

Diabetes Prevention in Massachusetts: The Diabetes Prevention Program



Diabetes Prevention and Control
www.mass.gov/dph/diabetes

Massachusetts
Department of
Public Health



Overview

- National Diabetes Data
- MA Diabetes Statistics
- Prediabetes Prevalence and Awareness
- Evidence Behind Diabetes Prevention Program
- Diabetes Prevention Program Features
- Prevent Diabetes STAT
- MA Diabetes Prevention Priorities
- Next Steps



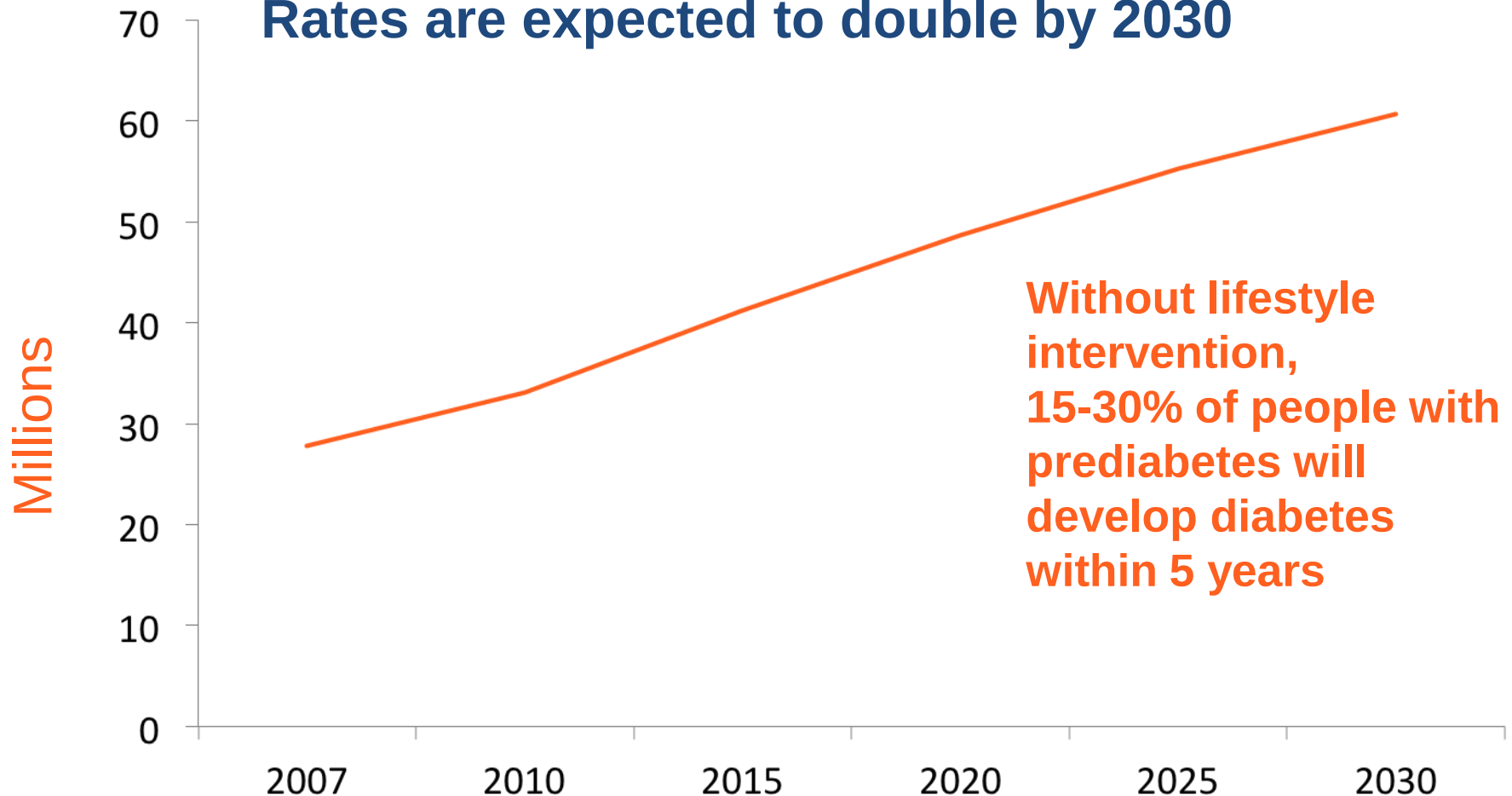
**29 million
with Diabetes**

**86 million
with Prediabetes**

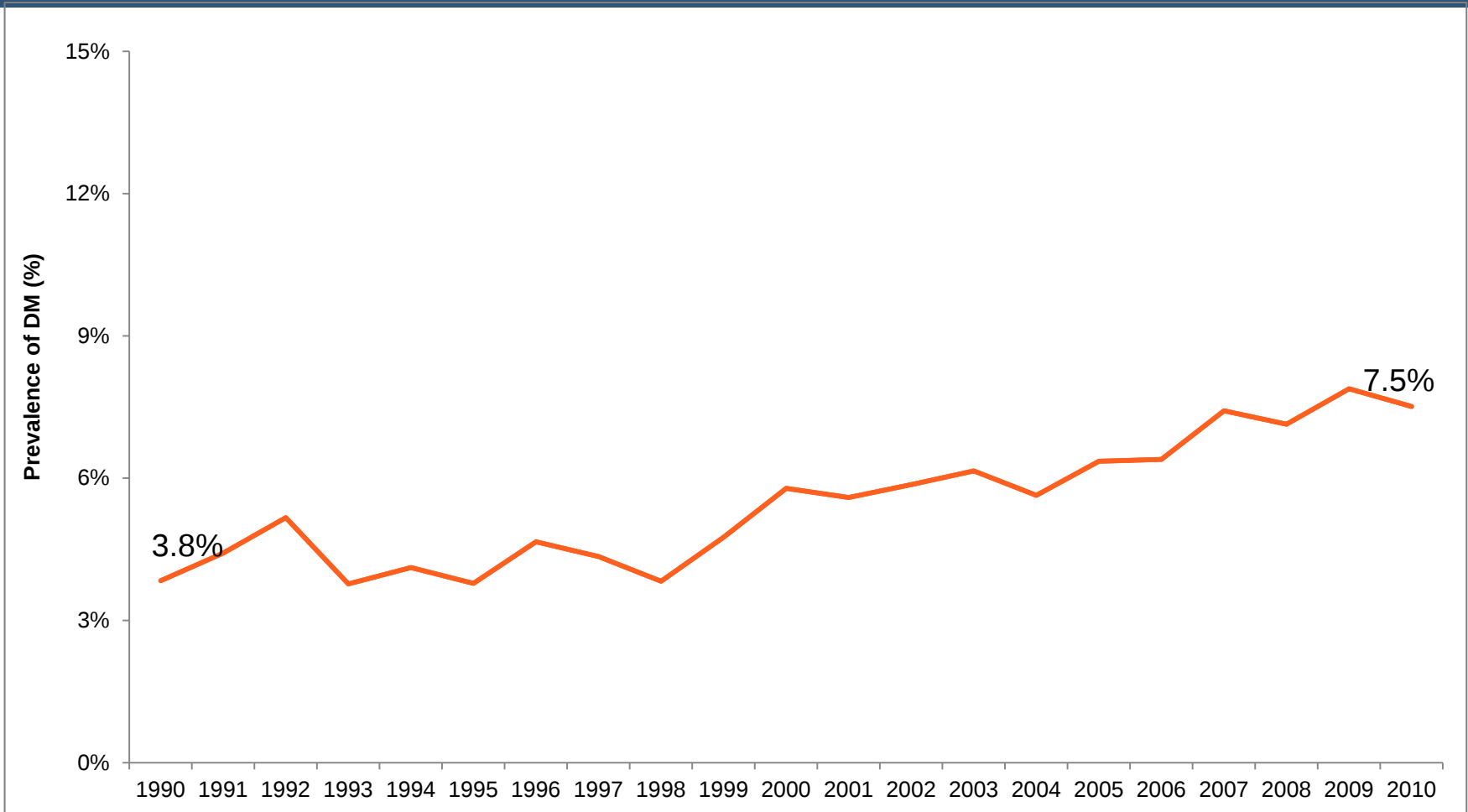
**Only 11% are aware
they have
prediabetes.**

