Supporting Clients in Diabetes Self-Management

A Provider Action Brief

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This brief was developed by Chad Morris at the University of Colorado for the SAMHSA-HRSA Center for Integrated Health Solutions to disseminate to SAMHSA-funded Primary and Behavioral Health Care Integration grantees.

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The SAMHSA-HRSA Center for Integrated Health Solutions (CIHS), in partnership with the University of Colorado Behavioral Health & Wellness Program, offers a series of briefs on:

- Making healthy food choices and increasing physical activity
- The importance of prevention and health screening
- Understanding sexual health
- Managing diabetes

Diabetes is a metabolic disorder affecting nearly 9 percent of the United States population. It is the seventh leading cause of death in the U.S., responsible for 21.2 deaths per 100,000 - nearly 74,000 people each year (NCHS 2012). Roughly 19 million individuals in the U.S. have been diagnosed with diabetes; and 7 million more have diabetes but have not yet been diagnosed. Additionally, approximately 79 million people have pre-diabetes, a condition where blood sugar levels are elevated but not high enough to warrant a diagnosis of diabetes. Individuals with pre-diabetes may suffer from disease-related injuries like heart or nerve damage. Individuals with diabetes are at increased risk of a host of conditions including glaucoma, cataracts, ulcers of the feet, ischemic heart disease, kidney disease, hearing loss, strokes, and opportunistic infections.

Reversing these alarming trends will require alterations to our current health delivery systems as well as population-wide lifestyle modifications. An increased focus on proactive prevention, coordinated care, and building effective self-management skills and knowledge through evidence-based interventions is critical. As it stands, while several such strategies exist, success has been limited. For example, Canadian statistics reveal that only 38 percent of individuals with diabetes have managed to keep their HbA1C levels in the optimal range (≤7 percent) (Medical Advisory Secretariat, 2009).

Diabetes and Behavioral Health

Individuals living with mental illnesses or addictions die, on average, as many as 25 years earlier than the general population - and this early mortality is often attributable to chronic medical conditions. The three most common behavioral health conditions associated with diabetes are schizophrenia, addictions, and depression (Mai, Q., et al., 2011). The association between these behavioral disorders and diabetes is bidirectional and complex. The symptoms of these conditions may impede an individual's ability or willingness to prevent or manage diabetes effectively and may encourage health-related attitudes and behaviors that contribute to the onset of diabetes or exacerbate its symptoms.

Many antipsychotic medications (e.g., clozapine, olanzapine, thioridizine, sertindole) cause substantial weight gain, which can contribute to the onset of diabetes, and some antipsychotics seem to effect glucose sensitivity directly (e.g., clonzapine, olanzapine, quetiapine) even in the absence of, or prior to, weight gain (Dixon et al., 2000). A failure to properly treat metabolic disorder is also associated with poorer behavioral health outcomes (De Hert et al., 2006).

Collaborative care (e.g., treating depression and diabetes at the same time) has been shown to improve outcomes for adherence to both depression medications and oral hypoglycemic medications (Anderson, et al., 2011; Huang et al., 2013). Despite its known effectiveness, self-management support is often non-existent in the primary care setting (Glasgow et al., 2003). Behavioral health care settings are attractive options for closing a serious science-to-service gap for those experiencing comorbid medical and behavioral health conditions.

An open and trusting relationship that promotes shared decision making is an important factor contributing to the success of interventions. While prescribing and balancing medications are outside the scope of most behavioral healthcare providers, educating clients on the psychological repercussions and physical health risks of their attitudes and behaviors, motivating clients to self-manage their disease, and assisting them as part of a larger healthcare team are all viable roles that have been shown to decrease psychological symptoms and improve adherence to medication regimens.

The 5 A's model (Ask, Advise, Assess, Assist and Arrange) is a protocol for engaging with clients about their health behaviors. This intervention, as outlined can relate to preventing or postponing the onset of diabetes or in managing the disease once it has been diagnosed (Glasgow, et al., 2005; Glasgow et al., 2003; Glasgow et al., 2002).

ASK

Every session should begin by reviewing the general risk factors associated with developing or exacerbating diabetes. Ask the client, in neutral language about their knowledge, beliefs, and behaviors as they relate to their risk or their ability to manage the disease.

You can initiate the conversation by asking the client to gauge their activity levels and intake of refined carbohydrates or simple sugars and whether they have recently had their cholesterol, triglyceride, or blood glucose levels checked.

Family history of Type 1 or 2 diabetes, gestational diabetes, or polycystic ovarian syndrome (PCOS) can all be recorded in patient notes and do not have to be reassessed at each visit. The client's responses should be considered in conjunction with whatever clinical data exists.

Risk factors for Type 2 Diabetes*

- Overweight/Obesity
- Inactivity
- Family history
- Race (African-American, Hispanic, American Indian, Asian-American)
- Age
- History of gestational diabetes, polycystic ovarian syndrome, high blood pressure, abnormal cholesterol and triglyceride levels

** Type 1 diabetes, previously called "juvenile diabetes" is typically diagnosed in childhood or early adulthood. Type 1 diabetes risk factors are genetics and early exposure to certain viruses.*

ADVISE

Gauge the clients' level of knowledge of diabetes and general health literacy as this will impact their understanding of any new information.

