

Insulin-Dependent Diabetes



U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES

Public Health Service
National Institutes of Health

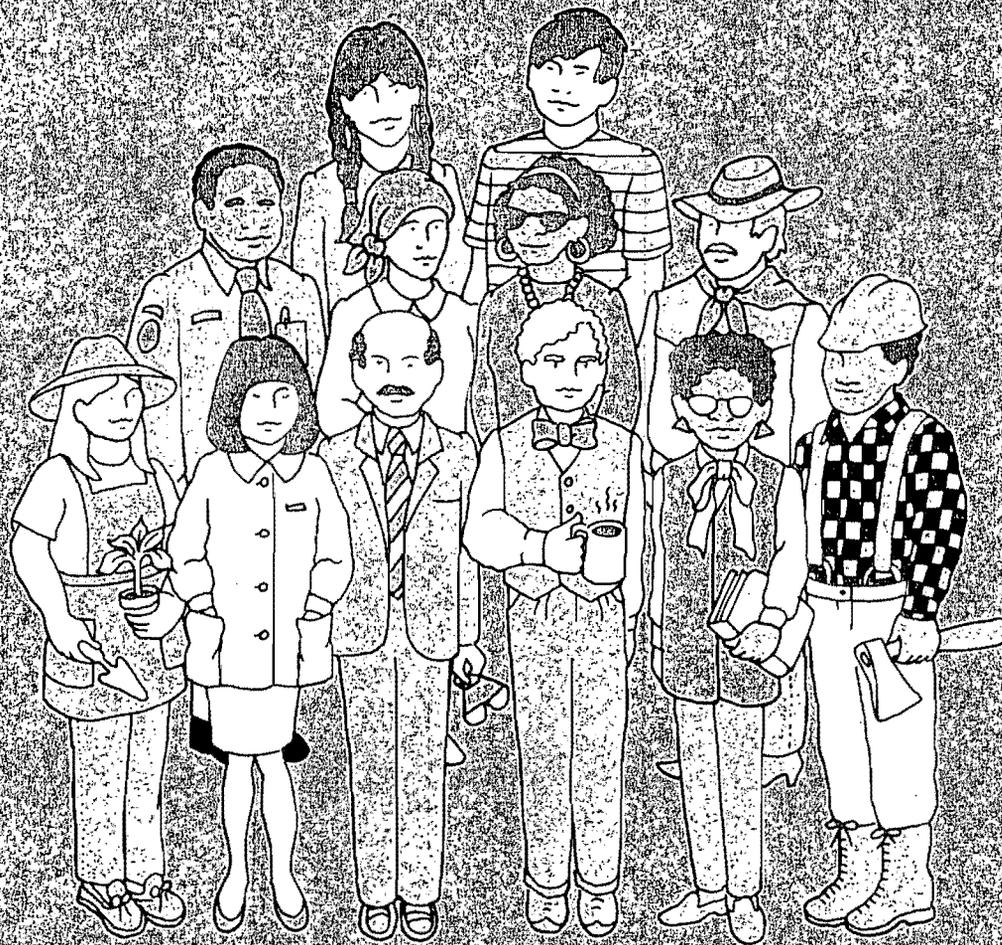
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The Diabetes Dictionary



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DIABETES

16 million persons in the U.S. have diabetes, and 8 million are not aware of it.

27% of all Medicare costs annually are to treat persons with diabetes.

Diabetes is the 7th leading cause of death.

The American Diabetes Association estimates that we could save \$6.5 billion annually if we establish diabetes prevention and control programs.

Diabetes

A Serious Public Health Problem

AT-A-GLANCE

1996



Translating Science Into Care

*Those who suffer losses due to diabetes are not just statistics on a chart.
They are people whose talents and wisdom are needed and whose problems deserve our unified efforts.
Together we can join to make life more just and more joyful for generations to come.*

David Satcher, MD, PhD, Director, Centers for Disease Control and Prevention



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention



Is Diabetes a Serious Public Health Problem?

In 1995, about 16 million people in the United States had diabetes, but only 8 million had been diagnosed with the condition. The number of persons with diagnosed diabetes has increased from 1.6 million in 1958 to 8 million in 1995—a fivefold increase. Diabetes is the seventh leading cause of death in the United States, and it contributes to thousands of deaths each year. Individuals with diabetes are at increased risk for

- ◆ heart disease
- ◆ blindness
- ◆ kidney failure
- ◆ lower extremity amputations not related to injury

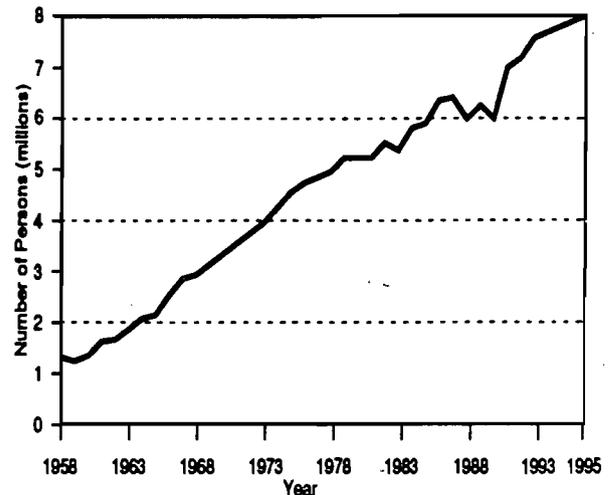
Diabetes and its complications occur among Americans of all ages and racial and ethnic groups. The burden of this disease is heavier among elderly Americans and certain racial and ethnic populations, including African Americans, Hispanics/Latinos, and American Indians. For example, more than 10% of elderly adults have been diagnosed with diabetes, and the prevalence of diabetes among various American Indian tribes ranges from 5% to 50%. A number of studies have also shown increased rates of the disease among certain Asian and Pacific Islander populations.

What Is Diabetes?

The term *diabetes* describes either a deficiency of insulin or a decreased ability of the body to use insulin, which is a hormone secreted by the pancreas. Insulin allows glucose (sugar) to enter body cells and be converted to energy. Insulin is also needed to synthesize protein and store fats. In uncontrolled diabetes, glucose and lipids (fats) remain in the bloodstream and, with time, damage the body's vital organs and contribute to heart disease.

Diabetes is classified into two main types: non-insulin-dependent diabetes mellitus (NIDDM) and insulin-dependent diabetes mellitus (IDDM). The most common type is NIDDM. It affects 90% of those with diabetes and usually appears after the age

Number of Persons With Diagnosed Diabetes

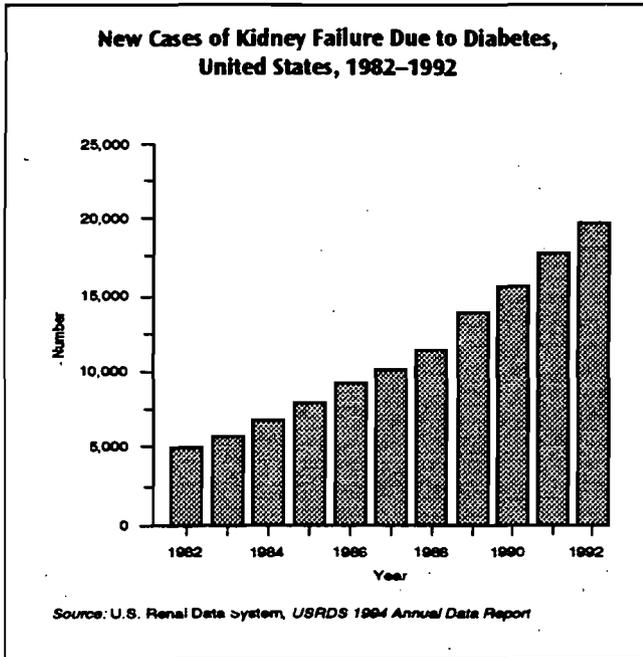


Source: National Institutes of Health, 1995

of 40. The other type—IDDM—affects less than 10% of those with diabetes. Although this type of diabetes can occur at any age, it most often appears in childhood or the teen years. The primary focus of the Centers for Disease Control and Prevention (CDC) is to translate scientific information about diabetes into strategic plans that help people prevent the complications of diabetes.

