

Diabetes Advisory Council

FINAL REPORT

May 15, 2017



Connecticut Department of Public Health

Diabetes Advisory Committee FINAL Report

May 15, 2017

Public Health Committee
Connecticut General Assembly
Legislative Office Building, Suite 3000
Hartford, CT 06106-1591

Dear Honorable Members of the Public Health Committee,

In accordance with Public Act 16-66, *An Act Concerning Various Revisions to the Public Health Statutes*, please find attached the **Diabetes Advisory Council** Report prepared by the Department of Public Health. This public act requires the council to make recommendations to the legislature to enhance and support diabetes prevention, control and treatment programs. The council convened in August of 2016 to begin this work and completed its findings in April of 2017.

To prepare this final report, the council reviewed multiple sources of information including: strategies to identify and enroll individuals who are at risk of diabetes in prevention programs; strategies to identify and refer individuals with diabetes for enrollment in formal education classes and management programs; the status of health care organizations reporting on clinical quality measures related to diabetes control; existing state programs that address prevention, control, and treatment; and evidence that supports the need for such programs.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Subira Gordon". The signature is written in a cursive, elegant script.

Subira Gordon, MPH
Chair of the Diabetes Advisory Council

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DIABETES ADVISORY COUNCIL MEMBERSHIP ROSTER

First Name	Last Name	Organization	Title
Leigh	Bak	Connecticut Alliance of Diabetes Educators Connecticut Nurses' Association	Diabetes Clinical Nurse Specialist
Anne	Camp	Fair Haven Community Health Center	Endocrinologist
Donna	Campbell	Commission on Equity and Opportunity/ African American Affairs Commission	Member
Mark	Chasse	Connecticut Association of Optometrists	Optometrist
Trish	Comrie- Schreer	Medtronic Diabetes	Direct Clinical Supervisor
Michelle	Cook	Connecticut General Assembly	State Representative, Public Health Committee Member
Sandra	Czunas	Office of the State Comptroller	Associate Health Care Analyst
Mehul	Dalal	Department of Public Health	Chronic Disease Director
John	Domenichini	Connecticut State Medical Society	Endocrinologist
Nicole	Dunn	Hartford Hospital	Advanced Practice Registered Nurse, Diabetes Nurse Practitioner
Tekisha	Everette	Health Equity Solutions	Executive Director
Maureen	Farrell	Regional Young Men's Christian Association of Western Connecticut	Director of Community Wellness
Daniel	Foley	Boeringher Ingelheim	Associate Director of Health Economics & Outcomes Research
Subira	Gordon	Commission on Equity and Opportunity	Executive Director
Bruce	Gould	Community Health Center Association of Connecticut	Medical Director
Richard	Guerriere	ProHealth Physicians	Senior Vice President and Chief Medical Officer
Steve	Habbe	American Diabetes Association	Advocacy Director, Northeast

First Name	Last Name	Organization	Title
Cindy	Kozak	Department of Public Health	Health Program Associate
Linda	Krikawa	Qualidigm	Project Coordinator
Paula	Leibovitz	Diabetes Self-Management Technical Assistance	Consultant
Susan	Levine	University of Connecticut Health Center	Medical Director of General Medicine Associates
Karen	McAvoy	Connecticut Alliance of Diabetes Educators	Diabetes Clinical Nurse Specialist
Barbara	Moore	Stratford Regional Young Men's Christian Association	District Executive Director
Sherry	Ostrout	Connecticut Community Care Inc.	Director Government Initiatives
Rob	Picone	Novo Nordisk	Senior Medical Liaison, Clinical, Medical and Regulatory Affairs
Stephanie	Poulin	Department of Public Health	Epidemiologist
Dana	Robinson-Rush	Department of Social Services	Health Program Associate
Debbye	Rosen	West Hartford Bloomfield Health District	Public Health Nurse
Mark	Schaefer	State Innovation Model, Program Management Office	Director
Kenneth	Snow	Aetna	Medical Director
Harold	Sparrow	Young Men's Christian Association of Greater Hartford	President & Chief Executive Officer
Kelly	Vaughan	Central Connecticut Coast Young Men's Christian Association	Program Coordinator

INTRODUCTION

This final report presents the recommendations of the Diabetes Advisory Council (DAC) as of May 15, 2017.

The DAC formed in response to Public Act 16-6, An Act Concerning Various Revisions to the Public Health Statutes, Section 51. This act establishes, within available appropriations, a DAC within the Connecticut Department of Public Health (DPH). The council must (1) analyze the current state of diabetes prevention, control, and treatment in Connecticut and (2) advise the Connecticut DPH on methods to achieve the federal Centers for Disease Control and Prevention's goal in granting funds to the state for diabetes prevention.

The bill requires the DAC to make recommendations to enhance and support diabetes prevention, control and treatment programs. To do this, the DAC must review the following:

- Strategies to identify and enroll individuals at risk of diabetes in prevention programs;
- Strategies to identify and refer individuals with diabetes for enrollment in formal education classes and management programs;
- The status of health care organizations reporting on clinical quality measures related to diabetes control;
- Existing state programs that address prevention, control, and treatment; and
- Evidence that supports the need for such programs.

Additionally, the law permits the council to study the (1) effectiveness of existing state diabetes programs; (2) financial impact of diabetes on the state, including disease prevalence and the cost for administering related programs; and (3) coordination of state agency programs and other efforts to prevent, control, and treat diabetes.

The DAC may also develop an action plan with steps to reduce diabetes impact on the state, including expected outcomes for each step toward prevention, control, and treatment.

The DAC consists of state officials and appointees of the Commissioner of Public Health, and is chaired by Subira Gordon, M.P.P.

The full DAC met on a monthly basis nine (9) times since its inception (8/18/2016, 9/29/2016, 10/20/2016, 11/15/2016, 12/8/2016, 1/24/2017, 2/14/2017, 3/29/2017, and 4/11/2017). Members participated in one of three (3) workgroups: Diabetes Self-Management Education, Diabetes Prevention for Type 2 Diabetes, and Clinical Quality Measures. Staff members from DPH facilitated these workgroups through monthly conference calls held in between the DAC full council meetings. Each workgroup formulated recommendations and one-year action steps in accordance with Public Act 16-6, Section 51. The full council discussed and voted on both the recommendations and final report.

BURDEN OF DIABETES

Prevalence of Diabetes and Prediabetes

Diabetes is a serious chronic disease that can lead to a number of health problems and incur large costs not only for individuals, but also for communities, businesses, governments, and other organizations.

An estimated 9.0% of Connecticut adults have diagnosed diabetes (types 1 and 2) – that is, approximately 250,000 adults. An additional 83,000 adults are estimated to have undiagnosed diabetes.ⁱ

The age-adjusted prevalence¹ of diagnosed diabetes varies by sociodemographic characteristics. Males, racial and ethnic minority groups², older adults, and adults with lower socioeconomic status experience a higher prevalence of diabetes. For example, diabetes prevalence is higher among males compared with females (9.0% vs. 7.0%). Also, the diabetes prevalence among Black or African American (14.7%) and Hispanic or Latino (14.1%) adults is more than double the diabetes rates of White adults (6.5%). Additionally, diabetes prevalence increases with age. Furthermore, adults who are not high school graduates have three times the diabetes prevalence of adults who are college graduates (14.3% vs. 4.7%).ⁱ

Prediabetes is a strong risk factor for developing diabetes. Prediabetes is a condition in which a person's blood glucose levels are higher than normal, but are not high enough to be considered frank or overt diabetes. Many people with prediabetes do not know they have the condition. While an estimated 37% of US adults have prediabetes, only 7% of Connecticut adults have been told that they have prediabetes (diagnosed prediabetes).ⁱⁱ Prediabetes is diagnosed using fasting blood glucose, glucose tolerance, or hemoglobin A1C tests. Only 55.6% of Connecticut adults without diagnosed diabetes have been tested for diabetes in the past three years.ⁱⁱ

Diagnosing prediabetes is important because people with prediabetes can prevent or delay type 2 diabetes by losing 5% to 7% of their body weight and participating in 150 minutes of physical activity each week. Lifestyle change programs offered through the National Diabetes Prevention Program are options to help people with prediabetes improve their food choices, increase physical activity, and learn coping skills to maintain weight loss and healthy lifestyle changes. However, these lifestyle change programs cost approximately \$450 for the year long program, per participant, and are not routinely covered by private health insurance or Medicaid. This creates a potential barrier for participation. Medicare will provide coverage of the DPP beginning January 1, 2018.

