

VALUE TRANSFORMATION FRAMEWORK

Companion Action Guide >> Evidence-Based Care

HEALTH CENTER



INFRASTRUCTURE



CARE DELIVERY

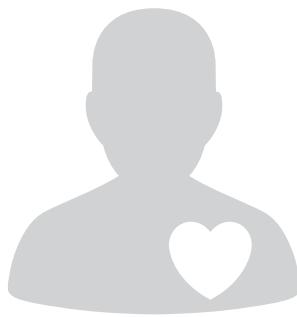


PEOPLE

DIABETES CONTROL



Providing diabetes care that improves health outcomes, improves patient and provider experiences, and reduces costs (the Quadruple Aim), requires health centers to couple evidence-based diabetes interventions with larger systems-level change. NACHC's Value Transformation Framework is designed to guide this systems approach to transformation.



WHY

is attention to diabetes so important?

The impact of diabetes within the United States population is staggering. Diabetes directly impacts an estimated 114.4 million Americans, with 23.1 million people diagnosed, 84.1 million pre-diabetics, and 7.2 million undiagnosed diabetics.¹ Many more feel the impact of diabetes indirectly. This problem is expected to grow, with at least 15-30% of pre-diabetics developing type 2 diabetes within 5 years without weight loss or moderate physical activity.² The highest rates of diabetes are found among minority populations (African Americans, Mexican Americans, Puerto Ricans, and Native Americans) and older Americans.³ The percent of community health center patients who have been told they have diabetes is 21% versus 11% in the general population.⁴

One-third or more patients with diabetes do not meet healthy target levels for blood sugar, blood pressure, or cholesterol.⁵ Without control for these targets, patients with diabetes have a higher risk of serious health complications like heart disease and stroke. Diabetes can lead to kidney failure, lower limb amputations, and adult-onset blindness.³

The estimated cost of diabetes in the United States in 2017 was \$327 billion, including \$237 billion for direct medical costs and \$90 billion in indirect costs for disability, time lost from work, and premature death.⁶ The cost of medical care increases significantly for every 1% increase in a patient's glycemic level (for HbA1c above 7%).⁷ If health center patients with uncontrolled diabetes could reduce their HbA1c by just 1.25%, the potential savings in medical costs could exceed \$3.44 billion over three years.⁸

This Evidence-Based Companion Guide on diabetes care explores the evidence-based steps for managing patients with diabetes. Used alongside the Evidence-Based Care Action Guide, it offers health centers an actionable road map to track and control diabetes within the context of whole person care.



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Community health centers play a critical role in providing care and preventive services to the nation's most vulnerable populations. They serve approximately 28 million people—more than two-thirds of whom are uninsured or on Medicaid. As evidenced by 2018 UDS data showing that only 56% of women age 23-64 were screened for cervical cancer, and 44% of patients age 50-75 for colorectal cancer,^{14,15} identifying effective ways to improve screening rates can help health centers achieve Healthy People 2020 goals, better health outcomes and experiences, and reduced costs.

WHAT are the clinical guidelines for managing diabetes?



The U.S. Preventive Services Task Force (USPSTF) recommends screening for abnormal blood glucose in adults aged 40 to 70 years who are overweight or obese. If patients have abnormal blood glucose levels, they should be offered, or referred to, intensive behavioral counseling interventions to promote healthy lifestyles including changes to diet and physical activity.⁹ USPSTF recommends that clinicians screen earlier for patients at increased risk (see below).

The American Diabetes Association (ADA) Standards of Medical Care in Diabetes recognizes that "*optimal diabetes management requires an organized, systematic approach and the involvement of a coordinated team of dedicated health care professionals working in an environment where patient-centered high-quality care is a priority.*"¹⁰ Additionally, the ADA recommends tailoring treatment for social context by assessing social determinants of health; referring patients to local community resources when available; and providing patients with self-management support from lay health coaches, navigators, or community health workers.

USPSTF RECOMMENDATIONS: GRADE B⁹

Adults age 40 - 70	<ul style="list-style-type: none"> Screen for abnormal blood glucose as part of cardiovascular risk assessment in adults aged 40 to 70 years who are <u>overweight or obese</u>. Clinicians should offer or refer patients with abnormal blood glucose to intensive behavioral counseling interventions to promote a healthful diet and physical activity.
Patients <40	<ul style="list-style-type: none"> Consider screening earlier than age 40 in persons with 1 or more of the following characteristics (regardless of body mass): <ul style="list-style-type: none"> ✓ Family history of diabetes, ✓ History of gestational diabetes or polycystic ovarian syndrome, ✓ Members of certain racial/ethnic groups (African Americans, American Indians or Alaskan Natives, Asian Americans, Hispanics or Latinos, or Native Hawaiians or Pacific Islanders)

[U.S. Preventive Services Task Force, Final Recommendation Statement, Abnormal Blood Glucose and Type 2 Diabetes Mellitus: Screening](#)





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HOW can health centers impact diabetes?



Diabetes is a complex chronic condition that requires a multifactorial approach to care^{11,12} along with the transformation of health care systems.^{13,14} Evidence-based interventions outlined in this Action Guide have proven to help control this disease and are consistent with ADA recommendations⁵ and the [Guiding Principles for the Care of People with or at Risk for Diabetes](#) supported by more than a dozen federal agencies and professional organizations.

NACHC's [Value Transformation Framework](#) can guide health centers in coupling diabetes-specific interventions with systems-level interventions to improve health outcomes, improve patient and staff experience, and reduce costs (the Quadruple Aim).

EVIDENCE-BASED COMPANION GUIDE: DIABETES CONTROL

This Action Guide takes the ten (10) systems-level intervention from the *Evidenced-Based Care Action Guide* and expands those steps specifically for diabetes.

