8-21-2017

Strategies To Improve Control Of Blood A1C In Diabetics

Jennifer Aronson  
*Maine Medical Center*

Leanne Bellino  
*Maine Medical Center*

Elizabeth Eisenhardt  
*Maine Medical Center*

Diane Bryant  
*Maine Medical Center*

Haley Pelletier  
*Maine Medical Center*

Part of the *Community Health and Preventive Medicine Commons, Endocrine System Diseases Commons, Endocrinology, Diabetes, and Metabolism Commons, Family Practice Nursing Commons, Geriatric Nursing Commons, Hematology Commons, Internal Medicine Commons, Nursing Administration Commons, Nutritional and Metabolic Diseases Commons, Pharmacy and Pharmaceutical Sciences Commons, Primary Care Commons,* and the *Public Health and Community Nursing Commons*

**Recommended Citation**
Aronson, Jennifer; Bellino, Leanne; Eisenhardt, Elizabeth; Bryant, Diane; Pelletier, Haley; Internal Medicine Team; and Adult Outpatient Clinic, "Strategies To Improve Control Of Blood A1C In Diabetics" (2017). *Maine Medical Center*. 1.  
https://knowledgeconnection.mainehealth.org/mmc/1

This Article is brought to you for free and open access by the All MaineHealth at MaineHealth Knowledge Connection. It has been accepted for inclusion in Maine Medical Center by an authorized administrator of MaineHealth Knowledge Connection. For more information, please contact mckeld1@mmc.org.
Authors
Jennifer Aronson, Leanne Bellino, Elizabeth Eisenhardt, Diane Bryant, Haley Pelletier, Internal Medicine Team, and Adult Outpatient Clinic
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 dedicated to repeating the POC A1C
• KPI 4: 100% of diabetic patients with A1C greater than 8% calling for a refill of medication will be scheduled for a follow up DM visit within one month, unless otherwise noted.

Overall Goal: The percentage of DM patients 18-75 seen within the past year who have an A1c > 9, or no recorded A1C reading in the past year will be 18% or under

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

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.

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 not scheduled for a follow-up
• Elimination of patients no longer in our practice
• Population Health support at health system level

Figure 2: Overall data for percentage of DM patients seen in MMC Adult Internal Medicine Clinic with an A1C value higher than 9, or no A1C reading in the past year.

Figure 1: Prior to implementation of Operational Excellence methods: Baseline data for percentage of DM patients seen in MMC Adult Internal Medicine Clinic with an A1C value higher than 9, or no A1C reading in the last year.

Outcomes:

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 not scheduled for a follow-up
• Elimination of patients no longer in our practice

Figure 2: Overall data for percentage of DM patients with an A1C value higher than 9, or no A1C reading in 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:
• Maintain monthly review patients >9% or not seen >12 months at clinic level

Executive Sponsor: Mark Parker Facilitator: Haley Pelletier
Project: Adult Clinic - Care for Diabetic Population Last Updated: 8/21/2017
Team Members: Dr. Jennifer Aronson, Leanne Bellino, Dr. Elizabeth Eisenhardt, Diane Bryant, Internal Medicine Team, Suneela Nayak, Stephen Tzyzik, Ruth Hanselman

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>