Competencies for Diabetes Community Care Coordinators: Identifying Through a Modified Delphi Process

Introduction

The Association of Diabetes Care & Education Specialists (ADCES) has long held the position that all people who work in health care and community health settings should have sufficient knowledge of diabetes, the skills, and the ability required to provide safe and effective care and education for persons with diabetes (PWD) and related conditions. It is critical that each member of the diabetes care team develop the skill set necessary to effectively care for and educate this population.[1] To this goal, in 2020, ADCES implemented a nationally modified Delphi study designed to identify and develop competencies for the expanded diabetes care team.[2]

The purpose of this modified Delphi study was to develop care and professional education competencies that address prediabetes, diabetes, and cardiometabolic conditions at the individual and population levels. The targeted audiences for these expanded competencies included the following health care professionals (HCPs): 1) community workers who serve as a bridge between populations and the health care systems, and 2) point-of-care clinicians who care for PWD and related conditions, in the general health care system, but who are not specialized in diabetes care and education beyond their current clinical training. They represent the front line of HCPs.

The Delphi study method included the following objectives:

- Identify core competencies that all team members should possess, regardless of their discipline, to meet the needs of people with, affected by, or at risk for diabetes
- Promote self-assessment and professional development goals related to the knowledge, skills, and abilities required to effectively work with PWD and related conditions

It is important to note that these competencies are meant to expand and augment the existing competencies to recognize the expanded role of diabetes care across the entire health care team. These competencies are not a revision to the existing competencies for diabetes care and education specialists (DCES) that were published in 2020 or any other interprofessional competencies; they are an addition to the existing competencies.[2] To identify the broad skillset in this diverse workforce caring for people with diabetes in the community, the title, diabetes community care coordinators (DCCC), was adopted by the ADCES board of directors in 2021. The DCCC title is used by the Delphi research team for this study.

Methods

To achieve the rigor and fidelity of the process, a modified Delphi method was used. The Delphi method, an approach used to obtain an expert opinion in a systematic manner, has been used in health and medicine for nearly 5 decades.[3] The Delphi method allows for organizing multiple expert opinions, values, and experiences from the interprofessional team into a consensus. The process applied here identified core competency domains that are inclusive of all professions who work with individuals and populations with diabetes. The

competencies identified were reached through a systematic consensus-building process, expert opinion, and a focus on the vision for optimal health and quality of life (QOL) for PWD and related conditions.

Two national Delphi studies were conducted (Delphi Study A and Delphi Study B) to develop diabetes-specific competencies. The Delphi method typically involves multiple rounds of a survey in which experts from varied interdisciplinary backgrounds are consulted to address a specific research question.[3,4] During each round, participant responses were summarized, and the synopsis of the responses was redistributed for discussion during subsequent rounds until consensus was achieved.[2,5]

Delphi Study A: Study A group focused on the competencies for diabetes community care coordinators (DCCC). This group included community health workers, peer support community workers, paraprofessionals, and health educators.

Delphi Study B: Study B group focused on competencies for HCPs who provide care and education for PWD and related conditions, but diabetes is not their specialty or primary focus.

Study Design and Explanation

ADCES used a modified 3-round Delphi method process for Delphi studies A and B to obtain opinions and consensus from diabetes care team experts. A diverse pool of professionals (Table 1) participated in both Delphi studies to ensure a comprehensive methodology for decision-making, ADCES staff was available and present to provide background information and support as needed.

Table 1.

Diabetes Care Team		
Diabetes Community Care Coordinators	**Health Professionals**	**Diabetes Care and Education Specialists**
Member of the diabetes care team focused on linking individuals to resources, building relationships, and supporting people with, affected by, or at risk for diabetes and cardiometabolic conditions. This includes, but is not limited to, community health workers (CHW), health educators/coaches, medical assistants (MA), certified nursing assistants (CNA), licensed practical nurses (LPN), registered nutrition/dietetic technicians (NDTR), military medics and corpsmen, pharmacy assistants/technicians, physical therapy assistants, nutritionists, dental hygienists, emergency medical technicians (EMT), and other similar roles.	Member of the diabetes care team who interacts with people with diabetes and related conditions, but whose primary focus is not diabetes. This includes, but is not limited to, registered nurses (RN), registered dietitian nutritionists (RDN), pharmacists, and other similar roles.	Experts who, as integral members of the care team, provide collaborative, comprehensive, and person-centered care and education to people with diabetes and related conditions. This includes, but is not limited to, those with the credential CDCES (certified diabetes care and education specialist) or BC-ADM (board-certified advanced diabetes management) and similar roles specializing in diabetes

Round 1

Environmental Scan

A team of interprofessional diabetes experts (N=14), represented largely by DCCC and HCPs in which diabetes is not their primary focus, were invited to engage in facilitated virtual meetings and to complete an environmental scan of the competencies related to their profession, including the 2020 ADCES competencies.[2,6] A criterion of the scan wasthe competencies must have been published in English within the past 5 years.

