SB

276

SFIN

FILE

SENATE FINANCE COMMITTEE REPORT

DATE: 3/3/00

REPORTED OUT 3/28/00

FURTHER:

DATE TURNED IN TO OFFICE: 28 March 2000

Finance Committee considered SENATE BILL NO. 276

"An Act requiring that health care insurers provide coverage for treatment of diabetes."

and recommends:

[X] be **replaced** with ____ CS SB 276 (FIN)

[ ] adopt **previous** ____ CS ____ ( )

[ ] attached amendment(s) For morning CS

[ ] adopt Letter of Intent by ____

[ ] further referral to the ____ Committee

Senate Bill:
[X] same title
[ ] new title

House Bill:
[ ] same title
[ ] technical title
[ ] new: SCR#____

SIGNING DO PASS	*DP*	*OTHER RECOMMENDATIONS*	*NR*	*DNP*	*AM*
Lee Adams	X	Kelly & Ellis	✓		
	—	Lyda Green			✓
Robert Kelly	✓				
Gary Wilson	✓				
Drew D. Ferrin	—				
Co-Chair: A Storrer	✓	*Co-Chair:*			
Co-Chair: Dean A Pannell	✓	*Co-Chair:*			

NEW FISCAL NOTE(S):

Department	Date	Zero	Fiscal

PREVIOUS FISCAL NOTE(S):*

Department	Date	Zero	Fiscal
Comm. & Econ. Dev	3/2/00	✓	

[ ] **APPROPRIATION -- no fiscal note**

***include fiscal notes accompanying Governor's bill**

FISCAL NOTE

No. 1
Bill Version: SB276
BILL NO(S) Publish Date: 3/3/00

STATE OF ALASKA
2000 LEGISLATIVE SESSION

3/28/00

Revision Date/Time (Note if correction) _____
Dept. Affected Community & Economic Development
Title An Act requiring that health care insurers provide coverage for treatment of diabetes
BRU Insurance
Component Insurance
Sponsor Senate HES
Requester Senate L&C
Component No. 354

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2000) cost: 0.0

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*
No fiscal impact on this component.

Prepared by: Robert A. Lohr
Phone 269-7900
Division Insurance
Date/Time 3-2-00 11:53 AM
Approved by Commissioner Deborah B. Sedwick
Date 3/2/00
Agency Community & Economic Development

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SENATE FINANCE
COMMITTEE
Amendment Number: #4
Bill Number: SB 276
Sponsor: Torgerson Date: 3/27/00
Logged In By: Mindy

1-LS1471\A.3
Ford
3/25/00

AMENDMENT

OFFERED IN THE SENATE BY SENATOR TORGERSON

TO: SB 276

Page 1, following line 14:

Insert a new subsection to read:

"(b) Coverage for the cost of diabetes outpatient self-management training or education under (a) of this section is limited to $1,500 for a covered person in a year."

Reletter the following subsection accordingly.

Page 2, following line 5:

Insert a new bill section to read:

"* **Sec. 2.** AS 21.42.390(b) is repealed January 1, 2003."

SENATE FINANCE COMMITTEE

2000 COMMITTEE ACTION

Bill Number	SB 276
Amendment	#4
Motion	
Motion by	SP
Objection	
Objection by	SG
Removed	
Second Objection by	
Committee Member	***Vote***
Senator Pete Kelly	Y
Senator Lyda Green	Y
Senator Randy Phillips	Y
Senator Dave Donley	Y
Senator Loren Leman	Y
Senator Al Adams	Y
Senator Gary Wilken	Y
Co-Chair Sean Parnell	Y
Co-Chair John Torgerson	Y
Tally	
Yea	0 7
Nay	0 /
Absent	0
MOTION	Adopted

SENATE FINANCE COMMITTEE

Amendment Number: #3 1-LS1471\A.2
Bill Number: SB 276 Ford
Sponsor: Torgerson Date: 3/23/00 3/25/00
Logged In By: Mindy

AMENDMENT

OFFERED IN THE SENATE BY SENATOR TORGERSON

TO: SB 276

Page 1, line 1, following "**that**":

Insert "**certain**"

Page 1, line 6, following "plan":

Insert "that includes coverage for pharmacy services"

Page 1, line 8:

Following "equipment,":

Insert "and"

Following "supplies":

Delete ","

Insert ". All health insurance plans must include coverage for"

Page 1, line 9:

Delete "recommended"

Insert "prescribed"

Page 1, line 12, following "of":

Insert "medical"

SENATE FINANCE COMMITTEE

2000 COMMITTEE ACTION

Bill Number	SB 276
Amendment	# 3
Motion	
Motion by	SP
Objection	
Objection by	
Removed	
Second Objection by	
Committee Member	***Vote***
Senator Gary Wilken	
Senator Pete Kelly	
Senator Lyda Green	
Senator Randy Phillips	
Senator Dave Donley	
Senator Loren Leman	
Senator Al Adams	
Co-Chair Sean Parnell	
Co-Chair John Torgerson	
Tally	
Yea	**0**
Nay	**0**
Absent	**0**
MOTION	Adopted

1-LS1471\A.1
Ford
3/17/00

SENATE FINANCE COMMITTEE
Amendment Number: #1
Bill Number: SB 276
Sponsor: Torgerson Date: 3/20/00
Logged In By: Jamie

AMENDMENT

OFFERED IN THE SENATE

TO: SB 276

Page 1, line 1, following "**Act**":

Insert "**relating to unfair discrimination under group health insurance; and**"

Page 1, following line 3:

Insert a new bill section to read:

"*** Section 1.** AS 21.36.090(d) is amended to read:

(d) Except to the extent necessary to comply with AS 21.42.365 and AS 21.56, a person may not practice or permit unfair discrimination against a person who provides a service covered under a group health insurance policy that extends coverage on an expense incurred basis, or under a group service or indemnity type contract issued by a nonprofit corporation, if the service is within the scope of the provider's occupational license. In this subsection, "provider" means a state licensed physician, **physician assistant,** dentist, osteopath, optometrist, chiropractor, nurse midwife, advanced nurse practitioner, naturopath, physical therapist, occupational therapist, marital and family therapist, psychologist, psychological associate, or licensed clinical social worker, or certified direct-entry midwife."

Page 1, line 4:

Delete "*** Section 1.**"

Insert "*** Sec. 2.**"

Not considered

SENATE FINANCE COMMITTEE
Amendment Number: #2
Bill Number: SB276
Sponsor: Torgerson By request Date: 3/20/00
Logged In By: Jamie

By:

AMENDMENT

OFFERED IN THE SENATE

TO: SB 276

Page 1, Line 1, following "**that**":
Insert "certain"

Page 1, line 6, following "plan":
Insert: "that includes coverage for pharmacy services"

Page 1, line 8, following "supplies"
Delete ","
Insert "."

Page 1, line 8, before "outpatient"
Insert "For all health insurance plans, such coverage shall include"

Page 1, line 8, following "and";
Insert "medical"

Page 1, line 9:
Delete "recommended"
Insert "prescribed"

Page 1, line 12, following "of";
Insert "medical"

Alaska State Legislature

Senator Mike Miller, Chairman
Senator Pete Kelly, Vice Chairman
Senator Drue Pearce
Senator Gary Wilken
Senator Kim Elton

State Capitol, Rm 119
Juneau, Alaska 99801-1182
(907) 465-3762

Senate Committee on
Health, Education and Social Services

Sponsor Statement
SB 276

"An Act requiring that health care insurers provide coverage for treatment of diabetes."

Senate Bill 276 would require that health insurers in Alaska provide coverage for diabetes equipment, supplies, training and education as deemed necessary by state licensed health care providers. To date, 37 states have enacted legislation providing similar diabetes coverage.

Over 30,000 Alaskans are affected by diabetes. Without education o.· proper treatment, diabetes can lead to kidney failure, amputation, nerve damage, blindness, associated suffering and resulting costs are often avoidable through patient education on proper nutrition, exercise, blood sugar monitoring and medication.
Education is the foundation of quality diabetes care. It is the process of providing the person with diabetes the knowledge and skills needed to perform self-care, prevent crisis and make important life style changes required to effectively avoid complications. Through proper education, the diabetic may assume his/her appropriate role as an active participant in the treatment plan.