Current Projections of Cases of Diabetes in the United States by 2030

Rates are expected to double by 2030

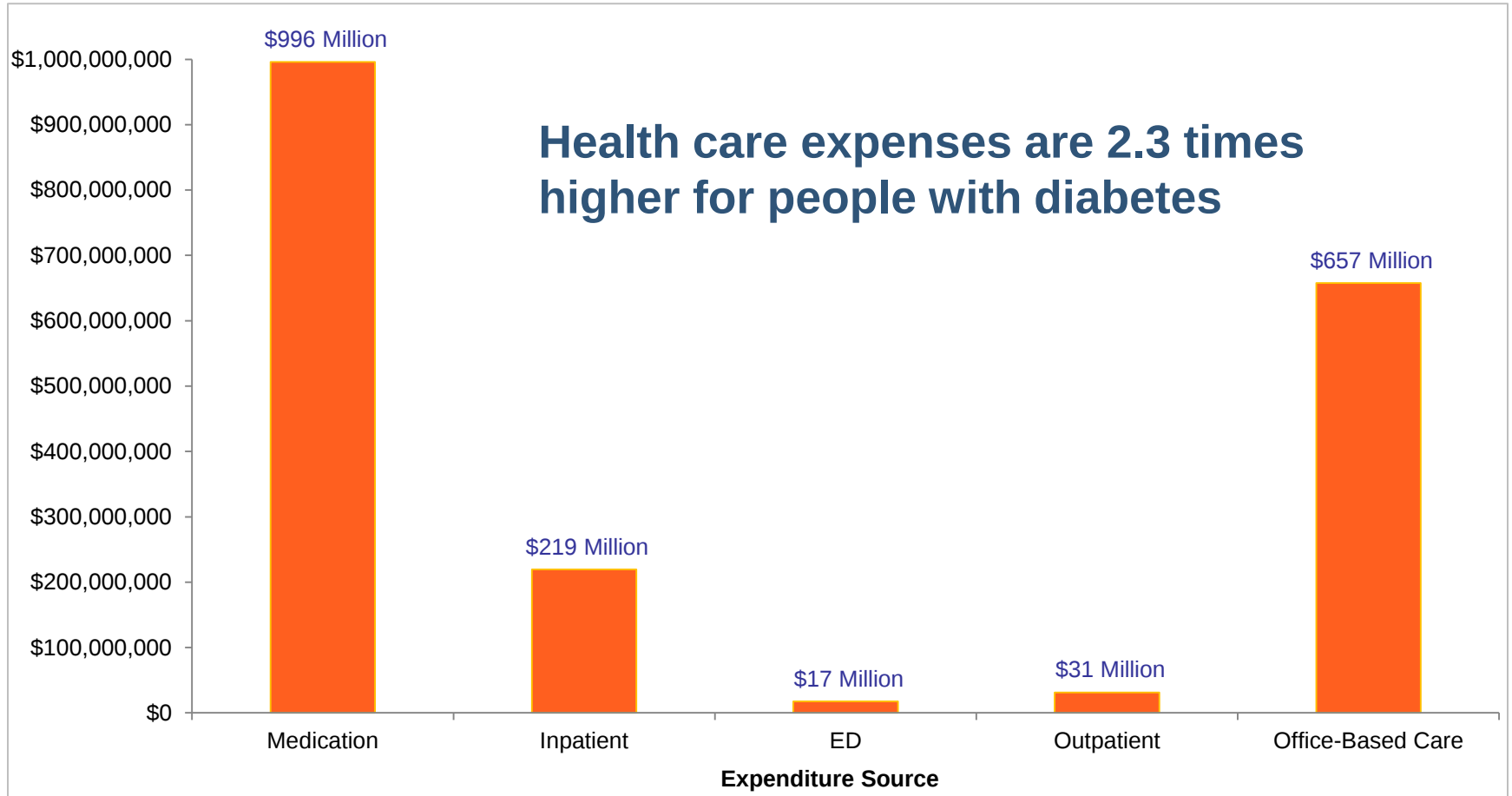


Trends in Diabetes Prevalence in Massachusetts



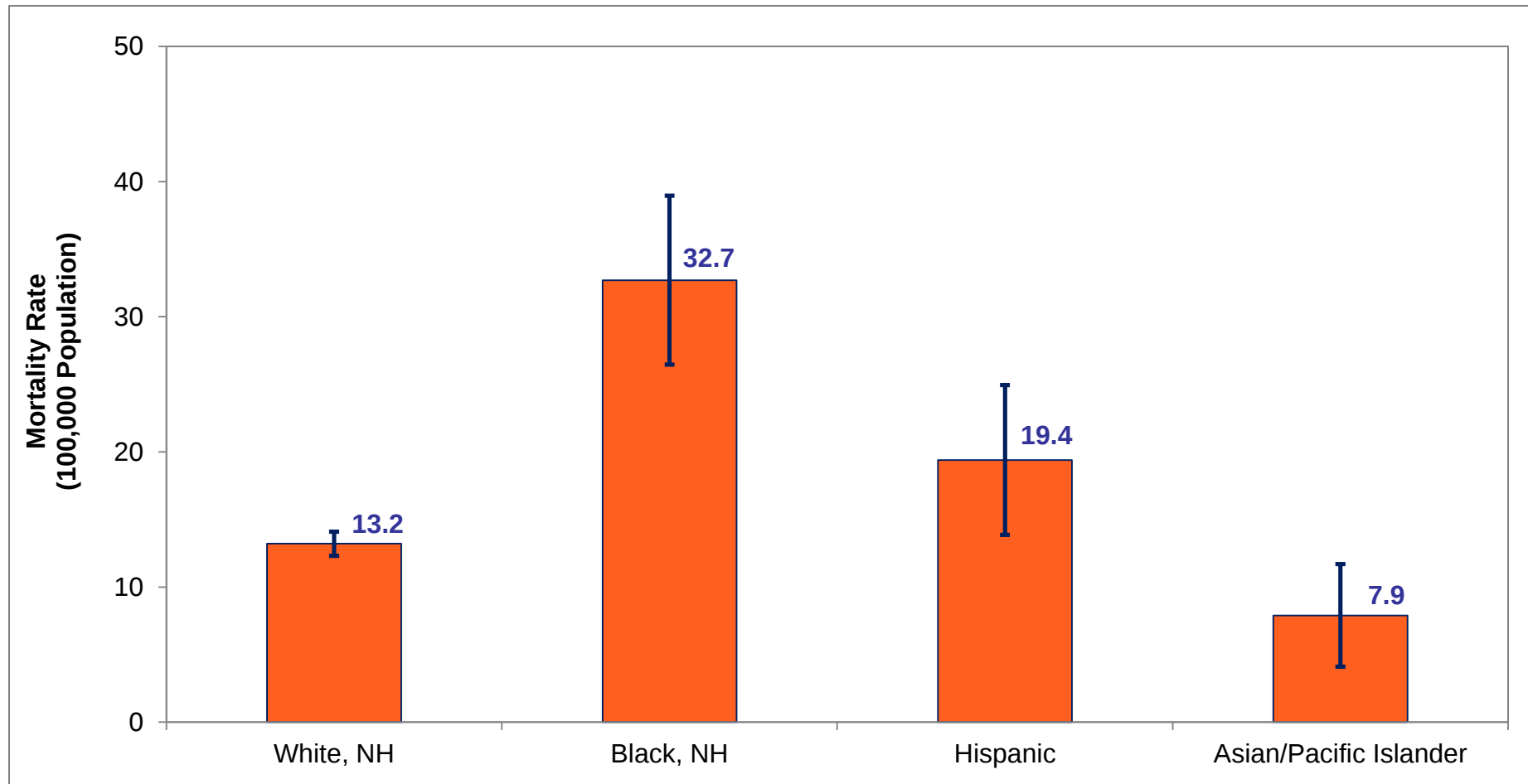
- Massachusetts Behavioral Risk Factor Surveillance System.
- 95% Confidence Interval.
- Adults (18+) only.

Personal Healthcare Expenditures for Diabetes in Massachusetts (2012)



- Source: Medical Expenditure Panel Survey (MEPS), Agency for Healthcare Research & Quality (AHRQ).
