Diabetes Prevention in Primary Care

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My Focus

- Master Certified Health Education Specialist (MCHES)
- 15+ years working in family medicine (MSU)
- Health behavior change to prevent and manage disease; and how health care systems can support this goal
- Interested in qualitative and mixed methods research

Agenda

- What does the evidence say about diabetes prevention in practice?
- What is happening “out there”?

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Prevention of Diabetes

• We know that patients who reduce their weight, eat a healthier diet and are physically active reduce their risk of developing type 2 diabetes (or at least delaying it)\(^1\)
• Even small amounts of weight loss (5-10% of body weight) result in reduction of risk
• The question is – how do we get patients to do those things?

Managing Obesity in Primary Care

Recent narrative review randomized controlled trials of the management of obesity in primary care\(^2\)
• Brief (10-15 mins) behavioral counseling delivered by primary care providers (PCPs) at monthly to quarterly visits - Mean weight losses of 0.1-2.3 kg
• Combined with weight loss medication - Losses increased to 1.7-7.5 kg
• Collaborative treatment: MA's delivered brief monthly behavioral counseling in conjunction with PCPs - 1.0-4.6 kg up to 2 years
• Remotely delivered, intensive (>monthly contact) behavioral counseling, as offered by telephone - 0.4-5.1 kg

Further study is needed
• frequency and duration of visits required to produce clinically meaningful weight loss (>5%) in primary care patients
• examine the cost-effectiveness of PCP-delivered counseling, compared with that potentially provided by registered dietitians or well-studied commercial programs.

Identifying Diabetes Risk

• Consensus panel on getting health risk assessments in EMR determined standards and recommendations for what should be assessed\(^3\)
• How to assess this information?
Keep watching...

- My Own Health Record (MOHR)³
- Test whether primary care practices can systematically implement the collection of patient-reported information and provide patients needed advice, goal setting, and counseling in response
- Cluster randomized delayed intervention trial. Nine pairs of diverse primary care practices will be randomized to early or delayed intervention 4 months later
- **TRIAL REGISTRATION:** Clinicaltrials.gov: NCT01825746

Develop Website/Portal

One is MyPreventiveCare.org
- Patients from 6 primary care practices were recruited and randomized to a basic website or an enhanced website⁴
- Patients were prompted to return for follow-up assessments at 3 and 6 months after enrollment
- Of 7706 participants, 169 (2.2%) targeted for recruitment actually used the website.
- Both web-based interventions seemed to assist patients with making positive changes in their behavior, especially activity level and healthful diet

Assessment in Practice

- We studied care manager follow-up on health behaviors
- Patients in care management assessed at entry to care management, 3, 6 and 12 months later
- Phone or in person visit
- Demographics, self-management behaviors, PHQ-2, health status

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Follow-up Rates at 3, 6, and 12 Months by Care Manager

<table>
<thead>
<tr>
<th></th>
<th>Practice 1</th>
<th>Practice 2</th>
<th>Practice 3</th>
<th>Practice 4</th>
<th>Practice 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>CM1 117</td>
<td>CM2 145</td>
<td>CM3 217</td>
<td>CM4 14</td>
<td>CM5 94</td>
<td>706</td>
</tr>
<tr>
<td>3 Months</td>
<td>47.9</td>
<td>63.6</td>
<td>84.8</td>
<td>21.4</td>
<td>50</td>
<td>60.5</td>
</tr>
<tr>
<td>6 Months</td>
<td>35</td>
<td>52.3</td>
<td>70.3</td>
<td>0</td>
<td>48</td>
<td>50.4</td>
</tr>
<tr>
<td>12 Months</td>
<td>37.6</td>
<td>38.6</td>
<td>64.1</td>
<td>36.9</td>
<td>48.9</td>
<td>44.3</td>
</tr>
</tbody>
</table>

Data at 3, 6, and 12 months are percentages

Once risks identified – Getting help

- Resources inside the practice
- Resources outside the practice
- Some of both? Bridging?

Additionally...

