Diabetes Self-Management Education & Support

Implementation Toolkit

Designed for current program providers, clinicians, health system administrators, and anyone interested in developing and implementing Diabetes Self-Management Education & Support Services based on the 2022 National Standards.

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Introduction

In California and locally in Los Angeles County, nearly 1 in 10 adults have been diagnosed with type 2 diabetes.[1,2] Diabetes comes with additional risks as the disease progresses, so proper diabetes management is vital to reduce the burden and severity of the disease. Comorbidities that can arise from uncontrolled diabetes include heart disease, nerve damage, chronic kidney disease, and mental health complications among others.[3] The Diabetes Self-Management Education & Support (DSMES) program can be offered to help people with diabetes better manage their disease. The Centers for Disease Control and Prevention (CDC) defines DSMES as the ongoing process of facilitating the knowledge, skills, and ability necessary for diabetes self-care, as well as activities that assist a person in implementing and sustaining the behaviors needed to manage their condition on an ongoing basis, beyond or outside of formal self-management training.[4] DSMES programs provide 10 hours of diabetes education and follow an evidence-based diabetes management service model shown to have a positive impact on lifestyle changes resulting in prevention or delay of diabetes complications and improved quality of life.[4] DSMES programs have been linked to positive changes in diabetes-related social and emotional coping, as well as health behaviors and outcomes, including improvements in blood pressure, hemoglobin A1c, and cholesterol.[5] DSMES is referred to by several names depending on the payer or organization – Diabetic Self-Management Training (DSMT), Diabetes Self-Management Education (DSME), and Diabetes Self-Management Support (DSMS) – but all refer to the same services. While they do share similarities, it should be noted that DSMES is separate from Medical Nutrition Therapy (MNT), which is a diagnostic counseling service provided by a registered dietitian for the purpose of managing diabetes. The two programs may be provided simultaneously for additional support.[5,6]

DSMES services are underutilized in the United States. Less than 5% of eligible Medicare patients and 6.8% of privately insured patients are referred to DSMES services.[4,7] DSMES providers can receive reimbursement for services by receiving recognition from the American Diabetes Association (ADA) or accreditation from the Association of Diabetes Care and Education Specialists (ADCES). These two organizations use the *National Standards for Diabetes Self-Management Education and Support* (‘*National Standards’*; Appendix F), a guidance document outlining 6 critical components required for the provision of DSMES services. The *National Standards* offer a framework for providing evidence-based DSMES services, evaluating the quality of DSMES programs, and ensuring that participants receive

current, high quality, culturally appropriate services.[8] The *National Standards* are applicable to all care models and provide structure and consistency to the coordination of care for diabetes management services. The *National Standards* are reviewed and revised every 5 years, the most recent being the 2022 *National Standards* referenced in this document.

This toolkit offers existing and future providers a variety of tools and resources needed to develop, implement, and/or sustain DSMES programs in a variety of settings.

Program Development

This section of the toolkit will go over all the preparations and considerations that your organization should make when deciding to offer DSMES services. This section includes the following: infrastructure required for DSMES suppliers, DSMES program format and requirements, and participant eligibility criteria.

Infrastructure

Although specific infrastructure may vary between DSMES programs, there are a few key components that each program should include when developing and implementing a DSMES program. This section will cover these basic requirements and includes the following tools and resources:

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• Organizational Checklist	pg. 7
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Organizational Resource Checklist

Operating a successful, recognized/accredited DSMES program requires several components, including: an appropriate location, equipment to conduct sessions, and qualified staff trained to perform all necessary duties (recruitment, delivery, billing, and data entry and evaluation). The following checklist will help get you started.

Organizational Resource Checklist:

Site Requirements:	
Private room, with door, to conduct group intervention sessions and maintain confidential participant information	
Separate area for weigh-ins (with curtain, screen, or other blockade) *	
Table(s) and chairs for participants	
Ability to maintain compliant with HIPAA regulations for all records and communications with participants	
Equipment Requirements:	
Scale (balance beam or digital) to weigh participants with maximum weight of 500 lbs.*	
Printer and copier to print/copy participant handouts and other program materials	
Blackboard, whiteboard, or flip chart	
Appropriate writing utensils	
Binders, binder clips, and tabs	
Computer to enter data and/or conduct online programming as needed	
Phone system to communicate with patients for appointments and follow-up	
Cyber security standard operating procedures (SOP) for online services (optional)	
Staff Requirements:	
At least 2 trained Diabetes Educators to teach courses (in case a substitute is needed)	
Quality Coordinator	
Curriculum Requirements:	
Familiarity with, and agreement to use ADA or ADCES pre-approved curriculum	
If not using approved curriculum, get ADA/ADCES approval for curriculum	

**May vary depending on measurements being taken, only needed if BMI is used as a measurement.*

Budget

The cost per person for DSMES can vary by region, depending on the setting, mode, and intensity of the program offered. Although there are many up-front costs associated with starting the program, the majority of the overall cost for DSMES is labor, at upwards of 80% of total ongoing costs.[7]

Your organization should assess both the fixed and variable costs associated with your program, starting with your program launch. Questions to help guide your planning include: How much will you pay your education staff? What program supplies will you need to purchase? Will you use participant incentives? How will you offset your expenses? How many participants do you need per class to make your program financially sustainable and/or earn revenue? A sample budget template follows that can be adjusted based on your delivery method and program staffing needs.

DSMES Budget Template[9]

Item	Quantity	Itemized Cost	Total Cost	Notes on Formulas
Personnel Services				
Quality Coordinator				
Diabetes Educator				
Fringe Benefits				
Fringe benefits of full-time personnel @ XX%				
Fringe benefits of part-time personnel @ YY%				
Subtotal for Personnel				
Startup Costs				
Marketing materials (table tents, postcards, referral pads, posters, etc.)				
Training for providers				
Billing service (*if applicable*)				
Room rental for training				
Printing costs for training materials				
Scales				
Accreditation/Recognition application fee				
Subtotal for Startup Costs				
Programming Costs (per class, 12 participants)				
Provider time (@hourly rate)				
Participant binders				
Printing participant handouts				
Participant incentives				
Subtotal for Programming Cost				
Other Categories				
Rent for facility				
Office supplies				
Office equipment				
Subtotal for Other Categories				
Total Expenses				
Program Fee Income				
Total Income Generated				
Subtotal Direct Cost				
Subtotal Indirect Costs (XX%)				
Total for Budget				

Staffing

To implement and deliver DSMES services, your organization will need to hire staff and/or delegate duties to current staff. All designated staff should be trained to meet ADA or ADCES requirements and the *National Standards* (Appendix F). The number of staff dedicated to operating the DSMES program depends on the size and breadth of the program. Successful programs should have at least one Diabetes Educator responsible for leading DSMES class sessions and one Quality Coordinator to oversee quality improvement, program management, and DSMES program delivery. It is recommended that a program should have at least two Diabetes Educators in case a substitute is needed. For smaller programs, a Diabetes Educator may also serve as the Quality Coordinator. If a program serves many participants at one-time, some larger organizations may decide to also use administrative support staff for data entry to alleviate burden from the Quality Coordinator. When deciding how many staff to hire and train, your organization should consider staffing, supervision, and substitution needs, to assure quality performance and continuity of the program. Staffing plans should also consider the requirements outlined in the *National Standards* (see next section for further details).

National Standards Requirements

The 2022 *National Standards* outline the requirements for the DSMES team in Standard 3 as follows:[8]

- At least one practitioner on the DSMES team must fulfill the role of the Quality Coordinator
- All members of the DSMES team must participate in continuing education specific to their role on the DSMES team.
- DSMES team members are not required to hold any credentials and may include pharmacists, physicians, social workers, registered dietitians, Certified Health Education Specialists, Diabetes Community Care Coordinators, etc.
- When patients require services outside the scope of the DSMES team, referrals to outside resources or qualified healthcare professionals must be documented.

Quality Coordinator Role Description

The DSMES Quality Coordinator is responsible for ensuring that DSMES services are delivered in a manner that is person-centered and reflects the latest research regarding diabetes education. The Quality Coordinator is also responsible for identifying, analyzing, and communicating data about the program to the respective recognizing/accrediting body.[10] Due to the varied nature of DSMES programs, the Quality Coordinator may or may not play a role in participant instruction depending on the scale and capacity of the DSMES team.

Duties and Responsibilities[10,11]

- Oversees the planning, implementation, and evaluation of the DSMES service.
- Organizes the identification of DSMES stakeholders and coordinates between the DSMES team members, stakeholders, and other departments and administration.
- Monitors and facilitates maintenance of DSMES team members qualifications (continuing education (CE) credits, training, competency, licensures, and registrations).
- Ensures DSMES outcomes are tracked.
- Ensures the DSMES service always has a quality improvement project underway.
- Completes the Recognition/Accreditation annual status report in a timely manner.
- Responsible for maintaining ADA Recognition or ADCES Accreditation and participating in the evaluation of the DSMES service's effectiveness.

Qualifications

- Bachelor's Degree, Master's degree strongly preferred.
- Demonstrated skill in gathering pertinent data, preparing narrative reports, statistical reports, charts, graphs, and tables.
- Demonstrated ability to carry out analytical tasks, to identify and define issues and alternatives, to resolve problems, and to draw logical conclusions.
- Demonstrated skill in reviewing data and material compiled by others for completeness and accuracy to ensure that incorrect/incomplete data is corrected.
- Skill in working as part of a team, collaboration with physicians and ability to establish and maintain cooperative working relationship.

- Demonstrated ability to be extremely organized and detailed oriented with effective follow-up skills.
- Skill in analyzing information, problems, situations, practices or procedures to define the problem, identify relevant concerns or factors, identify patterns, tendencies and relationships and formulate logical and object conclusions.

Diabetes Educator Role Description [12]

The Diabetes Educator is responsible for ensuring that high-quality DSMES services are delivered through an organized, systematic process to improve patient quality of care and utilization of services. The Diabetes Educator will also assist the Quality Coordinator as needed; some DSMES programs may have one staff member who serves in both roles.

Duties and Responsibilities

- Assists the QC in overseeing the DSMES program and assumes the responsibility of planning implementation and evaluation of education services and implementation of the DSMES standards.
- Maintains continuing education and practice requirements of credentials.
- Completes a minimum of 15 hours of continuing education in diabetes care on an annual basis.
- Assesses the diabetes self-management, education, and support needs of each participant and collaborates with participants to develop and individualized education and support plan focused on behavior change.
- Monitors participant's achievement of personalized diabetes self-management goals and other outcome(s) to evaluate the effectiveness of the educational interventions, using appropriate measurement techniques.
- Assists with office management and ongoing continuous quality improvement projects as needed.
- Collects and analyzes data to identify gaps in services.

Qualifications

- Demonstrated leadership, team building and management skills.
- Experience managing a chronic disease, facilitating behavior change, and experience with program and/or clinical management.
- Experience of care-coordination within an individual practice or health system.
- Preferred:
    - Certified Diabetes Educator (CDE) and/or Board Certified – Advanced Diabetes Management (BC-ADM)
    - Bachelor's degree in health education-related field
    - Registered Nurse (RN), Registered Dietitian (RD), or pharmacist with training
    - 2 years of experience pertinent to DSMES
    - Experience with continuous glucose monitoring (CGM) and insulin pumps
    - Experience with program development, assessment of effectiveness, and refinement of SMART goals

Program Format & Requirements

The settings, teams, and audiences of DSMES programs vary widely depending on the provider, and as such DSMES programs may follow a variety of formats so long as they meet the base requirements set forth by the *National Standards* (Appendix F). However, regardless of the program setting and structure there are a few basic requirements for DSMES curricula.

Curriculum

Prospective DSMES programs have two options when it comes to the program curriculum: use a pre-developed and pre-approved curriculum or develop a new curriculum. If using a pre-approved curriculum, the options may vary depending on the recognizing or accrediting organization (see Appendix A for sample approved curricula).

If a program chooses to develop a new curriculum, they should consider the requirements of the approving organization they want to work with (ADA or ADCES) so that the curriculum can be approved by that organization prior to the start of the DSMES program.

The curriculum must be interactive, participant-centered, align with current best practices and research, and the "curriculum content and delivery should be creative, culturally appropriate, and adapted as necessary for the individuals and groups within the target population".[8] The program delivery should also ensure that topic areas are integrated together rather than separated, that content is individualized for the variety of participants in the program, and that each topic area has a plan including a purpose, learning objectives, methods of instruction, content to be covered, and methods of evaluation.

Content for DSMES programs must cover the following topic areas:

Topic Area	Description
Pathophysiology of diabetes and treatment options	DSMES providers should inform patients of their treatment options and coordinate with the patient's healthcare team when needed.
Healthy coping	Diabetes is a difficult disease that presents its own unique challenges that can compound when combined with the trials of daily life. As such, participants should learn healthy coping skills to be well equipped to navigate these challenges, understand the resources available, and support their physical and mental health and wellbeing.
Healthy eating	DSMES programs should promote one aspect of healthy lifestyle change by ensuring that participants understand how to incorporate healthy, balanced meals into their lives in ways that are accessible to them.
Being active	DSMES programs should also promote healthy activity levels and should assist participants in incorporating physical activity in their lives to the level that they are able.
Taking medication	When necessary, those with diabetes may need to take insulin and/or other medications related to diabetes, diabetes complications, or other health issues. DSMES programs should incorporate the importance of medication use and consistency in addition to lifestyle change.
Monitoring	Programs should detail information about blood sugar monitoring and should promote consistent follow ups with the healthcare team.
Reducing risk (treating acute and chronic complications)	People with diabetes are at risk for complications including, but not limited to: stroke, heart disease, and kidney disease.[3] As such, participants in DSMES programs should be aware of these risks and how to manage them, as well as how to manage and treat these complications should they arise.
Problem-solving and behavior change strategies	DSMES programs should incorporate problem-solving and strategies for maintenance to ensure sustainability of behavior changes outside of the program and aid participants in navigating challenges.

Additional topic areas that are encouraged include psychosocial and emotional components of diabetes management. Research states that patients with diabetes require psychological support

throughout their life following diagnosis, yet current psychological support of people with diabetes is lacking.[13] This is critical due to the physiological effects of psychosocial and emotional components – including cortisol dysregulation, immune fluctuations, and inflammatory effects of stress, anxiety, and depression – that can impact the well-being and ability of people with diabetes to manage their condition and potential comorbidities.[13,14]

Finally, when selecting or developing a curriculum be sure to take note of the curriculum's cultural relevance, see the Cultural Sensitivity and Competency section for more information (pg. 36). Curricula should be designed at a 6th grade reading level and should attempt to use images rather than text to convey complex concepts and ideas. All topics should be patient-focused and geared for empowerment and conversation by creating a culture of safety and acceptance without guilt, shame, blame, or judgement.[7]

Participant Eligibility Criteria

Once you have trained staff, it is time to recruit and enroll participants. It is usually the quality coordinator's responsibility to assess eligibility and readiness of participants.