- Data based on payments, not charges.
- DM supplies (e.g., syringes) included in the 'Medication' category.

Age-Adjusted Mortality Due to Any Diabetes by Race & Ethnicity in Massachusetts (2013)



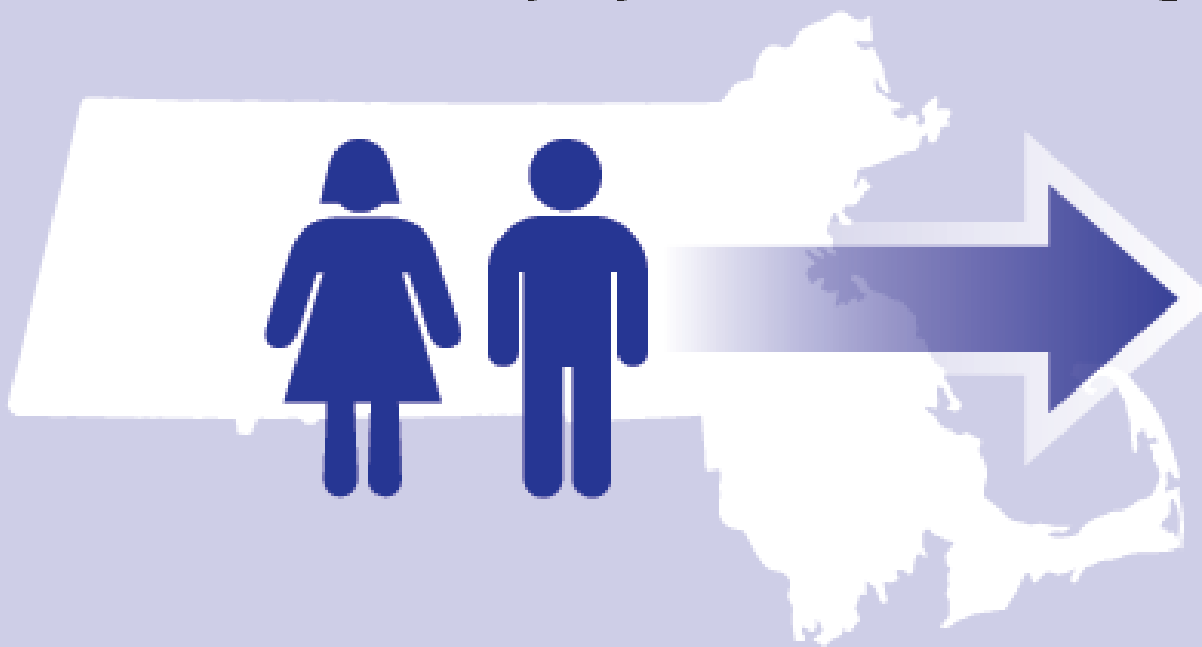
- Source: CDC Wonder (Vital Statistics).
 - Age adjustment based on US population in 2000.
 - NH=Non-Hispanic.
 - American Indian, NH data is suppressed.
 - ICD 10 codes E10 – E14.
- 95% confidence interval.
-Deaths among all ages.