- STEP 1 Engage Leadership:** Prioritize diabetes management; set organizational goals for improvement.
- STEP 2 Apply Population Health Management Strategies:** Segment your patient population into target subgroups and use registries to identify and track patients with diabetes within each target segment.
- STEP 3 Design Models of Care that Incorporate Diabetes Evidence-Based Interventions:** Define a core set of diabetes interventions that your health center will focus on. Target interventions to the needs of complex, high-risk, medium-risk, and low-risk diabetes patients.
- STEP 4 Create/Update Diabetes Clinical Policies and Standing Orders:** Create diabetes clinical policies, procedures, and standing orders based on current evidence-based best practices. Integrate clinical policies and standing orders into routine care.
- STEP 5 Deploy Care Teams in New Ways:** Enhance the delivery of diabetes interventions by maximizing the role of each member of the care team to work in new, efficient ways.
- STEP 6 Optimize Health Information Systems:** Leverage health information technology to track, improve, and manage diabetes activities. Capture the data needed for care delivery, reimbursement, and reporting.
- STEP 7 Engage Patients and Support Self-Management:** Tap into a variety of resources for engaging patients in diabetes care and management.
- STEP 8 Develop/Enhance Community Partnerships:** Create a list of community partners to support "whole person" diabetes care. Establish memorandums of understanding to formalize collaboration.
- STEP 9 Tailor Treatment for Social Context:** Incorporate social risk assessment into patient processes. Create an inventory of referral sources that match the social determinants of health impacting your community.
- STEP 10 Maximize Reimbursement for Diabetes Management and Prevention:** Identify sources of reimbursement for diabetes care and incorporate billing codes into your EHR and billing systems. Explore the addition of services lines (e.g., care management) that support diabetes control and generate additional revenue.



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STEP 1

Engage Leadership

Identify a set of priority clinical conditions for improvement that includes diabetes control. Name a clinical lead to pursue diabetes management as a top organizational priority and who is supported by health center leadership through messaging, protected time, and other resources. Leadership, in partnership with staff, should set short and long-term targets for improvement. Short-term goals may include staff training on new policies, and changes in the roles and responsibilities of care team members. Longer-term measures can include diabetes control rates and follow-up on patients with high HbA1c levels.



Action Item: Leadership incorporates diabetes control within the larger business case for value transformation. See NACHC's [Leadership Action Guide¹⁵](#) and [Evidence-Based Action Guide¹⁶](#) for more information. Set targets, benchmark success, and commit to improving diabetes control as part of local, state, or national initiatives.

STEP 2

Apply Population Health Management Strategies, including Risk Stratification and Registries

Utilize data on your patient population to target diabetes interventions. Start with a high-level view—the number and percent of patients with type 2 diabetes and the percent of patients with diabetes that have poor glycemic control (defined as > 9% HbA1c) in your patient population—and note how they compare to [county-level trends](#). The [Agency for Healthcare Research and Quality \(AHRQ\)'s diabetes snapshot tool](#) allows you to view measures of quality, cost, and treatment disparities for diabetes in your state compared to regional and national outcomes.

Next, use risk stratification to segment your patient population into target groups (see NACHC's [Risk Stratification Action Guide](#) for more details).¹⁷ Diabetes registries or reports from your electronic health record (EHR) will help to identify patients with diabetes in each target group.



Action Item: Risk stratify your patient population into target groups and utilize diabetes registries to identify patients with diabetes within each group. Use health center, local, and national data to support clinic-based quality improvements related to diabetes management and other priority conditions.

STEP 3

Design Models of Care that Incorporate Evidence-based Diabetes Guidelines and Interventions

Amidst competing priorities and limited resources, health centers can improve diabetes control by coupling and streamlining a core set of evidence-based diabetes interventions with systems-level interventions (e.g., changes to infrastructure, care delivery, or people). This requires “packaging” diabetes care as one important part of overall care. Approaching from this systems perspective can also help manage the limited time of providers and not overwhelm patients. Many of the evidence-based diabetes interventions outlined in this guide may already be common practice for some health centers, others require changes in processes or services. The key is to weave diabetes-specific interventions within larger system change, while balancing the overall needs of each patient and without overwhelming providers.



Action Item: Design a model of care that incorporates a core, actionable set of evidence-based diabetes interventions.



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(3.1) Depression Screening: Having diabetes doubles the odds of depression.¹⁸ Depression impacts self-care which, in turn, impacts patients' ability to maintain glycemic control.^{18,19} The USPSTF recommends depression screening for the general adult population,²⁰ and the ADA specifies annual depression screening for all patients with diabetes.¹⁰ Screening should be implemented with adequate systems in place for diagnosis, treatment, and appropriate follow-up. The Patient Health Questionnaire (PHQ) is an effective tool that can be self-administered by patients in the waiting room or exam room.

- The [PHQ-2](#): A 2 question tool that measures the frequency of depressed mood over the past two weeks. Patients who screen positive (a score of 3 or above) should be further evaluated.²¹
- The [PHQ-9](#): A 9 question tool that can reliably and validly measure depression severity.²¹⁻²³

Over the past 2 weeks, how often have you been bothered by any of the following problems?	Not At All	Several Days	More Than Half The Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3



Action Item (Depression Screening): Incorporate depression screening into routine primary care visits. Have plans in place for follow-up/referral for patients who screen positive.

(3.2) Weight Management: Modest and sustained weight loss in overweight or obese patients with type 2 diabetes has been shown to reduce the need for glucose-lowering medications^{24,25} and improve cardiovascular risk factors.²⁶ Weight-loss induced improvements are greatest earlier in the natural history of type 2 diabetes, making early action especially impactful.^{25,27,28} As little as 3% weight loss can improve glycemic control.²⁹ Lifestyle management that includes weight loss in individuals with type 2 diabetes can reduce HbA1c levels, improve glycemic and lipid control, reduce depression, reduce the need for diabetes medications, and reduce costs.³⁰ Obesity management can also delay the progression from prediabetes to type 2 diabetes.^{10,31}

Diet: Ensure processes are in place to measure patients' body mass index (BMI) per [UDS guidelines](#) and implement a care plan for diabetic patients with a BMI outside normal parameters. If a nutritionist or dietician is not available in your health center, an appropriate member of the care team member can develop a personalized menu of nutrition/diet options. Train staff in beneficial diet strategies like [USDA's MyPlate](#) and incorporate MyPlate education into discussions with diabetic patients.

- Develop a menu of nutrition/diet options targeted to different patient segments. Interventions should be individualized.
- Train at least one care team member to discuss basic tools for portion control and healthy food choices. Aim for a reduction of 500-750 calories per day.³²
- Show a [video on MyPlate](#) in your waiting room.
- Use visual prompts as conversation starters. For example: place an empty 16 oz. soda bottle in the exam room that is filled only with 16 teaspoons of sugar (the amount of sugar in one serving of soda). Teach patients that consuming one less soda (approximately 190 calories) a day could potentially result in weight loss of 20 pounds in one year.



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Action Item (Diet): Incorporate measurement of patients' body mass index (BMI) at each visit. Train staff to use MyPlate in discussions with diabetic patients. Develop a menu of nutrition/diet options targeted to different patient segments.

