMPACT OF A STANDARDIZED ORAL CHEMOTHERAPY REVIEW PROCESS WITHIN A COMMUNITY HOSPITAL
Alyssa Donadio-Baptist Hospital of Miami

Purpose/Background: At Baptist Hospital of Miami (BHM), inpatient parenteral chemotherapy administration occurs in the setting of strict prescribing standards, multidisciplinary verifications, and safe handling practices. Quality and safety related to oral chemotherapy delivery has been recognized by organizations such as the American Society of Clinical Oncology (ASCO) as an important area of opportunity, as few studies currently exist to inform best practices. The increasing availability of oral medications for the treatment of cancer offers many advantages for patients. Nonetheless, delivery of these agents presents unique challenges. The goal of this study is to determine the impact of a standardized pharmacy review process to ensure the safe and effective use of oral chemotherapy agents.

Methodology: IRB-exempt, two-phase study including hospitalized adult patients with an order for an oral chemotherapy agent for an oncology indication. Phase I is a retrospective review between May 2018 and June 2018, and phase II is a prospective review between December 2018 and February 2019. Data collected includes age, gender, serum creatinine, creatinine clearance, complete blood count with differential, hepatic function tests, oral chemotherapy agent and indication for use, oncology consultation, pharmacist interventions, and food or drug interactions. The primary outcome of the study is appropriateness of oral chemotherapy orders, defined as appropriate dose and treatment day and lack of major drug interactions.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Describe the impact of a pharmacy-driven inpatient oral chemotherapy monitoring service
Self Assessment: True or False: Oral chemotherapy agents are safer compared to intravenous chemotherapy agents.

ABSTRACT REPRODUCTION FORM

Time: 2:00 - 2:20 Room: CLC Category: Pain Management VI
EVALUATION OF PAIN MANAGEMENT IN SICKLE CELL PATIENTS THROUGH THE USE OF PAIN CONTROL ALGORITHMS AND PROVIDER EDUCATION
Brittany E. Carlson-Jackson Memorial Hospital

Purpose/Background: Vaso-occlusive crisis (VOC) is a problematic feature in patients with sickle cell disease for which the optimal treatment is rapid administration of intravenous (IV) opioids followed by physician-driven pain management. Inconsistencies in the treatment of this condition have led to an increase in hospital length of stay, variable prescribing of pain regimens, and a decline in patient satisfaction. The purpose of this project is to standardize the approach to pain management via the use of a treatment algorithm for admitted sickle cell patients experiencing a VOC. The inpatient sickle cell pain management algorithm outlines preferred opioid regimens, options for non-opioid adjunctive therapies, guidance to transition from IV to oral opioids, and suggested opioid regimens upon discharge.

Methodology: This is a retrospective, two phase study evaluating VOC pain management before and after implementation of a sickle cell pain management algorithm. Phase 1 will be conducted retrospectively to evaluate data from July 2018 to September 2018. Phase 2 will be conducted post algorithm implementation from January 2019 to March 2019. Data will be compiled in a secure data collection tool. Patients will be identified through a daily census of sickle cell patients admitted for VOC.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Describe the implementation of a standardized sickle cell pain control algorithm and evaluate outcomes before and after implementation
Self Assessment: What are some of the drawbacks to no hospital-wide pain management protocols for sickle cell disease? A. Increased length of stay B. Prolonged use of IV opioids C. Absence of de-escalation of therapy prior to discharge D. All of the above

ABSTRACT REPRODUCTION FORM

Time: 2:20 - 2:40 Room: CLC Category: Pain Management VI
IMPLEMENTATION OF AN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL FOR PATIENTS UNDERGOING NON-EMERGENT CRANIOTOMY AND THE IMPACT ON PAIN MANAGEMENT
Taylor McAdams-Kearney-Florida Hospital Tampa

Purpose/Background: Following a craniotomy, patients may experience pain, nausea, vomiting and anxiety and there is opportunity to improve post-operative outcomes. While enhanced recovery after surgery (ERAS) protocols have been utilized in other surgical procedures to improve pain and post-operative recovery, the concept of an ERAS plan for craniotomy patients is new. The utilization of multimodal analgesia including a gabapentinoid has shown to be superior compared to monotherapy with opioids for post-operative pain control for patients under-going a craniotomy. Pregabalin has demonstrated decreased anxiety and improved sleep quality in patients undergoing elective craniotomy. Therefore, implementation of an ERAS protocol may be of quality in patients undergoing elective craniotomy. Therefore, implementation of an ERAS protocol. The primary objective is to compare pain outcomes included 30 day readmissions, multimodal usage and pain scores.

