Oregon's Action Plan For Diabetes

Improving the Health and Quality of Life of Oregonians Affected by Diabetes

Oregon Diabetes Coalition

Created 2005

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Executive Summary

Diabetes is a serious, common, and costly public health problem. The percentage of adult Oregonians with diagnosed diabetes rose from 4% in 1993 to 6% in 2003. This is an increase of over 30% in the last ten years, after adjusting for age. Currently, an estimated 163,700 adult Oregonians have been diagnosed with diabetes and another 66,900 may have the disease, but do not know it. In the past decade, the death rate from diabetes has steadily increased and diabetes is now the 7th leading cause of death in Oregon. Over 43,400 hospitalizations – 12% of all hospitalizations, in 2002 – had diabetes listed as one of the contributing diagnoses.[1] In 2002, diabetes cost Oregon about $1.7 billion dollars in direct medical expenses and indirect losses from decreased productivity and premature death.[2] Because so many people have diabetes and because it requires constant care, diabetes places a heavy burden on individuals, families, and communities. The disease also poses challenges to the health care systems and social service agencies charged with treatment, management, and prevention activities.

In 1999, the Oregon Diabetes Coalition – with members from health care and social service agencies, individuals living with diabetes, and concerned citizens and professionals – developed an Action Plan to address diabetes. In the last five years, progress has been made in addressing diabetes. In response, the Coalition has revised its Action Plan to address the changing environment. The revised Plan calls on Oregonians to take action on five goals:

1. Policies in Oregon improve prevention, care and protection for people with diabetes.
2. Oregonians know the impact of diabetes and take action to decrease their risk of developing diabetes.
3. Oregonians affected by diabetes are able to manage their disease to prevent complications.
4. Health systems consistently improve health outcomes for Oregonians affected by diabetes.
5. Accurate diabetes data are integrated, accessible, and used.

These goals are incorporated into four topic areas: 1) diabetes policy and advocacy; 2) diabetes awareness and education (contains two goals); 3) diabetes quality health systems; and 4) access to diabetes data. For each of these four topic areas, the Action Plan presents a set of measurable objectives along with some suggested strategies to accomplish them.

The Action Plan outlines specific measures to monitor progress toward broadening public awareness of diabetes, increasing self-management by people with diabetes, providing quality health services, increasing and implementing policy and advocacy efforts, and disseminating and use of diabetes data. This revised Action Plan is intended to guide the activities of the Coalition and local community organizations for the next five years.

It is important to note that diabetes is best approached using chronic disease self-management strategies for several reasons. First, it often accompanies other chronic conditions like coronary artery disease, which are often amenable to the same clinical and community health strategies. Many of these diseases have their origins in obesity and lack of physical activity. Second, given that resources to implement these strategies are always limited, it makes sense to link together efforts that are addressing individual diseases to ensure a greater impact.

Many of the strategies in the Action Plan will require innovative approaches to bridging long distances, scarce resources, and diverse needs. Our success depends on the combined efforts and creativity of all individuals and organizations that want to improve the health and quality of life of Oregonians affected by diabetes.

Foreword

Diabetes advocates in Oregon have an excellent history of working together to reduce the burden of diabetes in the state. Prior to 1998, there was no coordinated effort to leverage resources for a greater impact on diabetes. In response, five organizations came together to create the Oregon Diabetes Coalition. Today, these five core organizations along with Coalition members guide the Coalition's activities. These five organizations include: Office of Medical Assistance Programs (OMAP); Oregon's Medical Professional Review Organization (OMPRO); American Diabetes Association Serving Oregon and Southwest Washington (ADA); Department of Human Services, Health Services, Oregon Diabetes Prevention and Control Program (ODPCP); and Oregon Diabetes Educators (ODE). Coalition members are comprised of staff from health care and social services agencies, individuals living with diabetes, and concerned citizens and professionals.

In 1999, the Coalition adopted its mission statement: *The Oregon Diabetes Coalition is committed to improving the health and quality of life of Oregonians affected by diabetes*. Next, the Coalition, with 100 partners, created Oregon's Action Plan for Diabetes which detailed goals, measurable objectives and strategies for addressing diabetes among four audiences: the general public; people with diabetes; health care providers and insurers; and health care purchasers. Over the last five years, the plan gave direction to the Coalition and member organizations' activities which addressed diabetes.

Given the rapidly changing environment over the last five years, an assessment of the state of diabetes in Oregon was conducted between 2003 and 2004 by the Coalition. Four groups of diabetes advocates were convened around four different topics: 1) diabetes policy and advocacy; 2) diabetes awareness and education; 3) diabetes quality health systems; and 4) access to diabetes data. The groups assessed if were we doing the right things and they also identified gaps that existed and provided suggestions on how to close those gaps. These meetings served as the foundation for updating the Action Plan. This revised Action Plan is intended to guide the activities of the coalition and local community organizations for the next five years.

The Oregon Diabetes Coalition will continue to work together to oversee ongoing implementation and evaluation of this plan. Each year, the Coalition will set a one-year action plan to outline the priority projects and implementation activities for that year. Coalition members will commit resources to ensure that the activities outlined in the one-year action plan are met.