Determine the clients' understanding of their risks and their willingness to change; as this will largely determine the level at which future productive engagement can occur. Many clients may not understand their risks, and may need additional education. Clients that are aware of the risks but are unwilling to alter their lifestyle are more likely to benefit from a more in depth exploration of their quality of life goals. In any case, it is important to provide the client with a clear message that their health is at risk, and they have the power to effectively manage their illness. Take the time to explain the benefits of healthy behaviors and the importance of good self-management.

If the client has not recently had their cholesterol, triglyceride, or glucose levels checked, non-judgmentally inform them of the importance of knowing such information. If the client does not know what these are, either inform the client yourself, or refer the client to educational resources.

Discuss and provide feedback about a clients' weight. Use non-judgmental language and do not refer to their "bad habits" or their "weight problem." Instead, discuss the benefits of a healthy diet and the importance of physical activity. Relate the client's behavior directly to their values and clinical outcomes in a way that is easy to understand, remember, and use.

ASSESS

For those clients identified as at risk for diabetes, either due to conditions outside their control (genetics, racial/ethnic background) or health behavior-related reasons should undergo a more intense assessment. This assessment can include gathering measurable data (BMI; cholesterol, triglyceride, or glucose levels, recent changes in weight) or self-reported measures

(cigarettes per day, fruits and vegetables consumed per week, minutes of physical activity per day or week). Behavioral health clinicians can make this assessment in coordination with or by referring to primary care providers.

It is also critical to help the client identify and prepare for any potential barriers to changing their behaviors. This could mean identifying triggers leading to cravings for sugary foods, scheduling conflicts that make regularly self-monitoring glucose levels difficult, or chronic pain that makes exercise uncomfortable or impossible. It may mean helping the client express and identify conflicting desires—the desire to be healthier, for example, and the desire to maintain certain habits the client finds comforting. Sometimes simply identifying this ambivalence is enough for the client to begin making steps to resolve it.

ASSIST

Help the client create a personalized action plan for creating new health habits. It is important to remember that while you may assist the client to create the plan, ultimately, it is the client's plan that should result from extensive person-centered planning that focuses on strengths, supports, and preferences to promote personal ownership.

Goals within the action plan should be specific, measurable, attainable, realistic, and timely (S.M.A.R.T.). Diabetes is a complicated disease with multiple factors contributing to its onset and symptoms—any of which can serve as the focus of a new healthy behavior plan. However, making multiple changes all at once, though possible, is mostly unlikely. Help the client to prioritize which achievable goals they should target first.

ARRANGE

Lastly, help the client arrange for supplemental support. Managing diabetes, like other chronic diseases, requires help from a diverse healthcare team and it means incorporating family, friends, peers, and members of the community. Clients may need referrals to clinics to help obtain a free or subsidized glucose test; or a referral to a support group or quit line service. Some clients may need to meet with a behavioral health specialist; for example one who works specifically with older clients or one that specializes in acute depression. The client may need support to pay rent, buy nutritional food, manage limited finances, or with childcare. Ensuring the client has the full social support they need may be the first step in reducing chronic life stressors so that diabetes self-management is an achievable goal. Often a peer specialist can play an important role in providing social support and activation of self-management to create new health habits.

It is important the client knows how to find the support they need. If possible, help the client to make an initial phone call to set the first appointment can be very helpful. Finally, arrange a follow-up meeting with the client yourself. This will be a time when you can assess the progress of the treatment plan.

Using Community Health Workers

Providing effective self-management support can be a challenge in certain populations. However, a recent systematic review found that modest improvements to a client's HbA1c levels and general self-management practices can be achieved with the support of community health workers either via telephonic support or through low-intensity individual coaching sessions. The study found no improvements in clients' mental health, suggesting such a service should be considered complementary to regular behavioral healthcare. (Small et al., 2013; Pennington et al., 2013)

Physical Activity

Increasing physical activity can help mitigate, including slowing or reversing many of the effects associated with diabetes. Increasing physical activity has been shown to have positive effects on mental well-being as well, including lessening the intensity and frequency of depressive episodes. However, clients with diabetes are often more reluctant than the general

population to pursue a more active lifestyle. Often, there are greater perceived negative consequences of exercise and reduced perceptions of benefit. (Plotnikoff, Karunamni, and Brunet, 2009)

Smoking and Diabetes
Several large-scale studies found an association between smoking and an increased incidence of diabetes. While it cannot be inferred that smoking causes diabetes, smoking has detrimental effects on the circulatory and cardiovascular systems—effects which are aggravated in people with diabetes. People who smoke and have diabetes suffer from increased complications in the kidneys and more extensive nerve damage than non-smokers with diabetes. (Will, et al., 2001; Haire-Joshu, D. et al., 1999).