A number of published studies by the American Diabetes Association show decreased in health care utilization for people with diabetes receiving appropriate education and access to supplies.
A Milliman study for the ADA estimates annual savings of $917 per person with diabetes that translates into savings for the insurance industry as well.
SB 276 promotes better health, and ultimately, lower health costs for the people of Alaska.

I urge your support of SB 276.

American Diabetes Association.

Mission
to prevent and cure diabetes
and to improve the lives of all
people affected by diabetes.

Senator Mike Miller
State Capitol
Juneau, Alaska 99801-1182

February 24, 2000

Dear Senator Miller:

I am writing to Thank you for your support of diabetes insurance reform legislation in Alaska. This legislation, Senate Bill 276, will ensure that Alaskans have access to diabetes medicines, equipment and education. Diabetes insurance reform will promote improved health and lower health costs for the people of Alaska. This legislation needs your support.

Talking Points:

- **Diabetes is a serious disease affecting 30,000 Alaskans.** It is the leading cause of kidney failure, blindness, nerve damage and amputations. Diabetes is also a major risk factor for heart disease and stroke. These serious health complications can result in significant medical costs.

- **Diabetes is a disease that is largely self-managed.** In order to stay healthy, a person with diabetes must have access to supplies, such as test strips, meters and insulin. People with diabetes need training on how to use these supplies. Patient education is also essential to support the nutritional, exercise and lifestyle changes required for successful self-management of the disease.

- Studies show that **diabetes complications can be minimized and health care costs can be significantly reduced** when people with diabetes have access to supplies and patient education. Some insurance plans in our state do cover diabetes supplies and education, but Alaska does not currently require insurers to provide this coverage. Many people with diabetes have trouble obtaining reimbursement from their insurers and are unable to successfully self-manage their disease.

Thank you for considering my request for your support of this important legislation.
I look forward to your response.

Sincerely,

Michelle A. Cassano
Executive Director

Enclosures

Alaska Office
801 W. Fireweed Lane, Suite 103, Anchorage, Alaska 99503 Tel: (907) 272-1424 Fax: (907) 272-1428

American Diabetes Association.

Mission
to prevent and cure diabetes and to improve the lives of all people affected by diabetes.

Senator Mike Miller
119 North Cushman Street
Fairbanks, Alaska 99701

February 11, 2000

Dear Senator Miller:

Thank you for supporting diabetes insurance reform legislation in Alaska. This legislation, drafted today, will ensure that Alaskans have access to diabetes medicines, equipment and education. Legislation sponsored by Senate Health Education and Social Services committee will be a companion bill to HB 298, introduced by Representative Lisa Murkowski and co-sponsored by Representatives Phillips and Brice.

Diabetes is a serious disease affecting more than 36,000 Alaskans. It is the leading cause of kidney failure, blindness, nerve damage and amputations. Diabetes is a major risk factor for heart disease and stroke. In addition to these serious health complications, diabetes care results in significant medical costs.

Diabetes is a disease that is largely self-managed. In order to stay healthy, the patient must have access to supplies, such as test strips, meters and insulin. People with diabetes need training on how to use these supplies. Patient education is also essential to support the lifestyle changes required for successful self-management of the disease.

Diabetes complications can be minimized and health care costs can be significantly reduced with access to the proper supplies, equipment, and education. Some insurance plans in our state do cover diabetes supplies and education, but Alaska does not currently require insurers to provide this coverage. Many people with diabetes have trouble obtaining reimbursement from their insurers and are unable to manage their disease.

Diabetes insurance reform will promote improved health and will also lower health costs for people living with diabetes in Alaska. Please take time to review the material enclosed with this letter. It demonstrates why the new legislation will benefit Alaska and Alaskans. Thank you.

Sincerely,

Betsy Turner-Bogren

Betsy Turner-Bogren
Fairbanks District Manager
American Diabetes Association

Enclosures

Common Issues Regarding Insurance Coverage For Diabetes

Responses from Steve Bieringer, Regional Advocacy Director, American Diabetes Association & David Holtzman, Director, Government Affairs, American Association of Diabetes Educators.

ISSUE: Mandating coverage of benefits will increase the cost of health insurance which may have the unintended consequence of increasing the number of uninsured as employers decrease their contributions or drop insurance.

RESPONSE: The insurance industry often raises these issues in general as an argument against mandates. I have not seen, and they have never produced, a study that shows Diabetes Insurance Reform will increase costs resulting in lost coverage for people. In fact numerous studies show that covering diabetes equipment, supplies and the education to learn to self-manage the disease will reduce costs. Short-term costs are reduced because of fewer hospitalizations, length of hospital stays and fewer emergency room visits. Lessening complications of diabetes such as blindness, end-stage renal disease, and microvascular disease reduces long-term costs. The industry opposes the diabetes mandate simply because they are afraid it will open the door to other mandates that may have a cost.

ISSUE: Small employers moving to self-funding to avoid state insurance laws; the majority of Alaskans are not impacted because their plans are not subject to state law.

RESPONSE: It is true that a federal law, ERISA, not state law, regulates the self-insured plans usually associated with large employers. It does not lessen the need for state insurance reform to help the 30% or so who are in state regulated plans. Of those covered by health plans not subject to state insurance laws, many already have the benefit of such coverage. The Medicare program provides coverage of monitors, strips and diabetes education. The Federal Employee Health Plan requires, with a few exceptions for some collective bargaining units, coverage for pumps, monitors, strips and education. Some, but not all, self-funded self-insuring plans provide coverage for strips and monitors although education is covered in limited cases. Finally, Alaska's Medicaid program covers monitors, strips and medical nutrition therapy for people with Type 1 or Type 2 diabetes

ISSUE: Mandated offers vs. mandated coverage

RESPONSE: While some insurers may offer this benefit and some employers may purchase it, serious gaps are left with mandatory offerings. Those gaps prevent and make it difficult for people with diabetes to receive the needed supplies, equipment, and education. Of the 37 states that require coverage and the three that have mandatory offering, only one does not include access or reimbursement to diabetes education. The experience of the mandatory offering states is not good. When coverage is provided only by way of a mandatory offering of a rider, the cost of coverage for the rider is borne exclusively by the people with diabetes participating in the coverage. In addition, the cost of the insurer's overhead is added to the costs of the rider pool. Experience shows that for many people with diabetes the cost of the rider is greater than the out of pocket expense they incurred prior to the rider.

The Case for Diabetes Insurance Reform in Alaska

Objective: Improved access to diabetes self-management education, equipment and supplies.

Results: Cost savings and better health for 30,000 Alaskans with diabetes.

WHAT WILL THIS LEGISLATION DO?

It will require that individual and group health insurance policies provide coverage for diabetes equipment and supplies and for diabetes education for self-management.

WHO WILL BENEFIT AND WHY IS IT NEEDED?

30,000 Alaskans have diabetes. Many have trouble obtaining the medically necessary equipment, supplies, and self-management education that providers prescribe.

Numerous studies show that access to the proper equipment, supplies and education results in improved health care at no additional cost, and often a cost savings.

HOW CAN THERE BE COST SAVINGS?

Short-term savings, as documented in states where this legislation is in place, are due to fewer hospitalizations, length of hospital stays, and emergency room visits, as the following studies show:

- 32% fewer hospitalizations and hospital days in Maine,
- 40-50% drop in hospitalizaiton and 50% lower frequency of emergency room visits in Maryland,
- 63% reduction in emergency room visits for insulin using diabetics in Rhode Island.

Long-term savings, as documented in states where this legislation is in place, result from a reduction in expensive long-term complications as documented in the Diabetes Control and Complications Trial:

- Blindness reduced by 60%,
- Kidney disease reduced by 56%,
- Microvascular nerve disease reduced by 61%.

HOW MUCH WILL THE COST SAVINGS BE?