- Complaint from care managers: providers didn’t look at the data enough
- Qualitative Study in BigHorn PBRN (Colorado) – patients want providers to review the info if they take the time to fill it out – make a difference in their care

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Connecting to Resources

Study evaluating connection to YMCA for DPP:

- Adults with BMI ≥24 kg/m² and blood glucose 6.1-11.1 mmol/L who had been previously enrolled in a cluster-randomized trial comparing a group-based DPP lifestyle intervention versus brief advice alone.
- 72% of 92 participants enrolled in an extension study, and all were offered a group lifestyle maintenance program at the YMCA.
- At 28 months, after 8-month lifestyle maintenance intervention, significant weight losses compared to baseline (brief advice controls: -3.6%; 95% CI: -5.8 to -1.4; Intensive lifestyle: -6.0%; 95% CI: -8.8 to -3.2).

The Problems with Referral

- CHERL study - People didn’t “go” very easily – needed a lot of prodding to connect – accountability important.
- Unpublished study by David West, PhD, at UCD – PCPs in CO: 192 referrals to the Y for weight loss, 17 did it and 15 lost weight.

Connector Person

We studied a community health educator referral liaison (CHERL):

- 15 practices in three Michigan communities.
- PCP referred adult patients needing improvement in at least one of four unhealthy behaviors.
- The CHERL contacted referred patients by telephone; assessed health risks; provided health behavior-change counseling, referral to other resources, or both; and sent patient progress reports to referring clinicians.
- 797 referrals over 8 months, a referral rate of 0%-2% per practice. Among referred patients, 55% enrolled, and 61% of those participated in multiple-session telephone counseling; 85% were referred to additional resources.
- Among patients enrolling, improvements (p<0.001) were reported at 6 months for BMI, dietary patterns, alcohol use, tobacco use, health status, and days of limited activity in the past month.

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Bringing Resources into the Practice

Care Managers – Role
- Practice team member that works together with others to ensure patients are identified and provided assistance with diabetes prevention and self-management

Function
- Individual and group visits with patients with and without physician to encourage healthy lifestyle for disease prevention and self-management of condition
- Community resource expert – referral and coordination
- Quality improvement and team planner – examine w/team practice performance and goals for improvement

Did providers refer? (among those who did end up participating)

Patients in Care Management

Average Number of Days Per Week Following a Healthy Eating Plan

Average Number of Days Per Week Following a Specific Diet (>5 servings of fruits/veggies and limiting high fat and full dairy)
Patients in Care Management

Average Number of Days per Week Participating in Physical Activity

- Practice 1
- Practice 2
- Practice 3
- Practice 4
- Total

Baseline 3-month 6-month 12-month
*p<0.05, **p<0.01, ***p<0.001

Patients in Care Management

Change in Average Systolic Blood Pressure Over Time

- Practice 1
- Practice 2
- Practice 3
- Practice 4
- Practice 5

Baseline 3-month 6-month 12-month
*p<0.05, **p<0.01, ***p<0.001

Patients in Care Management

Change in Average Weight Over Time

- Practice 1
- Practice 2
- Practice 3
- Practice 4
- Practice 5
- Total

Baseline 3-month 6-month 12-month
*p<0.05, **p<0.01, ***p<0.001

Patients in Care Management

Change in Average A1c Values Over Time

- Practice 1
- Practice 2
- Practice 3
- Practice 4
- Practice 5
- Total

Baseline 3-month 6-month 12-month
*p<0.05, **p<0.01, ***p<0.001
Patients in Care Management

Change in Average LDLs Over Time

- Practice 1
- Practice 2
- Practice 3
- Practice 4
- Practice 5
- Total

Baseline 3-month 6-month 12-month

*Caveats with Care Management...

- Primary care practices can implement care management
- What care management is and how it is structured varies widely
- Qualities of programs are likely to make a critical difference in explaining diverse results
- RD has funding to do this – providers most comfortable referring to RD for weight mgmt

*How to structure care differently to address diabetes prevention*

- Group visits, shared medical appointments
- Teamlet with MA’s
- Two MA’s to one provider to do additional education with patients

*Chronic Care Model*

Functional and Clinical Outcomes

1. Community
   - Resources and Policies
   - Organization of Health Care
2. Health System
   - Self-Management Support
   - Delivery System Design
3. Informed, Activated Patient
4. Productive Interactions
5. Prepared, Proactive Practice Team
6. Clinical Information Systems

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References


