



Section 2: Self-Management Education

Concern	Care/Test	Frequency
Self-Management Education	<ul style="list-style-type: none"> Refer to diabetes educator, preferably a CDE in an ADA Recognized or AADE Accredited Program 	At diagnosis, then every 6 – 12 months, or more as needed

MAIN TOPICS INCLUDED IN THIS SECTION:

- Providing Individualized Care
- Role of Diabetes Educators
- Referral to a Certified Diabetes Educator (CDE)
- National Standards for Diabetes Self-Management Education Programs
- Outcome Measures of Diabetes Self-Management Education
- Referral to a Diabetes Education Program
- The Changing Face of Diabetes Education
- Health Literacy
- Patient-Centered Teaching Approaches
- Medicare Coverage for Diabetes Screening, Education, and Supplies
- Insurance Coverage
- Additional Resources
- References

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Diabetes self-management education (DSME) is a formal process through which persons at risk for or with diabetes develop and use the knowledge and skill required to reach their self-defined diabetes goals. Providers of self-management education facilitate short- and long-term goal setting. **Emphasis is placed on individualized, realistic, and obtainable goals. Family members, significant others, the primary care provider, the diabetes team, and a variety of others may influence goals, but the person at risk for or with diabetes must ultimately determine self-care goals.** Goals and related interventions should be evaluated regularly and revised to achieve desired health outcomes.

In Healthy People 2020, experts have increased the objective for the percentage of individuals in the United States who receive formal diabetes education to 62.5%. It is estimated that 50-80% of people with diabetes lack the knowledge and skills needed to adequately self-manage their diabetes. Data from the National Health and Nutrition Examination Survey (NHANES) from 2005-2008 show that only 53.5% of adults with diabetes achieved an A1C of less than 7.0% and 16.2% have A1C levels above 9%. Self-management education can help people lower their A1C levels, and could reduce the need for medication. Given this powerful and effective reduction in A1C, it is evident why self-management education must be included in the medical treatment plan.

Providing Individualized Care

According to the American Association of Diabetes Educators (AADE), DSME should not only be accessible, planned, documented, and evaluated, but it must also be individualized. Tailoring the educational process to match individual learner characteristics can assist in achieving positive outcomes. When self-management education is individualized, a number of key outcomes are achieved:

- Consideration is given to each person's educational concerns and priorities
- Recognition is offered for each person's expertise and unique perspectives toward the process of DSME
- Psychological and behavioral aspects of care are incorporated
- Collaborative relationships are formed between learners and educators

A crucial aspect of providing individualized care is assessing for specific learning barriers such as those related to language, culture, learning preferences, cognition, and memory. A learning assessment should be done on a regular basis to ensure that any changes are acknowledged and reflected in the teaching approach used. Specific attributes should also be assessed to better understand each person's ability to engage in self-care behaviors. These attributes include:

- Health status
- Attitudes, beliefs, experiences, and desire to participate in diabetes education
- Psychosocial status
- Literacy and learning style
- Cultural and life span issues
- Personal metabolic and other goals
- Self-care skills and access to resources

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In order to more fully individualize care, attempts should be made to better understand a person's readiness-to-change behavior. One evidence-based model of behavior change is the Transtheoretical Model of Change or Stages of Change Model by Prochaska, et al. (see Table 2-1). The Stages of Change Model shows that, for most people, a change in behavior occurs over time. People may initially be uninterested, unaware or unwilling to make a change (pre-contemplation). They may then begin to consider a change (contemplation) and eventually decide and prepare to make a change. Action is then taken over time to maintain the new behavior. Relapses are almost inevitable and become part of the process of working toward life-long change. Understanding readiness and barriers to change, and anticipating "relapses" can lead to realistic goal setting, improved confidence, and can help support people throughout the change process.

Table 2-1: Stages of Change Model

Stage of change	Patient stage	Incorporating other explanatory/treatment models
Pre-contemplation	Not thinking about change May be resigned Feeling of no control Denial: does not believe it applies to self Believes consequences are not serious	Locus of Control Health Belief Model Motivational Interviewing
Contemplation	Weighing benefits and costs of behavior, proposed change	Health Belief Model Motivational Interviewing
Preparation	Experimenting with small changes	Cognitive-Behavioral Therapy
Action	Taking a definitive action to change	Cognitive-Behavioral Therapy 12-Step program
Maintenance	Maintaining new behavior over time	Cognitive-Behavioral Therapy 12-Step program
Relapse	Experiencing normal part of process of change Usually feels demoralized	Motivational Interviewing 12-Step program

Source: Prochaska et al. and Miller, et al.

