

February 2005

MANAGING  
DIABETES

Health Plan Coverage  
of Services and  
Supplies





Highlights of [GAO-05-210](#), a report to congressional requesters

# MANAGING DIABETES

## Health Plan Coverage of Services and Supplies

### Why GAO Did This Study

Diabetes, which afflicts millions of Americans, is a manageable disease whose effects can be mitigated with proper care, regularly received. Experts recommend certain services and supplies for managing diabetes. Because these can be costly, concerns exist about whether individuals with diabetes have access to and receive what they need. Little is known, however, about health plan coverage of diabetes services and supplies.

GAO reviewed the extent to which (1) states require insurance policies to cover diabetes services and supplies, (2) health coverage not subject to state requirements includes diabetes services and supplies, and (3) individuals with diabetes ages 18 and older receive services and supplies. GAO analyzed all 50 states' and the District of Columbia's laws and regulations pertaining to diabetes coverage. GAO also obtained from selected health plans providing coverage not subject to state requirements—13 large-employer plans and 3 plans in the Federal Employees Health Benefits Program (FEHBP)—information on coverage of 10 services and nine supplies identified as important for individuals with diabetes. In addition, GAO obtained national data from the Centers for Disease Control and Prevention (CDC) on individuals' receipt of diabetes services and supplies. GAO received technical comments from CDC and incorporated them in the report as appropriate.

[www.gao.gov/cgi-bin/getrpt?GAO-05-210](http://www.gao.gov/cgi-bin/getrpt?GAO-05-210).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Kathryn G. Allen at (202) 512-7118.

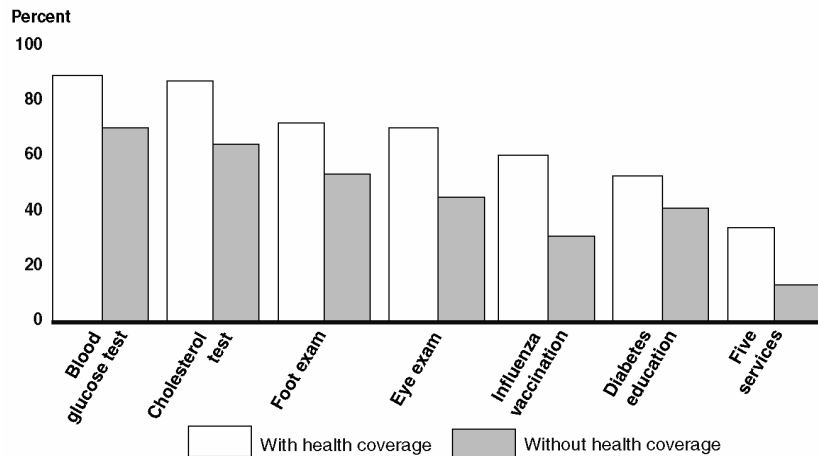
### What GAO Found

In 2004, 47 states, including the District of Columbia, had laws or regulations related to coverage of diabetes services or supplies, although specific requirements varied by state. Services for which states most often required coverage were diabetes education (45 states) and medical nutrition therapy (27 states). All 47 required coverage of diabetes supplies, although some states were more specific than others about which supplies must be covered.

Health plans GAO contacted that provide coverage not subject to state insurance requirements—those offered by 13 large Fortune 500 companies and the 3 largest health plans in FEHBP—covered most of the services and supplies recommended for individuals with diabetes, generally without limits on the coverage. Each plan covered at least 7 of 10 diabetes services, such as an annual blood glucose test, cholesterol and blood pressure monitoring, and influenza vaccinations, as well as at least five of nine diabetes supplies, such as insulin and insulin-administering supplies.

According to a 2003 CDC nationwide survey, the majority of individuals with diabetes reported receiving at least one diabetes service within the past 12 months. Significantly fewer individuals, however, reported receiving five services that individuals with diabetes are recommended to receive at least once a year. For example, an estimated 88 percent reported receiving a test for blood glucose, whereas an estimated 33 percent had received the five recommended services: blood glucose and cholesterol tests, eye and foot exams, and an influenza vaccination. Receipt of diabetes services and supplies varied by service, state, and whether an individual had health coverage. For example, 71 percent of individuals with diabetes who had health coverage at the time of the survey received eye exams, compared with 46 percent of individuals with diabetes who lacked coverage (see figure).

**Estimated Percentage of Individuals Ages 18 and Older with Diabetes, With and Without Health Coverage, Who Reported Receiving Diabetes Services, 2003**



Source: CDC's Behavioral Risk Factor Surveillance System.

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## Abbreviations

ADA	American Diabetes Association
Alliance	National Diabetes Quality Improvement Alliance
BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
ERISA	Employee Retirement Income Security Act of 1974
FEHBP	Federal Employees Health Benefits Program
NHANES	National Health and Nutrition Examination Survey
OPM	Office of Personnel Management

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United States Government Accountability Office  
Washington, DC 20548

February 25, 2005

The Honorable Joe Barton  
The Honorable Fred Upton  
House of Representatives

Diabetes afflicts an estimated 18 million Americans, and the number of newly diagnosed cases has been rising, according to the Centers for Disease Control and Prevention (CDC).<sup>1</sup> Diabetes is characterized by a high level of blood glucose, which damages nerve endings and blood vessels; this damage in turn leads to serious health complications such as blindness, heart disease and stroke, kidney disease, and poor circulation in the extremities potentially resulting in foot or leg amputations. Complications like these can be delayed or prevented with proper care, provided that such care is accessible and used.<sup>2</sup> Specifically, federal health agencies and national organizations recommend that individuals with diabetes receive certain services to manage their disease—including periodic tests for blood glucose,<sup>3</sup> eye and foot exams, medical nutrition therapy, and diabetes education—along with other services, such as cholesterol tests, smoking cessation services, and influenza immunizations, which help reduce the risk of complications. Supplies that many individuals with diabetes use to track and control their blood glucose levels include blood glucose monitors; test strips; insulin; and, to administer insulin, insulin pumps or disposable needles and syringes.

Because diabetes services and supplies can be costly, you and others have raised concerns about whether individuals with diabetes have access to and receive all the services and supplies they need. Certain national

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<sup>1</sup>Diabetes is a disease in which the body does not produce or properly use the hormone insulin, which converts sugar, starches, and other food into energy. The vast majority of individuals with diabetes are adults. According to CDC, from 1997 through 2002, the annual number of newly diagnosed cases among adults rose by 47 percent.

<sup>2</sup>Controlling levels of blood glucose, blood pressure, and cholesterol—in combination with other, regular preventive care services for eyes, kidneys, and feet—can delay or prevent complications.

<sup>3</sup>Unless otherwise stated, “test(s) for blood glucose” or “blood glucose test(s)” in this report refers to tests for a specific compound in the blood called A1c, also called HbA1c, hemoglobin A1c, or glycosylated hemoglobin. An A1c test measures the average level of glucose in a patient’s blood over the preceding 3 months.

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organizations concerned with diabetes patient care have advocated state laws mandating that health insurance cover certain services and supplies benefiting these individuals. Although states generally do not regulate employment-based benefit plans, such as health plans provided by employers, they do regulate insurance; consequently, health coverage employers provide through the purchase of insurance is generally subject to state insurance regulation.<sup>4</sup> Although the exact number is unknown, many individuals with diabetes have health coverage not subject to state insurance regulation because their employers self-fund their health plans; that is, the employers pay the cost of health benefits directly, instead of purchasing insurance. In addition, the Federal Employees Health Benefits Program (FEHBP)—through which the federal Office of Personnel Management (OPM) contracts with private health insurance carriers to offer health coverage to federal employees, retirees, and their dependents<sup>5</sup>—is not subject to state insurance requirements.<sup>6</sup>

In this context, we examined the following three questions:

1. To what extent do state laws or regulations require health insurance policies to cover diabetes services and supplies?
2. To what extent does health coverage not subject to state insurance requirements—specifically, coverage provided by the largest health plans participating in FEHBP and the largest private self-funded health plans—include diabetes services and supplies?
3. To what extent do individuals with diabetes, including those with health coverage and those without, receive diabetes services and supplies?