What Are the Economic Costs of Diabetes?

Diabetes imposes a heavy economic burden upon the nation each year. In 1992, an estimated \$92 billion in direct and indirect costs were spent on diabetes. Contributing substantially to these costs are the complications of diabetes. For example, in 1992, the cost of treating kidney failure for 56,000 Americans with diabetes exceeded \$2.1 billion. This figure did not include the costs associated with disabilities and premature death. In this same year, Medicare expenditures per person with diabetes on kidney dialysis averaged \$38,700. Because kidney failure is increasing at an alarming rate, these costs are expected to rise.



More than 60% of lower extremity amputations that are not related to injury occur among persons with diabetes. Approximately 57,000 diabetes-related amputations were performed in 1993. The direct costs of diabetes-related amputations are about \$600 million annually.

The full burden of diabetes in terms of death, complications, and costs is not easy to measure. In fact, many hidden costs are associated with diabetes. These costs include a failure to recognize the role of diabetes in premature deaths and the unknown costs related to undiagnosed diabetes. Furthermore, for families and communities, the loss of human lives and abilities transcends numerical measures.

What Are the Benefits of Prevention?

The increasing burden of diabetes is alarming, but the good news is that much of the burden of this major public health problem can be prevented with early detection, improved delivery of care, and diabetes self-management education. For example,

- ◆ Currently, screening and treatment for eye disease among persons with diabetes is saving

the federal government about \$248 million annually. If all persons with diabetes received recommended screening and treatment, the annual savings to the federal budget could exceed \$470 million.

- ◆ Women with preexisting diabetes deliver more than 18,000 babies each year. For every \$1.00 invested in preconception care for these mothers, \$1.86 can be saved by preventing birth defects.
- ◆ The Diabetes Control and Complications Trial, a national 10-year study that involved 1,441 volunteers with insulin-dependent diabetes, confirmed that good control of blood sugar prevented the onset or delayed the progression of eye, kidney, and nerve damage by at least 50%.

What Does CDC Do To Reduce the Burden?

CDC strives to increase awareness and education about diabetes, support early detection and treatment of complications, improve the quality of diabetes care, and enhance access to diabetes care by improving and expanding services.

To advance a common mission to reduce the burden of diabetes, CDC joins with state and territorial health departments in establishing partnerships for populations at increased risk for diabetes and its complications. CDC and its partners use the following approaches:

They define the burden and develop surveillance systems to—

- ◆ identify high-risk groups
- ◆ monitor health outcomes and indicators of the quality of health care recommended for persons with diabetes
- ◆ provide data that can be used to formulate health care policy
- ◆ evaluate progress in disease prevention and control

They develop new approaches such as innovative community-based programs—

Project DIRECT—CDC is collaborating with the state of North Carolina to evaluate the effectiveness of community-based public health approaches in reducing the burden of diabetes.

Diabetes Today—This program provides health professionals and community leaders with the skills to mobilize communities and to develop appropriate interventions. One of the outcomes of this course is a strategic plan that is community owned and culturally relevant to the local population.

Latino Diabetes Initiative for Action (Latino DIA)— In 1995, CDC launched this initiative to develop culturally relevant diabetes prevention strategies for Latino communities. CDC enlisted the National Latino Expert Workgroup to collaborate in planning, prioritizing, implementing, promoting, and evaluating strategic Latino DIA activities to narrow the disparity of diabetes in the Latino community.

They implement effective programs—

CDC works with state- and territorial-based diabetes control programs to reduce the complications associated with diabetes. The following are just a few examples of such activities:

The Maine Diabetes Control Program implemented a diabetes outpatient education program in more than 30 hospitals and health centers throughout the state. In a 3-year period, this state education program resulted in a 32% reduction in hospital admissions—a savings of \$293 per participant.

The Michigan Diabetes Control Program's Upper Peninsula Diabetes Outreach Network (UPDON) established a program with hospitals, health departments, and home care agencies that improved the quality of diabetes care and education. The participants in the program experienced a 45%

lower rate of hospitalizations, a 31% drop in lower extremity amputations, and a 27% lower death rate than did nonparticipants. This program has been replicated in five new outreach networks throughout the state.

The Texas Diabetes Control Program recently formed the Managed Care Work Group to establish minimum standards of care and outcome measures for Texans with diabetes. A cost-benefit analysis by one of the collaborating partners determined a break-even point in 2 years with savings to result thereafter. Other partners are joining as they consider the quality of care issues and realize the cost benefit.

National Partnerships

CDC joins with government agencies, voluntary and professional organizations, academic institutions, and community groups to

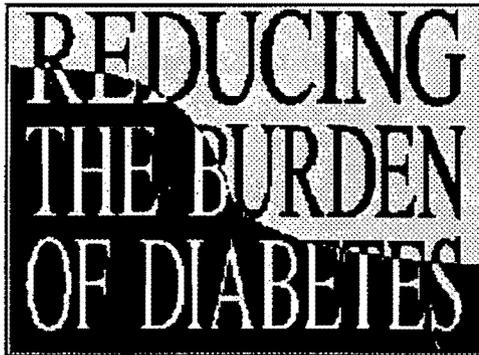
- ◆ provide data for sound public health decisions
- ◆ inform the public about the burden of diabetes
- ◆ ensure that current research findings are translated into effective clinical and public health strategies to reduce the burden of diabetes
- ◆ promote assurance of optimal diabetes care and education for all persons living with diabetes in the United States

Diabetes presents both a challenge to and an opportunity for public policymakers, health care providers, community leaders, and individuals with diabetes to apply prevention strategies known to make a significant impact. Recent studies in diabetes have confirmed that prevention of complications of diabetes is a strategy that works. Such strategies benefit individuals, families, communities, health organizations, and all those who are financially and economically concerned about the impact of diabetes and its complications.

For more information, please contact the Centers for Disease Control and Prevention,
National Center for Chronic Disease Prevention and Health Promotion,
4770 Buford Highway, NE, Mail Stop K-10, Atlanta, GA 30341-3724, (770) 488-5000.

E-mail to ccdinfol@cccdod1.em.cdc.gov
World Wide Web at <http://www.cdc.gov/nccdphp/ddt/ddthome.htm>

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National Diabetes Fact Sheet

(National estimates released on November 3, 1995)

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Prevalence of Diabetes in the United States

Total (diagnosed and undiagnosed): 16 million (1995 estimate)

- Diagnosed: 8 million**
- Undiagnosed: 8 million**
- Insulin-dependent diabetes (IDDM):** Estimates range up to 800,000 (No national registry for diabetes exists. These estimates are extrapolated from several regional registries).
- Noninsulin-dependent diabetes (NIDDM):** About 7 to 7.5 million diagnosed cases (1993 estimate)

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Cost

Total (direct and indirect): \$92 billion (United States, 1992)

- Direct medical costs:** \$45 billion (The figure for direct medical costs includes only those costs directly attributable to diabetes. This is in contrast to figures cited elsewhere that estimate all health care costs incurred by people with diabetes, including costs not related to diabetes.)
- Indirect costs:** \$47 billion (disability, work loss, premature mortality)

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Deaths

- In 1993, about 400,000 deaths from all causes are estimated to have occurred among persons aged 25 years and older who have diabetes. This figure represents 5 percent of all persons known to have diabetes and 18 percent of all deaths in the United States in persons aged 25 years and older.
- Based on death certificate data, diabetes contributed to the deaths of more than 169,000 persons in 1992. It is well known that death certificate data underrepresent diabetes deaths.
- Diabetes was the seventh leading cause of death listed on U.S. death certificates in 1993, according to the National Center for Health Statistics. It is the sixth leading cause of death by disease.