To be eligible for the program, participants must be an adult (aged 18 years or older) with a documented diagnosis of type 1, type 2, or gestational diabetes. When recruiting participants, programs must also complete a population and service assessment which includes an examination of their target population (based on age range, geographic location, etc.) and an assessment of potential participants' readiness to change. Resources for assessing readiness to change are provided on page 41.

When assessing target populations, programs should reference Standard 2 of the 2022 *National Standards*.[8] This standard outlines the reasons behind the population and service assessment requirement, with extra focus on evaluating and understanding the social determinants of health (SDoH) that affect the target population of the program. SDoH are the conditions in the environments in which people live, work, etc. that affect their health status, quality of life, and risks and outcomes of various health conditions.[15] Examples of SDoH include economic stability, education access and quality, access to healthcare and health services, the neighborhood and built environment, and the social systems of the community around an individual.

Programs may evaluate SDoH using participant intake forms (see pg. 31) and one-on-one participant discussions during the recruitment phase of program development.

Recognition & Accreditation

Two organizations are authorized by the Centers for Medicare & Medicaid Services (CMS) to determine whether DSMES services meet the required standards: the American Diabetes Association (ADA) and the Association of Diabetes Care and Education Specialists (ADCES), which was formerly known as the American Association of Diabetes Educators. Each organization uses a different term for their evaluation process: the ADA uses the term "recognition" while ADCES uses the term "accreditation". However, both organizations use the current *National Standards* to evaluate DSMES programs.[8,16] This section will cover the 2022 *National Standards*, the ADA Recognition process, and the ADCES Accreditation process.

2022 National Standards

The National Standards provide evidence-based guidance for quality DSMES services for people with diabetes.[8] The 2022 update of this document outlines 6 standards required for program implementation.

Standard 1: Support for DSMES Services

This standard explains the requirement for DSMES programs to seek out support from partners and sponsor organizations in order to promote the sustainability of DMSES programs. The sponsor organization will provide guidance, support, and other resources to assist the DSMES program and to overcome low DSMES utilization due to various barriers.

Some important tasks for DSMES providers related to this standard are as follows:

- Establish partnerships and referral networks.
- Identify and connect with external stakeholders.
- Decide on an accreditation/recognition organization.
- If part of a larger organization, establish leadership support for offering DSMES at that organization.
- Evaluate potential expenses, sources of revenue, and future program sustainability.
- Identify means of participant recruitment and communication.

Standard 2: Population and Service Assessment

This standard explains that DSMES programs are expected to evaluate the target population of their region in order to properly tailor the program to the population's unique needs.

Some important tasks for DSMES providers related to this standard are as follows:

- Evaluate the composition and service needs of the target population.
- Identify population barriers and health inequities in the target population.
- Identify existing local DSMES sites and establish that additional need for DSMES exists.

Standard 3: DSMES Team

This standard explains the expectation of all members of the DSMES team to uphold each of the 6 national standards and outlines the requirements for staffing a DSMES program.

Some important tasks for DSMES providers related to this standard are as follows:

- Build a collaborative DSMES team.
- Identify at least one team member as the DSMES Quality Coordinator.
- Establish how continuing education requirements will be met.

Standard 4: Delivery and Design of DSMES Services

This standard outlines the expectation that DSMES programs will use an appropriate curriculum that addresses specific topics and goals for patient education.

Some important tasks for organizations related to this standard are as follows:

- Decide on or design an evidence-based DSMES curriculum.
- Determine a curriculum review schedule.
- Determine procedure for meeting participant needs that are outside the scope of practice of the DSMES team.

Standard 5: Person-Centered DSMES

This standard establishes the need for individualized approaches in DSMES participant plans due to the uniqueness of each person with diabetes. This standard also outlines the collaborative nature of DSMES in interprofessional practice and recommends that monitoring completed within DSMES programs be communicated to the referring physician and/or healthcare team of the participant.

Some important tasks for organizations related to this standard are as follows:

- Develop individualized lifestyle change plans to provide tailored care.
- Determine which outcome measures will be recorded and how those measures will be recorded (i.e., data entry platform, HIPAA-compliant software, etc.) and reported.

- Develop routine communication plans and update schedules with referring providers.

Standard 6: Measuring and Demonstrating Outcomes of DSMES Services

This standard outlines the requirement for DSMES programs to institute continuous quality improvement measures in order to continually provide quality DSMES services that are relevant to the population being served.

Some important tasks for organizations related to this standard are as follows:

- Plan for how your team will evaluate the program.
- Identify the SDoH most important to your target population (e.g., safe housing, employment status, reliable transportation, access to grocery stores).
- Implement continuous quality improvement measures (e.g., projects aimed at improving referrals, improving participant lipid levels, etc.).

ADA Recognition

The American Diabetes Association (ADA) uses the term "recognition" when evaluating DSMES programs based on the *National Standards*. A step-by-step summary of the recognition process is provided below. Programs considering ADA Recognition should refer to the ADA Recognition Requirements in Appendix D for more detailed instructions. Note that DSMES programs must have completed the initial comprehensive DSMES cycle (1 cohort) before they can apply for ADA recognition.

Steps to Receiving ADA Recognition

1. **Evaluate population & community needs**
2. **Cohort recruitment**
3. **Ensure program meets the *National Standards***
4. **Collect documentation for at least one participant through the initial comprehensive DSMES cycle** (If applying for multiple sites, one participant per site must have completed the initial comprehensive DSMES cycle during the specified reporting period.)
5. **Track participant-defined goal attainment and 1 other outcome** (e.g., process outcomes, clinical outcomes, psychosocial and behavioral outcomes, patient-reported outcomes, or patient-generated health data)
6. **Contact ADA for application portal access**
7. **Submit online application and site fee**
    - **Online application**: contact ADA (ERP@diabetes.org) for an application once all materials have been procured
    - **Site fee**: $1,100 for main site, $100 for each additional multi-site included with the application (no fee for expansion sites)
        - **Multi-site**: additional service location where either the curriculum, instructors, forms, policies, procedures, OR current project are different than the original site (e.g. any site that has different staff or offers additional services)
        - **Expansion Site**: additional service location at which the curriculum, instructors, forms, policies, procedures, and current project are ***ALL*** the

same as the original site (e.g. different classroom rentals for different days of service, but the same service is provided by the same team)

8. **Submit supporting information** (see the *Support Documentation Package Checklist* linked in Appendix D)
9. **Recognition granted, valid 4 years**
10. **Submit *Annual Status Reports***

ADCES Accreditation

The Association of Diabetes Care and Education Specialists (ADCES) uses the term "accreditation" when evaluating DSMES programs based on *the National Standards*. A step-by-step summary of the accreditation process is provided below. Programs considering ADCES Accreditation should use the *ADCES Interpretive Guidance* in Appendix D for more detailed instructions.

Steps to Receiving ADCES Accreditation

1. **Evaluate population & community needs**
2. **Cohort recruitment**
3. **Ensure program meets the *National Standards***
4. **Collect documentation for at least one participant's program completion through follow-up**
5. **Collect 1 clinical and 1 behavioral outcome measure**
    - **Examples of a clinical outcome measure**: Hemoglobin A1c, time in hypoglycemia, pregnancy outcomes, low-density lipoprotein (LDL)-cholesterol levels, body mass index and body weight, blood pressure, time in range (TIR)
    - **Examples of a behavioral outcome measure**: Healthy coping, healthy eating, being active, taking medication, monitoring, reducing risk, problem solving
6. **Submit online application and site fee**
    - **Online application link**: located on the ADCES website, see Appendix D for links and step-by-step instructions
    - **Site fee**: $1,100 standard application fee, $100 per additional branch location (no fee for additional community sites)

- If applying for multiple service locations or virtual delivery contact deap@adces.org

7. **Submit supporting information**
8. **Telephone interview**
9. **Accreditation granted, valid 4 years**
10. **Submit *Annual Status Reports***

ADA Recognition versus ADCES Accreditation

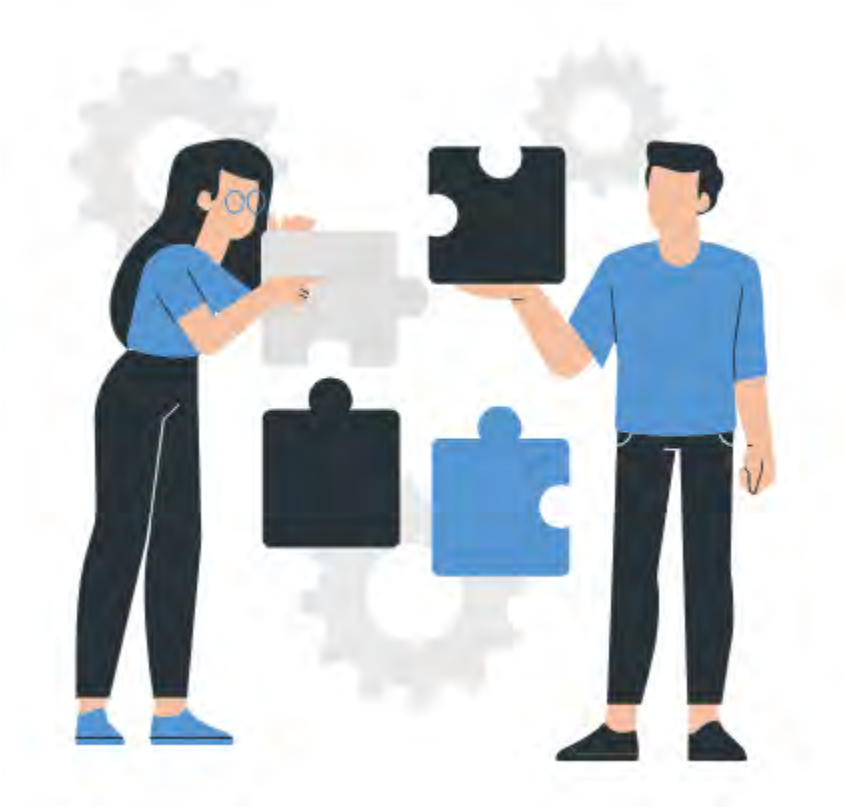
There are a few main differences between ADA recognition and ADCES accreditation. First, step 4 of each process described above differs: the ADA requires documentation for one participant through the initial comprehensive DSMES cycle (i.e., through the final course offering), while ADCES requires documentation for at least one participant through follow-up, which typically occurs after the initial course offering.

Furthermore, the reported outcomes also differ for each recognizing/accrediting organization. The ADA requires that DSMES programs track goal attainment and 1 other outcome, which can be categorized as process outcomes, clinical outcomes, psychosocial and behavioral outcomes, patient-reported outcomes, or patient-generated health data. ADCES requires DSMES programs to track and report on 1 clinical (lab-test or patient-generated health data) and 1 behavioral outcome.

ADA Recognition	ADCES Accreditation
• **Step 4**: Requires documentation for one participant through the initial cycle. • **Step 5**: Track goal attainment and 1 other outcome (does not have to be clinical). • Requires online application, site fee, and supporting documentation.	• **Step 4**: Collect documentation for at least one participant's program completion through follow-up. • **Step 5**: Track 1 clinical and 1 behavioral outcome. • Requires online application, site fee, supporting documentation, and a telephone interview.

Recruitment & Implementation

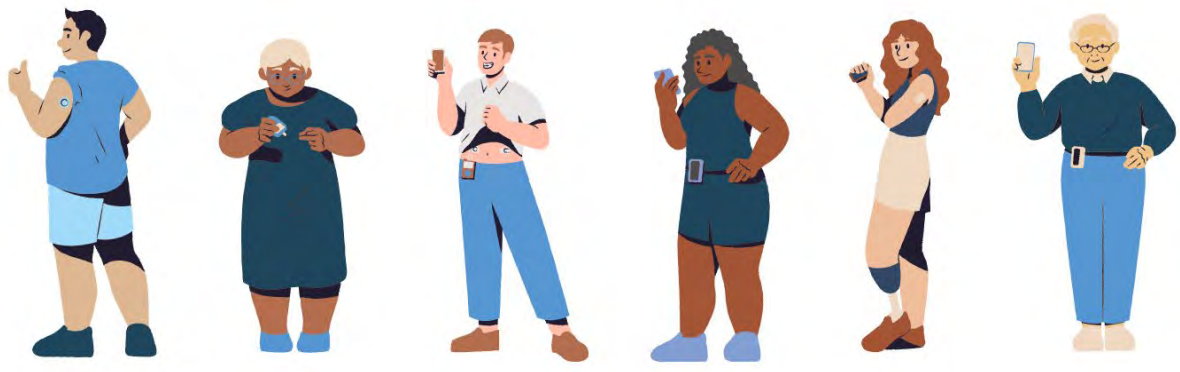
This section of the toolkit will review tips and resources for the recruitment and implementation phases of DSMES program planning. These phases involve active participant interaction and program maintenance, and as such this section will cover recruitment resources, implementation tips, reimbursement, and program sustainability.



Recruitment

Recruitment and retention are key to the success and sustainability of DSMES programs. There are several ways that your organization can recruit participants, including: targeted outreach and advertising; referrals from healthcare providers and community-based organizations; and partnering with either a health system, employer, or other organization to facilitate screening and recruitment. Program referrals can increase by also having your organization listed on local databases, such as 211, or the California Healthier Living Website (a full list of resources can be found in Appendix A). This section includes the following tools and resources:

Tools in this Section	
• Sample Recruitment Letters	pg. 27
• Tips for Engaging Healthcare Providers	pg. 30
• Sample Participant Intake Form	pg. 31
• Sample Recruitment Flyers	pg. 34



Sample Recruitment Letters

The next several pages include sample recruitment letters your organization can use to build partnerships, advertise, and expand your DSMES program. Sample letters address two main target audiences: (1) healthcare systems and (2) patients. These letters contain information about DSMES for those who are unfamiliar with the program and provide a rationale for why DSMES is important. The letters are described below and can be tailored to meet your organizations' needs.

1. **Letter to a Healthcare Provider**: This sample letter introduces your organization and DSMES to healthcare providers/clinics. It briefly explains the importance of diabetes management, evidence supporting DSMES, and sets the stage for a meeting in which you can set up a referral feedback loop.
2. **Letter to a Patient**: This sample letter is for healthcare providers to send to their patients diagnosed with diabetes. These letters can be sent out once a clinic has performed a retrospective search of their database for individuals eligible for DSMES, or to remind patients who have been identified as eligible for DSMES that they have been referred to the program.

