



## **Diabetes Clinical Management, Education, Prevention and Support Bilaterally Integrated through Optometry and Diabetes Care and Education Specialists**

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Comprehensive person-centered diabetes care and education demands a “team approach;” one that is assisted through core clinician competencies in communication, counseling and education which must be continually honed to today’s changing health care environment. Data from the Centers for Disease Control and Prevention (CDC) describe that 34.2 million Americans (one in 10) have diabetes and 88 million American adults (one in three) have prediabetes. The CDC estimated that 7.3 million (21.4% of people with diabetes) had type 2 diabetes but were not aware of it.

Unfortunately, we have witnessed that the diabetes pandemic has wrought more severe morbidity and mortality through COVID-19. In the U.S., 10% of people with diabetes die within seven days of a COVID-related hospitalization. Americans with diabetes and other related underlying health conditions are hospitalized six times more often and are 12 times more likely to die from COVID-19 than those without an underlying condition; and other than cardiovascular disease, diabetes is the most reported underlying health condition among U.S. COVID-19 patients.

**INTEGRATING OPTOMETRY DIABETES CARE (E.G., CLINICAL MANAGEMENT, EDUCATION, PREVENTION AND SUPPORT) THROUGH DIABETES CARE AND EDUCATION SPECIALISTS IS CRITICAL IN REDUCING MORBIDITY AND MORTALITY ASSOCIATED WITH DIABETES.**

Doctors of optometry (optometrists) examine, diagnose, treat and manage diseases and disorders of the eye. In addition to providing eye and vision care, they play a major role in an individual’s overall health and well-being by detecting systemic diseases, like diabetes, and diagnosing, treating, and managing ocular manifestations of those diseases, providing feedback to other clinicians, and providing vaccinations and preventive care. As with other physician providers, doctors of optometry possess the teaching and learning skills developed in their professional program of origin and are considered Level 1 diabetes educators, having the basic background knowledge of diabetes inherent to health professional academic training. The Level 1 diabetes educator can instruct the patient on simple nutrition guidelines, glycemic management and its relation to complication abatement, self-monitoring of blood glucose, record keeping

and the importance of attending a Diabetes Prevention Program (DPP or MDPP) or Diabetes Self-Management Education and Support (DSMES) services.<sup>1</sup>

While doctors of optometry may choose to develop broader-based diabetes practice knowledge by pursuing the Certified Diabetes Care and Education Specialist (CDCES) credential (formerly known as CDE or certified diabetes educator), most will rely on nurses, dietitians, pharmacists, exercise physiologists and others who have chosen to pursue this added level of diabetes credentialing needed to effectively work with people across the spectrum of diabetes to better enable their patients to engage in impactful self-care.<sup>2</sup>

CDCES' body of knowledge and skills in the biological and social sciences, communication, counseling and education stands above that which is required by the profession of origin including experience in the care of people with diabetes and related conditions.<sup>3</sup>

The Level 2 diabetes educator would possess the minimum competencies to meet the academic, professional and experiential criteria to qualify for and maintain the CDCES credential. At Level 2, the educator's focus is on applying, analyzing and evaluating an individuals' specific diabetes needs; accounting not only for the necessary transmission of knowledge and skill sets, but additionally providing an increased focus on facilitating constructive behavior change. Many doctors of optometry have considerable experience working with diabetes patients and may have reached this degree of Level 2 practice, but because their practice is not limited to diabetes, they may not hold the CDCES credential, as they may not meet all criteria set by the certifying board (e.g., practice hours). They may have completed a variety of "assessment-based certificate" programs, but these are not certifications or credentials.<sup>4</sup>

The highest certification or credential level of diabetes care and education practice, Level 3, requires the practitioner to be further involved in the integrated, comprehensive and global management of people with diabetes and serve as an advanced level expert in diabetes education, clinical management and/or research. These Level 3 providers are Board Certified-Advanced Diabetes Management (BC-ADM<sup>®</sup>) and/or hold the Certified Diabetes Technology Clinician (CDTC)<sup>5</sup> advanced credentials.<sup>6</sup>