The environmental scan revealed many comprehensive, discipline-specific competency frameworks for individual practitioners. Through careful review and input from key informants, the focus on diabetes-specific skills and knowledge was identified as an opportunity to augment, not replace, existing frameworks that guide diverse disciplines and practices. The environmental scan indicated there are broad sets of core competencies that ensure DCCC and HCPs have the basic skills necessary to adequately carry out their roles. However, based on the needs of PWD in target communities, researchers identified a significant opportunity to tailor diabetes-specific skills and knowledge for these professionals.

Stakeholder Consultation

Interprofessional diabetes specialty experts (N=14) and ADCES staff (N=4) engaged in bi-weekly facilitated, virtual meetings to discuss the environmental scan for the purpose of establishing and preparing the first draft of the competencies. All feedback and recommendations were recorded.

Round 2: Competency Development and First Online Survey

The research team used an iterative process to create, review, and revise competencies based on the feedback from Round 1, resulting in the first draft of the competencies.

First Draft of Competency Statements

Two online surveys were developed to collect anonymous data: Survey A: Competencies for DCCC and Community Health Workers and Survey B: Competencies for HCPs.

First Competency Online Survey

The DCCC and health care professional experts were asked to provide anonymous feedback and assess each competency in the first draft. Specifically, the experts were asked to rate each competency using the following rating system:

1—Essential 2—Important 3—Should be modified 4—Not important 5—Unsure

Expert participants were encouraged to provide in-depth narrative feedback. A prior decision was made to include only those competencies that achieved 80% agreement when combining *essential* and *important* rankings into the second draft. Two confidential surveys were sent to a random sample of HCPs who completed the ADCES paraprofessional level 1 or level 2 certificate training and a list of community health workers from the Centers for Disease Control and Prevention (comprising 10% of the total list). Two reminder emails were sent.

Results of Survey A: *Competencies for DCCC:* In total, 138 expert participants were invited to participate in the survey and 10 participants completed the survey. The response rate was 7.2%.

Results of Survey B: *Competencies for HCPs:* In total, 132 participants were invited to participate in the survey and 10 participants completed the survey. The responserate was 7.6%.

Round 3

Second Draft of Competency Statements

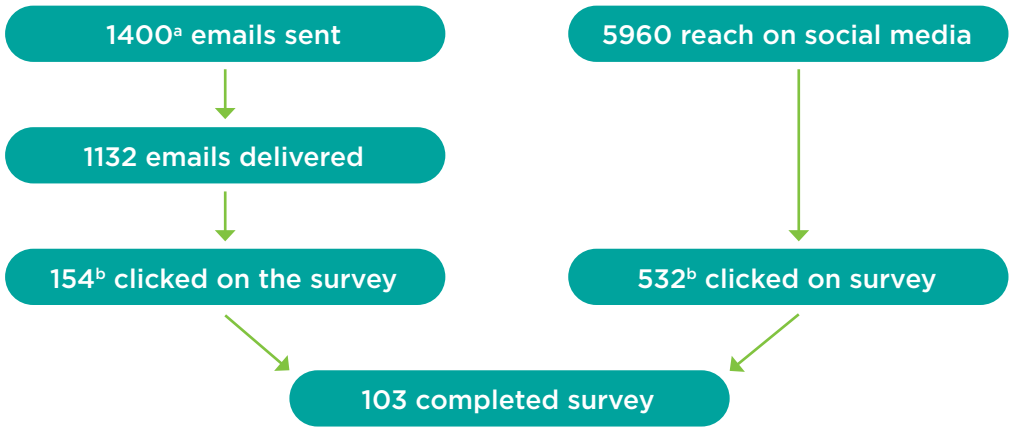
All qualitative participant responses and ratings from round 2 were analyzed and a revised draft of the competencies was developed and presented in an online survey format.

Second Competency Online Survey

The second online survey included a national group of community care and health professional diabetes experts who were asked to provide anonymous feedback from theirassessment of each competency. An email Listserv was sent to prospective participants for each survey: Survey A: Competencies for DCCC /community health workers and Survey B: Competencies for HCPs. Two email reminders were sent to participants who did not open prior emails based on the survey settings to determine if a message was read or not read. Given the interdisciplinary nature of the competencies and the desire to be inclusive,6 social media advertisements ran on Facebook and Instagram targeting diabetes care professionals who self-identified as community care or health professionals and invited these individuals to take the survey included in the recruitment process.

Results of Survey A: Competencies for DCCC (Figure 1): 1132 survey emails were delivered by an email Listserv, 154 people clicked on the survey link. Social media marketing efforts reached 5,960 individuals and 532 clicked on the survey link. A total of 7,092 participants were invited or reached and 103 participants completed the survey. The response rate was 1.5%.