1. Sample Letter to Engage a Healthcare System

<<YOUR LETTER HEAD>>

<<ADDRESs>>

<<PHONE NUMBER>>

Dear <<INSERT NAME OF YOUR CONNECTION, THE CLINIC ADMINISTRATOR, OR HR PROFESSIONAL>>:

I am contacting you from <<name of organization >>. Our organization serves individuals from <<NAME OF COMMUNITY>> and provides services focused on <<list things your org works on>>. We are currently reaching out to healthcare systems in the region to discuss chronic disease management efforts and to learn more about the programs currently offered by your healthcare clinics focused on diabetes management. In addition, we are reaching out to healthcare systems to see if there are any opportunities for us to work together to either expand your current programs or help you develop programs geared towards diabetes management.

Type 2 diabetes is one of the most common, and fastest growing conditions in the United States: 29.1 million adults suffer from diabetes—21 million are diagnosed and 8.1 million are undiagnosed. Action must be taken to prevent this health crisis from further affecting our population, and we at <<NAME OF ORGANIZATION>> would like to help you prevent these conditions and improve health outcomes for your patients!

There is an intervention proven to improve health behaviors and outcomes for people with diabetes. Diabetes Self-Management Education and Support (DSMES) is an evidence-based service model proven to help prevent or delay complications from diabetes and reduce the risk of patients developing health complications including blindness, kidney failure, and heart disease.

I would like to set up a time to chat with you and your team about this program or other opportunities for chronic disease prevention. Please feel free to contact me by email or phone at << EMAIL ADDRESS AND PHONE NUMBER >> I hope you will take advantage of this program which can help your patients from developing serious health problems. I look forward to working with you.

Yours in health,

<<CONTACT NAME AND NAME OF ORGANIZATION>>

2. Sample Letter to Engage a Patient[17]

<<YOUR LETTERHEAD>>

<<ADDRESS>>

<<PHONE NUMBER>>

<<DATE>>

<<PATIENT NAME>>

<<PATIENT ADDRESS>>

Mr./Mrs. <<PATIENT LAST NAME>>,

Thank you for being a patient of the <<PRACTICE NAME HERE>>. We are writing to tell you about a service to help make your health better.

Based on our review of your medical chart, you have a condition known as type 2 diabetes. This means your blood sugar is higher than normal, which increases your risk of developing serious health problems including heart disease and stroke.

We have some good news. Our office wants you to know that you may be eligible for a diabetes management program run by our partners, <<NAME OF PROGRAM PROVIDER>>. This program is proven to reduce your risk of developing complications from diabetes.

We have sent a referral to <<NAME OF PROGRAM PROVIDER>> and someone will call you to discuss the program, answer any questions you may have and, if you are interested, enroll you in the program.

Please feel free to give <<NAME OF PROGRAM PROVIDER>> a call at <<PHONE NUMBER>>.

---OR--

We have sent a referral to <<NAME OF PROGRAM PROVIDER>> and we urge you to call <<PHONE NUMBER>> to learn more about the program and enroll.

We hope you will take advantage of this program, which can help prevent you from developing serious health problems.

Sincerely,

Dr. <<PHYSICIAN LAST NAME>>

<<NAME OF ORGANIZATION>>

Tips for Engaging Healthcare Providers[18,19]

- Distribute educational materials about diabetes and your program for waiting rooms and exam rooms.
- Identify a program champion at a clinic or health system and communicate with them regularly.
    - This person can also act as a "referral champion" who can promote the benefits of referring to DSMES programs to other providers in the area.
- Organize a "guidance team" at the health system and include someone from each area that interacts with patients.
- Email providers notifying them of new classes, including how to easily refer patients using an electronic referral system.
    - *Note*: If using an electronic referral system, it must have secure cybersecurity policies that adhere to HIPAA.
- Send individualized emails prompting providers to refer by sending your team a list of their eligible patients (as needed to fill classes).
- Communicate regularly regarding patient progress.
- Create a feedback loop protocol to demonstrate reach and successful patient outcomes.
- Follow your referral, enrollment, and feedback plan.
- Conduct in-clinic presentations showing program success data.

Sample Participant Intake Form

The intake form on the following page can be filled out by the DSMES provider and the participant upon enrollment in the program. The form contains all the information needed for initial participant data reporting, including eligibility and analysis of SDoH. Once the intake form is filled out and the participant is enrolled, an identification number should be assigned in the space at the top of the form, to streamline reporting. Editable PDF and Word copies of the form can be accessed from the Los Angeles County Department of Public Health (LACDPH) Box Folder linked in Appendix E for use enrolling participants in your program.

Sample Participant Intake Form[20,21]

[Insert Program logo]

[Insert Name of Program]

Diabetes Self-Management Education and Support Program Participant Intake Form & Questionnaire

ID #:

(*To be filled out by provider*)

Today's Date (*mm/dd/yyyy*): _____

First Name:	**Last Name**:	
E-mail Address:	**Phone Number**: _____-_____-_____	
Street Address:	**City**:	
State:	**Zip Code**:	
Date of Birth (*mm/dd/yyyy*): _____/_____/_____	**Height**: _____ft. _____in	**Weight**: _____lbs.

Gender (*check one*):

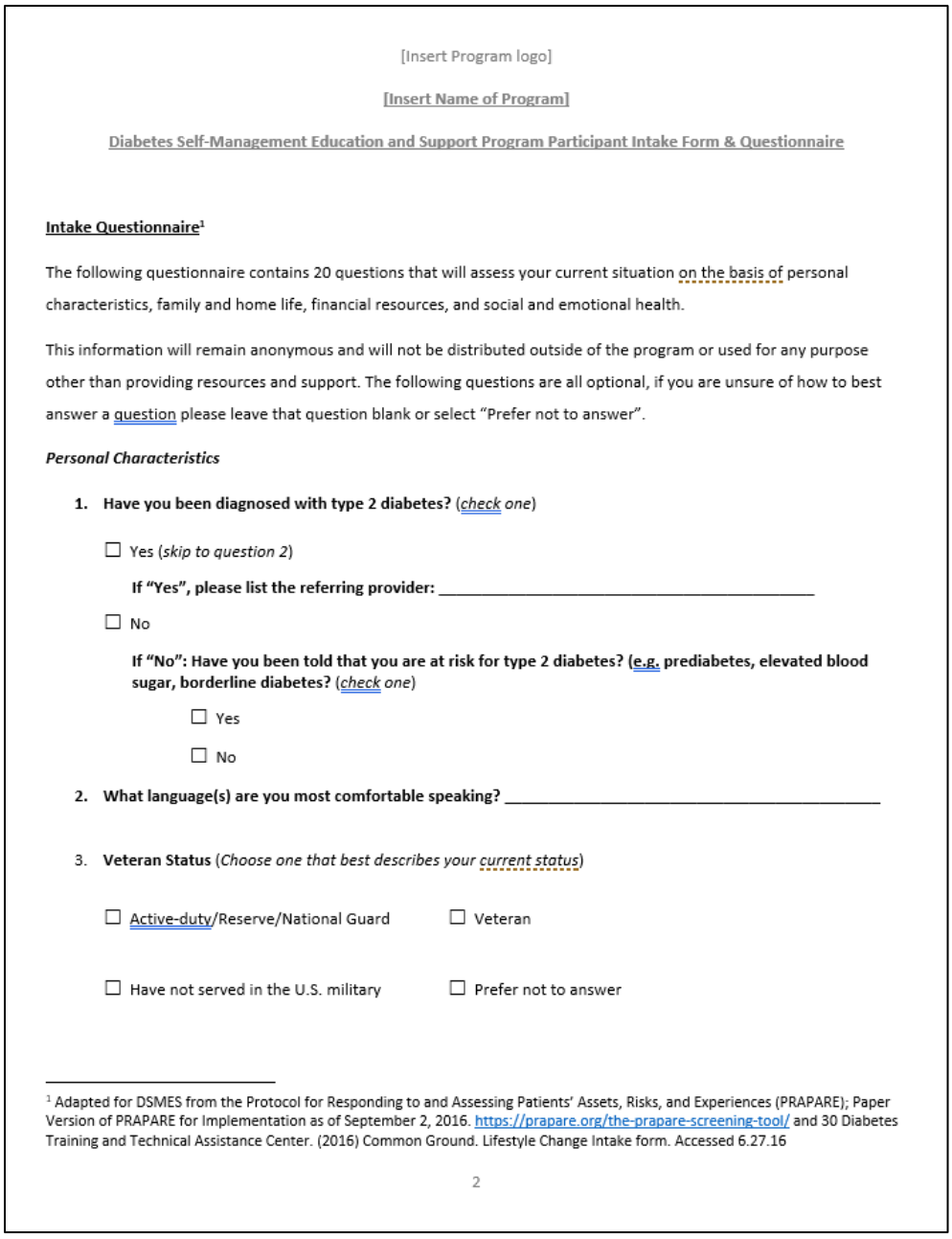
☐ Male ☐ Female ☐ Nonbinary ☐ Other (list): _____

Race (*check all that apply*): ☐ Native American or Alaska Native ☐ Asian ☐ Black or African American ☐ Native Hawaiian or Pacific Islander ☐ White ☐ Other (*please specify*): _____	**Ethnicity** (*check one*): ☐ Hispanic or Latino ☐ Not Hispanic or Latino

1

Sample Participant Intake Questionnaire

After the Intake form, a brief questionnaire can be administered. The following is a sample 20-question intake questionnaire which aims to assess various SDoH that may affect your organization's participants. The full questionnaire and intake form is linked in Appendix A.



[Insert Program logo]

[Insert Name of Program]

Diabetes Self-Management Education and Support Program Participant Intake Form & Questionnaire

Intake Questionnaire[1]

The following questionnaire contains 20 questions that will assess your current situation on the basis of personal characteristics, family and home life, financial resources, and social and emotional health.

This information will remain anonymous and will not be distributed outside of the program or used for any purpose other than providing resources and support. The following questions are all optional, if you are unsure of how to best answer a question please leave that question blank or select "Prefer not to answer".

Personal Characteristics

1. **Have you been diagnosed with type 2 diabetes?** (*check one*)

   ☐ Yes (*skip to question 2*)

   If "Yes", please list the referring provider: _____

   ☐ No

   If "No": Have you been told that you are at risk for type 2 diabetes? (e.g. prediabetes, elevated blood sugar, borderline diabetes? (*check one*)

   ☐ Yes

   ☐ No

2. **What language(s) are you most comfortable speaking?** _____

3. **Veteran Status** (*Choose one that best describes your current status*)

   ☐ Active-duty/Reserve/National Guard ☐ Veteran

   ☐ Have not served in the U.S. military ☐ Prefer not to answer

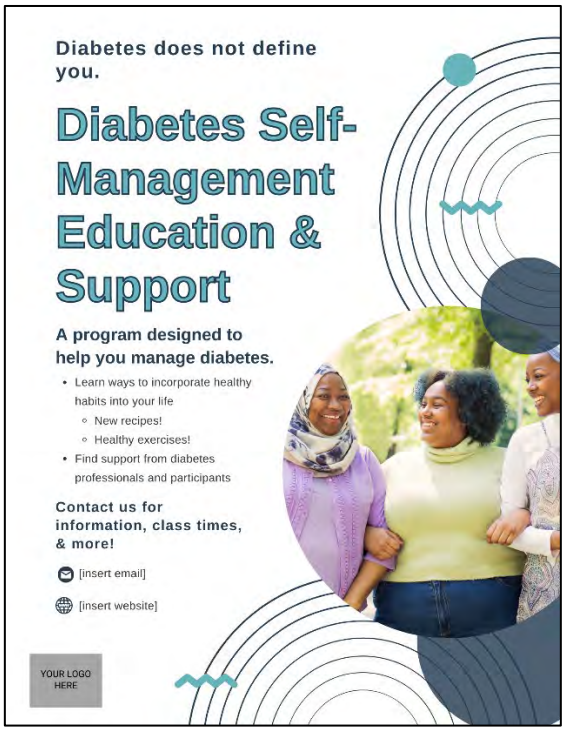
[1] Adapted for DSMES from the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE); Paper Version of PRAPARE for Implementation as of September 2, 2016. https://prapare.org/the-prapare-screening-tool/ and 30 Diabetes Training and Technical Assistance Center. (2016) Common Ground. Lifestyle Change Intake form. Accessed 6.27.16

2

Sample Recruitment Flyers

Your organization should have a target population in mind to reach when implementing DSMES. Your organization can place flyers and brochures that advertise your program in locations where your target population will notice them.

The sample flyers shown below include information that you can use to promote your program. Editable PDF copies of the following flyers can be found on the LACDPH Diabetes Box Folder linked in Appendix E.



Implementation

This section focuses on tools to aid in the implementation phase of DSMES program materials and includes the following resources:

Cultural Sensitivity and Competency[22]

Overall, 1 in 10 adults in Los Angeles County have type 2 diabetes, but not all populations are impacted equally; Latinos, African Americans, Asian Americans, and American Indians/Alaska Natives have higher rates of diabetes than non-Hispanic whites.[23–25] This demographic picture of type 2 diabetes, combined with robust evidence that culture plays an important role in health, underscores the need to do the following: recognize cultural differences among participants; hire and train culturally congruent and/or competent program providers; and deliver the program with racial and cultural sensitivity to reach and retain people that most need diabetes services. This section is meant to serve as a guide for how to develop cultural awareness, competence, and humility, to provide DSMES with cultural sensitivity.

Culture and Health

Each culture has attitudes, beliefs, practices, and values about good health and disease management; the care and treatment of the sick; whom to consult when ill; and the social roles between patients and healthcare professionals. Additionally, culture shapes the way that a person learns, how they utilize information, and the way they relate to support networks. Understanding culture is an active, developmental learning process requiring a long-term commitment.[23] Evidence supports a connection between understanding a participant's culture and health outcomes, particularly as it relates to client satisfaction and adherence, which is very relevant to behavior change programs.

Applying Cultural Constructs to Delivering Diabetes Services

Awareness of the need for cultural sensitivity is the first step toward facilitating disease management with sensitivity and cultural competency. However, providers must go beyond a knowledge of cultural values, beliefs, customs, language, thoughts, and actions, by developing and showing insight into participants' situations and recognizing what they do not know. This cultural humility will help develop a mutually respectful and positive relationship between patients and providers. Follow-up with an emphasis on participant-family-community empowerment can also improve diabetes outcomes. The more participants and their support networks are motivated and involved in the program, the more likely they are to achieve desired outcomes and improve their quality

of life.[26] In order to optimize program success and sustainability, providers must recognize participants' prior experiences, leverage participants' existing support networks, and adapt their facilitation according to participants' cultural variations in learning style and health beliefs.[27]

Overcoming Linguistic and Cultural Barriers

A key element to overcome cultural barriers during educator-participant interactions is the use of effective communication. Successful cross-cultural communication and understanding occurs when healthcare professionals address participants' perceptions of illness, treatment, and outcomes. Strategies for effective communication must be considered when engaging with populations with low literacy, low health literacy, limited English proficiency, and non-English speakers. Curriculum and facilitation should be at a 6th grade reading level when working with patients with low literacy and limited English proficiency, and be coupled with teach back methods to confirm participant understanding. The use of trained and properly integrated bilingual educators or professional interpreters is also essential when delivering programs to non-English speakers. To better streamline communication efforts, some programs create a language proficiency assessment for staff to monitor and perform quality assessments of cultural linguistic efforts.[7] Communicating at the linguistic, cultural, and educational level of participants is essential to providing education to diverse populations, as it enables the use of proper verbal and non-verbal communication style across cultures.

