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Advancing Health Equity in Diabetes: Tools to Help Remove Barriers to Health

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Abstract

People living with diabetes and their health care teams face an endless number of care decisions that are often compounded by limited access to needed resources, especially adequate food, medications, and monitoring tools.[1] Registered dietitians, as diabetes care and education specialists and as members of care teams, can help assess what barriers exist and how they can best be mitigated both in the short- and long term.[2] Examples of health equity challenges and tools to support efforts in type 2 diabetes (T2D) prevention and diabetes management are presented.

Introduction

Equitable access to care and support services to help prevent and manage chronic diseases is essential for people to live at their highest possible level of health. Per a Centers for Disease Control report, “the COVID-19 pandemic highlighted the persistent problem of health disparities, with some racial and ethnic groups at elevated risk of severe complications related to higher rates of diabetes, heart disease, and other underlying health conditions, compared to others.”[3] Lack of access to food, let alone to healthy food, further compounds disparities. Food and nutrition insecurity put people at risk of developing T2D and make it harder for people living with diabetes to manage their health, including keeping blood glucose levels within targeted ranges and avoiding complications and hospitalizations. The relationship between food access and diabetes is challenged by other individual and social barriers to care, such as limited transportation, inconsistent access to needed medications, and lack of defined social support. As members of care teams and as diabetes care and education specialists (DCESs), registered dietitian nutritionists (RDNs) and nutrition and dietetics technicians, registered (NDTRs) support individuals and families in managing diabetes, especially in the areas of food access and healthy eating.

Community Health Workers Expand Service Reach

According to a 2019 Association of Diabetes Care and Education Specialists’ practice paper, for every available DCES, there are at least 1,000 people living with diabetes who need care.[4] Other partners who provide care and education for people with diabetes are community health workers (CHWs) (Promotoras de salud), who play a particularly critical role in addressing equity and access issues. CHWs tend to understand the real challenges to eating healthy foods, being active, taking medication, coping with stress, and accessing care that their own neighbors with diabetes and prediabetes experience. Researchers at

the University of Texas found that CHWs were “able to help 32% of the individuals with diabetes they supported attain a behaviorally defined level of self-management,” associated with reductions in A1c and decreased hospital visits.[5] CHWs are well equipped to provide diabetes self-management support and other social services support for persons with diabetes.

Social Determinants of Health and Diabetes

Social determinants of health (SDOH) are the conditions in which people live, work, play, worship, and age and have impacts on a wide range of health and quality of life outcomes and risks.[6] Social and environmental contexts (see Figure 1) are linked directly to T2D prevention and diabetes care and self-management behaviors. Furthermore, the amount of time, or life-course exposure, that someone lives in a resource-deprived environment significantly magnifies disparities in diabetes risk, diagnosis, and outcomes.[7]

When it comes to providing diabetes care, it is essential for RDNs and NDTRs to consider the community context of participants receiving diabetes self-management education and support (DSMES) services; this can help them ensure that the programs they deliver recognize the relevant context, barriers, and SDOH.[1] A recent systematic review, published by Egede, et al, showed strong correlations between focused interventions to overcome systemic barriers and diabetes outcomes.[8] In providing counseling and education, RDNs and NDTRs offer person-centered approaches to identifying and addressing barriers to access to food, transportation, health care, and other needed services. In this article, we explore a few examples of SDOH, as well as provide a collection of resources that may help nutrition professionals overcome therapeutic inertia and deliver more compassionate and equitable care.

Addressing Therapeutic Inertia with Compassion

Effective diabetes care requires a complex series of choices to be made by both the person with diabetes and their health care team.[1] Therapeutic inertia can happen when obstacles to changing a diabetes treatment plan outweigh perceived benefits.[9] These obstacles can exist on the part of the provider, the person with diabetes, and/or the overall health care system. Examples include lack of time or skills on the part of the provider, fear or misinformation about a therapy or approach on the part of the person with diabetes, poor communication between providers, or lack of support for the person with diabetes.[10] These challenges are amplified for people with diabetes who face disparities related to SDOH. Beyond the barriers to achieving diabetes management goals, research indicates that resulting gaps in care, lags in progress, or even regressions in health status, can increase the risk of complications.[9]

