An EMR-based diagnostic stewardship intervention for GI mPCR aimed at reducing inappropriate C. diff tests
Margaret E. Newman MD; Emily Landon MD; Allison Bartlett MD, MS; Rachel Marrs DPN, RN, CIC; Alexandra Seguin BSN, RN; Cynthia Murillo M(ASCP), CIC; Kathleen G. Beavis MD; Jessica P. Ridgway MD, MS
University of Chicago Medicine

Methods

• In Jan 2018, our 700-bed academic medical center implemented an informatics-based intervention that restricted ordering of the GI mPCR:
  - During first 48hrs of hospitalization, providers may order the GI mPCR or singleplex C. diff PCR
  - After 48hrs, providers required to contact microbiology to request an exception for GI mPCR
  - Orders for GI mPCR also required documentation of >3 stools per day
  - See Figure 1 & Figure 2 regarding intervention alerts
  - Statistical analysis performed with STATA software

Results

• 283 late (after 48hrs of admission) GI mPCR tests were ordered in the 104 days before restriction
• 210 late GI mPCR tests were ordered in the 104 days after restriction
• Late GI mPCR tests resulted in diagnoses other than C. difficile less than 4% of the time (18 of 493 tests)

Table 1. Late GI Panels (ordered >48hrs)

<table>
<thead>
<tr>
<th>CDI Lab ID Events</th>
<th>Before Intervention</th>
<th>After Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDI</td>
<td>41/283 (14.5%)</td>
<td>22/210 (10.5%)</td>
</tr>
<tr>
<td>Alternate Diagnoses</td>
<td>11/242 (4.6%)</td>
<td>7/188 (3.7%)</td>
</tr>
</tbody>
</table>

Conclusions

• Accurate diagnosis of C. diff infection is important for treatment and prevention efforts
• This data show that many rapid GI mPCR tests are inappropriately ordered on patients who may not have loose stools
• EMR-based restriction on the GI mPCR ordering time reduced Lab ID events of C. diff infection without missing important alternate diagnoses
• Restrictions only reduced late GI mPCR rates by 25.7% (p<0.05). Additional interventions are needed to further reduce unnecessary testing

Disclosure

The authors of this presentation have no financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.