

Challenges for younger adults with diabetes

A customized approach is called for

BY ROZALINA G. MCCOY, MD, MS; RENÉE S.M. KIDNEY, PHD, MPH; DANETTE HOLZNAGEL, RN, BSN, PHN, CDE; TINA PETERS, MPH, RN, PHN; AND VIMBAI MADZURA, MA, LGSW

Last spring, the *Star Tribune* shared the story of Alec Smith, a 26-year-old from Minnesota who died from diabetic ketoacidosis due to rationing insulin. Smith, who had just turned 26, lost the health care coverage he had through his parents' health plan and could not afford the costs associated with managing his type 1 diabetes.

Smith's story is both heartbreaking and alarming, prompting consideration of the wide range of challenges faced by young adults living with diabetes amid circumstances and systems that do not support good control. Most stories don't end in death, but the struggle to manage and control diabetes is more common among younger adults and the external factors that complicate management are distinct from those faced by older adults.

A recent study conducted by the Minnesota Department of Health and the University of Minnesota found that hospitalization rates associated with severe hypoglycemia and hyperglycemia, especially ketoacidosis, are three to five times greater for young adults with diabetes (those 18-44 years old) than for their older counterparts. Young adults also were less likely to achieve age-specific hemoglobin A1c (HbA1c) goals, whether they had type 1 or type 2 diabetes. Young adults were also more likely to have depression and to use tobacco, and less likely to see a primary care provider, than older adults. The study was published in *Preventing Chronic Disease*.



Lack of access to health care contributes to poor diabetes management and outcomes. Despite relatively high rates of insurance among young Minnesota adults with diabetes, young adults with diabetes may still experience gaps in insurance coverage that can lead to inadequate HbA1c control and contribute to acute hypoglycemic and hyperglycemic events. Minnesotans 18-34 years old are the least likely to have paid sick time available to them, which can prevent them from seeking and obtaining care needed to manage their diabetes.

These findings are consistent with earlier research in different populations demonstrating high rates of hospitalizations for severe hypoglycemia and hyperglycemia among young adults. Young adults are also more likely to be re-hospitalized for such acute diabetes complications, particularly if their treatment regimen is not evaluated, modified and adjusted to their blood glucose response. This pattern is consistent with poor and progressively worsening glycemic control among young adults with diabetes.

Management challenges for young adults

The MDH study scratches the surface of the issue. It did not study causation, but there are many factors that could be contributing to this pattern.

While 95 percent of adults with diabetes have type 2 diabetes, young adults are more likely to have type 1 diabetes. With type 1 diabetes, blood glucose levels fluctuate rapidly in response to food, physical activity, illness and stress, requiring people with type 1 diabetes to constantly measure

their blood glucose levels. This can be extremely taxing, especially when paired with other life challenges.

For example, the MDH study found that hospitalization rates for mental health conditions were the second most common cause of hospitalization among young adults with diabetes. Depression and other mental health conditions may make the complicated management of diabetes more difficult. Depression, anxiety and eating disorders are more common among people with diabetes than the general population and disproportionately affect the young.

Individuals diagnosed with type 2 diabetes at younger ages often have more severe disease than their older counterparts. People diagnosed with diabetes at a younger age are more likely to develop diabetes complications earlier and have more serious or advanced complications. These complications include microvascular disease (retinopathy or vision loss, peripheral or autonomic neuropathy, lower extremity ulceration, nephropathy or kidney disease) and macrovascular disease (cardiovascular, cerebrovascular and peripheral vascular disease).

In addition to barriers such as inadequate access to health care and mental health concerns, young adults face co-occurring life-stage stressors that make

The full CDC report on Diabetes Treatment, Control, and Hospitalization Among Adults 18 to 44 in Minnesota 2013-2015 is available online at https://www.cdc.gov/pcd/issues/2018/18_0255.htm, with the opportunity to earn CME credit.

diabetes self-management increasingly challenging. While managing diet, insulin and medication schedules and monitoring blood glucose, young people with diabetes may be furthering their education, working, caring for a child and maintaining stable housing. These demands can sometimes be at odds with optimal diabetes care.

