Examination and cost analysis of inappropriate continuation of stress ulcer prophylaxis during ICU transfer and hospital discharge

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INTRODUCTION

Stress ulcers can occur in critically ill patients
• Resulting in occult and significant gastrointestinal (GI) bleeding

Prophylactic medications decrease gastric acid secretions
• Histamine (H2) antagonists and proton-pump inhibitors (PPI)
• Patients transferred from ICU may no longer meet criteria for medication use
• adverse effects: enteric infections, drug interactions, nutrient malabsorption

Why is inappropriate continuation of prophylactics important
• Potential adverse effects
• Unnecessary charges
METHODS & SAMPLE

Retrospective study
• IRB approved for review of medical and pharmaceutical data

Inclusion criteria
• Hospital admission: 7/1/2013 and 9/14/2013
• Stress ulcer prophylaxis (SUP) initiated in the ICU or directly prior to transfer to ICU

Exclusion criteria
• On PPI/H2 antagonist at home
• GI bleed during admission
• Deceased in ICU
• First dose of PPI or H2 antagonist given on general medicine floor

Fig. 1 Sample of ICU patients on SUP medications; *74% (95% CI: 68-80%); 8%(95% CI: 3-13%).
## COST ESTIMATES

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosages Outside ICU</th>
<th>Hospital Cost per Dose</th>
<th>Hospital Charge per Dose</th>
<th>Total Unnecessary Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Famotidine PO</td>
<td>50</td>
<td>$0.10</td>
<td>$1.15</td>
<td>$58</td>
</tr>
<tr>
<td>Famotidine IV</td>
<td>76</td>
<td>$0.39</td>
<td>$89.10</td>
<td>$6772</td>
</tr>
<tr>
<td>Lansoprazole PO</td>
<td>66</td>
<td>$11.12</td>
<td>$14.35</td>
<td>$947</td>
</tr>
<tr>
<td>Omeprazole PO</td>
<td>34</td>
<td>$0.38</td>
<td>$1.75</td>
<td>$60</td>
</tr>
<tr>
<td>Pantoprazole PO</td>
<td>341</td>
<td>$0.30</td>
<td>$1.50</td>
<td>$512</td>
</tr>
<tr>
<td>Pantoprazole IV</td>
<td>225</td>
<td>$5.00</td>
<td>$97.50</td>
<td>$21,937</td>
</tr>
</tbody>
</table>

**Grand total:** $30,286

Extrapolated to 1 year ~ $145,000
DISCUSSION

• SUP medications discontinued at discharge, but not regularly at time of ICU transfer

• Increased risk and charges

• Project provided resident engagement in quality improvement, accountability, and IRB procedures

Limitations: Assumptions and documentation

**Future Strategies:** Education and direct intervention
Residents as Educators: Value-Added Integration of Teaching and Leadership Skills

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Ochsner Clinical School Faculty
Institutes of Health Care Improvement Scholar 2014/15
Ochsner Clinic Foundation, New Orleans LA
Introduction

- What is a resident's role in medical education?
- New Challenges with Ochsner Clinical School/University of Queensland and Ochsner Health System Collaboration.
  - Low scores in “Student involvement as a part of the clinical team” and “Overall clinical education experience”
- AIMS:
  - 1) to design and implement an enduring resident-as-teacher program that would be integrated into a resident’s daily work
  - 2) to teach residents strategies and provide tools that they can incorporate into their daily schedule to facilitate learning in all settings and with a variety of learners
  - 3) to help residents learn how to use role modeling as a teaching strategy.
Methods

- Project progressed through 4 PDSA cycles.
- Began with a pre-survey sent to all Internal Medicine residents for self-assessment of resident teaching skills and knowledge of available educational resources.
- Next we created a Student Checklist.
- **PDSA 1**: One resident/student teaching team for two weeks. Checklist and post surveys launched, reviewed and revised.
- **PDSA 2**: All Hospital Medicine teaching teams for 4 weeks. Staff physicians presented 10 min ‘Teaching on the fly’ sessions.
- **PDSA 3**: All Hospital Medicine teaching teams for 8 week. Ipad teaching apps distributed. Students begin evaluating residents.
- **PDSA 4**: All Hospital Medicine teaching teams for 8 weeks. Began workshops on how to assess student clinical skills.
  - Utilized the UQ curriculum to teach residents to grade HPIs, physical exam skills and provide feedback for midblock evaluations.
Resident/Student Results

