



Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

IMPORTANCE OF FOCUS

Although Prediabetes is not viewed as a clinical entity in its own right, it is a risk factor for diabetes and cardiovascular disease. It is estimated that approximately 1 in 3 U.S. adults have prediabetes. According to the CDC, regardless of education level, income, or insurance coverage, only a small percentage of these adults are aware of their condition.

Research indicates that 1/3 of people with prediabetes will progress to diabetes in 3 to 5 years. This will increase their risk of cardiovascular disease, stroke, high blood pressure, blindness, kidney and nerve disease, and amputation. However; the US Diabetes Prevention Program (DPP) research indicates that progression to diabetes can be prevented. Preventing diabetes will help prevent other serious chronic conditions. The 10-year follow-up study of the DPP concluded that investment in lifestyle and Metformin interventions for diabetes prevention in high-risk adults is highly cost effective.

This care map will provide evidence-based recommendations for care and outlines a plan for shared accountability in this process.

GOALS

It is the goal of this care map that all patients at risk for prediabetes will be identified, engaged, educated, and monitored. To promote this goal, our recommendation is to track the following interventions:

- Percentage of all patients' age ≥ 45 years or with BMI ≥ 25 kg/m² and one or more risk factors that were screened for prediabetes using HbA1c and/or FPG
- Percentage of all patients identified as having prediabetes who attend a Palmetto Health Comprehensive Prediabetes/Diabetes Class taught by Certified Diabetes Educators (CDEs)
- Changes in weight, HbA1c, fasting blood glucose, blood pressure, BMI, lipids

KEY RECOMMENDATIONS

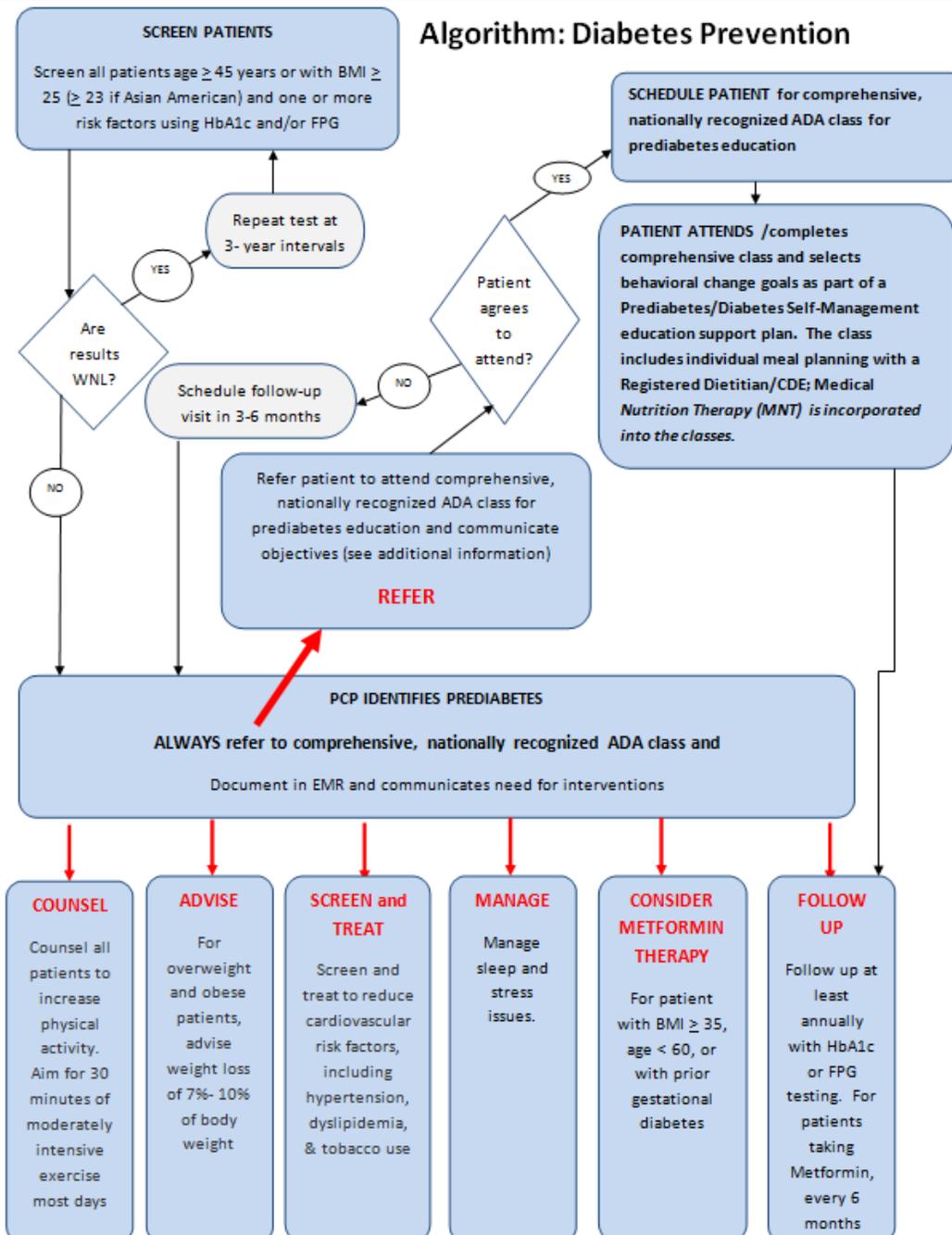
- Diabetes prevention is the shared responsibility of clinicians, dietitians, operational and clinic teams, primary care providers, and patients.
- Screen all patients age ≥ 45 years or with BMI ≥ 25 kg/m² (≥ 23 for Asian Americans) and one or more risk factors using HbA1c and/or FPG; if tests are normal, repeat testing at 3-year intervals.
- Screen and treat to reduce cardiovascular risk factors, including hypertension, dyslipidemia, and tobacco use
- Counsel all patients to increase physical activity
- Refer to an effective ongoing support program targeting lifestyle change
- For overweight or obese patients, advise weight loss of 7% to 10% of body weight
- Identify and manage sleep and stress issues
- Refer patient to attend prediabetes / diabetes Self Management Education class and communicate objectives of the class to the patient.
- Consider Metformin therapy with BMI ≥ 35 kg/m², age < 60 , or with prior gestational diabetes.
- Follow up at least annually with HbA1c or FPG testing. For patients taking Metformin, follow up every 6 months



Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

CARE PATHWAY COMPONENTS





Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

Additional Information

Prediabetes Classes and Diabetes Prevention Programs

Comprehensive Outpatient Prediabetes/Diabetes Self-Management Education at Palmetto Health

Who benefits most from comprehensive Prediabetes/Diabetes Education? Patients who are: 1) newly diagnosed with prediabetes/diabetes; 2) have never attended comprehensive education classes previously, and/or 3) have uncontrolled diabetes.

Patients with prediabetes and diabetes are referred to the Outpatient Diabetes Education Program at Palmetto Health to meet the following goals: 1) ensure patient safety, 2) promote patient satisfaction, and 3) provide optimal outcomes--prevention of type 2 diabetes (if prediabetes), lower A1cs, target blood glucose levels, etc.:

To ensure patient safety:

- Accurate and consistent information will be provided by Certified Diabetes Educators (CDEs). *(CDEs have to meet the required minimal amount of work hours and successfully pass the CDE exam to become certified. To maintain certification credentials, 75 hours of continuing education hours must be obtained every 5 years. CDEs are considered the "experts" for providing Prediabetes/Diabetes Education).*
- Examples of information all patients are taught: how to prevent and treat hypoglycemia; how to properly perform a finger stick blood glucose (and how to interpret the results, and know the target ranges); oral medications and side effects; how to correctly prepare and administer insulin, when they should eat a snack prior to physical activity; how to handle "sick days", and when they should call their physician.
- When insulin is ordered, the patient will receive correct insulin preparation and administration technique—to decrease risks of hypoglycemia and to increase chances of reaching optimal target blood glucose levels.

To promote patient satisfaction:

- Insurance verification/benefit coverage is provided by our Patient Access Department; prediabetes education is a covered benefit for patients with some insurance providers (ex. Blue Choice provides coverage at 100%--no deductible; no co-pay; more insurance companies are starting to provide coverage for prediabetes education. Patients are provided coverage/deductible information prior to 1st visit.
- An individualized meal plan will be designed for the patient with prediabetes/diabetes by a Registered Dietitian/CDE. *(The meal plan is designed for patients based on their age, height, weight/weight goals, gender, activity level, medications, and disease states, likes & dislikes, so it will provide patients with an accurate recommendation for not only carbohydrates, but protein, fat, and limits on saturated fat. Also, if the meal plan follows the patient's usual meal schedule (as much as possible), it encourages adherence with the meal plan. Many patients would not be able to follow commercial "standardized" meal plans due to food allergies, lactose or gluten intolerance, shift work, # of meals eaten per day, meal timing, etc.)*
- Patients will be able to take full advantage and benefit from seeing and handling food models in order to recognize and internalize serving sizes of foods, and how to count carbohydrates, read labels, and properly plan meals, and menus, based on food preferences (menus based on the patients' individual preferences greatly improves adherence to the meal plan.)



Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

- To prevent misinformation being provided to patients about the nutritional aspects of prediabetes/diabetes guidelines, and to prevent patients from becoming confused or upset when they hear conflicting statements (ex. “no white foods”, “you just need to follow the Atkins Diet”; or I want you to go buy the Sugar Busters Book”).

To provide optimal outcomes (lower A1cs, target blood glucose levels, etc.):

- The most up-to-date, quality, comprehensive education will be provided in our ADA nationally recognized program (>15 years), based on the most recent American Diabetes Association (ADA) Standards of Medical Care Guidelines (this is what our Diabetes Education Program Curriculum is based).
- For the majority of patients who are referred to our program, they are seen by RD/CDE or RN/CDE for a 1:1 individual one-hour assessment visit to determine education needs and goals, and receive basic survival skills. Then, they are scheduled to attend approximately 9 hours of group classes taught by RD/CDE or RN/CDE. Classes are provided on all 3 campuses—PH Baptist, PHB Parkridge, or PH Richland. The patient is provided with a class notebook with printed information, handouts, and resources for them to take home and use as a reference as needed.
- Adequate time will be provided for quality, comprehensive education---based on the patients' educational needs. Topics covered include:
 - What is prediabetes/diabetes?
 - Prediabetes/Diabetes medications-- if needed--oral agents, “other” injectables (incretin mimetics), and insulin preparation and administration
 - Nutrition & Individualized meal planning
 - Blood glucose monitoring & target ranges
 - Acute complications (hypo- and hyperglycemia)
 - Physical activity guidelines/recommendations;
 - Long-Term complications, & risk reduction
 - Prediabetes/Diabetes Resources
- 98-99% of Class Evaluations have responses of Strongly Agree or Agree, reflecting patient satisfaction with our program, and include comments such as:
 - The program was very helpful to me!
 - I now have a much better understanding of prediabetes.
 - I wish I had attended the diabetes education classes years ago!
 - Very encouraging! I will focus on serving sizes and eating on time.

Additional concerns regarding patients, and prediabetes/diabetes education provided in the Physician Practices (not only Palmetto Health Physician Practices):

- Patients feel if they receive basic education in the physician office, then that is all they need (we have received physician referrals for patients with very elevated A1c levels, and they decline education in our program, stating they are attending classes in the physician office.
- Patients have said they don't need “duplicate” education, and don't have time to come to both.
- Patients become confused, and don't understand why they should attend education at both locations.
- Information provided to the patients in the physician practices is not always the most accurate or up-to-date, and sometimes conflicts with our Prediabetes/Diabetes Education Curriculum (which is updated at least annually based on ADA Standards of Medical Care).

Initial assessment appointments with the CDEs are available at either PH Baptist or PH Richland. We are able to schedule patients within 48-72 hours, but if needed (for very elevated blood glucose levels, high A1c, new to insulin instruction, etc.), patients will be scheduled as soon as possible.



Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

An Order/Consult for Prediabetes/Diabetes Education can be requested in Powerworks, or submitted by fax referral to 803-296-8908, if needed.

Questions? Contact [Jan Lander](#), prediabetes/diabetes education manager, 803-296-3956 or jan.lander@palmettohealth.org

Free Programs

Palmetto Health Diabetes Education Seminars

for people with prediabetes/diabetes and their family members

- Coordinated by PH Diabetes Education CDEs
- Offered quarterly (free of charge)
- PH Baptist Auditorium; Ground Level
1501 Sumter Street; Columbia, SC
- Contact: Care Call at 296-2273

Palmetto Health Office of Community Services

- **Diabetes Prevention Program (DPP)**
- focused mainly on the 29203 zip code, but not exclusively
- no income requirements for participants
- only requirement is that they have to live in Richland, Lexington, or Fairfield county
- For referral to the program, the contact is Shawnee Garrick at 296-3070; or email Shawnee.Garrick@palmettohealth.org

Family Medicine Center Diabetes Ed Group Classes (basic group classes for prediabetes/diabetes with no fee/charge)

- 3209 Colonial Drive
Columbia, SC 29203
- 1st and 3rd Tuesdays of each month (9-11:30am)
- Contact: Claudia Cartledge @ 434-6113



Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.