Role of Diabetes Educators

Diabetes educators represent a variety of health care disciplines. Although each is responsible for upholding discipline-specific standards of professional practice, diabetes educators have a number of shared expectations.

Diabetes educators:

- Use established principles of teaching and learning theory and lifestyle counseling to help clients
- Confidently and effectively work with the person to manage their diabetes
- Provide instruction that is individualized for persons of all ages, incorporating cultural preferences, health beliefs, and preferred learning styles
- Promote behavior change directed at successful diabetes self-management

Referral to a Certified Diabetes Educator (CDE)

Persons newly diagnosed with diabetes, or needing assistance in managing their diabetes care, should be referred to a diabetes educator, preferably a certified diabetes educator (CDE) in an ADA or AADE accredited program.

CDEs are health care professionals with knowledge, expertise, and at least 1000 hours of practical experience in diabetes education and management. CDEs include, but are not limited to, nurse practitioners, pharmacists, physicians, physician assistants, podiatrists, registered dietitians, registered nurses, and social workers. The CDE has the expertise to identify factors influencing the outcomes of successful self-management and the skills to help people with diabetes, their family members, and primary care providers collaborate to develop achievable goals.

Certified diabetes educators must meet specific requirements including licensure as a health care professional as well as experience in diabetes management and counseling. These educators must pass a qualifying exam to become certified. For more information on CDE requirements, see the National Certification Board for Diabetes Educators website: <http://www.ncbde.org>. CDE professionals may be members of the American Association of Diabetes Educators (AADE). A listing of CDEs who are AADE members may be found at: <http://www.diabeteseducator.org/DiabetesEducation/Find.html>.

Health care providers without access to designated certified diabetes educators in their clinic or health care organization may find it beneficial to coordinate care with other diabetes educators and health education programs found in their communities.

National Standards for Diabetes Self-Management Education Programs

The American Diabetes Association (ADA) and the American Association of Diabetes Educators (AADE) have established specific standards for diabetes self-management education (DSME). DSME programs have been implemented in diverse settings and facilitate improvement in health care outcomes for people with diabetes. There are ten evidence-based standards applied to the structure, process, and outcomes of quality DSME programs. These are available on the AADE website: http://www.diabeteseducator.org/export/sites/aade/_resources/pdf/2007national_standards_for_dsme.pdf.

Each recognized diabetes program must have a written curriculum that includes criteria for successful learning outcomes. It must also include an individual educational needs assessment, a formal educational plan, a goal setting process, and documentation of education provided and goals identified and achieved.

The individualized educational needs assessment should include:

- Health history and physical limitations
- Medical history
- Cultural influences
- Previous and current use of medication(s)
- Nutrition history and eating practice
- Current mental health status

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- Family and social supports
- Previous diabetes education, actual knowledge, and skills
- Current self-management practices
- Access to and utilization of health care delivery systems
- Lifestyle practices including health beliefs and attitudes
- Psychosocial factors (socioeconomic, housing, employment, financial status [including the person's ability to afford DSME and proposed diabetes regimens])
- Readiness to learn
- Barriers to learning, including health literacy level

The formal DSME educational plan begins with basic information, typically referred to as “diabetes survival skills.” This introductory education should ideally be followed by a more comprehensive training program. For those interested in or needing additional knowledge and skills development, intensive management programs within specialty clinic settings may be available.

Basic Diabetes Survival Skills Education

Comprehensive diabetes education is often not possible at the time of diagnosis. Survival skills education or basic diabetes education provides the information essential for the safety of the person with diabetes in the immediate weeks following diagnosis. People with diabetes need basic survival skills education, including:

- Understanding of diabetes as a disease process and the dosing and expected effects (including side effects) of medication/insulin
- Self-monitoring of blood glucose and explanation of home blood glucose goals (additional information on self-monitoring of blood glucose is located in *Section 4: Glycemic Control*)
- Definition, recognition, treatment, and prevention of hypoglycemia and hyperglycemia
- Identification of health care provider who will provide diabetes care after discharge
- Information on consistent eating patterns
- Planning when and how to take blood glucose-lowering medications including insulin administration (if prescribed)
- Planning for and responding to diabetes emergencies and sick days
- Resources for proper use and disposal of needles and syringes