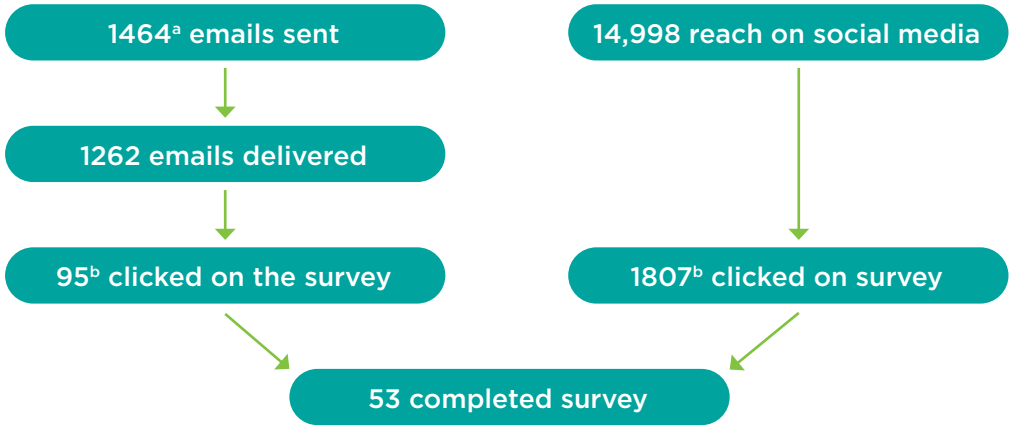
Figure 1. Round 3 Strategy to Reach Community-Based Team Members



[a]Three sets of emails were sent, some going to the same individuals
[b]Unable to determine if clicks were unique

Results of Survey B: *Competencies for HCPs (Figure 2):* 1,262 survey emails were delivered by Listserv, and 95 people clicked on the survey. The social media advertising efforts reached 14,998 individuals. Of those, 1,807 assessed the survey link. A total of 16,260 participants were invited or reached. Of those participants, 53completed the survey. The response rate was 0.3%.

Figure 2. Round 3 Strategy to Reach Non-DCES Healthcare Providers



[a]Three sets of emails were sent, some going to the same individuals
[b]Unable to determine if clicks were unique

Our social media reach was wide-reaching and diverse to ensure our study included the broad population representing the specialty. Participants represented a diverse pool of community care and diabetes health care experts. Most participants identified as community health workers or health coaches (41%) and worked in a variety of settings, including, but not limited to community-based organizations, outpatient clinics (primary care and hospital-based), and online support groups. Participants served a variety of racial and ethnic populations from multiple racial backgrounds (59.9%), African American/Black (42%), White (45.5%), and Hispanic/Latinx (43.2%) being the most common. These participants provided diabetes care and education services nearly equal in rural (48.9%), urban (42.1%), and suburban (45.5%) settings.

Like Round 1, participants rated each competency as *essential, important, should be modified, not important*, or *unsure.* Participants had the option of providing narrative feedback. A consensus of 80% of participant responses coded as *essential* or *important* was required for each competency to be included in the final corpus.

Competencies Finalized

All competencies achieved 80% consensus in the second competency online survey. A final draft of 123 competencies was then confirmed.

Results

A modified 3-round Delphi method identified core competencies for HCPs and DCCC. A total of 14 diabetes care team experts throughout the United States contributed to the Delphi study rounds to develop the final corpus of competencies. The experts represented nutritionists, community health workers, dental hygienists, health educators/coaches, dietitian technicians, pharmacist assistants, individual navigators, social workers, pharmacy technicians, students, care coordinators, master's level nutritionists, dietary-health technicians, diabetes care and education specialists (DCES), nurses, and exercise physiologists. The final set of 123 competencies is representative of 2 domains: (1) Clinical Management Practice and Integration and (2) Person-centered Care and Counseling Across the Lifespan.

Table 1.

Diabetes Care Team		
Diabetes Community Care Coordinators	**Health Professionals**	**Diabetes Care and Education Specialists**
Member of the diabetes care team focused on linking individuals to resources, building relationships, and supporting people with, affected by, or at risk for diabetes and cardiometabolic conditions. This includes, but is not limited to, community health workers (CHW), health educators/coaches, medical assistants (MA), certified nursing assistants (CNA), licensed practical nurses (LPN), registered nutrition/dietetic technicians (NDTR), military medics and corpsmen, pharmacy assistants/technicians, physical therapy assistants, nutritionists, dental hygienists, emergency medical technicians (EMT), and other similar roles.	Member of the diabetes care team who interacts with people with diabetes and related conditions, but whose primary focus is not diabetes. This includes, but is not limited to, registered nurses (RN), registered dietitian nutritionists (RDN), pharmacists, and other similar roles.	Experts who, as integral members of the care team, provide collaborative, comprehensive, and person-centered care and education to people with diabetes and related conditions. This includes, but is not limited to, those with the credential CDCES (certified diabetes care and education specialist) or BC-ADM (board-certified advanced diabetes management) and similar roles specializing in diabetes

Table 2. Competencies for the Diabetes Community Care Coordinator

These competencies are the core knowledge and skills needed to support, engage, and care for people with diabetes. These competencies are not meant to replace professional or core competencies.