It is hard to say exactly but experience and studies show:

- In Maine, $3 saved for every $1 spent on diabetes self-management training, saving $293 per participant,
- Estimated savings of $2,319 per patient each year in a county hospital setting as reported in the New England Journal of Medicine,
- Estimated savings of $437,500 per year for education involving 12,950 individuals with diabetes as reported in the Journal of the American Dietetic Association,
- Estimates savings of $917 per patient in the most likely scenario of a study for the American Diabetes Association,
- Per person costs for Medicaid patients after diabetes education dropped from $5,271 to 3,533.

IS THIS NEW, CUTTING EDGE LEGISLATION?

No. In fact, thirty-seven states have passed similar legislation. It has been signed by Republican and Democratic governors alike.

WILL INSURANCE PREMIUMS RISE?

Not according to a Wisconsin study undertaken after its law passed. New Mexico and Maine report no expected increases in administrative costs.

ADA in Action

FYI

Master Calendar

Staff Directory

Staff Forums

PBD Online

File Library

- Departments -

ADA Internet

Helpful Internet Sites

Search This Site

Still Can't Find It? Click Here!

Change Your Password

HOME

DIABETES STATISTICS FOR Alaska

Total Number with Diabetes	36,698.00
Number Diagnosed with Diabetes	24,073.89
Number Undiagnosed with Diabetes	12,624.11
Number of Children with Diabetes	338.37
Number Aged 65 and Older with Diabetes	6,189.94
Number on New Cases of Diabetes	1,866.00
Number of Deaths each year caused by Diabetes	438.14
Number of Amputations each year caused by Diabetes	156.48
Number of new cases of Blindness each year caused by Diabetes	Between 28.17 and 56.33
Number on Dialysis or Receiving a Kidney Transplant	231.11
Annual Economic Cost of Diabetes	Indirect $125,984,674.38 Direct $103,078,369.94 Total $229,063,044.32

Click here to return to American Diabetes Month Operational Guide

Return To Intranet Homepage

American Diabetes Association®

Testimony March 20, 2000
Senate Finance Committee

Michelle A. Cassano
Executive Director, Alaska Area
907-272-1424 mcassano@diabetes.org

The American Diabetes Association serving Alaska supports SB 276
"An Act requiring that health care insurers provide coverage for treatment of diabetes."

Alaska's population includes 30,000 people affected by diabetes.
Diabetes is a disease that is largely self-managed. To stay healthy a person with diabetes needs access to the proper supplies such as test strips, meters, insulin and other medications and devices. People with diabetes must also be educated on how to properly use these supplies in conjunction with diet and exercise to best manage diabetes.

SB 276 will insure that state regulated health plans cover diabetes supplies, equipment and the education needed to learn to self-manage the disease. The studies and statistics that follow you have heard repeatedly as they are proven facts. Diabetes is a life long disease that demands daily care and treatment....there are no days off from diabetes.

In regards to diabetes education, the costs vary per individual. The ADA feels there is no need for a cap on annual education costs. There is no evidence that education is being abused by people with diabetes, educators, hospitals or physicians.
We are aware of no other outpatient healthcare benefit that is capped in state law.

In the past 3 years many Alaska communities have made a commitment to diabetes education, the need is very real. Healthcare professionals are making quality up-to-date diabetes education a priority. Diabetes education is not just books and pamphlets...it is quality one on one learning. Technology and new innovations in treatment (medications/testing supplies) is moving forward at an amazing pace, that is good news for people living with diabetes. Please allow education for the self-management of diabetes to be available to keep Alaskans healthy and productive.

The public sector of insurability Medicare and Medicaid readily accept the guidelines we are requesting.

Proper management of diabetes will improve a person's health and results in cost savings. The Diabetes Complications and Control Trials demonstrated that good blood glucose control reduces costly complications like:

- Blindness by 60%
- Kidney disease by 56%
- Microvascular nerve disease by 61%

Additional studies show reductions in hospitalization, length of hospital stays, and emergency room visits following participation in diabetes self-management education programs:

- The Maine Diabetes Control Project program resulted in 32% fewer hospitalizations and shorter hospital stays
- A Maryland program resulted in a 40-50% decreased risk of hospitalization and 50% lower frequency of emergency room visits
- Rhode Island found a 63% reduction in emergency room visits after participation in an education program.
- A study done for the American Diabetes Association estimates savings of $917/patient/year as the most likely scenario
- A Wisconsin study showed no rise in premiums after that state's law was passed. New Mexico and Maine reported no expected premium increases as a result of the legislation.

Recent advances in the treatment of diabetes and a strong understanding of the importance of education for self-management of diabetes provide the opportunity for people to live healthier and more productive lives with diabetes and the chance to reduce both short-term and long-term costs.

A potential benefit to employers from better diabetes care is less time missed due to diabetes related illness and hospitalization, along with the improved productivity that comes when employees are healthy. More dramatic is the improvement in the quality of life for people with diabetes.

SB 276 is not radical or new legislation. To date 38 states have passed similar legislation. They include large and small, rural and urban states. As recently as last year 6 states as diverse as California and South Dakota enacted similar laws. Of the 38 states, half the legislation was signed by Republican and half by Democratic Governors. Similarly, legislatures of various political leanings have passed the legislation.
We urge you to support SB 276.

Chapter 29

Health Insurance and Diabetes

Maureen I. Harris, PhD, MPH

SUMMARY

Among all adults with diabetes, 92.0% have some form of health insurance, including 86.5% of those age 18-64 years and 98.8% of those age ≥65 years. However, about 640,000 people with diabetes do not have any form of health care coverage. Among diabetic individuals age 18-64 years, 10.3% are covered by Medicare, 69.3% by private health insurance, 5.5% through military benefits, and 14.1% through Medicaid or other public assistance programs. Among those age ≥65 years, 94.7% are covered by Medicare, 69.2% by private health insurance, 4.9% through military benefits, and 15.4% through Medicaid or other public assistance programs. Government-funded programs are responsible for health care coverage for 57.4% of adults with diabetes, including 26.4% of those age 18-64 years and 96.0% of those age ≥65 years. There is little difference by type of diabetes—insulin-dependent diabetes mellitus (IDDM) and non-insulin-dependent diabetes mellitus (NIDDM)—in the proportion of individuals covered by each health insurance mechanism. At age 18-64 years, males compared with females have higher rates of coverage for each insurance type except Medicaid/other public programs; a higher proportion of blacks and Hispanics compared with all whites are covered by Medicare and Medicaid; and whites are more frequently covered by private health insurance. For all adults with diabetes, the proportion covered by Medicaid decreases with increasing family income and the proportion covered by private health insurance increases. Virtually all diabetic persons covered by Medicare or private health insurance have coverage for hospital care and physician/surgeon bills. Coverage for prescription medicines occurs for 62.9% of adults with diabetes. About 41% of persons with diabetes are covered by more than one health insurance mechanism, but 13.5% of those age 18-64 years and 1.2% of those age ≥65 years do not have any form of health care coverage. There are only small differences between people with diabetes and those without diabetes in the proportion covered and the types of health care coverage. The costs of private health insurance are also similar for people with and without diabetes.