Comprehensive Self-Management

A comprehensive self-management program is an interactive educational process most often completed in ambulatory care settings, either individually or in a group format. Comprehensive self-management education incorporates the components of basic diabetes education and builds on that education with the addition of the National Standards for Diabetes Self-Management Education's ten core educational content areas, which include:

1. Disease process and treatment options
2. Nutrition (incorporating into lifestyle)
3. Physical activity (incorporating into lifestyle)
4. Medication(s) (safe usage and maximum therapeutic effectiveness)

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5. Blood glucose monitoring (interpreting and using results for self-management decision making)
6. Acute complications (preventing, detecting, and treating)
7. Chronic complications (preventing, detecting, and treating)
8. Goal setting and problem solving (personal strategies to promote health and behavior change)
9. Psychosocial aspects (personal strategies to address issues and concerns)
10. Preconception care/pregnancy/gestational diabetes

It is important for a comprehensive self-management program to include a multidisciplinary, instructional team which may include but is not limited to nurses, dietitians, physicians, social workers, psychologists, and exercise physiologists to assure all ten of the core educational areas are taught by qualified professionals.

Intensive Self-Management

Intensive self-management diabetes education builds upon comprehensive education. Intensive self-management should be sought for all highly motivated people. Providers can assist people to individualize and intensify self-management skills to achieve normal or near-normal blood glucose levels using all available resources. Persons choosing intensive self-management may incorporate any or all of the following into their individualized plan:

- Intensive insulin therapy (multiple daily injections or continuous subcutaneous insulin infusion by pump)
- Carbohydrate counting using insulin-to-carbohydrate ratios which may be fixed or individualized for each meal and snack
- Correction insulin doses which may be fixed, or individualized by time of day
- Temporary or adjusted insulin rates for physical activity, fasting, or sick days
- A variety of insulin regimens (patterns) based on varying days of the week (weekday vs. weekend, highly active day vs. sedentary day, high stress day vs. normal work day, travel day vs. office day)

At all levels of DSME, the person with diabetes and the diabetes team must work together to balance achievement of optimal glucose levels without increased risk for hypoglycemia.

Regardless of the teaching methods or interventions used, goal setting is an integral component of DSME. The role of the diabetes educator is to assist the person with diabetes in making sure that his or her individualized goals are specific and measurable within a specified time frame. Documentation of all aspects of the diabetes program is essential for follow up as well as for measuring effectiveness of the DSME. Examples of self-management tools can be found in the Tools Section of this document.

Outcome Measures of Diabetes Self-Management Education

In an environment of evidence-based practice, diabetes educators must gather data to support their practices and modify their educational approaches in response to outcomes achieved. Educators must evaluate both the process and the outcomes of their diabetes educational program.

The AADE identifies seven diabetes self-care behaviors (see Table 2-2) that are integral to optimal self-management. Educators can use outcomes of these behavioral goals to:

- Determine the efficacy of education with both individuals and populations
- Compare performance with established benchmarks
- Measure or quantify the unique contribution that DSME plays in the overall context of diabetes care

Table 2-2: AADE7™ Self-Care Behaviors

1. Healthy eating
2. Being active (physical activity)
3. Monitoring (blood glucose and A1C for long-term complications)
4. Taking medication and/or insulin
5. Problem solving (especially for blood glucose, high and low levels, and sick days)
6. Reducing risks (of diabetes complications)
7. Healthy coping

AADE7™ Self-Care Behaviors Goal Sheets and other materials can be purchased from the AADE at:
<http://www.diabeteseducator.org/ProfessionalResources/AADE7/>

Adapted from the AADE7™ Self-Care Behaviors

The AADE further defines standards for outcomes measurement for DSME programs that are practical, informative, applicable, and achievable (see Table 2-3).

Table 2-3: American Association of Diabetes Educators Standards for Outcomes Measurement

1. Behavior change is the unique outcome measurement of diabetes self-management education.
2. Seven diabetes self-care behavior measures determine the effectiveness of diabetes self-management education at individual, participant, and population levels (see Table 2-2).
3. Diabetes self-care behaviors should be evaluated at baseline and then at regular intervals after the education program.
4. The continuum of outcomes, including learning, behavioral, clinical, and health status, should be assessed to demonstrate the interrelationship between DSME and behavior change in the care of individuals with diabetes.
5. Individual outcomes are used to guide the intervention and improve care for that person with diabetes. Aggregate population outcomes are used to guide programmatic services and for continuous quality improvement activities for the DSME and the population it serves.