Target audience: Diabetes community care coordinators

Member of the diabetes care team focused on linking individuals to resources, building relationships, and supporting people with, affected by, or at risk for diabetes and cardiometabolic conditions.[1] This includes, but is not limited to, community health workers (CHW), health educators/coaches, medical assistants (MA), certified nursing assistants (CNA), licensed practical nurses (LPN), registered nutrition/dietetic technicians (NDTR), military medics and corpsmen, pharmacy assistants/technicians, physical therapy assistants, nutritionists, dental hygienists, emergency medical technicians (EMT), and other similar roles.

Domain 1: Support of Clinical Management Practice and Integration

The diabetes community care coordinator maintains the necessary knowledge and skills in diabetes to provide support in the management of diabetes and cardiometabolic conditions.

1. Support of Clinical Management of Diabetes and Cardiometabolic Conditions	
1.1.1	Describes differences between prediabetes, type 1 and type 2 diabetes, and gestational diabetes
1.1.2	Describes the relationship between diabetes and cardiometabolic conditions
1.1.3	Lists risk factors for developing type 2 diabetes and related conditions
1.1.4	Reviews common acute complications of diabetes
1.1.5	Provides person-centered support and education for self-care to individuals and their caregivers
1.1.6	Identifies Social Determinants of Health (SDOH) and the resulting gaps in resources and support for self-care
1.1.7	Collects diabetes information which may include glucose meter or continuous glucose monitoring (CGM) logs from health information technology sources
1.1.8	Collaborates and participates in ongoing communications with primary care providers
1.1.9	Demonstrates understanding of the relevant scope of practice of interprofessional care team including roles and responsibilities
2. Support of Clinical Practice: Healthy Coping	
1.2.1	Demonstrates awareness of psychosocial and emotional health within the daily self-management of diabetes
1.2.2	Provides examples of healthy coping strategies to incorporate into daily activities
1.2.3	Assists individuals with recognition of barriers and facilitators related to self-care to support positive change
1.2.4	Uses screening tools as indicated to identify concerns with healthy coping, such as diabetes distress, depression, eating disorders, and other mental health concerns
1.2.5	Assists individuals with appointments to behavioral specialists and supports ongoing participation in care
3. Support of Clinical Practice: Reducing Risks	
1.3.1	States complications of and risk factors for diabetes
1.3.2	Explains healthy behaviors to help prevent type 2 diabetes and/or reduce risks of related complications
1.3.3	Outlines key prevention behaviors to maintain health at points of care transitions (at diagnosis, annually and/or when not meeting treatment targets, when complicating factors develop, and when transitions in-life and care occur)
1.3.4	Matches potential barriers to healthy behavior with steps to maintain or improve health and prevent complications
4. Support of Clinical Practice: Taking Medication	
1.4.1	Reviews medication plan with individual and confirms understanding
1.4.2	Assists individuals with recognition of barriers and explains strategies for uninterrupted medication use
1.4.3	Identifies and communicates issues that require care team intervention
5. Support of Clinical Practice: Healthy Eating	
1.5.1	Describes general considerations for healthy eating, such as food groups, label reading, portion sizes, and meal planning
1.5.2	Explains components of healthy eating patterns, such as including non-starchy vegetables, minimizing added sugars and refined grains, and choosing whole foods instead of processed foods
1.5.3	Assists individuals to incorporate cultural and socioeconomic preferences into meal planning and eating patterns
1.5.4	Assists individuals with recognition of barriers and implementation of strategies for healthy eating
1.5.5	Uses knowledge of the interaction between food, activity, and medication to promote and maintain healthy eating choices

6. Support of Clinical Practice: Monitoring	
1.6.1	Explains available tools used for monitoring, such as meters for glucose monitoring, devices for continuous glucose monitoring (CGM), mobile applications (apps), and point of care (POC) tools
1.6.2	Assists in the training needed for glucose monitoring and (when necessary) urine ketones
1.6.3	Assists individuals with recognition of barriers to effective monitoring and explores possible solutions for overcoming barriers with self-monitoring
1.6.4	Supports individuals' attempts to achieve and maintain effective self-monitoring habits
7. Support of Clinical Practice: Being Active	
1.7.1	Understands the role and impact of physical activity and fitness in prevention and treatment of diabetes and cardiometabolic conditions
1.7.2	Encourages physical activities as recommended by the care team
1.7.3	Assists individuals to overcome barriers to routine physical activity and connects them with appropriate community resources
1.7.4	Supports individuals as they make changes in movement patterns appropriate for age and life stage and refers to health care team for modifications
8. Support of Clinical Practice: Problem Solving	
1.8.1	Works with individuals to identify solutions to challenges with self-management
1.8.2	Demonstrates use of tools including adaptive aids to facilitate effective self-management
1.8.3	Assists individuals with goal setting
1.8.4	Adapts education tools to support literacy
1.8.5	Supports individuals to integrate established plan of care into daily lives

Domain 2: Person-Centered Care and Education Across the Life Span

The diabetes community care coordinator partners with team members to facilitate and advocate for care and education that promotes healthy behaviors and improves quality of life for people with diabetes and cardiometabolic conditions across the life span.