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<sup>4</sup>The Employee Retirement Income Security Act of 1974 (ERISA) preempts state laws that “relate” to employee benefit plans but specifically does not preempt state laws regulating insurance. *See* 29 U.S.C. § 1144(a) and (b)(2)(A) (2000). Like insurance purchased by employers, insurance purchased directly by individuals is subject to state regulation.

<sup>5</sup>More than 8 million federal employees, retirees, and their dependents were enrolled in FEHBP in 2003.

<sup>6</sup>Under federal law, coverage- or benefit-related provisions in FEHBP contracts preempt state or local laws or regulations relating to health insurance or plans. *See* 5 U.S.C. § 8902(m)(1) (2000).

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To answer these questions, we obtained information from federal health agencies and national organizations concerned with diabetes patient care, and we identified 10 services and nine supplies that individuals with diabetes may need.<sup>7</sup> To examine the extent to which states require health insurance policies to cover diabetes services and supplies, we reviewed state laws and regulations related to diabetes coverage.<sup>8</sup> To assess the extent to which health coverage not subject to state requirements—such as coverage provided by the largest plans participating in FEHBP and by selected large employers’ self-funded plans—includes diabetes services and supplies, we contacted the three largest national plans participating in FEHBP—Blue Cross and Blue Shield, Mail Handlers, and Government Employees Hospital Association, Inc.<sup>9</sup>—as well as a random sample of 15 of the largest 50 Fortune 500 companies regarding their plans’ coverage of diabetes services and supplies in 2004.<sup>10</sup> We received responses from all three FEHBP plans, which covered approximately 5.3 million people in 2003, and from 13 of 15 of the employers we contacted, which together employed about 2.4 million people in 2003.<sup>11</sup> To collect information on the extent to which individuals with diabetes with and without health coverage receive diabetes services and supplies, we analyzed data provided by CDC from an annual national survey of individuals ages 18 and older known as the Behavioral Risk Factor Surveillance System (BRFSS). This survey, conducted by the states, consists of self-reported

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<sup>7</sup>We identified 10 diabetes services, including blood glucose tests, lipid (cholesterol) management, urine protein screening, eye exams, foot exams, influenza immunization, blood pressure management, smoking cessation, diabetes self-management education (hereafter called diabetes education), and medical nutrition therapy. We also identified nine diabetes supplies, including blood glucose monitors, glucose control solutions, test strips, lancet devices and lancets, alcohol swabs, therapeutic shoes for diabetic foot disease, insulin, insulin pumps, and disposable needles and syringes.

<sup>8</sup>Throughout this report, we include the District of Columbia in our discussion of states.

<sup>9</sup>Each of these three FEHBP plans offers two coverage options, but coverage for the diabetes services and supplies we reviewed was identical in both options.

<sup>10</sup>Because employers may offer their employees more than one health plan option, we asked employers to provide coverage information related to the health plan that had the largest enrollment. One of the employers in our review provided different benefits for hourly employees than for salaried employees within the same health plan. For this health plan, we included information on the coverage for salaried employees.

<sup>11</sup>We relied on the information reported by officials of the health plans reviewed and did not independently verify their responses. Because of our sampling approach, we cannot generalize our findings to all FEHBP plans or to all large employers.

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data gathered from telephone interviews.<sup>12</sup> We used data collected during 2003, the most recent year available. We also obtained data from another CDC survey known as the National Health and Nutrition Examination Survey (NHANES). Unlike BRFSS, this survey combines an in-home interview with a physical examination to assess the health of a nationally representative sample of the noninstitutionalized U.S. population, including a representative sample of individuals with diabetes.<sup>13</sup> We used data collected by this survey from 1999 through 2002 for individuals ages 18 and older. To assess data reliability, we reviewed CDC documentation of its data collection and discussed the data and their appropriate use with CDC officials. We determined that the data were sufficiently reliable for our purposes.

We conducted our work according to generally accepted government auditing standards from July 2004 through January 2005. Additional details about our scope and methodology appear in appendix I.

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## Results in Brief

In 2004, 47 states had laws or regulations related to coverage of diabetes services or supplies, although the specific coverage requirements varied by state. States most often required coverage of two diabetes services: diabetes education and medical nutrition therapy. Forty-five states required diabetes education, and 27 required medical nutrition therapy. National organizations concerned with diabetes patient care have worked with states to develop laws and regulations addressing these services in particular because other services, such as eye and foot exams, were thought to be covered by most health plans as general medical services. In

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<sup>12</sup>The BRFSS data we obtained contained information from 50 states and the District of Columbia. Each year the survey asks a range of health questions over the telephone, including if respondents have previously received a diagnosis of diabetes, whether they have health coverage at the time of the survey, and how many times they received any of a number of different health services. The survey does not identify what type of health coverage a respondent has, that is, whether a respondent is covered by a private health plan or a program such as Medicare, the federal health program that covers adults ages 65 and older and certain individuals with disabilities.

<sup>13</sup>Estimates from BRFSS and NHANES were analyzed separately and, when possible, stratified by health coverage (respondents with health coverage and those without). For both surveys, the analysis used data only for the sample reporting a diagnosis of diabetes before the survey period, excluding women with gestational diabetes. We excluded estimates whose 95 percent confidence intervals exceeded plus or minus 10 percentage points. Most estimates from BRFSS were stratified by state, although state estimates could not be broken down by health coverage; NHANES estimates were limited to the national level.



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addition, 47 states had coverage requirements related to diabetes supplies, although some states were more specific than others about which supplies must be covered.

The plans we contacted that provide coverage not subject to state insurance requirements—specifically, the 3 largest health plans participating in FEHBP and 13 of the largest employers’ self-funded plans—covered most of the diabetes services and supplies we reviewed, in most cases without limits on the coverage. Each of the 3 FEHBP plans and the 13 self-funded plans we contacted covered at least 7 of the 10 diabetes services, such as an annual blood glucose test, cholesterol and blood pressure monitoring, and influenza vaccinations. Services covered less often included diabetes education, medical nutrition therapy, and smoking cessation therapy. All 16 plans also covered at least five of the nine diabetes supplies we reviewed, including insulin and insulin-administering supplies; most of these plans also covered blood glucose monitors, glucose control solutions, alcohol swabs, and therapeutic shoes.

Data from CDC’s 2003 nationwide survey showed that a majority of individuals with diabetes ages 18 and older reported receiving at least one diabetes service within the past 12 months; a much smaller proportion, however, reported receiving five services that experts recommend that individuals with diabetes receive at least once a year. Nationwide, an estimated 88 percent of individuals with diabetes had received a test for blood glucose within the past 12 months, whereas an estimated 33 percent had received five services: blood glucose and cholesterol tests, eye and foot exams, and an influenza vaccination. Receipt of services and supplies among individuals with diabetes varied by service, state, and whether an individual had health coverage. For example, an estimated 71 percent of individuals with diabetes who had health coverage at the time of the survey had received eye exams, compared with 46 percent of those who lacked health coverage. Other CDC survey data indicate that many individuals with diabetes do not have adequate control of diabetes-related conditions that may increase their risk of complications.

We provided a draft of this report to CDC for comment. The agency provided us with technical comments, which we incorporated into the report as appropriate.

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## Background

Diabetes, a chronic disease, was the sixth leading cause of death in the United States in 2000, contributing to the loss of more than 200,000 lives, according to CDC. Type 1 diabetes, in which the body fails to produce insulin, is usually diagnosed in children and young adults. Type 2 diabetes, in which the body fails to use insulin properly, is associated with aging, a family history of diabetes, physical inactivity, and obesity and accounts for 90 to 95 percent of all diabetes cases. Although type 2 diabetes occurs most often among adults, it is increasingly being diagnosed in children and adolescents.<sup>14</sup> One study found that, on average in 2002, individuals with diabetes incurred about \$13,243 in health care expenditures, compared with about \$2,560 in expenditures for individuals without diabetes.<sup>15</sup> These estimates include costs attributed to complications of diabetes, such as cardiovascular disease, neurological symptoms, and kidney disease.