Diabetes Mortality

Diabetes was the seventh leading cause of death in Connecticut in 2014. There were 684 deaths with diabetes as the principal cause of death.ⁱⁱⁱ Because people with diabetes often die from the complications of diabetes rather than the disease itself, diabetes is underreported as the underlying or principal cause of death. For this reason, diabetes-related mortality is studied. Diabetes-related mortality is defined as deaths with diabetes as a contributing (or secondary) cause of death among residents. In 2014, there were 2,027 diabetes-related deaths.ⁱⁱⁱ

¹ Since diseases and deaths occur at different rates in different age groups and because different population groups have different age distributions, the prevalence, mortality rates, and hospital rates are age-adjusted to make the rates among different population groups more comparable. A standard population is used to weight age-specific rates. The age-adjusted rates are the rates that would have occurred if the population distribution was the same as the standard population.

² All racial groupings (e.g., "Black or African American," "White," "Asian") exclude persons of Hispanic ethnicity. A Hispanic or Latino ethnicity category is referenced separate from race categories. Therefore, the modifier "Non-Hispanic or Latino" is assumed.

Diabetes and diabetes-related age-adjusted mortality rates vary by race and ethnicity. Age-adjusted diabetes and diabetes-related mortality rates are higher among Black or African American and Hispanic or Latino Connecticut residents compared with White and Asian residents (Table 1).^{iv}

Diabetes is also associated with premature death. One measure of premature death is the years of potential life lost (YPLL). YPLL represent the number of years of potential life lost by each death before a predetermined end point (e.g., 75 years of age). The YPLL statistic is derived by summing age-specific years of life lost figures over all age groups up to 75 years. YPLL is presented for persons less than 75 years of age because the average life expectancy in the United States is over 75 years. Similar to age-adjusted mortality rates, premature mortality (deaths before age 75 years) due to diabetes is higher among Black or African American and Hispanic or Latino Connecticut residents compared with White and Asian residents (Table 1).^{iv}

Table 1. Diabetes and Diabetes-related Age-adjusted Mortality Rates and Years of Potential Life Lost (YPLL) per 100,000 population, Connecticut Residents, 2010-2014 Mortality Files

	White	Black or African American	Hispanic or Latino	Asian
Age-adjusted Mortality Rate per 100,000 Population				
Diabetes*	13.25	32.93	19.21	8.32
Diabetes-related **	42.64	83.53	59.5	27.58
Years of Potential Life Lost (YPLL) <age 75 years per 100,000 Population				
Diabetes*	82.4	251.4	114.8	28.5
Diabetes-related**	205.2	505.9	308.2	98.2

*ICD-10 Codes E10-E14 as principal cause of death

**ICD-10 Codes E10-E14 as secondary or contributing cause of death

Diabetes Hospitalizations and Charges

Diabetes can lead to a number of complications and conditions that require emergency department visits and inpatient hospitalizations. Each emergency department visit or inpatient hospitalization may have up to ten diagnoses (note: emergency department visits and hospitalizations are the number of hospital admissions, not unduplicated patients). Those with a diabetes ICD-9-CM code as the first-listed diagnosis are termed “diabetes” while those with a diabetes ICD-9-CM code as any diagnosis are referred to as “diabetes-related”. Diabetes and diabetes-related hospital discharge and emergency department visits vary by race and ethnicity. Black or African American and Hispanic Connecticut residents have higher age-adjusted diabetes, and diabetes-related inpatient hospitalization and emergency department rates than White residents.^v Table 2 displays the number and age-adjusted rate of hospital discharges and emergency department visits in 2014 as well as the associated hospital charges.

Table 2. Diabetes and Diabetes-related Hospitalization and Emergency Department Visit Counts, Age-adjusted Rates, and Median Charges, Connecticut Residents, 2014 CHIME Data

	All	White	Black or African American	Hispanic or Latino	Other
<i>Diabetes Inpatient Hospitalizations*</i>					
Count	5,654	3,018	1,399	1,063	127
Age-adjusted rate (per 100,000 population)	142.9	99.5	393.0	253.0	85.1
Median Charges	\$22,231	\$22,541	\$23,057	\$21,073	\$20,471
<i>Diabetes-related Inpatient Hospitalizations**</i>					
Count	64,288	42,476	10,466	8,865	2,163
Age-adjusted rate (per 100,000 population)	1,490.6	1,193.3	3,097.0	2,666.9	1,805.8
Median Charges	\$26,817	\$26,950	\$28,140	\$24,328	\$27,444
<i>Diabetes Emergency Department Visits*</i>					
Count	6,447	2,991	1,589	1,622	211
Age-adjusted rate (per 100,000 population)	166.6	102.8	439.4	393.9	137.5
Median Charges	\$2,321	\$2,210	\$2,512	\$2,308	\$2,192
<i>Diabetes-related Emergency Department Visits**</i>					
Count	70,045	37,535	13,830	15,579	2,889
Age-adjusted rate (per 100,000 population)	1,732.2	1,191.3	3,876.6	3,996.1	2,004.6
Total Charges	2,325	2,256	2,437	2,396	2,201

*ICD-9-CM 250 as first-listed diagnosis

**ICD-9-CM 250 as any diagnosis

Diabetes-related Nontraumatic Lower-extremity Amputations

One serious complication of diabetes is lower-extremity amputation. In 2014, there were 1,082 hospital admissions for diabetes-related nontraumatic lower-extremity amputation (NLEA), with a median charge of \$50,170. Diabetes increases the risk of lower-extremity amputation. The risk is increased because many people with diabetes have peripheral artery disease (PAD), which decreases the blood flow to the feet and decreases the ability to fight infection and heal. Also, diabetes is associated with nerve damage which leads to the loss of feeling in the feet; therefore, people with diabetes may not feel foot injuries.^{vi} Higher rates of age-adjusted hospitalization rates for diabetes-related NLEA are associated with racial and ethnic minority groups. For example, the age-adjusted diabetes-related NLEA among Black or

African American residents is over three times the rate among White residents (Black or African American: 62.8 per 100,000 population; White: 18.3 per 100,000 population). Similarly, the age-adjusted diabetes-related NLEA among Hispanic or Latino residents is over 2.5 times the rate among White residents (Hispanic or Latino: 49.0 per 100,000 population; White: 18.3 per 100,000 population).^v

Diabetes-related Hypoglycemia

A main cause of diabetes-related emergency department visits is hypoglycemia. Hypoglycemia is characterized by abnormally low glucose levels and can cause confusion, dizziness, and lack of coordination, in turn, leading to accidents and injuries. Hypoglycemia may also cause coma and death.^{vii} In 2014, there were 2,600 diabetes-related Emergency Department visits with hypoglycemia as the first-listed diagnosis. Black or African American and Hispanic or Latino residents have higher age-adjusted rates of emergency department visits for diabetes-related hypoglycemia compared with White residents (Black or African American: 152.1 per 100,000 population; Hispanic or Latino: 119.3 per 100,000 population; White: 49.6 per 100,000 population). Additionally, there were 1.5 to two (2) times more emergency department visits for diabetes-related hypoglycemia among residents with Medicaid and Medicare compared to residents with private health insurance (Medicaid: 756; Medicare: 972; Private: 499).^v