Exercise Promotion: Structured exercise that lasts eight weeks or more has been shown to lower the HbA1c of patients with type 2 diabetes by an average of 0.66%.^{33,34}

- Provide patients with “prescriptions” for exercise. Start with patient specific goals. Target patient weight loss and exercise goals based on losing at least 5 to 10% of their body weight within a reasonable timeframe. Consider that people with diabetes have better glucose control if they walk for 15-minutes after each meal, than if they get one 45-minute workout per day.³⁵ For a sample exercise prescription, see the Minneapolis American Indian Center's [Exercise Prescription Release Form](#).



Action Item (Exercise): Provide patients with “prescriptions” for exercise. Target patient weight loss goals toward at least 5 to 10% of a patient’s body weight.

(3.3) Heart/Cardiovascular Health: *“Cardiovascular disease is the leading cause of death for people with diabetes and a major contributor to health care costs related to diabetes”*.²⁹ Large benefits can be seen in reducing cardiovascular disease when multiple risk factors are addressed simultaneously.³⁶ Risk factors include high blood pressure, high cholesterol/lipid levels, and smoking. Actions should be taken for each of these risk factors.

Blood Pressure Screening: Measure blood pressure for each patient at every office visit. Train staff in accurate BP measurement and track results in the electronic health record.

- BP should be less than 140/90 for most patients. Blood pressure should be measured while patients are seated, with feet on the floor and back supported, after at least 5 minutes of rest and arm supported at heart level.³⁷
- Use the average of >2 office readings (>3 if using an unattended automatic blood pressure machine); separate measurement by 1-2 minutes.³⁷
- Home blood pressure self-monitoring can be helpful in evaluating differences that occur between blood pressure measurements taken at home compared to blood pressure taken in the clinic setting (e.g., “white coat” hypertension) and evaluating the effectiveness of antihypertensive treatment. There is evidence that home blood pressure monitoring improves medication adherence, thereby reducing cardiovascular risk.³⁸
- If blood pressure is elevated, consider initial therapy, which may include: thiazide diuretic, calcium channel blocker, ACE inhibitor, or an ARB.
- Several instructional tools for proper blood pressure measurement include:
 - American Medical Association (AMA) instruction on accurate measurements: [BP instructional page](#) or in this video: [7 simple tips to get an accurate blood pressure reading](#).
 - Tools to teach hypertensive patients to monitor their BP at home: [AMA Target: BP video for care teams and patients](#) and [this training video by NACHC](#).



Action Item (Blood Pressure): Train staff in accurate BP measurement. Measure blood pressure for each patient at every office visit and track results in the electronic health record.



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Lipids/Cholesterol Management: Diabetic patients should know their overall cholesterol level and their LDL ("bad") and HDL ("good") levels. People with type 2 diabetes often have lipid abnormalities, which contribute to increased risk for cardiovascular disease.¹⁰ Weight loss, physical activity, and diet changes can help with cholesterol control. Where appropriate, medications should be used to bring lipid levels into control. Numerous studies and data analyses show significant beneficial effects of statin therapy in preventing cardiovascular disease.³⁹⁻⁴¹

 **Action Item (Lipid/Cholesterol Management): Develop clinical protocols for the use of statin and combination treatment in adults with diabetes.** Take steps to ensure your electronic health record can capture and report data on the new [UDS reporting requirement around statin therapy in diabetics](#).

Tobacco Cessation: *"Smokers with diabetes (and people with diabetes exposed to secondhand smoke) have a heightened risk of CVD, premature death, and microvascular complications. Smoking may play a role in developing type 2 diabetes".*^{33,42,43} Smoking is the leading cause of preventable disease, disability, and death in the U.S., costing over \$300 billion.⁴⁴ Providers can deliver strong, clear messages urging tobacco users to quit. Incorporate tobacco use assessment into the routine vitals process, and document status in the electronic health record. Create a [protocol to identify and treat patients who use tobacco](#).

- Assign a care-team member to deliver and document brief tobacco cessation counseling (1-3 minutes) and refer to a Quitline (use a "Quitline Rx"). Quitlines (available in all 50 states free of charge), are staffed by individuals trained in evidence-based smoking cessation strategies and have been shown to significantly increase abstinence rates. Some states offer mailing of over-the-counter medications.
- State-specific information is available online or by calling 1-800-QUIT-NOW (1-800-784-8669). Research indicates that 69% of people who currently smoke would like to quit smoking, and 52% try to quit at some point in the course of a year.⁴⁵

 **Action Item (Tobacco Cessation): Incorporate tobacco use assessment into the routine vitals process and document status in the electronic health record. Create a protocol for identifying and treating patients who use tobacco.**⁴⁶ Deliver and document brief tobacco cessation counseling (1-3 minutes). Develop a script for providers to personalize that delivers a strong, clear message urging every tobacco user to quit. Refer to the telephone Quitline: 1-800-QUIT-NOW.

Heart Health – Aspirin Therapy: Low dose aspirin (75-162 mg/day) in patients with diabetes has been shown effective in diabetic patients with previous cardiovascular events but is less conclusive in preventing cardiovascular disease among patients with no previous risk. Decisions regarding aspirin use should be considered by the provider and an informed patient.

 **Action Item (Aspirin Therapy): Consider use of low dose aspirin therapy for patients with diabetes who have, or are at risk for, cardiovascular disease.**

(3.4) Foot care: Diabetic foot ulcer is one of the most costly and difficult complications of diabetes mellitus, affecting about 15% of diabetic patients during their lifetime.⁴⁷ Early effective management of foot ulcers can reduce the severity of complications, including amputation and possible death. Comprehensive foot evaluations (skin inspection, assessment of foot deformities, neurological assessment and pulse checks on legs and feet) should be performed annually.¹⁰ Diabetic patients



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with sensory loss or ulceration should have a visual inspection of their feet at each visit. This can be built-into the visit by instructing patients, upon rooming, to remove shoes and socks. Medicare Part B may cover the cost of special shoes or inserts which help prevent foot ulcers.

Several tools exist to support foot care for patients with diabetes, including:

- Competency assessments for diabetic foot exams: see the [AMA's Competency assessment for diabetic foot exams](#).
- Electronic prompts in the medical record for annual foot evaluations: see the [ADA's Instructions for staff in methods for proper comprehensive foot evaluations](#).
- Instructional videos: see the [Indian Health Service instructional video on how to perform a complete diabetic foot exam](#).

 **Action Item (Foot Care): Incorporate visual inspection of feet into the patient visit process for diabetic patients.** Create a list of tasks to be completed by each member of the care team; include instruction for removal of socks and shoes by staff responsible for rooming patient.