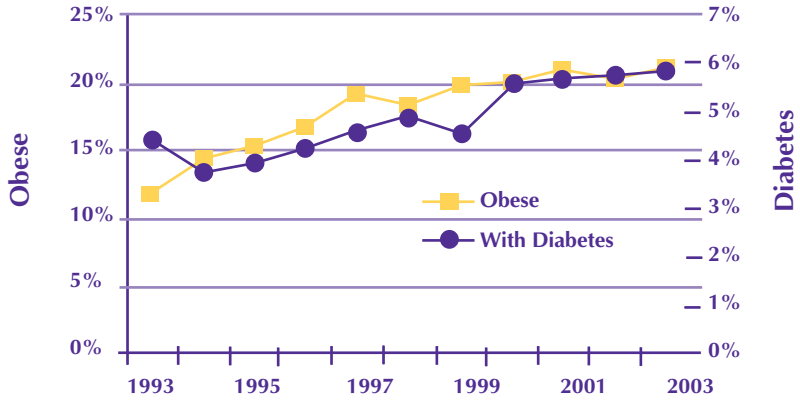
Diabetes: The Problem in Oregon

Why should Oregonians care about diabetes?

It is increasingly common.

- The percentage of adult Oregonians with diagnosed diabetes rose from 4% in 1993 to 6% in 2003—an increase of over 30% in the last ten years.[1]
- Close to 30% of the people with diabetes in Oregon have not been diagnosed and are not being treated—that translates to over 66,900 Oregonians who have diabetes and do not know it.[3]
- Health care providers are finding more and more children with type 2 diabetes, a disease usually diagnosed in adults aged 40 years or older.[4]
- Prevalence of diabetes is expected to continue to rise (by more than 80% in the next 50 years) due to changes in the age and racial/ethnic composition of the population, overall population growth, and increasing numbers of people who are overweight, obese, or less physically active.[5]

Prevalence of adults with diabetes and estimated prevalence of obese* adults, Oregon, 1993-2003[14]



*Body mass index ≥30.0 kg/meter^2.

It is serious.

- Diabetes is the 7th leading cause of death in Oregon. Diabetes mortality rates are more than 2.5 times higher in blacks or African Americans and almost 2 times higher in American Indians and Alaskan Natives than whites, Asians & Pacific Islanders and Hispanics or Latinos.[1]
- Every day in Oregon, it is estimated that 2 hospital discharges for diabetes-related amputations occur, 1 person with diabetes is newly diagnosed with chronic end-stage renal disease, 10 hospitalizations for diabetes take place, and 3 people die because of diabetes.[1]
- Oregonians with diabetes are often hospitalized because of major diabetes complications rather than the disease itself—out of the 43,400 diabetes-related hospitalizations that occurred in Oregon in 2002, over one-quarter were for major cardiovascular disease (11% coronary heart disease, 6% heart failure, 5% stroke), 5% influenza or pneumonia, 5% lower extremity conditions, and 3% diabetic ketoacidosis.[1]
- Diabetic retinopathy, a leading cause of vision impairment and blindness, affects over 65,000 adult Oregonians. National data show that at older ages (≥40 years) Hispanics or Latinos are the most commonly affected by retinopathy.[6]

- Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes. The risk for stroke is 2 to 4 times higher among people with diabetes.[7]
- In 2003, 247 births were to Oregon women with preexisting diabetes and 1,670 with gestational diabetes.[8] These women and their babies are at higher risk for serious complications such as stillbirths, congenital malformations, and cesarean sections.[9]

It is costly.

- The cost to people with diabetes, their families, and Oregon's communities is staggering. The direct cost (medical care) and indirect cost (lost productivity and premature mortality) of diabetes in Oregon is estimated at about $1.7 billion in 2002.[2]
- The average health care costs for a person with diabetes was $13,243 compared with $2,560 for a person without diabetes in 2002.[10]
- A 1% or more sustained decrease in A1c among adult diabetes patients is associated with significant health care cost savings—about $685-$950 per patient per year.[11]

It is controllable.

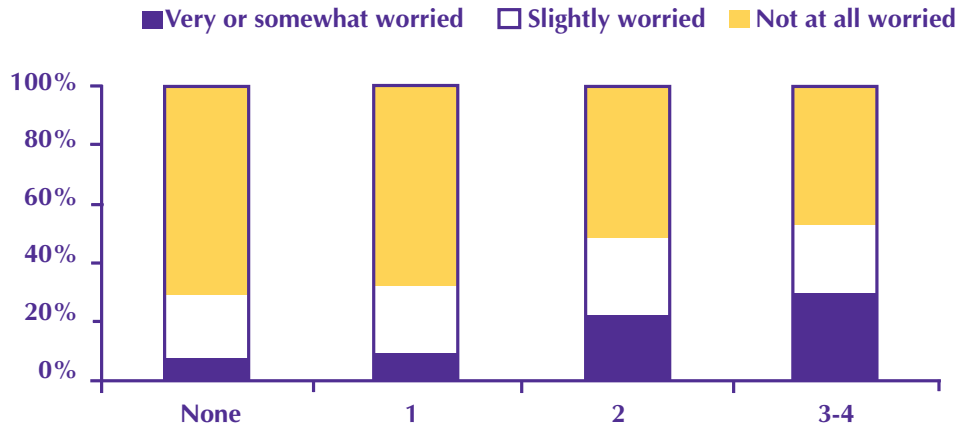
- When diabetes is diagnosed at an early stage, morbidity and mortality can be limited through a number of evidence-based, cost-effective treatment strategies.[7,12]