1. Assessment	
2.1.1	Collects and reports findings from individual's assessment for self-management of health conditions
2.1.2	Provides appropriate screening tools to assess daily self-management and type 2 diabetes prevention activities to meet individual needs
2.1.3	Establishes person's interest in support networks and assists with access to those networks and community resources
2.1.4	Identifies person's preferences for use of technology to promote self-management
2. Care Delivery for Individual	
2.2.1	Teaches evidence-based diabetes and cardiometabolic self-management topics collaboratively and within scope of practice to individuals across the life span
2.2.2	Uses the ADCES7 Self-Care Behaviors® as a framework to teach and reinforce self-management skills (These self-care behaviors include healthy coping, healthy eating, being active, taking medication, monitoring, reducing risk, and problem solving.)
2.2.3	Facilitates behavior change and improved quality of life
2.2.4	Recommends appropriate services based on age, culture, health literacy and numeracy, and learning needs of individual
2.2.5	Assists individuals with evaluation of reliability of health information
2.2.6	Matches an individual's interest in technology with the most appropriate tools

2.2.7	Encourages problem-solving skills and shares techniques to overcome barriers to self-care
2.2.8	Names behavioral approaches to meet evolving needs of the individual
2.2.9	Recommends the inclusion of a support network into individual's care and provides evidence to the benefits of a support network
2.2.10	Encourages 'person first' language to promote positive interactions
2.2.11	Provides positive feedback to celebrate successful self-management events
3. Care Delivery for Population	
2.3.1	Demonstrates appropriate participatory teaching methods in delivery of education
2.3.2	Participates in care coordination, including access to resources
3.3.3	Participates in education programming and services, including the National Diabetes Prevention Program (DPP), diabetes self-management education and support, and chronic disease programs

Discussion

There are 130 million Americans currently living or at risk for diabetes. As a result, clinicians, nonclinical providers, and peer supporters are all indispensable in the delivery of person-centered, team-based diabetes care and education.[7] The ADCES recognizes the need and opportunity for expanded competencies that include a broad interprofessional team to support integrated and person-centered care to meet the standards for high-quality care for PWD and cardiometabolic conditions. Based on evidence-based outcomes, the American Diabetes Association, and the European Association for the Study of Diabetes, along with ADCES, recommend a person-centered approach to diabetes management that is holistic and includes self-management education and health behavior change for all PWD and related conditions.[7,8,12,13] Every person living with diabetes in the United States deserves access to the information and resources necessary to reduce the health risk of diabetes and cardiometabolic conditions, which will allow them to achieve optimal QOL.

Core competencies for the DCCC and HCPs were identified through the results of the 2021 Delphi study and with key stakeholder feedback that focused on diabetes-specificskills and knowledge with a focus on person-centered care and care integration. These core competencies align with ADCES' key strategies that most impact PWD and other cardiometabolic conditions on a community-based, population health level.

Redefining the Diabetes Care Team

In previous ADCES competencies, 3 levels of diabetes educators and 2 levels of diabetes education associates/ paraprofessionals were included.[8-10] Driven by stakeholder input, the 2 levels of paraprofessionals have been merged into 1 role retitled "diabetes community care coordinators." Health care team members who hold a license or certification and who do not intend to specialize in diabetes are referred to as "health professionals." These roles are defined in Table 1 and discussed in detail below.

Diabetes Community Care Coordinators

Diabetes community care coordinators (DCCC) are inclusive of a broad set of diabetes care team members focused on providing community-based, person-centered care, and education and connecting individuals to health care teams and systems. Diabetes community care coordinators are recognized by the full care team for their understanding of local culture, environment, and social determinants of health[1] within their community. The term diabetes community care coordinator was identified as it aptly describes these trusted liaisons who link individuals to diabetes-related resources, build relationships, and collaboratively work with people at any stage of readiness. Diabetes community care coordinators includes, but is not limited to, community health workers, health educators/ coaches, medical assistants, certified nursing assistants, licensed practical nurses, registered nutrition/dietetic technicians, military medics and corpsmen, pharmacy assistants/technicians, physical therapy assistants, nutritionists, dental hygienists, emergency medical technicians, and those in other similar roles. As a front-line workforce, DCCC serve as essential partners in mitigating inequalities and supporting self-care behaviors for people with, affected by, or at risk for diabetes.

Health Professionals (diabetes is not a specialty focus)

The HCPs are key members of the diabetes care team, and they have many opportunities to enhance the care and education provided to PWD. These frontline HCPs are well-positioned to use a person-centered approach that will make significant differences in the lives of people with, affected by, or at risk for diabetes. They work within a defined scope of practice that is guided by their specific professional competencies, and they have completed academic preparation in health and science. These professionals may not be specialized in diabetes, but their work often includes interacting with this population. Examples of how these providers interact with PWD include a registered dietitian nutritionist who is creating a post-operative care plan for a PWD, a pharmacist who occasionally teaches blood glucose monitoring, or a registered nurse who provides bedside care in the medical/surgical unit of a hospital.