(3.5) Eye care/retinopathy: Diabetic retinopathy is the most frequent cause of new cases of blindness among adults aged 20–74 years.⁴⁸ Diabetic retinopathy is related to both the duration of diabetes and level of glycemic control.⁴⁹ During the first two decades of disease, nearly all patients with type 1 diabetes and 60% of patients with type 2 diabetes will have retinopathy.⁵⁰ Patients with type 2 diabetes should have an initial dilated and comprehensive eye examination by an ophthalmologist or optometrist shortly after diabetes diagnosis. Strategies to prevent or slow the progression of diabetes retinopathy include optimizing glycemic control, blood pressure, and serum lipid control.¹⁰

 **Action Step (Eye Care/Retinopathy): Implement action steps to improve glycemic control, blood pressure, and serum lipid control as a preventive measure against retinopathy.** Create and maintain a list of ophthalmologists/optometrists for referrals to comprehensive eye exams.

(3.6) Medication Use: It is critical for patients with diabetes to use prescribed medications as directed. For type 2 diabetes, Metformin is the preferred initial treatment, if not contraindicated and if tolerated.¹⁰ Evidence also shows Metformin can be effective in preventing diabetes among individuals with prediabetes, although the drug is not yet approved for diabetes prevention by the U.S. Food and Drug Administration.¹⁰ Patients should be told about side effects, like temporary diarrhea. Review medications at each visit. Alternate medications can be offered if weight gain becomes a problem which may happen with some antipsychotics (e.g., clozapine, olanzapine, risperidone), antidepressants (e.g., tricyclic antidepressants, selective serotonin reuptake inhibitors, and onoamine oxidase inhibitors), glucocorticoids, oral contraceptives that contain progestins, anticonvulsants, and some antihistamines and anticholinergics.⁵¹ ADA's [Antihyperglycemic Therapy in Adults with Type 2 Diabetes](#) provides recommendations and considerations for mono, dual, and triple therapy.

A variety of tools exist to support medication adherence:

- The American Association of Diabetes Educators' (AADE) [Fostering Medication Adherence Tips and Tricks](#).
- AMA Stepsforward [Medication Adherence](#) care team training.
- Merck & Co. Inc.'s [Adherence Estimator](#)[®] can be used (validated for oral medications prescribed for chronic, asymptomatic conditions such as diabetes).



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- AARP has created [My Personal Medical Record](#) that can assist patients in tracking medications.
- AHRQ has created [How to Create a Pill Card](#) that uses visuals and simple phrases to show the medications a patient needs to take on a regular basis.
- CDC's Million Hearts® has created a [Drug Adherence Work-up Tool](#) to assess patient adherence to blood pressure medications that could be adapted for use with diabetes or other medications.



Action Item (Medication Adherence): Add a "tickler" to the electronic health record to talk about medication adherence and review medications with patients. Ask about side effects; talk through alternatives if side effects (like weight gain) become a problem.

STEP 4

Create/update diabetes clinical policies and standing orders

Evidence-based clinical policies and protocols for patients with diabetes are critical for standardizing effective care. They should be updated regularly at the health center based on clinical guidelines for diabetes such as the [ADA Standards of Medical Care](#). Additional diabetes practice guidelines are available from the [American Academy of Family Physicians Clinical Practice Guidelines](#), [American Association of Clinical Endocrinologists](#), [American College of Physicians](#), and the [Endocrine Society](#). A sample health center diabetes policy ([Management of Diabetes Mellitus](#)) is available from Coastal Community Health Services in Georgia.

Consider using standing orders to authorize certain staff to carry out medical orders without a clinician's examination. Standing orders can improve clinical measures⁵² and may be implemented for orders such as HbA1c testing, serum lipid testing, referral for dilated eye exam, and annual referral to diabetic educators. See sample diabetes standing orders in the "resources" section of the following [AMA Stepsforward](#) module.



Action Item: Create/update clinical policies and standing orders for diabetes and associated conditions based on evidence-based practice guidelines. See NACHC's [Evidence-Based Action Guide](#) for more information on systems-level interventions.¹⁶

STEP 5

Deploy care teams in new ways

Care teams that are high-functioning and patient-centered have been shown to improve the care of patients with diabetes and improve health outcomes.^{13,53-55} Disease management programs have been shown to have a significant impact on HbA1c levels.⁵⁶ More specifically, care managers with a high frequency of patient contact and the ability to adjust treatment (with or without prior physician approval) have been found to substantially help patients with diabetes.^{56,57}

Create a diabetes proficiency checklist for key care team positions; evaluate staff proficiency and address gaps. Train staff in diabetes screening and control, including skills such as diabetes education and weight management. If a diabetes educator is not on staff, create a list of educators in your area. Incorporate diabetes interventions as a part of pre-visit planning. (See the AMA Stepsforward's "[Pre-Appointment Questionnaire](#).") Practices may increase their panel size by assigning a subpanel of patients with uncomplicated chronic conditions such as diabetes to nurses or pharmacists who manage the chronic condition using standing orders.⁵⁸

Consider group visits for patients with diabetes. Group visits are a patient-centered way to optimize time and reduce health care associated costs, while keeping patients engaged in an interactive and empowering environment.⁵⁹ These visits have been found to reduce participants' HbA1c, cholesterol, and blood pressure levels.^{60,61} See the [University of Colorado's Diabetes Group](#).



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[Visits Leader's Manual](#). Provider and staff training in motivational interviewing has been shown to improve patient engagement.⁸

-  **Action Item:** Assess, train, and support care team members around core competencies for diabetes care. Include diabetes interventions as part of pre-visit planning and consider offering group visits for patients with diabetes. Implement interventions outlined in NACHC's [Care Teams Action Guide](#) and NACHC's [Care Management Action Guide](#).^{62,63}

STEP 6

Optimize health information systems

Document and track diabetes care in the EHR. Create provider guidance for documentation as part of a primary care visit. This requires documenting diabetes management using structured fields within the EHR. Structured data refers to any data in a fixed field within the patient record used for relational databases and spreadsheets. Take steps to also ensure your EHR can capture and report data on the new [UDS reporting requirement around statin therapy in patients with diabetes](#).

Configure your EHR to create gap reports, which provide information on the management of chronic conditions such as diabetes as well as preventive care needs. Gap reports are a helpful tool to organize and prioritize the care team's work around an upcoming patient visit.

Implement automated reminders with electronic alerts/flags in the EHR to prompt the clinical team. These alerts can be tailored by age and condition, and used to document historical screenings, patient education, and patient refusals. Reminders are needed not only to measure HbA1c or other diabetes tests, but also to recall patients in need of follow-up.

-  **Action Item: Configure diabetes management prompts, as appropriate, for the care team. Create/update EHR templates to capture data on diabetes-related care items in addition to UDS and other measures.** This includes screening for blood pressure, tobacco use, weight management, glucose tracking, foot checks, eye care, and medications. Use the data collected to support your health center's billing claims for diabetes-care.