Federal health agencies and national organizations concerned with diabetes patient care have identified a number of services and supplies that individuals with diabetes often need to help manage their disease. Table 1 lists services considered important for diabetes patient care by the American Association of Diabetes Educators; the American Dietetic Association; and the National Diabetes Quality Improvement Alliance (Alliance), a consortium of 13 private-sector organizations and government agencies, including the American Diabetes Association (ADA), CDC, and the Centers for Medicare & Medicaid Services.<sup>16</sup>

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<sup>14</sup>CDC estimates that more than 200,000 people under 20 years of age had diabetes in 2002, but no data currently exist to determine the extent to which type 2 diabetes has emerged among U.S. children and adolescents.

<sup>15</sup>American Diabetes Association, "Economic Costs of Diabetes in the U.S. in 2002," *Diabetes Care*, vol. 26, no. 3 (2003).

<sup>16</sup>The Alliance uses nine services—blood glucose (A1c) management, lipid (cholesterol) management, urine protein screening, eye exams, foot exams, influenza immunization, blood pressure management, aspirin therapy, and smoking cessation therapy—as performance measures to assess and report on the quality of diabetes care for adults with diabetes. For women of childbearing age with diabetes, the Alliance also recommends pre-pregnancy counseling on the importance of glucose management before conception.

**Table 1: Services for Managing Diabetes**

Service	Importance for patient care
Blood glucose (A1c) management <sup>a</sup>	Regular, frequent monitoring of glucose in the blood (as HbA1c, hemoglobin A1c, or glycosylated hemoglobin) reduces the risk of complications such as nerve damage, kidney disease, and vision disorders.
Lipid (cholesterol) management	Individuals with diabetes are at increased risk of coronary heart disease. Lowering serum cholesterol levels can reduce this risk.
Urine protein screening for kidney disease	Diabetes is the leading cause of end-stage renal (kidney) disease. The earliest clinical evidence of kidney disease is the appearance of low but abnormal levels of a protein (albumin) in the urine. Early detection and treatment of this condition may prevent or slow the progression of diabetic kidney disease.
Eye exam for eye disease	Individuals with diabetes are at increased risk of blindness caused by retinopathy, or diseases of the retina, the light-sensitive tissue at the back of the eye that is needed for vision. The prevalence of retinopathy is strongly related to the duration of diabetes, but treatment can prevent or delay onset.
Foot exam to detect problems with circulation and sensation	Individuals with diabetes are at increased risk of foot ulcers and amputations. Annual foot exams and management of risk factors can prevent or delay poor outcomes.
Influenza immunization	Individuals with diabetes are considered to be at increased risk of complications, hospitalization, and death from influenza, as well as of secondary infections, such as pneumonia, resulting from influenza.
Blood pressure management	Controlling blood pressure in patients with diabetes reduces diabetes complications, diabetes-related deaths, strokes, heart failure, and other complications.
Diabetes education	Diabetes education teaches individuals to manage their disease through activities including exercise and blood glucose monitoring.
Medical nutrition therapy	Medical nutrition therapy is a specific nutrition service and procedure used to treat illnesses or health conditions. It involves an in-depth nutrition assessment, changes in diet as appropriate, and follow-up monitoring and evaluation.
Smoking cessation therapy: counseling or drugs	Individuals with diabetes who smoke are more likely to suffer nerve damage and kidney disease. Smoking also damages and constricts blood vessels, which can worsen foot ulcers and leg infections. In addition, smoking increases blood pressure and blood glucose.

Sources: American Association of Diabetes Educators, American Diabetes Association, American Dietetic Association, and National Diabetes Quality Improvement Alliance.

Note: In addition to the services listed in this table, the Alliance also recommends aspirin therapy to help prevent stroke, heart attack, and other cardiovascular problems in adults with diabetes. Because aspirin is an over-the-counter medication not typically covered by health plans, we excluded aspirin therapy from our review.

<sup>a</sup>A1c tests differ from traditional home glucose monitoring, which usually involves pricking a finger, putting a drop of blood on a test strip, and placing the strip into a meter that displays the level of glucose in the blood. A1c tests are done in a health care provider's office and measure the average level of glucose in the blood over the preceding 3 months. For some patients, daily (or sometimes hourly) self-testing for glucose level is recommended to provide a short-term glucose assessment, but experts recommend at least one A1c test annually for all diabetes patients to assess a patient's general glucose level.

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In addition to such services, according to federal agencies and organizations concerned with diabetes patient care, individuals with diabetes often need certain supplies to manage their disease. Needed supplies may include blood glucose monitors, glucose control solutions (used to check the accuracy of testing equipment and test strips), test strips, lancets and lancet devices (used to prick the skin for a blood sample to self-test blood glucose levels), insulin (when necessary), insulin pumps (to administer insulin), disposable needles and syringes (also to administer insulin), alcohol swabs, and therapeutic shoes (for individuals with severe diabetic foot disease).

Health coverage may be provided through the purchase of insurance policies that are subject to state laws and regulations or through means other than insurance. Health coverage provided through the purchase of insurance in a given state, whether purchased by individuals or by employers, is subject to insurance requirements in that state, including requirements to cover specified illnesses, services, or supplies.<sup>17</sup> For example, states often require coverage of cancer-screening services such as mammography or tests for colorectal cancer.<sup>18</sup> These state requirements are in addition to coverage requirements established by federal law. In 2001, two-thirds of Americans younger than 65 (the age at which people generally become eligible for Medicare),<sup>19</sup> received health coverage through their own employer or that of a family member. Large private employers often self-fund their health plans,<sup>20</sup> and coverage provided by these plans is not subject to state insurance regulation, although it is

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<sup>17</sup>Health insurance policies may also cover services or supplies that they are not required to cover.

<sup>18</sup>See *Private Health Insurance: Coverage of Key Colorectal Cancer Screening Tests Is Common but Not Universal*, [GAO-04-713](#) (Washington, D.C.: June 17, 2004), and *Private Health Insurance: Federal and State Requirements Affecting Coverage Offered by Small Businesses*, [GAO-03-1133](#) (Washington D.C.: Sept. 30, 2003).

<sup>19</sup>Medicare provided health coverage to almost 35 million beneficiaries ages 65 and older and 6 million individuals with disabilities in 2002 (the most recent data available), including individuals with end-stage renal disease. Medicare covers the diabetes services that we reviewed, except smoking cessation therapy, and the diabetes supplies that we reviewed, except alcohol swabs and disposable needles and syringes. The program generally does not cover insulin, although it may cover insulin when used with an insulin pump.

<sup>20</sup>In 2002, about 78 percent of employers with more than 500 employees offered at least one self-funded plan, compared with about 29 percent of employers that had 100–499 employees and about 13 percent of small employers (those with fewer than 50 employees).

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generally subject to federal requirements.<sup>21</sup> Health coverage provided by the federal government is also not subject to state insurance regulation. For FEHBP, OPM is responsible for contracting with private health insurance carriers to offer health benefit plans to federal employees. By federal law, the terms of any FEHBP contract negotiated by OPM that relate to coverage or benefits preempt any inconsistent state or local law or regulation. OPM routinely preempts state requirements to ensure a consistent set of benefits among nationwide FEHBP plans, according to an OPM official.<sup>22</sup>

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## Most States Require Insurance Policies to Cover Diabetes Services and Supplies, Although Specific Requirements Vary

In 2004, 47 states had laws or regulations related to coverage of diabetes services or supplies, although specific requirements varied by state (see fig. 1 and app. II). Forty-five states required insurance policies to cover specific services or supplies for diabetes.<sup>23</sup> Two more states, Mississippi and Missouri, required “mandated offerings”; that is, these states required insurance policies to provide coverage for diabetes at the option of purchasers. Some states’ requirements applied only in narrow circumstances. For example, Arizona and Wisconsin required coverage of diabetes supplies only when a health insurance policy covered the treatment of diabetes.<sup>24</sup> The services most frequently specified in state requirements were diabetes education and medical nutrition therapy: 45 states required that insurance policies cover diabetes education, and 27

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<sup>21</sup>The most significant of these are included in ERISA. *See* 29 U.S.C. §§ 1001 et. seq. (2000). ERISA does not require that any employer provide health coverage. For most employers that do provide health coverage, it specifies several requirements, but coverage for diabetes services and supplies is not among them.