Four key strategies can help clinicians, pharmacists, clinic staff, educators and public health professionals individualize and improve diabetes care and education for young adults: accurate diagnosis of diabetes type and appropriate management, healthcare delivery that addresses patient needs, whole person approach and behavioral health approaches.

Accurate diagnosis of diabetes type and appropriate management.

Because of differences in the management of type 1 and type 2 diabetes, as well as other less common types of diabetes (such as Maturity Onset Diabetes of the Young, or MODY) it is important to start with an accurate diagnosis of diabetes type and to follow appropriate management protocols.

The American Diabetes Association Standards of Care 2019 is a good place to start. It includes information about classification and diagnosis of diabetes (including prediabetes, gestational diabetes and more). It also highlights treatment considerations and recommendations for type 1, type 2 and less prevalent types of diabetes.

Diagnosis. Classifying diabetes subjectively, based solely on age, can result in misdiagnoses. Take other factors into consideration to ensure the proper treatment plan, including family history, presence of risk factors for type 1 or type 2 diabetes and lab tests as appropriate. “New-Onset Diabetes: How to Tell the Difference Between Type 1 and Type 2 Diabetes,” a case study in *Clinical Diabetes*, can be a good resource.

Management. Young adults face several unique challenges that complicate diabetes management. Use patient age as one consideration in establishing glycemic goals, with fasting, bedtime/overnight and/or HbA1c targets. Diagnostic continuous glucose monitors may help in this process. Consider referring to diabetes self-management edu-

cation and support (DSMES) classes, even if the patient is not newly diagnosed.

Healthcare delivery that addresses patient needs

The Chronic Care Model (CCM) supports high-quality, patient-centered care by addressing common barriers to health care such as fragmentation of care, poor use of information technology, duplication of services and inconsistent and/or uncoordinated delivery of chronic care. CCM includes:

- Delivery system design supporting *proactive* rather than *reactive* care.
- Self-management support, including diabetes self-management education.
- Evidence-based decision support.
- Optimal use of health information technology, e.g. diabetes registries that flag patients as being a young adult or having specific needs.
- Better use and integration of community resources.
- Creation of a culture of quality and patient-centeredness within the health care system.

Since adults with diabetes often have multiple comorbidities and face social, economic and personal barriers to optimal control, patient-centered care needs to be delivered by multi-disciplinary teams. Teams can include endocrinologists, primary care providers (PCPs), nurses, mental health professionals, diabetes educators, dietitians, pharmacists, social workers, care coordinators, community health workers and others.

One way to implement and improve upon these practices is using Minnesota’s model of a Patient-Centered Medical Home-Health Care Homes. The model incorporates CCM principles and uses team-based care, with the PCP serving as the primary contact and being entrusted with helping the patient find necessary resources to ensure health. Care coordinators support the PCP by improving coordination and communication between the PCP and the care team and ensuring follow-up after labs, ED visits and care transitions. (Find information about Health Care Homes at <http://www.health.state.mn.us/healthreform/homes/index.html>.)

Whole person approach

Diabetes care needs to be tailored to the specific and unique needs of young adults with diabetes, with attention paid to diabetes type, life stage, availability of logistical and social support and comorbidities.

Understand patient barriers

- Screen patients for social determinants of health, including food insecurity, difficulty paying for insulin (e.g. rationing, being behind on other bills to pay for insulin, using expired insulin or borrowing insulin), family demands or schedules that preclude optimal testing and/or insulin administration.
- Connect patients to resources or support to address social determinants of health *before* diabetes-related conditions become life-threatening.
- Screen for low health literacy and limited English proficiency. Focused DSMES may work well for patients with limited health literacy.
- Engage patients according to needs/preferences.
- Provide educational/clinical resources in the patient’s native language if English proficiency is limited.
- Refer to DSMES that is individualized to the needs of the patient and mindful of each patient’s life stage, culture, circumstance and ability. DSMES has been shown to improve diabetes management and health outcomes, both immediate and long-term. Most health plans reimburse for up to 10 hours of education in the first year of diagnosis and up to two hours every year thereafter.
- Consider how texting, telemedicine, eHealth (web) and mHealth (mobile) platforms can help communicate with and engage younger patients, especially those in rural or underserved areas. Integrate these modalities in clinical practice; for example, use a telephone-based program to initiate and titrate insulin.