STEP 7

Engage patients and support self-management

Diabetes self-management education and support (DSME/S) has been shown to improve health outcomes⁶⁴ and reduce costs by reducing hospital admissions and readmissions.^{65,66} DSME/S is most effective when group and individual interventions are combined, using team-based approaches, and at least 10 hours of patient education.⁶⁷ Patient education can be delivered in-person, online, or through a combination of formats. Collaborative goal setting with patients has been found to reduce HbA1c, blood pressure, and/or LDL cholesterol.^{68,69} Community health workers (CHWs), peer supporters, and lay leaders may assist in the delivery of DSME/S services, and can be part of a cost-effective, evidence-based strategy to improve the management of diabetes.

The ADA's DSME/S Algorithm identifies four "critical" points in time to provide education: at diagnosis; during annual assessment of education, nutrition, and emotional needs; when new complicating factors influence self-management; and when transitions in care occur.⁶⁴ View [the algorithm](#) for a checklist of action steps at each of the four points in care.

Teach patients the difference between a reading from a glucometer (which measures blood sugar level at the time of the test) versus an HbA1c test (which measures average sugar levels over the previous two to three months). Work with patients to set an HbA1c goal and a plan to achieve this goal. Check HbA1c levels at least 2 times a year.



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The National Diabetes Education Program (NDEP) maintains a [national repository of diabetes education tools](#) that are high quality, science- and audience-based, culturally and linguistically on target, and available for free.⁷⁰ Create or adopt a limited literacy and culturally competent educational tool for patients to understand HbA1c and take a role in developing their care plans. Such resources include:

- Association of Clinicians for the Underserved [Blood Sugar Too High or Too Low?](#) (Spanish)
- Connecticut Department of Public Health [Live Free with Diabetes: Blood Sugar](#)
- MHP Salud [Know Your A1C Tool](#) (all in English/Spanish).
- [Migrant Clinicians Network Diabetes Program](#)
- National Center for Farmworker Health Keeping Diabetes: [Information for Healthy Living](#)
- Shared decision-making aids can help, like the [Diabetes Medication Choice decision making tool created by the Mayo Clinic](#)
- The ADA, the AADE, and the Academy of Nutrition and Dietetics [algorithm for self-management](#)⁶⁴

Use patient reminders and telephone and text messaging systems to emphasize provider recommendations and facilitate the health center's integrated approach to diabetes management. For example, a script can be created to communicate plans for an upcoming visit, including provider recommendations for HbA1c or other testing, as appropriate.



Action Item: Engage and educate patients. Support patients' diabetes self-management using culturally and linguistically appropriate education tools. Engage patients in developing their own care plans. See NACHC's [Patient Engagement Action Guide](#) for more.⁷¹

STEP 8

Develop/Enhance Partnerships

Partnerships with a wide range of external organizations are key to building community support for diabetes self-management. Linkages with organizations that offer nutrition counseling, behavioral or mental health services, or employment, can provide avenues to address the health and social needs of patients. Work by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) recognizes the importance of community partnerships for clinics to help patients successfully manage their diabetes: "...*Clinic-community partnerships have demonstrated benefits at the individual, organizational, and community levels. For example, clinic-community partnerships result in better clinical outcomes; increased capacity for outreach; improved access to community resources; enhanced community engagement in diabetes support; and, ultimately, reductions in morbidity and mortality and improvements in quality of life related to diabetes.*"⁷²

The NIDDK's "Community Partnerships" page outlines [steps for health care practices to develop partnerships](#) with outside organizations to deliver better diabetes care and education. They range from identifying available resources and exploring ways to listen to community members' diabetes care needs, to periodically reviewing your partnerships and pursuing public policy that supports healthy lifestyles.

The National Diabetes Prevention Program (NDPP) exemplifies a successful community partnership for community health centers. It aims to prevent type 2 diabetes by offering patients a curriculum on healthy eating, physical activity, and stress management through regular group meetings and support over the course of a year. The program can be delivered in-person and/or online. Visit the [NDPP locator](#) to locate a program near your health center. Additional resources may also be available through the AADE's [diabetes education program locator tool](#) which provides listings of



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accredited diabetes education programs in your area.

-  **Action Item: Develop/leverage partnerships in support of “whole person” diabetes care. Maintain a list of partners and key points of contact within each organization.**
- Establish memorandums of understanding to formalize collaboration.

STEP 9 Tailor Treatment for Social Context

Health inequities related to diabetes and its complications are well documented and are heavily influenced by social determinants of health. ADA Standards of Care recommend that “providers should assess social context, including potential food insecurity, housing stability, and financial barriers, and apply that information to treatment decisions”. Tools such as NACHC’s Protocol for Responding to and Assessing Patients’ Assets, Risks, and Experiences ([PRAPARE](#)) can be applied by health centers to assess and then respond to social risk factors.

-  **Action Item: Incorporate social risk assessment into patient visit process.** Assess potential food insecurity, housing instability, and financial barriers, and apply that information to treatment decisions. Refer patients to community resources in your inventory list, as appropriate.

STEP 10 Maximize reimbursement for diabetes management and prevention

High-quality, sustainable diabetes care can only be delivered with proper reimbursement. Laws requiring health insurance coverage for diabetes treatment are in place in 46 states and the District of Columbia. The laws in Mississippi and Missouri only require that insurers offer coverage, but do not require that all active policies include it.⁷³ Alabama, Idaho, North Dakota, and Ohio are the only four states that do not have a mandate or insurance requirement for diabetes coverage.⁷³

The Centers for Medicare and Medicaid Services (CMS) covers intensive behavioral therapy and nutrition counseling for Medicare beneficiaries with or without diabetes who have obesity (BMI>30 kg/m²). Care must be provided by a qualified primary care physician, nurse practitioner, clinical nurse specialist, or physician’s assistant and may be covered for up to 12 months if a weight loss of at least 3 kg is achieved within the first 6 months. Medicare also covers up to 3 hours of medical nutrition therapy initially, and up to 2 hours annually, thereafter.⁷⁴

CMS reimburses for 10 program hours of initial diabetes education in the first year and 2 hours each subsequent year. Referrals for DSME/S must be made by a health care provider and include specified indicators. Sample referral forms and information on reimbursement can be found on the ADA’s website [Make a Referral](#).

