A ROADMAP FOR DIABETES CARE

Vermont Blueprint for Health/ October 20, 2014

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OUTLINE OF PRESENTATION

• WHAT IS A ROADMAP?
• WHY DO WE NEED A ROADMAP?
• HOW DID WE GET STARTED?
• WHAT IS THE PRODUCT/ROADMAP?
• IMPLEMENTATION OF ROADMAP
• DATA TRACKED, OUTCOMES
• LESSONS LEARNED
• PDSA at its best---ROADMAP #2!
What is a Roadmap?

- A tool that a primary care provider can use as a guide to managing chronic medical conditions such as diabetes, asthma, COPD.

- It uses evidence-based medicine to guide diagnostics, treatment strategies and referrals.
Why Do We Need a Roadmap?

- Chronic disease management is one of the cornerstones of future payment models (Accountable Care).
- We need to be patient centered—right care at the right time in the right place.
- We need to use all our resources wisely—including specialists.
- Fosters collaboration/communication between specialty providers and primary care providers.
Why a Diabetes Roadmap in particular?

• Estimated cost of diabetes (2012): $245 billion
  > Hospital inpatient care (43% of total medical costs)
  > Prescription medicines to treat complications of diabetes (18%)
  > Anti-diabetic agents and diabetes supplies (12%)
  > Physician office visits (9%)
  > Nursing/residential facility stays (8%)

• Previous cost (2007) was $174 billion !!
The process—where to start?

- Assembling the team
  - Endocrinology
  - Primary Care Internal Medicine/Family Medicine
  - Community Health Team
  - Administration
  - PRISM
  - Medical Group Education
  - Pharmacy
The Process--continued

- What are the basic goals for the Roadmap
  - Identify patients for referral to specialist
  - Pre-visit preparation (labs or diagnostic tests needed)
  - Streamlining referral to specialist
  - Specific recommendations for management-PCP role, specialist role
  - Clear and consistent communication
# Diabetes Education Referral

## Diabetes Education Referral and Patient Flow

<table>
<thead>
<tr>
<th>Phase</th>
<th>Referral for Diabetes Education</th>
<th>Referral to CHT CDE resource for assessment within CHT</th>
<th>Is referral from UHMD Provider?</th>
<th>CHT Diabetes team screens patient for readiness to change</th>
<th>Is A1C &gt;7?</th>
<th>Under CHT umbrella: CDE Resource (either CHT or Endocrine CDE will screen patients &amp; make assessment)</th>
<th>CDE makes appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Provider makes referral for Diabetes education thru mandatory consult.</td>
<td>No</td>
<td>Yes</td>
<td>UHMD Provider copies CHT on patient note</td>
<td>CHT Diabetes team screens patient for readiness to change</td>
<td>Is A1C &gt;7?</td>
<td>Under CHT umbrella: CDE Resource (either CHT or Endocrine CDE will screen patients &amp; make assessment)</td>
</tr>
<tr>
<td></td>
<td>Non-PCMH</td>
<td>Yes</td>
<td>No</td>
<td>Community provider: Referral request &amp; note is FAXed to CHT</td>
<td>CHT Diabetes team screens patient for readiness to change</td>
<td>Is A1C &gt;7?</td>
<td>Under CHT umbrella: CDE Resource (either CHT or Endocrine CDE will screen patients &amp; make assessment)</td>
</tr>
<tr>
<td></td>
<td>PCMH referral for Diabetes Education</td>
<td>Refer to Endocrinology Clinic for CDE DSMFT with classes as needed</td>
<td>Go to “Adult Diabetes Management: Outpatient Roadmap”, “Education Consult to Endocrine Clinic: CD/E”</td>
<td>Go to “Assess for Readiness to Change” swim lane</td>
<td>Go to appointment with Endocrine CDE</td>
<td>Go to appointment with Endocrine CDE</td>
<td>Go to appointment with Endocrine CDE</td>
</tr>
</tbody>
</table>

## Assess Readiness to Change

- **Goals:** Nutrition, physical activity, monitoring, behavior, problem solving, reducing risk.
- **Determine patient’s readiness for education patient has had. What worked.**
- **Determine barriers including insurance status, whether co-pay is an issue.**
- **Patient is asked to complete assessment tools:**
  - **Assessment tools:** AUDIT-C, GAD-7, PHQ-9, AADE-F
- **Referral to behavioralist?**
- **Referral to education?**
- **Yes**
- **Go to Behavioralist Referral**
- **Go to referral**

**CDE will copy PRN HM note to CDE pool, to original PCP & Endo specialist if seen or referred for visit**
Re: @NAME@
Date of Visit: @ED@
Date of Birth: @DOB@

Dear Dr. @FATO1STCC@:

I had the pleasure of seeing your patient, @NAME@, in consultation in the Vermont Regional Diabetes Center for further evaluation and management of their @DIAGX@.