SOURCES OF DATA ON HEALTH INSURANCE COVERAGE

Information on health insurance coverage for people with diabetes is contained in several surveys that included national probability samples of the U.S. population. The 1989 National Health Interview Survey (NHIS) is the major data source for this chapter. In this survey, detailed questionnaires on diabetes and health insurance were administered to representative samples of persons with and without diagnosed diabetes in the U.S. population age ≥18 years[1,2]. Diabetic people were classified as having IDDM if they were diagnosed at age <30 years, were currently taking insulin, had been taking insulin consistently since diagnosis of diabetes, and their percent desirable weight was <120. All other subjects with diabetes were considered to have NIDDM. In the 1978 NHIS[3], a questionnaire on health insurance was administered that was similar to that in the 1989 NHIS. In the 1977 National Medical Care Expenditure Survey (NMCES) and its Health Insurance/Employer Survey, data on health insurance were obtained from five rounds of household interviews and questionnaires to employers, unions, insurance companies, and other organizations identified as sources of private health insurance[4]. The 1987 National Medical Expenditure Survey (NMES) was a successor to the 1977 NMCES and was conducted in a similar fashion, but it oversampled American Indians and Alaska Natives and included a component for persons in nursing and personal care homes and facilities for the mentally retarded[5]. The 1991 National Ambulatory Medical Care Survey

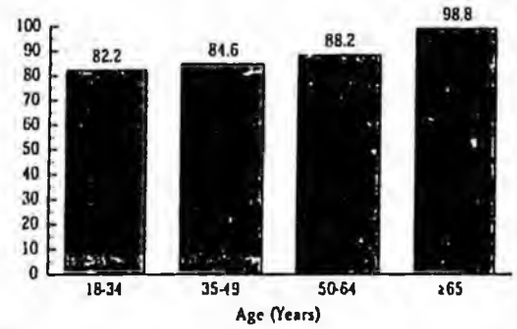
(NAMCS) collected data on ambulatory visits to office-based physicians in the United States[6]. In this survey, physicians or their office staffs completed a patient record form for a sample of visits. Questions about the sources of payment for the visit were included on this form.

PROPORTION COVERED AND TYPES OF HEALTH INSURANCE

PERCENTAGE OF PEOPLE WITH DIABETES WHO HAVE HEALTH INSURANCE

Based on the 1989 NHIS, it is estimated that 92.0% of all adults with diabetes have some form of health insurance, including 86.5% of those age 18-64 years and 98.8% of those age ≥65 years (Figure 29.1). The proportion of persons with diabetes covered by health insurance is very similar by type of diabetes (IDDM, NIDDM) and insulin use (Figure 29.2). Among persons age 18-64 years, 88.8% with IDDM, 87.8% with insulin-treated NIDDM, and 85.1% with NIDDM not treated with insulin have some form of health insurance coverage. Among diabetic people age ≥65 years, the proportion with health insurance coverage is 98.9% for insulin-treated NIDDM and 98.8% for NIDDM not treated with insulin.

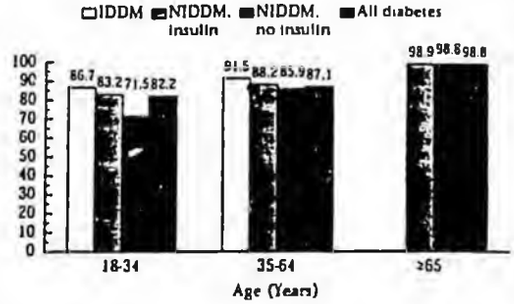
Figure 29.1
Percent of Adults with Diabetes Who Have Health Insurance, U.S., 1989



Sources of coverage include private insurance, Medicare, military benefits, and Medicaid or other public assistance programs.

Source: Reference 2

Figure 29.2
Percent of Adults with Diabetes Who Have Health Insurance, by Type of Diabetes, U.S., 1989



Sources of health insurance include private insurance, Medicare, military benefits, and Medicaid or other public assistance programs.

Source: Reference 2

NUMBER OF DIABETIC PERSONS WHO HAVE NO HEALTH INSURANCE

There were ~4.5 million people age 18-64 years and 3.2 million age ≥65 years with known diabetes in the United States in 1993[7]. Applying the rates of health insurance coverage (Figure 29.1) to this population, it is estimated that ~640,000 adults with diabetes do not have any health care coverage, including 600,000 people age 18-64 years and 40,000 people age ≥65 years[2].

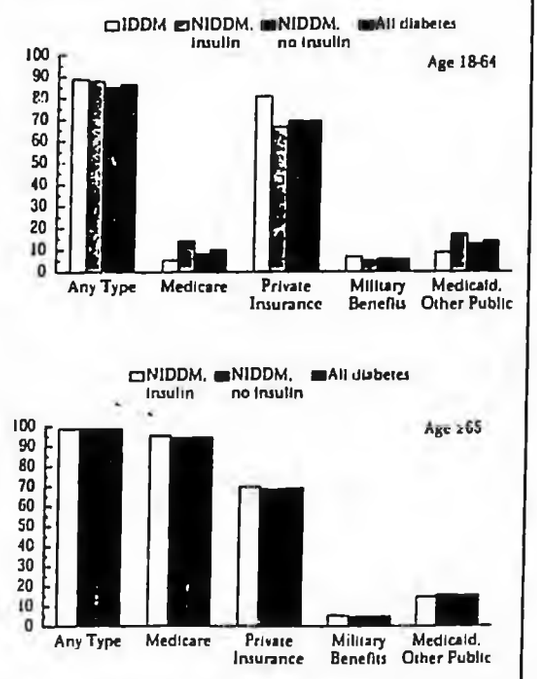
COVERAGE BY TYPE OF HEALTH INSURANCE

Figure 29.3 shows the percentage of diabetic people who are covered by each of the four major types of health insurance. Among those age 18-64 years, 10.3% are covered by Medicare, 69.3% by private health insurance, 5.5% through military benefits, and 14.1% through Medicaid or other public assistance programs. Among those age ≥65 years, 94.7% are covered by Medicare, 69.2% by private health insurance, 4.9% through military benefits, and 15.4% through Medicaid or other public assistance programs. There is little difference by type of diabetes in the proportion of diabetic individuals covered by each of these health insurance mechanisms.

COVERAGE BY GOVERNMENT PROGRAMS

Overall, 57.4% of people with diabetes are covered by government-financed health insurance programs

Figure 29.3
Percent of Adults with Diabetes Who Have Health Insurance, by Type of Insurance, U.S., 1939



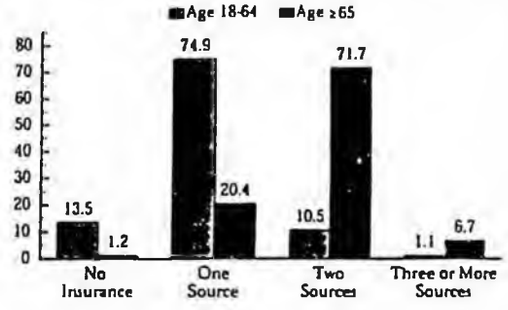
Source: Reference 2

(Medicare, military coverage, Medicaid, and/or other public assistance programs), including 26.4% of those age 18-64 years and 96.0% of those age ≥65 years.

MULTIPLE HEALTH INSURANCE COVERAGE

People with diabetes frequently have multiple health insurance coverage; 41.4% are covered by more than one source. The proportion differs substantially by age (Figure 29.4). Among those age 18-64 years, 11.7% are covered by two or more health insurance mechanisms; among those age ≥65 years, 71.7% have two sources of health insurance and 6.7% have three or more sources. Most of the multiple coverage for diabetic people age ≥65 years is due to people having both Medicare and private insurance. For those age 18-64 years, multiple coverage comes from a variety of sources.

Figure 29.4
Multiple Health Insurance Coverage for Adults with Diabetes, U.S., 1989



Sources of health insurance coverage include private insurance, Medicare, military benefits, and Medicaid or other public assistance programs.

Source: Reference 2

DEMOGRAPHIC CHARACTERISTICS AND HEALTH INSURANCE COVERAGE

Table 29.1 shows the proportion of diabetic persons who have health insurance, by sex, race, and family income. At age 18-64 years and age ≥65 years, males compared with females have higher rates of insurance coverage for Medicare, private insurance, and military benefits. Females have higher rates for Medicaid and other public programs. A higher proportion of blacks and Hispanics compared with all whites are covered by Medicare and Medicaid at age 18-64 years; whites are more frequently covered by private health insurance at all ages. The proportions covered by Medicare and Medicaid decrease with increasing family income while the proportion covered by private health insurance increases.

In a study in San Antonio, TX, of Mexican Americans with NIDDM, 67% of those with lower socioeconomic status and 83% of those with higher socioeconomic status had health insurance[8]. Private health insurance was held by 33% of those with lower socioeconomic status and 73% of those with higher socioeconomic status. About 28% of the patients relied on county- or federally funded clinics as their primary source of medical care[8].