Glucose control	For every 1% reduction in results of A1C blood tests (e.g., from 8.0% to 7.0%), the risk of developing microvascular diabetic complications (eye, kidney, and nerve disease) is reduced by 40%.
Blood pressure control	• Blood pressure control can reduce cardiovascular disease (heart disease and stroke) by approximately 33% to 50% and can reduce microvascular disease (eye, kidney, and nerve disease) by approximately 33%. • For every 10 millimeters of mercury (mm Hg) reduction in systolic blood pressure, the risk for any complication related to diabetes is reduced by 12%.
Control blood lipids	Improved control of cholesterol or blood lipids (for example, HDL, LDL, and triglycerides) can reduce cardiovascular complications by 20% to 50%.
Preventive care for eyes, kidneys, feet	• Detecting and treating diabetic eye disease with laser therapy can reduce the development of severe vision loss by an estimated 50% to 60%. • Comprehensive foot care programs can reduce amputation rates by 45% to 85%. • Detecting and treating early diabetic kidney disease by lowering blood pressure can reduce the decline in kidney function by 30% to 70%.

It is preventable.

- It is estimated that 40% of adults aged 40-74 years, about 540,500 Oregon adults, have pre-diabetes—a condition in which blood glucose levels are elevated although not to the point where they meet diagnostic criteria for diabetes—and could benefit from interventions to help them avoid developing diabetes.[7]
- In the Diabetes Prevention Program (DPP) a 5-7% weight reduction plus 30 minutes of modest physical activity five days a week decreased progression to diabetes by 58%, over three years—a finding true across different racial/ethnic groups, for both men and women, and for those aged 60 and older.[13]
- Among adult Oregonians with multiple risk factors for diabetes, less than one-third report concern about getting diabetes and only one-fifth report discussing their risk with a health professional in the past year. This highlights the need to identify and implement effective public health messages that help people understand their risk and address the benefits of diabetes screening and prevention for those at highest risk.[14]

Level of worry about getting diabetes according to number of risk factors* for developing diabetes, Oregon, 2003[1]



*Includes family history of diabetes, obese, age ≥45 years, and inactivity.

Diabetes: The Health Care Access Challenge

One of the greatest challenges for Oregon is to ensure that people with diabetes, or those at risk for it, have access to health care services that identify and treat their disease.

This means people have a health insurance plan that does not require them to pay more out of their own pockets than is reasonable given their income. People with diabetes often have to pay for glucose monitors, test strips, prescription medications, equipment, diabetes education, office visits, or hospitalizations. Insurance coverage for these items and services differs among Oregon's major health plans. Oregonians with diabetes who cannot afford out-of-pocket medical expenses say they sometimes take less medicine, re-use test strips, or go without.

Access to health care also means that appointments are available without long waits, and support services, such as transportation and childcare, are available to those who need them. For people who do not speak English as their first language, access may also mean bilingual health care providers or translators are available, and education materials are in a format that is culturally appropriate.

Several populations face challenges with accessing health care including the uninsured or underinsured, racial and ethnic minorities, low socioeconomic groups, the elderly, and persons from rural areas. Lack of access to health care means that people with diabetes are not receiving the necessary preventive services. As a result, they are more likely to have diabetes complications and this drives up health care costs. The Oregon Diabetes Coalition can play a role in eliminating this access issue by taking steps to improve access. Small steps can be made through advocacy and policy efforts, utilizing existing data to paint a picture of the state of diabetes, and changing the way health systems provide care. It will take time to make these changes, but collectively, the Coalition can have a greater impact. The following is a description of the populations most vulnerable to lack of access.

Uninsured or Underinsured

Health care access is a particular challenge for people who are uninsured or underinsured. People lacking insurance coverage have worse health outcomes and incur higher health costs from delayed treatment or diagnosis.[15] In 2004, 17% of Oregonians were without health insurance. This is an increase from 14% in 2002 and represents an estimated 609,000 uninsured Oregonians. Over one-fourth of uninsured Oregonians have incomes below the federal poverty level of $18,850 for a family of four, which means that paying out of pocket for treatment or supplies to control diabetes is not an option.[16]

An even larger number of Oregonians may be underinsured due to the state's continuing economic problems. The ongoing state budget crisis has grave implications for the capacity of the Oregon Health Plan to provide health care services to Oregon's Medicaid and working poor populations.[17]

Racial and Ethnic Minorities

Oregon's racial and ethnic minority populations are hard hit by diabetes and by problems with accessing care. Although Oregon's population is 82% white, the number of minority residents has more than doubled (an increase of 140%) from 1990 to 2003 (263,000 vs. 629,000).[18] The Hispanic and Latino population is Oregon's fastest growing minority group with a 190% increase in the number of residents since 1990 (113,000 vs. 326,000).[18] Oregon's racial and ethnic minorities are more likely to be uninsured, more likely to get diabetes and die from it, and less likely to have a health care provider who understands their cultural health beliefs and language needs. These disparities are impacted by complex differences in social, cultural, economic and political factors that affect health.