Role of the Educator

Educators need to be mindful of the cultural traditions and customs of all cultural and ethnic groups and to recognize socio-economic challenges that may exist. Culture and traditions are a cluster of learned behaviors, customs, preferences, beliefs, and ways of knowing.[28] Understanding the motivations of people from diverse backgrounds will enable educators to develop effective teaching strategies. For example, to effectively motivate clients to make healthier food choices, educators must possess specific knowledge about food habits, preferences, and practices (e.g., holidays, celebrations, and fasting practices) for the ethnic and racial groups they see in their sessions. In this way, clients feel as if they have been understood and their beliefs, behaviors, and values have been respected.

When disease management programs are delivered using culturally appropriate methods in diverse populations, they can result in improved patient health behavior, knowledge, health status, and

self-efficacy.[29–31] Integrating individuals' cultures within health education and training is important for program effectiveness.[32] Expanding beyond racial, ethnic, and religious sensitivity to improve individualization based on age-appropriate and socio-economic considerations can increase participant retention and improves the rate of program success.

Motivational Interviewing

Motivational interviewing is an evidence-based counseling style founded on the principles of psychology. It is a technique that focuses on helping interviewees make changes to their behavior, by helping them explore and resolve ambivalence that may be inhibiting that change. This method is frequently used to encourage individuals to change behaviors that damage their health, such as substance abuse, obesity, and related lifestyle habits. Motivational Interviewing is based on the following assumptions:

- Ambivalence (conflicting reactions, beliefs, or feelings towards something) about change is normal and constitutes an important motivational obstacle in recovery.
- Ambivalence can be resolved by working out the interviewee's intrinsic motivations and values.
- The alliance between the interviewer and the interviewee is a collaborative partnership to which each person brings important expertise.
- An empathetic, supportive, yet directive method of counseling fosters conditions for change. Direct argument and aggressive confrontation may tend to increase client defensiveness and reduce the likelihood of behavioral change.

Trained interviewers use motivational interviewing to influence interviewees' decision-making by using five principles:

- Expressing empathy through reflective listening.
- Avoiding disagreement and direct confrontation.
- Developing discrepancy between interviewees' goals and values and their current behavior.
- Adjusting to interviewee resistance rather than opposing it directly.
- Supporting self-efficacy (the participant's belief that they can make a change) and optimism.

Motivational interviewing triggers the capability for change that everyone possesses. Thus, the goal is to create discrepancy to enhance motivation to change, elicit statements from the interviewee that demonstrate confidence in their ability to change, and, finally, elicit demonstrated behavior change from the individual.

More Resources for Motivational Interviewing:

The following resources provide expanded information on the motivational interviewing techniques described in this toolkit.

- Treatment Improvement Protocols, Chapter 3—Motivational Interviewing as a Counseling Style Series, No. 35. Center for Substance Abuse Treatment. Rockville (MD): Substance Abuse and Mental Health Services Administration (US); 1999. https://www.ncbi.nlm.nih.gov/books/NBK64964/
    - This chapter from *Enhancing Motivation for Change in Substance Abuse Treatment* describes some of the main tenets of motivational interviewing through the lens of substance abuse and defines many of the terms used when discussing motivational interviewing.
- Case Western Reservice University: Center for Evidence Based Treatment Practices. Motivational Interviewing. https://www.centerforebp.case.edu/practices/mi
    - This article from Case Western breaks down motivational interviewing into its core principles and describes the benefits of motivational interviewing for both the interviewer and interviewee.
- Substance Abuse and Mental Health Services Administration (SAMHSA). Empowering Change: Motivational Interviewing. https://www.samhsa.gov/homelessness-programs-resources/hpr-resources/empowering-change
    - This article from SAMHSA contextualizes motivational interviewing through the lens of homelessness and substance abuse treatment. The article also discusses some of the common struggles with motivational interviewing on the provider side and how to navigate challenges to working with vulnerable populations.

Readiness to Change Evaluation Tools

Readiness to change refers to a person's willingness to change their behavior. Participants entering the program must be prepared to make lifelong changes to their behaviors and surroundings. If participants enroll in the program resistant or unwilling to change their current behaviors, they are less likely to successfully reach their goals. To ensure effective sessions and that participants receive the greatest benefits from the program, it is important to assess the readiness level of the individual.

According to one DSMES program in Los Angeles County, the majority of people with diabetes do not exhibit high readiness to change until they are problem aware - knowledgeable about their diabetes, how it impacts them, and why management is important.[7] In many cases they become more problem aware after starting a program which increases their readiness to change. Furthermore, it is important to note that although we may think of readiness to change as linear, participants readiness level may ebb and flow based on various circumstances that come up in their lives during their time in the program.[33] As such, it is important to monitor readiness to change even after your program has already recruited its cohort, as the readiness level of participants may be subject to change throughout the course of the program.

The following tools aim to aid program providers in assessing participants' readiness to change before and throughout the program delivery and include: the Readiness to Change Questionnaire, Readiness to Change Screening Tool, and Tips on Improving Readiness to Change.

Readiness to Change Questionnaire and Screening Tool[34]

The following questionnaires may be used to evaluate where participants are at on the readiness to change scale. These tools can also be customized based on individual needs of program participants and can be found in the LADPH Dropbox folder linked in Appendix E (in both English and Spanish).

Where am I right now?

The "Where am I right now?" section of the questionnaire is a useful tool for assessing general readiness to change. Participants who score high (i.e., Strongly Agree, Agree) on the first two questions "I eat healthily" and "I get enough physical activity" likely do not see any issues with their current behaviors and may therefore be resistant to change. Participants who score low (i.e., Disagree, Strongly Disagree) on these questions are likely aware of current issues, but their readiness to change will be dependent on the other half of their answers.

Participants who score high on the second two questions "I want to eat more healthily" and "I want to be more physically active" possess the drive to change and may just be lacking the knowledge of how to implement that change. However, participants who score low on these questions are likely not ready to change and would not be good candidates for DSMES at this time.

How confident are you that you can make changes now?

The "How confident are you that you can make changes now?" section of the questionnaire is a useful tool for assessing specific readiness to change. Participants may score higher, indicating higher readiness to change, on the eating questions when compared to the physical activity questions and vice versa. This tool is useful for goal-setting with current program participants and can help facilitate conversations regarding barriers and motivations to specific behavior change.

Readiness to Change Questionnaire

Readiness to Change Questionnaire

Where are you right now?

Thinking about your physical activity and eating over the past three months, please answer the following questions. Please circle one number to indicate how strongly you agree or disagree with the following statements. Check "Don't know or refused" if you do not know or do not want to answer.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Don't Know or Refused
I eat healthily.	5	4	3	2	1	
I get enough physical activity.	5	4	3	2	1	
I want to eat more healthily.	5	4	3	2	1	
I want to be more physically active.	5	4	3	2	1	

How confident are you that you can make changes now?

Please circle one number to indicate how confident you are that you can make the following changes. Check "Don't know or refused" if you do not know or do not want to answer.

Physical Activity:	Sure I can	Think I can	Not sure I can	Don't think I can	Don't know or refused
Get physical activity more often	4	3	2	1	
Be physically active for longer time	4	3	2	1	

Eating:	Sure I can	Think I can	Not sure I can	Don't think I can	Don't know or refused
Eat more healthful food	4	3	2	1	
Overeat less often	4	3	2	1	

Readiness to Change Participant Agreement Form

Readiness to Change Agreement Form

1. **Are you here because YOU want to make changes?** If you feel pressured into coming by your spouse, doctor, or a friend, you may not be ready to participate in this program. There is a good chance you'll be setting yourself up to fail.
2. **Are you ready to make a life-long commitment to healthy moderate eating habits and regular physical activity?** Think about your personal goals for diabetes management. If you're willing to spend time developing new eating and activity patterns over the next several months, there's good chance this program is for you.
3. **Are you ready to make this a priority in your life?** Changing long upheld behaviors takes time and effort. Besides attending the sessions, you'll need to spend time recording your food and activity each day. If you're already overcommitted, this might not be the right time for you to start. This program will be available when it works best for you to begin.
4. **Are you willing to be accountable for your food and physical activity choices?** You may have been in other programs where everything is laid out for you. The key to this program is to find what works best for you. This will involve some serious thinking and decisions about what you are willing to change.
5. **Are you ready to create a goal that is realistic and healthy for you?** The success of this program involves achieving a healthy lifestyle that can be maintained by staying active and eating at sufficient levels.

Your commitment is important as it takes hard work to change habits. We know this program works, as it's based on years of research. To be successful, we ask that you think about your readiness, sign a contract, and make a commitment to this program.

Signature:_____ **Date:**_____

Tips to Improve Readiness to Change[35]

Not all patients referred to DSMES programs are ready to enroll in a disease management program right away. Many patients feel that they face too many or too large of barriers to commit to a program that requires them to change their lifestyle. This section identifies ways to improve a participant's readiness to change and suggests language to discuss each barrier in a non-threatening way. This resource can be given to your partners to enhance referrals. It can also be used by your organization's quality coordinator when following up with referred potential participants to improve the enrollment and retention of participants in your programs. For more information, see the section on Motivational Interviewing in this guide (pg. 39).

Making Lifestyle Changes: Tips for Enhancing Conviction and Confidence[36]

Action	Description	Suggested Language
Enhancing Conviction		
Emphasize patient autonomy	If conviction is very low, ask permission to provide new information. Avoid giving the same old lecture—vary the message.	*"Perhaps now is not the right time to talk about this…I don't want to push you into a decision, it's clearly up to you. I suggest you take time to think about it…"*
Expand on limited conviction	Discuss what is holding them back in their confidence in their ability to make changes.	*"You said it was somewhat important that you change this behavior. Why did you score a 4 and not a 1? What would have to happen to move you up to a 2 or 3?"*
Identify ambivalence	Avoid hard confrontation, which causes the patient to defend the attacked position. Identifying ambivalence helps the patient believe you understand his or her perspective.	*"So, you have considered this before, but you do not like people telling you what to do."*
Identify barriers to considering change	Brainstorm replacements	*"Watching television seems to help you relax. What else have you noticed helps you relax? How might you combine your goals of relaxing and improving physical fitness?"*
Brainstorm around obstacles	Discuss potential barriers and how to overcome them before they happen.	*"What will make it hard to increase your activity level?"*
Address stated worries directly	Work through individual barriers to provide specific solutions that work for their situation.	*"Because you are uncomfortable exercising in public, let's think of some other ways to increase your physical activity."*
Discuss pros and cons	Have the patient list the benefits and costs of no change versus change. Start with benefits of no change—there are obviously benefits to the patient or he or she would not be continuing that behavior. Summarize and let the patient draw conclusions.	*"Tell me more about why you want to make this change. What do you hope to gain from it? What would happen if you made no changes?"*
Take a hypothetical look over the fence	Brainstorm potential benefits of changes and discuss further potential barriers.	*"So, you're not too sure about changing your diet. Let's imagine for a moment that you did make this change. How would that make you feel?"*
Enhancing Confidence		
Review previous change successes, praising positive steps and exploring obstacles	Discuss what has and has not worked in the past in order to set achievable goals for the future.	*"Have you tried this before? How long did you continue that effort? What helped you succeed for that long? What do you think will work for you now? What obstacles were there? What might help with those obstacles now? Tell me about some of the things you have successfully changed in the past."*
Expand on limited confidence	Discuss what it would take for their confidence to increase – focus on positive change.	*"You said you had some confidence that you could change this. Why did you score a 4 and not a 1? What would have to happen to move you up to a 2 or 3?"*
Brainstorm solutions	Coach the participant to select small, easy steps based on their previous experiences and preferences.	*"You want to exercise more, that's great! What activity are you interested in and how can you incorporate that into your day?*
Facilitate the shift from success or failure to a stage model	Instead of focusing on failures, focus on small steps to achieve overall goals. Remind them that change is not perfect, and that life happens.	*"Most people have partial success several times before they succeed for good. Previous attempts to change increase the odds of success. People go through a period of not wanting to think about it, thinking about it, considering options, deciding to change, struggling to change, struggling with temptations or slips, and finally feeling like it's behind them. Sometimes people cycle through all or parts of that process several times before changing for good."*
Address relapse prevention	Discuss "slips" rather than failures; brainstorm ways to break any pattern of slips that leads to a sense of failure; anticipate triggers and plan solutions.	*"You mentioned that you didn't hit your goal last week. That's okay, but let's talk about that. What kept you from meeting that goal? What can be done to help you meet your goals in the future?"*

Session Zero Tips

Organizations delivering diabetes programs can consider offering an information session sometimes called "Session Zero" before the first session to accomplish a variety of tasks. These sessions may be offered in a group or one-on-one "orientation" format. The goals of session zero are as follows:

1. **Recruit participants to the program**
2. **Assess readiness of participants**
3. **Inform participants of program goals, structure, and commitment**
4. **Collect program intake information**

Considerations for Session Zero content/tasks:	Considerations for Session Zero activities:
• Provide background on DSMES and how the program is evidence-based/what the benefits are • Explain program goals (lifestyle change for diabetes management) • Explain structure of the program • Delineate expectations of participants (e.g., food and activity tracking, group participation, etc.) • Complete organizational enrollment paperwork • Complete readiness assessment, if applicable	• Have a panel of former or current participants speak about their experience with the program • Show a video created by your organization featuring other successful participants reflecting on the program

Below is a sample "Session Zero" Agenda:

- Greet attendees and have them sign-in
- Hand out information sheets, intake forms, and program flyers
- Review program goals and expectations
- Begin Q&A session
- Collect completed registration forms
- End session

Planning & Scheduling Sessions

It is important to note that DSMES programs do not have a standardized format (see Format and Requirements, pg. 14). Therefore, planning and scheduling DSMES sessions may look different for each organization. DSMES is not attendance-based, thus its structure will be dependent on your population, staffing, and other needs. Some programs break up the 10 hours of instruction into a 5-week course with 2 hour sessions per week.[37,38] Others may provide 30 minute sessions over the course of 12 months.[39] Despite the lack of strict session requirements, it is not recommended that the course be condensed into long sessions as participants will not have time nor be willing to attend a 10 hour class.[7] Instead, it is recommended to break up the course into shorter sessions that will be manageable for participants to fit into their current schedules. In some cases, you may even choose to discuss course length with potential participants during the recruitment phase to get a more accurate picture of the type of sessions your audience prefers. This can help with program retention.

