Evaluation of intravenous (IV) to oral (PO) conversion of medications: a look at opportunity, compliance, cost, and possible expansion of the current procedure.

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**Study Objectives**
- In-depth chart review and data collection is in process.
- Statistical analysis to follow completion of data collection.
- Final results will be presented at Great Lakes Pharmacy Resident Conference.
- Intend to submit final manuscript for publication.

**Ongoing Research**
- Evaluate the number of opportunities for IV to PO conversion at each of the three hospitals.
- Determine the number of pharmacist and physician conversions made for IV to PO conversions at each hospital.
- Determine the cost savings associated with the interventions and the opportunity for cost savings associated with missed interventions.
- Recommend additional medications that could be added to the procedure.

**Background**
- Studies have shown that transitioning from intravenous to oral therapy as soon as patients are clinically stable can reduce the length of hospitalization and lower associated healthcare costs.¹
- Some medications have very similar IV and PO bioavailability; this makes them ideal choices for IV to PO conversion protocols. Common medications involved in IV to PO conversions include: antibiotics, analgesics, antipsychotics, and antivirals.²
- Numerous factors must be evaluated prior to switching hospitalized patients from IV to PO medications.
- Fifty-eight percent of physicians believed that "patients should be afebrile for 24 hours before conversion to oral antibiotics," and 19% said "patients should receive a standard duration of intravenous antibiotics."³

**Methods**
- This study has been approved by St. Elizabeth Healthcare’s Institutional Review Board.
- Retrospective chart review identifying patients admitted to St. Elizabeth Healthcare from June 1, 2015 to May 31, 2016 who:
  - Received one of eight medications on the current intravenous to oral conversion protocol: fluconazole, azithromycin, ciprofloxacin, levofloxacin, linezolid, metronidazole, famotidine, or pantoprazole.
- **Eligibility for intervention:** functioning GI tracts, expected to tolerate the oral dosage form,¹¹ improving signs and symptoms of infection such as declining white blood cell count and being afebrile for antibiotic conversion.
- **Inclusion criteria:** Any patient over the age of 18 admitted to SEH who received greater than 24 hours of medications on current protocol.
- **Data Collection:** Demographics, SEH location, identified IV to PO medication, eligibility for intervention, date eligible for intervention, physician IV to PO conversion, pharmacist IV to PO conversion, date of pharmacist intervention, if applicable difference between date of eligibility and date of intervention, cost savings associated with intervention and costs associated with missed interventions.
- **Forfeited Opportunity Cost:**
  - (costIV-costPO) x # of IV doses following date of eligibility
- **Cost Savings:**
  - (costIV-costPO) x # of PO doses

**Study Design**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Oral Cost</th>
<th>Intravenous Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azithromycin 500 mg</td>
<td>$ 0.67</td>
<td>$ 2.32</td>
</tr>
<tr>
<td>Ciprofloxacin 500 mg</td>
<td>$ 0.13</td>
<td>$ 1.71</td>
</tr>
<tr>
<td>Famotidine 40 mg</td>
<td>$ 0.09</td>
<td>$ 0.67</td>
</tr>
<tr>
<td>Fluconazole 200 mg</td>
<td>$ 1.01</td>
<td>$ 2.64</td>
</tr>
<tr>
<td>Levofloxacin 500 mg</td>
<td>$ 0.21</td>
<td>$ 2.74</td>
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<tr>
<td>Linezolid 600 mg</td>
<td>$ 3.44</td>
<td>$ 59.64</td>
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<tr>
<td>Metronidazole 500 mg</td>
<td>$ 0.50</td>
<td>$ 0.83</td>
</tr>
<tr>
<td>Pantoprazole 40 mg</td>
<td>$ 0.06</td>
<td>$ 3.51</td>
</tr>
</tbody>
</table>

**References**

**Disclosures**
Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.
Katelyn Gaines and Julie Spanyer: Nothing to disclose