Behavioral Interventions and Psychosocial Care for People with Diabetes

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Overview

• Part 1: Diabetes
  • What is it?
  • Models of care

• Part 2: Psychosocial Care in Diabetes
  • But Why? *The psychosocial onion*
  • ADA Position Statement
  • But How? *The case for integration*
Overview

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Diabetes – What is it?

- Type 2 diabetes (T2D)...
  - 90-95% of all cases.
  - Causes blood glucose (sugar) levels to rise.
  - Can lead to organ damage and other serious complications when not adequately managed.

- Compared with non-Latino whites...
  - Latinos have a 66% higher risk of developing T2D.
  - Latinos with diabetes suffer more complications and hospitalizations, and an increased mortality rate.
Diabetes – What is it?

• Good blood sugar control can improve outcomes.
• This can be achieved through lifestyle changes:
  • Medications
  • Blood glucose-monitoring
  • Diet
  • Exercise
Diabetes – What is it?

• There are many long-term benefits to good diabetes care, but very few immediate ones.

• On the other hand, there are many immediate benefits to ignoring diabetes.
50% of patients do not take chronic disease medications as prescribed.¹

50% of patients leave an office not understanding provider recommendations.²

>50% of patients with diabetes do not know their A1c level or goal.³

Only 1 in 10 patients follow provider-recommended guidelines for lifestyle changes.¹

Rarely enough time in a typical medical visit to adequately address health behavior change.

Only 5-7% access diabetes self-management education (DSME)

Innovative, team-based care models have been developed to support individuals living with diabetes.
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EXAMPLE 1: Project Dulce

Multidisciplinary Team
RN/CDE, Physician, Medical Assistant

Diabetes Education
Peer Educator

Diabetes Electronic Registry

Decision Support Tools
Peer-Led Diabetes Education Programs in High-Risk Mexican Americans Improve Glycemic Control Compared With Standard Approaches

A Project Dulce promotora randomized trial

HbA1c (%) vs Time

- Project Dulce Peer Education
- Control

Baseline, Month-4, Month-10

p-values: p = 0.14, p = 0.85, p < 0.01, p < 0.01
Project Dulce: *From the community, for the community*

**Partners:**
- UCSD School of Medicine
- County Public Health Dept
- SDSU School of Public Health
- Hospitals
- Community Clinics
- CBOs

*Project Dulce Design - 1997*
Project Dulce: Graphic, low-literacy patient education

Cambios de Estilo de Vida

- Ejercicio
- Dieta
- Medicina
- Ensayo

Hypoglycemia (Low Blood Sugar)

- Shaking
- Rapid heartbeat
- Headache
- Sweating
- Impaired vision
- Dizziness
- Hunger
- Anxious
- Irritable
- Weakness, fatigue
Estimating Portion Sizes/Food Label

1. Fist = 1 cup
   - Example: three servings of pasta or two servings of oatmeal (one cup pasta = three servings)

2. Palm or deck of cards = 3 oz
   - Example: a cooked serving of meat

3. Thumb Tip = 1 teaspoon
   - Example: a serving of mayonnaise or margarine

4. Handful = 1 or 2 oz
   - Example: a snack food

5. Thumb = 1 oz
   - Example: a piece of cheese

Nutrition Facts

<table>
<thead>
<tr>
<th>Serving Size</th>
<th>1/2 Container (47 g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Per Serving</td>
<td></td>
</tr>
<tr>
<td>Calories 180</td>
<td>Calories from Fat 80</td>
</tr>
<tr>
<td>Total Fat 8 g</td>
<td>12 % Daily Value</td>
</tr>
<tr>
<td>Saturated Fat 4 g</td>
<td>20 %</td>
</tr>
<tr>
<td>Trans Fat 0 g</td>
<td>0 %</td>
</tr>
<tr>
<td>Cholesterol 0 mg</td>
<td>0 %</td>
</tr>
<tr>
<td>Sodium 850 mg</td>
<td>35 %</td>
</tr>
<tr>
<td>Total Carbohydrate 35g</td>
<td>8 %</td>
</tr>
<tr>
<td>Dietary Fiber 1g</td>
<td>4 %</td>
</tr>
<tr>
<td>Sugars 3g</td>
<td></td>
</tr>
<tr>
<td>Protein 6g</td>
<td></td>
</tr>
</tbody>
</table>