### **Integrating Care and Prevention**

Diabetes can feel overwhelming and stressful for the individual and their family, and emotional factors can get in the way of optimal glycemic management. Importantly, optimal glycemic management reduces diabetes complications and improves quality of life but making glycemic management attainable to the individual must come on terms that meet their needs and level of health literacy and numeracy. For example, every 1% decrease in glycosylated hemoglobin (HbA1c) level is associated with an approximate 37% decrease in the risk of diabetes-related retinopathy (leading cause of blindness among working-age adults).<sup>7</sup> This large reduction in complication risk underscores the importance of early diagnosis of type 2 diabetes and prediabetes and prompt attainment of improved glycemic management.

Unfortunately, the psychological barriers to diabetes management are often not addressed or even recognized by the health care team, resulting in poor glycemic management. This can be for many reasons, including discomfort addressing emotional issues, limited time and lack of referral resources. However, to provide the best care for people with diabetes, the emotional barriers to self-management need to be a core part of the treatment plan and onsite or referral sources for this level of care should be made available.<sup>8</sup>

This necessary integration of complex behavioral, emotional and social factors into daily life for the person with diabetes requires the assistance of a Level 1 provider to help patients get to a Level 2 or Level 3 provider as part of their diabetes treatment plan (DSMES services) or diabetes prevention (DPP programs).

Doctors of optometry as health care professionals dedicated to providing integrated, person-centered diabetes self-management care and education can seek out community opportunities for assuring this care for their diabetes patients, as described below.

### **Diabetes Self-Management Education and Support (DSMES)**

An accredited or recognized DSMES program must adhere to the National Standards for DSMES which require a curriculum having 1) evidence-based content; 2) learning objectives; 3) method of delivery that uses problem-solving approaches, is participant-centric and involves active learning; and 4) method for evaluating learning will serve as the framework for the provision of DSMES.<sup>9 10</sup> The content, at a minimum, must include: pathophysiology and treatment options; healthy eating; being active; medication usage; monitoring (including pattern management, interpretation of patient-generated health data); preventing, detecting and treating acute complications (hypoglycemia, hyperglycemia, diabetes ketoacidosis and sick day guidelines); severe weather or crisis supply management/disaster preparedness<sup>11</sup>; preventing, detecting and treating chronic complications (eye , foot, dental, kidney); and immunizations.<sup>12 13</sup> <sup>14</sup>Importantly these programs are updated on at least an annual basis, have a written set of lesson plans that guide the instructors, deliver consistent information (culturally appropriate, language appropriate and interactive) and involve stakeholders' input with a focus on problem solving and shared decision making.<sup>15</sup>

### **Diabetes Self-Management Training (DSMT)**

The Centers for Medicare & Medicaid Services (CMS) uses the term “training” (DSMT) instead of “education and support” (DSMES) when defining the reimbursable benefit (DSMT).<sup>16</sup> This term relates specifically to Medicare billing. Medicare Part B (medical insurance) covers outpatient diabetes self-management training (DSMT) for individuals diagnosed with diabetes. DSMT is provided by diabetes care and education specialists who are licensed or nationally registered health care professionals.

Medicare covers up to 10 hours of initial DSMT: one hour of individual training and nine hours of group training. Individuals may also qualify for up to two hours of follow-up training each year if it takes place in a calendar year after the year they received their initial training.<sup>17</sup> DSMT teaches individuals to cope with and manage their diabetes. The program may include tips for eating healthy, being active, monitoring blood sugar, taking prescription drugs and reducing risks. Some patients may also be eligible for medical nutrition therapy.

Diabetes self-management training services are covered by Medicare only if the treating physician or treating qualified nonphysician practitioner who is managing the beneficiary's diabetes certifies that such services are needed.

The referring physician (i.e., doctor of optometry, primary care provider or endocrinologist) or qualified nonphysician practitioner must maintain the plan of care in the beneficiary's medical record and documentation substantiating the need for training on an individual basis when group training is typically covered, if so ordered. The order must also include a statement signed by the physician that the service is needed as well as the following:

- The number of initial or follow-up hours ordered (the physician can order less than 10 hours of training).
- The topics to be covered in training (initial training hours can be used for the full initial training program or specific areas such as nutrition or insulin training).