Diabetes care and education specialists

The description and competencies for this role have been addressed elsewhere.[12]

Application and Use

The intent of the competencies remains the same as described in Competencies for Diabetes Care and Education Specialists (DCES); [they are] "intended to guide practice regardless of discipline and encourage mastery through continuing education, individual study, and mentorship".[12]

Although additional core competencies may be necessary for specific job roles, the competencies defined in this document pertain specifically to diabetes. The competencies are not intended to address the scope of practice, nor are they intended to override organizational policies and bylaws, protocols, state licensure, and other regulations.

Both sets of competencies for DCCC and HCPs include a domain focused on person-centered care and education. In this approach, the beliefs, preferences, and values of the PWD are paramount. Diabetes care team members must be able to demonstrate respect for the individual and provide equitable and high-quality care for all persons they serve and incorporate their individual beliefs, values, and preferences into the care they deliver. These competencies apply to all practice settings and delivery modes, including virtual interactions. The ADCES embraces using technology to overcome barriers to self-care for PWD and encourages competence in the use of technology for the diabetes care team.

The ADCES urges DCCC and HCPs to use these competencies to perform self-assessments and set professional development goals. The DCCC and HCPs who achieve thesecompetencies contribute to a more proficient and empowered workforce, which can result in improved QOL and outcomes for people with, affected by, or at risk of diabetes.

Navigation of Competencies

Acquiring knowledge is a prerequisite to competency. Each competency has been carefully developed to illustrate a distinct knowledge set, skill, or ability. Note: The term personincludes those with, affected by, or at risk for diabetes, as well as the full spectrum of conditions including prediabetes and cardiometabolic conditions.

Table 2 outlines the competencies for DCCC. Competencies listed under "Support of Clinical Management Practice and Integration" reinforce the importance of a strong foundation in the clinical management of diabetes and self-management through the ADCES7 Self-Care Behaviors®.[13] Competencies listed under "Person-Centered Care and Education Across the Life Span" emphasize the need to identify and incorporate an individual's needs and preferences when facilitating and delivering care and education.

Table 3. Competencies for Health Professionals (diabetes is not primary focus)

These competencies are the core knowledge and skills needed to support, engage and care for people with diabetes. These competencies are not meant to replace professional or core competencies.

Target Audience: Health professionals

Member of the diabetes care team who interacts with people with diabetes and related conditions, but whose primary focus is not diabetes. This includes, but is not limited to, registered nurses (RN), registered dietitian nutritionists (RDN), pharmacists, and other similar roles.

Domain 1: Clinical Management Practice and Integration

Health professionals maintain knowledge and skills in pathophysiology, epidemiology, clinical management, and self-management to support people with diabetes and cardiometabolic conditions.

1. Clinical Management of Diabetes and Cardiometabolic Conditions	
1.1.1	Describes the difference between prediabetes, type 1 and type 2 diabetes, and gestational diabetes
1.1.2	States the diagnostic criteria, risk factors, and progression of diabetes across the life span
1.1.3	Identifies the impact of glucose levels on the development of diabetes and cardiometabolic conditions
1.1.4	Recognizes the signs and symptoms of hypoglycemia, hyperglycemia, hyperosmolar hyperglycemic state (HHS), and diabetes-related ketoacidosis (DKA)
1.1.5	Applies knowledge of the pathophysiology of diabetes and cardiometabolic conditions to provide diabetes care
1.1.6	Applies clinical practice guidelines into care and care models
1.1.7	Refers or facilitates referrals and/or treatments as appropriate
1.18	Assesses Social Determinants of Health (SDOH) and identifies the gaps in resources and support for self-care
1.1.9	Recommends and provides interventions as appropriate for community-based resources to support self-care
1.1.10	Provides person-centered care, education and support for diabetes self-care
2. Clinical Practice: Healthy Coping	
1.2.1	Assists individuals with identifying and prioritizing their goals as part of the shared decision making process
1.2.2	Identifies the impact of psychosocial and emotional health within the daily self-management of diabetes
1.2.3	Assesses impact of individual's behavioral and emotional health on the plan of care
1.2.4	Assists individuals with recognition of barriers and implementation of strategies for healthy coping
1.2.5	Screens for the presence of diabetes distress, depression, eating disorders, and other mental health concerns
1.2.6	Appropriately refers individuals to behavioral specialists or community behavioral resources
1.2.7	Facilitates the development of healthy coping skills in people with diabetes and cardiometabolic conditions
3. Clinical Practice: Reducing Risks	
1.3.1	Encourages participation in diabetes self-management education and support (DSMES), the National Diabetes Prevention Program (DPP), medical nutrition therapy (MNT), and other individual or group models of care
1.3.2	Provides or facilitates referrals to diabetes care and education specialists, which may include registered dietitian nutritionists (RDN), certified diabetes care and education specialists (CDCES), and those with the credential, board certified-advanced diabetes management (BC-ADM)
1.3.2	Applies knowledge of diabetes-related complications and associated risk factors for education, prevention, and management
1.3.3	Implements risk reduction strategies to minimize actual and potential risks related to common diabetes-related complications
1.3.4	Implements prevention strategies to assist individuals with diabetes and cardiometabolic conditions at care transition points (at diagnosis, annually and/or when not meeting treatment targets, when complicating factors develop, and when transitions in-life and care occur)
1.3.5	Assists individuals with recognition of barriers and implementation of strategies to effectively reduce the risk of diabetes and diabetes-related complications
1.3.6	Develops processes to ensure access to resources needed for self-management at the time of transition
1.3.7	Advocates for appropriate and timely adjustments in plans of care to prevent therapeutic inertia