MA Diabetes Statistics Take Aways

- Higher Diabetes Prevalence in MA for:
 - Males
 - Low SES population
 - Low educational attainment
 - 65+ age group
 - Urban and rural populations
 - Racial and ethnic minorities

MA Prediabetes Prevalence and Awareness

In Massachusetts, 1.8 million adults or 35% of the population have prediabetes.



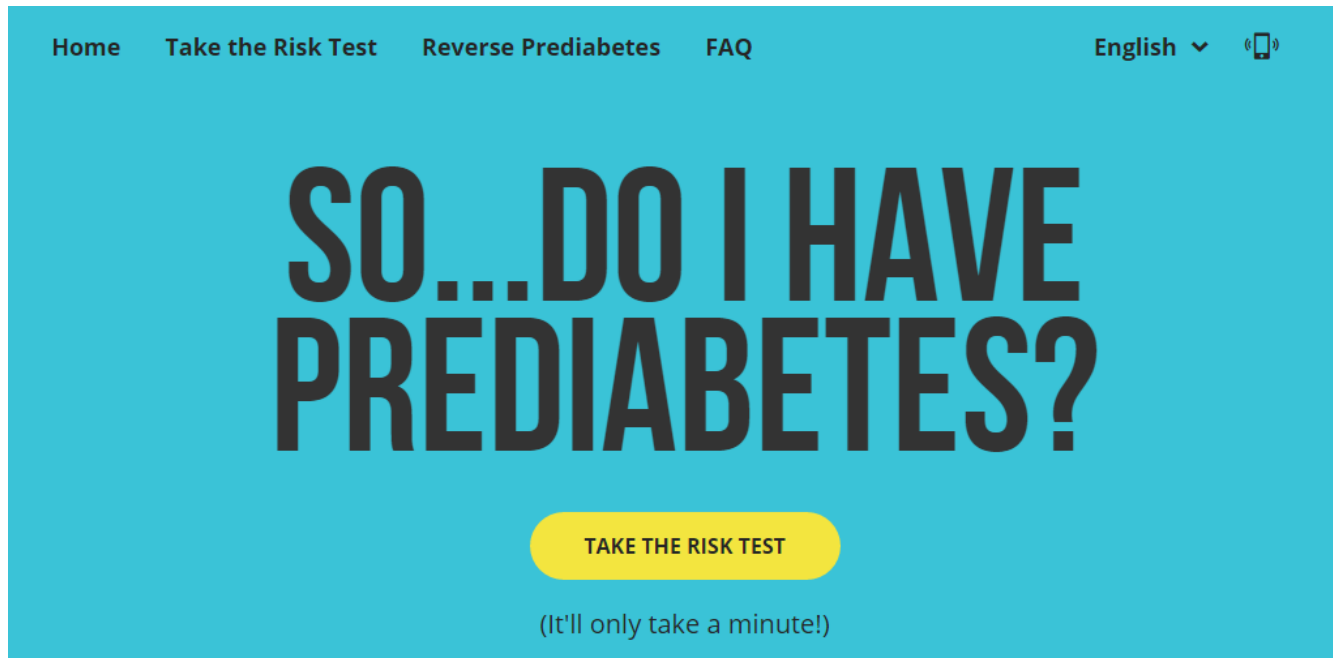
Only 7% are aware of their condition.

Possible Reasons for Prediabetes Knowledge Gap

- Lack of patient awareness
- Lack of provider awareness
- Lack of screening
- Lack of testing
- Lack of communication between patient and provider
- Lack of systems for coding/payment



Patient Awareness

A screenshot of a website with a teal background. At the top, there is a navigation bar with links: 'Home', 'Take the Risk Test', 'Reverse Prediabetes', and 'FAQ'. On the right side of the navigation bar, there is a language selector 'English' with a dropdown arrow and a mobile device icon. The main content area features the text 'SO...DO I HAVE PREDIABETES?' in large, bold, black capital letters. Below this text is a yellow rounded rectangular button with the text 'TAKE THE RISK TEST' in black capital letters. Underneath the button, the text '(It'll only take a minute!)' is displayed in a smaller, black font.

Home Take the Risk Test Reverse Prediabetes FAQ

English  

SO...DO I HAVE PREDIABETES?

TAKE THE RISK TEST

(It'll only take a minute!)

www.DolHavePrediabetes.org

Statewide Campaign



Prediabetes?
That's a thing?

Yes. And 1 in 3 people have it.

Take the risk test at
www.mass.gov/dph/preventdiabetes



MASSACHUSETTS
DEPARTMENT
OF PUBLIC HEALTH

Provider Awareness

Increasing Awareness of Prediabetes: Screening, Prevention & Treatment

PREDIABETES

Definition, Prevalence and Risk Factors

- Prediabetes is a condition in which an individual's blood glucose levels are higher than normal but not high enough to be classified as type 2 diabetes.
 - Fasting blood glucose:** 100-125 mg/dL
 - Oral Glucose Tolerance Test:** 140-199 mg/dL
 - HbA1c:** 5.7 - 6.4%
- The three primary risk factors for diabetes include:
 - Being overweight
 - Over the age of 45
 - Family history of diabetes
- Without making the lifestyle changes noted below, **11%** of adults with prediabetes will develop type 2 diabetes within **3 years**; **15-30%** will go on to develop type 2 diabetes within **5 years**:
 - Improvements in diet
 - Increased physical activity
 - Smoking cessation
 - Stress reduction

In the United States, **86 million adults** or **37%** of the population **have prediabetes**.



In Massachusetts, **1.8 million adults** or **35%** of the population **have prediabetes**.