Broaden your care delivery network

To facilitate engagement in DSMES and to overcome reimbursement barriers, integrate DSMES into primary care practices.

Identify and facilitate engagement of available sources of support including family, friends, colleagues, members of religious or social organizations and/or community organizations. Partnerships may help reach and engage patients who do not routinely seek care.

Behavioral health approaches

Consider the intersection of mental health and diabetes

Diabetes and mental health are inter-related, influencing one another in multiple ways. Emotional well-being is an important part of diabetes care and self-management; symptoms interfering with a person's ability to engage in self-care must be addressed.

Use routine opportunities to assess mental health symptoms and provide referral for follow-up as indicated. Opportunities to assess mental health include: at diabetes diagnosis, during regularly scheduled management visits, and during appointments addressing changes to health.

Use a care coordinator to link to resources. Mental Health Minnesota offers statewide resources; Mental Health Connect serves the Twin Cities metro area; and the Department of Human Services (DHS), in collaboration with many partners, administers mental health services across the continuum.

Consider behavioral health home services

In Minnesota, Behavioral Health Home (BHH) services is a Medical Assistance benefit for eligible individuals with mental illness. BHH services were implemented to address known barriers to health care access, high co-occurrence of chronic health conditions and early mortality more prevalent among this population. BHH services expand upon the concept of a Health Care Home to serve the whole person across primary care, behavioral health and social services components of the health care delivery system. BHH services can be particularly beneficial for supporting individuals living with mental illness and other chronic conditions, including diabetes.

BHH service providers use a multidisciplinary team to facilitate a person-

centered, ecological approach to care that considers the wide range of factors that affect each person's health and well-being. This strengths-based approach engages and supports individuals and their families in creating plans that identify and address goals for physical health, mental health, substance use and wellness. Certified BHH service providers provide the following core activities: comprehensive care management, care coordination, health and wellness promotion, comprehensive transitional care, individual and family support and referral to community and social supports. At the close of 2018, there were 25 certified BHH service providers across the state. To find out more about BHH services, how to become a certified BHH service provider, or if there is a certified provider in your area you can partner with, visit the DHS website or email Behavioral.Health.Home.Services@state.mn.us.

Next steps

Each person living with diabetes is unique, facing different challenges. Some challenges are shared by the majority of people living with diabetes, while others affect people at specific stages of life. The health care system can address these challenges through a more nuanced approach to care. A clearer picture of important and potentially preventable gaps in diabetes care quality and outcomes among young adults is emerging.

Data show young people with diabetes are struggling. Taking steps to customize care can help young adults better manage their disease, reduce complications, and improve long-term quality of life. **MM**

Rozalina G. McCoy, MD, MS, is an endocrinologist and internist, Division of Community Internal Medicine, Department of Medicine, Mayo Clinic. Renée S.M. Kidney, PhD, MPH, is a Principal Epidemiologist with the Diabetes Unit in the Minnesota Department of Health's Division of Health Promotion and Chronic Disease. Danette Holznagel, RN, BSN, PHN, and Certified Diabetes Educator (CDE), is a Practice Improvement Specialist with Minnesota Department of Health, Health Care Homes Program. Tina Peters, MPH, RN, PHN, is an Integration Specialist with Minnesota Department of Health, Health Care Homes Program. Vimbai Madzura, MA, LGSW, is Integration Reform Manager, Community and Care Integration Division, Minnesota Department of Human Services.

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