Chapter 25

# A Cafeteria Worker With Diabetes and Bipolar Disorder

Sylvia Sobocinski, MA, OTR/L

## Introduction

Multiple challenges face all clients with diabetes when trying to take the steps necessary to manage the disease. These challenges are increased for clients with mental health issues, due to the following:

- Weight gain: Medications used to treat schizophrenia and bipolar disorder, as well as some antidepressants, often cause large amounts of weight gain, putting these clients at greater risk for complications and often limiting their mobility.
- Lack of exercise: Many clients do not exercise regularly secondary to lack of understanding of the role that exercise plays in wellness, and specifically in diabetes management. In addition, feeling intimidated about trying something new and fear of failure keeps people from trying to exercise. Many clients with mental illness lack established routines, which makes it difficult to incorporate exercise into their plans on a regular basis.
- Stigma: The feeling of being different from "normal" people that many individuals with mental illness cope with on a daily basis may be exacerbated by feeling left out and "different" due to the dietary restrictions imposed by diabetes.
- Poor eating habits: A diet that frequently includes fast food, foods high in sugar and fat, and the tendency to skip meals or to binge poses multiple challenges in maintaining blood glucose levels within normal limits. Many individuals also lack or have minimal cooking facilities available, while others may rely on foods obtained from food pantries or soup kitchens.
- Low income: Lack of funds and lack of medical insurance may impact accessibility to services and access to medical information.
- Poor health literacy: Difficulty or inability to read and understand medication labels and medical information needed to make appropriate decisions regarding medical issues.
- Symptoms of mental illness: Auditory hallucinations may impact a client's ability to stay on task; delusional thinking may result in poor insight regarding wellness practices, while symptoms of depression may cause difficulty with daily living skills and the ability to keep medical appointments. Lastly, symptoms of hypoglycemia may mimic symptoms of mental illness or substance abuse, making it difficult to identify the problem and treat the low blood sugar in a timely manner. For example, low blood sugar can cause anxiety, sweating, and irritability, which can be mistaken for an anxiety attack.
- Addictive behavior: Addictions may cloud judgment leading to spending limited money on a substance habit, such as drugs or cigarettes, rather than purchasing food.

Sladyk, K. (Ed.). *Ryan's Occupational Therapy Assistant: Principles, Practice Issues, and Techniques* (5th ed., pp. 336-344).

- Limited family and social supports: Lack of support systems to assist with implementing and maintaining lifestyle changes can contribute to poor diabetes outcomes (Dixon et al., 2004).

## Clinical Overview

### Etiology

There are 3 main types of diabetes:

1. Type 1 diabetes, formerly referred to as juvenile diabetes or insulin-dependent diabetes, because it is most often diagnosed in children or teenagers, can develop at any age. The pancreas no longer makes insulin, so people with type 1 diabetes must take insulin injections or use insulin via an insulin pump to control blood glucose levels.
2. Type 2 diabetes, formerly referred to as adult onset or non-insulin-dependent diabetes, can also develop at any age. In type 2 diabetes, the pancreas can still make insulin, but the body's cells do not use it properly. This is the most common type of diabetes. African Americans, Hispanic Americans, Pacific Island Americans, and Americans Indians are among the groups with highest risk for developing type 2 diabetes. Risk is further increased with age, obesity, inactivity, and a family history of diabetes. Type 2 diabetes can usually be controlled with oral medication and the addition of regular exercise, weight control, and making appropriate food choices. At times, insulin is needed in addition to oral medication to maintain appropriate blood glucose levels.
3. The third type, gestational diabetes, occurs for some women in pregnancy due to the hormones of pregnancy or a shortage of insulin production. It usually resolves after the baby is born, but the mother has a higher likelihood of developing type 2 diabetes later in life.

### Prevalence

According to the National Diabetes Information Clearinghouse, in the United States in 2007, a total of 23.6 million people—7.8% of the population—have diabetes.

In 2006, it was the seventh leading cause of death in the United States. Undiagnosed diabetes has become a major problem, with one third of all cases going undiagnosed and untreated (Harris & Eastman, 2000). Diabetes was more than two-and-a-half times as prevalent in individuals treated with antipsychotics than in the general population, as measured by the National Health and Nutrition Examination Surveys (Srihari, Cenk, Chwastiak, Woods, & Steiner, 2007).