- A determination that the beneficiary should receive individual or group training.
- The provider of the service must maintain documentation in file that includes the original order from the physician and any special conditions noted by the physician.

When the training under the order is changed, the training order/referral must be signed by the physician or qualified nonphysician practitioner treating the beneficiary and maintained in the beneficiary's file in the DSMT's program records.

Despite the undisputed benefits of DSMT for people with diabetes, including lower hemoglobin A1c, weight loss, improved quality of life, healthy coping skills, as well as reduced health care costs for the beneficiary and the health system as a whole, only an estimated 5% of Medicare beneficiaries with newly diagnosed diabetes utilize this Medicare benefit.<sup>18 19 20</sup>

### **Medical Nutrition Therapy (MNT)**

Medical nutrition therapy (MNT) and DSMT are separate but complementary services. MNT is provided by registered dietitians or nutritional professionals. Although relying on distinct techniques, DSMT and MNT together are more effective than either service would be if offered alone. MNT is defined as a "nutrition-based treatment provided by a registered dietitian nutritionist." It includes "a nutrition diagnosis as well as therapeutic and counseling services to help manage diabetes."<sup>21</sup> Currently, Medicare covers MNT for people with diabetes but does not cover this service for individuals with prediabetes, reducing the options that Medicare beneficiaries have for improving their health. MNT for individuals with prediabetes has been shown in numerous studies to decrease fasting blood glucose, body weight, blood pressure and waist circumference for patients who received the intervention for at least three months.<sup>22</sup>

<sup>23 24</sup>

### **Diabetes Prevention Program (DPP) (National)**

The National Diabetes Prevention Program (National DPP) is a partnership of public and private organizations working to prevent or delay type 2 diabetes. Partners make it easier for people at risk for type 2 diabetes to participate in evidence-based lifestyle change programs to reduce their risk of type 2 diabetes. One key feature of the National DPP is the [CDC-recognized lifestyle change program](#), a research-based program focusing on healthy eating and physical activity which showed that people with prediabetes who take part in a structured lifestyle change program can cut their risk of developing type 2 diabetes by 58% (71% for people over 60 years old). View the list of organizations offering CDC-recognized lifestyle change programs [here](#).

### **Diabetes Prevention Program (DPP) (Medicare)**

The MDPP was the first preventive service model tested by the Center for Medicare & Medicaid Innovation (CMMI) that was approved as a Medicare-covered service for fee-for-service (FFS) and Medicare Advantage (MA) beneficiaries. Currently, there is a disconnect between the National DPP and the MDPP that establishes different ranges for qualifying for the programs (differing ranges of blood test measures to define prediabetes) that creates confusion for program suppliers. MDPP imposes a once per lifetime participation limit.

The number of suppliers has gradually increased to 196 suppliers providing services in 762 unique locations (as of March 2, 2020). Increasing supplier enrollment continues to be a priority for the program.

MDPP suppliers include health systems, health plans, health departments, YMCAs, foundations and other health care or community organizations. Because beneficiaries must attend 16 in-person class sessions during the core MDPP curriculum, beneficiaries who live closer to an MDPP supplier may find it easier to access the program. As of December 31, 2019, most MDPP beneficiaries lived in the same county as an MDPP supplier (89%) or within 25 miles of a supplier (96%). However, 57% of all Medicare beneficiaries live more than 25 miles away from the nearest MDPP, so increasing access to suppliers remains a priority of the program. This has kept the numbers participating in the program to less than 2,500 over the course of a year. The MDPP Evaluation Report data show the current program is not reaching those most impacted by prediabetes and diabetes.<sup>25</sup> View the locations of MDPP providers [here](#).