Source: American Association of Diabetes Educators

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Referral to a Diabetes Education Program

Referral to a recognized or accredited program is optimal. Educators who lead self-management programs identify their program as a quality service by earning recognition status in the ADA Education Recognition Program or accreditation status in the AADE Accredited Diabetes Education Program. Both programs meet the Centers for Medicare & Medicaid Services' criteria for reimbursement for Diabetes Self-Management Training (DSMT). To earn recognition/accreditation status, staff must develop a diabetes education curriculum using the National Standards for Diabetes Self-Management Education, collect data to demonstrate Continuous Quality Improvement (CQI) measures, and pay an application fee. Recognition/accreditation is granted for a four-year cycle, at which time the organization must reapply.

To learn more about achieving ADA Recognition:

<http://professional.diabetes.org/Recognition.aspx?cid=57941&typ=15>.

To learn more about achieving AADE Accreditation:

<http://www.diabeteseducator.org/ProfessionalResources/accred/>.

To locate Wisconsin locations for ADA Recognized Programs go to:

http://professional.diabetes.org/ERP_List.aspx.

To locate AADE accredited programs in Wisconsin, go to:

<http://www.diabeteseducator.org/ProfessionalResources/accred/Programs.html>.

The Changing Face of Diabetes Education

In today's health care environment, information about diabetes is available from a variety of sources. Many persons with diabetes have access through the internet to reliable diabetes resources, specifically national organizations such as the ADA, the AADE, the Centers for Disease Control and Prevention (CDC), the National Diabetes Education Program (NDEP), and multiple other sites. Information is provided through the written word, podcasts, game playing, and interactive learning modules.

Conversation Maps

Conversation Maps are a learning tool using a board game format with small groups of people. Produced in collaboration between the ADA and Healthy Interactions Inc. (Healthyi), Conversation Maps are used to engage people in learning about diabetes self-management. Users of the maps have access to a curriculum which meets the requirements needed for ADA recognition or AADE accreditation. The underlying philosophy of conversation maps is empowerment. Six components of the Conversation Maps include:

1. Large visual map
2. Facts about diabetes, medications, food choices, long-term complications
3. Conversation questions
4. Group interaction (as opposed to lecture content)
5. Facilitation by a health care provider, often a diabetes educator
6. Action plans (exercises to stimulate goal setting and taking the "next step")

Information on Diabetes Conversation Maps can be found at: <http://www.healthyinteractions.com/>

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Disease Case Management

Diabetes education and self-management are also available in the form of Disease Case Management. Disease Case Management is a multi-disciplinary, continuum-based approach to health care delivery that proactively identifies populations with, or at risk for, chronic medical conditions. Typically, a Disease Case Manager is a nurse who supports the practitioner-patient relationship and plan of care and emphasizes prevention of exacerbations and complications using cost-effective, evidence-based practice guidelines and patient empowerment strategies. Disease Case Managers continuously evaluate clinical, humanistic, and economic outcomes in their clinic population with the goal of improving overall health. Some insurance companies offer this type of support to people with diabetes.

Stanford Chronic Disease Self-Management Program (Living Well with Chronic Conditions)

People with diabetes need continued support to reach self-management and lifestyle goals as they strive for optimal diabetes control. The Chronic Disease Self-Management Program (CDSMP) is an evidence-based prevention program that is an option for extending self-management support to people with diabetes and/or other chronic diseases. In Wisconsin, the statewide CDSMP program is known as *Living Well with Chronic Conditions* (<http://www.dhs.wisconsin.gov/aging/CDSMP/LivingWellwithChronicConditions/index.htm>). CDSMP has been shown to have a beneficial effect on physical and emotional health outcomes, as well as health-related quality of life. Program participants consistently experience greater energy, less fatigue, improved physical activity, fewer social role limitations, improved psychological well-being, enhanced partnerships with physicians, improved health status, and greater self-esteem. CDSMP is a program that does not replace DSME, but complements it and provides an opportunity for continued support for people with diabetes. Providers will find it useful to refer people to CDSMP after completion of DSME. More information about how CDSMP and DSME differ can be found in the Tools section.

