IMPROVING INPATIENT TO OUTPATIENT TRANSITION FOR GENERAL MEDICINE CLINIC PATIENTS

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8/2016-1/2017
THE TEAM

• CSE Participants:
  • Julie Gilbreath, MD, FACP, Assistant Clinical Professor Division of General and Hospital Medicine
  • Ramon Gallegos, RN, Director of Operations for Medicine and Medicine Specialties
  • Patricia Reyes, Operations Manager for Access Plus

• Team Members
  • Sean Moore, University Hospital RN
  • Cathleen Hauschildt, Manager Care Coordinator University Hospital
  • Krayton Blower, MD, Internal Medicine resident
  • Taryn Johnson, LVN, General Medicine Clinic
  • Christian Cueva, MD, Internal Medicine resident
  • Norma Porter, Senior Administrative Associate Access Plus
  • Alexia Pratt, Nurse Supervisor at the Robert B. Green
  • Irma Rodríguez, Support Service Robert B. Green
  • Camerino Salazar, Senior Director, Health Analytics
  • Herminia Flores, Medical Assistant General Medicine Clinic
  • Sherry Martin, Facilitator
WHAT WE ARE TRYING TO ACCOMPLISH?

OUR GOAL

To decrease the hospital readmission rate of General Medicine Clinic patients
WHAT WE ARE TRYING TO ACCOMPLISH?

OUR AIM STATEMENT

To increase the number of General Medicine Clinic patients that are seen in clinic within 7 days of hospital discharge from the inpatient medicine service by 20% for the period of November 1 – January 31 2017.
19% of patients experience an adverse event within <2 weeks of hospital discharge. 

1/3 of these events are preventable, and 1/3 could have been ameliorated.
BACKGROUND

Most common adverse events

- Injuries due to medications
- Procedure-related complications
- Infections
- Falls
BACKGROUND

Hospital Discharge

- PCP f/u within 4 weeks
- No PCP f/u within 4 weeks

10x increase RR for same condition
NATIONAL ALL-CAUSE READMISSION RATE

• 30 day readmission rate, all-cause 17.8% (2012)
• Potentially preventable readmissions” (PPR) was 12.3% (2011)
UNIVERSITY HEALTH SYSTEM READMISSION RATE
GENERAL Medicine clinic readmission rate

Calculating .......
DATA COLLECTION PLAN

- Data will be collected on the number of GMC patients discharged from the Medicine teams and ER at University Hospital.
- We will track the days to appointment post-discharge and determine the percentage with appointments within 7 days.
- We will track no-show rate for post-discharge appointments.
- Will continue to monitor through June 30th, 2017.
PROJECT MILESTONES

- Team Created 8/2016
- AIM statement created 8/26/2016
- Weekly Team Meetings 8/2016-1/2017
- Background Data, Brainstorm Sessions 9/6/2016, 10/6/2016, 10/21/2016
- Workflow and Fishbone Analyses 9/23/2016
- Data Analysis 10/31/16, 1/2/2017
- CS&E Presentation- Preliminary 11/11/2016
- Graduation Date 01/13/2017
### Control Chart

**SPC p-Chart: % No-Show Appointments ("Cancelled") (Sep-Oct206)**

<table>
<thead>
<tr>
<th>Week</th>
<th>Admitted</th>
<th>Cancelled</th>
<th>Discharged</th>
<th>Pre-Admission</th>
<th>Total Visits</th>
<th>NoShow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>36</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>66.7%</td>
</tr>
<tr>
<td>2</td>
<td>37</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>40.0%</td>
</tr>
<tr>
<td>3</td>
<td>38</td>
<td>0</td>
<td>10</td>
<td>13</td>
<td>23</td>
<td>43.5%</td>
</tr>
<tr>
<td>4</td>
<td>39</td>
<td>0</td>
<td>7</td>
<td>8</td>
<td>15</td>
<td>46.7%</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>21</td>
<td>47.6%</td>
</tr>
<tr>
<td>6</td>
<td>41</td>
<td>0</td>
<td>8</td>
<td>7</td>
<td>15</td>
<td>53.3%</td>
</tr>
<tr>
<td>7</td>
<td>42</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>50.0%</td>
</tr>
<tr>
<td>8</td>
<td>43</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>33.3%</td>
</tr>
<tr>
<td>9</td>
<td>44</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>50.0%</td>
</tr>
<tr>
<td>10</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

![Proportion for Cancelled](chart.png)
To increase the # of patients that are seen at GMC within 7 days after hospital discharge from medicine service at UHS

Correctly identify pcp on Sunrise and IDX

- Work with IT to fix PCP button on Sunrise and IDX (10/5 RG)
- Temporarily, identify PCP under allergy section (10/5 RG)
- Add resident names to IDX library (10/5 PR)
CHALLENGES

Work with IT to fix PCP button on Sunrise and IDX (10/5 RG)

IT said identifying pcp in Sunrise can’t be done

Will be included in the next Sunrise update (Unknown date)
CHALLENGES

Temporarily, identify PCP under allergy section (10/5 RG)

Were told we would get in trouble for it

Decided to do it anyway until we can find a better solution

Cannot pull a patient panel or create reports
CHALLENGES

Add resident names to IDX library (10/5 PR) → Were told it cannot be done

Still investigating why
To increase the # of patients that are seen at GMC within 7 days after hospital discharge from medicine service at UHS

Correctly identify pcp on Sunrise and IDX

Improve no-show rate

- Have front desk review Televox report daily and call patients (10/5 RG)
- Switch discharge clinic from Monday to Thursday afternoon (10/17 JG)

Goal

Primary Driver

Interventions
To increase the # of patients that are seen at GMC within 7 days after hospital discharge from medicine service at UHS.