Resources

High Cholesterol and Triglyceride Educational Materials for Patients
- http://www.cdc.gov/cholesterol/materials_for_patients.htm
- http://www.nutrition411.com/patient-education-materials/heart-health/item/1052-cholesterol-and-triglyceride-management-guide/
- http://pcna.net/patients---preventive-cardiovascular-nurses-association/triglycerides-and-hdl

Blood Sugar Education Materials
- http://www.healthline.com/health/blood-sugar-tests#Overview1
- http://ndep.nih.gov/publications/publicationdetail.aspx?pubid=17

Diabetes Patient Education Materials
- http://www.ndei.org/patienteducation.aspx
- http://www.dce.org/publications/education-handouts/

Nutrition Assessment Tools
- http://fnic.nal.usda.gov/dietary-guidance/individual-dietary-assessment
- http://www.columbia.edu/itc/hs/medical/nutrition/dat/dat.html

Physical Activity Assessment Tools
- Rapid Assessment of Physical Activity: http://depts.washington.edu/hprc/rapa
- Physical Activity Resource Center: http://www.parcph.org/assess.aspx

References

Anderson, R.J., Freedland, K.E., Closue, R.E., Lustman, P.J., (2001). The prevalence of comorbid depression in adults with diabetes. *Diabetes Care.* 24(6): 1069-1078.

De Hert, M., van Winkle, R., Van Eyck, D, Hanssens, L., Wampers, M., Scheen, A., Peusken, J. (2006). Prevalence of diabetes, metabolic syndrome, and metabolic abnormalities in schizophrenia over the course of the illness: a cross-sectional study. *Clinical Practice and Epidemiology in Mental Health.* 2:14 Online: www.cpementalhealth.com/content/2/1/14

Dixon, L., Weiden, P., Delahanty, J., Goldberg, R., Postrado, L., Lucksted, A., Lehman, A. (2000). Prevalence and correlates of diabetes in national schizophrenia samples. *Schizophrenia Bulletin.* 26(4): 903-912.

Glasgow, R.E., Funnell, M.M., Bonomi, A.E., Davis, C. Beckham, V., Wagner, E.H., (2002). Self-management aspects of the Improving Chronic Illness Care Breakthrough Series: implementation with diabetes and heart failure teams. *Annals of Behavioral Medicine.* 24(2): 80-87.

Glasgow, R.E., Davis, C.L., Funnell, M.M., Beck A. (2003). Implementing practical interventions to support chronic illness self-management. *Joint Commission Journal Quality and Safety.* 29(11): 536-574.

Glasgow, R.E., Whitesides, H., Nelson, C.C., King, D.K. (2005) Use of the Patient Assessment of Chronic Illness Care (PACIC) with diabetic patients. *Diabetes Care.* 28(11): 2655-2661.

Haire-Joshu, D., Glasgow, R.E., Tibbs, T.L. (1999). Smoking and diabetes. *Diabetes Care.* 22(11): 1887-1898.

Huang, Y., Wie, Xiaming, Wu, T. Chen, R., Guo, A. (2013). Collaborative care for patients with depression and diabetes mellitus: a systematic review and meta-analysis. *BMC Psychiatry*. 13: 260.

Mai, Q., Holman, C.D., Sanfilippo, F.M., Emery, J.D., Preen, D.B. (2011). Mental illness related disparities in diabetes prevalence, quality of care and outcomes: a population-based longitudinal study. *BMC Medicine.* 9:118. Online: www.biomedcentral.com/content/pdf/1741-7015-9-118.pdf

Medical Advisory Secretariat. (2009). Behavioural interventions for type 2 diabetes: an evidence-based analysis. Ontario Health Technology Assessment Series 2009;9(22)

National Center for Health Statistics, National Vital Statistics System. (2012). U.S. census populations with bridged race categories. Available from: www.cdc.gov/nchs/nvss/bridged_race.htm

Pennington, M. Visram, S., Donaldson, C. White, M. Lhussier, M., Deane, K., Forster, N. Carr. S.M. (2013). Cost-effectiveness of health-related lifestyle advice delivered by peer or lay advisors: synthesis of evidence from a systematic review. *Cost Effectiveness and Resource Allocation.* 11:30.

Rowley, W.R., and Bezold, C. (2012). Creating public awareness: state 2025 diabetes forecasts. *Population Health Management.* 15(4): 194-200.

Plotnikoff, R.C., Karunamuni, N., Brunet, S. (2009) A comparison of physical activity-related social- cognitive factors between those with type 1 diabetes, type 2 diabetes, and diabetes free adults. *Psychology, Health & Medicine.* 14(5): 536-544.

Small, N. Blickem, C., Blakeman, T., Panagioti, Chew-Graham, C.A., Bower, P. (2013). Telephone base self-management support by "lay health workers" and "peer support workers" to prevent and manage vascular diseases: a systematic review and meta-analysis. *BMC Health Services Research*. 13:533

Will, J.C., Galuska, D.A., Ford, E.S., Mokdad, A., Calle, E.E., (2001). Cigarette smoking and diabetes mellitus: evidence of a positive association from a large prospective cohort study. *International Journal of Epidemiology.* 30: 540-546.