Step 1

1. Look at the serving size

Step 2

2. Look at the total grams (g) of carbohydrate only
   - Sugars are already counted in the total carbohydrate.

Step 3

3. Use scale below to know how many carb servings you’re eating.

   - Close to 15g = 1 carb serving
   - Close to 30g = 2 carb servings
   - Close to 45g = 3 carb servings
   - Close to 60g = 4 carb servings
   - Close to 75g = 5 carb servings

Learn more about Scripps Whittier Diabetes Institute, visit scripps.org/diabetes or call 1-877-WHITTIER (944-8643).

Calculando el tamaño de las porciones de alimentos

1. Pulpo = 1 taza
   - Ejemplo: tres porciones de pasta o dos porciones de avena (una taza de pasta = tres porciones)

2. Palma de la mano o mazo de cartas = 3 oz
   - Ejemplo: Una porción de carne cocinada

3. Puño del pulgar = 1 cucharadita
   - Ejemplo: Una porción de mayonesa o margarina

4. Puñado = 1 o 2 oz
   - Ejemplo: Una onza de nueces = un puñado
   - Dos onzas de pretzels = dos puños

Paso 1

1. Revise el tamaño de la porción

Paso 2

1. Solo vea el total de gramos (g) de carbohidratos. Los azúcares ya están contados en el total de carbohidratos.

Paso 3

1. Use la escala de abajo para saber cuántas porciones de carbohidratos está comiendo.

   - Cerca de 15g = 1 porción de carbohidratos
   - Cerca de 30g = 2 porciones de carbohidratos
   - Cerca de 45g = 3 porciones de carbohidratos
   - Cerca de 60g = 4 porciones de carbohidratos
   - Cerca de 75g = 5 porciones de carbohidratos

Para más información comuníquese con Scripps Whittier Diabetes Institute: 1-877-944-8843 o 655-678-7050
Project Dulce: Model scaled to multiple sites

(adapted for local environment)
Project Dulce: Medical professional training
Project Dulce: Peer educator graduates
Can mHealth be used to overcome barriers and deliver DSME and support to individuals with poorly controlled diabetes?
Dulce Digital: Intervention

- N=126 Latinos with T2D at FQHCs.
- Dulce Digital (n=63) received 3 types of messages:
  - Educational/motivational
  - Medication reminders
  - BGM prompts
- 2-3 text messages/day, tapering over 6 months.
- Staff monitored BG responses, assessed reasons for hyper/hypo, and encouraged PCP follow-up.
Dulce Digital showed significantly greater improvements over time compared to control. ($p = .03$)
EXAMPLE 3: MAC

MA Health Coaching (MAC) Trial

NIH Pragmatic Trial 5R18DK104250-03 (Philis-Tsimikas/Gallo)
T2DM patients with poor clinical control are identified using the EMR.

MAC joins visit to understand care plan.

After visit, MAC meets with patient 1:1 to provide health coaching to care plan.

MAC conducts follow-up calls on a weekly ➔ monthly basis.
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But Why?

- Haven’t we come so far in diabetes???
- Increased number and efficacy of diabetes medications.
- Improved medication delivery systems.
- Evolving technology for glucose monitoring.
But Why?

- Haven’t we come so far in diabetes???
  
  Yes...but!

Many PWD do not achieve optimal clinical control.

- Only 18.8% met all targets for HbA1c, lipids, and BP.
  
  - 47.5% had HbA1c > 7%
  - 15.6% with HbA1c > 9%
But Why?

