Clinical Safety & Effectiveness
Cohort # 15

Decreasing Health Disparities for Hispanic Patients with IBD

CENTER FOR PATIENT SAFETY & HEALTH POLICY

UT Health Science Center™
SAN ANTONIO

Educating for Quality Improvement & Patient Safety
The Team

• Members
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  – Joanna Lininsteadt, MD
  – Richard Contreras, IT Specialist
  – Ellen Gu, IT Specialist
  – Karen Aufdemorte, Facilitator

• Sponsor Department:
  – Glenn Gross, MD, Chair of the Department of Medicine, Chief of the Division of Gastroenterology
  – Tisha Lunsford, MD, Program Director, Division of Gastroenterology
AIM STATEMENT

• Improve the pneumococcal vaccine documentation rates in clinic notes for Hispanic population with inflammatory bowel disease seen at the RBG gastroenterology clinic from 32% to 50% by January, 2015.
Project Milestones

• Team Created August 2014
• AIM statement created August 2014
• Weekly Team Meetings 9/5, 9/11, 9/29, 10/1, 10/3, 11/1, 1/8
• Background Data, Brainstorm Sessions, 9/16, 9/29, 10/1, 10/3
  Workflow and Fishbone Analyses
• Interventions Implemented 11/2014 - present
• Data Analysis 11/24/2014 – 1/14/2014
• CS&E Presentation 1/23/2014
Background

• Gastroenterology society guidelines state that ALL patients with IBD should be vaccinated with the pneumococcal vaccine

• Literature shows that vaccination rates are variable
  – No standardization of the practice
  – No policies

• Importance of vaccination
  – Patient safety: protection from preventable illness
  – Reimbursement: meeting PQRS standards may prevent deduction in payment
If the patient's first visit to the IBD clinic:

- Fellow reviews records for vaccine status.
  - Yes, Vaccine recorded: Continue with Pt visit.
  - No vaccine recorded: As part of H & P, clarify with Pt if vaccine ever received.
Pre-intervention Data

• Collected data through Sunrise EMR and IDX
  – Used ICD-9 codes to identify our group of patients
  – Vaccination data was collected through Immunization manager
  – Documentation data was collected by chart review

• Overall vaccination documentation rate pre-intervention showed an average of 32%
  – Calculations were performed using the total number of vaccines documented divided by the total number of vaccines given
  – The data points on the SPC charts represent these ratios over time
Vaccine Documentation Rate Prior to Intervention

Total Percent Documented

Jul - Oct 2014

UCL: 162%
CL: 58%
LCL: -46%

Vaccine Documentation Rate Prior to Intervention
PLAN: Intervention

• Problem identified: variation of the documentation of the pneumococcal vaccine in the traditional GI clinic note for IBD patients
  – Difficult to tell who has been vaccinated and who has not
  – This leads to delays in vaccination or possible inappropriate re-vaccination
  – Difficult to capture data on vaccine rates

• Intervention: Implementation of a standardized note template in order to make it easier to identify those in need of a vaccine
  – This is a re-design of the standardized Gastroenterology Initial Clinic Visit note
Intervention Design

Note title: Gastroenterology Clinic IBD Note
New “Plan” section

UHSTEST, ORANGE is due for the following events:

<table>
<thead>
<tr>
<th>Event</th>
<th>Due Date</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>Sep-15-2014</td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>Oct-10-2014</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Oct-10-2014</td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td>Oct-10-2014</td>
<td></td>
</tr>
</tbody>
</table>

There are no ‘Near Due’ reminders.

Charted Data:

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Dose #</th>
<th>Age at Event</th>
<th>Action Date/Time</th>
</tr>
</thead>
</table>

[Retrieve Last Charted Values]
[Insert Default Values]
[Clear Unsaved Data]
# Immunization Manager

- **Event**: [Dropdown]
- **Vaccine**: [Dropdown]
- **Performed Date**: [Input Box]
- **Information Source**: [Dropdown]
- **Not Given**: [Checkbox]
- **Historical**: [Checkbox]
- **Actions**: [Button]"
Vaccination Documentation

<table>
<thead>
<tr>
<th>Event</th>
<th>Vaccine</th>
<th>Performed Date</th>
<th>Information Source</th>
<th>Not Given</th>
<th>Historical</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumococal</td>
<td>pneumococcal polysaccharide PPSV23</td>
<td>Nov-20-2014</td>
<td>Physician office/hospital record</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Vaccination Documentation

### Historical Entry - University of Southern California (USC)

<table>
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<tr>
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Click on the "Details" button for more information.
Documentation complete
DO: Implementing the Change

• Note template created and revised
• Divisional meeting informing the faculty and staff of the new standardized note and when to use it
• Email instructions were sent with step-by-step screenshot instructions of when and how to use the new note
• Live note implemented on 11/24/2014
CHECK: Results/Impact

• The average rate of vaccine documentation increased to 55% overall
  – There were not enough data points to show a clear improvement but the trend was towards improvement as time progressed
  – The data points on the SPC charts represent the ratios of the vaccine documentation rate divided by the actual vaccination rate over time
  – The number of patients vaccinated (not necessarily documented) improved from 50% pre-intervention to 74%
Vaccine Documentation Rates Post-Intervention

Nov 2014 - Jan 2015

Percent Vaccine Documented

UCL = 146.4
CL = 43
LCL = -61
ACT: Sustaining the Results

• The biggest barrier seemed to be difficulty changing habit in the use of the old note template
  – Medical assistants usually start the note and they are not sure which patients this note can be used for
  – This caused a delay in seeing the true impact of the intervention

• We plan to have medical assistants start the patient visit with “Med Clinic Intake Note” rather than starting the actual note template

• Use of the note will become standard information in orientation of new fellows
Return on Investment

• Direct ROI:
  – Cost of the pneumococcal vaccine: $41.49
  – Reimbursement for administration: $77.85
  – Increase in revenue per vaccine billed: $31.36

• Indirect ROI:
  – Potential penalty avoidance through CMS PQRS reporting: -2% for not reporting
    • Follow up visit: $108.76 x 556 visits/year = $60,035.52
      – -2% penalty = $1,200.71
    • New visit: $164.96 x 108 visits/year = $17,815.68
      – -2% penalty = $356.31
What’s Next...

- Continue the use of the standardized note template with the goal if increasing our pneumococcal vaccination and documentation rate
  - Implement further IBD PQRS into the standardized note template for improved patient care, documentation and billing
- This type note template could possibly be used among other departments for documentation of health maintenance parameters
Thank you!