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Incidence

Total new cases diagnosed every day: About 1,700 (1990-1992 averaged)

Total new cases diagnosed every year: 625,000 (1990-1992 averaged)

- NIDDM:** About 595,000 new cases per year
- IDDM:** About 30,000 new cases per year

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Prevalence by Population Groups

Number of persons diagnosed with diabetes (1993 estimates)

- Women:** 4.2 million
- Men:** 3.6 million
- Children aged 19 years or younger:** About 100,000
- Adults aged 65 years or older:** 3.2 million

Percentage of Adults with Diabetes by Race and Ethnicity

(estimates of the prevalence of diagnosed and undiagnosed diabetes from various national surveys and special studies)

- African Americans:** 9.6 percent
- Mexican Americans:** 9.6 percent
- Cuban Americans:** 9.1 percent
- Puerto Rican Americans:** 10.9 percent
- White Americans:** 6.2 percent
- American Indians:** Ranges from 5 to 50 percent
- Japanese Americans:** Among second-generation Japanese Americans 45 to 74 years of age residing in King County, WA, 20 percent of the men and 16 percent of the women had diabetes.

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Treatment for Diabetes

Treatment emphasizes control of blood glucose through blood glucose monitoring, regular physical activity, meal planning, and attention to relevant medical and psychosocial factors. In many patients, oral medications and/or insulin injections are also required for appropriate glucose control. Treatment of diabetes is an ongoing process that is planned and regularly reassessed by the health care team, the person with diabetes, and his or her family. Patient and family education are important parts of the process.

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Long-Term Complications

Heart Disease

- Cardiovascular disease is 2 to 4 times more common among persons with diabetes.
- Cardiovascular disease is present in 75 percent of diabetes-related deaths.
- Middle-aged persons with diabetes have death rates twice as high and heart disease death rates about 2 to 4 times as high as middle-aged persons without diabetes.

Stroke

- The risk of stroke is 2 to 4 times higher among persons with diabetes.

High blood pressure

- An estimated 60 to 65 percent of persons with diabetes have high blood pressure.

Blindness

- Diabetes is the leading cause of new cases of blindness among adults 20 to 74 years of age.
- Diabetic retinopathy causes from 12,000 to 24,000 new cases of blindness per year.

Kidney disease (treatment by dialysis or transplantation)

- Diabetes is the leading cause of end-stage renal disease, accounting for 36 percent of new cases.
- 19,790 new cases occurred in 1992 in people with diabetes.
- 56,059 people with diabetes were undergoing dialysis or transplantation treatment in 1992.

Nerve disease

- About 60 to 70 percent of people with diabetes have mild to severe forms of diabetic nerve damage (with such manifestations as impaired sensation in the feet or hands, delayed stomach emptying, carpal tunnel syndrome, peripheral neuropathy).
- Severe forms of diabetic nerve disease are a major contributing cause of lower extremity amputations.

Amputations

- More than half of lower limb amputations in the United States occur among persons with diabetes; from 1989 to 1992, the average number of amputations performed each year among persons with diabetes was 54,000.

Dental disease

- Periodontal disease, which can lead to tooth loss, occurs with greater frequency and severity among persons with diabetes. In one study, 30 percent of IDDM patients aged 19 years and older had periodontal disease.
- The rate of tooth loss is 15 times higher, and the incidence of periodontal disease is 2.6 times higher among Pima Indians with NIDDM than among those without diabetes.

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Pregnancy

- The rate of major congenital malformations in babies born to women with preexisting diabetes varies from 0 to 5 percent in women who receive preconception care to 10 percent in women who do not receive preconception care.
- Three to 5 percent of pregnancies in women with diabetes result in death of the newborn; this compares to a rate of 1.5 percent for women who do not have diabetes.

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Gestational Diabetes

Gestational diabetes develops in some pregnant women; the condition disappears when the pregnancy is over. A history of gestational diabetes, however, is a risk factor for eventual development of NIDDM.

- Gestational diabetes occurs in 2 to 5 percent of pregnancies and at higher rates among African Americans, Hispanics/Latino Americans, and American Indians (rates in American Indians range from 1 to 14 percent).

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Impaired Glucose Tolerance

Impaired Glucose Tolerance (IGT) refers to a condition in which blood sugar levels are higher than normal but not high enough to be classified as diabetes (between 140 to 199 mg/dl in a 2-hour oral glucose tolerance test). IGT is a major risk factor for NIDDM

- This condition is present in about 11 percent of adults.
- About 40 to 45 percent of persons aged 65 years or older have either NIDDM or IGT.

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These organizations collaborated in compiling the information upon which this fact sheet is based:

- American Association of Diabetes Educators
- American Diabetes Association
- Centers for Disease Control and Prevention
- Department of Veterans Affairs
- Health Resources and Services Administration
- Indian Health Service
- Juvenile Diabetes Foundation International
- National Institute of Diabetes and Digestive and Kidney Disease of the National Institutes of Health

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FACTS ON DIABETES

There are 8 million people diagnosed with diabetes and another 8 million are believed to have, but have not been diagnosed, with this disease. 3.2 million Americans diagnosed with diabetes are adults age 65 and over. Approximately half of all diabetes cases occur in people older than 55 years of age. The death rate from diabetes is nearly 3 times higher in the Native American population than in the U.S. population. African-Americans have diabetes at nearly double the rate of other Americans.

Diabetes is the seventh leading cause of death. Middle-aged Americans with diabetes have death rates twice as high as other Americans.

People with diabetes are more likely to suffer from heart disease, high blood pressure, and strokes. People with diabetes are 2 to 4 times more likely to suffer from cardiovascular disease, and 2 to 4 times more at risk for a stroke. High blood pressure affects nearly two-thirds of people with diabetes.

Diabetes is the leading cause of end-stage renal disease, non-traumatic amputations, and blindness. Diabetes accounts for thirty-six percent of new end-stage renal disease (ERSD) cases (kidney disease)--about 20,000 cases each year. In addition, 54,000 amputations are performed on diabetics each year, and up to 24,000 adults are blinded each year from diabetes.

The American Diabetes Association estimates that we spend \$92 billion per year on diabetes care. Of the total, costs directly attributable to diabetes total \$45 billion, while indirect medical costs, such as work loss, disability, and premature death total \$47 billion.

DIABETES AND MEDICARE

Medicare pays for ERSD for the non-elderly population as well. About 20,000 Americans develop this disease through diabetes each year, and Medicare expenditures on kidney dialysis for each of these people averages nearly \$40,000 annually.

TYPE I DIABETES

Between 700,000 and 1 million Americans have Type I diabetes and as many as half of these are children. Each year about 30,000 Americans -- many of whom are children -- are diagnosed with Type I diabetes.

Almost all Americans with Type I diabetes will likely suffer from at least one of the many complications arising from diabetes, including serious eye disease (e.g. blindness), amputation, heart disease, or kidney disease.

NATIVE AMERICANS AND DIABETES

Diabetes occurs at rates dramatically higher among Native Americans than in the general U.S. population. One third to one half of adults in certain tribal groups have diabetes.

Native Americans develop Type II diabetes at a younger age -- as young as age eight -- and suffer higher rates of complications including blindness, amputation, and kidney disease.