Diabetes-related Hyperglycemia

Another cause of emergency department visits is hyperglycemia. Hyperglycemia was the first-listed diagnosis for 186 diabetes-related emergency department visits in 2014. Hyperglycemia, or high blood glucose, occurs when the body has too little insulin or cannot use insulin properly. With type 2 diabetes, high blood sugars raise the concern for hyperosmolar hyperglycemic syndrome/state (HHS) in which the elevated glucose levels cause profound dehydration and electrolyte disturbances. People with HHS may have significant cognitive impairment and are often frail or elderly. Untreated hyperglycemia may also lead to ketoacidosis, particularly in type 1 diabetes. Ketoacidosis develops when the body breaks down fats to use for energy because the body cannot use glucose due to the lack of insulin. When the body breaks down fats, ketones are produced. Too many ketones in the body cause the blood to become acidic and is life-threatening. In 2014, there were 37 diabetes inpatient admissions with ketoacidosis as the first-listed diagnosis.^{v, viii}

Diabetes Preventive Care Practices

Diabetes-related nontraumatic lower-extremity amputations, hypoglycemia, hyperglycemia, and ketoacidosis can be prevented through good diabetes management. For example, a daily self-exam of the feet may help identify foot injuries and lead to seeking care early and possibly preventing serious foot problems and amputation. However, only 61.3% of Connecticut adults with diabetes check their feet daily. Furthermore, diabetes self-management education (DSME) is a key step in preventing diabetes complications, such as hypoglycemia and hyperglycemia. DSME is a collaborative process in which diabetes educators help people with or at risk for diabetes gain the knowledge, problem-solving and coping skills needed to successfully self-manage the disease and its related conditions. Yet, few adults with diabetes report carrying out these practices. Only 47.7% of adults with diabetes report that they have ever taken a class on how to manage their diabetes.ⁱ Additionally, only 13,767 people with

diabetes had at least one encounter at an American Diabetes Association-recognized, American Association of Diabetes Educators-accredited program in 2014.^{ix} Furthermore, only 410 people participated in the community-based Diabetes Self-Management Programs in 2016. Also, the Medicare part B diabetes self-management training benefit is underutilized with approximately 5% of Medicare beneficiaries with newly diagnosed diabetes using the service.^x

To prevent and control type 2 diabetes among all Connecticut residents, wellness must be promoted in all aspects of people's lives – where they are born, grow, live, learn, play, work, worship, and age, including the health system. Also, all residents must have equal access to wellness resources, including healthy food, safe places for physical activity, quality clinical and other health services, and community and clinical organizations to support prevention, self-management and control of diabetes, high blood pressure, and obesity.

RECOMMENDATIONS AND ACTION STEPS

Diabetes Self-Management Education

Diabetes Self-Management Education (DSME) as defined by the American Diabetes Association (ADA) is the ongoing process of facilitating the knowledge, skill, and ability necessary for diabetes self-care. This process incorporates the needs, goals, and life experiences of the person with diabetes and is guided by evidence-based standards. The overall objectives of DSME are to support informed decision-making, self-care behaviors, problem-solving and active collaboration with the health care team, and to improve clinical outcomes, health status, and quality of life. Providing DSME is a standard of care according to the ADA.^{xi}

Topics covered include, but are not limited to: blood glucose (sugar) goals, blood sugar monitoring technique, hypo (low) and hyperglycemia (high blood sugar) management, medication adherence information including proper injection technique (when appropriate), proper nutrition for weight loss, blood pressure, blood cholesterol and blood sugar control, physical activity guidelines, medical testing needed to ensure avoidance or delay of complications such as eye disease, lower extremity amputations, kidney disease, and heart disease, problem solving and emotional issues such as depression, which are more common in people with diabetes. In brief, DSME covers multiple topics that people with diabetes need to learn and incorporate into their lifestyle to manage blood sugar, cholesterol and blood pressure in order to prevent or delay the costly complications of the disease listed above.

When provided in accordance with the American Diabetes Association National Standards for DSME, multiple studies have demonstrated the effectiveness DSME. A recent (November 2016) report from the Agency on Healthcare Research and Quality (AHRQ) concluded that offering ≥ 11 contact hours led to clinically important improvements in glycemic control.^{xii} Actuarial studies on DSME have demonstrated cost effectiveness resulting from DSME interventions.^{xiii} In a 2016 systematic review of the effect of diabetes self-management education for adults with type 2 diabetes, Chrvala found a .88 reduction in A1c (a three month average of blood sugar) when a combination of group and individual engagement was used.^{xiv} This is similar to the effect of some oral medications commonly prescribed for diabetes. Appendix A provides a summary of studies associating DSME with cost-savings. Currently, there are

twenty six programs that meet the criteria to become a recognized program by the ADA or an accredited program by the American Association of Diabetes Educators. These programs use Certified Diabetes Educators to assess and educate people with diabetes and their significant others.

In Connecticut, there is currently a second option for people with diabetes to obtain diabetes education. This is through Live Well, the community-based Diabetes Self-Management Program (DSMP), which employs the evidence-based curriculum developed at Stanford University. This program uses trained leaders to implement workshops in community venues such as senior centers, libraries, faith institutions, elderly housing, community centers, and so forth. Workshop leaders may be health professionals or lay leaders trained in the program, which emphasizes referring any questions or problems back to the person's health care provider.

1. Diabetes Self-Management Education Recommendations and One-Year Action Steps

Recommendation 1.1	Secure Medicaid coverage for Diabetes Self-Management Education (DSME) at American Diabetes Association/ American Association of Diabetes Educators accredited programs.
Action Step 1.1.1	Between May 2017 and April 2018, the Department of Public Health (DPH) will secure actuarial services and assess the cost-benefit analysis of DSME for the Medicaid population Connecticut and share the results with key change agents (e.g. legislators).
Recommendation 1.2	Devise a plan and seek financial support to increase Connecticut's pool of lay and professional diabetes educators who represent at-risk populations, including, but not limited to, minorities and those residing in low socioeconomic and rural areas.
Action Step 1.2.1	Between May 2017 and April 2018, the Department of Public Health will convene stakeholders who have vested interest in seeing more culturally diverse educators develop, including workforce investment boards, to identify one or two organizations to spearhead this initiative.
Recommendation 1.3	Modify cost sharing of Diabetes Self-Management Education by reforming insurance plans to decrease barriers such that DSME is not subject to insurance deductibles and co-payments.
Action Step 1.3.1	Between May 2017 and October 2017, Connecticut Community Care Inc. will conduct a literature search on how cost, even with insurance coverage, affects accessing DSME and then share the results with key change agents (e.g. legislators).
Action Step 1.3.2	Between May 2017 and April 2018, the Department of Public Health will work with Office of the State Comptroller and the State Innovation Model (SIM) Project Management Office to formulate recommendations for Value-Based Insurance Design (VBID) to address financial barriers to DSME access in the self-funded and fully insured health insurance markets.

Action Step 1.3.3	Between January 2018 and June 2018, the Office of the State Comptroller, SIM Project Management Office, and DPH will convey recommended Value-Based Insurance Design policies to the SIM employer-led VBID consortium to be considered for inclusion in the updated VBID templates for the self-funded and fully insured health insurance markets.
Recommendation 1.4	Build statewide Diabetes Self-Management Education capacity with emphasis on culturally and linguistically appropriate standards, and improved access.
Action Step 1.4.1	Between May 2017 and April 2018, Connecticut Community Care Inc. will convene interested diabetes education providers to pursue American Diabetes Association/ American Association of Diabetes Educators recognition in Tolland County.
Action Step 1.4.2	Between May 2017 and April 2018, Connecticut Community Care, Inc. will conduct outreach regarding the Diabetes Self-Management Program to leaders through the Connecticut Health Living Collective.