Reimbursement is also available in some cases for diabetes prevention efforts. Select payers reimburse health centers that participate in the National DPP. The [National DPP Coverage Toolkit](#) describes coverage options through Medicare, Medicaid, and commercial payers. Medicare reimburses NDPP “suppliers” up to \$165 per patient for core sessions, plus \$160 if the patient attained the minimum weight loss of 5%, and an additional \$25 if the patient attained 9% weight loss.⁷⁵ To bill Medicare, health centers must obtain CDC-recognition and register as a Medicare Diabetes Prevention Program (MDPP) supplier. NDPP is also covered by over 30 health plans and is a Medicaid covered benefit in six states.⁷⁶

-  **Action Item: Maximize reimbursement for diabetes management and prevention.**
- Identify sources of reimbursement for both diabetes care and prevention efforts and incorporate billing codes into your EHR and billing systems.



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References

1. CDC. National Diabetes Statistics Report, 2017 - Estimates of Diabetes and Its Burden in the United States. 2017. <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>.
2. CDC. National Diabetes Prevention Program: Working Together to Prevent Type 2 Diabetes. The Diabetes Prevention Program. https://www.cdc.gov/diabetes/prevention/pdf/NDPP_Infographic.pdf.
3. ODPHP. Diabetes | Healthy People 2020. Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/diabetes>. Accessed October 4, 2019.
4. National Association of Community Health Centers. Community Health Center Chartbook. NACHC. <http://www.nachc.org/wp-content/uploads/2019/01/Community-Health-Center-Chartbook-FINAL-1.28.19.pdf>. Published January 2019. Accessed August 10, 2019.
5. American Diabetes Association. Standards of Medical Care in Diabetes—2019 Abridged for Primary Care Providers. *Clin Diabetes*. 2019;37(1):11-34. doi:10.2337/cd18-0105
6. American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2017. *Diabetes Care*. 2018;42(10):dc180007. doi:10.2337/dc18-0007
7. Gilmer TP, O'Connor PJ, Manning WG, Rush WA. The Cost to Health Plans of Poor Glycemic Control. *Diabetes Care*. 1997;20(12):1847-1853. doi:10.2337/diacare.20.12.1847
8. Fitch A, Everling L, Fox C, et al. Health Care Guidelines - Prevention and Management of Obesity for Adults. *Inst Clin Syst Improv*. 2013;Sixth Edition. https://www.healthpartners.com/ucm/groups/public/@hp/@public/documents/documents/cntrb_037112.pdf. Accessed October 8, 2019.
9. USPSTF. Final Recommendation Statement: Abnormal Blood Glucose and Type 2 Diabetes Mellitus: Screening - US Preventive Services Task Force. U.S. Preventive Services Task Force. <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/screening-for-abnormal-blood-glucose-and-type-2-diabetes>. Published April 2018. Accessed October 7, 2019.
10. American Diabetes Association. Standards of Medical Care in Diabetes—2018 Abridged for Primary Care Providers. *Clin Diabetes*. 2018;36(1):14-37. doi:10.2337/cd17-0119
11. Chin MH, Auerbach SB, Cook S, et al. Quality of diabetes care in community health centers. *Am J Public Health*. 2000;90(3):431-434.
12. Draznin B, Gilden J, Golden SH, Inzucchi SE. Pathways to Quality Inpatient Management of Hyperglycemia and Diabetes: A Call to Action. *Diabetes Care*. 2013;36(7):1807-1814. doi:10.2337/dc12-2508
13. Shojania KG, Ranji SR, McDonald KM, et al. Effects of Quality Improvement Strategies for Type 2 Diabetes on Glycemic Control: A Meta-Regression Analysis | Diabetes | JAMA | JAMA Network. *JAMA*. 2006;296(4):427-440.
14. Peterson KA, Brown MT, Warren-Boulton E. Responding to the Challenges of Primary Diabetes Care Through the National Diabetes Education Program. *Diabetes Care*. 2015;38(3):343-344. doi:10.2337/dc14-1922
15. The National Association of Community Health Centers. Leadership Action Guide. Quality Center. <http://www.nachc.org/wp-content/uploads/2019/03/Leadership-Action-Guide-Mar-2019.pdf>. Published July 2019. Accessed October 3, 2019.
16. The National Association of Community Health Centers. Evidence-Based Care Action Guide. Quality Center. <http://www.nachc.org/clinical-matters/value-transformation-framework/>. Published 2019.
17. National Association of Community Health Centers. Risk Stratification Action Guide. <http://www.nachc.org/wp-content/uploads/2019/03/Risk-Stratification-Action-Guide-Mar-2019.pdf>. Published July 2019. Accessed October 3, 2019.
18. Anderson RJ, Freedland KE, Clouse RE, Lustman PJ. The Prevalence of Comorbid Depression in Adults With Diabetes: A meta-analysis. *Diabetes Care*. 2001;24(6):1069-1078. doi:10.2337/diacare.24.6.1069
19. McKellar JD, Humphreys K, Piette JD. Depression Increases Diabetes Symptoms by Complicating Patients' Self-Care Adherence. *Diabetes Educ*. 2004;30(3):485-492. doi:10.1177/014572170403000320
20. USPSTF. Final Recommendation Statement: Depression in Adults: Screening - US Preventive Services Task Force. U.S. Preventive Services Task Force. <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/depression-in-adults-screening1>. Published January 2016. Accessed October 8, 2019.
21. Kroenke K, Spitzer R, Williams J. The Patient Health Questionnaire-2: Validity of a Two-Item Depression Screener. *Med Care*. 2003;41(11):1284-1292. doi:10.1097/01.MLR.0000093487.78664.3C
22. Kroenke K, Spitzer RL, Williams JBW. The PHQ-9. *J Gen Intern Med*. 2001;16(9):606-613. doi:10.1046/j.1525-1497.2001.016009606.x
23. Li C, Friedman B, Conwell Y, Fiscella K. Validity of the Patient Health Questionnaire 2 (PHQ-2) in Identifying Major Depression in Older People. *J Am Geriatr Soc*. 2007;55(4):596-602. doi:10.1111/j.1532-5415.2007.01103.x
24. Goldstein DJ. Beneficial health effects of modest weight loss. *Int J Obes Relat Metab Disord J Int Assoc Study Obes*. 1992;16(6):397-415.
25. Pastors JG, Warshaw H, Daly A, Franz M, Kulkarni K. The Evidence for the Effectiveness of Medical Nutrition Therapy in Diabetes Management. *Diabetes Care*. 2002;25(3):608-613. doi:10.2337/diacare.25.3.608