**Goal**

**Primary Driver**

- Correctly identify pcp on Sunrise and IDX
- Improve no-show rate
- Ensure proper post-discharge communication and follow up

**Interventions**

- Orient Access Plus on scheduling B755 within 7 days (11/10 PR)
- Create a daily report of hospital discharges (11/10 JG)
- Call patients within 2 days of discharge and chart a TOC note (status, med rec, f/u) (11/1 JG)
- Follow a TOC template for discharge visit (11/10 JG)
- Call no-shows on discharge clinic day and document reason (11/10 JG)
Distributions (negative values excluded)

Days to Follow Up Appt (Sep-Nov 2016)

Control Chart (negative values excluded)

SPC Individuals Chart: Days to Follow-Up Appt (Sep-Nov 2016)
Intervention Dates:
1. 05 Oct 2016
2. 15 Oct 2016
3. 01 Nov 2016
4. 10 Nov 2016

**Conclusion:** No real change in final average Days to Follow-up Appt, but real increase in average during Intervention 1; real decrease in variation during Intervention 2.
### Control Chart

**SPC p-Chart:** % NoShow ("Cancelled") Appointments (Sep-Nov2016)

- **UCL**
- **LCL**
- **g=0.47**
Percent (%) of Patients with a Follow-Up Appointment and Assigned to Robert B. Green Campus, General Medicine Clinic (N = 72) September to November 2016

Source: IDX Appointment System, Allscripts, October to November 2016
Number of Patients Discharge from University Hospital a Follow-Up Appointment and Assigned to Robert B. Green Campus, General Medicine Clinic (N = 21) September to November 2016

Days to a Follow-Up Appointment

<table>
<thead>
<tr>
<th></th>
<th>0 to 7</th>
<th>8 to 14</th>
<th>15 to 21</th>
<th>22+</th>
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<tbody>
<tr>
<td>September</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

- Of the 72 General Medicine patients, 21 (30%) were discharged from an inpatient setting.
- About half received a follow-up appointment within two weeks of discharge.
- In general, patients with a shorter follow-up interval were also more likely to make their primary care appointment.

Source: IDX Appointment System, Allscripts, October to November 2016
WHAT’S NEXT?

• Work with IT to fix PCP button
• Work with IT to add “pcp upon discharge” order embedded in the medicine progress note
• Bypass the order completely and schedule appointment on admission (Access Plus)
• Add resident names to IDX library
• Recruit RBG SW or patient navigator to assist
• Participate in Readmission Prevention Committee efforts
• Expand Discharge clinic
• Add midlevel for these tasks only?
## ROI

<table>
<thead>
<tr>
<th>Investment</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correctly identify pcp on Sunrise and IDX</td>
<td>No additional cost</td>
</tr>
<tr>
<td>front desk review Televox report daily</td>
<td>No additional cost</td>
</tr>
<tr>
<td>Switch discharge clinic from Monday to Thursday afternoon</td>
<td>No additional cost</td>
</tr>
<tr>
<td>Orient Access Plus on scheduling B755 within 7 days</td>
<td>No additional cost</td>
</tr>
<tr>
<td>Create a daily report of hospital discharges</td>
<td>No additional cost</td>
</tr>
<tr>
<td>Call patients within 2 days of discharge and chart a TOC note</td>
<td>No additional cost</td>
</tr>
<tr>
<td>Hire a patient navigator</td>
<td>15$/hour</td>
</tr>
<tr>
<td>Hire a midlevel to run TOC</td>
<td>50$/hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic vs ED visit</td>
<td>800 per visit</td>
</tr>
<tr>
<td>Reduce adverse events</td>
<td>$$$ potentially</td>
</tr>
<tr>
<td>Avoiding Medicare penalty fees for readmission</td>
<td>$$$ potentially annually US health care system</td>
</tr>
<tr>
<td>Patient satisfaction</td>
<td>Soft</td>
</tr>
</tbody>
</table>
### ROI

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>Timely follow-up clinic visit</th>
<th>Not Seen</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Medicine Discharges</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Percent Seen</td>
<td>11.75%</td>
<td>88.25%</td>
<td>100.00%</td>
<td></td>
</tr>
<tr>
<td>Patients Seen / not Seen</td>
<td>141</td>
<td>1,059</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Readmission Rate</td>
<td>0.50%</td>
<td>5.50%</td>
<td>4.91%</td>
<td></td>
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<tr>
<td>Preventable Readmissions</td>
<td>0.7</td>
<td>58.2</td>
<td>59.0</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Optimal of 20% to Clinic</th>
<th>Timely follow-up clinic visit</th>
<th>Not Seen</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Medicine Discharges</td>
<td>1,200</td>
<td>1,200</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Percent Seen</td>
<td>31.75%</td>
<td>68.25%</td>
<td>100.00%</td>
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</tr>
<tr>
<td>Patients Seen / not Seen</td>
<td>381</td>
<td>819</td>
<td>1,200</td>
<td></td>
</tr>
<tr>
<td>Readmission Rate</td>
<td>0.50%</td>
<td>5.50%</td>
<td>3.91%</td>
<td></td>
</tr>
<tr>
<td>Preventable Readmissions</td>
<td>1.9</td>
<td>45.0</td>
<td>47.0</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Difference in Readmissions</th>
<th>Direct Cost of UHS Medical Inpatient</th>
<th>Annual Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.0</td>
<td>6,628</td>
<td>$ 79,536</td>
</tr>
</tbody>
</table>
REFERENCES


THANK YOU