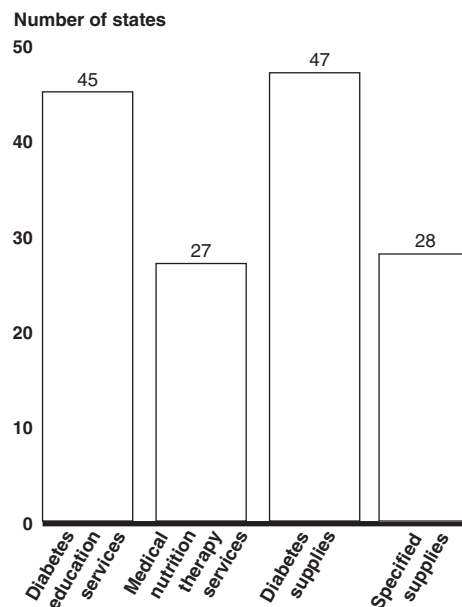
<sup>22</sup>OPM does not impose specific coverage requirements on FEHBP plans, including for diabetes services and supplies.

<sup>23</sup>Alabama, Idaho, North Dakota, and Ohio did not require coverage of diabetes services or supplies. Except for Idaho, these states have considered or are considering legislation to require coverage of specific diabetes services or supplies. State requirements generally applied to both individual and group health insurance policies, but requirements in Illinois, Montana, and Oregon applied only to group policies. Alaska’s requirements applied only to policies covering pharmacy services.

<sup>24</sup>Wisconsin law also required coverage of diabetes education programs only if the policy covered expenses for the treatment of diabetes.

states required coverage of medical nutrition therapy.<sup>25</sup> State requirements may have focused more often on these two services in part because national organizations concerned with diabetes patient care—including ADA, the American Dietetic Association, and the American Association of Diabetes Educators—have supported “model” legislation centered on these two services. According to ADA and the American Dietetic Association, the organizations focused on these two services in particular because others, such as eye and foot exams, were thought to be covered by most policies as general medical services. The model legislation also includes coverage of “diabetes equipment and supplies,” and 47 states required such coverage. Twenty-eight states identified which supplies must be covered, although their specific requirements varied.

**Figure 1: Number of States Requiring Coverage of Diabetes Services and Supplies, 2004**



Source: GAO.

<sup>25</sup>In addition, six states required coverage of nutrition counseling or education that includes information on proper diet. Florida, which we did not count among these six, required coverage of “outpatient self-management training and educational services used to treat diabetes” and stated that any policy “may require that nutrition counseling be provided by a licensed dietician.”

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Some states had specific requirements regarding the coverage of certain services, such as diabetes education. Forty-two states specified at least some criteria for the training or education that health care professionals must have to provide diabetes education. These criteria varied widely from state to state. To provide diabetes education in Louisiana, for example, health professionals must have demonstrated expertise in diabetes and must have completed an educational program in compliance with the National Standards for Diabetes Self-Management Education established by ADA. In contrast, several states required educators to be licensed professionals with expertise in diabetes but did not define the term expertise. Eight states referred to ADA's national standards in setting their requirements for diabetes education programs. Some of these states required programs to be consistent with these standards, while others mentioned them as an example of acceptable standards.

Among the 47 states whose laws or regulations required coverage of diabetes supplies, specific coverage requirements varied. For example, 19 states did not specify which supplies must be covered; instead, these states typically required coverage of all medically necessary equipment and supplies prescribed by a physician. The remaining 28 states specified covered supplies, either in laws or regulations, but the number of supplies varied among the states. For example, Michigan had requirements related to insulin, blood glucose monitors, test strips, lancets, lancet devices, syringes, and insulin pumps. In contrast, Mississippi required coverage of equipment and supplies, including supplies used in connection with blood glucose monitoring and insulin administration, but did not specify which supplies. Some states that listed covered supplies also prescribed procedures for adding new supplies to the list. For example, in New Jersey, the Commissioner for Insurance, in consultation with the Commissioner of Health, may update the list of supplies.

While nearly all states have required some coverage of diabetes services or supplies in the insurance policies they regulate, some states have authorized a class of health insurance policies that are not bound by many of the state coverage requirements, which may include those for coverage of diabetes services and supplies. Known as "flexible health benefit" or "limited-benefit" policies, and typically marketed to small employers or individuals, such policies may, through lower premiums, reduce the cost of coverage. At least two states, Louisiana and Arkansas, have authorized limited-benefit policies that are not bound by requirements related to

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diabetes services and supplies.<sup>26</sup> Louisiana has authorized such policies for individuals not otherwise able to obtain health coverage and for small employers (3–35 employees), and Arkansas has authorized them for all groups, regardless of size. ADA is concerned that limited-benefit policies may not provide sufficient coverage of the services and supplies that individuals with diabetes need to manage their condition.

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## Selected Health Plans Providing Coverage Not Subject to State Regulation Cover Most but Not All Diabetes Services and Supplies

The 3 largest plans participating in FEHBP—Blue Cross and Blue Shield, Mail Handlers, and Government Employees Hospital Association, Inc.—and the 13 large-employer self-funded plans we contacted covered most of the diabetes services and supplies we reviewed. All 16 plans covered at least 7 of the 10 diabetes services, as well as at least five of nine diabetes supplies. Few of the plans we contacted placed limits on coverage for diabetes services and supplies.<sup>27</sup>

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## Three Largest FEHBP Plans Cover Most Diabetes Services and Supplies

The three largest FEHBP plans covered at least 8 of the 10 diabetes services we reviewed (see table 2). Both diabetes education and medical nutrition therapy were covered by two of the three plans, although one plan placed conditions on these services: diabetes education was covered when provided at a hospital and medical nutrition therapy when provided by a physician. The three plans stated that coverage requirements for diabetes services and supplies applied only in cases of medical necessity. The plans generally did not, however, set monetary limits on their

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<sup>26</sup>According to one study, at least 11 states had legislation as of 2004 to allow the marketing of policies that do not meet their usual coverage requirements; this study, however, did not specify whether the states' legislation included provisions related to diabetes [I. Friedenzohn, "Limited-Benefit Policies: Public and Private Sector Experiences," *Academy Health Issue Brief*, vol. V, no. 1 (2004)]. At least one state, Colorado, required health insurance policies to comply with some state coverage requirements, including those for diabetes services and supplies, but not with others, including those for mammography and prostate cancer screening.

<sup>27</sup>Other factors, outside the scope of this review, such as high co-payments, high deductibles, or transitions in health coverage when individuals change employers, may create financial and access-to-care barriers for individuals with diabetes, according to a February 2005 report [Karen Pollitz et al., *Falling through the Cracks: Stories of How Health Insurance Can Fail People with Diabetes* (Washington, D.C.: Georgetown University Health Policy Institute and American Diabetes Association, Feb. 8, 2005)].



coverage for diabetes services. One exception was smoking cessation therapy, for which one plan set \$100 lifetime limits per enrollee for both counseling and drug therapy. Another plan set \$100 lifetime limits per enrollee for smoking cessation counseling.

**Table 2: Diabetes Services Covered by the Three Largest FEHBP Plans, 2004**

Service	Blue Cross and Blue Shield	Mail Handlers	Government Employees Hospital Association, Inc.
Blood glucose test	X	X	X
Lipid profile	X	X	X
Urine protein screening	X	X	X
Eye exam	X	X	X
Foot exam	X	X	X
Influenza vaccination	X	X	X
Blood pressure management	X	X	X
Smoking cessation therapy	X	X	X
Diabetes education	X		X
Medical nutrition therapy	X <sup>a</sup>		X

Source: GAO analysis of data from the three largest FEHBP plans.