NEW DIABETES INVESTMENTS TO IMPROVE TREATMENT, PREVENTION, AND RESEARCH FOR AMERICANS WITH DIABETES

Today President Clinton highlighted a set of four initiatives that will improve the lives of the at least 8 million Americans who have been diagnosed with diabetes. Three of these initiatives were included in the balanced budget the President signed into law on Tuesday. The President also emphasized that this new investments emerged as a result of a strong bipartisan partnership with Speaker Gingrich. The American Diabetes Association (ADA) stated that "taken together, these new investments in diabetes, announced by President Clinton today, are as important for people with diabetes as the discovery of insulin in 1921." The President announced:

- (1) **An important new Medicare benefit** which will help pay for the critically necessary supplies and self-management instruction which will help the 3.2 million older Americans who suffer from diabetes better manage their treatment.
- (2) **A new \$150 million investment in diabetes research to prevent and cure Type I (often known as juvenile) diabetes**, to be allocated by Health and Human Services Secretary Donna Shalala.
- (3) **A new \$150 million investment for prevention and treatment of diabetes among Native Americans**, who are almost three times as likely to suffer from the disease as others in the U.S. population;
- (4) **A new public/private effort to assure and improve high quality care for Americans with diabetes**. This effort will review current treatments for diabetes to determine the degree to which they are effective, to recommend alternative approaches that ensure high quality care, and to develop more consistent quality measures for diabetes patients, health plans, and health providers across America.

A New Medicare Benefit to Help People With Diabetes Better Manage Their Care.

The balanced budget expands Medicare's coverage of benefits for people with diabetes by \$2.1 billion over five years. In so doing, it expands the number of people able to take advantage of self-management tools will increase the number of Americans who properly manage their diabetes, thereby helping to prevent the debilitating and costly complications too often associated with the disease. Under the new balanced budget, Medicare will cover self-management training offered by physicians and other certified providers rather than only in hospital-based programs as it traditionally has. This will help ensure that more beneficiaries with diabetes can access the necessary education to manage this disease. In addition, Medicare will make blood glucose monitors (including testing strips) available to all beneficiaries with diabetes, whereas Medicare currently covers only insulin-dependent patients. Ensuring Medicare beneficiaries have access to these supplies will help improve their treatment and has great potential to reduce costs. This new legislation was introduced and strongly advocated by Rep. Furse, Rep. Nethercut, and Senator Breaux.

A New \$150 Million Investment to Help Research a Cure for Type I (Juvenile) Diabetes.

The HHS Secretary is allocated \$30 million annually for five years for research to help find the cure for diabetes. Americans with Type I diabetes with this disease often suffer severe consequences, even when they receive the best treatment and care. The HHS Secretary will have discretion to target the new funds to the best scientific opportunities. This represents the largest single new investment in Type I diabetes.

\$150 Million Investment to Help Prevent and Treat Diabetes Among Native Americans. The HHS Secretary is allocated \$30 million annually for five years to be used to provide services for diabetes prevention and treatment for Native Americans. The death rate from diabetes is almost three times higher in the Native American population than in the U.S. population as a whole. This new funding will go to help improve prevention efforts (such as improved diet, exercise and other factors that reduce the likelihood of diabetes) and help identify the disease as early as possible. It will also help more Native Americans with diabetes get the necessary information about managing diabetes, for example, by improving linkages between families, public health services, schools, and nutrition programs. Moreover, it will expand access to affordable treatment so that more Native Americans get the care they need to help reduce costly and extensive complications. IHS will work in partnership with Tribes, Urban Indian Health Centers Facilities, and other agencies within HHS, such as the CDC.

A New Diabetes Quality Improvement Project.

Numerous studies by organizations such as the ADA and National Committee on Quality Assurance (NCQA) have shown that many patients are not receiving the medical care known to reduce diabetes complications such as blindness and amputation. In fact, an NCQA study shows that the rate of an annual eye exam in managed care plans averages less than 40 percent. The multiplicity of report cards, each with their own measures, has created confusion and made it difficult to compare and improve care across all delivery systems.

The President announced a major year-long collaborative effort to review current treatments for diabetes to determine the degree to which they are effective, to recommend alternative approaches that ensure high quality care, and to develop more consistent quality measures for diabetes patients, health plans, and health providers across America. Such measures will monitor whether proper care was delivered (for example, an annual eye exam) or health outcomes were achieved (such as appropriate blood glucose levels).

The performance and outcome measures are being developed by a coalition of four organizations: HCFA, the largest purchaser of health care for the diabetic population; the ADA, the largest voluntary health agency dedicated to improving the lives of people with diabetes; NCQA, which develops and maintains a set of standardized performance measures used by more than 90 percent of health plans; and the Foundation for Accountability (FACCT), an organization dedicated to ensuring that consumers have adequate information to make health care decisions. Together, these organizations will work to ensure that millions of consumers, purchasers, and health care providers utilize this new information to improve care.

**QUOTES SUPPORTING PRESIDENT CLINTON'S ANNOUNCEMENT ON
UNPRECEDENTED DIABETES INITIATIVE**

"President Clinton's announcement today ends an extraordinary week in the history of diabetes in America. Because of the President's support of bi-partisan initiatives, nearly \$3 billion of new money will be invested into research and treatment. Finally, diabetes is getting the recognition it deserves as a major public health problem facing America."

"By investing now in the tools and services that can help seniors manage their diabetes, we anticipate that Medicare can help reduce the enormous human and financial cost that accompanies diabetes complications. This is a dramatic step forward since Medicare traditionally has paid for diabetes-related hospitalizations, but not for the means that would help keep seniors out of the hospital."

American Diabetes Association

"With the tremendous human and economic tolls taken by this devastating disease and its complications, it is more than appropriate that a full frontal attack on diabetes be launched by the federal government. This long awaited increase contains a significant infusion of new funds for research into Type I diabetes, and provides renewed hope for millions of Americans."

"We know that this extraordinary initiative [announced by the President today] will help attract the attention of our leading scientists, and encourage them to apply their knowledge to the complex and myriad problems of diabetes in new and imaginative ways."

— Juvenile Diabetes Foundation International

"Insulin is not a cure. With this initiative, we can capitalize on years of research progress and start to move advances out of the laboratories to the bedsides of our loved ones."

— Mary Tyler Moore
International Chairman
Juvenile Diabetes Foundation International

"President Clinton is to be commended for providing leadership in improving the quality of life for the 16 million Americans who suffer from Diabetes. This significant development is a positive step forward in expanding the life expectancy for the millions of African Americans who have been victims of this dreaded disease."

-- The National Caucus and Center on
Black Aged, Inc.

"For the approximately 3 million African Americans affected by diabetes and who suffer a disproportionate burden from its complications, the initiatives announced by President Clinton will prompt a shift in the quality of care and access to services that can improve outcomes. The National Medical Association feels strongly that this is a health initiative that will strike a major blow to the debilitating effects of a silent killer in high-risk minority communities, and reduce the enormous drain on human and fiscal resources caused by diabetes."

"The National Medical Association enthusiastically applauds President Clinton for the provisions in the balanced budget package directed towards cure of Type I diabetes, more intense preventive services and treatments for Native Americans, and improved coverage for self-management of older and other high-risk populations. For the almost 3 million African Americans with diabetes, who suffer higher rates of amputations and kidney failure, these initiatives signal a major shift in the direction of bringing much of our new knowledge to bear on relief of a costly and debilitating disease, while hastening our quest to eradicate it completely."

-- National Medical Association

"President Clinton is the first President to understand the importance of diabetes to so many people. We know that the President's diabetes initiative will improve the quality of life for the 1.3 million Hispanic diagnosed with this chronic disease. As Hispanics are twice as likely as the general population to have diabetes we know that our communities welcome this major step from the President."