Prevention of Type 2 Diabetes

The Diabetes Prevention Program, (DPP), a major federally funded study of 3,234 people at high risk for type 2 diabetes, showed that people can delay, and possibly prevent, the disease by losing a small amount of weight (5 to 7 percent of total body weight) through 30 minutes of physical activity five (5) days a week and healthier eating.^{xv} Although some people can accomplish this on their own, DPPs provide the structure many need, and have been shown to be effective. To ensure high quality programming, the Centers for Disease Control and Prevention (CDC) now provides recognition to lifestyle change programs that meet certain standards and show they can achieve results. These standards include following an approved curriculum that is facilitated by a trained lifestyle coach, and submitting data each year to show that the program is having an impact.

Medicare actuaries who evaluated the DPP have demonstrated a cost savings of \$2650 over fifteen months for eligible people who enrolled in the program compared to those that did not.^{xvi} Medicare has announced their intention to provide coverage for DPP beginning January 2018.

2. Prevention of Type 2 Diabetes Recommendations

Recommendation 2.1	Secure coverage through accountable care organizations, commercial, state employee and Medicaid health plans for CDC-recognized Diabetes Prevention Programs (DPP).
Action Step 2.1.1	By December 2017, the Department of Public Health (DPH) working through the State Innovation Model (SIM) Prevention Services Model will assess the interest and capability of at least two (2) accountable care organizations, including PCMH+ practices in offering the Diabetes Prevention Program as a

	benefit to their attributed commercial or Medicaid members.
Action Step 2.1.2	By April 2018, the Department of Public Health working through the State Innovation Model Prevention Services Model, will aim to obtain commitments from at least two accountable care organizations, including PCMH+ practices to provide the Diabetes Prevention Program for all or part of their eligible attributed Medicaid and/or commercial population.
Recommendation 2.2	Establish as a standard of care, the referral of patients with prediabetes or at risk for type 2 diabetes to CDC-recognized Diabetes Prevention Programs by medical providers, other health service providers, or by self-referral.
Action Step 2.2.1	Between May 2017 and April 2018, the Connecticut YMCA Diabetes Prevention Program will hold a minimum of two (2) state-wide learning collaborative meetings among DPP Coordinators/educators and health care providers to share best practices and resources with respect to provider outreach and engagement, and patient recruitment, referral and retention.
Recommendation 2.3	Build statewide Diabetes Prevention Program capacity with an emphasis on culturally and linguistically appropriate standards, and improved access.
Action Step 2.3.1	By April 2018, the Department of Public Health will identify up to five (5) geographic areas in the state with a high prevalence of at-risk populations and work with the Diabetes Prevention Program network to identify the steps and funding needed to implement DPPs in up to three (3) of those areas.

Clinical Quality Measures

Clinical quality measures (CQM) use data to monitor the quality of care provided by the health care system. Measuring and reporting CQMs help to ensure that health care systems are delivering effective, safe, efficient, patient-centered, equitable, and timely care.^{xvii} Typically, CQMs are evidence-based, tested for reliability and validity, developed and/or maintained by a measure steward and often undergo rigorous review and endorsement by national bodies such as the National Quality Forum (NQF). A number of state and national initiatives require health care systems to report and monitor CQMs.

For example, DPH and eHealthConnecticut, the state's Regional Extension Center (REC), collect data for NQF 59 (diabetic patients with A1c > 9%) and NQF 18 (blood pressure control: <140/90) from at least five large health care systems a year. The health care systems can then use the data to design and implement quality improvement protocols. Funds from the CDC grant "State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health" support this CQM initiative as well as other programs to prevent and control chronic diseases and their risk factors for Connecticut residents across the state.

Another example of a program requiring the reporting of CQMs is the Health Resources and Service Administration's (HRSA) Health Center Program. Through this program, HRSA provides funds to over 1,400 health centers across the nation. These health centers provide quality preventive and primary

care to underserved communities.^{xviii} There are sixteen (16) grantees in Connecticut that serve over 350,000 patients. Fifteen grantees are members of Community Health Center Association of Connecticut (CHCACT). The funded health centers annually submit patient demographic data and clinical data to HRSA. Two (2) diabetes CQMs are collected: 1) diabetic adults as a percent of estimated adult medical patients of ages 18-75 and 2) uncontrolled diabetes (diabetic patients with A1c > 9).^{xix}

Additionally, the Connecticut State Innovation Model (SIM) promotes the use of CQMs. The SIM initiative, funded by the Centers for Medicare and Medicaid Services, seeks to advance multi-payer health care payment and delivery system reform models with the aim of achieving better quality of care, lower costs, and improved health for the state population. One SIM workgroup, the SIM Quality Council, recommended a core set of quality measures for use in value-based payment arrangements and is currently reviewing ways to enhance healthcare system performance transparency through public CQM scorecards. Public and private payers are encouraged to adopt these recommended measures for use in value-based payment arrangements, with the aim of reducing the burden and cost of quality reporting; improving the availability of comparable and reliable data on quality performance; and advancing continuous quality improvement in Connecticut. Four diabetes measures are included in the core set: 1) A1c poor control (NQF 59); 2) A1c testing (NQF 57); 3) diabetes eye exam (NQF 55); and 4) diabetes: medical attention for nephropathy (NQF 62).^{xx} The Office of the State Comptroller is also promoting the Quality Council’s core measure set among insurance carriers for state employees, retirees, and their dependents.

Furthermore, the Practice Transformation Taskforce of Connecticut of SIM developed the Community and Clinical Integration Program Standards (CCIP) for Advanced Networks and Federally Qualified Health Centers (PCMH+ initiative). CCIP includes care delivery standards and technical assistance to: a) improve care for individuals with complex health needs; b) introduce new care processes to reduce health equity gaps; and c) improve access to and integration of behavioral health services. Reducing health equity gaps involves expanding the collection, reporting, and analysis of standardized data stratified by sub-populations, including standardizing the collection of race and ethnicity data.^{xxi}

Also as part of SIM, a dashboard is available. The purpose of this data dashboard is to monitor and report on the progress of SIM. The dashboard contains population health, healthcare costs, healthcare delivery, and health insurance transformation data. The dashboard presents overall results for each measure and details on age, gender, race and ethnicity, income, and insurance payer as the data allows. New measures and data will be added as they become available.^{xxii}

The following table lists the recommendations and one-year action steps of the Diabetes Advisory Council’s Clinical Quality Measures Workgroup. The recommendations of the workgroup focus on improving the capabilities to collect, report, and monitor CQM data statewide, regionally, and at the health care system level and promoting health equity through the standardized collection of race and ethnicity data.