TYPES OF PRIVATE HEALTH INSURANCE

Figure 29.5 shows the proportions of people with diabetes who are covered by private health insurance. These proportions are similar across all age groups (68%-72%). Figure 29.6 shows the types of private

Table 29.1

Percent of Adults with Diabetes Who Have Health Insurance Coverage, U.S., 1989

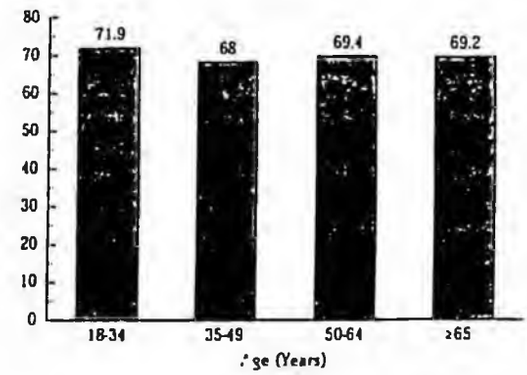
Health insurance type and demographic characteristic	Age 18-64	Age ≥65	Age ≥18
Any health insurance			
All persons	86.5	98.8	92.0
Male	89.0	99.1	93.0
Female	84.4	98.6	91.2
White	87.1	99.2	92.7
Black	85.1	98.0	90.3
All other races	82.7	90.2	84.9
Mexican American	70.3	94.7	76.9
All other Hispanic	85.3	100.0	90.8
Family income <$15,000	73.8	98.8	88.6
Family income $15-29,999	90.7	99.1	94.2
Family income ≥$30,000	95.3	98.8	96.0
Medicare			
All persons	10.3	94.7	47.9
Male	11.5	94.7	44.8
Female	9.3	94.6	50.1
White	9.1	95.4	49.0
Black	15.2	92.4	45.8
All other races	6.9	85.7	30.2
Mexican American	10.4	84.0	30.3
All other Hispanic	11.5	84.8	37.9
Family income <$15,000	16.0	95.5	62.9
Family income $15-29,999	11.9	96.1	46.3
Family income ≥$30,000	4.9	89.7	22.2
Private health insurance			
All persons	69.3	69.2	69.2
Male	74.7	76.1	75.3
Female	64.7	65.0	64.8
White	74.3	75.8	75.0
Black	53.5	40.2	48.3
All other races	57.9	51.2	55.9
Mexican American	47.7	35.6	44.4
All other Hispanic	44.1	47.9	45.5
Family income <$15,000	29.8	57.4	46.1
Family income $15-29,999	78.5	84.5	80.9
Family income ≥$30,000	92.7	84.5	91.1
Military benefits			
All persons	5.5	4.9	5.3
Male	8.9	11.3	9.8
Female	2.8	1.1	2.0
White	5.4	5.0	5.2
Black	6.6	3.7	5.4
All other races	2.4	11.3	5.1
Mexican American	2.5	4.6	3.0
All other Hispanic	7.0	0.0	4.5
Family income <$15,000	5.4	3.5	4.3
Family income $15-29,999	7.5	8.2	7.8
Family income ≥$30,000	5.6	6.3	5.7
Medicaid or other public programs			
All persons	14.1	15.4	14.7
Male	8.2	9.9	8.9
Female	19.0	18.8	18.9
White	11.1	11.9	11.5
Black	22.4	30.1	25.5
All other races	28.4	31.9	29.4
Mexican American	20.2	38.7	25.2
All other Hispanic	32.1	32.4	32.2
Family income <$15,000	36.8	22.9	28.6
Family income $15-29,999	8.1	7.6	7.9
Family income ≥$30,000	1.8	5.9	2.9

White and black includes persons of Hispanic ethnicity.

Source: 1989 National Health Interview Survey

Figure 29.5

Percent of Adults with Diabetes Who Have Private Health Insurance, U.S., 1989

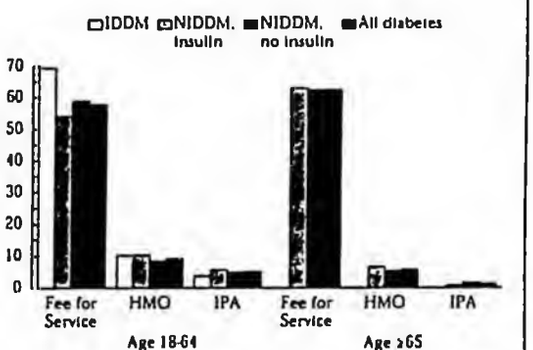


Source: Reference 2

health insurance carried by diabetic people according to age and type of diabetes. Among those age 18-64 years, 57.8% are covered by fee-for-service plans, 9.3% by health maintenance organizations, and 5.2% by individual practice associations. Among people with diabetes age ≥65 years, 62.5% are covered by fee-for-service plans, 5.8% by health maintenance organizations, and 1.3% by individual practice associations. There are no significant differences by type of diabetes in the percentage of individuals covered by each type of private health insurance.

Figure 29.6

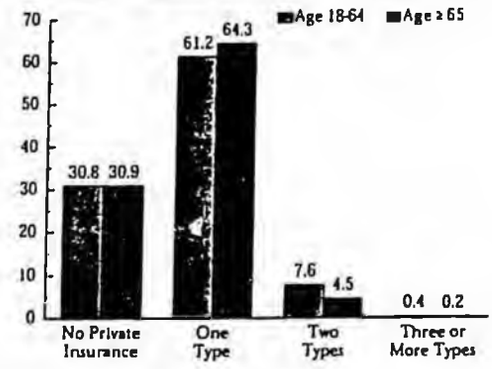
Types of Private Health Insurance Held by Adults with Diabetes, U.S., 1989



HMO, health maintenance organization; IPA, individual practice association.

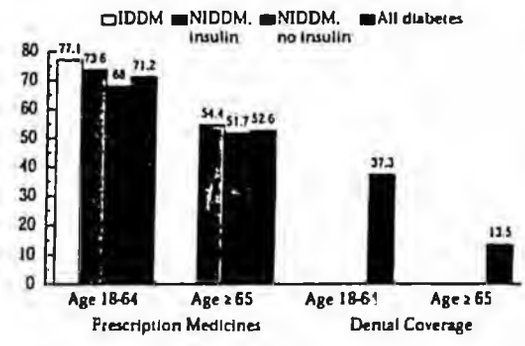
Source: Reference 2

Figure 29.7
Multiple Types of Private Health Care Coverage for Adults with Diabetes, U.S., 1989



Source: Reference 2

Figure 29.8
Health Insurance Coverage for Prescription Medicines and Dental Care of Adults with Diabetes, U.S., 1989



Source: Reference 2

Among diabetic people age 18-64 years, 60.3% are covered by private insurance only and have no other source of health care coverage. Figure 29.7 shows that most diabetic people are covered by only one source of private insurance. However, 8.0% of those age 18-64 years and 4.7% of those age ≥65 years have two or more sources of private health insurance.

IMPLICATIONS FOR HEALTH CARE OF DIABETES

COVERAGE FOR SPECIFIC ASPECTS OF HEALTH CARE

Virtually all (97.2%) diabetic people who are covered by Medicare have both Medicare Part A and Part B[2]. This occurs for those age 18-64 years and for those age ≥65 years. Similarly, of diabetic people with private health insurance, 99.5% have coverage for hospital care and 98.2% have coverage for physician/surgeon bills for operations[2]. Coverage for prescription medicines occurs for 62.9% of people with diabetes through private insurance, Medicaid, and military sources, including 71.2% of those age 18-64 years and 52.6% of those age ≥65 years (Figure 29.8). There is little difference by type of diabetes in the proportion covered. Dental coverage is held through private insurance for 37.3% of people with diabetes age 18-64 years and 13.5% of those age ≥65 years (Figure 29.8).

