Realities of Complex Care in Primary Health Care

Diabetes Care Management in Patients With Depression

EMR Case Definitions

Patients with diabetes were identified as those meeting at least two of the following criteria:
- An encounter related to diabetes;
- Diabetes recorded in the Problem List or Health Issues table;
- Medication related to diabetes; and
- At least two lab values or at least five lab values recorded.

Patients with depression were identified as those meeting at least two of the following criteria:
- Having had an encounter related to depression;
- Having had depression recorded in the Problem List or Health Issues table; and
- Having had anti-depressant medication.

Results

Nine percent (n = 8,629) of patients age 18 and older in the PHC VRS data set (n = 89,687) had a diagnosis of diabetes, the majority of whom also had a comorbidity. Of these, 15% (n = 873) had depression as a comorbidity. Three out of four of those with depression as a comorbidity also had another comorbidity.

Patients with depression were more likely to have uncontrolled A1C levels and less likely to have had an A1C test at all in the last 15 months (see figures 1a and 1b).

- Regression analyses indicate that patients with both diabetes and depression were 30% more likely to have an A1C higher than 9%. These patients were also 40% more likely not to have had an A1C test performed in the previous year at all.

Patients with diabetes and depression were more likely to be high service users.
- A patient who falls into the 90th percentile or above in terms of the number of visits made in a two-year period is considered a high service user. This equates to at least 18 visits to a PHC provider in a two-year period.
- Patients with diagnoses of both diabetes and depression were nearly twice as likely to be high service users as patients with a diagnosis of diabetes alone.
- Each additional comorbidity made a patient more than 1.5 times more likely to be a high service user (see Figure 2).

Implications for Patient Care

- Patients with depression are often treated in a primary care setting and may have comorbidities that increase the complexity of their care.
- It appears that, on average, patients with diabetes and depression have lower A1C screening rates and higher A1C levels. Further investigation of this association and that of other relevant clinical measures is recommended.

As part of the PHC VRS, clinicians are provided with patient-centric reports and the Quality Management Improvement Compass (QMIC) (see Figure 3). Quality improvement tools allow clinicians to identify patients that have complex care needs and to plan and deliver better chronic disease prevention and management.

Table 1: Summary of Patient Characteristics

<table>
<thead>
<tr>
<th>Age</th>
<th>Patients With Diabetes Alone</th>
<th>Patients With Diabetes and Depression Only</th>
<th>Patients With Diabetes, Depression and One or More Comorbidities</th>
<th>Total Patients With Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>18–44 Years</td>
<td>453</td>
<td>61%</td>
<td>415</td>
<td>51%</td>
</tr>
<tr>
<td>45–64 Years</td>
<td>1,591</td>
<td>41%</td>
<td>134</td>
<td>2%</td>
</tr>
<tr>
<td>65 Years +</td>
<td>1,212</td>
<td>20%</td>
<td>41</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>3,256</td>
<td>38%</td>
<td>223</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Note
- Comorbidities include asthma, coronary artery disease, hypertension, chronic obstructive pulmonary disease and osteoarthritis.

Source
- Primary Health Care Voluntary Reporting System, Canadian Institute for Health Information.

Figure 1A: Percentage of Patients With Diabetes, With or Without Depression, A1C Higher Than 9%

Figure 1B: Percentage of Patients With Diabetes, With or Without Depression, A1C Not Tested in Past 15 Months

Figure 2: Average Number of Encounters Over a Two-Year Period for Patients With Depression, With or Without Comorbid Conditions

Figure 3: PHC VRS Clinical Practice Quality Tools

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Our Vision

To help improve Canada’s health system and the well-being of Canadians by being a leading source of unbiased, credible and comparable information that will enable health leaders to make better-informed decisions.

About Primary Health Care (PHC)

PHC is the most common health care experienced by Canadians and improvements are essential. Our goal is to establish new pan-Canadian data sources and information that can be used to better understand PHC across Canada, report on PHC indicators and inform health policy and decision-making at various levels.

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