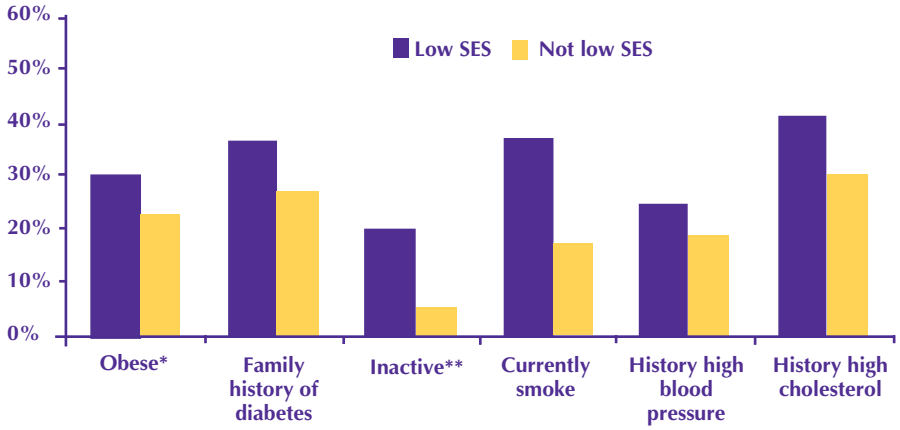
	Death rate from diabetes (per 100,000 persons annually)[1]	Percent Uninsured[19]	Percent aware of having diabetes[20]	Percent have family history of diabetes [20]
Race				
Black or African American	69.6	13.9	7.6	31.3
Asian/Pacific Islander	26.7	11.2	5.7	30.1
American Indian/Alaskan Native	51.1	17.8	8.8	40.8
White	26.5	12.7	5.8	24.2
Hispanic ethnicity				
Hispanic or Latino	32.1	30.7	4.2	33.5
Non-Hispanic	26.8	12.5	5.9	24.3

* For consistency across the various data sources, race and Hispanic ethnicity are presented separately because most data systems collect information on Hispanic ethnicity separately from race per national guidelines.

Low Socioeconomic Groups

Diabetes health disparities exist for poor and less educated communities who often have less access to health resources. In Oregon, adults age 25-64

Prevalence of diabetes-related risk factors among adults age 25-64 years, by socioeconomic status, Oregon, 2003[14]



*Body mass index ≥ 30.0 kg/meter^2. **<10 minutes of leisure time activity per week.

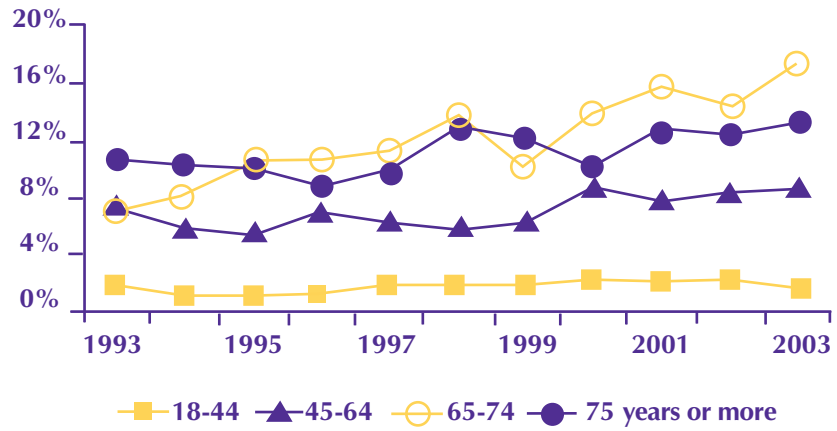
years with a lower socioeconomic status (SES)* are more likely to have diabetes (8%) compared to adults not considered to be of low SES (4%).[14] Both the risks of diabetes and diabetes itself are much more common in lower socioeconomic populations, so provision of preventive services to this group is extremely important to decrease the long term burden of complications. The Oregon Health Plan, Medicaid and the Children's Health Insurance Program help low-income Oregonians obtain needed health care, but these programs continue to struggle with serving a fast-growing population in a difficult economic environment.

Elderly

With the aging of Oregon's population, there will be more older people with diabetes who will need regular monitoring and increased access to a variety of health services.

Approximately 13% of Oregon's population (460,000 people) are over the age of 65 years and 2% (70,000 people) are over the age of 85.[18] Those 85 years and older are the fastest growing segment of the older population.[21] The size of this older age group is especially important for the future of Oregon's health care system, because these individuals tend to be in poorer health and require more services than the younger old.