-- Jane L. Delgado, Ph.D.
President and CEO
National Coalition of Hispanic Health and
Human Services Organizations (COSSMHO)

"The National Council on Aging, Inc. Supports the President's Initiative on Diabetes. Better screening is essential to make sure cases are correctly diagnosed. NCOA [The National Council on Aging, Inc.] strongly supports efforts to develop and disseminate diabetes guidelines to health professionals for appropriate disease management."

-- The National Council on Aging, Inc.

DIABETES Q&As

Q: WHY ARE YOU INVESTING \$30 MILLION ANNUALLY OVER FIVE YEARS IN TYPE I DIABETES WHEN ONLY A SMALL PORTION OF THE DIABETES POPULATION HAS THIS DISEASE?

A: Increasing our research efforts for Type I diabetes will actually help improve our knowledge about all types of diabetes. In fact, currently NIH does not even distinguish between their research dollars spent on Type I and Type II diabetes.

This initiative, which allows the HHS Secretary to allocate \$30 million annually for five years to research a cure for Type I diabetes, however, could make a significant difference in how scientists understand this disease. We have talked to scientists at NIH who believe that an intensified effort on diabetes could lead to some important breakthroughs in our understanding of how we can cure diabetes.

There are between 700,000 and one million Americans who suffer from Type 1 diabetes, as many as half of whom are children. These Americans -- even those who receive the proper treatment -- are likely to develop at least one of severe diseases associated with diabetes, such as blindness, heart disease, or kidney problems later in life. We will not be able to eliminate the serious consequences and costs of this disease until we develop a cure.

Q: WHY IS ARE YOU SUPPORTING AN APPROACH THAT IS OUTSIDE THE NORMAL APPROPRIATIONS PROCESS THAT SUPPORTS THE NATIONAL INSTITUTES OF HEALTH (NIH)?

A: The \$150 million allocated by the HHS Secretary for Type I diabetes will be given out by the Secretary -- with the help of the top scientists at HHS -- to the most promising research scientific research projects. NIH is currently in the process of administering a clinical trial for Type I diabetes and is making significant progress in research on Type I diabetes. Scientists at NIH believe that this new intensified effort will provide more resources in a tight budget to take the next steps in understanding this disease.

Q: DO YOU PLAN TO ALLOW THE HHS SECRETARY TO ALLOCATE GRANTS FOR OTHER DISEASES AS WELL?

A: This is an intensified effort to help research a cure for one of our nation's most costly diseases and to help reduce the impact of diabetes on Native Americans since it is devastating this population. There are not currently any plans to extend this kind of allocation to other diseases.

Q: WHY ARE WE FOCUSING SO MUCH OF THIS EFFORT ON DIABETES CARE FOR NATIVE AMERICANS?

A: The death rate for Native Americans with diabetes is nearly three times that of other Americans. In some tribes more than one-third of the population suffers from this dreadful disease. Native Americans are also far less likely to receive adequate treatment to manage this disease and therefore are more likely to get some of the serious complications associated with diabetes, such as kidney disease and heart disease more frequently.

This disease is devastating this population, and it is important that we make a concentrated effort to eliminate some of its damaging effects. We believe that this significant investment in preventing, treating, and researching diabetes in Native Americans will take a significant step towards improving this serious problem.

Q: WHY IS THE NEW MEDICARE BENEFIT FOR PEOPLE WITH DIABETES SO IMPORTANT? DON'T MOST BENEFICIARIES GET THEIR DIABETES CARE PAID FOR BY SUPPLEMENTAL INSURANCE?

A: Many older Americans with diabetes -- even many of those with supplemental insurance - are not getting the proper care they need to prevent the costly devastating complications associated with diabetes. Medicare beneficiaries report that they are unsure how to properly manage their diabetes care.

Moreover, Medicare does not currently cover some of the most critical services that beneficiaries with diabetes need to manage their disease. It does not pay for blood glucose monitors or for the strip tests that people with diabetes need to monitor their blood sugar.

The balanced budget expands Medicare's coverage of benefits for people with diabetes by \$2.1 billion over five years. In so doing, it expands the number of people able to take advantage of self-management tools will increase the number of Americans who properly manage their diabetes, thereby helping to prevent the debilitating and costly complications too often associated with the disease.

Q: WILL WE BE ABLE TO CURE DIABETES WITH THIS INVESTMENT?

A: No investment in research can guarantee that a cure can be discovered. However, scientific researchers are making significant progress in the area of diabetes and scientists at NIH say that this new investment will help these important efforts.

--- Every day, a **child** with Juvenile Diabetes is faced with tasks that can mean the difference between life and death. Children with diabetes must administer insulin injections to themselves six times a day, conduct blood glucose testing 8 times a day, and stick to a stringent diet. The strain of caring for a diabetic infant or toddler can be enormous -- parents often worry that they are hurting their child with the injections and finger pricks and are uneasy about entrusting the child to babysitters. The discomfort of the pricks and injections may cause children to fear their disease and can become the center of constant disputes between children and their parents. Moreover, the normal fussy eating habits and temper tantrums of a very young diabetic child can have serious health consequences.

Once children enter school, they face a new set of obstacles. They may feel uncomfortable eating snacks in front of their peers or refusing the candy bar or pizza that everyone else is enjoying. Older children may even experiment with diabetic rules or simply rebel by skipping insulin shots and not monitoring their blood glucose levels.

Children with diabetes have life expectancies that are 30% lower than those of their peers. Approximately 100,000 individuals under 19 years of age and approximately 800,000 individuals under the age of 30 have diabetes.

--- Diabetes in the **Native American** population is growing at alarming rates. Native Americans have an incidence rate of end stage renal disease and kidney failure that is six times higher than that of the general populations. They also have mortality rates higher than the general population. IHS officials claim that the diabetes program was funded at only 75% of need. 12.2% of Indian children (19 and younger) are diabetic compared to 5.2% in the general population. Type 2 diabetic mortality rates in the American Indian and Alaska Native population is 2.7 times the rate of the U.S. general population. The diabetic mortality rate of Native Americans is 4.3 times the rates of whites. 13.2% of Native American women have diabetes, and 11% of Native American men have diabetes.

These high rates may be related to the genetic code of some Native Americans. A genetic marker linked with insulin resistance has been described in members of the Pima tribe of Arizona, and diabetes is higher in full-blooded Native Americans. In Pimas, Diabetes I is higher in the offspring of parents who developed diabetes at a young age. The Pima tribe has the highest rate of diabetes in the world: approximately 50% of Pimas between the ages of 30-64 have diabetes.

Cataract surgery rates are higher in Pimas than in the general population. Native Americans are 3 to 4 times more likely to have an amputation due to diabetes than the general population. Obesity is a major risk factor for diabetes in Pimas and is widespread in many tribes with increasing rates of obesity measured in several communities in the U.S.

--- The most common form of diabetes among **older people** is type II, or non-insulin-dependent diabetes which accounts for 85% of all elderly diabetes cases. More than 40% of individuals 65-74 years old and 50% of individuals 80-89 years old have diabetes. There are 100 amputations per 100,000 diabetics age 65 years and older. Amputations are the fifth leading cause of death in people between the ages of 65-74. Elderly diabetics can expect to need more medications, have side effects due to medications, and experience greater difficulty in following exercise and dietary regimens.

Diabetes in North American Indians and Alaska Natives

Diabetes in the Native American population has limited data because only those served by the Indian Health Service (IHS), an agency of the U.S. Health Service, were surveyed. Indians living on reservations are not included in US national survey's. However, in the United States, 1.9 million individuals identified themselves in the 1990 Census as American Indian or Alaska Native, but only 1.2 million of these resided in the 33 reservation states served by the IHS. The following data is based on the 1.2 million in the 33 reservation states.

The 1987 survey by IHS showed that 12.2% of Indian children (19 years of age and younger) are diabetic compared to 5.2% in the general population.