Addressing the multifactorial challenge of therapeutic inertia requires efforts that bring together multidisciplinary diabetes care teams, people with diabetes, community organizations, health systems, payors, technology providers, and policymakers to effect change.[11] To further support people with diabetes, RDNs and NDTRs may benefit from furthering their understanding of therapeutic inertia and its impact on health outcomes,

working within their organizations to identify systems-level barriers, and facilitating long-term strategies that can promote positive changes in person-centered and compassionate ways.[9]

Support for Early Intervention and Ongoing Care

A sense of fatalism may prevail in groups that experience a disproportionate impact of diabetes, where both individuals and providers may be resigned to the inevitability of diabetes and miss the opportunity for early intervention and prevention approaches.[12] Given the vast majority of people with prediabetes are unaware that they have it, early and regular screening for prediabetes and diabetes followed by an immediate referral to care is critical.[13] A recent analysis suggests that screening Black, Hispanic, and Asian individuals ages 35 and older at a lower BMI than recommended for White individuals and screening overweight individuals at an earlier age might reduce disparities in the screening criteria that lead to undetected cases and lack of early intervention. However, this study did not look into the relationship between SDOH and race with diabetes, and a study limitation is noted in that it did not look at the heterogeneity within racial/ethnic groups.[14]

Half of adults with diabetes report that they have a family or friend regularly helping them manage their diabetes. This goes to show that support from inner circles is incredibly important to the day-to-day management of diabetes, as well as improved medication taking behavior and blood glucose management.[15] However, this support can go beyond immediate social circles. Through the pathways of social networks and social cohesion, there are opportunities to bring groups together around common goals for better health. Social cohesion is the result of strong relationships and a sense of solidarity among members of a community, while social networks are the multiple forms of social support (including emotional and functional support, i.e. giving someone a ride to the doctor) that are available to a person and impact their wellbeing.[6] Through community-placed education such as grocery store tours, cooking classes, and gardening clubs, RDNs and NDTRs can promote nutrition messaging and help promote overall positive behavior change for T2D prevention and diabetes management while supporting social cohesion.

Person-Centered Care: Keeping Health Literacy Top of Mind

Both organizational and personal health literacy can have a major impact on health outcomes. The 2022 National DSMES Standards (Standard 4) for person-centered care reminds providers to deliver services in line with the individual’s needs, including around literacy level and numeracy.[1] Personal health literacy can affect the ability to navigate services, understand medical information, follow instructions, and engage in self-care. Integrating visuals, creating reminders, sending text messages, and using the teach-back method are all techniques for supporting people with different literacy levels. These techniques can then be used to support nutrition and food literacy skills that are fostered by RDNs and NDTRs and that are essential for people with diabetes to be better able to prepare or select foods outside of the home that will support their health.

Medication Access and Transitions in Care

One of the seven self-care behaviors listed in the Association of Diabetes Care & Education Specialists (ADCES) 7 Self-Care Behaviors™ is consistently and correctly taking prescribed medications. There are significant diabetes-related inequities resulting from cost and lack of access to insulin and the latest medication and technologies. Insulin prices went up 40% between 2014 to 2018.[16] Loss of insurance coverage during the COVID-19 pandemic made getting needed medications more difficult, with an estimated 14 million people losing employer-sponsored health insurance in 2020.[17] Financial limitations can also impact the ability of a person with diabetes to try newer diabetes medications. In an analysis of data from the Look AHEAD (Action for Health in Diabetes) lifestyle intervention study, the authors assessed the association between race/ethnicity and socioeconomic factors with starting newer diabetes medications. Initiation rates were lower among Black, American Indian, and Alaska Native study participants, and annual income was inversely associated with taking new medications.[18] It is important to note, however, that these inequities are not isolated to newer medications as all needed medications for an individual's diabetes management may be impacted by cost barriers.

In addition to medication access, another area of consideration for access to care is the transition from pediatric to adult care. This is a phase of life associated with increased vulnerability. Some relevant factors include developmental changes for the person with diabetes, changes in family and home life, the transition to a new health care provider, and changes in access to care and medications. The difficulties of this transition put young adults at "increased risk of suboptimal diabetes management and related complications".[19] RDNs working with the pediatric population may find benefit in helping to support a "warm handoff" to fellow practitioners who work with adults with diabetes if they themselves may not be equipped or available to continue providing care.