Prevalence of diabetes among adults age 18 and older, by age, Oregon, 1993-2003[1]



About 1 in every 6 adults age 65 and older in Oregon has diabetes.[1] As diabetes continues to increase among the elderly, disease complications will become more common. Older adults with diabetes are not only at increased risk for the traditional vascular complications, but have a greater risk for cognitive decline, physical disability, falls, fractures, and depression. These complications severely impact quality of life, result in loss of independence, and place increasing

*Considered low socioeconomic status (SES) if have: < high school diploma, annual household income <$25,000, currently enrolled in the Oregon Health Plan, or no health insurance. Excludes those with annual household income >$50,000 or college graduates.

demands on those who provide care.[22] Identifying effective ways to care for the increasing number of older adults with diabetes will be a challenge to health care systems, providers, policy makers, state and local health agencies, and caregivers.

Rural communities

In much of rural Oregon, barriers to appropriate medical care are matters of both financial and practical access. Rural Oregonians are more likely than urban dwellers to be uninsured or underinsured. People must travel farther for both primary and specialty care appointments, and considerably fewer educational and support resources are available to people with diabetes and their families.

In rural areas, it is common to serve a higher portion of patients who are either on Medicare, Medicaid, or do not have any insurance.[23] Certified rural health clinics and federally-qualified health centers continue to provide the majority of health care to residents in rural areas.

Geographic Breakdown[24]

- 3% of Oregon residents live in frontier counties (entire geographic area has a population density of six people per square mile or less).
- 23% live in rural counties (entire geographic area is ten or more miles from a population center of 30,000 or more, and is not considered to be a frontier county).
- 54% live in mixed urban and rural counties and 20% live in urban counties.
- Ten of the 36 counties in Oregon are considered frontier and comprise almost half of the state's geographic area.

Call to Action

Now is the time for action on diabetes

Oregon's Action Plan for Diabetes is a call to action for all who can have an impact on improving the lives of people with diabetes.

Individuals, families, communities, schools, worksites, organizations and government must join together to build solutions that will both prevent diabetes and prevent the debilitating complications of diabetes.

- If the public understands the serious nature of diabetes, its risk factors, and the impact it has on our population, then they can take steps individually to reduce their risk and can collectively promote supportive environments for people with diabetes.
- If people with diabetes know they have the disease at its earliest stages, have access to quality health care and support services, and work in supportive environments, then they can take responsibility to manage their disease well.
- If health care providers routinely measure and report whether people with diabetes receive the treatment and education they need, as well as their health outcomes, then they can identify gaps in care and take steps toward improvement.
- If diabetes advocates help policy makers understand the nature and severity of the disease and possible solutions, they can create policies that will result in better health outcomes.
- If appropriate data are collected, easily accessible and used, strong arguments can be made for resource allocation, program development and creation and enforcement of policies.

In the following sections, Coalition members have created goals, objectives, and strategies for addressing diabetes advocacy and policy, diabetes awareness and education, quality health systems, and diabetes data.

Oregon's Action Plan for Diabetes

Diabetes Policy and Advocacy

Goal:

Policies in Oregon improve prevention, care and protection for people with diabetes.

Objective 1:

Promote and implement a diabetes related policy agenda.

Strategies:

- Create an advocacy and policy subcommittee to develop a policy agenda for addressing diabetes in Oregon.
- Increase advocacy partnerships to promote national, state, and local public policy that supports prevention and treatment of diabetes.
- Strengthen the organization of efforts to augment or initiate policies that affect people with diabetes from the community to the statewide level.

Objective 2:

Strengthen and increase awareness about diabetes related rights.

Strategies:

- Promote awareness in communities at high risk about diabetes related advocacy tools, such as the Diabetes Rights Hotline.
- Promote awareness of how diabetes advocacy can be used to influence decisions regarding diabetes policies and rights.
- Partner with organizations that address chronic diseases to achieve the right of universal access to health care.
- Compel the health care delivery system to make changes needed to improve the quality of diabetes care.

Definition

An Advocate is someone who supports or defends a cause; or, one who pleads on behalf of another. The purpose of diabetes advocacy is to:

- support the right of people with diabetes to have appropriate health care and insurance coverage;
- seek increased funding on a national level for diabetes research; and
- defend the rights of a person with diabetes to be protected from discrimination in the workplace or school setting.

History

In 1999, the Action Plan for Diabetes did not specifically focus on advocacy or policy; however, members of the Diabetes Coalition were lending their personal support to matters that impacted Oregonians affected by diabetes.

In 2000, the American Diabetes Association led the advocacy and policy effort to make insurance coverage for diabetes education and supplies mandatory in Oregon. That law was challenged in 2004, and again, the American Diabetes Association was at the forefront of protecting coverage for diabetes education.

Many resources exist for individuals with diabetes that protect them from discrimination either in the work place or in schools. Advocates around the state are working to ensure fair treatment and rights for people with diabetes who may need special accommodations to self-manage their disease.

Policies for people affected by diabetes can be created at the federal, state, or local levels. Such policies can range from coverage for diabetes education to policies in a work place that support healthy food options for employees. Advocacy is the tool that increases awareness about the need for, and use of, these policies. Given the increasing prevalence of diabetes and obesity, it is time to focus our efforts on diabetes policy and advocacy to improve the outcomes of people affected by diabetes from the community to the state and federal levels.

