Sustainability Model for Diabetes Care in Rural Arizona

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To establish and evaluate the infrastructure for a comprehensive and sustainable diabetes self-management program in partnership with local health care providers in a rural Arizonan community led by Mt. Graham Regional Medical Center in Safford, AZ and Carondelet Diabetes Care Center in Tucson, AZ in order to offer a continuum of diabetes care.
Learning Objectives

- Describe three elements in the improvement of care of patients with diabetes by using the Planned Care Model and developing a local Diabetes partnership

- Identify two principles for developing sustainable local networks
Mt. Graham Regional Medical Center

Safford, AZ
Southeastern Corner of Arizona in Graham County.

• Closest Metropolitan Area: Tucson, AZ – 140 miles

• Closest Hospital of Equivalent Size:
  Silver City, NM – 100 miles

Closest Target, JCPenny, Olive Garden, Staples and Local Television Station:
  Tucson, AZ – 140 miles
Current CHN Telehealth Delivery Sites
Carondelet Telemedicine Services

- TeleDiabetes Services
  - TeleOphthalmology
  - Medical Nutrition Therapy
  - TeleDiabetes Day Clinics

- Telederm

- Telecardiology

- TeleProfessional Classes
  - Diabetes
  - Cardiology

Carondelet Health Network
Formulate the partners

Establish the meeting schedule and structure
- Adopt the ADA Advisory Board structure
- Meet Quarterly initially then biannually

Provide oversight for the grant components

Train Mt. Graham professionals
The Partnership

- Carondelet Diabetes Care Center
- Mt. Graham Regional Medical Center
  - CEO
  - CNO
  - Community Health Director
  - Safford Community Health Center NP
  - Home Health Nursing Director
  - Two Primary Care Providers
  - Local Podiatrist
  - Diabetes Patient
Diabetes Core Classes on site
Telemantoring from Tucson
CDEI Advance Classes

Gestational Diabetes, Type 1, Insulin Pump,
Wound Care,
Renal Care
Clinical Delivery System

- An ADA recognized Diabetes Self-Management Program at Mt. Graham Regional Medical Center operated as a Carondelet satellite
- A One-Stop” Quarterly Diabetes Day Clinic offering eye exams, foot exams, labs and Medical Nutrition Therapy
- A MGRMC Diabetes Nurse Educator leased in the Primary Care offices
- A free monthly Community Diabetes Information Session
Diabetes Self-Management Classes
Diabetes Clinics with Health Plans

- Annual Eye and Foot Exams
- MNT
- Vital Signs and Labs
- MGRMC = 41
- Canyonlands = 11
UA Mobile Health Unit, MGRMC & Carondelet for Diabetes Day at Canyonland CHC in Safford
MGRMC Diabetes Nurse Educators leased to Gila Valley Clinic
The partnership adopted the ADA Guidelines for the DSMT Program and Primary Care Practice

The DSMT utilized the Carondelet DSMT curriculum, patient workbook and meal plan

The Primary Care Practice utilized the Carondelet Medical Group diabetes format for Diabetes Education in the PCP offices
The Partnership leveraged the following resources:

- Mt. Graham Regional Medical Center nursing and dietary staff
- Safford Community Health Center staff
- Carondelet Diabetes Care Center staff
- University of Arizona Mobile Health Clinic
- Safford physicians and podiatrist
- Carondelet Ophthalmologists
- Home Health agency
The Partnership adopted the Carondelet Diabetes Care Center tools

- Patient Workbook
- Patient Meal Plan
- Patient Diabetes Passports
- Level of Confidence Tool
- Satisfaction and Knowledge gained tools
Diabetes Care Centers
WORKBOOK

Meal Plan

My Personal Meal Plan

Name: ___________________________ Date: ___________________________

Your Meal Plan will help you manage your diabetes and improve your overall health. The Dietitian designed this plan to fit your health needs and lifestyle, bringing this with you to each session. If you have questions or problems, we will work with you to adjust the meal plan so it “fits.”

What is inside:
Your daily nutrition needs, information on carb counting, food portions, label reading, and a food log.

Dietitian: ___________________________ Phone: ___________________________

Notes: ________________________________________________________________
Clinical Information Systems

- The Partnership agreed to utilize the Carondelet Diabetes Care Center tracking methodology

- Information is reported at Biannual Partnership Meetings
Outcomes

- Partnership continues to meet biannually
- More than 10 RNs and 1 RD have been trained and continue to receive on-going education.
- 2 RNs are planning to become CDEs
- Over 100 patients have completed the DSMT program
- 52 patients have participated in the Diabetes Day Clinics
- One physician office leases a Diabetes Nurse Educator for their office
- Monthly Community Classes
Review: On-Going Goals

Continue to strive for 75% capacity rate

<table>
<thead>
<tr>
<th>Location</th>
<th>Quarter 1</th>
<th>Quarter 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSM</td>
<td>73%</td>
<td>41%</td>
</tr>
<tr>
<td>CSJ</td>
<td>70%</td>
<td>81%</td>
</tr>
<tr>
<td>GV</td>
<td>54%</td>
<td>70%</td>
</tr>
<tr>
<td>THH</td>
<td>56%</td>
<td>50%</td>
</tr>
<tr>
<td>MGRMC</td>
<td>84%</td>
<td>69%</td>
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</table>
## MGRMC Diabetes Classes