<sup>a</sup>Covered for enrollees with a diagnosis of diabetes.

The three FEHBP plans all covered at least seven of nine diabetes supplies, including blood glucose monitors, glucose control solutions, test strips, lancets and lancet devices, insulin, insulin pumps, and disposable needles and syringes. One plan did not cover alcohol swabs, and two plans did not cover therapeutic shoes. One plan limited its coverage of supplies; specifically, this plan set lifetime durable medical equipment limits of \$10,000 per person for specific supplies, including blood glucose monitors and insulin pumps.

## Large Employers' Self-Funded Health Plans Reviewed Cover Most Diabetes Services and Supplies

Each of the 13 large employers' self-funded health plans we reviewed covered at least 7 of 10 diabetes services, specifically, blood glucose, lipid, and urine tests; eye and foot exams; blood pressure management, and influenza vaccinations. The remaining 3 services were covered by at least 9 plans (see fig. 2). Among these plans, we found limits on coverage only for smoking cessation therapy. One plan, for example, had a lifetime maximum of three drug therapy treatments for smoking cessation, and

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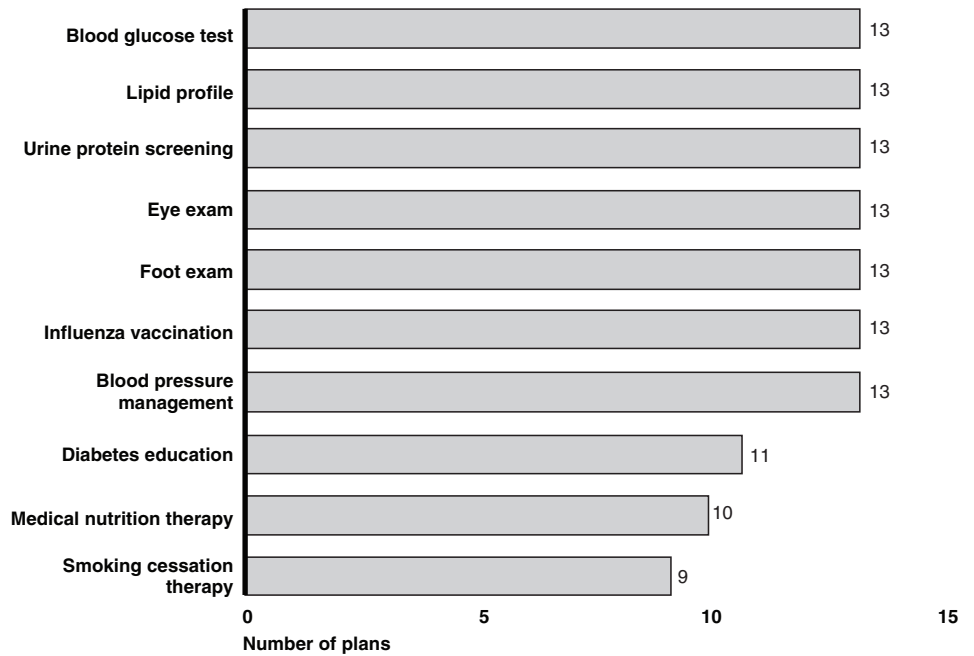
another plan had a maximum of two smoking-cessation programs per lifetime for each enrollee for both counseling and drug therapy.

In a few cases, the plans specified certain conditions for coverage. For example, among the 11 plans offering coverage of diabetes education, 4 did so only if an employee with diabetes was enrolled in the plan's diabetes management program. Three of the 10 plans offering coverage of medical nutrition therapy did so only as part of their diabetes management program. Of the 9 plans covering smoking cessation therapy, 5 restricted coverage to drug therapy and did not cover smoking cessation counseling. Most of the self-funded plans stipulated that diabetes services and supplies were covered only when medically necessary.<sup>28</sup> In addition, 7 plans required waiting periods ranging from 30 days to 6 months after an employee was hired before health coverage began. One plan did not cover preexisting conditions—either an injury or illness—occurring during the 90 days before a newly hired employee began the waiting period.

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<sup>28</sup>For example, one health plan told us that it would pay for medically necessary services, supplies, or treatments that it considers to be “reasonable, necessary, and customary,” which means that such services, supplies, or treatments must be appropriate and consistent with the diagnosis or symptoms; consistent with accepted medical standards; not experimental or investigational; not provided solely on a convenience or personal basis; and employed appropriately, effectively, and safely with respect to the type and level of care.

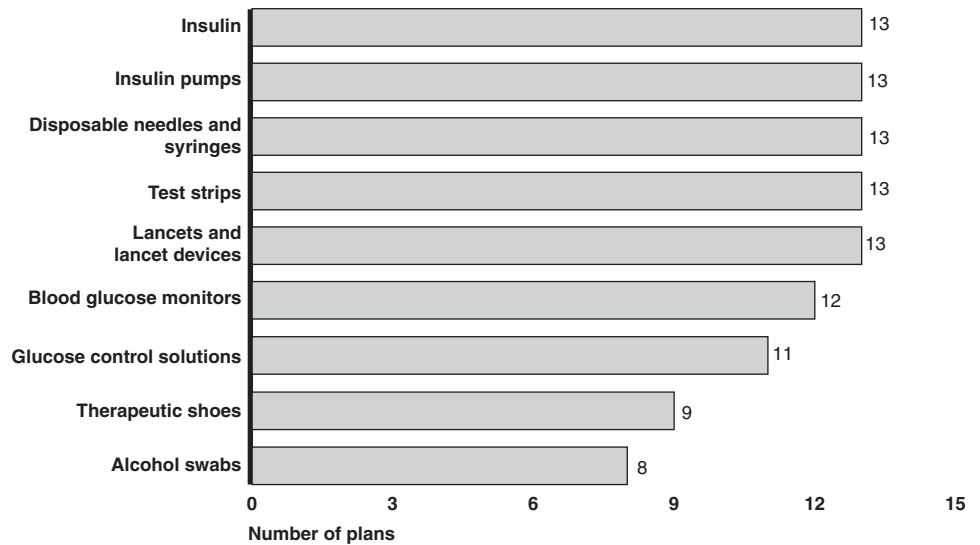
**Figure 2: Diabetes Services Covered by 13 Large Employers' Self-Funded Health Plans, 2004**



Source: GAO analysis of data from 13 of the 50 largest Fortune 500 companies.

All 13 self-funded plans covered at least five of nine diabetes supplies, including insulin, insulin pumps, disposable needles and syringes, test strips, and lancets and lancet devices, and all but 1 covered blood glucose monitors (see fig. 3). Only 1 of the 13 plans reported having limits on the quantity of supplies covered, covering one blood glucose monitor per year. Two of the 13 plans reported placing conditions on their coverage of supplies. For example, 1 plan told us that it allowed up to a 90-day supply of items for each claim, and another plan covered therapeutic shoes when prescribed by a physician and purchased through an authorized supplier.

**Figure 3: Diabetes Supplies Covered by 13 Large Employers' Self-Funded Health Plans, 2004**



Source: GAO analysis of data from 13 of the 50 largest Fortune 500 companies.

## Nationwide, Receipt of Diabetes Services and Control of Related Health Conditions Are Uneven

Data from CDC's 2003 nationwide survey showed that individuals with diabetes received some but not all diabetes services, and those who had health coverage were more likely to have received services than those who did not. The proportion of individuals with diabetes receiving diabetes services varied widely by type of service and among states. Another CDC survey, which included a physical examination of participants, indicated that many individuals with diabetes did not have their diabetes-related conditions adequately controlled.