The Psychosocial Onion

Environmental

Social

Behavioral & Emotional

A  Treatment  B  Outcome
Psychosocial Onion

Check BG
Take orals
Wear a CGM?
Check BG
Take orals
Inject insulin
Track BG levels!

Check your feet
Carry quick-acting sugar
Check BG
Warm-up/Cool-down
Be active

Join a support group
DSME
Lab draws
Physician appointments

Carry a snack
Limit alcohol intake

Track what you eat & drink!

Portion size
Avoid SSBs
Meal plan
Count carbs
Portion size
Avoid SSBs

Meal plan
Count carbs
Portion size
Avoid SSBs
Meal plan
Count carbs

Carry a list of your current medications!

Be aware of signs of hyper/hypoglycemia!

Wear an insulin pump?
Carry/monitor supplies, pick-up refills!

Inject insulin
Inject insulin
Refrigerate
Use a sharps container

Take orals
Take orals
Inject insulin
Inject insulin

Wear a CGM?

Check BG
Check BG
Check BG
Check BG
Track BG levels!

An illustration...
Stigma pervades all layers of the onion.
### Psychosocial Onion

- **Shaming**

<table>
<thead>
<tr>
<th>Try to avoid</th>
<th>Replace with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliant vs. Non-compliant</td>
<td>• Engaged vs. Unengaged</td>
</tr>
<tr>
<td></td>
<td>• OR simply describe the behavior</td>
</tr>
<tr>
<td>Testing BG</td>
<td>• Checking BG</td>
</tr>
<tr>
<td></td>
<td>• Monitoring BG</td>
</tr>
<tr>
<td>Controlled vs. Uncontrolled</td>
<td>• Within optimal range vs. outside optimal range</td>
</tr>
<tr>
<td>Diabetic</td>
<td>• Person with diabetes</td>
</tr>
<tr>
<td></td>
<td>• Person living with diabetes</td>
</tr>
</tbody>
</table>

Psychosocial Onion

- Shaming
  - Even our EMRs do it!
• As you support your patients on their journey to **Optimal diabetes outcome**.

• . . . be mindful of the onions.
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ADA Position Statement -- Reactions

Don’t we already know all of this?

What are the specific intervention recommendations?

I can’t find much about the social and environmental factors. . .

Formal acknowledgement by the ADA was needed.

Good question.

This is just the beginning.
Psychosocial Care for People With Diabetes: A Position Statement of the American Diabetes Association

"Psychological care should be integrated with collaborative, patient-centered medical care and provided to all people with diabetes, with the goal of optimizing health outcomes and health-related quality of life."

American Diabetes Association
The Case of Depression

Mental illnesses, such as depression, can make even simple tasks feel overwhelming.

Source: womansday.com
Overwhelmed; depressed; low energy & motivation; perceptions of failure; hopelessness; low interest

- Very poor control, high risk for complications
- Monitors infrequently; inconsistent Rx adherence; sedentary; poor eating habits
- PCP appointment but skips lab draw
- 15% weight gain
- Skips PCP follow-up call
- Runs out of meds
- Avoids PCP refill
- 1 wk late picking up Rx refill
- Reminder from PCP to go to lab
- Labs indicate poor control

HIGH RISK

Very poor control, high risk for complications

Depression and Diabetes Management
QUIZ: What is the estimated prevalence of depression in diabetes?

• A: <10%
• B: 20-35%
• C: 40-60%
Depression vs. Diabetes Distress

• Depression rates = 18-35%, per systematic review.\(^1\)

• Depression $\rightarrow$ ↓ self-management, ↑ functional impairment, work loss, comorbidities.\(^2\text{-}^3\)

• BUT, diabetes-specific distress (not depression) may be accounting for many of the reported cases.\(^4\)

• Both pose challenges to effective diabetes management and coping.