Moving Forward: the 2005 Plan

The goal of diabetes policy and advocacy is to ensure that policies that are created improve the environment and rights for people with diabetes. This can be done through advocacy efforts of our statewide partners. Coalition members created two objectives: first, to establish a diabetes policy agenda and second, to increase awareness about diabetes-related rights. These will help ensure that people affected by diabetes receive the support they need to self-manage their disease, which will increase the likelihood of positive health outcomes.

One of the most important steps the Advocacy and Policy Subcommittee will take is to partner with organizations that address other chronic diseases and work with them to improve the quality of healthcare for all Oregonians. These partnerships can help educate and increase awareness about policies that need to be created, strengthened, or continued to be supported.

By including policy and advocacy in the Action Plan for Diabetes, the Oregon Diabetes Coalition is making a statement that we intend to make our voices heard and move diabetes care and treatment forward for all Oregonians.

Related Measures:

		Status
Measure	Data Source	2005
Number of bills related to diabetes prevention and care being submitted during a legislative session	LINUS	3*

*SB560, SB860, SB228 (related to physical activity and nutrition standards in schools).

Diabetes Awareness and Education

Goal :

Oregonians know the impact of diabetes and take action to decrease their risk of developing diabetes.

Objective 1:

Increase knowledge of Oregonians about prevention, risk factors, symptoms, complications, treatments and financial impact.

Strategies:

- Make available statewide, low-literacy and multi-lingual education materials and visual aids to promote prevention of diabetes.
- Educate health care providers about pre-diabetes and the fact that many cases of type 2 diabetes are preventable and what they can do to take action.

Objective 2:

Identify at-risk populations and reduce disparities among Oregonians by increasing access to and improving diabetes education.

Strategies:

- Provide health care professionals with cultural competency trainings, resources, and tools such as motivational interviewing so that they can effectively deliver health education messages to patients.
- Target children and culturally, ethnically, and geographically diverse populations with appropriate diabetes-related information.
- Distribute the American Diabetes Association's risk assessment test to the public in a variety of venues and in different communities.

Objective 3:

Identify and expand community partnerships that result in outreach to Oregonians at risk for diabetes or with pre-diabetes.

Strategies:

- Include the community in all stages of decision making when partnering to implement outreach programs.
- Encourage local communities to develop, train and maintain a diverse speakers bureau to educate communities using culturally appropriate, understandable and accurate information.

Objective 4:

Provide and support resources for Oregonians to make lifestyle changes to delay or prevent the onset of diabetes.

Strategies:

- Encourage communities to create a resource guide to raise awareness around resources available in their community that support lifestyle changes.
- Support efforts to expand walkable communities by partnering with organizations that support environments conducive to walking.

Goal:

Oregonians affected by diabetes are able to manage their disease to prevent complications.

Objective 1:

Increase availability and accessibility of culturally and age appropriate health care, education, and community resources to help Oregonians manage diabetes.

Strategies:

- Develop a list of resources and standards for diabetes self-management education, and disseminate to health care providers and those people affected by diabetes.
- Create and deliver a continuum of understandable and accurate diabetes self-management education through a variety of means such as community gathering places, or group visits with physicians.
- Create partnerships with local and statewide organizations to collaborate and share resources.

Objective 2:

Increase the percentage of Oregonians affected by diabetes who understand, value, and carry out self-management behaviors to reduce complications and improve quality of life.

Strategies:

- Educate and empower people affected by diabetes about how to partner with their health care team to receive needed medical management, treatment, and access to community resources.
- Promote community awareness and understanding about self-management needs of people affected by diabetes.

Definition

The purpose of diabetes awareness is to spread knowledge to people with diabetes or those at risk of developing diabetes about the disease, its related complications and the possibility of preventing the disease. Diabetes education teaches people how to turn that knowledge into action to improve their health.

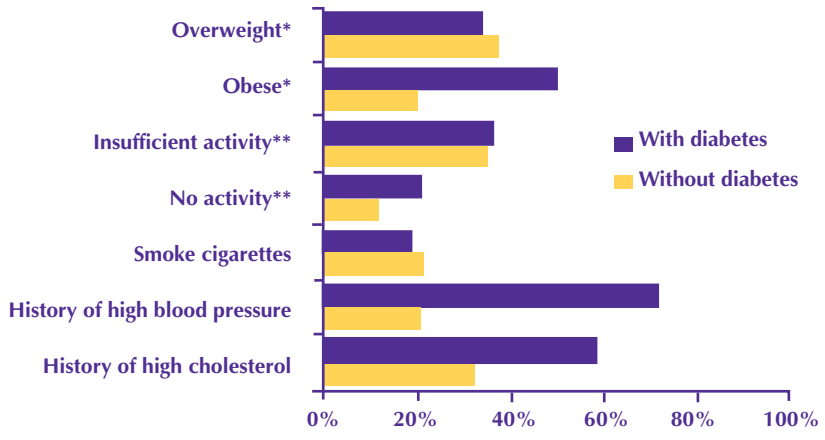
History

In 2000, 67% of Oregonians surveyed had fair or poor knowledge about diabetes and its complications.[25] In 2003, more Oregonians knew about diabetes and its complications, yet 50% still reported having fair or poor knowledge.[14] As these numbers attest, there is still much to be done to increase awareness about diabetes.