### Individuals with Diabetes Report Receiving Many but Not All Services

National data show that individuals with diabetes ages 18 and older receive many but not all diabetes services. In a nationwide telephone survey conducted in 2003, the majority of individuals with diabetes reported receiving at least one of six identified diabetes services for which national data were available.<sup>29</sup> Substantially fewer individuals reported receiving within the past 12 months the five services recommended that

<sup>29</sup>CDC's 2003 BRFSS included a representative sample of 19,162 participants from 50 states and the District of Columbia who reported receiving a diagnosis of diabetes from a physician before the survey period.

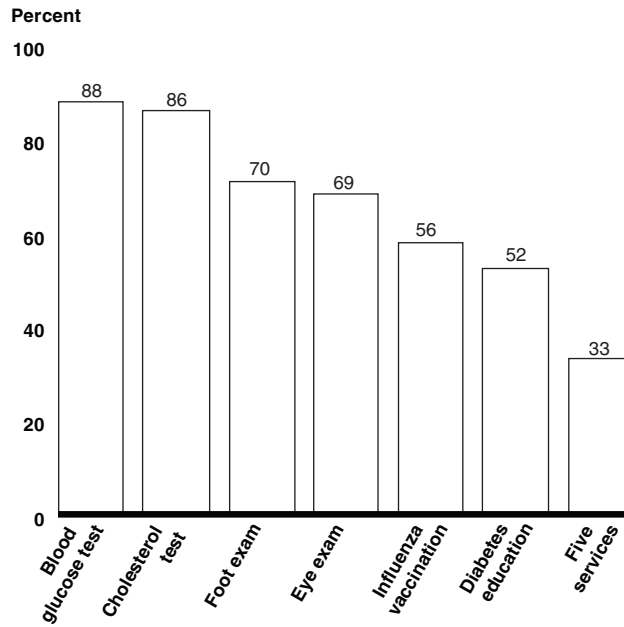
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individuals with diabetes receive at least once a year. Although the receipt of services varied by service, half or more of the individuals with diabetes reported receiving each given service. For example, an estimated 88 percent had received a test for blood glucose within the past 12 months, and an estimated 52 percent had received diabetes education. A much smaller proportion, 33 percent, had received the five services recommended that individuals with diabetes receive at least once a year—specifically, a blood glucose test, a cholesterol test, an eye exam, a foot exam, and an influenza vaccination (see fig. 4).<sup>30</sup>

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<sup>30</sup>The national BRFSS data had information on 6 of the 10 services we reviewed for managing diabetes, specifically, A1c tests for blood glucose, cholesterol tests, eye exams, foot exams, influenza vaccinations, and diabetes education. With the exception of diabetes education, experts recommend that individuals with diabetes receive these services at least once a year. We selected 5 of these services for a combined estimate of services recommended that individuals with diabetes receive at least once a year—specifically, A1c tests for blood glucose, cholesterol tests, eye exams, foot exams, and influenza vaccinations. The 4 services absent from the national data were urine protein screening, blood pressure management, medical nutrition therapy, and smoking cessation therapy.

**Figure 4: Estimated Nationwide Percentage of Individuals Ages 18 and Older with Diabetes Who Reported Receiving Diabetes Services, 2003**



Source: CDC's BRFSS.

Notes: These nationwide estimates were constructed from available state data. Data represent the estimated percentage of individuals ages 18 and older nationwide who reported receiving a service within the past 12 months, except for diabetes education, for which respondents were asked if they had ever received the service (specifically, participants were asked if they had ever taken a course on how to manage their diabetes). Data for "Five services" represent the estimated percentage of individuals who reported receiving all of five services recommended that individuals with diabetes receive at least once a year: a blood glucose test, a cholesterol test, a foot exam for sores or irritations, an eye exam in which the pupils were dilated, and an influenza vaccination.

CDC's survey also indicated that an estimated 82 percent of individuals with diabetes were taking insulin or diabetes medication to control their blood glucose.<sup>31</sup> Otherwise, use of diabetes supplies was not captured in CDC's survey.

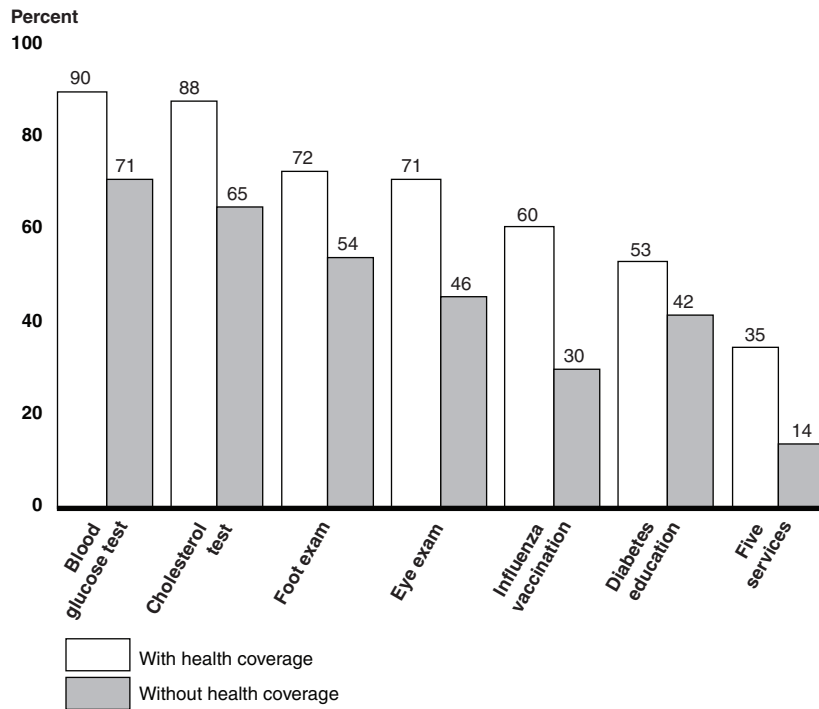
<sup>31</sup>Insulin delivery typically requires use of supplies such as insulin pumps or needles and syringes.

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**Individuals with Diabetes  
Who Have Health  
Coverage More Likely to  
Receive Services Than  
Those Who Lack Coverage**

According to CDC's 2003 survey, in comparison with individuals with diabetes who lacked health coverage, a larger proportion who had health coverage reported receiving one or more services. For example, an estimated 90 percent of individuals with diabetes who had health coverage at the time of the survey had received a blood glucose test, compared with 71 percent of those who reported not having such coverage (see fig. 5). Moreover, the estimated proportion of individuals with diabetes who received all of the five diabetes services was more than twice as high for those who had coverage than for those who did not. For example, although an estimated 35 percent of those with health coverage had received a blood glucose test, a cholesterol test, eye exam, foot exam, and influenza vaccination, just 14 percent of those without health coverage received the same set of services.

**Figure 5: Estimated Nationwide Percentage of Individuals Ages 18 and Older with Diabetes, With and Without Health Coverage, Who Reported Receiving Diabetes Services, 2003**



Source: CDC's BRFSS.

Notes: These nationwide estimates were constructed from available state data. Data represent the estimated percentage of individuals ages 18 and older nationwide who reported receiving a service within the past 12 months, except for diabetes education, for which respondents were asked if they had ever received the service (specifically, participants were asked if they had ever taken a course on how to manage their diabetes). Data for "Five services" represent the estimated percentage of individuals who reported receiving all of five services recommended that individuals with diabetes receive at least once a year: a blood glucose test, a cholesterol test, a foot exam for sores or irritations, an eye exam in which the pupils were dilated, and an influenza vaccination.

## Receipt of Diabetes Services Varies Widely among States

CDC's 2003 survey showed substantial variation among states in the receipt of diabetes services. Depending on the service, the estimated state-by-state percentages of individuals with diabetes who reported receiving services varied widely. For example, the estimated state-by-state percentages of individuals with diabetes who reported receiving an eye exam ranged from 55 to 84 percent (see table 3). Despite this state-by-state variation, the same services were generally the most received across all states. In most states, for example, more individuals received blood



glucose and cholesterol tests than received foot exams or diabetes education.