### Classic Signs

The symptoms of undiagnosed or uncontrolled diabetes can include frequent urination, extreme thirst, feeling very hungry, feeling very tired, losing weight without trying, having sores that heal slowly, losing the feeling in your feet or having tingling in your feet, and blurred vision. A client may experience one or more of these signs or may not have any symptoms at all, which is why the disease can initially go undetected.

### Precautions

Preventive foot care is essential. Advise clients to avoid going barefoot and to check feet daily for blisters and skin breakdown that could lead to infection. Teach them to use a mirror when checking if they are unable to see all surfaces of each foot secondary to limited mobility. In addition, people with diabetes should avoid excessively hot water and dress appropriately for cold weather as decreased sensation may result in a burn or hypothermia occurring before the client is aware of the situation.

Advise clients to check blood glucose daily and more often if the physician indicates. Make sure clients have an understanding of the procedures to follow if monitoring or symptoms indicate that blood glucose levels are too high or too low.

## Recognizing the Symptoms of Hypoglycemia and Hyperglycemia

Education and self-awareness regarding the symptoms of hypoglycemia and hyperglycemia are key factors in managing the disease. This can be difficult as symptoms do not always present the same for each person, or on each occasion.

Symptoms of hypoglycemia can include shaking, sweating, increased heartbeat, dizziness, anxiety, hunger, blurred vision, feelings of fatigue or weakness, headache, and irritability. These symptoms may appear suddenly and can progress to a severe insulin reaction if left untreated. Confusion, tremors, and unconsciousness may result.

Symptoms of hyperglycemia can include extreme thirst; frequent urination; dry, itchy skin; increased feelings of hunger; blurred vision; drowsiness; and difficulty healing.

## Preventing/Delaying the Onset of Diabetes and Resulting Complications

Teaching at-risk clients about proper nutrition, portion sizes, reading labels, weight loss, and the role of exercise can promote improved health and prevent onset of diabetes. New guidelines for diagnostic criteria published by the American Diabetes Association (2010) call for a diagnosis

of pre-diabetes for an individual with an A1c result of 5.7% to 6.4%, and urge that individuals in this range receive education and information regarding lifestyle changes to prevent the onset of diabetes.

Encouraging regular medical check-ups and prompt diagnosis can help individuals to learn about and manage the disease in a proactive manner before complications occur. The A1c is increasingly being used as a means to diagnose diabetes as fasting is not required, and a simple blood test can be obtained without the need for a separate visit to the doctor.

Once diabetes is diagnosed, good blood sugar control is key to preventing complications. Complications from unmanaged diabetes can affect virtually all systems of the body. Individuals with diabetes are at greater risk for gum disease, heart disease, infections, nerve damage caused by neuropathy, and loss of vision secondary to retinopathy.

## Frames of Reference

The cognitive disabilities model focuses on approaching the client at his or her cognitive level, providing needed assistance so tasks and learning activities can be accomplished successfully (Cole, 2005). This frame of reference can help a client receiving both mental health and diabetic education master information needed for healthy living.

The Model of Human Occupation (MOHO) is a broad frame of reference, or "overarching theory," that has its roots in systems theory (Cole, 2005). Emphasis on interaction with the environment and feedback makes it applicable for community-based treatment. Activities are considered as a way to restore roles or develop new roles to cope with changing needs. MOHO includes volition, habituation (habits, roles, skills), and performance capacity or occupational competence (Kielhofner, Forsyth, & Barrett, 2003). Change is considered in terms of restoring order in the person's life.

In terms of diabetes management, clients in the mental health system will be learning to take on a new role of being knowledgeable about the illness and actively advocating for their needs. It means changing from the role of passive patient to active client, putting the emphasis on "person," rather than on "diabetic." For many who have been in the mental health system for years, this means moving away from the sick role toward a new role of being empowered with seeing possibilities and choices. The cognitive disabilities model and MOHO can help frame these issues for effective treatment.

# Case Study

Celina is a 43-year-old, single, Black mother of 5 grown children, one of whom is still living with her in a small apartment on a bus line. Her medical diagnoses include type 2 diabetes requiring oral medication, bipolar disorder, high cholesterol, hypertension, and obesity. She has a history of homelessness in the past, but has had a stable living environment for the past 5 years. Currently, Celina is an outpatient client at the state mental health center and is taking her first course in a long time at the local community college. She also participates in a supported employment program and works part-time at the health center's cafeteria. She takes pride in her work and has a goal of obtaining work in a school cafeteria in the near future.