---

# Depression vs. Diabetes Distress

<table>
<thead>
<tr>
<th>Depression</th>
<th>Diabetes Distress</th>
</tr>
</thead>
<tbody>
<tr>
<td>May or may not be related to diabetes</td>
<td>Caused by the burdens of daily diabetes care</td>
</tr>
<tr>
<td>Less common</td>
<td>Very common</td>
</tr>
<tr>
<td>Must meet clinical criteria for depression.</td>
<td>No criteria</td>
</tr>
<tr>
<td>Treatment may include antidepressants or therapy.</td>
<td>Treatment focuses on addressing stress associated with diabetes care.</td>
</tr>
</tbody>
</table>
What does Diabetes Distress look like?

- Diabetes Distress is the emotional burden of managing diabetes.
  - Feeling overwhelmed and defeated by diabetes.
  - Feeling angry and frustrated with one’s self-care regimen.
  - Feeling that diabetes controls one’s life.
  - Avoiding thinking about diabetes.
  - Feeling alone, misunderstood, or judged.
Who is at risk for Diabetes Distress?

Every person living with diabetes is likely to experience Diabetes Distress at some point in their lives.

- Times when it is most likely to become a problem:
  - Diagnosis
  - Complications
  - Treatment additions or changes
  - New health care plans or medical provider.
  - Major life events or developmental transitions.
How do I help someone with Diabetes Distress?

My face.

when my blood sugar won't do what i want it to do
How do I help someone with Diabetes Distress?

• Find out if diabetes is a root of distress:
  “What has living with diabetes been like for you?”

• Identify the source of Diabetes Distress:
  “What is driving you most crazy about living with diabetes?”

First line interventions for Diabetes Distress:

• Diabetes self-management education & support (DSME/S)
• Addressing any other factors contributing to the Diabetes Distress

Remember: Use validated screeners whenever possible!
## Psychosocial Assessments in Diabetes

<table>
<thead>
<tr>
<th>What</th>
<th>How - examples</th>
<th>When/Who to Assess</th>
<th>Now What?</th>
</tr>
</thead>
</table>
| Diabetes Distress     | DDS-17 (Polonsky et al. 2005) | • Routinely, or  
                          • When targets are not met and/or at the onset of complications | • DSME  
                          • BHP            |
| Depression            | PHQ-9 (Spitzer et al. 1994)  | • Annually, or  
                          • When self-reported history                                                      |                |
| Anxiety               | EDI-3 (Beck et al. 1993)   | • Signs of anxiety/worry that interfere with self-management behaviors             |                |
| Disordered eating     | DEPS-R (Markowitz et al. 2010) | • Observed BG values or weight change ≠ Reported medication adherence, eating, and/or physical activity behaviors. |                |
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• But How? The case for integration
But How?

- Time
- Stigma
- Logistics
- Knowledge/Expertise
- Burden
- Sub-threshold for clinical diagnosis
The case for integration

Diabetes Behavioral Health Integration Program (BeHIP)

• Clinical psychologist integrated with the care team in the Scripps Division of Diabetes and Endocrinology.

• BeHIP Goals:
  • Help patients manage/cope with diabetes-related emotional distress.
  • Assist patients who are struggling to make needed lifestyle changes despite receiving appropriate diabetes interventions.
  • Connect patients with serious mental health concerns with specialized care.
  • Provide consultation services to the clinical and education team.
The case for integration

Diabetes BeHavioral Health Integration Program (BeHIP)

- BeHIP Access
  - EMR referral
  - Warm hand-off

- BeHIP Services
  - Psychosocial assessment and referrals
  - Group therapy
  - Short-term individual therapy
  - Consultation
The case for integration

Diabetes Behavioral Health Integration Program (BeHIP)

• Preliminary Outcomes (N=39)

Resources

• In-person courses for licensed MHPs interested in providing behavioral health care to people with diabetes.

• ADA Mental Health Provider Directory
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Thank you!