- Resident comfort level with teaching students increased
  - PDSA 1: 41% high comfort level, 58% average comfort
  - PDSA 2: 77% high comfort level, 22% average comfort

- Student involvement as part of the clinical team
  - Increased average from PDSA 1 to PDSA 3

- Student overall clinical education experience at Ochsner
  - Increased average from PDSA 1 to PDSA 3

*Chi square with two degrees of freedom = 6.512, p = 0.05*

<table>
<thead>
<tr>
<th></th>
<th>PDSA 1</th>
<th>PDSA 2</th>
<th>PDSA 3</th>
<th>PDSA 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Involvement as part of Clinical Team</strong></td>
<td>3.63</td>
<td>4.16</td>
<td>4.53</td>
<td>4.28</td>
</tr>
<tr>
<td><strong>Overall Clinical Education Experience at Ochsner</strong></td>
<td>3.50</td>
<td>4.37</td>
<td>4.42</td>
<td>4.28</td>
</tr>
</tbody>
</table>
Resident/Student Results

End of Rotational Results

Student Involvement as part of Clinical Team

Overall Clinical Education Experience at Ochsner
Overall residents indicated that they had adequate resources needed to teach and had a high comfort level in teaching medical students.

- Bonus: The project did not prolong their workday.

Residents reported that a major barrier was knowing what to teach. This was reflected in the survey question “Are you familiar with the education expectations for the medical students?”

- This deficit was tackled by running resident workshops on how to assess clinical skills and provide feedback to medical students as per the clerkship curriculum which was implemented during PDSA 4.

Fast and easy was key to engaging learners.

Medical student end of rotation surveys given by the University of Queensland have indicated that students have successfully been incorporated into Hospital Medicine teams and overall educational experience has improved.

Next Steps:
- Assess for interns utilization of educational resources.
- Assess for any improvements in student exam scores
Transitions of Care

Developing tools to assess overnight provider documentation at an independent academic medical center

Shaun Hanson, MD
LeRoi Hicks, MD, MPH
Kate Rudolph, MS
Robert Dressler, MD, MBA

AIAMC Annual Meeting – April 2016
Transitions of care are a known safety issue

Gap in clinical documentation:
- Care provided to patients with changes in status is not consistently documented in the patient's chart

Our goals:
- Reliably identify patients’ changes in clinical status
- Current state analysis to determine extent of gap
- Develop Ongoing Professional Practice Evaluation (OPPE) program to provide feedback to providers in order to narrow this gap
- **Order inclusion criteria:**
  - 11 inpatient medicine units (non-ICU) 3pm–7am
  - New IV medications, IV fluid boluses, and stat labs, imaging studies and transfusion orders.

- **Order exclusion criteria:**
  - Written by non-primary service, dose or frequency change, or care documented in an existing chart note

- **Assessment of remaining, sampled orders**
  - Presence or absence of cross-coverage note
  - Completeness of note: 1 point each given for Subjective, Objective, Assessment, and Plan.
### Results:

<table>
<thead>
<tr>
<th>Date</th>
<th>12/6/15-2/20/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total orders from IT tool</td>
<td>11,026</td>
</tr>
<tr>
<td>Orders meeting primary exclusion criteria</td>
<td>-4,926</td>
</tr>
<tr>
<td>Remaining orders</td>
<td>6,100</td>
</tr>
<tr>
<td>Remaining orders after randomization and sampling</td>
<td>1925</td>
</tr>
<tr>
<td>Orders meeting secondary exclusion criteria</td>
<td>-1,085</td>
</tr>
<tr>
<td>Remaining orders for note review</td>
<td>840</td>
</tr>
<tr>
<td># Reviewed orders with chart note</td>
<td>281</td>
</tr>
<tr>
<td>% Reviewed orders with chart note</td>
<td>281/840 = 33.5</td>
</tr>
</tbody>
</table>

### Frequency of SOAP Note Element Presence (%)

<table>
<thead>
<tr>
<th>Element</th>
<th>Presence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>98</td>
</tr>
<tr>
<td>O</td>
<td>54</td>
</tr>
<tr>
<td>A</td>
<td>45</td>
</tr>
<tr>
<td>P</td>
<td>100</td>
</tr>
</tbody>
</table>
Conclusions and Path Forward:

- **Our Process:**
  - Reproducibly identifies patients meeting our definition of change in clinical status
  - Substantiates observation that cross-coverage care is infrequently captured in patient’s medical record, and when documentation is present, it is not consistently supported by objective findings or assessment

- **Path Forward:**
  - Formally imbed method into OPPE processes
  - Adapt to evaluate nursing documentation
  - Enlist clinical champions to advance process
ENGAGING & DEVELOPING FACULTY AS EDUCATORS FROM ENTRY TO TEACHING THE TEACHERS

Poster Slam: Deborah Simpson, PhD

Co Authors: Kjersti Knox, MD, Minuja Muralidharan, MD, Anne Getzin, MD, Bonnie Bobot, MD, Mark Robinson, DO, Lisa Sullivan Vedder, MD, John Brill, MD, MPH, Hina Mahboob, MD, Sharon Sabourin, Andy Anderson, MD
Changes Popping Up all Over

HEALTH CARE DELIVERY METRICS – VALUE BASED CARE

SCIENCES OF MEDICINE

UME-CME ACGME & ABMS

LEARNERS

WORKPLACE $$$ COMPET

LEARNING SCIENCES

“TOAST”!

CLINICAL TEACHER WELL-BEING

TECHNOLOGY ONLINE, TWITTER, ANALYTICS
NEED: These transformations require constant LEARNING @ EDUCATION & medicine
- EBE, teaching, learning and assessment strategies
- Accreditation standards – CLER

PROBLEM: Education enterprise requires varied roles and expertise ≠ 1 FD approach

AIM: To implement a staged, Edu-FD strategy in an IAMC
4 STAGE EDU–FD

EDUCATOR FACULTY DEVELOPMENT

- All new faculty
- 60–90 min
- Big Picture
- Roles & Expect

Orient to ME
Results to Date

- **Participation**
  - **Orientation:** All new teaching physicians
  - **CT & CE:** 4–20/session; multiple sessions

- **Evaluations:**
  - Clinical Teacher
  - Clinician Educator

- **Scholarly Activity** (per ACGME Common Program Require)
  - **Presentations:** AAMC, ABMS, ACGME AIAMC, AMEE, STFM
  - **Journals:** J Pt Ctr Res & Reviews, FM, J Med Educ & Cur Dev

**Summary & Next Steps?**
- Staged edu FD Works / Continue to evolve
Thanks to All My Edu-FD Colleagues!
Effect of Ethnic Disparities on the Outcome of Stage III Colon Cancer Patients

Carlos Sequera, MD
AIAMC Annual Meeting
4/2/16
Use of adjuvant chemotherapy has improved outcomes in patients with Stage III colon cancer.

However, differences in survival have been seen in patients of different ethnic groups.

Causes may include disparities in the use of adjuvant chemotherapy among different ethnic groups, less access to medical care, including screening colonoscopies for early diagnosis, surgery and adjuvant chemotherapy.
Retrospective cohort study of stage III colon cancer patients who were treated in two hospitals between 2004 and 2014.

Inclusion criteria was surgery for stage III colon cancer and age greater than 18 years of age. Characteristics that were examined included age, sex, ethnic group, number of nodes involved, chemotherapy received.

Survival curves with Kaplan Meier estimates were used to determine and compare survival between ethnic groups and treatments.
111 stage III colon cancer patients were identified and 74 patients received chemotherapy from four ethnic groups.

There was no statistical difference between the groups for use of adjuvant chemotherapy, survival or recurrence.

Mean survival and recurrence were substantially shorter for the Asian/Indian cohort compared to the entire cohort (survival: 35 versus 83 months; recurrence: 30 versus 89 months); however, the difference was not statistically significant.

Increased number of nodes was a predictor of survival (HR = 1.06, 95%CI = 1.01–1.11, p = 0.014) but not a predictor of recurrence (HR = 1.05, 95%CI = 0.99–1.12, p = 0.110).
Although in the past studies have shown disparities in the use of adjuvant chemotherapy among Medicare patients with stage III colon cancer, our data does not show difference in use of chemotherapy among different ethnic groups within our system.

The small numbers in the analysis hampers any meaningful analysis to be performed and limits the conclusions that can be made. After patients from different ethnic groups were diagnosed and treated there does not seem to be a difference in survival and recurrence among this groups.

Continued efforts should be taken to resolve racial disparities at the time of cancer treatment.
Thanks!!