4. Clinical Practice: Taking Medication	
1.4.1	Explains administration technique, dosing, frequency, side effects, storage, expiration, and benefits of medication taking
1.4.2	Identifies medications ordered for diabetes and cardiometabolic conditions
1.4.3	Identifies and communicates issues that require care team intervention
1.4.4	Assists individuals with recognition of barriers and co-develops strategies for uninterrupted medication use
1.4.5	Applies knowledge of the healthcare system and individual's medications to facilitate uninterrupted access to medications, devices, and supplies necessary to self-manage diabetes and cardiometabolic conditions
1.4.6	Demonstrates awareness of insulin pumps
5. Clinical Practice: Healthy Eating	
1.5.1	Facilitates referrals to National Diabetes Prevention Program (DPP), diabetes self-management education and support (DSMES) and medical nutrition therapy (MNT) providers, including diabetes care and education specialists and registered dietitian nutritionists
1.5.2	Applies nutrition knowledge, cultural and socioeconomic considerations, and person's preferences to assess and individualize healthy meal plans
1.5.3	Connects person with recommended online resources to support healthy behaviors to maintain healthy eating patterns
1.5.4	Describes general components of healthy eating, such as food sources of macronutrients, label reading, portion sizes, and meal planning
1.5.5	Explains relationship between food, activity, medication, and clinical outcomes, such as blood glucose, lipids, blood pressure, and weight
1.5.6	Explains components of healthy eating patterns, such as including non-starchy vegetables, minimizing added sugars and refined grains, and choosing whole foods instead of processed foods
1.5.7	Compares and contrasts various eating patterns useful for the management of diabetes and cardiometabolic conditions
1.5.8	Assists individuals with recognition of barriers and implementation of strategies for healthy eating
6. Clinical Practice: Monitoring	
1.6.1	Explains available tools used for monitoring, such as meters for glucose monitoring, devices for continuous glucose monitoring (CGM), mobile applications ("apps"), and point of care (POC) tools
1.6.2	Supports the individual's attempts to achieve and maintain effective self-monitoring habits
1.6.3	Applies knowledge of monitoring to provide guidance on achievement of treatment goals
1.6.4	Assists individuals with recognition of barriers and implementation of strategies for effective monitoring
7. Clinical Practice: Being Active	
1.7.1	Understands the role and impact of physical activity and fitness in prevention and treatment of diabetes and cardiometabolic conditions
1.7.2	Applies knowledge of exercise related glucose excursions to provide recommendations for aerobic, resistance, and other physical activity
1.7.3	Assists individuals with recognition of barriers and implementation of strategies to promote physical activity
1.7.4	Selects recommendations for physical activity based on factors such as pregnancy, age, body mass index, weight management goals, and macrovascular and microvascular complications
8. Clinical Practice: Problem Solving	
1.8.1	Employs collaborative problem-solving methods to identify and resolve gaps in the plan of care
1.8.2	Utilizes knowledge of problem solving and goal setting to develop appropriate and realistic plans of care
1.8.3	Develops person-centered plan of care consistent with available support systems, and physical, developmental, and cognitive levels
1.8.4	Assists individuals with recognition of barriers and implements strategies for effective problem solving

Domain 2: Person-Centered Care and Education Across the Life Span	
Health professionals partner with team members to facilitate and advocate for care and education that promotes healthy behaviors and improves quality of life for people with diabetes and cardiometabolic conditions across the life span.	
1. Assessment	
2.1.1	Assesses person's skills and knowledge level, education, health literacy/numeracy, culture, readiness to learn, preferred learning style and language, barriers to learning, financial barriers, confidence and skills with technology use, and support needs
2.1.2	Identifies appropriate community support for ongoing diabetes self-management
2.1.3	Evaluates person's interest and access to support network
2.1.4	Identifies tools that are well suited to individual preferences and plan of care to support an improved quality of life
2.1.5	Evaluates individual's physical and cognitive abilities to perform daily self-management activities and identifies tools including adaptive aids, to facilitate effective self-management
2. Care Delivery for Individual	
2.2.1	Provides evidence-based diabetes and cardiometabolic education to individuals across the life span
2.2.2	Uses the ADCES7 Self-Care Behaviors® as a framework to teach, reinforce, and evaluate self-management skills (These self-care behaviors include healthy coping, healthy eating, being active, taking medication, monitoring, reducing risk, and problem solving.)
2.2.3	Facilitates an individualized education plan
2.2.4	Applies knowledge of technology and individual's interest in and comfort with technology to select most appropriate tools
2.2.5	Facilitates individual problem-solving to overcome barriers to self-management
2.2.6	Integrates the inclusion of a support network into person's care
2.2.7	Encourages 'person first' language to promote positive interactions
3. Care Delivery for Population	
2.3.1	Facilitates referrals to diabetes self-management education and support programs, such as the National Diabetes Prevention Program (DPP) and chronic disease programs
2.3.2	Assists individuals in evaluating reliable information sources for diabetes and cardiometabolic conditions and identifying potential misinformation
2.3.3	Facilitates navigation of the health insurance system