Since 1999, the Oregon Diabetes Coalition has conducted several projects to increase awareness about diabetes, its risks and complications. The diabetes care card is a tool patients with diabetes can

use to track the preventive services they need and receive. A diabetes education toolkit was developed for health care providers and educators to use in coordination with the services they provide to Oregonians living with diabetes. The toolkit contains samples of English and Spanish patient education materials about diabetes that are free or low cost, and in the public domain.

Prevalence of risk factors for diabetes and complications among adults 18 or older with and without diabetes, Oregon, 2003[1]



*Overweight—body mass index (BMI) 25.0-29.9 kg/meter^2. Obese—BMI 30.0 ≥kg/meter^2.
**Insufficient activity—active, but do not meet CDC recommendation of moderate activity ≥30 minutes on ≥5 days per week or vigorous activity for ≥20 minutes on ≥3 days per week. No activity—<10 minutes of activity per week.

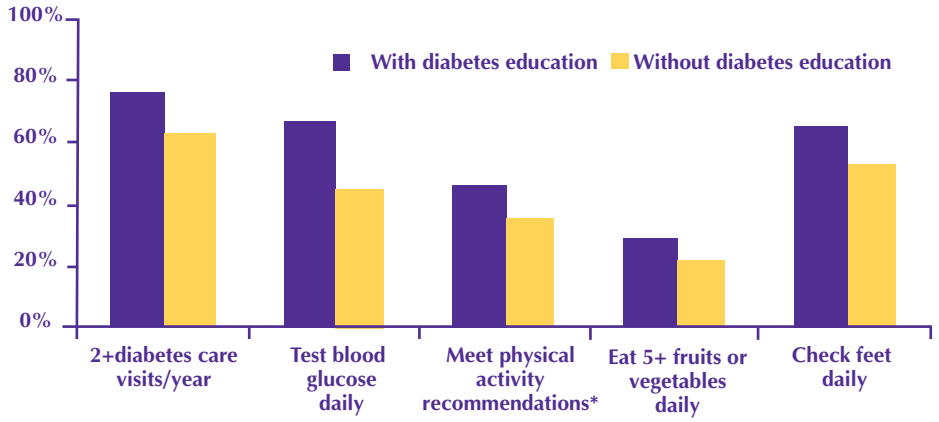
Education and support are basic needs for people with diabetes. In 2002, the American Diabetes Association led efforts to implement the Diabetes Education & Management Act, which requires state regulated health care plans to provide coverage for diabetes supplies, equipment, and self-management education for all people with diabetes.

Additionally, over the past five years, several community-based self-management resources have become available in local communities. This is a result of the awareness that it is not just the health care team that is responsible for the health outcomes of a person with diabetes, but the individual and their support person as well.

Moving forward: the 2005 Plan

The first goal of awareness and education targets those people who don't have diabetes, but are at risk of developing diabetes, as well as people with undiagnosed diabetes. Knowing what the risk factors are for developing diabetes is not enough to prevent diabetes. Recently, the Diabetes Prevention Program (DPP)[13] demonstrated that once individuals with pre-diabetes are identified, development of type 2 diabetes could be delayed and even prevented with modest lifestyle changes. Modest lifestyle changes included a 5-7% weight reduction plus 30 minutes of modest physical activity five days a week. It is our job to translate this knowledge into behavior change through education and resource supports both statewide and at the local level.

Prevalence of self-care practices among adults age 18 or older with diabetes, by receipt of formal diabetes education, Oregon, 2003[14]



*Moderate activity for ≥30 minutes on ≥5 days per week or vigorous activity for ≥20 minutes on ≥3 days per week.

Coalition members believe that greater awareness of diabetes, its risk factors, and methods for preventing diabetes needs to be achieved. The Coalition supports conducting risk-assessments as an effective method to identify the undiagnosed or those at risk. Once these individuals are identified, referrals to services and linkages to community resources can be made. Coalition members also recognize the importance of reaching disparate populations through appropriate mechanisms, such as low-literacy and visual resources. On the flip side, members stressed that the health care educators and providers need to be informed and engaged in disseminating this knowledge and education.

The second goal targets those people who have diabetes and need information on how to self-manage their disease (the ability to take care of, or manage one's own disease). The routine that people with diabetes adopt to keep their disease under control is rigorous. Daily activities include: testing blood glucose, taking and adjusting medications, planning meals with the best food choices, exercising, not smoking and checking their feet daily. While many people with diabetes do a good job of self-management, a survey of Oregonians shows that there is room for improvement

Preventive medical care can help reduce the impact of diabetes. Oregon's *Population-based Guidelines for Diabetes Mellitus* recommends a set of preventive services to track. People with diabetes and their caregivers should know about these services and work with their health care team to obtain these services at the intervals right for them. Coalition members stated that diabetes self-management education, provided in both clinical and community settings, is an effective way to convey the importance of diabetes self-management as well as strategies for doing so.