Living Well with Diabetes

Learning to live with diabetes is critical to your health. At Palmetto Health, we help people of all ages learn to take care of themselves and manage this condition, so it doesn't manage them.

Think you have diabetes? You're not alone.

Diabetes is a chronic condition which can damage many organs of the body if not controlled. Approximately 29 million people in the United States have diabetes, but only 19 million have been diagnosed. At least 86 million Americans have prediabetes, with an increased risk of developing type 2 diabetes.

South Carolina has one of the highest incidences of diabetes.

Signs and symptoms of diabetes include:

- Increased thirst
- Frequency of urination
- Increased hunger

The Diabetes Education programs at Palmetto Health provide quality, comprehensive learning opportunities via Certified Diabetes Nurse Educators and Registered Dietitians. Medical social workers also are available to address financial concerns and social support. Nationally recognized by the American Diabetes Association, our programs support patients with diabetes as they improve their self-management skills, thereby leading to healthier outcomes. We help children, adolescents and adults learn a variety of ways to manage diabetes.

Learning Options

- Individual sessions are offered for patients with type 1 and selected patients with type 2 diabetes.
- Group classes are held (day or evening) as needed for patients with type 2 diabetes.
- The number of sessions depends on patient needs. Type 2 classes consist of one individual and three group sessions.
- Gestational classes are held weekly.

In addition to diabetes education classes, quarterly Diabetes Seminars offer free education opportunities to continue learning more about diabetes.

Cost

The program fee can be filed with any insurance company, including Medicare or Medicaid. Reimbursement for diabetes education is a covered benefit for Medicare, Medicaid and most private insurance. A physician referral is required for participation in the program.

What can you learn?

General Diabetes Overview

Understand the definition, pathophysiology and treatment of diabetes.

Medical Nutrition Therapy

Learn nutrition information and different approaches to meal planning and diabetes management.

Exercise and Activity

Learn the effects of physical activity on blood glucose and how to create a customized plan.

Medications

Learn the purpose, use and side effects of diabetes medications.

Monitoring

Learn about monitor use, including how to record and use results to manage diabetes.

Acute and Chronic Complications

Learn the acute and chronic complications that can occur with diabetes.

Coping, Risk Factor Reduction, Behavior Changes

Learn coping mechanisms for stress and how it can affect diabetes. Also hear problem-solving approaches for diabetes self-care and general health habits.

Community Resources

Obtain a list of community resources, including support groups.

Preconception Care, Gestational Diabetes Management

Learn the effects of diabetes during pregnancy and how to manage gestational diabetes. Instruction includes meal planning, blood glucose monitoring, insulin (if ordered), physical activity and coping.

Pre-Insulin Pump Counseling

Learn about insulin pump therapy and the advantages and disadvantages of pump use.

We can help.

Learn more about what we can do for you by contacting one of our Certified Diabetes Educators at:

- Palmetto Health Baptist 803-296-8906
- Palmetto Health Richland 803-434-7027
- Palmetto Health Baptist Parkridge 803-296-8906



Diabetes Prevention (Managing Prediabetes)

Pre-diabetes is a condition in which blood glucose levels are higher than normal, but not high enough to be classified as full-blown diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

RESOURCES

American Diabetes Association (ADA). Standards of medical care in Diabetes-2015. 2015; 38 (Suppl 1): S1-S93.

Centers for Disease Control and Prevention (CDC). Awareness of prediabetes-United States, 2005-2010. *MMWR Morb Mortal Wkly Rep.* 2013; 62(11): 209-212. <http://www.cdc.gov/mmwr/pdf/wk/mm6211.pdf>

Diabetes Prevention Program Research Group. 10-year follow up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. *Lancet.* 2009; 374 (9702): 1677-1686. Doi: 10.1016/S0140-6736(09)61457-4.

Diabetes Prevention Program Research Group. The 10-year cost-effectiveness of lifestyle intervention or Metformin for diabetes prevention: an intent-to-treat analysis of the DPP/DPPOS. *Diabetes Care.* 2012; 35:723-730.

For Additional Information

Please contact a Certified Diabetes Educator at 803 296-8906 (Palmetto Baptist), 803 434-7027 (Palmetto Richland), or 803 296-8906 (Palmetto Baptist Parkridge).

Reviewed/Updated September 2015