

National Plan for Action Devoted to Detect, Prevent, Treat Diabetes

The HHS, along with other public health experts, designed the action plan in order to curb current trends in diabetes rates.

BY LAURA SUAREZ, ASSOCIATE EDITOR

Initiatives intended to better prevent, detect and treat diabetes are central components in this year's Department of Health and Human Services (HHS) agenda.

HHS Secretary Tommy G. Thompson announced the creation of *Diabetes: A National Plan for Action* (NDAP), a program aimed at reducing the prevalence of diabetes, promoting detection and monitoring treatment options.

INTRODUCTION

"Diabetes and its complications seriously diminish the quality of life for individuals suffering from this disease," wrote Thompson. "In order to reverse these trends, the [HHS] has increased its efforts to address this health crisis."

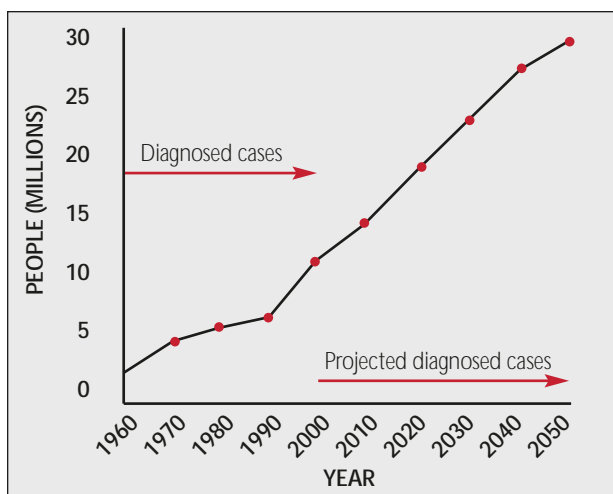


Figure 1. Prevalence of diagnosed and projected cases of diabetes in the United States, 1960-2050.

NDAP is a program aimed at reducing the prevalence of diabetes, promoting detection and monitoring treatment options.

The plan includes action steps for individuals and families, as well as the medical community, government officials and policy makers, employers and members of the media. The goal of the plan is to reduce the instance of diabetes in the United States.

"Individual action alone is not sufficient for addressing diabetes," authors of NDAP wrote.

Forty-one million US citizens have prediabetes and 18 million have diabetes, with diagnoses increasing each year: A four- to eightfold increase has occurred in the past half century. Forty-seven percent more people had diabetes in 2002 than in 1997, and this may rise to 165% more by 2050 (Figure 1).

Statistics "do not tell the whole story of the true impact that diabetes has on Americans," wrote Thompson. "Diabetes touches millions of Americans ... in ways that are difficult ... to measure."

NDAP is the government's attempt to reverse diabetic trends. As it looks now, diabetes will develop in one out of every three children born in 2000.

NDAP is comprised of three sections: prevention, detection and treatment. Each section lists action steps that individuals, family and friends, schools, health care providers, employers, health insurance providers, communities, the media, researchers and professional educators and governments should follow.

TABLE 1. RISK FACTORS AND ASSOCIATED MEDICAL CONDITIONS FOR DIABETES

Risk Factor	Type 1 Diabetes	Type 2 Diabetes	Prediabetes	Gestational Diabetes
• Family History				
Family member with diabetes	✓	✓	✓	✓
• Lifestyle				
Overweight or obesity		✓	✓	✓
Sedentary lifestyle (exercise <3 times per week)		✓	✓	✓
• Associated Medical Conditions or Events				
Impaired glucose tolerance or impaired fasting glucose		✓	✓	✓
High blood pressure		✓	✓	
Low HDL cholesterol and/or high triglycerides		✓	✓	
History of gestational diabetes		✓	✓	✓
Delivered baby 9 lbs or heavier		✓	✓	✓
• Race/Ethnicity				
Black		✓	✓	✓
Hispanic/Latino-American		✓	✓	✓
Native-American		✓	✓	✓
Asian-American		✓	✓	✓
Native Hawaiian/Pacific Islander ancestry		✓	✓	✓

PREVENTION

Weight gain and/or lack of physical activity contribute to the risk of diabetes (Table 1). Recent clinical trials suggest that lifestyle changes like tight blood glucose control, weight-loss and increased physical activity can reduce body mass index and lower a person's risk for developing diabetes and its complications.