Goal-Setting Worksheets

Keeping participants engaged throughout the course of the program is an important strategy for success. One method that has been proven to effectively maintain engagement is goal-setting. On the following page, you will find a goal-setting tool (worksheet) developed by a local DSMES provider organization in Los Angeles. The tool was designed for low-literacy participants in both English and Spanish to support development of self-management goals. An editable PDF version of the worksheet is available on the LACDPH Dropbox folder (Appendix E).

How to use the tool:

Use the worksheet as a guide when working with a participant to help them create their own goals and track their progress, so that the process remains patient-centered. The worksheet should not be given to participants to fill out on their own.

When to use the tool:

The goal-setting worksheet can be used during the initial phase of the program to help participants choose specific health behaviors to change and identify how they want to change them. Even though the worksheet has space to list multiple goals, it is recommended that both providers and participants focus on one goal at a time in order to simplify the process and not get overwhelmed.[7]

For example, the provider and participant can use the worksheet to set a goal at session 2, then check in on progress at session 4; set a new goal at session 5, and so on. Using the worksheet for shorter time periods can help participants stay engaged by allowing them to set short-term/intermediate goals that may be easier to achieve. This tool can also be used during the later sessions to help participants stay focused on their lifestyle change goals during the transition to follow-up.

Goal-Setting Worksheet[40]

The worksheet below and the Spanish translation can be found in the LACDPH Dropbox folder linked in Appendix E.

Patient Name: _____ Date: _____

Self-Management Goals for [Insert Program Name][1]

Instructions: Pick one or more goals for yourself, then write your goal in the area where it fits so it answers the following: what, when, where, and how often.
For example:
What: *I will walk around my neighborhood*
When: *3 days a week (Tuesday, Wednesday, Thursday)*
How often: *for at least 30 minutes.*

Activity 	**What:** **When:** **How often:**	**Eating Healthy** 	**What:** **When:** **How often:**
Monitoring 	**What:** **When:** **How often:**	**Sleep Quality** 	**What:** **When:** **How often:**
Taking Medications 	**What:** **When:** **How often:**	**Stress Management** 	**What:** **When:** **How often:**
Risk Reduction *(e.g. quit smoking)* 	**What:** **When:** **How often:**	**Other** 	**What:** **When:** **How often:**

On a scale of 0 to 10, how confident are you that you can accomplish your goal(s)?
(Circle one; 0 = not confident; 10 = very confident)

0 1 2 3 4 5 6 7 8 9 10

What are potential barriers that could interfere with your goal?

How can you avoid these barriers?

[1] Worksheet adapted from "Self-Management Goals for Your Health" by Northeast Valley Healthcare Corporation, San Fernando, CA.

HIPAA Training Resources

Participant privacy is essential when developing and implementing DSMES. To ensure that organizations are complying with patient standards, it is essential that all organizations be compliant with the Health Insurance and Portability Accountability Act (HIPAA). HIPAA requires that anyone who is handling confidential and identifiable health information be HIPAA trained and certified. This means that HIPAA certification is required for any employee who is collecting or entering participant data for insurance reimbursement or any other purposes. Below are two organizations that offer free online HIPAA training.

- The **U.S. Department of Health and Human Services (HHS)** offers HIPAA privacy training materials, information, and resources for individuals and professionals. This site also provides resources for filing HIPAA-related complaints through HHS.
    - https://www.hhs.gov/hipaa/for-professionals/training/index.html
- **OSHAcademy** offers HIPAA privacy training materials targeted to employees for free (certificates of completion are $15.99-27.99).
    - http://www.oshatrain.org/courses/mods/625e.html

Reimbursement

This section will discuss the mechanisms by which organizations may receive reimbursement for services from Medicare, Medicaid (Medi-Cal in California), and private insurance providers. Notably, organizations can also receive alternative forms of funding (e.g., grants) in addition to or instead of insurance reimbursements. In order for DSMES providers to bill for services through Medicare, some state Medicaid agencies, and many private insurers, they must first obtain ADA recognition or ADCES accreditation (see the Recognition and Accreditation section on pg. 18).[39] Covered benefits and rates of reimbursement will also vary by insurer, which is important to consider prior to participant enrollment. Throughout this section, DSMES services will be referred to also as Diabetic Self-Management Training (DSMT) or Diabetes Self-Management Education (DSME), as these are the terms used in billing codes and Medicare descriptions of DSMES services.

Tools in this Section	
• Insurance Coverage	pg. 53
• DSMES Billing	pg. 57
• Sustainability	pg. 58

Insurance Coverage[41]

When planning to bill insurance for reimbursement, the first step is to identify the insurers you plan to work with. This step may be performed after participants have already been recruited to ensure that you are prepared to work with the various insurers covering your population. This could save time for staff by ensuring they only focus on relevant insurers. Alternatively, this step may also be performed pre-emptively to limit the number of insurers that you work with. This practice is common for DSMES services that are provided by larger hospital systems, as they tend to limit the insurers that they work with. Keep in mind that this may also limit your participant pool during recruitment.

Once the insurance providers have been identified, the next step is to determine if DSMES/DSMT and/or any related benefits your organization plans to bill for (e.g., medical nutrition therapy [MNT]) are covered by each insurer and their various plans. If covered, the next step is to determine the details of that coverage for each insurer as follows:

- Requirements for billing for that benefit through that insurance provider
    - Procedure codes
    - Number of hours and visits allowed
    - Initial and follow-up time frames
- The relevant International Classification of Diseases (ICD)-10 diagnosis codes
- Approved billing and rendering providers
- Reimbursement rates (may differ according to provider and/or plan)
- Approved service locations
- Participant eligibility requirements

It is important to note that California state law requires private insurance plans to cover DSME/T for outpatient settings and permits copayments and cost-sharing, however there is no explicit trigger for DSME/T and no coverage cap.[42]

For organizations providing DSMES with a primary site and additional sites, there are additional billing considerations. First, when an additional site is added the accrediting or recognizing body must be notified of the additional site along with any payers and the Medicare Administrative Contractor (MAC). In addition, adding a secondary location may affect tax-exemption status and comes with additional

safety and privacy considerations for patients and staff.[39] Furthermore, the organization must also consider that the second site must adhere to anti-kickback regulations, be allowed by state licensure requirements, and adhere to Joint Commission Standards.[39]

Reimbursement Rules of Thumb[41]

Here are a few tips to consider as your program explores reimbursement options for DSMES.

- Note that each insurer may use a different procedure code – don't assume that they are all the same.
    - Procedure codes must match code terminology and the nature of the service.
- Note which codes limit billing to physicians or other qualified health providers (e.g., nurse practitioners, physician assistants, clinical nurse specialists) and which ones allow for billing from non-physician staff or physician extenders (e.g., registered nurses, registered dietitians, certified health education specialists, medical assistants).
- Check with each insurer to determine if the billing method "incident to physician services" is allowed, mandated, or prohibited.
    - Identify insurer requirements for office physicians and staff for this type of billing.
    - This billing method is statutorily prohibited for Medicare DSMT and MNT benefits.
- Track reimbursements quarterly to identify denials and rejections, the reason why, and to fix the problem to be able to re-bill as soon as possible.
    - Insurers may allow re-billing but billing is usually limited to 90 days (most managed care settings) or 12 months.[7,41]

Medicaid (Medi-Cal) & Medicare Coverage

Although private insurers may vary in coverage, the Centers for Medicare and Medicaid Services outline specific requirements for obtaining reimbursement and what is covered by Medicare and Medicaid services. As of April 2023, only in-person DSMES/DSMT services are covered and virtual DSMT services are not covered by Medicare, however exceptions have been made for the COVID-19 public health emergency and those living in rural areas through 2024.[43]

In order to receive reimbursement from Medicare and Medicaid, DSMES services must be accredited by one of the two accrediting organizations (ADA or ADCES) and must meet or exceed the *National Standards* (see the Recognition and Accreditation section on pg. 18). Once recognized or

accredited, organizations can begin the process of applying for reimbursement. In California, Medicaid (Medi-Cal) covers DSMES for its beneficiaries enrolled in a health plan (i.e., a Medi-Cal managed care plan such as L.A. Care Health Plan or HealthNet). However, in order to bill for DSMT through Medicare, organizations must be a pre-existing Medicare provider for another reimbursable service, such as MNT.[39] Note that Medicare considers DSMT a separate benefit and is not considered "incident-to".[39] Not all members of a group session have to be Medicare beneficiaries in order to bill for group DSMT to Medicare.[39]

Medicare Part B allows for 10 hours of outpatient DSMT for people with diabetes (1 hour of individual training and 9 hours of group training), and 2 hours of follow-up each calendar year after the initial training with a referral from a qualified health provider (e.g. physician, nurse practitioner, certified nursing specialist, physician assistant, advanced practice registered nurse).[44] A "qualified health provider" must be currently enrolled as a Medicare provider or in opt out status and must be treating the beneficiary's diabetes at the time of the referral. The referral must include: a signed order by the qualified health provider managing the patient's diabetes; the number of hours and topics to be covered; and whether the provider is referring for group or one-on-one special needs training.[39] Accredited/recognized programs are required to maintain records of the original referral order, and any changes to the referral must be re-submitted and re-signed by the referring provider.[39]

Exceptions to the one hour limit on individual training can be made under the following conditions: the need for individual training is documented by the referring provider on the referral and describes the needs or barriers that would hinder the beneficiary's effective participation in a group session (e.g. vision, hearing, language, cognition, non-ambulatory); no group session was available within 2 months of the referral date; or the referring provider offers additional insulin training.[39]

Note that Medicare beneficiaries are only eligible for the initial 10 hours benefit one time. The individual beneficiary will need to confirm that they have not participated in the initial 10 hours prior to starting the program. To do this, the beneficiary can call 1-800-MEDICARE and ask themselves, or the beneficiary can complete an "Authorization to Disclose Personal Health Information" and the provider can confirm whether or not they qualify.[39] Qualifying Medicare Part B beneficiaries must complete the initial 10 hours within a continuous 12-month period beginning with the date of the first visit (not the date of the referral).[39]

Following the initial 10 hours, Medicare covers follow-up training as long as it is delivered after the initial training and consists of no more than 2 hours of individual or group training during an authorized time period.[39] Authorized periods can be within the same calendar year or spread across two calendar years depending on the completion date of the initial ten hours. The following is an example of the authorized time periods for follow-up:

DSMES Start Date	10 hours Completed In	Eligible for First Follow Up	Completes First Follow Up	Eligible for Second Follow Up
Initial Completion Time Frame: 1 calendar year				
August 2022	October 2022	1 month after completion (November 2022)	December 2022	Next Calendar year (January 2023)
August 2022	December 2022	1 month after completion (January 2023)	July 2023	Next calendar year (January 2024)
Initial Completion Time Frame: 2 calendar years				
August 2022	August 2023	1 month after completion (September 2023)	December 2023	Next calendar year (January 2024)
August 2022	August 2023	1 month after completion (September 2023)	January 2024	Next calendar year (January 2025)

Furthermore, Medicare has a specific definition for diabetes that does not include hemoglobin A1c measurements. For Medicare billing and reporting purposes, diabetes is defined as a participant meeting one of the following requirements:[39]

- Fasting blood sugar ≥ 126 mg/dL on *two* different occasions
- Two-hour post glucose challenge ≥ 200 mg/dL on *two* different occasions
- Random glucose test over 200 mg/dL on one occasion for a person with symptoms of uncontrolled diabetes (e.g. excessive thirst, urination, hunger, or fatigue, blurred vision, unintentional weight loss, non-healing cuts or wounds)

Private Insurers

Although California state law requires private insurance plans to cover DSME/DSMT for outpatient settings, self-insured plans are not required to comply with state mandates and often

employer groups are the ones dictating the coverage policies.[39] Therefore, the best practice for commercial payer reimbursements is to verify coverage directly with each commercial payer.

In general, health plans may cover all DSMT visits or hours provided by the educator upon a referral from a qualified health provider for qualifying patients (e.g., those diagnosed with type 1 or 2 diabetes, gestational diabetes, non-dialysis kidney disease, post kidney transplant) or they may align with Medicare DSMT coverage and rules.[39]

DSMES Billing

To receive reimbursement for delivering DSMT, the accredited/recognized program sponsor (e.g. hospital, physician, advanced practitioner, RD) must have a National Provider Identifier (NPI) number and not the individual provider.[39]

Billing Codes

For individual/one-on-one DSMT, billing code G0108 is used to specify the number of units for the coded payable visit per 30 minutes.[39] Medicare limits for individual DSMT are 8 units (4 hours) for outpatient hospital services and 6 units (3 hours) for practitioner services. Note that Federally Qualified Health Centers (FQHCs) must bill all 10 DSMT hours as individual, as reimbursement is not available for group sessions in FQHC settings.

For group DSMT, billing code G0109 is used to specify the number of units for the coded payable visit per patient per 30 minutes.[39] Medicare limits for group DSMT are 12 units (6 hours) for outpatient hospital services and 12 units (6 hours) for practitioner services. New patients participating in DSMES for the first time can use code G0466, while established patients use G0467. Please note FQHCs must bill all DSMT hours as one-on-one session as reimbursement for group sessions is not available.

As of April 2023, COVID-19 virtual allowances permit virtual programs to use the in-person billing codes through the end of 2024.[39] Furthermore, COVID-19 risk can also be used as a medical reason for additional one-on-one sessions.[39]

Code	Description
G0108	Diabetes outpatient self-management training services, individual, per 30 minutes
G0109	Diabetes outpatient self-management training services, group session (2 or more individuals) per 30 minutes

Sustainability

The CDC defines sustainability as "the ability of DSMES services to continue over time" and describes many factors related to sustainability including billing, program funding, and referrals.[45] This section will focus on financial sustainability of programs via referrals and program funding.

The previous section described funding options from insurance providers and billing. However, many DSMES programs do not solely rely on direct reimbursement from insurance to fund their program and some do not seek reimbursement at all. Grant funding is one option that can help organizations that need assistance with start-up or expansion costs and can be sustainable when combined with other funding sources, such as other reimbursable services.[39] Another alternative funding opportunity is to contract with other companies, such as insulin pump device companies, for training contracts to increase the number of reimbursable services that staff are able to provide.[39]

Furthermore, organizations that provide services in addition to DSMES can bill for those services as a way to maintain staffing and administrative funding for multiple services. Some services that DSMES programs will provide and bill for in addition to DSMES include MNT provided by registered dietitians, CGM, or Remote Patient Monitoring.[39]

Finally, a key factor in sustainability for DSMES programs is strong, consistent referral networks. Clear and efficient referral processes can help minimize barriers and provide programs with a consistent, long-term inflow of patients for their DSMES program.[45,46] See the Recruitment and Implementation section (pg. 25) and Appendix C for resources for increasing referrals and building referral networks.