Methodology: Patients who were scheduled to undergo a non-emergent craniotomy with an order for an oral chemotherapy agent for an oncology indication. Phase I is a retrospective review between May 2018 and June 2018, and phase II is a prospective review between December 2018 and February 2019. Data collected includes age, gender, serum creatinine, creatinine clearance, complete blood count with differential, hepatic function tests, oral chemotherapy agent and indication for use, oncology consultation, pharmacist interventions, and food or drug interactions. The primary outcome of the study is appropriateness of oral chemotherapy orders, defined as appropriate dose and treatment day and lack of major drug interactions.

Results/Conclusions: Results and conclusions will be presented at the Florida Residency Conference.

Presentation Objective: Explain the role of an enhanced recovery for non-emergent craniotomy patients
Self Assessment: For non-emergent craniotomies, an enhanced recovery after surgery (ERAS) protocol has demonstrated:

ABSTRACT REPRODUCTION FORM

Time: 2:40 - 3:00 Room: CLC Category: Pain Management VI
EVALUATING THE EFFECTIVENESS OF A MULTIMODAL PAIN REGIMEN FOR PAIN CONTROL AND OPIOID USE FOLLOWING SURGICAL REPAIR OF HIP FRACTURES
Lisa Kistler-Holmes Regional Medical Center

Purpose/Background: Uncontrolled postoperative pain leads to increased long-term opioid use, impaired physical function, higher healthcare costs, and decreased patient satisfaction. Opioid-related adverse drug events (ORADEs) are associated with higher rates of mortality, 30-day readmissions, financial costs, and increased length of stay (LOS). Consequently, there has been a shift from opioid-driven postoperative pain regimens to opioid-sparing methods for pain control. The purpose of this study is to evaluate the efficacy of multimodal pain management for patients undergoing surgical hip fracture repair.

Methodology: This single-center, retrospective cohort study was conducted at a 514-bed tertiary hospital. Participants were at least 18 years old who underwent surgical hip fracture repair performed by a single orthopedic surgeon. Patients were excluded if they had surgery greater than 48 hours after admission, or an opioid allergy. Data was collected before and after implementation of a multimodal pain order set. The following patient demographics were collected: age, gender, weight, body mass index, race, procedure type, and pre-admission opioid use. Data was collected up to 96 hours postoperatively, which included pain scores, oral morphine equivalents (OMEs), and usage of multimodal pain adjuvants. Multimodal pain adjuvants were defined as acetaminophen, nonsteroidal anti-inflammatory drugs, gabapentinoids, and ketamine. The primary outcome was total opioid use postoperatively. Secondary outcomes included 30 day readmissions, multimodal usage and pain scores.

Results/Conclusions: Results and conclusion will be presented at the Florida Residency Conference.

Presentation Objective: Evaluate the outcomes of pain scores, hospital length of stay, total opioid consumption, and hospital readmission rates after initiating a multimodal pain protocol in patients undergoing surgical repair of hip fractures
Self Assessment: Which of the following was not statistically significant after implementing a multimodal pain order set in the postoperative hip fracture repair population? A. Pain scores, B. Length of stay, C. Opioid consumption, D. Readmission rate
**Acute Kidney Injury in Hospitalized Pediatric Patients Receiving Vancomycin and Anti-Pseudomonal Beta-Lactams**

Rachel Meyer-Wolfson Children's Hospital/Baptist Health

**Purpose/Background:** Acute kidney injury (AKI) etiology has shifted from primary renal disease to multifactorial causes in hospitalized children. Incidence of AKI is now mostly seen with nephrotoxic drug exposure. Vancomycin is often used empirically and may be paired with an anti-pseudomonal beta-lactam such as cefepime (CEF), ceftazidime (CTZ), meropenem (MER), and piperacillin/tazobactam (TZP). AKI in monotherapy with vancomycin has been previously evaluated against combination treatment with TZP, and combination therapy has been found to have a higher incidence of AKI. Some studies have also evaluated the use of other anti-pseudomonal beta-lactams compared to TZP and have found AKI occurs more when TZP is utilized. The purpose of this study is to determine which beta-lactam in combination with vancomycin contributes more to cases of AKI at Wolfson Children's Hospital.