Table 3 outlines competencies for HCPs whose primary focus is not diabetes. Competencies listed under "Clinical Management Practice and Integration" focus on the basics of clinical and self-management for diabetes and cardiometabolic conditions because HCPs have already completed academic preparation and clinical practice in their roles. Competencies listed under "Person-Centered Care and Education Across the Life Span" underscore the value of assessing individual needs and interests when selecting resources and delivering care and education.

Conclusion

The increase in diagnoses of diabetes, prediabetes, and cardiometabolic conditions, as well as emerging trends in diabetes treatments, including diabetes technology, demand the need for a competent and diverse diabetes care team to address the health of the individual and population levels in the United States. It is critical for the diabetes care team to use the competencies to complete a baseline self-assessment of their individual skillset and determine their next steps for professional development. Diabetes care and education team members can access the ADCES competencies and accompanying documentation in this issue of The Science of Diabetes Self-Management and Care, as well as by website.

ADCES calls upon the diabetes care team, the DCCC, HCPs, and DCES to strive for excellence in their pursuit of optimal health and QOL for people with, affected by, or at risk for diabetes. ADCES remains dedicated to fostering a collaborative and comprehensive approach to providing person-centered care and education. The competencies for DCCC and for HCPs who do not specialize in diabetes provide a pathway for the continued growth of the interprofessional team.

References:

1. Association of Diabetes Care and Education Specialists. About ADCES. Accessed July 28, 2023.
2. Litchman ML, Ryan D, Yehl K, Rinker J, Burke SD. Developing the 2020 diabetes care & education specialist competencies: a modified Delphi study. *Diabetes Educ.* 2020;46(4):378-383.
3. Dalkey N, Helmer O. An experimental application of the Delphi method to the use of experts. *Management Science.* 1963;9(3):458-467.
4. Beech B. Studying the future: a Delphi survey of how multi-disciplinary clinical staff view the likely development of two community mental health centres over the course of the next two years. *J Adv Nurs.* 1997;25(2):331-338.
5. Hsu C-C, Sandford BA. The Delphi technique: making sense of consensus. *Practical Assessment, Research & Evaluation.* 2007;12(10):1-8.
6. Schofield R, Chircop A, Baker C, MD Leurer, Duncan S, Wotton D. Entry-to-practice public health nursing competencies: a Delphi method and knowledge translation strategy. *Nurse Educ Today.* 2018;65:102-107.
7. Diabetes Educator Practice Level Work Group. Competencies for diabetes educators: a companion document to the diabetes educator practice levels. 2014. Accessed July 28, 2023. https://www.diabeteseducator.org/docs/default-source/legacy-docs/_resources/pdf/general/comp002.pdf?sfvrsn=9
8. Diabetes Educator Practice Level Work Group. Diabetes educator practice levels. Accessed July 28, 2023. https://www.diabeteseducator.org/docs/default-source/legacy-docs/_resources/pdf/general/praclev2014.pdf?sfvrsn=9
9. Association of Diabetes Care & Education Specialists. Addressing the full scope of cardiometabolic conditions. Accessed July 28, 2023. https://www.diabeteseducator.org/practice/Repositioning-the-Specialty-Association/addressing-the-fullscope-of-cardiometabolic-conditions
10. Diabetes Educator Competencies Work Group. Practice levels for diabetes educators and diabetes paraprofessionals. Accessed July 28, 2023. https://www.diabeteseducator.org/docs/default-source/practice/practice-resources/praclev20168f0edb36a05f68739c53ff0000b8561d.pdf?sfvrsn=6
11. Centers for Disease Control and Prevention. About social determinants of health (SDOH). 2021. Accessed July 28, 2023. https://www.cdc.gov/socialdeterminants/about.html
12. Ryan D, Burke S, Litchman ML, et al. Competencies for diabetes care and education specialists. *Diabetes Educ.* 2020;46(4):384-397. doi: 10.1177/0145721720931092
13. Association of Diabetes Care & Education Specialists. An effective model of diabetes care and education: the ADCES7 Self-care Behaviors®. *Sci Diabetes Self Manag Care.* 2021;47(1):30-53. doi: 10.1177/0145721720978154