Supporting 'Time in Range': Continuous Glucose Monitoring

Technology use is a standard of care that can enhance a person's ability to live a healthy lifestyle and prevent diabetes-related complications. The number of care and lifestyle decisions that people with diabetes make each day can seem overwhelming. Technology tools with monitoring capabilities offer data to help guide these decisions. Continuous glucose monitoring (CGM) offers ongoing access to glucose measurements to support individuals in making self-care decisions and helps build knowledge bases and provider protocols. Data from CGM helps supports people with diabetes in knowing and maximizing their 'time in range' — how much time they spend in an optimal glycemic range during the day.[19] The greater the time in range, the better the health outcomes.

While traditionally only considered for people with diabetes on insulin therapy, the value of CGM to improve time in range, promote positive clinical outcomes, and reduce complications in all people with prediabetes and diabetes is becoming rapidly apparent.[20] However, many of the same barriers exist when it comes to technological solutions: non-universal access, prohibitive costs, and lack of connections to experts who can bridge accessibility and usability gaps. A 2020 United Kingdom study on social inequality and

diabetes shared data showing a “tenfold variation in insulin pump use by people with type 1 diabetes (T1D) across specialist centers”.[21] In addition to expanding access to insulin pumps and CGMs to individuals with T1D, there are also opportunities to explore the use of these therapeutic tools for the management of T2D.[22] Until access can be improved to ensure these technologies (both current and upgraded models) are available to all those that need them, inequities will continue to exist in their access and utilization. As discussed in the 2021 ADCES practice paper, “The Diabetes Care and Education Specialist’s Role in Continuous Glucose Monitoring”, DCESs experienced in CGM can work with their health care systems to identify and support candidates for CGM and provide education on different device options.[23] While RDNs cannot bill for time spent evaluating the data from CGMs, they can support people with diabetes in accessing and understanding their data in partnership with the other members of their care team.

Resources to Address Health Inequities and Promote Person-Centered Care

While the burden on people with diabetes is often high, so too is the “ask” for the health care team. RDNs and NDTRs, like all those delivering health services, can experience feelings of frustration and exhaustion when working to meet the needs of those they serve. Creating community and health care sector partnerships that leverage staffing and resources and having ready access to helpful and timesaving tools can help. The collection of federal government resources and tools in Table 1 can help nutrition professionals screen for and respond to SDOH, make connections to programs like the National Diabetes Prevention Program and accredited diabetes programs that provide Diabetes Self-Management Education and Support services (DSMES), and use “out-of-the-box” resources to enhance existing DSMES or T2D prevention services.

Summary

There is no single “right way” to deliver care to people with diabetes. It depends on the person’s needs, provider skills, systems parameters, and the ever-evolving changes to the technology, health care, and overall public health landscape. Tailoring DSMES services delivery appropriately to the individual with diabetes, working together to identify challenges and what lies beneath the surface, and finding solutions as a team can all help lead to more positive outcomes and more equitable, compassionate, and person-centered care.