Health Literacy

Health literacy refers to one's ability to obtain, process, and understand basic health information and services needed to make appropriate health decisions. It includes writing, listening, speaking, arithmetic, and conceptual knowledge. **The Institute of Medicine (IOM) reports that nearly half of the American adult population, or approximately 90 million people, have limited health literacy. Literacy Services of Wisconsin estimates that there are more than 300,000 adults with literacy needs in Wisconsin.**

The extent of one's literacy and numeracy skills affects his/her ability to understand the material presented in DSME programs. Additionally, literacy skills can affect a person's ability to communicate needs to health care providers. The evidence suggests that diabetes patients who have low literacy and numeracy skills are more likely to have poorer glycemic control due to difficulties interpreting glucose readings, calculating carbohydrates, adjusting medications, and performing other daily self-management tasks. While there are many variations and degrees of literacy, health literacy affects all groups of people. Even those who have finished high school or college may have difficulties navigating the health care system. Those with low educational levels, linguistic or cultural barriers, and low socioeconomic status may have even more difficulty. Therefore, it is important to carefully assess health literacy levels and to tailor self-management education accordingly.

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There are a number of health literacy assessment tools that can be used to assess reading comprehension. Some tools also assess abstract reasoning and numeracy. The majority of tools are geared toward the assessment of people 18 years of age or older. A small number of them are available in Spanish. One valid and reliable screening tool, Newest Vital Sign (NVS), is available in English and Spanish and includes just 6 questions about a food label. Testing has demonstrated that it can be self-administered in approximately three minutes and allows for the applications of scenario information to assess reading, comprehension, abstract reasoning, and numeracy. See <http://www.pfizerhealthliteracy.com> for more information and to access to the tool.

There are specific interventions that can help to address health literacy. First, use straightforward or “plain” language and provide explanations of new or unfamiliar words. This can be accomplished when using print materials that are written at a fifth grade reading level or lower. Readability calculators are now available on the internet to assess reading levels, such as the SMOG (Simple Measure of Gobbledygook) calculator (<http://www.harrymclaughlin.com/SMOG.htm>). Health information should also be provided in a culturally-sensitive manner. Lastly, information should be provided and reinforced using both oral and written communication. Whenever possible, the educator should also use kinesthetic learning opportunities such as having the learner complete hands-on tasks, write out ideas, complete goal pages, or engage in role-playing or simulations.

Studies show that 40-80% of the medical information people receive is forgotten immediately (Kutner et al., 2006) and nearly half of the information retained is incorrect (DeWalt et al., 2004). It is the provider’s responsibility to assure that people understand the information exchanged during encounters. One way to accomplish this is by using the “teach-back” method, also known as the “show-me” method. A person’s understanding is confirmed when they can explain it back to you or demonstrate a skill. If a person is not able to verbalize the new knowledge or demonstrate the new skill, then a new teaching approach should be used as this is a reflection of how well the new concept or skill was explained or demonstrated.

Here are a few examples of using the teach-back method:

- “I want to be sure that I explained your medication correctly. Can you tell me how you are going to take this medicine?”
- “We covered a lot today about your diabetes, and I want to make sure that I explained things clearly. So let’s review what we discussed. What are three strategies that will help you control your diabetes?”
- “What are you going to do when you get home?”

Use of emerging technologies such as interactive tutorials, touch screen computers, and various visual formats can assist people in learning and absorbing new information. For more information and resources, refer to the list of health literacy organizations and programs in Table 2-4.

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Table 2-4: Health Literacy Organizations and Programs

Agency for Healthcare Research and Quality http://www.ahrq.gov/qual/literacy	Health Literacy Studies http://www.hsph.harvard.edu/healthliteracy/index.html
Ask Me 3 http://www.npsf.org/askme3/	Health Literacy Month http://www.healthliteracymonth.com/
Center for Plain Language http://www.centerforplainlanguage.org	Health Resources and Services Administration (HRSA) http://www.hrsa.gov/healthliteracy/
National Institute for Literacy http://www.caliteracy.org/nil/	Medical Library Association http://www.mlanet.org/resources/healthlit/
Health Literacy, American Medical Association Foundation http://www.ama-assn.org/ama/pub/about-ama/ama-foundation/our-programs/public-health/health-literacy-program.shtm	Literacy Information and Communication System: http://lincs.ed.gov/
Health Literacy Institute http://www.healthliteracyinstitute.net/	World Education, Health and Literacy Initiative http://www.worlded.org/