MORTALITY RATE

In 1989, Type 2 (Adult) **diabetic mortality rates in the American Indian and Alaska Native population is 2.7 times the rate of the US general population. From 1984-86 1,252 Native American deaths were diabetic related, 708 deaths listed diabetes as the underlying cause.** Allowing for the under reported death certificates of Indians in northern America by 65% the National American Feedback study found that the **diabetic mortality rate of Native American is 4.3 times the rates of whites.** In New Mexico the rate is 3.6 times that of whites. **On Canadian Indian Reservations the mortality rate is 2.2 times higher than in Canadian men and 4.1 times higher than in Canadian women.** Studies done in **Pima Indians** from 1975-84 found that their **mortality rate is 11.9 times greater than the 1980 death rate for all races in the United States.**

- Longer duration of Diabetes and Proteinuria were both associated with increased mortality

Medical Expenditure Survey of American Indians (IHS)

- Indian Women w/Diabetes 13.2%
- Indian Men w/Diabetes 11.0%

Genetics

- A genetic marker linked with insulin resistance, has been described in Pimas.
- Diabetes is higher in Full-blooded Native Americans.
- In Pimas, Diabetes I higher in the offspring of parents who developed Diabetes at a young age.
- The Pima tribe of Arizona has the highest rate of diabetes in the world. Approximately 50% of Pimas between the ages of 30-64 have diabetes.

Complications

- Kidney Failure-** Native Americans are 2.5 - 4 times at greater risk to enter kidney failure treatment
- One-fourth of all End-Stage Renal-Disease cases were contributed to Diabetes
- 1983-86 ESRD incidence for Native Amer. was 2.8 times the rate of whites with 55% contributed to Diabetes

US Incidence of Diabetic ESRD

-Out of 1 million new cases between 1987-90

39 is white

149 is black

236 is Native American

the Native Americans have a six times higher rate of developing ESRD (kidney failure) than the general population

Cataracts

Cataract surgery is higher in Pimas compared to the general population

Amputation

-Leg amputations are had by people w/ diabetes 15 to 40 times more often than people without diabetes. Each year 54,000 people lose their foot or leg to Diabetes.

Native Americans are 3 to 4 times greater to have an amputation than the general population.

CONCLUSION

Diabetes in the Native American population is growing at alarming rates. Statistics have shown that the Native American has a higher incidence of ESRD and Mortality rate than the general population. Furthermore, IHS officials claim that the diabetes program was funded at only 75% of need. These facts are enough to support the President's recommendation to increase IHS diabetes funding to \$2.5 million.

General Diabetic Statistics

PREVALENCE

Number of people diagnosed w/diabetes (1993)

- Women: 4.2 Million
- Men: 3.6 Million
- Children 19 and younger: About 100,000
- Adults 65 and older: 3.2 million

Percent of adults with diabetes by race and ethnicity

(Diagnosed and undiagnosed)

- African American: 9.6 percent
- Mexican American: 9.6 percent
- Cuban American: 9.1 percent
- Puerto Rican American: 10.9 percent
- White Americans 6.2 percent
- American Indians: Ranges from 5 to 50 percent
- Japanese Americans: Japanese Americans 45-75 years of age in King County, WA, 20 percent of the men and 16 percent of the women had diabetes.

African Americans and Diabetes

Diabetes Mellitus is one of the most challenging health conditions facing 30 million African Americans. It is the 5th leading cause of death in African Americans between the ages of 45-64 and is the third leading cause of death in African American women of all ages in 1990. In 1993 1.3 million African Americans were known to have diabetes 3 times the number diagnosed in 1963.

STATISTICS (1993)

- for every white person who gets Diabetes 1.6 African Americans get Diabetes
- One in 4 black Women 55years and older has diabetes.
- 25% of blacks between 74-65 has diabetes.
- Afr.Amer. Are more likely to develop complications and disability from Diabetes.
- At age 45 or older the prevalence of Diabetes is 1.4 to 2.3 times as frequent as in whites.
- In the 65-74 age range 17.4 percent of black Americans had diagnosed diabetes compared to 9.5% of white Americans
- African American children have lower rates of Type 1
- African Americans 40 years of age and older have Type 2 or non-insulin-dependent Diabetes.

Diabetes and Pregnant African American Women

- Afri. Amer women have a 80percent higher gestational diabetes rate than white women
- These women are 2 times more likely to develop diabetes in future pregnancies and type 2 diabetes in 20 years.

Complications

- Afri. Amer develop a higher rate of blindness, kidney failure, and amputations from diabetes in comparison to white Americans

Kidney failure

- 2.5 -5.5 times more often than whites

Visual Impairment

- 40 percent higher in African Americans than whites

Amputations (1991 study)

- 19 percent higher than whites

CONCLUSION:

Approximately 1.3 million African Americans have been diagnosed with Diabetes in the United States. They are more likely to suffer from diabetic related kidney failure, visual impariment, and amputations than there white counterparts. Pregnant African American women have a 80% higher gestational diabetes rate than white women. For these reasons we must increase diabetes funding.

Diabetes and the Elderly

The most common form of diabetes among older people is type II, or non-insulin-dependent diabetes. It accounts for 85% of all cases. More than 40% of individuals 65-74 yr of age and 50% of individuals 80-89 yr of age have diabetes. It is the fifth cause of death in people between the ages of 65-74. Aging does not cause diabetes however diabetes mellitus is now largely a geriatric disease.

DIAGNOSIS

- Inaccurate diagnosing of the elderly as diabetic, (NIH Study) based on a natural increase in glucose level with aging.

TREATMENT

- Basic treatment of diabetes is dietary prescription and exercise, however the elderly most often must be encouraged to do exercise that will not over tax their circulatory system.
- Drug treatment is also risky since it must not cause complications with other drugs

Examples:

The oral hypoglycemic agents used for Type II diabetes may cause congestive heart failure in patients with heart disease

Poor eyesight and manual dexterity problems will complicate insulin injections

AMPUTATION

- 65 yr and older 100 per 100,000
- 45-64 yr of age 45 per 100,000
- below 44 yr of age 12 per 100,000

CONCLUSION:

Elderly diabetics can expect to have more medications, side effects to medications and difficulty in following and exercise and dietary regimens, but good surveillance, proper diagnosis can prevent intensive diabetic treatment.

Children w/Diabetes

A child w/ Juvenile Diabetes is faced with death-threatening monitoring responsibilities on a daily basis. They must administer **insulin injections 6 times a day, conduct blood glucose testing 8 times a day**, and stick to a stringent diabetic diet plan. Each stage of childhood brings on different parental concerns for a parent of a child w/diabetes.

(New Statistic About 100,000 under 19 yrs. Of age and 800,000 under 30)

INFANCY CONSIDERATIONS:

- Finger Sticks and Injections that can cause pain (AM I Hurting my Baby)
- How it will effect their eating and sleeping routine
- Entrusting the care of your diabetic infant to other caretakers
- Marital tension caused by the parents that are communicated to the child interfering with the childs developing a sense of trust.

TODDLERHOOD

- Fussy eating habits and temper tantrums are normal toddler reactions, but these actions can interfere with the diet of a diabetic toddler.
Parents should consult a child behavioral psychiatrist on ways to curb this normal behavior of independence exhibited by toddlers for the sake of their diet.

PRESCHOOL Years

- Finger Pricking and Injections for Children between the ages of three and five may cause them to develop a fear of their disease. Injection and blood testing time can become nightmarish battles for parents and child. Experts suggest giving your child a reward every time they remain still for the allotted amount of time during an injection.