Screening and Diagnosis

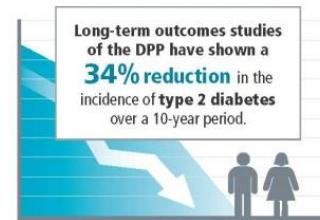
- Medical providers can conduct clinical screenings that effectively detect prediabetes such as **fasting plasma glucose (FPG)**, **Hemoglobin A1c (HbA1c)**, and/or **oral glucose tolerance testing (OGTT)**, especially in people with BMI levels denoting overweight/obese (**BMI $\geq 25\text{kg/m}^2$; if Asian, BMI $\geq 23\text{kg/m}^2$**).
- Non-clinical screening tools, based on self-identified risk assessments, have been promoted and made available through the National Diabetes Prevention Program (<http://www.cdc.gov/diabetes/prevention/pdf/prediabetestest.pdf>).
- The ICD-10 includes a more prevalent billable code (R73.09) that can be used to indicate a diagnosis of prediabetes (or other abnormal glucose). This new code is expected to make it easier for providers and health plans to identify patients with prediabetes and intervene to improve health status over time.

Costs

- It is estimated that in the U.S., \$44 billion is attributed to medical expenses for prediabetes.
- Prediabetes and lifestyle change interventions could potentially save the U.S. \$539 billion in medical costs and create \$992 billion in non-medical benefits by extending years of employment for affected individuals over a 10-year period. Such dramatic savings highlight the need to make the promotion of prediabetes awareness, screening, and lifestyle change a priority on the state and national levels.

DIABETES PREVENTION PROGRAM

- Developed by the CDC, the **Diabetes Prevention Program (DPP)** is an evidence-based intervention for preventing type 2 diabetes. DPP is a year-long program where people with prediabetes learn to make sustainable lifestyle changes. It has been shown to reduce the risk of developing type 2 diabetes by **58% (70% for adults over 60)**.
- DPP is delivered by trained and certified lifestyle coaches at local YMCAs, health care facilities, and other community settings throughout the U.S. Organizations offering DPP are formally recognized by the CDC.
- In July of 2015, the national Community Preventive Services Task Force published a recommendation statement (<http://www.thecommunityguide.org/diabetes/combineddietandpa.html>) supporting the use of combined diet and physical activity promotion programs to deter progression to type 2 diabetes in individuals at increased risk.
- "Prevent Diabetes STAT" (<http://www.cdc.gov/media/releases/2015/p0311-diabetes-STAT.html>), a tool kit jointly produced by the CDC and AMA, connects health care providers and individuals with screening, testing, and referral information for DPPs. This site also provides recommendations to employers, insurers, community-based organizations, health systems, and medical associations about how to prevent diabetes.
- A new CPT code (0403T), available as of January 2016, can be used for the purpose of reporting provision of services in a diabetes prevention program.



SCREEN: ☒

Incorporate routine screening for prediabetes among your patients using the CDC risk test

TEST: ☒

Order one of the three blood tests to confirm diagnoses of prediabetes among your patients
Use new ICD-10 code for diagnosis of prediabetes

ACT TODAY: ☒

Become familiar with the DPPs in your region and refer your eligible patients
Talk to your payers about whether the DPP is, or can be, a covered benefit for your patients

Screening

- USPSTF supports screening as part of a CV risk assessment in all adults aged 40-70 who are overweight or obese.
- ADA recommends screening for all adults 45 and older OR
- Adults 18 or older who are overweight or obese and have at least 1 risk factor

ARE YOU AT RISK FOR

TYPE 2 DIABETES?



Diabetes Risk Test

1 How old are you?

Less than 40 years (0 points)
40–49 years (1 point)
50–59 years (2 points)
60 years or older (3 points)

Write your score
in the box.

2 Are you a man or a woman?

Man (1 point) Woman (0 points)

3 If you are a woman, have you ever been diagnosed with gestational diabetes?

Yes (1 point) No (0 points)

4 Do you have a mother, father, sister, or brother with diabetes?

Yes (1 point) No (0 points)

5 Have you ever been diagnosed with high blood pressure?

Yes (1 point) No (0 points)

6 Are you physically active?

Yes (0 points) No (1 point)

7 What is your weight status? (see chart at right)

If you scored 5 or higher:

You are at increased risk for having type 2 diabetes. However, only your doctor can tell for sure if you do have type 2 diabetes or prediabetes (a condition that precedes type 2 diabetes in which blood glucose levels are higher than normal). Talk to your doctor to see if additional testing is needed.

Type 2 diabetes is more common in African Americans, Hispanics/Latinos, American Indians, and Asian Americans and Pacific Islanders.

Higher body weights increase diabetes risk for everyone. Asian Americans are at increased diabetes risk at lower body weights than the rest of the general public (about 15 pounds lower).

For more information, visit us at diabetes.org/alert or call 1-800-DIABETES (1-800-342-2383)

Height	Weight (lbs.)		
4' 10"	119-142	143-190	191+
4' 11"	124-147	148-197	198+
5' 0"	128-152	153-203	204+
5' 1"	132-157	158-210	211+
5' 2"	136-163	164-217	218+
5' 3"	141-168	169-224	225+
5' 4"	145-173	174-231	232+
5' 5"	150-179	180-239	240+
5' 6"	155-185	186-246	247+
5' 7"	159-190	191-254	255+
5' 8"	164-196	197-261	262+
5' 9"	169-202	203-269	270+
5' 10"	174-208	209-277	278+
5' 11"	179-214	215-285	286+
6' 0"	184-220	221-293	294+
6' 1"	189-226	227-301	302+
6' 2"	194-232	233-310	311+
6' 3"	200-239	240-318	319+
6' 4"	205-245	246-327	328+
	(1 Point)	(2 Points)	(3 Points)

You weigh less than the amount in the left column (0 points)

Adapted from Bang et al., Ann Intern Med 151:775-783, 2009.
Original algorithm was validated without gestational diabetes as part of the model.

Lower Your Risk

The good news is that you can manage your risk for type 2 diabetes. Small steps make a big difference and can help you live a longer, healthier life. If you are at high risk, your first step is to see your doctor to see if additional testing is needed. Visit diabetes.org or call 1-800-DIABETES (1-800-342-2383) for information, tips on getting started, and ideas for simple, small steps you can take to help lower your risk.



