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Strategies To Improve Control Of Blood A1C In Diabetics

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Project: Adult Clinic - Care for Diabetic Population
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Problem/Impact Statement:
Prior to the implementation of these KPIs, there was an auditing system in place at the Adult Clinic at MMC for targeting patients with poorly controlled Diabetes Mellitus. However, due to lack of essential equipment, variations in staff education, as well as the absence of daily reminders, many of the diabetic patients entering the outpatient clinic had high, or absent A1c levels, denoting that their conditions were not adequately controlled.

Scope:
In Scope: DM patients age 18-75 treated within the Adult Internal Medicine Clinic at Maine Medical Center (MMC)
Out of Scope: DM Patients 18-75 treated outside of the Adult Internal Medicine Clinic at MMC

Goal/Objective:
• KPI 1: 100% of diabetic patients who have an arrived visit and are due for HgbAC will have point of care (POC) A1c testing
• KPI 2: 100% of diabetic patients will have a self-care plan included in the AVS (After visit summary)
• KPI 3: 100% of Diabetic patients with POC A1C greater than 9% will schedule a follow up appointment at checkout
• KPI 4: When Diabetes patients with A1C over 8% call to get a medication refill, the admin staff will schedule that patient for a follow-up visit within a month.
• KPI 5: 100% of diabetics with A1C > 9 are scheduled for a 1 month follow up until the A1C is < 9

Baseline Metrics/Current State:
Baseline: DM patients 18-75 seen in the past year, who have A1C>9 or no A1C reading in the past year

<table>
<thead>
<tr>
<th>% DM Patients</th>
<th>MMC Adult IM Clinic</th>
<th>National Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>21</td>
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<td></td>
</tr>
<tr>
<td>19</td>
<td>17</td>
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</table>

Timing

Currently, and for the past 15 years, the Adult Clinic at MMC has been collecting data on a variety of health control measures, including HbA1C values. There is an interdisciplinary "care model team" that meets monthly, and works to audit these values, change workflows, and develop solutions for the patient population with uncontrolled Diabetes Mellitus. However, there is currently lacking ability to make changes on a day-to-day basis which is hypothesized to be a benefit of utilizing Operational Excellence.

Root Cause Analysis:
Staff not trained to do POC testing. Adult IM clinic does not have POC machine, patients do not receive a self-care plan, variability in patients receiving a follow-up appointment at checkout and other support services (Dietician, Social Work, Care Manager) not consulted.

Countermeasures
<table>
<thead>
<tr>
<th>KPI</th>
<th>Action</th>
<th>Owner</th>
<th>Due Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPI 1: Increase the number of staff trained to do Point of care (POC) A1c testing</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>8/25/2015</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>KPI 1: Daily, Admins identify patients due for A1c Testing and communicate that information to the providers</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>8/25/2015</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>KPI 1: Point of care A1C machine delivered</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>8/25/2015</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>KPI 2: Educate and remind staff to verify that all diabetes patients have self-care plan included in their after visit summary</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>11/30/2015</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>KPI 3: Require that Diabetes patients with POC A1C greater than 9% will schedule a follow up appointment at checkout</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>6/17/2016</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>KPI 4: When Diabetes patients with A1C over 8% call to get a medication refill, the admin staff will schedule that patient for a follow-up visit within a month.</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>9/9/2016</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>Referrals for poorly controlled Diabetes patients, to Dietician, Social Worker, or Care Manager</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>N/A</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>KPI 5: 100% of diabetics with A1C &gt; 9 are scheduled for a 1 month follow up until the A1C is &lt; 9</td>
<td>Equal contributions from PSRs, Medical Assistants, RNs, NPs, and Physicians</td>
<td>Current</td>
<td>Ongoing</td>
<td></td>
</tr>
</tbody>
</table>

Goals
- Maintain monthly review patients >9% or not seen >12 months at clinic level
- Population Health support at health system level

Discussion of Results: There was an overall decrease in % of patients with poorly controlled diabetes which has been attributed to:
- Improved glycemic control
- Contacting patients who had been seen but were controlled
- Elimination of patients no longer in our system

Figure 2: Overall data for percentage of DM patients with an A1C value higher than 9, or no A1C reading within the last year. Start date of each KPI is included for reference of the relationship between lowering this metric and quality improvement tools.

Next Steps
- Population Health support at health system level