Patient-Centered Teaching Approaches

Traditionally, the focus of diabetes education has been to increase a person's adherence to a treatment plan developed by a health care provider. Techniques used included teaching, persuasion, direct questioning and advice-giving, with the provider contributing most to the conversation. This approach has been shown to frustrate a person and provide limited effectiveness in managing chronic conditions. Multiple factors influence adherence to treatment including patient knowledge of the disease and treatments, psychological factors, socioeconomic factors, and beliefs about diabetes and its treatment. The Diabetes Attitudes Wishes and Beliefs (DAWN) Study was conducted to identify barriers to achieving optimal diabetes care and included over 5000 people with diabetes and over 3500 providers. The study results showed that poor psychological well-being is common in people with diabetes, affecting about 40% of people with diabetes, and may influence treatment adherence, especially for diet and physical activity.

Successful strategies to support behavior change and improve treatment adherence have been developed to replace more traditional approaches. Two of these strategies are patient empowerment and motivational interviewing.

The patient empowerment model is based on the assumption that most people do not want to adhere to lifestyle changes dictated by others. Instead, the assumption is that people will choose to bring about changes in their personal behavior, in their social situations, and in the environment. The empowerment model provides people with information (knowledge) and skills and places the responsibility for change in their hands.

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There are three main principles underpinning the empowerment approach to diabetes self-management education. These include the following:

1. Day-to-day decision making about self-care is the responsibility of the person with diabetes.
2. The health care team is responsible for providing diabetes expertise, education, and support so people are able to make informed decisions.
3. Adults who recognize benefits of behavior change and make decisions about their own self-care behaviors are more likely to maintain chosen behavior changes.

Motivational Interviewing is an evidence-based approach to behavior change counseling which has its origins in the field of substance abuse and is gaining more attention as a useful strategy for DSME. It has been shown to be effective in brief (15-20 minute) interventions which makes it practical and useful in the diabetes setting. It is based on models of behavior change theory and psychotherapy. Motivational interviewing by definition is “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence.”

Practitioners of motivational interviewing use interaction techniques such as:

1. Asking open-ended questions to elicit a person’s ambivalence about making change in health behaviors
2. Providing affirmations for steps taken in the direction of the person’s goals
3. Using reflective listening to determine the person’s reasons for, willingness to, and readiness for change
4. Summarizing regularly throughout the conversation to emphasize key concepts elicited from the person

Practitioners prompt the person with diabetes to identify the importance of achieving health outcomes and evaluate his or her self-confidence in making that behavior change, ultimately leading the person to take responsibility for his or her behavior change. Motivational Interviewing is used most appropriately in the precontemplation and contemplation stages when forming a commitment to change and believing change is possible are the principle barriers.

For more information about Motivational Interviewing, refer to: <http://www.motivationalinterview.org>.

Medicare Coverage for Diabetes Screening, Education, and Supplies

Since 1997, Medicare Part B has reimbursed for diabetes self-management training (DSMT) services when these services are provided by a nationally recognized/accredited provider and are prescribed by the treating physician or qualified non-physician practitioner as part of the diabetes care plan. DSMT services are available to the newly diagnosed, people at risk for complications from diabetes (e.g., poor blood glucose control, vision problems, nerve damage, or kidney disease), or people who have diabetes and recently became eligible for Medicare. DSMT includes ten hours of initial DSMT in the 12-month period following referral, as well as two hours of follow-up DSMT annually. MNT has been covered under the Medicare Part B DSMT benefit since 2002.

Medicare coverage for DSMT is contingent upon specific documentation in the provider's order, as well as documentation of diabetes as a diagnosis:

1. Fasting blood glucose greater than or equal to 126 mg/dL
2. Two-hour post-glucose challenge (75 grams) greater than or equal to 200 mg/dL
3. Random glucose test over 200 mg/dL for a person with symptoms of uncontrolled diabetes

The first two criteria should be confirmed with repeat testing to substantiate diagnosis. Diagnosis of diabetes, according to ADA standards, includes A1C of greater than or equal to 6.5%; however, this criteria is not included as a Medicare diagnostic criteria by the Centers for Medicare & Medicaid Services (CMS).