3. Clinical Quality Measures Recommendations	
Recommendation 3.1	<p>Implement diabetes-related clinical quality measures as part of:</p> <ul style="list-style-type: none"> a. Statewide and regional health dashboards to monitor and report the effectiveness of diabetes control efforts, and b. An all-payer scorecard of Advanced Network/Federally Qualified

	Health Centers' (FQHC) diabetes control performance, aligned with the measures recommended by the SIM Quality Council to enable quality improvement efforts.
Action Step 3.1.1	Between May 2017 and April 2018, the Diabetes Partnership will track the progress of the SIM Program Management Office (PMO) in developing and maintaining statewide and regional dashboards and an all-payer scorecard.
Recommendation 3.2	Reporting organizations and data administrators develop data systems to build analytic capabilities, stratify, and report clinical quality data by race and ethnicity.
Action Step 3.2.1	By September 2017, Community Health Center Association of Connecticut (CHCACT) undertakes a review to determine whether CHCACT and its members' existing data systems are sufficient to undertake the process of meeting Community and Clinical Integration Program (CCIP) data collection and analytic standards.
Action Step 3.2.2	By December 2017, the Department of Public Health (DPH) meets with or convenes state agencies with health care authority including the Department of Social Services (DSS), Department of Children and Families (DCF), Department of Mental Health and Addiction Services (DMHAS), and Department of Developmental Services (DDS) to seek endorsement of the Community and Clinical Integration Program Health Equity Improvement data collection and analytic standards for race and ethnicity.
Action Step 3.2.3	By December 2017, the Department of Public Health and the SIM Program Management Office meet with the Department of Social Services to discuss making the Community and Clinical Integration Program Health Equity Improvement data collection and analytic standards for race and ethnicity as a requirement of Federally Qualified Health Centers that are participating in PCMH+, and not already subject to the standards.
Action Step 3.2.4	By May 2018, as a result of meeting with the Department of Public Health and the SIM Program Management Office, the Department of Social Services includes the Community and Clinical Integration Program Health Equity Improvement data collection and analytic standards for race and ethnicity as a requirement of Federally Qualified Health Centers that are participating in PCMH+, and not already subject to the standards.

HEALTH CARE ORGANIZATIONS REPORTING ON CLINICAL QUALITY MEASURES

Overview and Methodology

The public act that established the DAC requires the council to review the status of health care organizations reporting on clinical quality measures (CQMs) related to diabetes control. To complete this review the CQM Workgroup developed a survey. The CQM Workgroup sent the survey on March 6,

2017 via email to the Governmental Liaisons of Aetna, Anthem, Cigna, ConnectiCare, and United as well as to the Diabetes Advisory Council Department of Social Services (DSS) representative. Four (4) of these six (6) health insurance carriers responded.

Survey Results

The first survey question was: Which of the following diabetes clinical quality measures (CQMs) does your organization currently calculate for the purpose of measuring provider performance? The survey provided a list of diabetes-related CQMs. Table 3 displays the CQMs listed on the survey and the frequency for which the CQMs were selected.

Table 3. CQM Titles and Frequency Selected by Health Insurance Carriers (total respondents=4)

CQM Name	Frequency
Comprehensive Diabetes Care: Eye Exam (NQF 55)	3
Diabetes: Foot Exam (NQF 56)	0
Comprehensive Diabetes Care: Hemoglobin A1c Testing (NQF 57)	4
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%) (NQF 59)	3
Comprehensive Diabetes Care: Blood Pressure Control (<140/90 mm Hg) (NQF 61)	3
Comprehensive Diabetes Care: Medical Attention for Nephropathy (NQF 62)	3
Comprehensive Diabetes Care: LDL-C Screening (NQF 63)	0
Comprehensive Diabetes Care: LDL-C Control <100 mg/dL (NQF 64)	0
Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy (NQF 88)	0
Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care (NQF 89)	0
Diabetes Mellitus: Diabetic Foot and Ankle Care, Ulcer Prevention – Evaluation of Footwear (NQF 416)	0
Diabetes Mellitus: Diabetic Foot and Ankle Care, Peripheral Neuropathy – Neurological Evaluation (NQF 417)	0
Diabetes: Appropriate Treatment of Hypertension (NQF 546)	1
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Control (<8.0%) (NQF 575)	3
Uncontrolled Diabetes Admission Rate (NQF 638)	1
Optimal Diabetes Care (NQF 729)	0
Comprehensive Diabetes Care (Composite Measure: CDC) (NQF 731)	2
All-Cause Unplanned Admissions for Patients with Diabetes	0

The survey then gave the respondents the option to list other CQMs related to diabetes control that the health insurance carriers calculate for the purpose of measuring provider performance. The respondents provided the following list of CQMs:

- Diabetes Short Term Complications Admission Rate (NQF 0272)
- Diabetes Long-Term complication rate (NQF 0274)
- Statin Therapy for Patients with Diabetes (NCQA)

- Diabetes Screening for People with Schizophrenia or Bipolar Disorder who are Using Antipsychotic Medication
- Diabetes Monitoring for People with Diabetes and Schizophrenia (NCQA)
- Diabetes: Urine Protein Screening
- Proportion of Days Covered (PDC): Oral Diabetes (measure of adherence to oral diabetes medications)

Next, the respondents indicated the types of providers for which their organizations calculates the CQMs related to diabetes control and the estimated number of each type of provider. All four (4) of the health insurance carriers reported calculating CQMs for accountable provider groups or health systems. One respondent indicated that the diabetes CQMs are calculated for thirteen (13) provider collaborations with over 4,000 primary care providers; a second respondent, seventeen (17) accountable provider groups or health systems; and a third, 4,900 providers (one (1) respondent did not specify). Three (3) of the respondents indicated calculating CQMs for individual clinicians. Of these three (3) respondents, one (1) indicated that the diabetes CQMs are calculated for 578 clinicians; and a second, 1,958 clinicians (one (1) respondent did not specify). Two (2) respondents reported calculating CQMs for hospitals. Of these two (2) respondents, one (1) indicated that the diabetes CQMs are calculated for thirty-three (33) hospitals (one (1) respondent did not specify).

The fourth question asked the health insurance carriers to indicate how reporting providers submit diabetes CQM data. Survey results show that data are submitted through claims (four (4) respondents), chart abstraction (three (3) respondents), and electronic health records (EHRs), either directly or through an EHR data submission vendor (one (1) respondent).

The health insurance carriers next selected how their organizations use CQMs related to diabetes control. All four (4) respondents selected benchmarking providers' performance for quality improvement purposes. Three (3) selected informing performance-based payments. One (1) selected public report cards for consumer decision making. One wrote in, "NCQA (National Committee for Quality Assurance) accreditation".

The final question gave the respondents the opportunity to provide any other information or comments related to the status of health care organizations reporting on CQMs related to diabetes control that may be useful to the DAC. One (1) respondent indicated that their practitioners receive biannual report cards that provide an accounting of the gaps in care have been closed and what gaps in care remain open. In addition, the carrier provides the same information to members so they can collaborate with their practitioners on closing gaps in care. A second respondent wrote that their organization creates clinical initiatives based on NCQA measures results in support of improving health outcomes of their diabetic populations.

In summary, the health insurance carriers in Connecticut are using CQMs data to monitor diabetes control. The carriers collect this data from a large number of health care providers in the state, mainly in the form of claims data and chart abstraction. The health insurance carriers use the data for quality improvement purposes and for informing performance-based payments.

EXISTING STATE PROGRAMS THAT ADDRESS DIABETES PREVENTION, CONTROL, AND TREATMENT

Public Act 16-66, An Act Concerning Various Revisions to the Public Health Statutes, requires the DAC to review existing state programs that address prevention, control, and treatment of diabetes. Appendix B provides a table with the details of these state programs, including links to websites with the locations of community-based diabetes self-management programs and CDC Diabetes Prevention Programs. In addition, Appendix C lists the locations of American Diabetes Association/ American Association of Diabetes Educators recognized programs.

NEXT STEPS

Members of the DAC are invited to join the pre-existing Diabetes Partnership. The Diabetes Partnership meets quarterly and will track the progress of the actions steps listed in this report.