<table>
<thead>
<tr>
<th>Month</th>
<th># attended</th>
<th># completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 08</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Sep</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Oct</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Nov</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Dec</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Jan 09*</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Feb</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Mar</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

* Mine Layoffs
A1C collection March – August 2009

- Pre & post 4 month A1c:
  - CSM (n=95)  42% collected
  - CSJ (n=109)  51% collected
  - GV (n=18)  61% collected
  - MTG (n=15)  40% collected

  MTG data May-July
<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
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</thead>
<tbody>
<tr>
<td>CSJ</td>
<td>7.6%</td>
<td>6.4%</td>
</tr>
<tr>
<td>CSM</td>
<td>8.8%</td>
<td>7.0%</td>
</tr>
<tr>
<td>GV</td>
<td>9.75%</td>
<td>7.0%</td>
</tr>
<tr>
<td>MTG</td>
<td>8.8%</td>
<td>7.1%</td>
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</table>
# Post-Program Confidence Levels

<table>
<thead>
<tr>
<th>Self-Management Behavior</th>
<th>Oct 08-Dec 08</th>
<th>Jan 09-March 09</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can check blood sugars correctly</td>
<td>4.8</td>
<td>4.6</td>
</tr>
<tr>
<td>2. Make healthy food choices</td>
<td>4.4</td>
<td>4.3</td>
</tr>
<tr>
<td>3. Know which foods are carbs</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>4. Know about meds and side effects</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>5. Know how to exercise regularly &amp; safely</td>
<td>4.2</td>
<td>4.7</td>
</tr>
<tr>
<td>6. Can find diabetes info and support</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>7. Know signs of low BG and what to do</td>
<td>4.7</td>
<td>4.9</td>
</tr>
<tr>
<td>8. Can check feet for problems/take care of feet</td>
<td>4.4</td>
<td>4.9</td>
</tr>
</tbody>
</table>

Target = 4.5 or higher (4.5 = 95% confidence)
Knowledge Assessment

- Administered pre- and post-program
- Multiple choice items

<table>
<thead>
<tr>
<th>Item</th>
<th>% Correct Answers Oct 08 – Dec 08</th>
<th>% Correct Answers Jan 09-March-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1c Goal</td>
<td>79%</td>
<td>100%</td>
</tr>
<tr>
<td>Fasting BG goal</td>
<td>74%</td>
<td>100%</td>
</tr>
<tr>
<td>2 hr PP goal</td>
<td>93%</td>
<td>100%</td>
</tr>
<tr>
<td>BP goal</td>
<td>86%</td>
<td>100%</td>
</tr>
<tr>
<td>Care goal</td>
<td>97%</td>
<td>100%</td>
</tr>
<tr>
<td>AVE</td>
<td>87%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Final Survey

- Measures patient program satisfaction
- Completed end of last session
- 8 Satisfaction elements, scale 1-5
- Form changed Oct. 1, 2008
- Target 4.5 or higher (4.5= 95% satisfaction)
<table>
<thead>
<tr>
<th>Satisfaction Item</th>
<th>Oct 08- Dec 08</th>
<th>Jan 09-March 09</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Class times convenient</td>
<td>4.4</td>
<td>4.1</td>
</tr>
<tr>
<td>2. Classes a reasonable length</td>
<td>4.7</td>
<td>4.5</td>
</tr>
<tr>
<td>3. Enough breaks during classes</td>
<td>4.7</td>
<td>4.7</td>
</tr>
<tr>
<td>4. Workbook helpful</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>5. Slides and class materials helpful</td>
<td>4.8</td>
<td>4.9</td>
</tr>
<tr>
<td>6. Staff and instructors courteous</td>
<td>4.9</td>
<td>5.0</td>
</tr>
<tr>
<td>7. Classes started on time</td>
<td>4.7</td>
<td>4.9</td>
</tr>
<tr>
<td>8. Teachers knowledgeable about diabetes</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>AVE</strong></td>
<td><strong>4.7</strong></td>
<td><strong>4.7</strong></td>
</tr>
</tbody>
</table>
Unforeseen Issues

- Decline of Economy resulted in layoffs in copper mine
  - People were afraid to go for education or diabetes day clinics
  - Increase in uninsured at CHC
- PCP practices overwhelmed with growing volume and lack of space
  - Inability for PCP offices to incorporate RN Diabetes Educator into office practice due to space/time
Sustainability

- MGRMC decided to stay a satellite of CHN
- Establishing leasing agreement between MGRMC and Carondelet Diabetes Care Center for RNs and RD payment
- Setting targets for attendance to achieve breakeven
- Spread to more PCP offices
- Continue Diabetes Day Clinics
- Continue Partnership
Arizona Department of Health Services is currently performing evaluation of Chronic Care Model to measure the level of system change achieved during the project period.
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