SCHOOL Years

- Verbal and Non-verbal peer pressure may cause a child to falter from their diabetic schedule.
Eating a candy bar to "fit in" with the crowd or not eating a snack in front of their peers out of embarrassment are examples of non-verbal peer pressure. A diabetic child is reminded daily that they are not like everyone else.
- Parents may become apprehensive about how well their child will stick to their diet when in school
- Entrusting that others will monitor your childs blood sugar intake or handle an episode of low blood glucose affectively may affect a children school attendance and socializing skills.
- Children may experiment with there diabetic rules by skipping insulin shots and not monitoring their blood glucose levels, thus putting their lives in jeopardy. Parents must address cheating behavior as it occurs.

CHILD DIABETES STATS

**-OVER A LIFETIME TYPE I DIABETICS SPEND AN AVERAGE OF 60,000 HOURS
DOING SELF TREATMENT**

-(New Statistic About 100,000 under 19 yrs. Of age and 800,000 under 30)

-A child w/Diabetes life expectancy is 30% less than his peers.



FAX COVER SHEET



OFFICE OF LEGISLATIVE & INTER-GOVERNMENTAL AFFAIRS

Number of Pages: 11 + cover page

Date: 3/10/97

To:	From:
Jean Lambrew White House	JOAN STIEBER Medicare Part B Analysis Division
Fax: (202) 456-7028 Phone: (202) 456-5377	Fax: (202) 690-8168 Phone: (202) 690-6884

REMARKS:

Attached, as requested, are materials on Medicare coverage of diabetes services, which were provided to Secretary Shalala in preparation for her meeting 3/11/97 with the American Diabetes Association. They include:

- (1) "Diabetic Screening in the President's Medicare Plan: Comparison of Administration and CBO Cost Estimates" (prepared by ASMB).
- (2) A comparison of H.R. 58 (introduced by Rep. Furse, D-OR) and provisions in the Administration's FY' 98 budget proposal for expanded diabetes benefits.
- (3) A summary of correspondence to the Secretary from the American Diabetes Association and from Rep. Furse.
- (4) A "Q&A" prepared for the Secretary last month addressing whether expanded diabetes benefits would save a lot of money.
- (5) More information on diabetes activities by the Medicare Peer Review Organizations (PROs).
- (6) A memo dated December 10, 1996, from Bruce Vladeck to the Secretary re: spending on diabetes and diabetes education.

If you have any further questions on this subject, please give me a call at (202) 690-6884.

DIABETIC SCREENING IN THE PRESIDENT'S MEDICARE PLAN: Comparison of Administration and CBO Cost Estimates

- Following is a summary of Administration and CBO scoring of the President's diabetes proposal:

	5-Year Cost Estimate 1998-2002 <i>(cost in billions)</i>	6-Year Cost Estimate 1998-2003 <i>(cost in billions)</i>
Administration	\$1.4	\$1.7
CBO	\$2.4	\$2.9

- Last year, we scored the cost of this proposal at \$1.1 billion over 5 years (1997-2001), whereas CBO scored it at only \$0.2 billion.
 - Also last fall, CBO scored a similar bill sponsored by Representative Elizabeth Furse (D-OR) as saving about \$40 million over 5 years and \$230 million over 6 years.

Key CBO Assumptions

- The biggest cost factor is a projected increase in the use of test strips, both among current insulin-dependent beneficiaries, as well as non-insulin dependent beneficiaries who will have expanded access to these test strips under our proposed policy.
- In addition, more beneficiaries are expected to purchase blood glucose monitors under the new policy (about 10% of insulin-dependent beneficiaries purchase this equipment today, that percentage may increase to 50%).
- These two assumptions are very similar to our actuaries' assumptions.

Why CBO's Estimates Differ From Last Year

- CBO no longer assumes sustained savings will result from the preventive education component of our proposal.
 - CBO assumes about 20 percent of eligible Medicare beneficiaries will take the self-management training classes made available under our proposal. This will result in a short-term reduction in hospitalizations as beneficiaries change their behavior, and consequently, reduced spending. However, CBO assumes that within six months, the majority of eligible beneficiaries will revert to old behavioral patterns.

HR 58 (Furse Bill)

- Representative Furse reintroduced her diabetes screening bill in January. CBO has not officially scored this proposal yet.
 - However, CBO has told HHS staff, and has indicated to Hill staff, that if asked to rescore this bill, the cost estimate will be virtually identical to how they scored the President's proposal, based on the new assumptions described above.

Q & A ON DIABETES SERVICES - PAGE 2

- o CDC and HCFA are exploring a collaborative project to determine the overall cost of health care among Medicare beneficiaries with diabetes, and the cost of care attributable to diabetes among Medicare beneficiaries.
 - o NIH's National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) is sponsoring a major diabetes prevention and treatment initiative, including clinical trials on diabetes prevention, ongoing follow-up of a clinical trial on diabetes-related heart disease and stroke, research on new methods to control blood glucose, and evaluation of the cost and effectiveness of treatment and prevention of diabetes complications.
 - o NIDDK and CDC are collaborating in a National Diabetes Education Program to inform patients, providers, policy makers, and payers about effective preventive treatments for diabetes
- The President's budget proposal for FY '98 would expand Medicare diabetes benefits by covering diabetes outpatient self-management training in non-hospital-based programs (already covered in hospital outpatient settings), and covering blood glucose monitoring and testing strips for all diabetics (already covered for insulin-dependent diabetics). These expansions would enable many more diabetic beneficiaries to utilize services that are crucial to managing their chronic disease.

Secretary Shalala's Meeting with the American Diabetes Association (ADA)

Topic: Peer Review Organizations' (PROs) Diabetes Activities

- The PROs began performing under their 5th contract cycle in 1996. As a condition of their 3 year contracts, each is required to carry out at least one quality improvement project designed to improve care provided to Medicare beneficiaries with diabetes. Most of the PROs have already commenced diabetes related activity, focused on such key aspects of care as increasing the use of appropriate medication (ACE inhibitors), raising the rate of eye care examinations and monitoring feet to decrease amputations.
- HCFA has worked with several PROs on two pilot projects with the goal of: 1) assessing the quality of care provided to Medicare beneficiaries with diabetes in both the managed care and fee for service systems, and 2) designing, implementing and evaluating improvement strategies targeting identified deficiencies in care.
- **Medicare Managed Care Quality Improvement Project (MMCQIP)**
This project involves 23 volunteer HMOs in 5 states (CA, FL, MN, NY and PA) and their PROs in a quality improvement effort begun in 1994. Ambulatory care data, both demographic and clinical, reflecting the provision of diabetes services were abstracted from the records of 300 Medicare enrollees from each of the HMOs and analyzed to identify specific opportunities to improve care. Each HMO then worked with its PRO to initiate an improvement strategy which targeted at least one area of deficient care. Many of the efforts were targeted at improving foot exam rates, some at improving annual dilated eye exam rates, and some at improving the frequency of glycosylated hemoglobin testing to monitor diabetes control. Our plan is to remeasure each HMO's performance in early 1998 to reassess diabetes care for Medicare beneficiaries following the intervention effort, and to identify which of the specific interventions were most successful and should be shared throughout the PRO community.
- **Ambulatory Quality Improvement Project (ACQIP)**
This project includes 3 PROs and 300 volunteer primary care physicians from 3 states (AL, IA and MD) who treat significant numbers of Medicare diabetics as part of their practices. The PROs abstracted clinical data from the charts of roughly 25 patients from each of the volunteer physicians to assess diabetes care being provided. A number of opportunities for improvement were identified. All participating physicians received information about their performance, and as compared with state peers participating in the project. In addition, approximately half of the physicians in each state received toolkits containing additional information and materials for improving diabetes practice patterns. Again the PROs will reassess diabetes care for these Medicare beneficiaries in early 1998 to document changes in performance and the impact of two types of interventions (feedback alone versus feedback plus toolkits) on diabetes practice patterns.