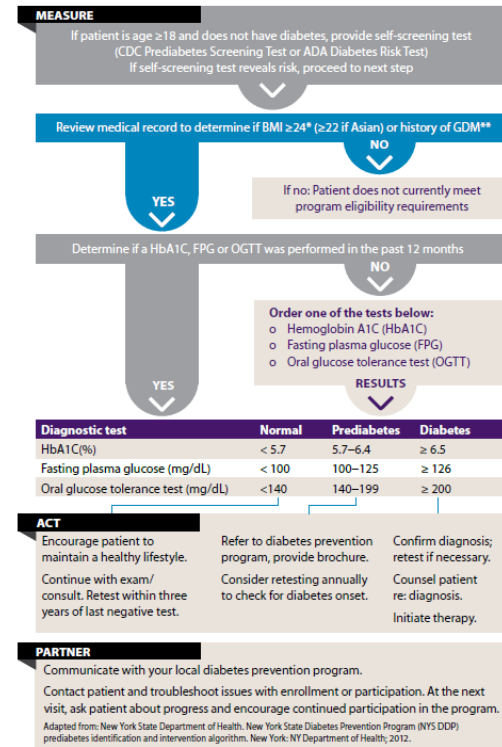
Special Thanks to our National Sponsor

Walgreens

Testing

- Retest every 3 years if normal
- Confirm diagnoses with 2 tests taken on separate days
- Retest every 6-12 months after a diagnosis

Point-of-care prediabetes identification



* Some diabetes prevention program providers require a BMI ≥25. Please check with your diabetes prevention program provider for eligibility requirements.

** History of GDM = eligibility for diabetes prevention program



Prevent Diabetes **STAT** | Screen / Test / Act Today™



The American Medical Association and the Centers for Disease Control are supporting physicians, care teams and patients to prevent diabetes.

— 20 —

Diagnostic test	Normal	Prediabetes	Diabetes
HbA1C(%)	< 5.7	5.7–6.4	≥ 6.5
Fasting plasma glucose (mg/dL)	< 100	100–125	≥ 126
Oral glucose tolerance test (mg/dL)	<140	140–199	≥ 200

Communication and Referral

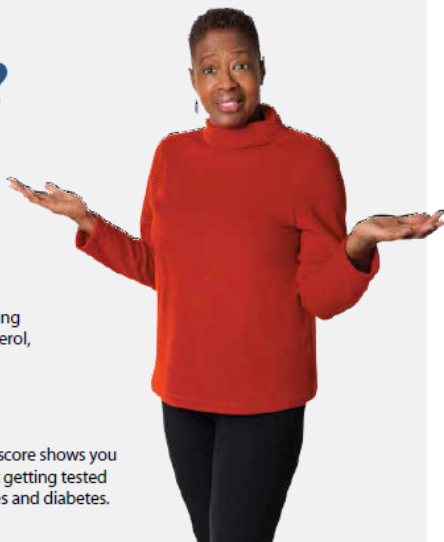
Prediabetes? That's a thing?

Yes, **1 in 3 people** have **prediabetes**, which means they have a much greater risk of developing Type 2 diabetes. Prediabetes happens when your blood sugar (glucose) level is higher than normal, but not high enough to be diagnosed as diabetes. In Massachusetts, **35% of adults** have prediabetes, but **most of them don't know they have it**.

Health risks for prediabetes and diabetes include being overweight or obese, high blood pressure or cholesterol, and being inactive.

Take the Risk Test

See the reverse side for a prediabetes risk test. If your score shows you are at high risk, talk to your healthcare provider about getting tested for prediabetes. A blood test can diagnose prediabetes and diabetes.



What can I do to lower my risk?

By **improving your diet** and increasing **physical activity**, you can reverse prediabetes and reduce your risk of diabetes in the future. Making healthy food choices and getting regular physical activity can lower weight, blood pressure and cholesterol - and help you keep a normal blood sugar level. Programs that focus on diet and physical activity - like the **Diabetes Prevention Program** - are proven to reduce the risk of type 2 diabetes by up to 58% (71% reduction for those over age 60).

The Diabetes Prevention Program

The Diabetes Prevention Program (DPP) is a year-long, group program held at a local community or health center, such as a YMCA.

A trained lifestyle coach will help you learn:

- **Practical ways to eat healthy**
- **How to add physical activity to your daily routine**
- **How to manage stress**

Joining a DPP may be free or you may be eligible for financial assistance. Contact a local program to learn more: <http://www.mass.gov/dph/preventdiabetes>



¹National Diabetes Prevention Program: For Healthcare Providers, Centers for Disease Control and Prevention, August 2015. http://www.cdc.gov/diabetes/prevention/resources_hcp.htm

Are you at risk for diabetes?

Prediabetes: 1 in 3 adults have it.

Prediabetes is a condition where your blood sugar level is above normal.

Prediabetes means you have a higher risk for developing Type 2 diabetes.

Diabetes

Type 2 diabetes is the most common form of diabetes. This condition happens when a person's body doesn't make enough of the hormone insulin, or it doesn't use insulin correctly. If Type 2 diabetes isn't controlled, it can have serious health consequences, including blindness, kidney or heart disease.

Type 1 diabetes can happen at any age, but commonly occurs in children and young adults.

Studies of **Diabetes Prevention Program** showed that losing 5-7% of body weight, by reducing calories and increasing physical activity, **cuts the risk of developing diabetes by 58%** (70% for adults over 60).

Risk factors that you can change are:

- Being overweight or obese
- Low activity level
- Unhealthy diet
- High blood pressure
- High cholesterol

Other risk factors that you can't change include:

- Age of 45 or above
- Race/ethnicity - African American, Hispanic/Latino, American Indians, Asian Americans, Pacific Islanders
- Family history of diabetes
- History of Gestational Diabetes
- Having Polycystic Ovarian Syndrome

Ask your doctor about your risk for prediabetes or diabetes.

In Massachusetts, 35% of adults have prediabetes but only 7% know that they have it.*

Prevent Diabetes

You can help prevent diabetes through a healthy diet and physical activity. If you're at risk, ask your doctor about the **Diabetes Prevention Program (DPP)** - a one year program led by a trained lifestyle coach. This program provides a supportive group environment where you will:

- Learn how to make healthy food choices
- Add physical activity into your daily routine
- Manage stress

This program may be free or offered at a reduced cost based on your income or the DPP location. Typically the program cost is \$400.

To learn more about preventing prediabetes and diabetes, visit mass.gov/dph/preventdiabetes.



*Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *New England Journal of Medicine*. 2002;346(6):393-403. <http://www.ncbi.nlm.nih.gov/pubmed/11832527>

Coding/Payment

- New ICD-10 code for prediabetes and abnormal glucose is R73.09
- Diabetes Prevention Program specific CPT code is 0403T (Category 3 so not yet a billable requirement)

National Diabetes Prevention Program Research Study

- A major multi-center, NIH sponsored national RCT (n = 3234)
- Representative sample of age, gender, and ethnicity
- Eligible participants were randomized to one of three interventions
 - Control
 - Metformin
 - Lifestyle Intervention



Evidence for National Diabetes Prevention Program

- The DPP research study showed that participants in a structured lifestyle change program (Lifestyle Intervention) who achieved:
 - **Modest weight loss of 5-7 percent**
- Were able to:
 - Reduce type 2 diabetes by **58% (71% in those over age 60)**
 - Improve blood pressure and lipids (**25% reduction in medication use**)
- 10-year f/u shows continued reduction in new cases of type 2 diabetes (34%)
- Translational studies demonstrated that trained lay health workers are as effective in delivering the lifestyle change program at 1/3 of the cost, while achieving similar results



Diabetes Prevention Program

- Year long program
 - 16 weekly group sessions
 - 6-8 monthly follow-up sessions
- Delivered by trained lifestyle coaches
- Uses CDC approved curriculum
 - Participants learn healthy lifestyle skills like healthy eating, physical activity, problem solving, stress reduction and coping
- Offered in community locations
 - YMCAs, Wellness Centers, Churches etc.
- Group support (8-15 participants per class)
- Both in-person and virtual options available
- Adherence to CDC quality standards

DPP Eligibility Criteria

- 1) Be **at least 18 years old**; and
- 2) Be **overweight** (BMI greater than or equal to 25 kg/m² ; greater than or equal to 23 kg/m² if Asian.)
- 3) And have **established risk factors** for developing type 2 diabetes (ADA Risk Test)

OR have been **diagnosed with prediabetes**

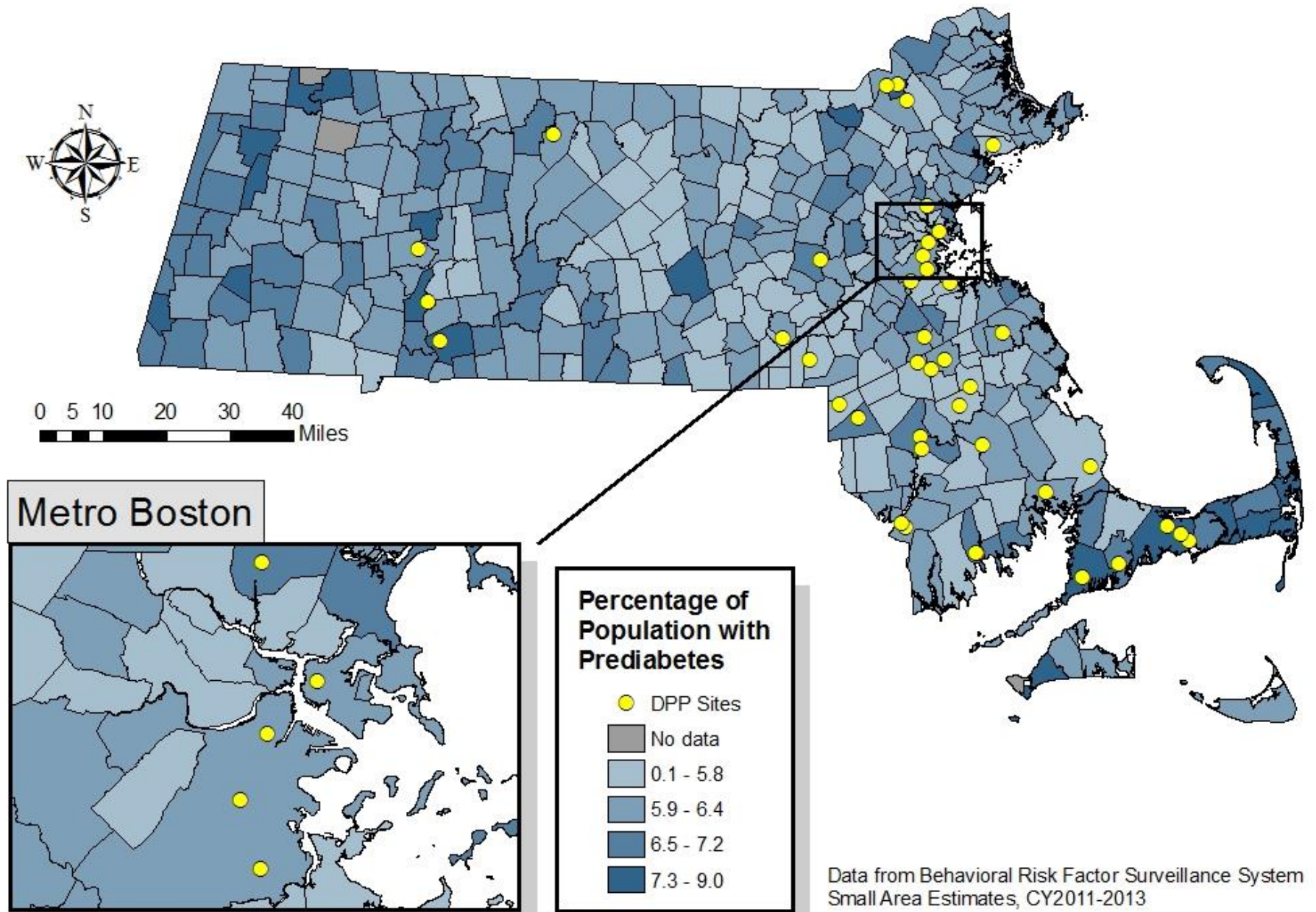
(FBG 100-124 mg/dL, HbA1c 5.7-6.4%, OGTT 140-199 mg/dL)

OR have been previously diagnosed with **gestational diabetes**.

DPP Costs

- Program costs range from \$400-\$600 per participant for a full year program
- A limited number of MA insurers cover or subsidize the cost
- Most DPP providers subsidize the cost for patients who can not afford it

Prediabetes Prevalence and Diabetes Prevention Program (DPP) Sites in Massachusetts



Prevent Diabetes STAT

Screen, Test, Act Today™

- ❑ Launched by the AMA and CDC to:
 - Raise awareness about prediabetes
 - Communicate a sense of urgency
 - Increase screening, testing and referrals to CDC-recognized diabetes prevention programs
 - Rally front-line healthcare providers, community organizations, public health professionals, health systems, employers, insurers, the public to ACT today

Prevent Diabetes **STAT**



Prevent Diabetes **STAT**

Screen, **T**est, **A**ct – **T**oday

86 MILLION
AMERICAN ADULTS
HAVE PREDIABETES

9 OUT OF **10** PEOPLE WITH
PREDIABETES DON'T
KNOW THEY HAVE IT.*

FOR HEALTH CARE PROFESSIONALS
FOR THE GENERAL PUBLIC

What you can do!