According to results from the Diabetes Prevention Program (DPP), a study of 3,234 people with impaired glucose tolerance, people participating in ≥ 30 minutes of physical activity 5 days a week lost 5% to 7% of their body weight. An overall 58% reduction in the prevalence of type 2 diabetes was also seen over the 3-year study.

Prevention methods, as suggested by NDAP, should include weight-loss through a reduced fat, low-calorie diet in combination with increased physical activity. Family and friends, schools, health care and health insurance providers, employers and other mem-

TABLE 2. SIGNS AND SYMPTOMS OF DIABETES

Symptoms	Type 1 Diabetes	Type 2 Diabetes
• Frequent urination	✓	✓
• Unusual thirst	✓	✓
• Extreme hunger	✓	✓
• Unusual weight-loss	✓	
• Extreme fatigue	✓	✓
• Sudden vision changes	✓	✓
• Fruity, sweet or wine-like odor on breath	✓	
• Heavy, labored breathing	✓	
• Stupor, unconsciousness	✓	
• Irritability	✓	✓
• Frequent infections	✓	✓
• Blurred vision	✓	✓
• Cuts/bruises that are slow to heal	✓	✓
• Recurring skin, gum or bladder infections		✓

bers of the community should help individuals at risk for type 2 diabetes build healthy eating and exercise patterns.

“It is not easy for many people to lose weight and increase their physical activity,” the authors wrote. “However, it is imperative to build upon the results of the DPP and encourage people to take the necessary steps to prevent type 2 diabetes.”

DETECTION

In the United States, 5 million of the 18 million people with diabetes are unaware that they have the disease. Although signs and symptoms are more dramatic in type 1 diabetes, anyone who is at risk or experiences symptoms (Table 2) should be tested for the disease.

Such tests include:

- Fasting plasma glucose test to determine the presence of prediabetes (100 mg/dL to 125 mg/dL) or diabetes (≥ 126 mg/dL);
- Oral glucose tolerance test (140 mg/dL to 199 mg/dL determines a presence of prediabetes and for dia-

betes ≥ 200 mg/dL);

- Blood glucose test during a random plasma glucose test (200 mg/dL indicate the presence of symptoms associated with diabetes).

In the event that test results are positive, a second fasting plasma glucose or oral glucose tolerance test

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should be administered on another occasion.

Because diabetes duration affects the severity of complications, the Diabetes Detection Initiative was created in 2003 as a community effort to identify and treat those unaware that they had diabetes. Early detection could ease the complications associated with diabetes.

“Knowledge of the risk factors and signs and symptoms of diabetes and prediabetes may help increase awareness about the need to be tested for diabetes,” wrote the authors, who suggested that an active involvement to detect diabetes may prompt others to get tested for diabetes.

TREATMENT

Treatment in an effort to avoid blindness, lower extremity amputations, kidney failure and other diabetes complications is important. In combination with prevention methods, preventive medical care services can prevent or delay the onset of such complications.

The treatment portion of the action plan suggests that individual diabetes management plans should be established (Table 3). Such plans create goals for HbA1c, blood glucose, blood pressure and cholesterol levels. They also set exercise and diet plans.

For more information on *Diabetes: A National Plan for Action*, and for a full list of suggestions on the prevention, detection and treatment of diabetes, visit www.smallstep.gov and www.nal.usda.gov/fnic/dga/dguide95.html.

In addition to diabetes prevention, detection and treatment methods, the full document also includes information on federal diabetes programs and resources like the Medicare Prescription Drug, Improvement and Modernization Act, which as of January 1 now includes coverage for diabetes screening for Medicare beneficiaries. ■

US Department of Health and Human Services. Diabetes: A National Plan for Action. Washington DC: US Dept of Health and Human Services; December 2004.

TABLE 3. DIABETES CARE CHECKLIST
<p>Daily diabetes care activities</p> <ul style="list-style-type: none"> • Exercise • Follow meal plan • Take diabetes medication • Check blood glucose as recommended by a health care provider • Check feet for sores that are not healing properly • Brush teeth and floss <p>At doctor visits</p> <ul style="list-style-type: none"> • Get feet checked • Check blood pressure <p>At least twice per year</p> <ul style="list-style-type: none"> • Get an HbA1c test • Get a dental check-up and have teeth cleaned by a dental professional <p>At least once per year</p> <ul style="list-style-type: none"> • Get a dilated eye exam • Get a complete foot exam – checking circulation and for changes in foot shape • Get a urine test for kidney function • Get a flu shot • Get blood lipid levels checked