## Conclusion

There are many opportunities for collaboration and synergy between DCESs and doctors of optometry. The specialties can teach one another about the work they do in caring for the person with diabetes and can work to develop joint resources and education around diabetes self-management and the importance of regular eye care. There is great value in this type of information-sharing. Additionally, doctors of optometry can play a key role in referring persons with diabetes to DSMES or recommending that their patients seek a referral for DSMES services as they sit on the front lines of care and will likely see individuals with both diagnosed and undiagnosed diabetes for vision changes. This may indicate the presence of other related chronic health conditions, whereby a CDCES can reinforce with their patients the important role of doctors of optometry in fulfilling the needed screenings, examinations and treatments so that eye disease and related health conditions can be prevented or caught early.

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<sup>1</sup> [https://www.diabeteseducator.org/docs/default-source/practice/practice-resources/praclev20168f0edb36a05f68739c53ff0000b8561d.pdf?sfvrsn=d051b358\\_6](https://www.diabeteseducator.org/docs/default-source/practice/practice-resources/praclev20168f0edb36a05f68739c53ff0000b8561d.pdf?sfvrsn=d051b358_6)

<sup>2</sup> Haas L, Maryniuk M, Beck J, et al. National standards for diabetes self-management education and support. *Diabetes care*. 2014; 37 Suppl 1: S144-53.

<sup>3</sup> Ryan D, Burke SD, Litchman ML, Bronich-Hall L, Kolb L, Rinker J, Yehl K. Competencies for Diabetes Care and Education Specialists. *Diabetes Educ*. 2020 Aug;46(4):384-397.

<sup>4</sup> <https://www.diabeteseducator.org/education/adces-certificates>, accessed 10.8.2021

<sup>5</sup> Diabetes Technology Society. <http://cdtccertification.org/>

<sup>6</sup> <https://www.diabeteseducator.org/education/adces-certificates>, accessed 10.8.2021

<sup>7</sup> [http://www.diabeticretinopathy.org.uk/prevention/hba1c\\_and\\_retinopathy.htm#:~:text=The%20progression%20rate%20of%20retinopathy,needed%20to%20assist%20good%20control](http://www.diabeticretinopathy.org.uk/prevention/hba1c_and_retinopathy.htm#:~:text=The%20progression%20rate%20of%20retinopathy,needed%20to%20assist%20good%20control)

<sup>8</sup> Practical Tips for Addressing Mental Health Challenges in People with Diabetes

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<https://professionaleducation.diabetes.org/Public/Catalog/Details.aspx?id=Jvgr0NLlxucbCx5FigKfQQ%3d%3d> accessed 10.04.2021

<sup>9</sup> <https://www.diabeteseducator.org/docs/default-source/practice/deap/standard-6-outline.pdf?sfvrsn=2>

<sup>10</sup> <https://www.cdc.gov/diabetes/dsmes-toolkit/standards/standard6.html>

<sup>11</sup> [mydiabetesemergencyplan.com](http://mydiabetesemergencyplan.com)

<sup>12</sup> [https://nf01.diabeteseducator.org/eweb/DynamicPage.aspx?W\\_ebCode=Books&pager=10](https://nf01.diabeteseducator.org/eweb/DynamicPage.aspx?W_ebCode=Books&pager=10)

<sup>13</sup> <https://www.shopdiabetes.org/1584-Lifewith-Diabetes-5th-Edition.aspx>

<sup>14</sup> <https://idcpublishing.com/?c=catalog>,

<sup>15</sup> <https://www.diabeteseducator.org/docs/default-source/practice/deap/march-2019-deap-webinar.pdf?sfvrsn=2>

<sup>16</sup> [https://www.cdc.gov/diabetes/dsmes-toolkit/accreditation-recognition/index.html#:~:text=\\*Note%3A%20The%20Centers%20for%20Medicare,relates%20specifically%20to%20Medicare%20billing](https://www.cdc.gov/diabetes/dsmes-toolkit/accreditation-recognition/index.html#:~:text=*Note%3A%20The%20Centers%20for%20Medicare,relates%20specifically%20to%20Medicare%20billing).

<sup>17</sup> <https://www.medicare.gov/coverage/diabetes-self-management-training>

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- <sup>25</sup> <https://innovation.cms.gov/data-and-reports/2021/mdpp-firstannevalrpt>