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Appendices

A. Implementation Resources

Approved Curricula

The following curricula have been previously established to meet the standards set forth by both ADA and ADCES for DSMES recognition/accreditation:

ADCES Diabetes Care and Education Curriculum has been developed by ADCES for health professionals working with patients who have diabetes or prediabetes.

Access at: https://www.diabeteseducator.org/education/publications/diabetes-education-curriculum

Project Dulce is an evidence-based curriculum established by Scripps Diabetes institute as a culturally-sensitive diabetes education program specifically designed to be appropriate to underserved populations.

Access at: https://www.scripps.org/services/metabolic-conditions/diabetes/diabetes-professional-training

ADA Continuous Quality Improvement Toolkit

This toolkit from the ADA outlines the Continuous Quality Improvement (CQI) standard for DSMES programs and provides examples of CQI projects for DSMES programs.

Access at: https://professional.diabetes.org/sites/default/files/media/cqi-toolkit-2022-12-6-22.doc.pdf

Cultural Sensitivity & Competency Resources

Cultural & Linguistic Competency

This article from the Office of Minority Health in the Department of Health and Human Services discusses the National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care (National CLAS Standards) and provides resources and various learning initiatives for providers.

Access at: https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=1&lvlid=6

Cultural Respect

This article from the National Institutes of Health discusses what cultural respect is and why it is important when providing services in healthcare settings that align with the National CLAS Standards.

Access at: https://www.nih.gov/institutes-nih/nih-office-director/office-communications-public-liaison/clear-communication/cultural-respect

Improving Cultural Competence

This publication from the Substance Abuse and Mental Health Services Administration describes cultural competence and discusses cultural considerations in the delivery of healthcare and mental health services.

Access at: https://store.samhsa.gov/product/TIP-59-Improving-Cultural-Competence/SMA15-4849

Cultural Competence in Health & Human Services

This article from the CDC's National Prevention Information Network provides information and resources about cultural competence and the importance of providing culturally competent care to vulnerable populations.

Access at: https://npin.cdc.gov/pages/cultural-competence

Participant Intake Form & Questionnaire

This 20-question intake questionnaire aims to assess various social determinants of health that may affect your organization's participants.

Access at:
https://www.dropbox.com/sh/3g5favf6d85qh3a/AAAfqXFHszuWhsPM8wTte14ya?dl=0

B. Coverage Resources

eHealth Health Insurance Coverage Search

Searchable list of insurance providers by zip code.

Access at: https://www.ehealthinsurance.com/health-insurance-companies

The Policy Surveillance Program Health Insurance Coverage Laws for Diabetes Self-Management Education and Training

This link provides a map of which states have laws that require coverage for both private insurance plans and Medicaid, and provides information on legal requirements for, among other things, when DSME/T coverage is triggered, what specific activities are covered, and the standards that DSME/T must meet.

Access at: https://lawatlas.org/datasets/diabetes-self-management-education-laws

CMS Resources: Telehealth during the COVID-19 National Pandemic

This link from the ADA provides various resources and updates from CMS regarding billing for telehealth during the COVID-19 public health emergency.

Access at: https://professional.diabetes.org/content-page/dsmes-and-mnt-during-covid-19-national-pandemic

What's Omnibus got to do with DSMT?

This article from ADCES provides updates from CMS regarding new deadlines and current legislation related to billing for telehealth during the COVID-19 public health emergency.

Access at: https://www.diabeteseducator.org/news/perspectives/adces-blog-details/adces-perspectives-on-diabetes-care/2023/01/11/what-s-omnibus-got-to-do-with-dsmt

NPI: What You Need to Know

This booklet from the Centers for Medicare and Medicaid Services Medicare Learning Network provides details about the National Provider Identifier (NPI) number, including what it is, who needs one, and how to apply for one.

Access at: https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/NPI-What-You-Need-To-Know.pdf

C. Referral Resources

Approaches to Promoting Referrals to Diabetes Self-Management Education and CDC-Recognized Diabetes Prevention Program Sites

This report from the CDC details four case studies from states with lessons learned specific to developing and promoting referral networks and strategies for diabetes-related programming.

Access at: https://www.cdc.gov/diabetes/pdfs/programs/stateandlocal/Emerging_Practices-Promoting_Referrals.pdf

Diabetes Educators: Tips for Reaching Providers

This brief compiles tips for connecting with prescribers (e.g. physicians, nurse practitioners, physician assistants, etc.) to establish referral networks.

Access at: https://www.diabeteseducator.org/docs/default-source/legacy-docs/_resources/pdf/general/Tips_for_Reaching_Prescribers_Final.pdf

Establishing a Referral Network

This section of the CDC's DSMES Toolkit discusses additional tips for providers looking to establish referral networks for DSMES programs and provides useful links and resources for referral assistance.

Access at: https://www.cdc.gov/diabetes/dsmes-toolkit/referrals-participation/establishing-referral-network.html

D. Recognition Resources

ADA Recognition

ADA Diabetes Education Recognition Program Home Page

This link refers to the main page for the ADA Education Recognition Program, also known as DSMES. This site has all of the information and materials required for ADA recognition as well as useful information and resources for DSMES providers.

Access at: https://professional.diabetes.org/diabetes-education/?utm_source=Offline&utm_medium=Print&utm_content=ERP&utm_campaign=ERP

ADA Diabetes Education Recognition Requirements (11th Edition)

A list of the American Diabetes Association's (ADA) DSMES Recognition Requirements and FAQs.

Access at: https://professional.diabetes.org/content/recognition-requirements

ADA Education Recognition Program Support Documentation Package Checklist

This checklist provides organizations seeking ADA recognition with a step-by-step guide to the application requirements.

Access at: https://professional.diabetes.org/sites/default/files/media/erp-support-document-checklist-4-30.pdf

ADA Education Recognition Program Quality Coordinator Guide

This guide by the ADA provides a reference guide for DSMES Quality Coordinators to use when applying for and working to maintain ADA recognition.

Access at: https://professional.diabetes.org/diabetes-education

ADCES Accreditation

ADCES Diabetes Education and Accreditation Program Home Page

This web page provides information for providers seeking ADCES accreditation including tools for practitioners, links to the standards, a link to the accreditation dashboard, and step-by-step accreditation instructions.

Access at: https://www.diabeteseducator.org/practice/diabetes-education-accreditation-program

ADCES Diabetes Education Accreditation Program: 2022 National Standards for DSMES Interpretive Guidance

Provides information on the required documentation for the Association of Diabetes Care and Education Specialists' (ADCES) accreditation for each of the 2022 standards.

Access at: https://www.diabeteseducator.org/docs/default-source/default-document-library/2022-interpretive-guidancee252f836a05f68739c53ff0000b8561d.pdf?sfvrsn=bd0d9058_0

ADCES DSMES and Prevention Program Resources

This web page includes resources for DSMES providers including ADCES publications and curricula, courses, certificate programs, webinars, and trainings.

Access at: https://www.diabeteseducator.org/education/dsmes-program-resources

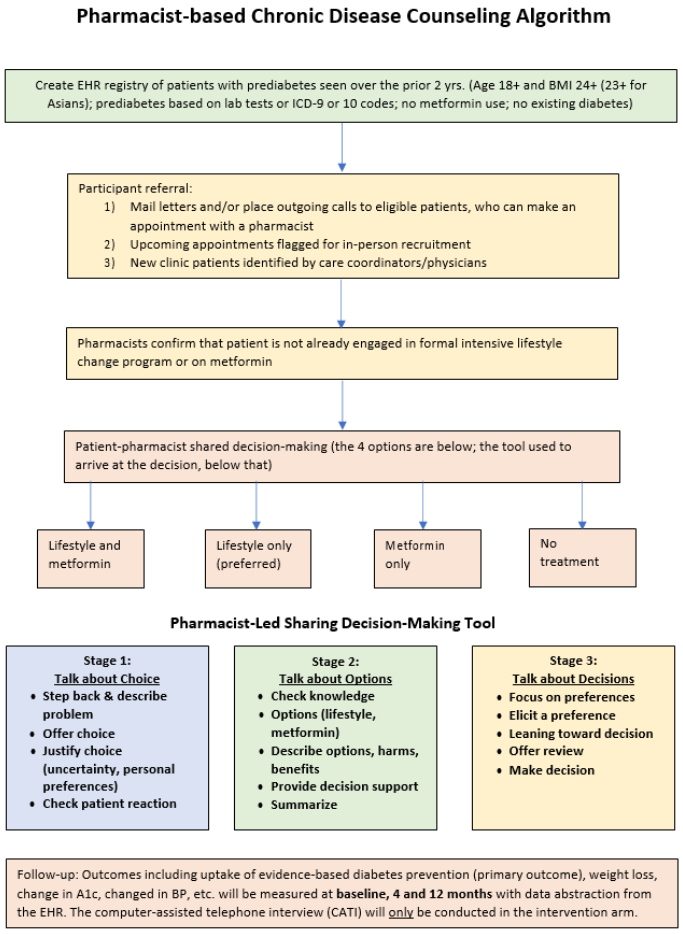
E. Other Resources

LACDPH DSMES Toolkit Materials Dropbox Folder

This folder contains editable PDF copies of materials presented in this toolkit.

Access at:
https://www.dropbox.com/sh/3g5favf6d85qh3a/AAAfgXFHszuWhsPM8wTte14ya?dl=

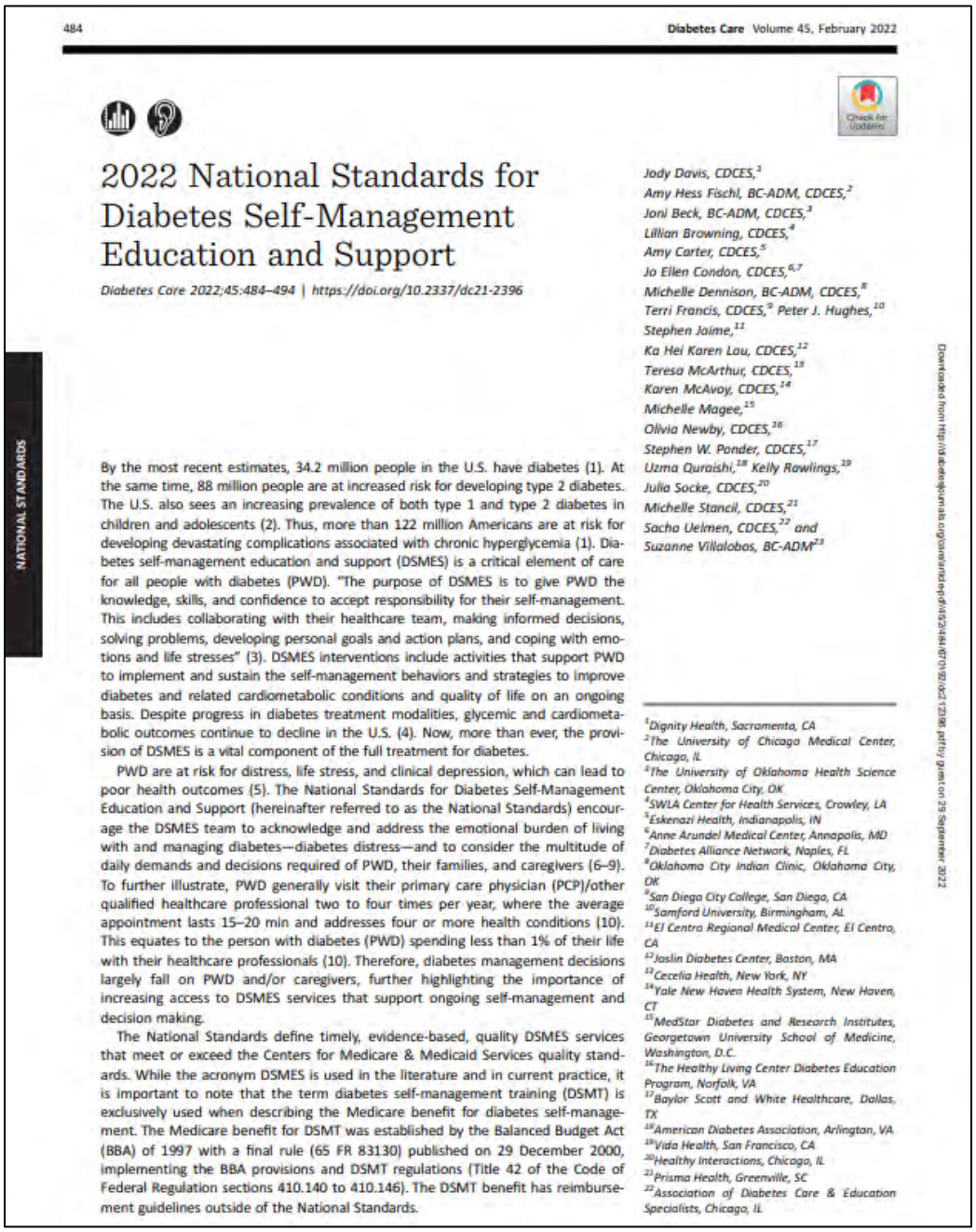
Sample Organizational Flow Charts



Source: UCLA PRIDE Study Algorithm and decision-making tool 2016

F. 2022 Standards[47]

The following includes the 2022 National Standards as published by *Diabetes Care* in February 2022 and sourced from https://diabetesjournals.org/care/article/45/2/484/140905/2022-National-Standards-for-Diabetes-Self.



NATIONAL STANDARDS

2022 National Standards for Diabetes Self-Management Education and Support

Diabetes Care 2022;45:484–494 | https://doi.org/10.2337/dc21-2396

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By the most recent estimates, 34.2 million people in the U.S. have diabetes (1). At the same time, 88 million people are at increased risk for developing type 2 diabetes. The U.S. also sees an increasing prevalence of both type 1 and type 2 diabetes in children and adolescents (2). Thus, more than 122 million Americans are at risk for developing devastating complications associated with chronic hyperglycemia (1). Diabetes self-management education and support (DSMES) is a critical element of care for all people with diabetes (PWD). "The purpose of DSMES is to give PWD the knowledge, skills, and confidence to accept responsibility for their self-management. This includes collaborating with their healthcare team, making informed decisions, solving problems, developing personal goals and action plans, and coping with emotions and life stresses" (3). DSMES interventions include activities that support PWD to implement and sustain the self-management behaviors and strategies to improve diabetes and related cardiometabolic conditions and quality of life on an ongoing basis. Despite progress in diabetes treatment modalities, glycemic and cardiometabolic outcomes continue to decline in the U.S. (4). Now, more than ever, the provision of DSMES is a vital component of the full treatment for diabetes.