APPENDIX A: SUMMARY OF STUDIES DEMONSTRATING SAVINGS ASSOCIATED WITH DIABETES EDUCATION

A number of studies have associated Diabetes Self-Management Education (DSME) with cost-savings. The following table presents a summary of five studies that demonstrated specific cost-savings associated with diabetes education. This table is adapted from *Reconsidering Cost-Sharing for Diabetes Self-Management Education: Recommendation for Policy Reform* (The Center for Health Law and Policy Innovation PATHS program, June 2015).^{xxiii}

Authors (Year)	Study Aim	Study Population	Intervention	Study Design	Savings	Type of Savings	Key Outcome
Cranor et al. (2003) ^{xxiv}	To assess the persistence of outcomes for up to 5 years following the initiation of community-based pharmaceutical care services (PCS) for patients with diabetes.	City of Asheville or Mission-St. Joseph's Health System (MSJ) employees with diabetes who accepted their employer's offer of PCS at no charge. PCS were offered in twelve (12) community pharmacies in Asheville, N.C.	The community pharmacist helped the patient set and monitor treatment goals, and provided diabetes education, home glucose monitoring training, lipid management education, and information about adherence to medication. Pharmacists performed physical	Quasi-experimental, longitudinal, pre-post cohort with-comparison group study.	\$1,622 - \$3,356 (depending upon year of follow-up)	Direct medical costs per patient per year. Direct medical costs included the amount paid by the employer for physician visits, hospitalization, emergency department visits, laboratory tests, prescription drugs and diabetes supplies, cognitive PCS, MSJ Health System diabetes	Changes in A1c and serum lipid concentrations and changes in diabetes-related and total medical utilization and costs over time (5 year follow-up period). Patients with diabetes who received ongoing PCS maintained improvement in A1c over time, and employers experienced a decline in mean total direct medical costs.

Authors (Year)	Study Aim	Study Population	Intervention	Study Design	Savings	Type of Savings	Key Outcome
			assessment of the patients' feet, skin, blood pressure, and weight, and referred the patients to their physician or the diabetes education center, as needed. Patients received a free home blood glucose monitor and a waiver of co-payments for diabetes-specific drugs and supplies as incentives.			education center fees, and co-payment waivers.	
Robbins et al. (2008)^{xxv}	To analyze the association between diabetes education visits and hospital admissions for a large, urban,	18,404 patients who had a Philadelphia Health Care Center (PHCC) visit with a diabetes	Nutritionist visits, diabetes classes, and health education visits.	Linked primary care encounter data of patients with diabetes diagnosis from the 8 PHCCs operated by	\$2,470	Hospital charges per patient per year	After adjustment using linear regression, having had any type of educational visit was associated with fewer hospitalizations and

Authors (Year)	Study Aim	Study Population	Intervention	Study Design	Savings	Type of Savings	Key Outcome
	safety-net primary care system.	diagnosis recorded between March 1, 1993 and December 31, 2001 and had at least 1 month follow-up time.		the Philadelphia Department of Public Health with hospital discharge data. Used linear regression to adjust hospitalization rate and hospital charges by demographic variables, baseline comorbid conditions, hospitalizations before the diabetes diagnosis, and number of other primary care visits.			hospital charges.
Duncan et al. (2009)^{xxvi}	To evaluate the impact of diabetes self-management education/training (DSME/T) on financial outcomes.	Members of commercial and Medicare Advantage health plans from a private national	Diabetes education included medical nutrition therapy, physician	The data were analyzed in a variety of ways to overcome bias. A longitudinal analysis was	\$2,002	Direct medical costs per patient per year (Medicare)	Diabetes education is associated with increased use of primary and preventive services (having a1C, microalbumin, or lipid

Authors (Year)	Study Aim	Study Population	Intervention	Study Design	Savings	Type of Savings	Key Outcome
		database of payer data.	educational services in group setting, DSMT for individuals and groups [Procedure codes: 97802, 97803, 97804, 99078, G0108, G0109, G0270, G0271]	conducted to test the effectiveness of diabetes education. The data were also risk adjusted to control for severity of illness.			tests, having an eye exam, better HEDIS diabetes process measures), lower use of acute, inpatient hospital services, and lower costs.
Dall et al. (2011)^{xxvii}	To determine whether participation intensity and prior indication of uncontrolled diabetes were associated with health care use and costs for participants enrolled in TRICARE's diabetes management program.	TRICARE beneficiaries who had any diabetes-related emergency department visits or hospitalizations, more than 10 diabetes-related ambulatory visits, or more than twenty 30-day prescriptions for diabetes drugs during the	A voluntary, opt-out program. Participants chose to receive either personalized telephone counseling ("active" group) or not ("passive"). The passive group received newsletters. A historical	Observed outcomes were compared to predicted outcomes in the absence of diabetes management (regression analysis used).	\$783	Direct medical cost per patient per year	Diabetes-related and total costs per year and overall

Authors (Year)	Study Aim	Study Population	Intervention	Study Design	Savings	Type of Savings	Key Outcome
		previous 12-month period.	control group was identified and used to predict outcomes for patients in the absence of a diabetes management program.				
Duncan et al. (2011)^{xxviii}	To evaluate the effectiveness of DSME/T provided by diabetes educators in reducing complications and improving quality of life.	Commercial and Medicare Advantage health plans from Solucia’s national database of payer data.	Participation in accredited DSME programs (G0108 and G1009) compared with those with no evidence of diabetes education (see codes listed in Duncan et al. 2009).	Two longitudinal studies (2005-2007 study and 2005-2008 study) that analyzed insurance claims for diabetes patients participating in commercial and Medicare Advantage insurance plans to observe the costs associated with patient who participated in accredited	<p>Commercial Plan 3 years (DSME vs. No DSME): Average savings of \$4,366 per patient over 3 years or \$1,455 per patient per year.</p> <p>Commercial Plan 4 years (2+ DSME vs. No DSME): Average savings of \$1,923 per patient over</p>	Average risk-adjusted savings largely attributable to decreased inpatient costs.	People with diabetes with DSMT provided by diabetes educators in accredited/recognized programs are likely to show lower cost patterns when compared with people with diabetes without DSMT. Those with multiple episodes of DSMT are more likely to receive recommended care and to adhere to medication regimens.

Authors (Year)	Study Aim	Study Population	Intervention	Study Design	Savings	Type of Savings	Key Outcome
				<p>DSME programs (G0108 and G1009) compared with those with no evidence of diabetes education (see codes listed in Duncan et al. 2009).</p>	<p>4 years or \$481 per patient per year.</p> <p>Medicare Advantage 3 years (DSME vs. No DSME): Average savings of \$1,266 per patient over 3 years or \$422 per patient per year.</p> <p>Medicare Advantage 4 years (2+ DSME vs. No DSME): Average savings of \$3,902 per patient over 4 years or \$976 per patient per year.</p>		

APPENDIX B: TABLE OF EXISTING STATE PROGRAMS THAT ADDRESS PREVENTION, CONTROL, TREATMENT OF DIABETES

Program	State Agency	State Agency Role	Other Partner(s)	Funding Source and Sustainability Status	Recommendations to enhance financial support
Stanford Live Well with Diabetes	DPH	Contract administration Quality management	Area Agencies on Aging, CT Community Care Inc., (CCCI) State Department on Aging. See cthealthyliving.org .	CDC grant ends June 2018, not yet known whether CDC will continue to support after grant period. A part of sustainability is planning, CCCI is creating wraparound structure for Medicare reimbursement and is developing a process manual for others. Live Well is a qualified service under CT Home Care Waiver.	Current and prospective service providers should consider establishing capacity and processes for Medicare reimbursement uses resources under development by CCCI. Stakeholders can pursue partnership with Medicaid to explore reimbursement.
Collecting and Reporting of National Quality Forum 59 (A1c poor control) and	DPH	Contract administration and oversight	Regional Extension Center	CDC grant ends June 2018, not yet known whether CDC will continue to support after grant period. Federally Qualified Health Centers	Payers should incorporate these clinical quality measures value-based or shared savings contracts with health care providers.