Celina states she takes her medications, but she does not have a list of medications to refer to and is unsure of the dosage. She currently does not test her blood sugar on a regular basis, although she does have a glucometer. Per her chart, Celina's A1c was 8.2 during her last doctor visit several months ago, putting her at high risk to develop complications. Her income is limited and she finds adhering to a diabetic diet a major challenge, especially when her daughter enjoys snack foods, chips, and soda, which are readily available in her apartment. Celina was referred to a dietitian, and kept 2 appointments, but visits are once a month and she is not able to sustain a healthy diet routine on her own between visits. Consequently, she has not made any progress with weight loss or lifestyle changes, is embarrassed, and refuses to return to the dietitian.

Celina does not exercise, although she does take the bus to the mental health center 3 days a week and to the community college 2 days week. Exercise has never been a regular part of her life. She does not participate in or enjoy watching team sports and has never been to a gym to exercise. She enjoys music and would like to dance. She also expressed an interest in gardening and cooking.

# Assessment

The OT met with Celina as part of outreach to clients with type 2 diabetes. Celina was interviewed to obtain an occupational profile and establish rapport. She was also given a simple handout—"Diabetes and Me...What Do I Do Now?"—to get baseline information on her knowledge of diabetes and the role that she could take in managing it. The OT completed Allen's Cognitive Level Screen (ACLS) to gain information on her attention span and her ability to learn new materials and follow directions. Assessment indicated that Celina is a good candidate for the diabetes group as she verbalized the desire to lose weight and to learn more about managing her diabetes so that she will have more energy to complete her goals for a job and to continue school. Her ACLS score of 5.2 indicated that she is capable of new learning and will be able to generalize what she learns to a new setting.

Celina identified some interest in learning more about actively managing her diabetes to stay healthy. She was very interested in taking another approach to weight loss, as well as exploring new activities that would increase her

opportunities to socialize. She was invited to participate in a weekly medication management group and a weekly diabetes support group at the mental health center, both co-led by the OTA and a nurse. She also agreed to a home visit in the near future.

## Diabetes Education and Support Group

This group was designed initially to run for 6 weekly sessions, but at the end of the series, clients requested that the group continue as a support group. Benefits of a group format for clients learning to manage diabetes include increased opportunities to gain support from staff and peers. Realizing others are dealing with diabetes often minimizes the feelings of stigma. Yalom (1995) refers to this as *universality.*

Group problem solving and sharing of ideas increases socialization, interaction skills, and provides opportunities for learning (Cole, 2005). Groups are also cost effective and allow the practitioner the opportunity to reach larger audiences and in some cases to check on a client's progress more than once a week.

## Incorporating Change Theory

Developed by Prochaska and DiClemente in 1982, and originally used for clients to address smoking cessation and substance abuse issues, this model expanded to include making healthy lifestyle changes to a broad range of health and mental health behaviors (Jones et al., 2003). The premise is that change is a process and can be broken down into 5 stages.

1. Precontemplation: The client in this stage does not believe that he or she needs to make a change and is not even considering the possibility. The client may be in denial or may be experiencing psychiatric symptoms impacting his or her decision-making process.
2. Contemplation: The client may acknowledge that change would be beneficial. He or she is now considering making a change, but does not feel ready to take any action to work on the change.
3. Preparation: The client is more serious and preparing for change. Determination is a prevalent characteristic.
4. Action: The client is actively engaged in the change process.
5. Maintenance: The client's efforts have been successful and produced positive results, and the client is continuing to maintain the change.

Change takes time and planning. Relapse, or return to old habits, occurs if the changes are not maintained. If a relapse does occur, it is considered a normal part of the change process. Clients are encouraged to learn from relapse by evaluating what caused the return to old habits and gain insight into what support they need to sustain positive changes in the future. The OT practitioner remains nonjudgmental and facilitates return to the process by helping the client make plans and set measurable, achievable goals (Table 25-1).

## General Goals/Treatment Ideas

Celina is in the preparation stage for most of the changes she has identified. She has been unsuccessful at weight loss attempts in the past, so that should be presented slowly. Support of a group setting may be very beneficial, since opportunities to increase socialization was identified by Celina as one of her goals.

The following goals were agreed upon:

1. Client will increase medication management skills.
2. Client will increase awareness of good nutrition as measured by ability to verbalize 3 things she can do to adhere to a healthier diet.
3. Client will verbalize the steps to adding a foot care regime to daily self-care routine.
4. Client will try one new physical activity that she is interested in incorporating into her schedule.

To address goal #1, the nurse provided Celina with a list of her current medications for home and as part of a wallet identification card that she can refer to at medical appointments or if dealing with low blood sugar out in the community.