**Table 3: Range among States in Estimates of Diabetes Services Received by Individuals with Diabetes, 2003**

Service	State percentages <sup>a</sup>	Number of states <sup>b</sup>
Blood glucose (A1c) test	74 to 97	46
Cholesterol test	79 to 92	51
Foot exam	59 to 82	45
Eye exam	55 to 84	44
Influenza vaccination	46 to 75	49
Diabetes education (ever received)	37 to 67	45
Five services <sup>c</sup>	23 to 48	44

Source: CDC's BRFSS.

<sup>a</sup>State percentages reflect the estimated proportion of individuals ages 18 and older with diabetes in a given state who reported receiving a service within the past 12 months, except for diabetes education.

<sup>b</sup>Numbers of states vary because not all states provided data for all diabetes services in 2003. Because the sample sizes of individuals with diabetes reporting receipt of each service for each state were relatively small, the confidence intervals were relatively large. Any state whose 95 percent confidence interval for any estimate exceeded plus or minus 10 percentage points was excluded from this analysis.

<sup>c</sup>"Five services" represents the estimated percentage of individuals who reported receiving the five services recommended that individuals with diabetes receive at least once a year: a blood glucose test, a cholesterol test, a foot exam for sores or irritations, an eye exam in which the pupils were dilated, and an influenza vaccination.

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## Many Individuals with Diabetes Do Not Have Adequate Control of Related Conditions That May Increase Their Risk of Complications

For 1999–2002, data from CDC’s NHANES—a nationally representative survey that involves a physical examination to assess each participant’s health—indicated that many individuals with diabetes ages 18 and older did not have adequate control of related conditions that could lead to health complications.<sup>32</sup> Experts say that controlling blood glucose and cholesterol levels lowers the risk of nerve damage, vision disorders, and cardiovascular disease; detecting renal disease early decreases the risk of kidney failure.<sup>33</sup> Yet data from CDC’s NHANES showed that about 19 percent of examined participants with diabetes had poor control of their blood glucose,<sup>34</sup> and about half of them had cholesterol levels putting them at increased risk for cardiovascular disease. In addition, about 40 percent were at increased risk of renal disease, as evidenced by a positive test for abnormal levels of a protein in their urine.<sup>35</sup> The data also showed that about 38 percent of individuals with diabetes who did not have health coverage had glucose levels indicative of poor control, compared with about 16 percent of those who had health coverage.

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## Agency Comments

We provided a draft of this report to CDC for comment. The agency provided us with technical comments, which we incorporated into the report as appropriate.

As agreed with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will send copies to interested congressional committees and members and make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

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<sup>32</sup>CDC’s NHANES included a nationally representative sample of 904 participants who reported a diagnosis of diabetes.

<sup>33</sup>The Diabetes Control and Complications Trial Research Group, “The Effect of Intensive Treatment of Diabetes on the Development and Progression of Long-Term Complications in Insulin-Dependent Diabetes Mellitus,” *New England Journal of Medicine*, vol. 329 (1993); and U.K. Prospective Diabetes Study Group, “Association of Glycaemia and Macrovascular and Microvascular Complications of Type 2 Diabetes: Prospective Observational Study,” *British Medical Journal*, vol. 321 (2000).

<sup>34</sup>Poor control of blood glucose is measured by the Alliance as an A1c value greater than 9 percent.

<sup>35</sup>Diabetes is the leading cause of end-stage renal disease.

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If you or your staffs have any questions about this report, please contact me at (202) 512-7118. Another contact and key contributors to this report are listed in appendix III.

*Kathryn G. Allen*

Kathryn G. Allen  
Director, Health Care—Medicaid  
and Private Health Insurance Issues

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# Appendix I: Scope and Methodology

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To assess health care coverage and receipt of diabetes services and supplies, we obtained information from federal health agencies and national organizations concerned with diabetes patient care and identified 10 services and nine supplies that individuals with diabetes often need. To determine the extent to which states require coverage of diabetes services and supplies for the health insurance policies they regulate, we examined state laws and regulations from September 2004 through December 2004 related to diabetes and the extent to which they required coverage of specific services and supplies. We also reviewed information prepared by the American Diabetes Association (ADA) and the American Dietetic Association and interviewed officials there, as well as from states and the National Conference of State Legislatures. In addition, we reviewed state requirements for limited-benefit policies—which are not required to comply with coverage requirements usually applicable to health insurance—in Louisiana, Arkansas, and Colorado.

To examine the extent to which the largest plans participating in the Federal Employees Health Benefits Program (FEHBP) and the largest self-funded employer plans cover diabetes services and supplies, we obtained information from the three largest national FEHBP plans—Blue Cross and Blue Shield, Mail Handlers, and Government Employees Hospital Association, Inc.—which together covered approximately 5.3 million people in 2003, or about 65 percent of employees, retirees, and their dependents covered by FEHBP plans. We also contacted a random sample of 15 of the 50 largest Fortune 500 companies, ranked by the number of employees, regarding their plans' coverage of diabetes services and supplies in 2004 and received responses from 13 of them. Together these 13 large companies, which had self-funded health plans, employed about 2.4 million people in 2003. Because employers may offer their employees more than one health plan option, we asked employers to provide coverage information related to the health plan that had the largest enrollment. We relied on the information as reported by officials of the health plans reviewed and did not independently verify their responses. Because of our sampling approach, we cannot generalize our findings to all FEHBP plans or to all large employers. Although we received responses from most (16 of 18) of the FEHBP plans and employers we contacted, our results may still reflect some selection bias, in that employers offering more benefits might have been more likely to respond than those offering fewer benefits.

To assess information on the extent to which individuals with diabetes receive diabetes services and use supplies, we analyzed data for individuals ages 18 and older provided by the Centers for Disease Control and Prevention (CDC) from two nationwide surveys: the Behavioral Risk Factor Surveillance System (BRFSS) for 2003 and the National Health and Nutrition Examination Survey (NHANES) for 1999–2002:

- *BRFSS* is a nationwide telephone survey conducted every year by state health departments, with technical and methodological assistance provided by CDC. A “cross-sectional” or point-in-time survey, BRFSS samples the civilian noninstitutionalized population of adults ages 18 and older in the United States, including the 50 states and the District of Columbia;<sup>1</sup> all data from BRFSS are self-reported. The survey’s purpose, methods, and data analyses are available at <http://www.cdc.gov/brfss>. We used data from CDC gathered during 2003 about services individuals with diabetes reported receiving within the 12 months preceding the survey, which represented the most recent information available. BRFSS 2003 included a representative sample of 19,162 participants with diabetes. In addition to questions from the core sections of the survey, we used questions from a diabetes-specific section, which included data from 46 states in 2003, to collect data on disease management practices from respondents with diabetes.
- *NHANES* is a nationally representative survey, whose data are collected every year and released every 2 years by CDC, that samples the civilian noninstitutionalized U.S. population. It is a two-part survey, consisting of an in-home interview plus a health examination in a mobile examination center. Its purpose, methods, and data analyses are available at <http://www.cdc.gov/nchs/nhanes.htm>. We used NHANES data from 1999–2002—the most recent information available—for adults ages 18 and older, which included a representative sample of 904 participants with diabetes. We relied on NHANES results from the physical examinations, which included laboratory tests, for specific test values for individuals who had reported a prior diagnosis of diabetes, including tests for blood glucose, cholesterol, and kidney disease.

We examined data provided to us by CDC from each survey separately. When possible, the data were stratified by health coverage status (respondents who reported having health coverage and those who

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<sup>1</sup>Although CDC’s BRFSS is conducted in Puerto Rico, the Virgin Islands, and Guam as well, we did not include these territories in our review.

reported not having it).<sup>2</sup> For both surveys, we used data only from respondents who reported receiving a diagnosis of diabetes before the survey period. Most of CDC’s estimates from BRFSS were stratified by state, although we could not develop state-level estimates by health coverage; NHANES estimates were limited to the national level. We analyzed a total of 10 indicators for diabetes services and supplies from both surveys (see table 4).