LACK OF AND LIMITATIONS IN HEALTH CARE COVERAGE

As presented above, it is estimated that there are ~640,000 people with diabetes who have no health insurance coverage in the United States. Table 29.2 shows the reasons given by diabetic people age 18-64 years who had no private insurance when they were asked why they did not have this type of coverage. The majority stated that health insurance was too expensive and they could not afford it. Indeed, the median family income of diabetic people with private insurance was $20,000-$25,000 compared with $8,000-$9,000 for those without private insurance. A larger proportion of those with diabetes compared with those without diabetes did not need private insurance

Table 29.2
Reasons Given by Individuals Age 18-64 Years for Not Having Private Health Insurance, U.S., 1989

Reason	Diabetic persons (%)	Nondiabetic persons (%)
Too expensive, cannot afford	66.0	64.4
Have some other type of health care coverage	18.9	11.0*
Cannot obtain because of poor health, illness, or age	16.2	2.0*
Unemployment or job loss	6.8	11.4*
Have been healthy and haven't needed insurance	1.2	7.0*
Dissatisfied with previous insurance	0.3	1.4
Don't believe in insurance	0	1.2
Other reason	9.9	13.9

Columns do not add to 100% because more than one reason was given.
*$p<0.01$, subjects with diabetes versus subjects without diabetes.

Source: Reference 2

because they had another type of coverage (18.9% versus 11.0%, p<0.001) or could not obtain private insurance because of their health (16.2% versus 2.0%, p<0.001). A small proportion of both groups reported that they did not have private insurance because of unemployment or job loss.

Of the 30.8% of diabetic people who have no private health insurance, 16.2% of those age 18-64 years and 0% of those age ≥65 years stated that they had ever been denied insurance because of poor health or illness[2]. In the 1987 NMES, however, only 5% of people with diabetes age <65 years who were uninsured reported that they had been denied health insurance or offered limited coverage because of their health[9]. In a study in Pittsburgh, PA[10], IDDM subjects were more likely to have been denied a health insurance policy at some time in their adult lives compared with their nondiabetic siblings (23% versus 12%).

Even though the proportion of people with diabetes who have health insurance is high in the United States, there may be limitations in coverage. For example, only 69.2% of diabetic people age ≥65 years supplement their Medicare with private insurance (Figure 29.3). Of those age 18-64 years, 9.7% are covered only by Medicaid or other public assistance programs, and the nature of coverage for diabetes through these programs varies widely from state to state. Only 71% of those age 18-64 years and 53% of those age ≥65 years have coverage for prescription medicines (Figure 29.8). These possible limitations in coverage may not be restricted to people with diabetes, however. Those who have private insurance appear to have coverage similar to that of people without diabetes. For example, in the 1977 NMCES, the various features of coverage for people with diabetes provided by private insurance policies were very similar to those for the nondiabetic population[4]. There were no significant differences in the proportions with basic and major medical coverage; coinsurance rates and deductibles for hospital care and physician office visits; or the percentages with coverage for dental care, vision care, drugs, routine physicals, and psychiatric care. However, a slightly higher proportion of those with diabetes lacked coverage for office visits (25% versus 17%) and lacked major medical coverage (26% versus 18%)[4].

ADVERSE EFFECTS ASSOCIATED WITH LACK OF HEALTH INSURANCE

Few studies have investigated whether the lack of health insurance has adverse effects on people with diabetes. Table 29.3, comparing diabetic persons age

Table 29.3
Characteristics of Diabetic Subjects Age 18-64 Years According to Health Insurance Coverage

Characteristic	Subjects with health insurance (%)	Subjects without health insurance (%)
Demographic characteristics		
Non-Hispanic White	68.2	55.0†
Black	20.8	23.4
Mexican American	4.8	13.3†
Other race/ethnicity	6.3	8.3
Education > high school	28.3	20.8*
Family income >$25,000	51.0	18.8†
Clinical characteristics		
Mean age at diabetes diagnosis (years)	40.4	39.3
Mean diabetes duration since diagnosis (years)	10.1	8.4*
Treated with insulin	49.5	43.5
Retinopathy	27.9	31.4
Kidney disease	7.6	8.5
Angina or heart trouble	24.4	23.5
Stroke	6.7	6.4
Hypertension	56.2	49.0
Amputation	2.0	2.6
Foot/ankle sores	9.2	12.6
Cataract	10.4	5.5*
High blood glucose always/most of the time‡	26.3	38.2†
Glucose in urine always/most of the time‡	31.6	41.6*
Medical care		
Self-test urine glucose ≥ once/week	21.5	26.9
Self-test blood glucose ≥ once/day	19.1	11.0†
Self-check feet ≥ once/week	76.0	64.3†
≥4 visits to diabetes physician in past year	55.6	44.5†
Urine glucose checked by health professional ≥ twice in past 6 months	46.5	47.1
Blood glucose checked by health professional ≥ twice in past 6 months	65.1	57.6
Blood pressure checked by health professional ≥ twice in past year	85.9	79.9
Feet examined by health professional ≥ twice in past 6 months	29.5	19.2†
Visit to podiatrist in past year	13.9	11.8
Dilated eye exam in past year	47.0	35.8†
Diabetes patient education course	41.4	32.6*

* p<0.05, † p<0.001, subjects with health insurance versus subjects with no health insurance. ‡ Reported by subjects whose urine/blood glucose was tested either by a health professional or by themselves.

Source: Reference 2

18-64 years with and without health insurance, shows few differences between the two groups in the proportion who report complications related to diabetes. A higher proportion of those without insurance report frequent hyperglycemia and glycosuria. The intensity of medical care, including self-care practices, tends to be greater for those who have health insurance. Those without health insurance are less likely to be non-Hispanic white and more likely to have education less than high school and to have a family income <$25,000.

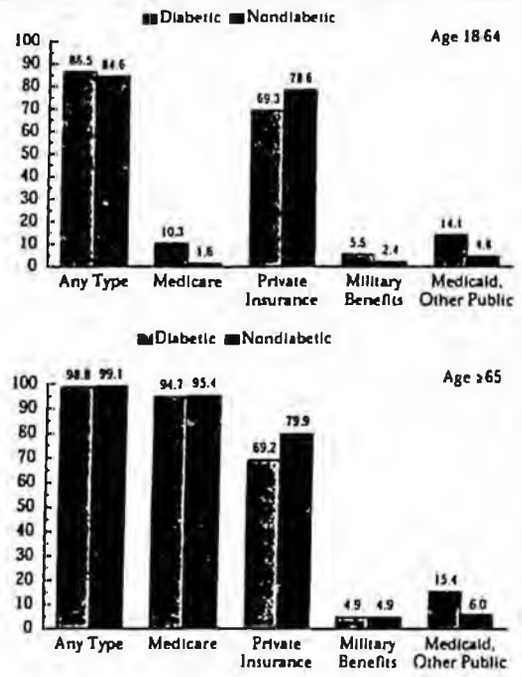
Lack of health insurance in the 1989 NHIS survey was associated with low income but not with an increased rate of diabetic complications (Table 29.3). Among Mexican Americans with NIDDM in San Antonio, the prevalence of microvascular complications was also similar among those with and without health insurance[8]. Microvascular complications were more common, however, among Mexican Americans who lacked health insurance for outpatient physician visits and medications, although this difference was attributable to hyperglycemia, longer duration of diabetes, higher blood pressure, and other risk factors for diabetes complications[8].

A study of adult diabetic patients in inner-city diabetic clinics found that full third-party reimbursement for health care was associated with a higher frequency of emergency room admissions but not with hospital admissions, use of a diabetes telephone hot line, or number of diabetes clinic visits[11]. Absence of health insurance has been associated with higher mortality among all adults[12] and a greater frequency of adverse outcomes for women with breast cancer[13]. However, such studies have not been conducted for people with diabetes.