@SEC2@

In addition, the patient should have a yearly assessment of their glomerular filtration rate (GFR), fasting lipids and urine micro albumin ratio. The patient should have their A1c repeated in *** months.

As always, if you have any questions of concerns regarding your patient’s evaluation at the Vermont Regional Diabetes Center please feel free to contact me.

Sincerely,
@ENCPROVNMTITLE@
Diabetes Registry

- Identifies patients due for primary care follow up or who have not met treatment goals
- Identifies patients who have not met chronic disease goals and could benefit from consultation
- Leverages PRISM functionality to support population management
- Criteria developed for management of registry data
  - Registry data reviewed quarterly as a component of the Transforming Primary Care Initiative
  - Action taken per protocol and/or provider discretion
    > i.e. Patient without PCP visit in > 3 months and/or have A1C >8.0, PCP visit scheduled and A1C completed in advance of visit
Clinical Operations / Population Management

- **Clinical Care Associates**
  - Trained in how to run PRISM Registry reports for Diabetes
  - Algorithm designed:
    - Patients with A1c>8 identified/reviewed with provider
    - If no visit within 6 months they are scheduled (regardless of A1c)
    - Pre-visit planning gets labs done prior to patient being seen

- **Weekly coordination huddle** - reviews referral recommendations
Diabetes Registry View

Registries Summary

DOB: 8/5/1965

Registry Information

<table>
<thead>
<tr>
<th>Registry</th>
<th>Status</th>
<th>First Included On</th>
</tr>
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<tbody>
<tr>
<td>Diabetes Registry</td>
<td>Active</td>
<td>12/12/2012 0:43</td>
</tr>
<tr>
<td>Hypertension Registry</td>
<td>Active</td>
<td>4/14/2013 15:53</td>
</tr>
<tr>
<td>Obesity Registry</td>
<td>Active</td>
<td>4/14/2013 16:53</td>
</tr>
</tbody>
</table>

Metric Information

Diabetes Registry

Key Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Metric Value</th>
<th>Associated Date</th>
<th>Last Checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Recent BMI</td>
<td>51.45</td>
<td>4/30/2013</td>
<td>5/2/2013</td>
</tr>
<tr>
<td>Most Recent BP - Diastolic</td>
<td>74</td>
<td>4/30/2013</td>
<td>5/2/2013</td>
</tr>
<tr>
<td>Most Recent BP - Systolic</td>
<td>126</td>
<td>4/30/2013</td>
<td>5/2/2013</td>
</tr>
</tbody>
</table>

General

<table>
<thead>
<tr>
<th>Metric</th>
<th>Metric Value</th>
<th>Associated Date</th>
<th>Last Checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current PCP</td>
<td>JACOBS, ALICIA A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Location</td>
<td>MCHV CAMPUS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Past Visit Information

<table>
<thead>
<tr>
<th>Metric</th>
<th>Metric Value</th>
<th>Associated Date</th>
<th>Last Checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Recent Encounter Date</td>
<td>4/30/2013</td>
<td>5/1/2013</td>
<td>1:34</td>
</tr>
<tr>
<td>Most Recent Encounter Type</td>
<td>History</td>
<td>5/1/2013</td>
<td>1:34</td>
</tr>
<tr>
<td>Most Recent Inpatient Admission Date</td>
<td>4/30/2013</td>
<td>5/1/2013</td>
<td>1:34</td>
</tr>
<tr>
<td>Most Recent Office Visit Date</td>
<td>4/2/2013</td>
<td>5/1/2013</td>
<td>1:34</td>
</tr>
</tbody>
</table>

Vitals

<table>
<thead>
<tr>
<th>Metric</th>
<th>Metric Value</th>
<th>Associated Date</th>
<th>Last Checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>First BMI</td>
<td>51 34</td>
<td>5/7/2012</td>
<td>5/2/2013</td>
</tr>
<tr>
<td>First BP - Diastolic</td>
<td>82</td>
<td>5/7/2012</td>
<td>5/2/2013</td>
</tr>
<tr>
<td>First BP - Systolic</td>
<td>122</td>
<td>5/7/2012</td>
<td>5/2/2013</td>
</tr>
</tbody>
</table>
Referral Tracker