PWD are at risk for distress, life stress, and clinical depression, which can lead to poor health outcomes (5). The National Standards for Diabetes Self-Management Education and Support (hereinafter referred to as the National Standards) encourage the DSMES team to acknowledge and address the emotional burden of living with and managing diabetes—diabetes distress—and to consider the multitude of daily demands and decisions required of PWD, their families, and caregivers (6–9). To further illustrate, PWD generally visit their primary care physician (PCP)/other qualified healthcare professional two to four times per year, where the average appointment lasts 15–20 min and addresses four or more health conditions (10). This equates to the person with diabetes (PWD) spending less than 1% of their life with their healthcare professionals (10). Therefore, diabetes management decisions largely fall on PWD and/or caregivers, further highlighting the importance of increasing access to DSMES services that support ongoing self-management and decision making.

The National Standards define timely, evidence-based, quality DSMES services that meet or exceed the Centers for Medicare & Medicaid Services quality standards. While the acronym DSMES is used in the literature and in current practice, it is important to note that the term diabetes self-management training (DSMT) is exclusively used when describing the Medicare benefit for diabetes self-management. The Medicare benefit for DSMT was established by the Balanced Budget Act (BBA) of 1997 with a final rule (65 FR 83130) published on 29 December 2000, implementing the BBA provisions and DSMT regulations (Title 42 of the Code of Federal Regulation sections 410.140 to 410.146). The DSMT benefit has reimbursement guidelines outside of the National Standards.

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The National Standards provide guidance and evidence-based, quality practice for all DSMES services, including those with no plan to seek reimbursement. The evidence supporting the 2022 National Standards clearly identifies the need to provide person-centered services that embrace cultural differences, social determinants of health (SDOH), and the ever-increasing technological engagement platforms and systems. Because the National Standards aim to promote health equity, technological advancements can often be used to achieve equitable access to DSMES (11); however, technology is not a requirement for delivery of DSMES.

Payers are invited to review the National Standards as a tool to inform and modernize DSMES reimbursement requirements and to align with the evolving needs of PWD and physicians/other qualified healthcare professionals. In the U.S., less than 5% of Medicare beneficiaries with diabetes and 6.8% of privately insured people with diagnosed diabetes have utilized DSMES services (12–14). The American Diabetes Association (ADA) and the Association of Diabetes Care & Education Specialists (ADCES) strongly advocate for health equity to ensure all PWD have access to this critical service proven to improve outcomes, both related to and beyond diabetes. Numerous studies have proven the benefits of DSMES, which include improved clinical outcomes and quality of life, while reducing hospitalizations and healthcare costs (13, 15–19). Engagement in DSMES services lowers hemoglobin A1C (A1C) by at least 0.6%, as much as many diabetes medications—however with no side effects (15). Greater A1C reductions have been associated with more than 10 h of DSMES services (15).

The 2022 National Standards update is meant to be a universal document that is easy to understand and can be implemented by the entire healthcare community. DSMES teams in collaboration with primary care have been shown to be the most effective approach to overcome therapeutic inertia (20). While the National Standards can be implemented in any care setting, the Chronic Care Model (CCM), which replaced the Acute Care Model as a leading practice in the 1990s, focuses on proactively managing chronic diseases (21). Additionally, Minimally Disruptive Medicine (MDM) is a person-centered approach to healthcare that prioritizes the PWD's self-determined and self-chosen goals for life and health while minimizing the healthcare disruption on their lives. The goal of MDM is to maximize outcomes for the PWD without additional burden; this approach can be incorporated with the CCM and diabetes self-management to reduce complexity (22,23).

The National Standards are applicable to all care models, including solo practice, community, large practice, technology-enabled models of care, and others (24). The National Standards can provide structure and consistency to the coordination of care and population health. DSMES services are not limited to fee-for-service billing to the Centers for Medicare & Medicaid Services and can utilize other financial models, such as value-based payments and collaboration with commercial payers for sustainability (25,26).

DSMES services must be supported and broadly incorporated in emerging models of care, including Accountable Care Organizations, Patient-Centered Medical Homes, Population Health Programs, and value-based payment models (27–29). The National Standards are the basis for recognition by the ADA and accreditation by the ADCES, the two accrediting organizations certified by Medicare (30,31). The National Standards also serve as a guide for all members of the care team as well as insurance providers to ensure PWD receive DSMES services that are evidence-based and up to date.

The authors and collaborating organizations involved in the revision of the 2022 National Standards urge payers, physicians/other qualified healthcare professionals, advocates, and supporters of DSMES to acknowledge and address the evolving complexities within the healthcare landscape (3,32). This revision again reinforces the essential need for person-centered DSMES services offered throughout the life span of a PWD instead of a rigid program structure. The National Standards do not endorse any one approach, but rather seek to delineate the commonalities among effective and evidence-based DSMES strategies. Since the last revision, the terminology for the Diabetes Educator has changed to the Diabetes Care and Education Specialist. The Diabetes Care and Education Specialist is "A compassionate teacher and expert who, as an integral member of the care team, provides collaborative, comprehensive, and person-centered care and education for people with diabetes" (33,34). The new title more accurately reflects this range of diverse skills and specialization and conveys the broad clinical management skill set and the expanded role of technology. The Certification Board for Diabetes Care and Education also changed Certified Diabetes Educator (CDE) to Certified Diabetes Care and Education Specialist (CDCES) in recognition of this change and conveys the level of expertise held by those with this credential (33).

GUIDING PRINCIPLES FOR THE 2022 REVISION OF THE NATIONAL STANDARDS

Due to the dynamic nature of healthcare and diabetes research, the National Standards are reviewed and revised approximately every 5 years by key stakeholders and experts within the diabetes care and education community. For each revision, the Task Force is charged with reviewing the current National Standards for appropriateness, relevance, and scientific basis and making updates based on

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current evidence and expert consensus. In 2021, the group was tasked with reducing administrative burden related to DSMES implementation across diverse care settings. The goal is to increase health equity through access to this critical service while focusing more on person-centered care and decreasing the administrative complexities outlined in previous revisions. The group was also committed to increasing clarity in documentation requirements that enhance communication and continuity of services and reduce ambiguity across all DSMES care team members. As a result, the National Standards have been revised to reduce administrative burden while maintaining the highest quality services for PWD and decreasing burnout for all diabetes healthcare professionals, including the DSMES team. It must be acknowledged that some language contained in the 2022 National Standards revision is from the 2017 National Standards (35). A summary of changes in the 2022 National Standards revision can be found in Supplementary Material 1. For definitions of terms, the National Standards' Glossary can be found in Supplementary Material 2.

STANDARD 1: SUPPORT FOR DSMES SERVICES

The DSMES team will seek leadership support for implementation and sustainability of DSMES services. The sponsor organization will recognize and support quality DSMES services as an integral component of diabetes care. Sponsor organizations will provide guidance and support for DSMES services to facilitate alignment with organizational resources and the needs of the community being served.

Support from the sponsor organizations and internal leadership is crucial for the success of DSMES services. This is needed to overcome the low utilization of DSMES services due to various barriers (e.g., payer, healthcare system, physician/other qualified healthcare professional, individual, environmental, etc.) that impede access to and utilization of DSMES services (3). Support of DSMES services also involves inclusive healthcare teams, which at minimum, include the PWD, the referring physician/other qualified healthcare professional, and the diabetes care and education specialist. The inclusion of and communication between various healthcare team members, specifically diabetes care and education specialists, has effectively improved diabetes care (20). Ultimately, organizational support of evidence-based DSMES is necessary to ensure that these services are available in the delivery method preferred and accessible and adequately utilized by the PWD. Support could also be from expert stakeholders, who can provide purposeful input and advocacy to promote awareness, value, access, increased utilization, and quality (36,37). Stakeholders can be identified from DSMES participants' referring physicians/other healthcare professionals (within and outside the organization), and community- and affinity-based groups that support DSMES (e.g., fitness clubs and social media networks).

STANDARD 2: POPULATION AND SERVICE ASSESSMENT

The DSMES service will evaluate their chosen target population to determine, develop, and enhance the resources, design, and delivery methods that align with the target populations' needs and preferences.

To best plan, design, deliver, evaluate, and improve quality of services, the DSMES team must identify and understand their target populations' demographics and SDOH (38). Demographic characteristics may include race, ethnic/cultural background, sex, age, geographic location, technology access, levels of formal education, literacy level, health literacy, and numeracy (39–41). The populations' perception of risk associated with diabetes, related complications, and co-occurring conditions (28,42,43) are also key characteristics to consider. This information is available from a variety of sources, including but not limited to community needs assessments by local or state health departments, health system/organizations specific to the populations, and DSMES data.

It is essential to promote access to DSMES services by identifying and addressing population barriers and health inequities (3). Barriers may include socioeconomics, cultural factors, misaligned schedules, health insurance shortfalls, perceived lack of need, or limited encouragement from healthcare professionals to engage in DSMES (28,44,45). SDOH related to the target population should guide service design and delivery (46).

STANDARD 3: DSMES TEAM

All members of a DSMES team will uphold the National Standards and implement collaborative DSMES services, including evidence-based service design, delivery, evaluation, and continuous quality improvement. At least one team member will be identified as the DSMES quality coordinator and will oversee effective implementation, evaluation, tracking, and reporting of DSMES service outcomes.

The DSMES team may include one or a variety of healthcare professionals. The evidence recommends that inclusion of dietitians, nurses, pharmacists, or all other disciplines with special certifications that demonstrate mastery of diabetes knowledge and training, such as Board Certified in Advanced Diabetes Management (BC-ADM) and Certified Diabetes Care and Education Specialists (CDCES), can support all DSMES services, including clinical assessment (24,47).

The quality coordinator needs to ensure the DSMES services are person-centered and understand the process of identifying, analyzing, and communicating quality data. The quality coordinator may partner with other team members to support quality improvement. Although the quality coordinator does not require additional degrees or certifications in informatics, developing an understanding of these skills—as well as marketing, healthcare administration, and business management—will be helpful as the healthcare environment continues to evolve. The quality coordinator role may vary depending on the setting of the DSMES services and may or may not be part of the instructional team.

Other members of the healthcare team, including social workers, Certified Health Education Specialists (CHESs and MCHESs), Exercise Physiologists, Diabetes Community Care Coordinators (previously referred to as paraprofessionals in the 2017 National Standards), and others are also valuable members of the DSMES team. As DSMES team members, Diabetes Community Care Coordinators may include, but are not limited to community health workers, health promotores, dietetic technicians, medical assistants, pharmacy technicians, peer educators, and trained peer leaders. Diabetes Community Care Coordinator team members can provide basic instruction, reinforce self-management skills, support behavior change, facilitate group discussion, provide

psychosocial support, and provide ongoing self-management support (47,48).

To maintain competence and expertise in the expanding diabetes care and education services, all DSMES team members are required to participate in and have documented continuing education, specific to the role they serve within the team (24,47–49). For services outside of the scope of practice of the DSMES team or services, the DSMES team should document communication with referring physicians/other qualified healthcare professionals to support person-centered care.

STANDARD 4: DELIVERY AND DESIGN OF DSMES SERVICES

DSMES services will utilize a curriculum to guide evidence-based content and delivery, to ensure consistency of teaching concepts, methods, and strategies within the team, and to serve as a resource for the team. DSMES teams will have knowledge of and be responsive to emerging evidence, advances in education strategies, pharmacotherapeutics, technology-enabled treatment, local and online peer support, psychosocial resources, and delivery strategies relevant to the population they serve.

The options for delivery of DSMES have grown dramatically in recent years as technology has been incorporated into healthcare, and simultaneously as more people have become comfortable using technology for communication, teaching, and learning. Various modes of delivery can support increased communication between PWD and the DSMES team and improve diabetes-related outcomes. Strong evidence supports DSMES delivery through virtual, telehealth, telephone, text messaging, and web-based/mobile phone applications (apps) (50–55).

The most effective and evidence-based delivery methods move beyond the mere acquisition of knowledge to support informed decision making while addressing psychosocial concerns of the PWD (56,57). The use of interactive teaching styles that include meaningful discussions to address individual questions and needs while fostering a culture of positivity within the DSMES services is recommended. The curriculum content and delivery should be creative, culturally appropriate (58,59), and adapted as necessary for the individuals and groups within the target population (60–64). Furthermore, culturally tailored services have been shown to be effective in improving diabetes care outcomes (59,65).

A curriculum provides guidance for the DSMES team, effective teaching strategies, and methods for evaluating learning outcomes and includes all aspects of diabetes self-management and support (66–68). DSMES delivery should integrate topics across content areas rather than creating silos of content that limit informed and wise decision making. The delivery of curriculum content must be dynamic and based on continuing assessment of need, preferences, and evaluation of outcomes (66,68–71). Recent education research endorses the inclusion of practical problem solving and self-advocacy approaches, as well as collaborative care, including family and peer support, addressing psychosocial issues, behavior change, diabetes devices, and strategies to sustain self-management efforts (21,24,65,72–78). The ADCES7 Self-Care Behaviors (i.e., healthy coping, healthy eating, being active, taking medication, monitoring, reducing risk, and problem solving) is an evidence-based framework and outline to provide and document diabetes care and education that can be used in conjunction with the chosen curricula (79). A DSMES curriculum must include the following core content areas, and content must be prioritized to meet the individual PWD's current needs and goals (3,15,80,81):

- Pathophysiology of diabetes and treatment options
- Healthy coping
- Healthy eating
- Being active
- Taking medication
- Monitoring
- Reducing risk (treating acute and chronic complications)
- Problem solving and behavior change strategies

DSMES follow-up and ongoing support

While initial DSMES is necessary, it is not sufficient for sustaining a lifetime of diabetes self-management; initial improvements in outcomes have been shown to diminish 6 months after conclusion of the intervention (80). To maintain self-care behavior at the level needed to effectively sustain diabetes management over time, PWD benefit from ongoing diabetes self-management support. Ongoing support helps PWD to implement and sustain the ongoing skills, knowledge, coping, and behavioral strategies needed to manage diabetes (3). Because family members, caregivers, and peers can be an effective resource for ongoing support but often don't know how to help, it can be beneficial to include family members and caregivers throughout the DSMES intervention (3). Connecting PWD to technology enabled solutions, such as mobile apps, digital therapeutics, online programs, and peer groups, within the local or online community can encourage practical integration of diabetes self-management and psychosocial support into the existing daily routine between and beyond DSMES sessions.