The OTA provided a diabetes identification bracelet as a visual cue to remind her to monitor her diabetes and assisted Celina with learning to identify her medications. The first step was for Celina to learn to identify each of the medications visually, by size and color. This step was accomplished quickly. The second step was for Celina to be able to verbalize why she is taking each of her medications and how often. Lastly, Celina worked on learning the proper dosage of each medication. She practiced the new skills with the OTA on a weekly basis and with the nurse on a daily basis. The multidisciplinary approach helped provide the reinforcement needed to make the changes over time and establish new routines.

A home visit is helpful to assess safety and structure the environment to maximize success. The OTA can provide visual cues and low-cost adaptations as needed, such as pill boxes, checklists, reminders, logs for recording glucose monitoring, Dycem for nonslip surfaces, magnifiers, or large print as needed.

Before discharge, the OTA planned to provide education to the client and clinicians regarding the need to update the list if medications change, and lastly, set up a support system in the community for the client if questions arise.

Goal #2 can be addressed in a diabetes support and education group. During group sessions, Celina was provided

**Table 25-1**
## Change Model for Diabetes Education

| *Intervention Approach* | *Diabetes Example* |
|---|---|
| **Precontemplation** | |
| Validate client's lack of readiness to make a change | Explore important roles and how excess weight affects these roles |
| Encourage self-exploration | Learn client preferences |
| Provide nonjudgmental support | Explore client's interests in activities with health benefits |
| **Contemplation** | |
| Continue to acknowledge and validate client's lack of readiness | Provide educational handouts |
| Provide information in a simple manner, targeted to client's cognitive ability | Invite to diabetes groups and activities |
| | Pair with successful peers in nonjudgmental activities that promote socialization and health |
| **Preparation** | |
| Assist with problem solving; identify potential challenges and roadblocks to success | Identify motivators |
| Praise efforts and ideas | Assist client with goal setting |
| Assist with developing health literacy | Identify possible coping strategies |
| | Assist with structure and timeline (e.g., bus schedule, calendar, planner, scheduling appointments) |
| **Action** | |
| Provide support and reinforcement as new behaviors emerge | Link with community supports (e.g., walking/weight loss groups, exercise groups, dancing) |
| Acknowledge loss of client's old habits and behaviors | Make reminder calls for initial sessions |
| **Maintenance** | |
| Continue to provide reinforcement for maintaining healthy lifestyle | Ongoing diabetes support group |
| | Monthly link to nutritionist for support with healthy eating |
| | Regular exercise |
| | Assist in maintaining health-related gains while taking on other new roles (e.g., more classes, pursuit of part-time job in the community) |

with information on controlling her weight while on medications, assisted with compiling a weekly shopping list linked to meal planning, and provided information on buying healthy snacks. Group activities also provided education regarding the best choices when eating on a budget or eating at fast-food restaurants and ideas for carrying a snack in case of low blood sugar. The OTA also reinforced the need to eat regularly and not skip meals.

The group format encouraged weekly goal setting by clients and incorporated a check-in on progress. Clients who do not meet their goals are encouraged to discuss the obstacles they faced and brainstorm with the group some coping strategies to use during the next week. Group norms include weekly reminders to maintain confidentiality as well as that the group setting provides a safe, nonjudgmental environment. A one-to-one follow-up session with the OTA can be scheduled if needed.

Goal #3 can also be addressed in context of a small group setting by providing education and adaptive equipment as needed. Celina was provided with a mirror to check her feet and a checklist on proper footwear. She made a sign with guidelines on checking her feet and agreed to post it inside her closet where she will see it daily and have a visual reminder that will not be visible to friends and family when they visit. The next step will be for her to research the possibility of visiting a podiatrist.

Goal #4 was accomplished by inviting Celina to join a walking group that incorporated social activities. The group met twice a week at the center and walked to a destination downtown and back. The group visited free or low-cost venues, such as the library, museums, and coffee shops, along the way. Celina joined the group once a week secondary to conflicts with her work schedule.

Celina enjoyed walking so the OTA will explore helping Celina set up a walking schedule and getting a used iPod (Apple) so she can record some music to use for walking when the group is not available.

## Summary

Type 2 diabetes continues to increase and obesity is the prominent factor driving the growth (Gregg et al., 2004). Other factors such as diet, physical activity, and environmental factors play a significant role making diabetes management an area for OTs and OTAs to address as part of an occupation-based focus.