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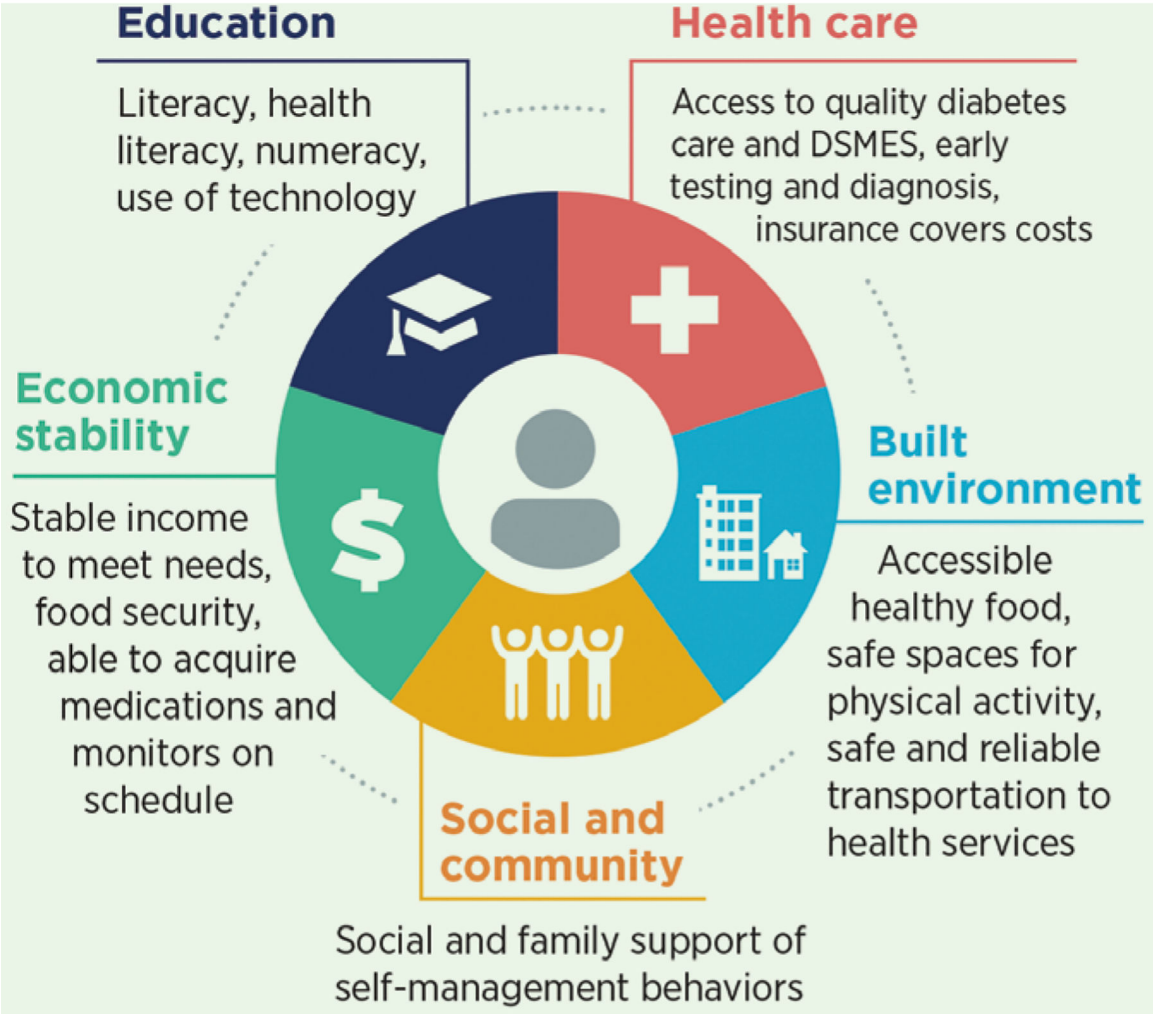

Figure 1:
Social Determinants of Health (Based on Healthy People 2030)
Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved Dec.5,2022, from https://health.gov/healthypeople/objectives-and-data/social-determinants-health

Table 1:

Federal Government Resources and Tools for Supporting Health Equity in Diabetes Care