DIABETES CONTROL

26. The Look AHEAD Research Group. The Look AHEAD Study: A Description of the Lifestyle Intervention and the Evidence Supporting It. *Obes Silver Spring Md.* 2006;14(5):737-752. doi:10.1038/oby.2006.84
27. Rothberg AE, McEwen LN, Kraftson AT, Fowler CE, Herman WH. Very-low-energy diet for type 2 diabetes: An underutilized therapy? *J Diabetes Complications.* 2014;28(4):506-510. doi:10.1016/j.jdiacomp.2014.03.014
28. Steven S, Hollingsworth KG, Al-Mrabeh A, et al. Very Low-Calorie Diet and 6 Months of Weight Stability in Type 2 Diabetes: Pathophysiological Changes in Responders and Nonresponders. *Diabetes Care.* 2016;39(5):808-815. doi:10.2337/dc15-1942
29. National Diabetes Education Program. Guiding Principles for the Care of People With or at Risk for Diabetes. *Natl Inst Diabetes Dig Kidney Dis.* August 2018. <https://www.niddk.nih.gov/health-information/communication-programs/ndep/health-professionals/guiding-principles-care-people-risk-diabetes>. Accessed October 10, 2019.
30. The Look AHEAD Research Group. Long Term Effects of a Lifestyle Intervention on Weight and Cardiovascular Risk Factors in Individuals with Type 2 Diabetes: Four Year Results of the Look AHEAD Trial. *Arch Intern Med.* 2010;170(17):1566-1575. doi:10.1001/archinternmed.2010.334
31. Knowler WC, Barrett-Connor E, Fowler SE, et al. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med.* 2002;346(6):393-403. doi:10.1056/NEJMoa012512
32. American Diabetes Association. 6. Obesity Management for the Treatment of Type 2 Diabetes. *Diabetes Care.* 2016;39(Supplement 1):S47-S51. doi:10.2337/dc16-S009
33. American Diabetes Association. 5. Lifestyle Management: Standards of Medical Care in Diabetes—2019. *Diabetes Care.* 2019;42(Supplement 1):S46-S60. doi:10.2337/dc19-S005
34. Boulé NG, Haddad E, Kenny GP, Wells GA, Sigal RJ. Effects of exercise on glycemic control and body mass in type 2 diabetes mellitus: a meta-analysis of controlled clinical trials. *JAMA.* 2001;286(10):1218-1227. doi:10.1001/jama.286.10.1218
35. DiPietro L, Gribok A, Stevens MS, Hamm LF, Rumpel W. Three 15-min Bouts of Moderate Postmeal Walking Significantly Improves 24-h Glycemic Control in Older People at Risk for Impaired Glucose Tolerance. *Diabetes Care.* 2013;36(10):3262-3268. doi:10.2337/dc13-0084
36. American Diabetes Association. 9. Cardiovascular Disease and Risk Management: Standards of Medical Care in Diabetes—2018. *Diabetes Care.* 2018;41(Supplement 1):S86-S104. doi:10.2337/dc18-S009
37. Muntner Paul, Shimbo Daichi, Carey Robert M., et al. Measurement of Blood Pressure in Humans: A Scientific Statement From the American Heart Association. *Hypertension.* 2019;73(5):e35-e66. doi:10.1161/HYP.0000000000000087
38. Omboni S, Gazzola T, Carabelli G, Parati G. Clinical usefulness and cost effectiveness of home blood pressure telemonitoring: meta-analysis of randomized controlled studies. *J Hypertens.* 2013;31(3):455-467; discussion 467-468. doi:10.1097/JHJ.0b013e32835ca8dd
39. Cholesterol Treatment Trialists' (CTT) Collaborators. The effects of lowering LDL cholesterol with statin therapy in people at low risk of vascular disease: meta-analysis of individual data from 27 randomised trials. *The Lancet.* 2012;380(9841):581-590. doi:10.1016/S0140-6736(12)60367-5
40. Baigent C, Keech A, Kearney PM, et al. Efficacy and safety of cholesterol-lowering treatment: prospective meta-analysis of data from 90,056 participants in 14 randomised trials of statins. *Lancet Lond Engl.* 2005;366(9493):1267-1278. doi:10.1016/S0140-6736(05)67394-1
41. Cholesterol Treatment Trialists' (CTT) Collaborators. Efficacy of cholesterol-lowering therapy in 18 686 people with diabetes in 14 randomised trials of statins: a meta-analysis. *The Lancet.* 2008;371(9607):117-125. doi:10.1016/S0140-6736(08)60104-X
42. Jankowich M, Choudhary G, Taveira TH, Wu W-C. Age-, race-, and gender-specific prevalence of diabetes among smokers. *Diabetes Res Clin Pract.* 2011;93(3):e101-e105. doi:10.1016/j.diabres.2011.05.029
43. Akter S, Goto A, Mizoue T. Smoking and the risk of type 2 diabetes in Japan: A systematic review and meta-analysis. *J Epidemiol.* 2017;27(12):553-561. doi:10.1016/j.je.2016.12.017
44. NCCDPHP. Tobacco Use | CDC. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>. Published March 27, 2019. Accessed October 10, 2019.
45. Centers for Disease Control and Prevention. Quitting Smoking Among Adults - United States, 2001-2010 -. Morbidity and Mortality Weekly Report (MMWR). <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6044a2.htm>. Published November 11, 2011. Accessed October 10, 2019.
46. Million Hearts. Tobacco Cessation Protocol. Million Hearts. <https://millionhearts.hhs.gov/files/Tobacco-Cessation-Protocol.pdf>. Accessed October 8, 2019.
47. Yazdanpanah L, Nasiri M, Adarvishi S. Literature review on the management of diabetic foot ulcer. *World J Diabetes.* 2015;6(1):37-53. doi:10.4239/wjd.v6.i1.37
48. American Diabetes Association. 11. Microvascular Complications and Foot Care: Standards of Medical Care in Diabetes—2019. *Diabetes Care.* 2019;42(Supplement 1):S124-S138. doi:10.2337/dc19-S011
49. Sadosky A, Schaefer C, Mann R, et al. Burden of illness associated with painful diabetic peripheral neuropathy among adults seeking treatment in the US: results from a retrospective chart review and cross-sectional survey. *Diabetes Metab Syndr Obes Targets Ther.* 2013;6:79-92. doi:10.2147/DMSO.S37415
50. Fong DS, Aiello L, Gardner TW, et al. Retinopathy in diabetes. *Diabetes Care.* 2004;27 Suppl 1:S84-87. doi:10.2337/diacare.27.2007.s84
51. American Diabetes Association. 7. Obesity Management for the Treatment of Type 2 Diabetes: Standards of Medical Care in Diabetes—2018. *Diabetes Care.* 2018;41(Supplement 1):S65-S72. doi:10.2337/dc18-S007
52. Nemeth LS, Ornstein SM, Jenkins RG, Wessell AM, Nietert PJ. Implementing and Evaluating Electronic Standing Orders in Primary Care Practice: A PPRNet Study. *J Am Board Fam Med.* 2012;25(5):594-604. doi:10.3122/jabfm.2012.05.110214
53. Wagner EH, Grothaus LC, Sandhu N, et al. Chronic Care Clinics for Diabetes in Primary Care: A system-wide randomized trial. *Diabetes Care.* 2001;24(4):695-700. doi:10.2337/diacare.24.4.695