The 2009 CMS document “The Guide to Medicare Preventive Services for Physicians, Providers, Suppliers, and Other Health Care Professionals, Third Edition” has detailed guidelines for Medicare coverage: https://www.cms.gov/MLNProducts/downloads/mps_guide_web-061305.pdf.

A “Diabetes Services Order Form (DSMT and MNT Services)” developed by the American Dietetic Association and the American Association of Diabetes Educators is available at: <http://www.diabeteseducator.org/ProfessionalResources/Library/ServicesForm.html>.

Persons with diabetes, family members, significant others, and caregivers can find more information about Medicare coverage for diabetes screening, education, and supplies on the following websites: <https://www.cms.gov/Medicare/Prevention/PrevntionGenInfo/index.html?redirect=/PrevntionGenInfo/>. For information on the Diabetes Medicare Screening Project: <http://www.screenfordiabetes.org/>.

Insurance Coverage

Diabetes self-management education must be available to everyone with diabetes. Organizations that purchase health care benefits for their members or employees should insist that self-management education be included in the services provided. Managed care organizations should include these services and supplies in the basic plan available to all participants. Diabetes self-management education can result in cost-savings as well as assist with improving outcomes. DSME programs that have met accepted standards should be adequately reimbursed by third-party payers.

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Additional Resources

1. “Life with Diabetes: A Series of Teaching Outlines, 4th Edition” 2009; developed by the Michigan Diabetes Research and Training Center and published by the American Diabetes Association. Available for purchase at: <http://store.diabetes.org>.
2. The National Diabetes Education Program (NDEP) provides many and varied materials. For more information, call 1-800-438-5383 or visit the NDEP website at: <http://ndep.nih.gov/>. Materials are not copyrighted.
3. Wisconsin Diabetes Prevention and Control Program (DPCP) Materials Order Form. Order DPCP resources for free through this order form, including the Diabetes Self-Care Information and Record Booklet. The order form can be accessed at: <http://www.dhs.wisconsin.gov/diabetes/PDFs/OrderForm.pdf>.
4. Diabetes HealthSense: www.YourDiabetesInfo.org/healthsense. Diabetes HealthSense provides people with diabetes, people at risk for the disease and those who care for them with easy access to useful tools and programs that exist within the public domain and facilitate the behavior change process.