Screening for social determinants of health		
The Accountable Health Communities Health-Related Social Needs Screening Tool (Centers for Medicaid and Medicare Services)	https://innovation.cms.gov/files/worksheets/ahcm-screeningtool.pdf	Screening tool for identifying health care-related social needs. Clinicians and their staff can easily use this short tool as part of their busy clinical workflows with people of all different ages, backgrounds, and settings.
Social Determinants of Health (SDOH) and Practice Improvement: Tools to Help Healthcare Organizations Address SDOH (Agency for Healthcare Research and Quality)	https://www.ahrq.gov/sdoh/practice-improvement.html	List of resources, including screening tools, to support health care practitioners in better understanding and responding to needs based on social determinants of health.
Skills for addressing barriers and challenges to self-care		
New Beginnings: A Discussion Guide for Living Well with Diabetes (CDC)	https://www.cdc.gov/diabetes/professional-info/toolkits/new-beginnings/index.html	Set of modules, mini-lessons, handouts, and other facilitator tools for diabetes care and education specialists, community health workers, and others to use with diabetes support groups or other types of group sessions. Uses stories, activities, and facilitated discussion to address the emotional impact of diabetes.
On Your Way to Preventing Type 2 Diabetes (CDC)	https://www.cdc.gov/diabetes/prevent-type-2/guide-prevent-type2-diabetes.html	Web-based or PDF guide for sharing with people at risk for type 2 diabetes (T2D). Emphasizes small, practical steps that add up to a healthy lifestyle.
Measuring Skills and Experiences	https://www.cdc.gov/healthliteracy/researchevaluate/measure-peoples-skills-experiences.html	Surveys to assess and measure people's literacy, numeracy, and health literacy skills and their experiences with healthcare.
A Practitioner's Guide for Advancing Health Equity: Community Strategies for Preventing Chronic Disease (CDC)	https://www.cdc.gov/nccdphp/dch/pdf/HealthEquityGuide.pdf	Guide that can help public health practitioners reduce disparities in chronic diseases. It provides a collection of health equity considerations for policy, systems, and environmental improvement strategies focused on tobacco-free living, healthy food and beverages, and active living.
Teach-Back Intervention (Agency for Healthcare Research and Quality)	https://www.ahrq.gov/patient-safety/reports/engage/interventions/teachback.html	Patient and provider tools for the teach-back method, a technique for health care providers to ensure that they have explained medical information clearly so that patients and their families understand what is communicated to them.
Tools for Putting Social Determinants of Health into Action (CDC)	https://www.cdc.gov/socialdeterminants/tools/index.htm	Looking at SDOH data can help practitioners better recognize the root causes that affect population health. Moving from data to action, however, can be challenging. These CDC tools can help practitioners take action to address SDOH.
Webinars and Videos (CDC) Including: • Compassionate Communication to Reengage People with Diabetes in DSMES • Don't Blame Me! Helping Providers and People with Diabetes Overcome Challenges for Behavior Change	https://www.cdc.gov/diabetes/professional-info/training/webinars.html	Collection of recordings of the Division of Diabetes Translation webinars including webinars addressing diabetes and mental health and helping providers and people with diabetes overcome challenges for behavior change.
Referrals to prevention		
National Diabetes Prevention Program (CDC)	https://www.cdc.gov/diabetes/prevention/index.html	Overview of information on the National DPP lifestyle change program for both individuals at risk for T2D and health care providers.

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Path to Prevention (CDC)	https://diabetespath2prevention.cdc.gov/	Online interactive resource for people who may be at risk for developing T2D. Includes videos, games, and other personalized information to help someone learn more about preventing T2D.
Enhancing DSMES services		
Diabetes Kickstart	https://www.cdc.gov/diabetestv/diabetes-kickstart.html	Collection of short, animated videos based on the 7 self-care behaviors for optimal diabetes management.
DSMES Microsite and DSMES Toolkit (CDC)	https://www.cdc.gov/diabetes/dsmes/index.html https://www.cdc.gov/diabetes/dsmes-toolkit/index.html	Collection of resources for achieving success in providing diabetes self-management education and support (DSMES) services.
Engaging Community Health Workers in Diabetes Self-Management Education Programs (CDC)	https://www.cdc.gov/diabetes/pdfs/programs/stateandlocal/emerging_practices-chw.pdf	Report that provides an overview of a technical assistance tool developed by CDC staff to explain key drivers of engaging community health workers (CHWs) in diabetes self-management education programs.
Implementing and Evaluating Diabetes Self-Management Education and Support (DSMES) Programs for Underserved Populations/Communities: A Practice-Based Guide (CDC)	https://www.cdc.gov/diabetes/pdfs/evaluation-resources/CDC-DSMES-Rapid-Evaluation-Practice-Based-Guide-508.pdf	Guide for implementing and evaluating DSMES programs designed to reach populations and communities that are underserved in the area of health and social services. The guide aligns with the 2017 National Standards for DSMES and is designed to complement the CDC DSMES Toolkit.
Community Preventative Services Task Force: Diabetes Management: Interventions Engaging Community Health Workers (CDC)	https://www.thecommunityguide.org/sites/default/files/assets/Diabetes-Management-Community-Health-Workers.pdf	Set of recommendations for engaging community health workers in diabetes management efforts.