DIABETES CONTROL

54. Rubin RR, Peyrot M, Siminerio LM. Health Care and Patient-Reported Outcomes: Results of the cross-national Diabetes Attitudes, Wishes and Needs (DAWN) study. *Diabetes Care.* 2006;29(6):1249-1255. doi:10.2337/dc05-2494
55. Piatt GA, Orchard TJ, Emerson S, et al. Translating the Chronic Care Model Into the Community: Results from a randomized controlled trial of a multifaceted diabetes care intervention. *Diabetes Care.* 2006;29(4):811-817. doi:10.2337/diacare.29.04.06.dc05-1785
56. Pimouguet C, Le Goff M, Thiébaut R, Dartigues JF, Helmer C. Effectiveness of disease-management programs for improving diabetes care: a meta-analysis. *CMAJ Can Med Assoc J.* 2011;183(2):E115-E127. doi:10.1503/cmaj.091786
57. Tricco AC, Ivers NM, Grimshaw JM, et al. Effectiveness of quality improvement strategies on the management of diabetes: a systematic review and meta-analysis. *The Lancet.* 2012;379(9833):2252-2261. doi:10.1016/S0140-6736(12)60480-2
58. Bodenheimer T, Ghorob A, Willard-Grace R, Grumbach K. The 10 Building Blocks of High-Performing Primary Care. *Ann Fam Med.* 2014;12(2):166-171. doi:10.1370/afm.1616
59. Burke RE, O'Grady ET. Group Visits Hold Great Potential For Improving Diabetes Care And Outcomes, But Best Practices Must Be Developed. *Health Aff (Millwood).* 2012;31(1):103-109. doi:10.1377/hlthaff.2011.0913
60. Ridge T. Shared Medical Appointments in Diabetes Care: A Literature Review. *Diabetes Spectr.* 2012;25(2):72-75. doi:10.2337/diaspect.25.2.72
61. Cohen LB, Taveira TH, Khatana SAM, Dooley AG, Pirraglia PA, Wu W-C. Pharmacist-led shared medical appointments for multiple cardiovascular risk reduction in patients with type 2 diabetes. *Diabetes Educ.* 2011;37(6):801-812. doi:10.1177/0145721711423980
62. The National Association of Community Health Centers. Care Teams Action Guide. Quality Center. <http://www.nachc.org/wp-content/uploads/2019/03/Care-Teams-Action-Guide-Mar-2019.pdf>. Published July 2019. Accessed October 3, 2019.
63. National Association of Community Health Centers. Care Management Action Guide. Quality Center. <http://www.nachc.org/wp-content/uploads/2019/03/Care-Management-Action-Guide-Mar-2019.pdf>. Published July 2019. Accessed October 3, 2019.
64. Powers MA, Bardsley J, Cypress M, et al. Diabetes Self-management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. *Diabetes Care.* June 2015;dc150730. doi:10.2337/dc15-0730
65. Duncan I, Ahmed T, Li Q (Emily), et al. Assessing the Value of the Diabetes Educator. *Diabetes Educ.* 2011;37(5):638-657. doi:10.1177/0145721711416256
66. Robbins JM, Thatcher GE, Webb DA, Valdmanis VG. Nutritionist Visits, Diabetes Classes, and Hospitalization Rates and Charges: the Urban Diabetes Study. *Diabetes Care.* 2008;31(4):655-660. doi:10.2337/dc07-1871
67. Chrvala CA, Sherr D, Lipman RD. Diabetes self-management education for adults with type 2 diabetes mellitus: A systematic review of the effect on glycemic control. *Patient Educ Couns.* 2016;99(6):926-943. doi:10.1016/j.pec.2015.11.003
68. Grant RW, Pabon-Nau L, Ross KM, Youatt EJ, Pandiscio JC, Park ER. Diabetes Oral Medication Initiation and Intensification. *Diabetes Educ.* 2011;37(1):78-84. doi:10.1177/0145721710388427
69. Tamhane S, Rodriguez-Gutierrez R, Hargraves I, Montori VM. Shared Decision-Making in Diabetes Care. *Curr Diab Rep.* 2015;15(12):112. doi:10.1007/s11892-015-0688-0
70. Siminerio LM, Albright A, Fradkin J, et al. The National Diabetes Education Program at 20 Years: Lessons Learned and Plans for the Future. *Diabetes Care.* 2018;41(2):209-218. doi:10.2337/dc17-0976
71. National Association of Community Health Centers. Patient Engagement Action Guide. Quality Center. <http://www.nachc.org/wp-content/uploads/2019/03/Patient-Engagement-Action-Guide-Mar-2019.pdf>. Published July 2019. Accessed October 3, 2019.
72. NIDDK. Community Partnerships. National Institute of Diabetes and Digestive and Kidney Diseases. <https://www.niddk.nih.gov/health-information/communication-programs/niddk-practice-transformation-physicians-health-care-teams/diabetes-practice-changes/community-partnerships>. Accessed October 8, 2019.
73. National Conference of State Legislature. Diabetes Health Coverage: State Laws and Programs. National Conference of State Legislature. <http://www.ncsl.org/research/health/diabetes-health-coverage-state-laws-and-programs.aspx>. Published January 10, 2016. Accessed October 8, 2019.
74. Centers for Medicare and Medicaid Services. State- and Payer-Specific Estimates of Annual Medical Expenditures Attributable to Obesity. CMS.gov. <http://doi.wiley.com/10.1038/oby.2011.169>. Published January 2012. Accessed October 8, 2019.
75. Department of Health and Human Services. Federal Register - Rules and Regulations. 2017;82(219). <https://www.govinfo.gov/content/pkg/FR-2017-11-15/pdf/2017-23953.pdf>. Accessed October 8, 2019.
76. NACDD. National Diabetes Prevention Program Coverage Toolkit. <https://www.chronicdisease.org/page/DiabetesToolkit/National-Diabetes-Prevention-Program-Coverage-Toolkit.htm>. Published 2017. Accessed October 8, 2019.