- Coordination of appointments between PCP office and specialty office.
  - Specialty office calls patient directly to set up appointment
  - Communication sent back to PCP office regarding scheduling appointment if conflict: Patient declined, Could not contact patient etc.
  - System alerts PCP staff when appointment is complete—to ensure that documentation received. NCQA requirement for closing the loop.
Implementation

- PILOT SITE—Colchester Family Practice

- ROLL OUT TO OTHER SITES
  - MD from team visited provider teams at sites to introduce roadmap.
  - Medical Education came to provide technical support
Data Tracked

- Number of referrals to CDE on Community Health Team
- Number of referrals to endocrine specialty office
- Length of time until first appointments
- Appointment utilization: no show, no contact
- Clinical parameters-
- ER utilization for diabetes diagnosis
## Measures of Success

<table>
<thead>
<tr>
<th>Check all the perspectives that apply:</th>
<th>Outcome Measure:</th>
<th>Baseline Outcome Measure</th>
<th>Target Outcome Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>Decrease in ED visits</td>
<td>TBD</td>
<td>50%</td>
</tr>
</tbody>
</table>
| Clinical                              | Blood pressure $< 130/80$ mm Hg  
Hb A1c $< 8.0\%$  
LDL cholesterol $< 100$ mg/dl       | TBD                      | 80%                    |
| Process                               | Primary care visits $\geq 2$ visits per year  
Hb A1c $1-4$ tests per year  
Urine protein yearly  
Documented foot exam at every regular visit  
Documented retinal exam at least yearly  
Total cholesterol at least yearly  
Smoking cessation at each visit  
Influenza vaccine yearly  
Pneumococcal vaccine per protocol  
Utilization of roadmap for communication | TBD                      | 100%                   |
| Learning                              | Increase in % of patients educated about their diabetes  
Increase in % of patients referred to diabetes educator | TBD                      | 100%                   |
Data--Roadmap Referrals

- Referrals for Diabetic Education (split 50/50 CDE/RN):
  - June 2014: 67
  - July 2014: 81
  - August 2014: 56

- Referrals for Endocrinology
  - June 2014:
  - July 2014:
  - August 2014:
Diabetes Education (March 2013 – January 2014)
## Referral to Endocrinology for Patients with A1C>8

<table>
<thead>
<tr>
<th>Location</th>
<th>Pre-Intervention (June 2011 - Nov 2012)</th>
<th>Post-Intervention (Dec 2012 - May 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesculapius</td>
<td>17%</td>
<td>14%</td>
</tr>
<tr>
<td>Berlin</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Colchester</td>
<td>38%</td>
<td>24%</td>
</tr>
<tr>
<td>Given Burlington</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>Given Essex</td>
<td>29%</td>
<td>21%</td>
</tr>
<tr>
<td>Given Williston</td>
<td>18%</td>
<td>11%</td>
</tr>
<tr>
<td>Hinesburg</td>
<td>34%</td>
<td>16%</td>
</tr>
<tr>
<td>Milton</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>South Burlington</td>
<td>32%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>21%</strong></td>
<td><strong>12%</strong></td>
</tr>
</tbody>
</table>
A1C Capture Rate by Clinic
Data-continued

Analysis

*Diabetes Patients with A1C > 8*

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<th>Post-Intervention (Dec 2012 - May 2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesculapius</td>
<td>20%</td>
<td>22%</td>
</tr>
<tr>
<td>Berlin</td>
<td>28%</td>
<td>31%</td>
</tr>
<tr>
<td>Colchester</td>
<td>30%</td>
<td>33%</td>
</tr>
<tr>
<td>Given Burlington</td>
<td>27%</td>
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<td>28%</td>
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<tr>
<td>Average</td>
<td><strong>24%</strong></td>
<td><strong>27%</strong></td>
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Although it may be too soon to see rates of A1C > 8 decline, this number should decrease over time as more patients are managing their condition, through medication and/or lifestyle change. The increase percentage of patients A1C > 8 might be due to worsening of one’s condition or because perhaps more providers are getting better at testing for A1C.
Lessons Learned/Challenges

- Getting provider “buy in” to this new system
- Getting patients to engage
- Changing recommendations from medical societies (ADA, USPTF, ACC)—hard to keep up at times.
PDSA cycle at its best—ROADMAP #2 !!
Next steps

- Will introduce this new/updated Roadmap to the primary care sites.
- Continued registry work and reinforcement of protocol with CCA staff.
- Spread to our affiliate practices in Plattsburgh.
- Recollect data and analyze twice per year.