AIMing for Improvement at GIMRAC

Quality Improvement Project on the Rate of Appropriate Emergency Department Referrals for the General Internal Medicine Clinic at St. Catharines Hospital

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Conflict Disclosures

The authors do not have any conflicts to disclose.
Background

- What is the General Internal Medicine Rapid Assessment Clinic (GIMRAC)?

- What are the goals of GIMRAC?
  - Taking consultations from both the emergency department (ED) and the internal medicine ward for patients post-discharge
  - Reducing rate of new hospitalizations and hospital readmissions
  - Not intended to replace GP or manage chronic issues
Overview

PDSA 1: January 2017
- Literature Review

PDSA 2: January 2017
- Environmental Scan

PDSA 3: March 2017
- Needs Assessment

PDSA 4: August 2017
- Implementing Change to Referral Process

PDSA 5: September 2017
- Education Session and Clinic Name Change

PDSA 6: January 2018
- Implementing Changes to Referral Form
PDSA 1: Literature Review

- Discussion among internists at SCH regarding the state of GIMRAC
- Search of existing literature on quality improvement for general internal medicine outpatient clinics
  - Educating referring physicians improved appropriateness of referrals
  - In-person teaching sessions and handout resources were both effective
  - Specific guidelines on referral forms were effective

**Current Issues with GIMRAC**

- Patients do not show up to appointment: 7.7%
- Inappropriate referrals: 30.8%
- Managed (or should be) by another physician: 23.1%
- Issues with scheduling (e.g., lab results N/A): 50.8%
- Issues with continuity of care: 7.7%
PDSA 2: Environmental Scan

- Fracture Clinic
  - Patients booked for appointment at time of visit as opposed to at a later time
  - No consultation with on-call orthopedics prior to making referral

- Cardiac Rapid Assessment Clinic (CRAC)
  - Provided information package to ED physicians on appropriate vs. inappropriate referrals
  - No consultation with on-call cardiology prior to making referral
PDSA 3: Needs Assessment

Strategies for Improvement Identified from Survey of Internists

- Allied health professional should ensure tests are completed: 30.00%
- Patients must have family physician to be seen: 10.00%
- Ensure continuity of care with NP/RN/PA present: 10.00%
- Triage of referrals: 10.00%
- Ensure patient’s chief complaint is not a chronic issue: 10.00%
- Referrals should include discussion with internist or allied health professional: 30.00%
Aim Statement

Making changes to the referral process and facilitating cross-specialty communication between ED physicians and internists to reduce the proportion of inappropriate referrals to the clinic by 50% within two years of starting this project.
PDSA 4: Implementing Change to Referral Process

- Patient seen by ED physician
- Referral directed to bookings department
- Bookings informs patient of appointment date/time
- Patient seen in GIMRAC
- On-call internist consulted for GIMRAC referral
- Patient provided with appointment date/time
- Patient seen in GIMRAC
PDSA 5: Education Session and Clinic Name Change

- Attended quarterly ED physician meeting to communicate proposed changes to GIMRAC and review the aims of the clinic
### Assessing PDSA 4 and 5

<table>
<thead>
<tr>
<th>Outcome Measures</th>
<th>Process Measures</th>
<th>Balancing Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of internist-rated appropriate referrals</td>
<td>Reason that referrals were inappropriate</td>
<td>Number of referrals from the ED</td>
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<td>Follow-up for patients post-clinic</td>
<td>Duration of wait-times to be seen in clinic</td>
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<td></td>
<td>Understanding of changes by ED physicians</td>
<td>Rate of patient no-show</td>
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</tbody>
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Assessing PDSA 4 and 5

**Reason that referrals were inappropriate**

- 48%
- 21%
- 17%
- 4%
- 10%

**Follow-up for patients post-clinic**

**Understanding of changes by ED physicians**

**Process Measures**

- Refer to specialist or being seen by specialist
- Chronic Issue
- Should be seen by GP
- No follow up needed; DCD
- No tangible complaints from patient

**Patient outcomes post-GIMRAC visit**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sent to GP</td>
<td>35</td>
</tr>
<tr>
<td>Follow up in Clinic</td>
<td>10</td>
</tr>
<tr>
<td>Sent to specialist</td>
<td>7</td>
</tr>
<tr>
<td>Admitted</td>
<td>3</td>
</tr>
<tr>
<td>D/C'd with no follow-up</td>
<td>1</td>
</tr>
</tbody>
</table>
Assessing PDSA 4 and 5

Process Measures

- Reason that referrals were inappropriate
- Follow-up for patients post-clinic
- Understanding of changes by ED physicians

ED Physician Familiarity with New Referral Process

- Number of Responses
- Rating

1. 0
2. 0.5
3. 1
4. 1.5
5. 2
6. 2.5
7. 3
8. 3.5
9. 4
10. 4.5
11. 5
Assessing PDSA 4 and 5

Outcome Measures

Rate of internist-rated appropriate referrals

Percentage of Inappropriate Referrals

- Before changes: 47%
- Sep-17: 38%
- Oct-17: 31%
- Nov-17: 27%
Assessing PDSA 4 and 5

Balancing Measures

- Number of referrals from the ED
- Duration of wait-times to be seen in clinic
- Rate of patient no-show

Percentage of AIM Clinic Referrals from ED

- Before changes: 66%
- Sep-17: 64%
- Oct-17: 75%
- Nov-17: 48%
- Dec-17: 40%
- Jan-18: 31%
PDSA 6: Implementing Changes to Referral Form

- Discussion with internists to generate list of most common issues to be seen at AIM clinic
- Change to referral form to include a structured checklist
- Reverting some previous changes to better streamline referral process

- Heart failure
- Hypertension
- COPD (new diagnosis/exacerbation)
- Pneumonia
- Syncope
- Liver disease
- Cirrhosis/hepatitis/jaundice
- Cellulitis
- New onset DM
- Electrolyte abnormalities
- Autoimmune disease/inflammatory arthritis/polyarthritis/gout
- Other
PDSA 6: Implementing Changes to Referral Form

Appropriateness of referrals at AIM

- Blue line: Appropriateness of Referrals
- Red line: Median
Conclusions

1. Communication between internists and ED physicians was crucial in ensuring the goals of the clinic were well understood to all parties.
2. Changing the referral process to include consultation of the on-call internist led to more appropriate referrals but created a barrier for referral, resulting in decreased AIM consults from the ED overall.
3. Changing the referral form to include a structured checklist maintained the improvement in appropriateness of consults while reducing the barrier for referrals.
Limitations

- Lack of stakeholder engagement with ED physicians prior to implementing changes to the referral process

- Did not attain 100% participation from internists on recording AIM Clinic data

- The reduction in the proportion of ED referrals we observed may have been confounded by the simultaneous increase in post-discharge referrals from the internal medicine ward