- Screen
 - Assess your patients risk for diabetes using the ADA Diabetes Risk Test or Prediabetes Algorithm
(<http://main.diabetes.org/dorg/PDFs/risk-test-paper-version.pdf>)
- Test
 - Diagnose your patients with prediabetes using HbA1c, FBG, or OGTT (ICD-10: R73.09)
- Act
 - Refer your eligible patients to the nearest DPP provider

How to locate and refer to DPPs in MA?

- 1. Visit www.mass.gov/dph/preventdiabetes to find program info and contact directly

The screenshot shows the Massachusetts Department of Public Health's Diabetes Prevention Program (DPP) website. The page has a blue header with a breadcrumb trail: Home > Government Agencies > Departments & Divisions > Public Health > Bureaus and Programs > Community Health > Diabetes Prevention and Control Program > Diabetes Prevention. The main heading is "Diabetes Prevention". Below it is a large image of a bowl of salad, a stethoscope, and a blood pressure cuff. To the right of the image, the "Friendly URL" is listed as www.mass.gov/dph/preventdiabetes. Below the image, the text reads: "You can prevent type 2 diabetes! About 1 in every 3 adult Americans has prediabetes. For those over 65, 1 in every 2 has prediabetes. In Massachusetts, there may be as many as 1.8 million adults who have prediabetes. Prediabetes happens when blood sugar (glucose) levels are higher than normal, but not high enough to be diabetes. People with prediabetes are much more likely to develop diabetes than people with normal blood sugar levels. A simple blood test can determine your blood sugar levels. If you have prediabetes, you probably don't know it. 1 in 3 MA adults have prediabetes, but only 7% know they have it. Find out if you are at risk for diabetes by [taking the online quiz!](#) If you think you might be at risk for prediabetes or diabetes, ask your doctor for a blood test to measure glucose. Knowing these results is the first step in preventing a more serious condition." To the right of the main content, there are three promotional boxes: "DIABETES PREVENTION PROGRAM" with a "Learn More!" link, "FIND A DPP NEAR YOU" with a "Join now!" link, and "For Providers" with a "Details" link. At the bottom right, there is a "Related Links" section with a link to "Diabetes Prevention and Control".

Home > Government Agencies > Departments & Divisions > Public Health > Bureaus and Programs > Community Health > Diabetes Prevention and Control Program > Diabetes Prevention

Diabetes Prevention

Friendly URL:
www.mass.gov/dph/preventdiabetes

DIABETES PREVENTION PROGRAM
Learn More! ▶

FIND A DPP NEAR YOU
Join now! ▶

For Providers
Details ▶

Related Links
Diabetes Prevention and Control

How to locate and refer to DPPs in MA?

- 2. Visit www.healthyliving4me.org or call 1-978-946-1211 to get connected with a nearby program

The screenshot shows the homepage of the Healthy Living Center of Excellence. The header features the organization's logo, a navigation menu with links to Home, Participant Champions, Leaders Training Opportunities, and Leaders Information, a phone number (978-946-1211), a search bar, and a 'MAKE A REFERRAL' button. The main content area includes a 'Welcome' section with a description of the center's collaborative mission and a 'LEARN MORE' button. Below this are three featured sections: 'Programs' with an image of two elderly men, 'About Us' with an image of a group of people, and 'Programas en Español' with an image of two women. Each section includes a brief description and a 'READ MORE' button.

the healthy living
Center of Excellence

Home Participant Champions Leaders Training Opportunities Leaders Information

978-946-1211 Resize text: A⁺ A⁻ MAKE A REFERRAL

About Us Program Descriptions Program Schedule Contact Us Search ...

Welcome

The Healthy Living Center of Excellence is an innovative collaborative between Elder Services of the Merrimack Valley, Inc., a community based organization and Hebrew Senior Life, a medical provider with a goal of helping seniors remain independent and in the community as long as possible. By combining our expertise in the aging service and medical networks, the collaborative encourages older adults to become active partners in managing their health.

LEARN MORE

Programs

The Center offers over a dozen programs which help you maintain your self- confidence and improve your overall health. The variety of programs encompasses many aspects of healthy living all designed to help you become more active partner in your health care

READ MORE

About Us

The Center fosters evidence-based programs through regional collaboratives that include community based organizations, health care providers and plans, government, foundations and for-profit partners. These programs all occur in community settings and are

READ MORE

Programas en Español

El Centro de Excelencia de Salud es una serie de programas diseñado para educar y ofrecer apoyo a personas mayores con problemas de salud. Los programas en español fueron creados especialmente para la cultura Latina

READ MORE

MA DPP Priorities

- State Diabetes Prevention Network
- Increase coverage/reimbursement for DPP
- Increase awareness of prediabetes as a treatable condition
- Identify provider and employer champions
- Increase clinical prediabetes screening, testing, and referrals to DPPs
- Increase availability and capacity of DPP providers

Action Steps

- Use Prevent Diabetes STAT in your practice to Screen, Test and Act Today
- Talk to your patients about prediabetes
- Advocate on behalf of your patients by telling payers to cover DPP
- Become familiar with local DPP providers to refer patients to, or host one on site
- Be a DPP champion and spread the word to fellow programs and providers

AMA CME Credit – STEPS Forward™ Module

- <https://www.stepsforward.org/modules/prevent-type-2-diabetes>
- Preventing type 2 diabetes in at-risk patients
- Offers 1.0 CME Credit; ends in June 2016

How will this module help me identify prediabetes and prevent the onset of diabetes?

- 1 Provide tools and resources on screening, testing and referral
- 2 Learn from practices that have successfully implemented prediabetes screening and education programs
- 3 Identify evidence-based prevention programs for patient referral
- 4 Get answers to commonly asked questions

- AMA also offers **ICD-10 implementation resources** and **Performance Improvement tools**

Thank You!

Max Alderman

Diabetes Program Coordinator

MA Department of Public Health

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