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References

- American Association of Diabetes Educators. (2003). *A CORE Curriculum for Diabetes Education, Diabetes Management Therapies* (5th ed.). Chicago, IL: American Association of Diabetes Educators.
- American Diabetes Association. (2004). Third-Party Reimbursement for Diabetes Care, Self-Management Education, and Supplies. *Diabetes Care*, 27, S136-137.
- American Diabetes Association. (2012). Standards of Medical Care in Diabetes - 2012. *Diabetes Care*, 2012 35 (supp 1), S11-S63.
- Betz, C., Ruccione, K., Meeske, K., Smith, K., & Chang, N. (2008). Health Literacy: A Pediatric Nursing Concern. *Pediatr Nurs*, 34(3), 231-239.
- Bodenheimer, T., Lorig, K., Holman, H., & Grumbach, K. (2002). Patient Self-Management of Chronic Disease in Primary Care. *JAMA*, 288, 2469-2475.
- Bohman, L., Panzer, A. M., & Kindig, D. A. (Eds.). (2004). *Health Literacy: A Prescription to End Confusion*. Washington, DC: The National Academies Press.
- Centers for Medicare and Medicaid Services. (2007). *Diabetes-Related Services* [pamphlet].
- Centers for Medicare and Medicaid Services. (2008). *Medicare Claims Processing Manual* [internet-only manual]. Retrieved from <http://cms.hhs.gov/Manuals/IOM/list.asp>.
- DeWalt, D. A., Berkman, N. D., Sheridan, S., et al. (2004). Literacy and Health Outcomes: A Systematic Review of the Literature. *J Gen Intern Med*, 19(12), 1228-1239.
- DeWalt, D. A., Callahan, L. F., Hawk, V. H., Brouckson, K. A., Hink, A., Rudd, R., & Brach, C. (2010). *Health Literacy Universal Precautions Toolkit*. (AHRQ Publication No. 10-0046-EF). Rockville, MD: Agency for Healthcare Research and Quality.
- Funnell, M. M., et al. (2007). National Standards for Diabetes Self-Management Education. *Diabetes Care*, 30, 1630-1637.
- Funnell, M. M., Arnold, M. S., Barr, P. A., & Lasichak, A. J. (2000). *Life with Diabetes: A Series of Teaching Outlines by the Michigan Diabetes Research and Training Center* (2nd ed.). Alexandria, VA: American Diabetes Association.
- Gazmararian, J. A., Williams, M. V., Peel, J., Baker, D. W. (2003). Health Literacy and Knowledge of Chronic Disease. *Patient Educ Couns*, 51:267-275.
- Goldstein, D. E., Little, R. R., Lorenz, R. A., Malone, J. I., Nathan, D. M., & Peterson, C. M. for the American Diabetes Association. (2004). Tests of Glycemia in Diabetes. *Diabetes Care*, 27, S91-S93.
- Joint Commission, The. (2007). *"What Did the Doctor Say?": Improving Health Literacy to Protect Patient Safety*. Oak Terrace, IL: The Joint Commission.
- Koenigsberg, M. R., Bartlett, D., & Cramer, J. S. (2004). Facilitating Treatment Adherence with Lifestyle Changes in Diabetes. *American Family Physician*, 69, 309-316.
- Kuritzky, L. (2010). *Closing the Gaps in Type 2 Diabetes Mellitus: A Focus on Improving Key Performance Measures*. Retrieved from <http://www.medscape.org/viewarticle/734424>.
- Kutner, M., Greenberg, E., Jin, Y., & Paulsen, C. (2006). *The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy* (NCES 2006-483). Washington, DC: National Center for Education Statistics, US Department of Education.
- Mensing, C., Boucher, J., Cypress, M., et al. (2004). National Standards for Diabetes Self-Management Education. *Diabetes Care*, 27, S143-S150.
- Mulcahy, K., Maryniuk, M., Peeples, M., et al. (2003). Technical Review: Diabetes Self-Management Education Core Outcomes Measures. *The Diabetes Educator*, 29(5), 768-803.
- Norris, S. L., Lau, J., Smith, S. J., Schmid, C. H., & Engelgau, M. M. (2002). Self-Management Education for Adults with Type 2 Diabetes: A Meta-Analysis of the Effect on Glycemic Control. *Diabetes Care*, 25, 1159-1171.
- Peyrot, M., Rubin, R. R., Lauritzen, T., et al. (2005). Resistance to Insulin Therapy Among Patients and Providers: Results of the Cross-national Diabetes Attitudes, Wishes, and Needs (DAWN) Study. *Diabetes Care*, 28, 2673-2679.
- Rothman, R. L., Malone, R., Bryant, B., et al. (2005). The Spoken Knowledge in Low Literacy in Diabetes Scale: A Diabetes Knowledge Scale for Vulnerable Patients. *Diabetes Educ*, 31, 215-224.
- Schillinger, D., Grumbach, K., Piette, J., et al. (2002). Association of Health Literacy with Diabetes Outcomes. *JAMA*, 288, 475-482.
- U. S. Department of Health and Human Services. (2020). *Healthy People 2020*. Washington, DC: U. S. Government Printing Office.
- U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2011). *Medicare & You* [CMS Publication Number 10050]. Washington, DC: U. S. Government Printing Office.
- Warshaw, H. S. (2004). Referral to Diabetes Self-Management Training and Medical Nutrition Therapy: Why Now and How? *Practical Diabetology*, 12-19.
- Weiss, B. D., Mays, M. Z., Martz, W., Castro, K. M., DeWalt, D. A., Pignone, M. P., Mockbee, J., & Hale, F.A. (2005). Quick Assessment of Literacy in Primary Care: The Newest Vital Sign. *Ann Fam Med*, 3(6), 514-522.
- Welch, G., Rose, G., & Ernst, D. (2010). Motivational Interviewing and Diabetes: What is it, How is it Used, and Does it Work?. *Diabetes Spectrum*, 19(1), 5-11.
- Wolff, K., Cavanaugh, K., Malone, R., Hawk, V., Pratt Gregory, B., Davis, D., Wallston, K., & Rothman, L. (2009). The Diabetes Literacy and Numeracy Education Toolkit (DLNET): Materials to Facilitate Diabetes Education and Management in Patients with Low Literacy and Numeracy Skills. *The Diabetes Educator*, 35(2), 233-245.