HEALTH INSURANCE COVERAGE FOR DIABETIC PERSONS COMPARED WITH NONDIABETIC PERSONS

Comparison of health insurance coverage for persons with and without diabetes is shown in Figure 29.9. The overall proportions that have any type of health insurance are similar, being 92.0% for those with diabetes and 86.8% for those without diabetes. Among persons age 18-64 years, 86.5% of those with diabetes and 84.6% of those without diabetes have some form of coverage; among those age ≥65 years, the frequencies are 98.8% and 99.1%, respectively. Medicare coverage among people age 18-64 years is more common for those with diabetes compared with people without diabetes (10.3% versus 1.6%, p<0.001). Private insurance is somewhat less common among people with

Figure 29.9
Health Insurance Coverage for Adults with and Without Diabetes, U.S., 1989



Source: Reference 2

diabetes compared with those without diabetes. Among those age 18-64 years, 69.3% of diabetic and 78.6% of nondiabetic individuals have private health insurance coverage (p<0.001). Among those age ≥65 years, 69.2% of those with diabetes and 79.9% of those without diabetes have private insurance (p<0.001). There is little difference in coverage through military sources between those with and without diabetes. Coverage through Medicaid or other public assistance programs is more common for people with diabetes compared with people without diabetes for those age 18-64 years (14.1% versus 4.8%, p<0.001) and for those age ≥65 years (15.4% versus 6.0%, p<0.001). Overall, coverage through any government program for people age 18-64 years is less frequent for people without diabetes (8.3%) compared with people with diabetes (26.4%), but not for those age ≥65 years (96.4% versus 96.0%).

Two previous studies on U.S. national samples in 1977-78 also found that health insurance coverage was similar for people with and without diabetes[3,4]. Further, in a study in Pittsburgh, the proportion of adults with IDDM covered by health insurance did not differ from the proportion of their nondiabetic siblings who were covered[10]. More than 90% had insur-

Table 29.4
Percent Distribution of Payment for Medical Care Expenses for Persons with Diabetes, U.S., 1977 and 1987

	Out-of-pocket expense	Private health insurance	Medicare	Medicaid	Other
1977					
All diabetic patients	22.1	24.2	31.8	11.8	10.2
Age (years)					
<45	19.8	47.4	1.7	20.2	10.9
45-64	22.8	36.0	11.4	15.9	13.9
≥65	22.0	12.0	51.1	7.5	7.5
1987					
All diabetic patients	14.8	24.9	32.2	11.5	16.6
Age (years)					
<30	13.2	32.1	15.6	17.6	21.5
30-64	13.4	35.4	11.6	17.6	22.0
≥65	16.2	15.0	51.7	5.7	11.4

Other includes CHAMPUS/CHAMPVA, Indian Health Service, VA, military, other federal/state/city/county payers, philanthropic institutions, and unknown source of payment.

Source: References 4 and 14

ance through a private third-party source and this insurance did not differ between the siblings by type of policy, type of coverage, or cost of premium. There was also no difference between the siblings in the proportion insured at different income levels.

ECONOMIC ASPECTS OF HEALTH INSURANCE COVERAGE

COST OF HEALTH INSURANCE

In the NMCES study of a representative sample of U.S. residents in 1977, the costs of premiums for private health insurance policies covering people with diabetes were not substantially different from those for the rest of the population[4]. Employers paid for about 67% of these premiums for persons age <65 years for both diabetic and nondiabetic employees. Above age 65 years, employers paid for 38% of the premiums for both diabetic and nondiabetic persons[4].

PROPORTION OF HEALTH CARE EXPENSES COVERED BY HEALTH INSURANCE

The NMCES study of a representative sample of U.S. residents found that 98.9% of diabetic people had an expense for medical care of diabetes in 1977[4]. In the 1987 NMES survey, this proportion was 99.6%[14]. Table 29.4 shows the distribution of sources of payment for this care. There were few differences between the two studies in the percent of health care costs paid by private insurance, Medicare, and Medicaid, but a lower proportion of costs were paid out of pocket and a higher proportion were paid by other sources in 1987. The 1977 study found that diabetic people paid a lower percent of their health care costs out of pocket compared with people without diabetes (22% versus 31%), although the amount paid was considerably higher for diabetic versus nondiabetic persons ($335 versus $184)[4].

Table 29.5 shows the expected sources of payment for ambulatory visits involving diabetes to office-based physicians in the United States in 1991. For age <65 years, Medicare, Medicaid, and other government sources combined were expected to be sources of payment for about one-third of visits. Private insurance was a payment mechanism for one-third of visits and

Table 29.5
Expected Sources of Payment for Visits Involving Diabetes to Ambulatory Care Physicians, U.S., 1991

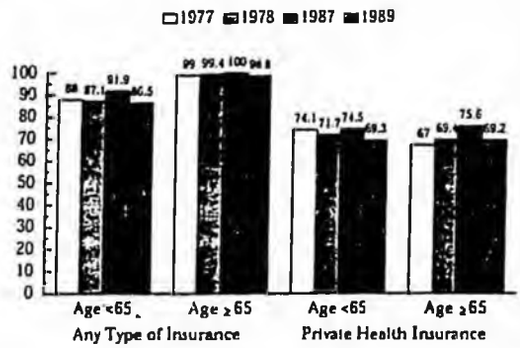
	Percent of visits		
Source of payment	Age 0-64	Age ≥65	All ages
Medicare	14.2	83.7	50.5
Medicaid	9.8	13.8	11.9
Other government source	5.5	1.2	3.3
Private insurance	32.6	24.2	28.2
HMO/prepaid plan	17.8	5.9	11.6
Out of pocket	26.5	13.2	19.6
Other source	3.9	4.0	4.0
No charge	1.8	0.0	0.8
Unknown	2.9	3.0	2.9

Diabetes visits were those that listed conditions with ICD9-CM codes 250, 251.3, 357.2, 362.0, 366.41, 648.0, or 775.1 as a patient diagnosis on the patient record form. Up to three conditions could be listed. Columns add to more than 100% because more than one source could be listed for each visit.

Source: 1991 National Ambulatory Medical Care Survey

out-of-pocket costs were involved in 27% of visits. For age ≥65 years, Medicare was a payment source for 84% of visits and private health insurance for 24%, and out-of-pocket costs were incurred in 13%.

Figure 29.10
Time Trends in the Percent of Adults with Diabetes Who Have Health Insurance, U.S., 1977-89



Source: References 2, 3, 4, and 14

TIME TRENDS IN HEALTH INSURANCE COVERAGE

Figure 29.10 shows the proportion of people with diabetes who had any type of health insurance and who had private health insurance for studies in 1977, 1978, 1987, and 1989. It is apparent that the proportions who have health care coverage have been almost constant during this 12-year period.

Dr. Maureen I. Harris is Director, National Diabetes Data Group, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD.

Outcomes and Costs in Diabetes Care: Trends Over Three Years

NIECEY E MELDRUM*, ROBERT S MECKLENBURG, KARA S LOVELL, *Seattle, WA*

Our intent was to access trends in outcomes of care and costs of goods and services supplied to a population of 148 patients with diabetes who received primary care from a diabetes specialty clinic from 1995 through 1997. Cost data were determined on the basis of relative value units and outcomes by chart review, selected SF-36 responses and patient satisfaction questionnaires. Mean age was 61 and mean duration of diabetes 23 years. Retinopathy, neuropathy and/or nephropathy were present in 52%, while 26% had CAD, 38% hypertension and 49% hyperlipidemia. For 1995, 1996 and 1997 group mean BP was 136/76, 140/76 and 135/75mm Hg, total cholesterol 215, 200 and 196 mg/dl and A1C 8.7, 8.3 and 7.5% respectively. Health was self-described as excellent, very good or good by 76% in 1995 and 78% in 1996 and 80% in 1997. Health care was rated very good or excellent by 94% in 1995, 93% in 1996 and 93% in 1997. Corrected for inflation, mean cost of care for 1995, 1996 and 1997 were $6764, $6332, and $6931, respectively, an increase of 3% over three years. Over the course of the study, outpatient visit costs rose from 25 to 29% and outpatient pharmacy costs from 24 to 34% of the total cost of care, while hospital professional costs decreased from 17 to 8% and hospital facility costs from 24 to 21%. In 1995, 27 patients were hospitalized a total of 35 times, in 1996, 19 patients were hospitalized a total of 35 times and in 1997, 23 patients were hospitalized a total of 38 times. Mean length of stay was 7.1 days in 1995, 4.1 days in 1996 and 4.3 days in 1997. Hospitalizations for CAD accounted for 6% of total cost in 1995, 6% in 1996 and 3% in 1997. Foot infections accounted for 4% of total cost in 1995, 3% in 1996 and 4% in 1997. Over the three years the proportion of total cost related to the use of test strips increased from 24 to 33%, for insulin from 19 to 28%, for lipid lowering agents from 9 to 19% and ACE inhibitors from 12 to 17%. We conclude that we have achieved improvement in control of A1C, blood pressure and lipids while holding overall costs stable. An increase in costs associated with outpatient visits and pharmaceuticals was offset by a reduction in hospital costs.