Program	State Agency	State Agency Role	Other Partner(s)	Funding Source and Sustainability Status	Recommendations to enhance financial support
18 (hypertension control) Clinical Quality Measures				currently report this data as HRSA grantees Both measures are in the core measure set recommended by the SIM Quality Council	Health systems would consider including these measures on public scorecards.
211 Infoline for diabetes referrals	DPH	Contract administration and oversight	211 Infoline	CDC grant ends June 2018, not yet known if CDC will continue to support after grant period.	211 will continue to have diabetes and pre-diabetes education information available for 211 to refer to.
Diabetes and pre-diabetes awareness campaigns	DPH	Production and dissemination	Marketing companies	CDC grant ends June 2018, not yet known whether CDC will continue to support after grant period.	DPH will continue to seek CDC/federal funds that support awareness campaigns. Using previously developed materials by trusted sources (CDC, American Medical Association, etc.) nonprofit or private sector organizations should support diabetes and prediabetes awareness within their own members

Program	State Agency	State Agency Role	Other Partner(s)	Funding Source and Sustainability Status	Recommendations to enhance financial support
Block grant for diabetes education for Stanford Live Well and for Certified Diabetes Educator led classes	DPH	Administration	Local health departments: LedgeLight Health District, West Hartford-Bloomfield Health District, Chatham, New Milford	Prevention and Public Health funds	or target populations. Local Health Departments seek third party payer reimbursement DPH continuation of Block Grant funding
Diabetes Prevention Programs	DPH	Convener	YMCAs, hospitals. Locations available at www.cdc.gov/diabetes/prevention		Medicare reimbursement 1/2018 Third party payer reimbursement
Medication Therapy Management	DPH	Administration	UConn School of Pharmacy	CDC grant ends June 2018, not yet known whether CDC will continue to support after grant period.	Pharmacists seek third party payer reimbursement ACOs reimburse for pharmacist services
Population health management for diabetes	State Innovation Model (SIM)				
Community Health Network diabetes services	Dept. of Social Services (DSS)	Diabetes Care Management, nutrition counseling	Community Health Network (CHN)	Ongoing	Continue current activity

Program	State Agency	State Agency Role	Other Partner(s)	Funding Source and Sustainability Status	Recommendations to enhance financial support
Exploration coverage for DPP for State employees	Comptroller	Pursuit of DPP coverage for state employees			Grant funding
Access Health CT All Payers Claims Database (APCD)	Access Health CT	Oversight	Health Insurance Carriers in Connecticut	Federal government, other public sources and other private sources	The APCD seeks funding from federal government, other public sources and other private sources
Diabetes education by offenders for offenders	Dept. of Corrections and DPH	Training of offender	CCCI	CDC funds end 6/18 Trainers are in place	Dept. of Corrections continues to maintain a cadre of trainers
Diabetes care for children including Life Skills for Adolescents with focus on healthy eating, physical activity and self-management skills	Dept. of Children and Families	Care for children with diabetes	Congregate care and private providers	Health insurances	Continue third party payment
Low vision services	Bureau of Education Services for the Blind	Provides resources low vision services, life	Lions Club	Funded by the Lions Club working with Occupational Therapists to raise	Maintain current approach

Program	State Agency	State Agency Role	Other Partner(s)	Funding Source and Sustainability Status	Recommendations to enhance financial support
		skills training, case management and vocational services		money to supply the Lions Low Vision Center with magnifications devices	
Diabetes education for Veterans	CT Veterans Association	Provides diabetes education for veterans by veterans	DPH	Grant funded	VA continues to maintain a cadre of trainers
Department of Insurance Consumer Report Card – Care Measure: Eye Exam for People with Diabetes	Department of Insurance	Collects data and writes report	Health Insurance Carriers in Connecticut	Based on legislation passed by the Connecticut General Assembly	Maintain current approach

APPENDIX C: AMERICAN DIABETES ASSOCIATION RECOGNIZED DIABETES EDUCATION PROGRAMS IN CONNECTICUT

Connecticut-based insurances and Medicare Part B must cover diabetes education. Co-pays and deductibles apply. A physician/qualified non-physician referral is required.

The list is in alphabetical order by municipality. Please also consult the list of American Association of Diabetes Educators Accredited programs on page 29.

Sponsoring Organization: Yale New Haven Health System

Address: 267 Grant Street, Bridgeport, CT, 06610 **Phone:** 203-384-4553

Sponsoring Organization: Bristol Hospital

Address: 102 North Street, Bristol, CT, 06010 **Phone:** 860-940-6300

Sponsoring Organization: Western Connecticut Health Network

Address: 41 Germantown Road, Suite B03, Danbury, CT, 06810 **Phone:** 203-739-4980

Sponsoring Organization: Griffin Faculty Physicians

Address: 67 Maple Street Derby, CT 06418 **Phone:** 203-732-1137

Note: Must be patient of Griffin Faculty Physicians, request referral from your provider

Sponsoring Organization: University of Connecticut Health Center

Address: 263 Farmington Avenue, Farmington, CT, 06030 **Phone:** 860-679-3245

Sponsoring Organization: Yale New Haven Health System

Address: 55 Holly Hill Lane, Greenwich, CT, 06830 **Phone:** 203-863-2939

Sponsoring Organization: Saint Francis Hospital and Medical Center

Address: 114 Woodland Street, Hartford, CT, 06105 **Phone:** 860-714-4402

Sponsoring Organization: Community Health Services, Inc.

Address: 500 Albany Avenue, Hartford, CT, 06120 **Phone:** 860-249-9625 (Press 0)

Sponsoring Organization: Hartford Hospital

Address: 85 Seymour Street, Hartford, CT, 06102-5037 **Phone:** 860-972-3526

Sponsoring Organization: Charter Oak Health Center

Address: 21 Grand Avenue, Hartford, CT, 06106 **Phone:** 860-550-7500

Sponsoring Organization: Eastern Connecticut Health Network, Inc.

Address: 71 Haynes Street, Manchester, CT, 06040 **Phone:** 860-647-6824

Sponsoring Organization: MidState Medical Center

Address: 61 Pomeroy Avenue, Meriden, CT, 06450 **Phone:** 203-694-5425

Sponsoring Organization: Middlesex Hospital
Site/Program Name: Diabetes Self-Management Education Program
Address: 28 Crescent Street, Middletown, CT, 06457 **Phone:** 860-358-5421

Sponsoring Organization: The Hospital of Central Connecticut
Address: 100 Grand Street, New Britain, CT, 06050 **Phone:** 860-224-5672

Sponsoring Organization: Yale New Haven Health System
Address: 20 York Street, New Haven, CT, 06504 **Phone:** 203-688-2422

Sponsoring Organization: Lawrence & Memorial Hospital Medical Group
Address: 194 Howard Street, New London, CT, 06320 **Phone:** 860-444-4737

Sponsoring Organization: New Milford Hospital
Address: 21 Elm Street New Milford, CT, 06776 **Phone:** 860-210-5393

Sponsoring Organization: Norwalk Hospital
Address: 34 Maple Street, Norwalk, CT, 06856 **Phone:** 203-852-2181

Sponsoring Organization: William W. Backus Hospital
Address: 111 Salem Turnpike, Norwich, CT, 06360 **Phone:** 860-892-6906

Sponsoring Organization: Lawrence & Memorial Hospital Medical Group
Address: 91 Voluntown Road, Stonington, CT, 06379 **Phone:** 860-444-3366

Sponsoring Organization: The Stamford Hospital
Address: 292 Long Ridge Road, Stamford, CT, 06902 **Phone:** 203-276-7286

Sponsoring Organization: Charlotte Hungerford Hospital
Address: 780 Litchfield Street, Torrington, CT, 06790 **Phone:** 860-489-0661, Ext. 4

Sponsoring Organization: VA Healthcare System/VA Connecticut
Address: 950 Campbell Avenue West Haven, CT, 06516 **Phone:** 203-932-5711 Ext. 5189

Sponsoring Organization: Windham Community Memorial Hospital and Hatch Hospital Corporation
Address: 112 Mansfield Avenue Willimantic, CT, 06226 **Phone:** 860-456-6727

American Association of Diabetes Educators Accredited Programs in Connecticut

Sponsoring Organization: Connecticut Children's Medical Center
Address: 85 Seymour Street, Hartford CT, 06106 **Phone:** 860-545-9370

Sponsoring Organization: Bethel Healthcare and Rehabilitation
Address: 13 Parklawn Drive, Bethel, CT, 06801 **Phone:** 203-830-4180

Sponsoring Organization: New Milford VNA
Address: 68 Park Lane, New Milford, CT, 06776 **Phone:** 860 354-2216

Sponsoring Organization: Connecticut Community Care Inc.