### *The Occupational Therapy Assistant and a Global Approach*

Because OT practitioners have holistic skills and diabetes affects almost 10% of the population, we can embrace and promote health literacy. According to the U.S. Department of Health and Human Services, Healthy People 2010, consumer health literacy is an important aspect of health communication (Schillinger et al., 2002). Poor health literacy is associated with increased glycemic index and increased complications for individuals with type 2 diabetes. This is an important area for OT practitioners to consider in bringing our message to clients in a way that facilitates their learning (Osbourne, 2004).

OT practitioners can also take a global approach to promoting healthy lifestyle changes by linking clients to other resources and support systems. Clients managing diabetes would benefit from ongoing support provided by adult education, walking groups, self-help groups, smoking cessation, and other wellness initiatives accessible within the community.

## Clinical Problem Solving

1. James is a 32-year-old client with a history of substance abuse and schizoaffective disorder. He feels angry he has to deal with diabetes as well, and he refuses to let others know he has developed diabetes as he does not want them to tell him what he should or should not eat. How might you approach him for an intervention?
2. Dion is homeless and unemployed. He was diagnosed with type 2 diabetes just 3 months ago. Dion is currently staying at a local shelter, where breakfast and dinner are provided. Sometimes he skips lunch and other times he eats at a fast-food restaurant. A visiting nurse administers his medications most mornings at the shelter and has referred him for diabetes education. He has agreed to come to the diabetes group to learn more about managing his type 2 diabetes and weight gain, but he is not always good with keeping appointments. How might your goals differ to address Dion's issues and needs?

## Learning Activities

1. Contact the American Diabetes Association for educational materials and information about resources and support groups.
2. Have each person in class develop a worksheet to address a specific need for a person with diabetes (Table 25-2).
3. Develop a safety checklist with compensatory strategies to address decreased sensation.
4. Develop a game as a vehicle for teaching and reinforcing diabetes education.
5. Attend a diabetes support group at a local hospital or clinic.
6. As an individual or class project, develop a 6-session group protocol for maximizing quality of life with diabetes (Table 25-3).

## Useful Websites for Diabetes Resources

*American Association of Diabetes Educators*
www.diabeteseducator.org
*American Diabetes Association*
www.diabetes.org
*Centers for Disease Control and Prevention*
www.cdc.gov/diabetes
*National Diabetes Information Clearinghouse*
http://diabetes.niddk.nih.gov/
*National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health*
www.niddk.nih.gov

## Related Education

- Resource table to provide a weekly reminder to potential participants and clinicians to sustain interest in the course, provide educational materials to reinforce learning, and link participants with community resources.
- Bulletin board to provide ongoing education and information during and between series sessions.
- Wallet medical alert cards distributed to participants will increase safety awareness and provide medical information they can easily access.

**Table 25-2**

## Special Care Considerations for People with Diabetes

| | |
|---|---|
| Foot care | Check feet once a day.<br>Check for cuts, sores, blisters, and splinters. |
| Foot hygiene | Keep nails trimmed and clean. _____ is a podiatrist who is a foot doctor who can help me. The phone number is _____. |
| Dental care | Good dental care is important when someone has diabetes. My dentist's name is _____ and the phone number is _____. |
| Toothbrushing | At home I can brush my teeth _____ and _____. I need to have my _____ and _____. |
| First aid | Take care of all scrapes and cuts right away. To clean a cut _____ and _____. Call my doctor if the cut is not closing or if it is getting red and dirty. My doctor's name is _____ and the phone number is _____. |
| Eye care | It is important to see an eye doctor once a year for good eye care. Diabetes can affect vision as well. My eye doctor's name is _____ and the phone number is _____. |
| Nutrition | Portion control and diet can be controlled at home as well to keep myself healthy! |

**Table 25-3**

## Proposed Diabetes Education Series—Staying Healthy With Diabetes: Six Sessions

1. What Is Diabetes?
   Learn about the symptoms of high and low blood sugar.
2. Diabetes and the Body: Avoiding Complications
   Learn why it is important to take special care of your eyes and feet and what you can do.
3. Monitoring Your Diabetes
   Practice checking your blood sugar level to feel your best.
4. Nutrition Basics
   Learn about the food pyramid, reading labels, and low-cost ways to eat well.
5. Nutrition and Diabetes
   Take the next step to improve your eating habits, make healthier fast food and snack choices.
6. Incorporating Exercise and Stress Management
   Learn the role of stress and exercise in staying healthy, identify ways to cope with some of the challenges of diabetes, and have some fun with chair yoga.

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