STANDARD 5: PERSON-CENTERED DSMES

Person-centered DSMES is a recurring process over the life span for PWD. Each person's DSMES plan will be unique and based on the person's concerns, needs, and priorities collaboratively determined as part of a DSMES assessment. The DSMES team will monitor and communicate the outcomes of the DSMES services to the diabetes care team and/or referring physician/other qualified healthcare professional.

To ensure that DSMES is addressing the current concerns, needs, and priorities of the PWD, referring physicians/other qualified healthcare professionals should assess the need for DSMES referral or follow-up at four critical times (3). The four critical times are at diagnosis, annually and/or when not meeting treatment targets, when complicating factors develop, and when transitions in life or care occur (3,66).

Every DSMES intervention should be a person-centered process that addresses timely education and supports individual needs throughout a person's lifetime (3,66,82,83). A DSMES intervention can include individual and/or group sessions and is initiated with an assessment of the PWD's current concerns, needs, and priorities to create a DSMES plan of care guided by the PWD's preferred delivery method and timing. The DSMES plan is implemented through a series of sessions, utilizing a variety of methods, while supporting and tracking related outcomes to identify trends and reinforce effective self-management behaviors (3,66,82). Communicating the progress and related outcomes to the

PWD's diabetes care team contributes to the continuum of person-centered collaborative care and assists in overcoming therapeutic inertia (66,84–86).

Assessment

To implement a person-centered DSMES plan, the Diabetes Care and Education Specialist must closely work in partnership with each PWD to better understand how (e.g., modality, content, and frequency) to best suit that person. The assessment process involves collaborative communication between a healthcare professional and the PWD to identify needs and agree on the PWD's preferred educational, coping, and behavioral interventions that will be used to develop needed problem-solving, decision-making, and self-management skills and strategies (15,87).

Examples of information gathered during the assessment process can include the following:

- Health status: type of diabetes, clinical needs, health history, disabilities, physical limitations, SDOH and health inequities (e.g., safe housing, transportation, access to nutritious foods, access to healthcare, financial status, and limitations), risk factors, comorbidities, and age
- Learning level: diabetes knowledge, health literacy, literacy, numeracy, readiness to learn, ability to self-manage, developmental stage, learning disabilities, cognitive/developmental disabilities (e.g., intellectual disability, moderate-severe autism, dementia), and mental health impairment (e.g., schizophrenia, suicidality)
- Lifestyle practices: self-management skills and behaviors, health service or resource utilization, cultural influences, alcohol and drug use, lived experiences, religion, and sexual orientation
- Psychosocial adjustment: emotional response to diabetes, diabetes distress, diabetes family support, peer support (e.g., in-person or via social networking sites), and other potential promotors and barriers (22,46,84,88–92)

This information can be provided by the PWD as well as obtained from the health record/electronic health record (EHR) and identified support persons or caregivers. This information should be reviewed by the DSMES team to inform and promote person-centered understanding. The assessment process can be supported by a variety of collection/intake modalities, such as online assessments via consumer portals and EHR, tablet computers that integrate with EHR, text messaging, web-based tools, automated telephone follow-up, and remote monitoring tools (26,93–95). Although not an exhaustive list or applicable to all populations, examples of assessment tools can be found in Supplementary Material 3.

While it would be ideal to have all this information on or before the first session, the realities of the healthcare environment often require the DSMES team to conduct focused assessments in specific areas at the first session and throughout subsequent sessions of the intervention. After the initial assessment, ongoing assessments will be incremental over time based on individual need (3,96). A PWD's concerns and needs change throughout their lifetime due to changes in physical and emotional health, cultural and religious practices, SDOH, the ability to exercise, care support systems, etc. (46,84,89,96).

The assessment can also identify factors that affect the PWD's ability to effectively manage their diabetes that go beyond the scope of practice of the DSMES team. For example, DSMES services play a critical role in closing gaps in care by helping to facilitate necessary referrals (e.g., medical nutrition therapy, social work, psychology, pharmacy, podiatry, optometry, lab tests, specialists, etc.) beyond DSMES that increase access to resources to assist the PWD (88,97–100).

Implementing person-centered DSMES sessions

After the initial assessment, the PWD and DSMES team member(s) develop a person-centered DSMES plan. The ADCES7 Self-Care Behaviors (57) can be used as a base for documentation of the DSMES plan to promote continuity of care with all members of the DSMES team and across DSMES services.

The DSMES team member(s) use person-centered and strengths-based plain language (101), jargon-free and culturally relevant information, language- and literacy-appropriate educational materials (102), and interpreter services when indicated (103). Evidence-based communication strategies, such as goal setting, action planning, empowerment-based principles and strategies, motivational interviewing, shared decision making, cognitive behavioral therapy, problem solving, self-efficacy enhancement, teach-back method, and relapse prevention strategies are also effective (76,104–107). The DSMES team uses nonjudgmental, nonstigmatizing, and gender-inclusive language when speaking and in writing with and about PWD.

The DSMES plan, topics covered at each session, and the outcomes of the intervention are documented in the DSMES record for each person. This documentation provides evidence of person-centered DSMES and communication among other members of the person's healthcare team. This enhances long-term management and continuity of diabetes care, education, and support (108). Using technology tools and EHRs, in turn, increase access to information for all team members to work collaboratively and have access to documentation (109).

Supporting and tracking person-centered self-management outcomes

Clinical outcome measures reflect the impact of the DSMES services on the health status of the PWD (110). To demonstrate the benefits of DSMES and/or the need for treatment plan adaptation, it is important for DSMES services to measure and track relevant individual outcomes, such as clinical outcomes, patient-reported outcomes, psychosocial outcomes, and behavioral outcomes. Use of patient-generated health data (PGHD) has rapidly increased with wearable devices and apps, and PGHD can assist in setting and tracking outcomes and goals. There is increasing adoption of PGHD diabetes devices, such as continuous glucose monitors (CGMs). For example, CGMs can assist PWD in setting and tracking behavioral and clinical outcomes with real-time feedback for indicators, such as glucose time in, below, or above range and glucose management indicator (111). Incorporating PGHD (112) into decision making individualizes self-management and empowers PWD to fully engage in personal problem solving toward evaluating and changing behaviors and improving outcomes (26,111,113–115).

It is crucial for each PWD to collaboratively develop action-oriented behavior

change plans to reach their personal behavioral goals, coping strategies, and treatment (or clinical) targets (87,116). The DSMES team will explain and demonstrate psychosocial and behavior change strategies that can be used by the PWD to meet their self-determined goals and targets (117). The role of the DSMES team is to provide support in problem solving during this process (118,119). The ADCES7 Self-Care Behaviors (57) can be used for tracking progress in behavior goals.

For some outcomes, the indicators, measures, and timeframes will depend on evidence-based guidelines from professional organizations or government agencies (15,120,121).

STANDARD 6: MEASURING AND DEMONSTRATING OUTCOMES OF DSMES SERVICES

DSMES services will have ongoing continuous quality improvement (CQI) strategies in place that measure the impact of the DSMES services. Systematic evaluation of process and outcome data will be conducted to identify areas for improvement and to guide services optimization and/or redesign.

To demonstrate the benefits of DSMES, members of the DSMES team track relevant individual PWD outcomes (STANDARD 5). Then, these individual outcomes are aggregated to report practice level population outcomes. The diabetes self-management education core outcomes measures (68) specify behavior change as a key outcome, and the ADCES7 Self-Care Behaviors provide a useful framework for assessment, documentation, and evaluation (3,57). The DSMES team should select validated instruments or assessment tools (see Supplementary Material 3) whenever possible and consider utilizing, contributing to, or reflecting upon assessment tools within their organization to accurately track progress and outcomes.

Service models that include population health and disease management, an interprofessional team, and ongoing social support improve both individual-level and aggregated practice-level outcomes (3,122). Formal CQI strategies provide a framework to strive for excellence, quantify successes, and identify future opportunities. In addition, formal CQI strategies are best informed through stakeholder input and have been shown to improve diabetes outcomes (123), which in turn may be used as evidence to inform payment models and policy for support of DSMES services.

Quality improvement initiatives may target DSMES services at an individual practice, multicenter system, or national DSMES effort level (124). By measuring and monitoring both process and outcome data on an ongoing basis, the DSMES team can identify areas for improvement. They can then adjust engagement strategies and service offerings to optimize outcomes. Evaluation of reach, effectiveness, and adoption achieved via quality improvement initiatives generates evidence to support the business case for maintenance and/or expansion of the DSMES services. Positive results from quality initiatives can be used in marketing efforts and shared with administrators/leadership. A focus on quality is also part of overall healthcare quality initiatives. DSMES services can make a substantial impact on many of the measured outcomes, including the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act (MACRA) and the Quality Payment Program, which have shifted the focus of provider payment from unit of service to quality and outcomes. As an example of promoting quality as an outcome, participating clinicians can be rewarded based on annual predetermined quality measure data, and requirements may change each performance year (125).

Once areas for DSMES services improvement are identified, timelines for data collection with internal audits for verification of data integrity, analysis, and presentation of results can be established.

Outcomes are broadly considered as process data or outcomes data. Outcome data may be clinical, behavioral, patient-reported, and PGHD. Examples for each of these outcome types are provided in **Table 1**. Process outcomes indicate what a healthcare professional does to maintain or improve health (110). They provide information to inform what will lead to desired behavioral and clinical outcomes improvement (e.g., attendance at DSMES sessions, medication taking behaviors, or preventive services involvement) (126). Clinical outcomes indicate the result of the process (e.g., whether treatment or behavioral changes are leading to improvements, such as a change in A1C) and should align with the greater organizational performance measures, when applicable.

Process outcome measures examine activities driving the most important outcomes of interest from the DSMES services perspective. Process outcome measures generally recommended for DSMES services are operational measures (e.g., characteristics of PWD receiving services, results of marketing efforts, attendance and factors impacting attendance, financial metrics including billing and reimbursement rates, copays, facility fees, PWD and physician/other qualified healthcare professional satisfaction, referrals to DSMES, and attainment rates for recommended diabetes-related surveillance testing). For DSMES services, SDOH must also be considered as process measures because addressing elements of SDOH are necessary for the PWD to achieve optimal self-management and are deemed essential to achieving health equity from the individual PWD, program, and population health perspectives (46).

A wide variety of methods can be used to guide quality improvement initiatives at the individual practice or system levels. The Institute for Healthcare Improvement suggests the Model for Improvement as a framework to guide improvement work (126). The model consists of three fundamental questions that should be answered by an improvement process: *1*) "What are we trying to accomplish?" *2*) "How will we know a change is an improvement?" and *3*) "What changes can we make that will result in an improvement?" (126). Evidence-based examples of such methods include the Plan-Do-Study-Act model, Six Sigma, Lean, workflow mapping, the Re-AIM (127) framework, and the Chronic Care Model (128). There are resources available to assist those initiating quality improvement programs for the first time or for those looking for new options (21,123,126–129). The Centers for Disease Control and Prevention DSMES Technical Assistance Guide (129) and accompanying toolkit (130) also provide guidance for planning and implementing activities to increase use of DSMES services and address quality improvement components. Quality and Performance groups at hospitals and in health systems are also a resource for those embarking on DSMES services quality improvement efforts.

Table 1—DSMES Outcome Examples

Outcome type	Example
Process outcomes	Referral process Attendance Education mapping Social determinants of health Timing of education sessions (e.g., times that meet the PWD needs)
Clinical outcomes	A1C Time in hypoglycemia Pregnancy outcomes LDL-cholesterol levels BMI and body weight Blood pressure Time in range
Psychosocial and behavioral outcomes (57)	Healthy coping Healthy eating Being active Taking medication Monitoring Reducing risk Problem solving
Patient-reported outcomes	Health-related quality of life Diabetes-related quality of life Diabetes distress Self-efficacy Functional status Patient satisfaction
Patient generated health data	Blood glucose trends CGM glucose management indicator Weight, activity, steps Food/beverage intake Sleep Blood pressure

CONCLUSIONS

In keeping with the theme of MDM and recognition of the specialist role of the Diabetes Care and Education Specialist and CDCES, this revision of the National Standards focuses on clarifying key concepts and reducing administrative tasks associated with DSMES services that have little to no impact on person-centered outcomes. While the COVID-19 pandemic and public health emergency have had a major impact on healthcare systems, physicians/other qualified healthcare professionals, and PWD, it is imperative that evidence-based solutions are supported, and that every effort is made across government agencies, payers, and physicians/other qualified healthcare professionals to expand the role of and access to DSMES across the country. As we have learned from the disruption in all aspects of people's daily lives from the COVID-19 pandemic, it is clear that structured DSMES programs do not benefit everyone, and delivery of evidenced-based, person-centered care is needed to drive quality outcomes. It also reinforces the importance of assessing diabetes distress and promoting the use of healthy coping strategies for effective self-management of diabetes. Alternative methods of delivery, such as one on one audio and audio-video contact, can also improve outcomes similar to in-person DSMES and allow the PWD to choose the option that best meets their needs and preferences.

Evidence supports an expanded role of the Diabetes Care and Education Specialist as an effective change agent in overcoming therapeutic inertia. Research studies show that Diabetes Care and Education Specialists can support intensification of treatment plans to achieve glycemic, blood pressure, and lipid targets through the implementation of diabetes management protocols (131). Furthermore, a recent systematic review and meta-analysis adds to the growing body of evidence that professionals who are not physicians, such as the Diabetes Care and Education Specialist, are well positioned and should be empowered to initiate and intensify treatment plans when supported by appropriate guidelines (20). Use of digital technology (e.g., cloud-based, telehealth, data management platforms, apps, and social media) enhances the ability to employ a technology enabled self-management feedback loop with four key elements—two-way communication, analysis of PGHD, customized education, and person-centered feedback —to provide real-time engagement in self-management, as well as enable and empower PWD to effectively communicate with their care team (26). Disparities and inequities in access, adoption, and optimization of diabetes technology have become increasingly apparent in the COVID-19 pandemic (11). A framework identified specifically for Diabetes Care and Education Specialists to address these inequities that can be used as a practice model to aid in the incorporation of technology into their DSMES services is the ICC Framework (Identify, Configure, Collaborate) (132, 133). Data support that technology can aid in better outcomes; however, additional assessment and judgement to determine if there are barriers to use and if those barriers can be overcome must be considered (134,135). Other tools are available to assist with implementation and ongoing utilization of diabetes technology (111,136,137).

On a final note, implementation science is an emerging and cost-effective way to study real world methods that promote integration of research and evidence into practice and policy (138). DSMES is an area well established for healthcare professionals to utilize a robust body of evidence to evaluate outcomes, reduce costs, and decrease health disparities while addressing and reducing health inequities.

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