**Table 4: Indicators of Services and Supplies for Managing Diabetes**

Diabetes indicator <sup>a</sup>	Data source	Population
Percentage of patients who report receiving one or more A1c tests	BRFSS	National and state
Percentage of patients with a measured A1c test value >9.0%	NHANES	National
Percentage of patients who report receiving at least one cholesterol test	BRFSS	National and state
Percentage of patients with a measured total cholesterol value ≥200 mg/dl	NHANES	National
Percentage of patients who report receiving a dilated-eye exam	BRFSS	National and state
Percentage of patients who report receiving at least one foot exam for sores or irritations	BRFSS	National and state
Percentage of patients who report receiving an influenza immunization <sup>b</sup>	BRFSS	National and state
Percentage of patients who report ever taking a diabetes self-management course	BRFSS	National and state
Percentage of patients who report currently taking insulin or diabetes medication	BRFSS	National and state
Percentage of patients with a negative test for nephropathy (kidney disease) <sup>c</sup>	NHANES	National

Source: CDC.

<sup>a</sup>Unless otherwise noted, we used data from BRFSS about respondents’ receipt of diabetes services within the past 12 months. NHANES data came from 1999–2002.

<sup>b</sup>The BRFSS question asks participants if they have received a “flu shot,” thus potentially excluding respondents who may have received an intranasal immunization for influenza.

<sup>c</sup>A negative test for nephropathy is defined as a ratio of urinary albumin to urinary creatinine of <17 for men and <25 for women.

<sup>2</sup>Specifically, BRFSS asked respondents, “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?” NHANES asked about health insurance status, including the type of coverage, but we did not stratify NHANES data by the type of health coverage because of insufficient sample sizes of respondents with diabetes. We did not identify any data sources on the number of individuals having coverage subject to state insurance requirements or not subject to state requirements. We therefore could not assess whether individuals with different types of coverage differed in receipt of diabetes services and supplies.

We assessed the reliability of the NHANES and BRFSS data provided by CDC by (1) reviewing existing information about the data and the methods used to collect them and (2) interviewing and working with agency officials knowledgeable about the data. We determined that the data were sufficiently reliable for the purposes of this report. Our review had several data limitations. First, BRFSS data were self-reported for each service we reviewed, and both BRFSS and NHANES used self-reported diagnoses of diabetes from participants, a practice that can result in recall bias. Second, BRFSS is a telephone survey, which limits data collection to individuals who have telephones. Third, both surveys are cross-sectional; that is, they provide information at one point in time. For example, although health coverage was assessed at the time the surveys were conducted, we could not determine whether participants' coverage changed over the survey year.

# Appendix II: Summary of Diabetes Coverage Requirements in State Laws or Regulations, 2004

State	Requirement related to diabetes	Diabetes education services	Medical nutrition therapy services <sup>a</sup>	Diabetes supplies	Specified supplies
Alabama					
Alaska	X	X <sup>b</sup>	X <sup>b</sup>	X <sup>b</sup>	
Arizona	X			X <sup>c</sup>	X
Arkansas	X	X	X	X	X
California	X	X	X	X	X
Colorado	X	X	X	X	
Connecticut	X	X	X	X	
Delaware	X			X <sup>d</sup>	X
District of Columbia	X	X	X	X	
Florida	X	X		X	
Georgia	X	X	X	X	X
Hawaii	X	X		X	
Idaho					
Illinois <sup>e</sup>	X	X	X	X	X <sup>f</sup>
Indiana	X	X		X	
Iowa	X	X		X	X
Kansas	X	X	X	X	X <sup>g</sup>
Kentucky	X	X	X	X	
Louisiana	X	X	X	X	
Maine	X	X		X	X
Maryland	X	X	X	X	
Massachusetts	X	X	X	X	X
Michigan	X	X		X	X <sup>h</sup>
Minnesota	X	X	X	X	
Mississippi <sup>i</sup>	X	X	X	X	X
Missouri <sup>i</sup>	X	X		X	
Montana <sup>e</sup>	X	X		X	X
Nebraska	X	X	X	X	X
Nevada	X	X		X	
New Hampshire	X	X	X	X	X <sup>i</sup>
New Jersey	X	X		X	X
New Mexico	X	X	X	X	X
New York	X	X		X	X
North Carolina	X	X		X	



**Appendix II: Summary of Diabetes Coverage Requirements in State Laws or Regulations, 2004**

<b>State</b>	<b>Requirement related to diabetes</b>	<b>Diabetes education services</b>	<b>Medical nutrition therapy services<sup>a</sup></b>	<b>Diabetes supplies</b>	<b>Specified supplies</b>
Alabama					
North Dakota					
Ohio					
Oklahoma	X	X	X	X	X
Oregon <sup>e</sup>	X	X		X	
Pennsylvania	X	X	X	X	X
Rhode Island	X	X	X	X	X
South Carolina	X	X		X	
South Dakota	X	X	X	X	X
Tennessee	X	X		X	X
Texas	X	X		X	X
Utah	X	X	X	X	X
Vermont	X	X	X	X	
Virginia	X	X	X	X	
Washington	X	X	X	X <sup>k</sup>	X
West Virginia	X	X		X	X
Wisconsin	X	X <sup>l</sup>		X <sup>c</sup>	X
Wyoming	X	X	X	X	
<b>Totals</b>	<b>47</b>	<b>45</b>	<b>27</b>	<b>47</b>	<b>28</b>

Source: GAO.

<sup>a</sup>We did not include states with coverage requirements related to nutrition that did not refer specifically to medical nutrition therapy. As a result, Nevada, Tennessee, Texas, and West Virginia—which required coverage of nutrition counseling—and New Jersey and New York—which required education that includes information on proper diet—are omitted here. We also omitted Florida from this column, although the state required coverage of “outpatient self-management training and educational services used to treat diabetes” and further stated that any policy “may require that nutrition counseling be provided by a licensed dietician.”

<sup>b</sup>Alaska required coverage of education, medical nutrition therapy, and supplies only when coverage was otherwise provided for pharmacy services.

<sup>c</sup>Arizona and Wisconsin required coverage of equipment and supplies only when a policy covered expenses incurred for the treatment of diabetes.

<sup>d</sup>Delaware required coverage of supplies only when the contract or policy provided prescription drug coverage.

<sup>e</sup>Requirements in Illinois, Montana, and Oregon applied only to group policies.

<sup>f</sup>Illinois required certain supplies—blood glucose monitors, cartridges, and lancets and lancing devices—to be covered only if the policy provided a durable medical equipment benefit. Coverage of other supplies—insulin, syringes and needles, test strips, oral agents to control blood sugar, and glucagon emergency kits—was required only if the policy provided a drug benefit.

<sup>g</sup>Kansas required coverage of insulin only if coverage was otherwise provided for prescription drugs.

<sup>h</sup>Michigan required expense-incurred policies and HMO contracts to cover insulin and other medications to treat diabetes only if they otherwise provided pharmaceutical coverage.

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**Appendix II: Summary of Diabetes Coverage  
Requirements in State Laws or Regulations,  
2004**

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<sup>1</sup>Mississippi and Missouri required insurance policies to provide diabetes coverage only at the option of purchasers, a requirement referred to as a “mandated offering.”

<sup>2</sup>In New Hampshire, insurers were required to cover medically appropriate or necessary equipment only if they covered durable medical equipment. Insurers were required to cover insulin, oral agents, and equipment only if they provided a prescription rider.

<sup>3</sup>In Washington, coverage for equipment and supplies was required only when the contract or plan included pharmacy services.

<sup>4</sup>Wisconsin required coverage of self-management education programs only if the policy covered expenses for the treatment of diabetes.

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# Appendix III: GAO Contact and Staff Acknowledgments

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## GAO Contact

Katherine Iritani (206) 287-4820

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## Acknowledgments

Lisa A. Lusk, Jennifer Major, Adrienne Griffin, Craig Winslow, and Ellen W. Chu made key contributions to this report.

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