- The ADA, primarily through the participation of Dr. Richard Kahn, has been a very welcome and important collaborator at several key junctures of this set of projects.
- HCFA has also initiated collaborative efforts with the Centers for Disease Control and Prevention in seeking ways to maximize the interaction between our contractors/grantees, the PROs and the Diabetes Control Programs in each state, as all strive to improve diabetes care.

COMPARISON BETWEEN H.R. 58 (FURSE BILL) AND ADMINISTRATION PROPOSALS FOR EXPANDED DIABETES BENEFITS

On January 7, 1997, Representative Elizabeth Furse (D-OR) and 69 bipartisan co-sponsors introduced the "Medicare Diabetes Education and Supplies Amendments of 1997" (H.R. 58). (The same legislation introduced in the 104th Congress had 250 bipartisan co-sponsors.) H.R. 58 is substantially the same as the diabetes provision in the President's FY '98 budget proposal, as summarized below.

PROPOSALS INCLUDED IN BOTH H.R. 58 AND THE ADMINISTRATION'S BILL

- Diabetes outpatient self-management training services: Under current law, Medicare covers diabetes outpatient self-management training only in hospital-based programs. The proposals would expand coverage to include outpatient training furnished by other certified providers.
 - o Both proposals direct the Secretary to consult with the American Diabetes Association (ADA) and other organizations in establishing payment amounts for diabetes outpatient self-management training provided by physicians.
- Blood glucose monitors and testing strips: Under current law, Medicare covers blood glucose monitors (including testing strips) only for insulin-dependent diabetics. The proposals would expand coverage to pay for monitors and testing strips for all diabetics.
 - o While H.R. 58 refers to "testing strips", we assume it intends to expand coverage for blood glucose monitors as well as strips. In contrast, the Administration's bill refers to "blood glucose monitors", which automatically includes coverage of strips which are used as a supply in conjunction with the monitors.

DIFFERENCES BETWEEN H.R. 15 AND THE ADMINISTRATION'S BILL

- Reduction in payment for testing strips: The Administration's bill includes a 10 percent reduction in payment for testing strips based on evidence of overpayment for these items. H.R. 58 includes no such reduction.
- Parameters on timing and providers of outpatient self-management training: H.R. 58 sets no boundaries on the duration or frequency of the outpatient self-management training benefit, and would allow any type of Medicare provider to furnish such services. The Administration's bill would cover training services according to timeframes set by the Secretary, and defines an eligible provider as a physician or other entity designated by the Secretary.

CORRESPONDENCE FROM THE AMERICAN DIABETES ASSOCIATION AND REPRESENTATIVE ELIZABETH FURSE

American Diabetes Association (ADA):

- On December 5, 1997, Michael Mawby, ADA Vice President for Government Affairs, wrote to the Secretary requesting a meeting to discuss the ADA's legislative proposals. The letter referred to:
 - o the shared goals of HHS and the ADA to improve services for diabetics and reduce Medicare costs;
 - o recent attention to diabetes from President Clinton and House Speaker Gingrich;
 - o legislation introduced by Rep. Furse (D-OR) and Congressional support for "diabetes Medicare reforms"; and
 - o cost savings attributed to diabetes preventive care.
- The meeting with the ADA on March 11, 1997, is scheduled in lieu of a written response.

Representative Furse:

- On December 13, 1997, Representative Furse wrote to the Secretary urging that improved coverage for diabetes services (as reflected in her proposed legislation) be included in the Administration's FY '98 budget proposal. (A similar provision is included in our FY '98 budget.)
- Rep. Furse's letter refers to studies indicating that "27% of the Medicare budget is spent on treating diabetes". This represents a common misunderstanding of information supplied last year by the CDC, which suggested that 27% of Medicare costs are spent on treatment of all types for persons with diabetes -- not on treatment of diabetes itself.
- Rep. Furse's letter also refers to prior CBO scoring that suggested that coverage changes made by her bill would "save \$223 million over six years." However, CBO's latest scoring of the diabetes provision in the Administration's FY '98 budget proposal (which is essentially the same as Rep. Furse's bill) estimates a cost of \$2.9 billion over six years.
- A response to Rep. Furse's letter is being prepared by HHS.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care Financing Administration

The Administrator
Washington, D.C. 20201

DEC 10 1996

TO: The Secretary
Thru: DS ___
ES ___

FROM: Bruce C. Vladeck 
Administrator

SUBJECT: Spending on Diabetes and Diabetes Education

You asked us to look at an NIH study claiming that 27 percent of all Medicare spending is for people with diabetes. We are concerned about the methods used in the survey and the conclusions it draws. The NIH study was focused on a small subset of young, insulin-dependent diabetics, while Medicare beneficiaries with diabetes are much older and tend to have non-insulin dependent diabetes. Because of the differences in age and type of diabetes, we do not think the results of this study are generalizable to Medicare.

Second, most Medicare beneficiaries with diabetes are diagnosed prior to becoming eligible for Medicare and may have already developed complications before they enrolled in Medicare. We are not aware of any information that leads us to believe that complications from diabetes are reversible. The study also assumed a higher prevalence of diabetes in both the general population and the elderly population than any other study. This assumption raises both their estimates of current spending for diabetes and estimates of how much could be saved if diabetes education were covered by insurance.

Although we take issue with the spending and savings estimates in the NIH study, we agree that improving health care for diabetics is vitally important. Under current law, Medicare covers blood glucose monitoring (including testing strips) for insulin-dependent diabetics. Medicare also covers outpatient diabetic self-management training in hospital-based programs. The President's FY 97 budget would have expanded coverage of outpatient self-management training to non-hospital-based programs, and coverage of blood glucose monitoring (including testing strips) to all diabetics. Similar proposals are under consideration for FY 98. While we do not believe claims that expanded benefits will save the program money, we believe they are important to improving beneficiaries' quality of life. HCFA also has a number of quality improvement initiatives for diabetics underway, discussed in more detail below.

Page 2 - The Secretary

Estimates of Health Care Spending for Diabetics

You also asked whether we have any Medicare data on spending for diabetics. We don't have Medicare data, but the National Center for Health Statistics (NCHS) has estimates. They estimate spending for disease categories from national health expenditure data for those under age 65 and 65 and older, calibrating their results to national health expenditure data. Preliminary data regarding diabetes spending for 1995 is listed below. These figures do not currently contain estimates of all health expenditures for diabetics, but NCHS estimates that the diabetes costs would more than double when all health expenditures for diabetics are included.

Total personal health care costs and costs of treating diabetes--Calendar Year 1995

	Total	under 65	65 years and older
	[Amount in Billions]		
Personal health care	\$ 787.5	\$ 462.3	\$ 325.3
Diabetes	18.8	8.9	9.9
Diabetes as a share of Personal health care	2.4%	1.9%	3.0%

Multiply diabetes costs by 2.5 to include costs for comorbidities:

Diabetes as a share of Personal health care	6.0%	4.8%	7.6%
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There are a few caveats to these data. These data are preliminary and will undergo internal review in January. Second, NCHS did not try to allocate all of personal health care spending to disease categories. About 12 percent of personal health care spending is unallocated, and is not attributed to any disease category. Third, expenditures were counted only when a primary or comorbidity diagnosis of diabetes could be found. Therefore, any spending for undiagnosed diabetes patients would not be included.

These data indicate that the estimate of 27 percent in the NIH study is inflated. NCHS estimates that about 2.4 percent of all health spending is for diabetics. When we inflate NCHS costs by 2.5 to account for comorbidities, spending rises to 6 percent for all ages. For those under age 65, 4.8 percent of personal health expenditures is estimated to be spent on diabetes and its comorbidities; for those 65 and older, the estimate is 7.6 percent of personal health expenditures.