**Methodology:** This study is a retrospective cohort performed by chart review. The population includes pediatric patients admitted to the general pediatric floors, hematology/oncology, or ICU services between August 1st, 2013 & August 31st, 2018. Subjects were divided into the vancomycin + TZP group and the vancomycin + CEF/MER/CTZ group. Data on patients that met inclusion criteria was collected from the electronic medical record. The primary objective was to determine if there is a difference in incidence of AKI between patients receiving vancomycin + TZP versus those on vancomycin + CEF/MER/CTZ. Subgroups evaluated from this objective include vancomycin dose, patient age, number of nephrotoxic drugs, and hospital service. The secondary objective evaluated length of stay.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Identify the most common cause of pediatric acute kidney injury in hospitalized patients

**Self Assessment:** What is the most common cause of pediatric AKI in hospitalized patients?

A. Dehydration  B. Nephrotoxic medications  C. Sepsis  D. Lack of mobility

---

**Effect of Smoflipid® on Cholestasis in Pediatric Parenteral Nutrition Patients with or at Risk for Parenteral Nutrition Associated Cholestasis Versus Intralipid®: A Retrospective Institutional Analysis**

Molly Siver-Wolfson Children's Hospital/Baptist Health

**Purpose/Background:** Parenteral nutrition allows caloric nutrition to be delivered through an intravenous line, bypassing the gut. While necessary in many patients, it has been associated with worsening liver dysfunction and side effects. Parenteral nutrition associated cholestasis (PNAC), is an established risk that can ultimately lead to complications such as cirrhosis, sepsis and organ failure. Smoflipid® is a newer lipid emulsion combining 30% soy, 30% medium chain triglycerides, 25% olive oil, and 15% fish oil for parenteral nutrition. It was formulated on the hypothesis that using a product richer in omega-3 fatty acids would provide an anti-inflammatory effect and therefore produce better outcomes on cholestasis versus historical soy-based Intralipid. At Wolfson Children's Hospital, Smoflipid emulsion has been utilized in parenteral nutrition formulations since November 2016. Ultimately, the purpose of this study is to determine the benefit of Smoflipid over Intralipid on cholestasis in pediatric patients at WCH with parenteral nutrition.

**Methodology:** This was a retrospective chart review conducted at Wolfson Children's Hospital. A cohort of Smoflipid patients that fit institutional criteria for use from November 2016-November 2018 were compared to a matched historical cohort of Intralipid patients prior to Smoflipid utilization at this institution. The primary endpoint was change in liver function measured as change in conjugated bilirubin at baseline to end of hospital therapy. Secondary endpoints were improvement of cholestasis defined as decrease in conjugated bilirubin from baseline and the percent change from baseline of AST and ALT during Smoflipid utilization.

**Results/Conclusions:** Results and conclusions will be presented at the Florida Residency Conference.

**Presentation Objective:** Recognize the risks associated with long term utilization of lipids with parenteral nutrition

**Self Assessment:** Which of the following is NOT an established consequence of long term lipid utilization? A. Increased bilirubin  B. Liver dysfunction  C. Increased Serum creatinine  D. Increased Serum triglycerides

---

**Ketamine with or without Benzodiazepines for Pediatric Procedural Sedation in the Emergency Department**

Stephanie M. Johnson-Tampa General Hospital

**Purpose/Background:** Procedural sedation is a technique that involves titrating medications to create a level of sedation allowing patients to tolerate painful procedures while maintaining the ability to breathe independently. In pediatric patients, ketamine has been shown to be safe and effective for this indication. It has been proposed that adding a benzodiazepine helps mitigate adverse events of ketamine therapy. This study evaluated ketamine use in pediatric patients who required procedural sedation in our emergency department. The results will enable us to assess prescribing practices at our institution and evaluate the effects of a combination regimen on adverse events and length of stay in the emergency department.

**Methodology:** This was a single-center, retrospective chart review evaluating pediatric patients undergoing procedural sedation using ketamine with or without a benzodiazepine in the emergency department during the two-year time frame from September 1, 2016 through September 30, 2018. Pediatric patients meeting the inclusion criteria were randomized and data collection was continued until a total of 100 patients were included. Electronic medical records were reviewed for procedure type and duration, ketamine dosing, benzodiazepine usage, reported adverse events and time until discharge. The primary outcome was the number of patients receiving combination therapy. Secondary outcomes include the frequency of adverse events including emergence reactions, blood pressure and heart rate changes, respiratory depression, nausea and vomiting, oxygen desaturation, laryngospasm and apnea, as well as the average time until the patient was ready for discharge following procedural sedation.

**Results/Conclusions:** Results and conclusions will be presented at FRC

**Presentation Objective:** Identify the impact of combining ketamine with a benzodiazepine on the incidence of adverse events and emergency department length of stay following procedural sedation

**Self Assessment:** Side effects frequently seen with the use of ketamine in pediatric patients include which of the following? A. Tachypnea  B. Bradycardia  C. Hypotension  D. Tachycardia