Managing diabetic patients in primary care: baseline procedures and implications for change

1 Background

Management of chronic illnesses in the primary care setting relies on care coordination at multiple levels. Providers and staff at Green Spring General Internal Medicine sought to improve the delivery of patient centered, evidence-based care for their patients with diabetes.

Goal: To understand the process and shortcomings of current chronic illness management practices at Green Spring General Internal Medicine, using the Chronic Care Model.

2 Methods

An interdisciplinary team was developed out of the practice’s Comprehensive Unit Based Safety Program (CUSP) including physicians, nurses and administrative staff. The DMAIC process (Define, Measure, Analyze, Improve, Control) was used to understand the current process and plan for change.

Data collection and analysis

1. Quantitative survey

Participants: All staff and providers at Green Spring Station

Survey instrument: The Assessment of Chronic Illness Care (ACIC) plus 2 qualitative free response questions

Domains:
- Organization of the healthcare delivery system
- Community Linkages
- Decision Support
- Delivery System Design
- Clinical Information System
- Total Integration

Analysis: Median scores were calculated for each question and used to identify priority areas for improvement

2. Electronic health record data

Patients:
- Identified through EPIC report
- Last visit to the practice within 2 years
- Diagnosis of diabetes in problem list

Data collected:
- Hemoglobin A1C (hgbA1C) level and date
- Last visit date

Analysis:
- hgbA1C ≥8.0 was defined as uncontrolled diabetes
- Follow up: categorized as ≤3 months, 3–6 months, and >6 months
- ≤3 months established as standard for follow up if patient’s hgbA1C ≥8.0
- Description of distribution of hgbA1C and follow up

Lean Sigma Analysis

Baseline process map
- Created following direct observation and qualitative interviews
- Revised following input from team members

Root cause analysis (RCA)
- Qualitative interviews with providers and staff to create fishbone diagram
- Used to identify initial priority for improvement

Proposed improvement
- Iterative qualitative interviews were used to inform the proposed intervention

2.51 areas identified with “limited support for chronic illness care” (median score 0-2) (Table 1).

Table 1. Areas with limited support for chronic illness care

<table>
<thead>
<tr>
<th>Survey Domain</th>
<th>Participants</th>
<th>Median Score</th>
<th>Implications for change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow up: scheduled by patients and providers in an ad hoc fashion</td>
<td>N=16</td>
<td>2</td>
<td>Create a more standardized process for scheduling follow-up</td>
</tr>
<tr>
<td>Planned visits for chronic illness care scheduled by patients</td>
<td>N = 17</td>
<td>2</td>
<td>Create a more standardized process for scheduling follow-up</td>
</tr>
<tr>
<td>Registry of patients with specific conditions is not available</td>
<td>N = 14</td>
<td>2.5</td>
<td>Develop a diabetic patient registry for ongoing tracking and monitoring</td>
</tr>
<tr>
<td>Information systems/registries do not include patient self-management goals</td>
<td>N = 14</td>
<td>2.5</td>
<td>Incorporate self-management goals in information systems/registries</td>
</tr>
<tr>
<td>Community programs do not provide feedback to the healthcare system/clinic about their patients’ progress in their programs</td>
<td>N = 14</td>
<td>2</td>
<td>Communicate and collaborate with community support programs</td>
</tr>
</tbody>
</table>

3 Results

Survey Results:
- 19 of 37 participants completed the ACIC survey
- 51% answered all questions
- 5 areas identified with “limited support for chronic illness care” (median score 0-2) (Table 1).

Electronic health record data
Of 391 total diabetic patients:
- 21.5% (N=84) had hgbA1C ≥8.0.
- Of these, 47.6% (N=40) had follow up at ≥3 months.

4 Conclusions

The first step in providing chronic care management is to ensure that our patients have disease management visits at the recommended intervals.

We plan to intentionally manage patients with diabetes through the use of principles of safe design:
- Setting standards for patient appointment intervals
- Independent checks at the front desk and through the use of a monthly report
- Learning from our defects by ongoing monitoring of our performance

Using a team based model of care, we seek to empower staff at the front desk and medical office coordinators by establishing clear roles and responsibilities for them in the process

5 Future Directions

- Pilot the proposed process and evaluate its impact
- Engage patients to understand barriers to the scheduling process
- Obtain feedback from patients, providers, and administrative staff on changes implemented
- Additional work is needed to address other priorities identified through this process

6 References


Acknowledgements: We would like to thank Anne McHugh, Kim Curren, Kim Kaiser, and Debra Ross for their continued input and support.

Funding Source: The Helene Fuld Leadership Program for the Advancement of Patient Care Quality and Safety