Address: 43 Enterprise Dr., Bristol, CT, 06010 **Phone:** 860-589-6226

GLOSSARY OF SELECTED TERMS

Certified diabetes educator: A registered nurse, registered dietitian, registered pharmacist or selected other health professionals who document at least 1000 hours of experience working with people with diabetes and then successfully pass an exam administered by the National Certification Board of Diabetes Educators.

Connecticut Home Care Waiver: Also known as the Connecticut Home Care Program for Elders (CHCPE). The CHCPE helps eligible clients continue living at home instead of going to a nursing home. To be eligible, applicants must be 65 years of age or older, be a Connecticut resident, be at risk of nursing home placement and meet the program's financial eligibility criteria. To be at risk of nursing home placement means that the applicant needs assistance with critical needs such as bathing, dressing, eating, taking medications, and toileting.

Dashboard: A graphical summary of important measures to monitor an entity's performance and support quality improvement processes.

Educators: Lay people and professionals who instruct people with diabetes on how to manage diabetes.

Health equity: Equity in health refers to how uniformly services, opportunities and access are distributed across groups and places, according to the population group. Equity in health implies that ideally everyone could attain their full health potential and that no one should be disadvantaged from achieving this potential because of their social position or other socially determined circumstance. Efforts to promote equity in health are therefore aimed at creating opportunities and removing barriers to achieving the health potential of all people. It involves the fair distribution of resources needed for health, fair access to the opportunities available, and fairness in the support offered to people when ill. (Adapted from the World Health Organization Concept Paper as cited by the American Medical Student Association, n.d.).

Key change agent: An individual or organization that brings about, or helps bring about, change.

Medicare wraparound services: A type of health insurance policy that covers services that Medicare does not cover. Also referred to as supplemental health insurance.

Person-Centered Medical Home Plus (PCMH+): PCMH+ will build on DSS' existing person-centered medical home (PCMH) model. PCMHs offer coordinated, comprehensive primary health care that is accessible, continuous, compassionate and culturally appropriate.^{xxix} PCMH+ builds on PCMH by incorporating new Enhanced Care Coordination Activities and Care Coordination Add-On Payment Activities related to the integration of primary care and behavioral health care, building provider competencies to support Medicaid beneficiaries with complex medical conditions and disability needs, and promoting linkages to community supports that can assist beneficiaries in utilizing their Medicaid benefits. PCMH+ is open to federally qualified health centers (FQHCs) and advanced networks (networks including one or more primary care physician PCMH practices, which may also include one or more other specified types of providers in the network). These participating entities may receive shared savings if certain benchmarks are met and shared savings for members are demonstrated.^{xxx}

Scorecard: Graphical representation of progress made toward meeting specific goals or of trends in measures (e.g. clinical quality measures).

Stakeholder: Individuals or organizations with a vested interest in the policy, activity, or initiative being promoted.

Value-based insurance design: A cost sharing strategy in which incentives are aligned to promote appropriate use of high-value services and adherence to treatment regimens and healthy behaviors.^{xxxi}

ENDNOTES

ⁱ Connecticut Department of Public Health (CT DPH), 2013-2015 Behavioral Risk Factor Surveillance System (BRFSS) data

ⁱⁱ CT DPH, 2012-2014 BRFSS data

ⁱⁱⁱ CT DPH Vital Records Mortality Files. 2014

^{iv} CT DPH Vital Records Mortality Files. 2010-2014

^v CHIME (hospital data). 2014

^{vi} American Diabetes Association. Foot Complications. Available at <http://www.diabetes.org/living-with-diabetes/complications/foot-complications/>.

^{vii} American Diabetes Association. Hypoglycemia (Low Blood Glucose). Available at <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/hypoglycemia-low-blood.html>.

^{viii} American Diabetes Association. Hyperglycemia (High Blood Glucose). Available at <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/hyperglycemia.html>.

^{ix} Centers for Disease Control and Prevention data sent via email to State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health (DP13-1305) grantees. Data revised May 17, 2016.

^x Health Educ Behav. 2015 Aug;42(4):530-8. doi: 10.1177/1090198114566271. Epub 2015 Jan 23.

^{xi} American Diabetes Association Clinical Practice Recommendations, Diabetes Care Jan 2014 (37), 144-53.

^{xii} Agency for Healthcare Research and Quality, Evidence Report/Technical Assessment #221: Behavioral Programs for Diabetes. #15-E003-EF, Sept, 2015. Available at <https://www.effectivehealthcare.ahrq.gov/ehc/products/560/2124/diabetes-behavior-programs-report-150924.pdf>.

^{xiii} Duncan, I. et al., Assessing the Value of the Diabetes Educator. The Diabetes Educator 37(5) Sept 2011, 638-57.

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^{xv} Diabetes Prevention Program Research Group, Diabetes Care 2002 Dec; 25(12): 2165-2171.

^{xvi} Dept. Health and Human Services Center for Medicare and Medicaid Memo dated 3/14/16 from Office of the Actuary.

- ^{xvii} Centers for Medicaid and Medicare Services. Clinical Quality Measure Basics. Available at <https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/ClinicalQualityMeasures.html>.
- ^{xviii} Health Resources & Services Administration (HRSA). Health Center Program: Impact and Growth. Available at <https://bphc.hrsa.gov/about/healthcenterprogram/index.html>.
- ^{xix} HRSA. 2015 Health Center Data, Connecticut. Available at <https://bphc.hrsa.gov/uds/datacenter.aspx?year=2015&state=CT#fn5>.
- ^{xx} Connecticut State Innovation Model (SIM). Report of the Quality Council on A Multi-Payer Quality Measure Set for Improving Connecticut’s Healthcare Quality. Available at <http://www.healthreform.ct.gov/ohri/cwp/view.asp?a=2765&q=336272>.
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- ^{xxii} SIM. Data Dashboard. Available at http://www.publichealth.uconn.edu/sim_dash.html?ohriNav=|.
- ^{xxiii} The Center for Health Law and Policy Innovation of Harvard Law School, Reconsidering Cost-Sharing for Diabetes Self-Management Education: Recommendation for Policy Reform (June 2015).
- ^{xxiv} Carole W. Cranor et al., The Ashville Project: Long-Term Clinical and Economic Outcomes of a Community Pharmacy Diabetes Care Program, 43 J. OF THE AMERICAN PHARMACEUTICAL ASS’N, no. 2, 173, 183 (Mar./Apr. 2003).
- ^{xxv} Jessica M Robbins et al., Nutritionist Visits, Diabetes Classes, and Hospitalization Rates and Charges: The Urban Diabetes Study, 31 DIABETES CARE, no. 4, 655, 657 (Apr. 2008).
- ^{xxvi} Ian Duncan et al., Assessing the Value of Diabetes Education, 35 THE DIABETES EDUCATOR, no. 5, 752, 757 (Sept./Oct. 2009).
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