Costs of Health Care for Eight Years Prior to Recognition of Type 2 Diabetes (DM2)

GREGORY A NICHOLS, JONATHAN B BROWN*, *Portland, OR*

Type 2 Diabetes and its complications lead to higher medical care costs, beginning at diagnosis and continuing throughout life. Little is known, however, about health care expenditures and utilization prior to recognition of DM2. We identified all members of Kaiser Permanente Northwest Region, a nonprofit HMO, who were diagnosed with DM2 in 1988 through 1995, and matched each of them on age, gender and eligibility to an HMO member without DM. We then observed outpatient, pharmaceutical, and inpatient costs in the eight years prior to diagnosis and calculated incremental costs as the difference between DM2's and their matched controls. Total costs for both DM2's and their matched controls were relatively flat four to eight years prior to diagnosis of DM2; incremental costs were not significantly different from zero in those years. In the three years immediately before diagnosis, however, DM2 costs rose while control costs remained flat. By this measure, DM2 appears to cause significant excess total costs, starting about three years prior to diagnosis. Considered on their own, however, outpatient and pharmacy costs each exceeded control costs during all eight pre-diagnostic years. The majority of incremental costs are for outpatient visits (62%). We conclude that DM2 begins causing greater health expenditures at least eight years prior to diagnosis.

Table 1. Per-Person Medical Costs by Year Prior to Diagnosis of DM2

Number of Cases	Pre-DX Year	DM2 Cost	Control Cost	Incremental Cost	Percent Incremental
708	-8	$1,774	$1,712	$62	3%
1,493	-7	2,144	1,767	377	18%
2,397	-6	1,872	1,792	80	4%
3,323	-5	2,208	2,005	203	9%
4,269	-4	2,238	2,044	194	9%
5,327	-3	2,474	1,911	563	23%
6,490	-2	2,536	1,978	558	22%
8,685	-1	2,819	1,949	870	31%

Ms. Betsy Turner-Bogren and Mr. Max Bogren Go to Juneau!

On March 1, Ms. Betsy Turner-Bogren and her son, Max, hit the Capitol Building in Juneau with full speed ahead. Betsy and Max are strong supporters of SB 276 and HB 298, legislation that requires insurance companies to provide coverage for individual with diabetes. The next day both Betsy and Max testified before the Senate Labor and Commerce Committee.

Max showed the committee how he, as someone who has diabetes, must test his blood sugar several times each day. Max then adjusts his diet depending on the results of his frequent tests. Under SB 276, the cost for diabetes outpatient education and nutrition counseling will be covered by health care insurance. This legislation will allow Max and others to obtain the medical advice needed to help combat this disease.

Senator Jerry Mackie, Chairman of Senate Labor and Commerce Committee, and Senator Loren Leman listen carefully as Max explains how he is able to help the doctors treat his disease. A high school student, who was "job shadowing" Senator Mackie, is also most interested in Max's testimony on SB 276.

The committee voted to move the legislation out of committee and the next committee to consider this bill will be the Senate Finance Committee.

SENATE FINANCE COMMITTEE

SIGN-IN

SB 276-REQUIRE HEALTH INS COVERAGE FOR DIABETES

NAME: Dan Novotney Subject/Bill No: 276

Co./Dept./Title: Juneau Diabetes Association Phone: 7804300

Address: 1100 Timberline Ct Juneau Zip: 99801

Do you wish to testify? X Yes ___ No X Respond To Questions

NAME: Chris Holzwarth Subject/Bill No: 276

Co./Dept./Title: ___ Phone: 790-2776

Address: 8800 Glacier Hwy # 119 Zip: 99801

Do you wish to testify? X Yes ___ No X Respond To Questions

NAME: Julie Burns Subject/Bill No: ___

Co./Dept./Title: ___ Phone: 790-2776

Address: 8800 Glacier Hwy # 119 Zip: 99801

Do you wish to testify? X Yes ___ No X Respond To Questions

NAME: Michelle Cassone Subject/Bill No: ___

Co./Dept./Title: Am Diabetes Phone: ___

Address: 801 W. Firewood Zip: ___

Do you wish to testify? X Yes ___ No ___ Respond To Questions

NAME: GORDON EVANS Subject/Bill No: SB 276

Co./Dept./Title: HIAA Phone: 586-3210

Address: 711 4th St., Suite 305, Juneau Zip: 99801

Do you wish to testify? X Yes ___No ___Respond To Questions

Request Fiscal note

NAME: Shawn Clark Subject/Bill No: ___

Co./Dept./Title: Leg Aide/Sen Miller Phone: ___

Address: ___ Zip: ___

Do you wish to testify? ✓ Yes ___No ___Respond To Questions

Will read Sponsor statement for Sen. Miller

NAME: SHAN HAN Subject/Bill No: 276

Co./Dept./Title: STAFF REP MUCKOWSKI Phone: -3783

Address: ___ Zip: ___

Do you wish to testify? ___Yes ___No ___Respond To Questions

WILL SPEAK TO AMENDMENT IF NEEDED.

NAME: Irene Raimondi Subject/Bill No: SB 276

Co./Dept./Title: Blue Cross Phone: ___

Address: ___ Zip: ___

Do you wish to testify? ___Yes ___No X Respond To Questions

NAME: ___ Subject/Bill No: ___

Co./Dept./Title: ___ Phone: ___

Address: ___ Zip: ___

Do you wish to testify? ___Yes ___No ___Respond To Questions

Bill History/Action Display

H

BILL: SB 276 SHORT TITLE: REQUIRE HEALTH INS COVERAGE FOR DIABETES
BILL VERSION:
SPONSOR(S): HEALTH, EDUCATION & SOCIAL SERVICES

CURRENT STATUS: (S) FIN STATUS DATE: 3/03/00

TITLE: "An Act requiring that health care insurers provide coverage for treatment of diabetes."

Full Text Detailed 2000 fiscal note information currently not available on-line.

Committee Action With Bill History

Jrn-Date	Jrn-Page		Action
2/16/00	2318	(S)	READ THE FIRST TIME - REFERRALS
2/16/00	2318	(S)	L&C, FIN
3/03/00	2508	(S)	L&C RPT 3DP 1AM
3/03/00	2508	(S)	DP: MACKIE, LEMAN, HOFFMAN; AM: KELLY
3/03/00	2508	(S)	ZERO FISCAL NOTE (DCED)
3/03/00	2508	(S)	REFERRED TO FINANCE

Similar Subject Match or Exact Subject Match
INSURANCE
MEDICAL CARE

Bill Root: Display History/Action Clear Bill Root

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SENATE FINANCE COMMITTEE

S I G N - I N

SB 276-REQUIRE HEALTH INS COVERAGE FOR DIABETES

NAME: Sharon Clark Subject/Bill No: 276

Co./Dept./Title: Leg Aide Sen. Mulle Phone: _____

Address: _____ Zip: _____

Do you wish to testify? C ___Yes ___No ___Respond To Questions

Only if leader - Sen Miller will not be here

NAME: _____ Subject/Bill No: _____

Co./Dept./Title: _____ Phone: _____

Address: _____ Zip: _____

Do you wish to testify? ___Yes ___No ___Respond To Questions

NAME: _____ Subject/Bill No: _____

Co./Dept./Title: _____ Phone: _____

Address: _____ Zip: _____

Do you wish to testify? ___Yes ___No ___Respond To Questions

NAME: _____ Subject/Bill No: _____

Co./Dept./Title: _____ Phone: _____

Address: _____ Zip: _____

Do you wish to testify? ___Yes ___No ___Respond To Questions