If those at risk of developing diabetes, or those who have diabetes and do not know it understand the serious nature of diabetes, its risk factors, and the impact it has on our population, then they can take steps individually to reduce their risk and can collectively promote supportive environments for people with diabetes. The strategies in this section have been chosen because they can help achieve the set goals.

Related Measures:

Measure	Data Source	Status	
		2000	2003
Percentage of Oregonians at high-risk[1] for diabetes who consider themselves at risk	BRFSS	—	31%
Percentage of Oregonians at high-risk[1] for diabetes who discuss diabetes risk with health care professional in past year	BRFSS	—	22%
Percentage of Oregonians without diabetes who have good diabetes knowledge[2]	BRFSS	32%	49%

[1]Considered at high-risk if have 3-4 of the following risk factors for developing diabetes: family history of diabetes, obesity, age ≥45 years, and inactivity.

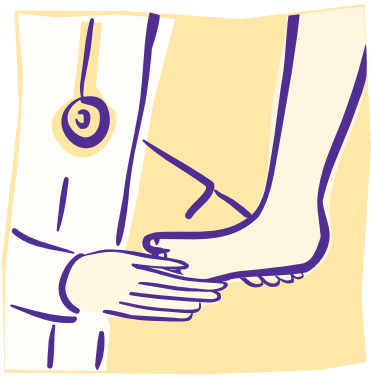
[2]Agree with ≥7 of the following statements: 1) know that diabetes can harm body before diagnosis; 2) person can have and not know; 3) diabetes has no cure; 4) diabetes is more common in older adults; 5) diabetes can cause blindness; 6) diabetes can cause lower leg amputations; 7) diabetes can cause heart disease; and 8) diabetes can cause kidney disease.

Measure	Data Source	Status		
		1999	2001	2003
Percentage of Oregonians with diabetes who monitor their blood glucose daily	BRFSS	60%	58%	60%
Percentage of Oregonians with diabetes who meet current physical activity recommendations[1]	BRFSS	—	39%	46%
Percentage of Oregonians with diabetes who consume 5 or more fruits or vegetables per day	BRFSS	—	27%	24%

[1]CDC physical activity recommendation is defined as: moderate-intensity physical activity for ≥30 minutes on ≥5 days of the week, or vigorous-intensity physical activity for ≥20 minutes on ≥3 days of the week.

Measure	Data Source	Status		
		1999	2001	2002
Percentage of Oregonians with diabetes who receive and understand self-care education from health care professionals about: - How and when to test blood glucose - How to adjust food choices - How to get appropriate physical activity	BRFSS	 77% 69% 86%	 76% 68% 85%	 78% 71% 87%
Percentage of Oregonians who have set goals for managing diabetes with health care professional	BRFSS (available 2004)	—	—	—

Diabetes Quality Health Systems



Goal:

Health Systems consistently improve health outcomes for Oregonians affected by diabetes.

Objective 1:

Clinical practices and health plans use electronic tracking systems to identify their patients with diabetes and ensure appropriate care.

Strategies:

- Organize and support the next stage of the Chronic Disease Data Clearinghouse (pooling health plan data to help doctors).

Objective 2:

Increase continuity of care across systems for Oregonians with diabetes.

Strategies:

- Encourage health systems and the local community to cooperatively work together to help make patients successful in managing their diabetes.
- Foster mentorships between organizations that provide quality diabetes care and those organizations that are trying to achieve those standards.

Objective 3:

Provide easy access to proactive planned support to assist Oregonians with diabetes.

Strategies:

- Assess existing diabetes disease management initiatives and convene a summit to develop strategies for a coordinated, cohesive approach in Oregon.
- Disseminate the chronic care model using new strategies.
- Provide technical assistance and resources for Independent Physician Associations (IPAs) and physician groups to highlight best practices and tools for improving care.

Objective 4:

Purchasers, plans, and systems recognize and reward providers who report key diabetes indicators and who demonstrate quality diabetes outcomes.

Strategies:

- Promote health care purchaser's toolkit that educates why and how to support good diabetes care and encourage its use among Oregon's employers.
- Create rewards to recognize systems that provide high quality diabetes care.

- Advocate for diabetes issues to be included within important health policy development forums for change (Example: Oregon Health Policy Commission, Oregon Health Care Quality Corporation's Pay-for-Quality Initiative).

Definition

People with diabetes and their families need services from a quality health care delivery system in order to manage their disease. In the Coalition's vision, care meets the Institute of Medicine's definition of quality: care is safe, effective, efficient, patient-centered, timely and equitable. A quality health system includes the following components:

- Financial access through health insurance that covers all types of care, including pharmacy, supplies, and education
- A provider who is responsible and prepared to assure that treatment is provided according to clinical guidelines
- A care team that proactively assists patients with clinical and self-management support
- A seamlessly managed transition as patients change from in-patient, outpatient, and long-term care settings
- Services that are appropriately tailored to meet diverse language, cultural and educational needs
- Providers who routinely use electronic systems to help manage care and to track and improve their outcomes
- Payment and reward systems that provide appropriate incentives for good care

History

The 1999 *Action Plan for Diabetes* outlined strategies for providers, insurers, purchasers and patients to encourage systematic, comprehensive care for people with diabetes. The plan particularly called for efforts that encouraged greater use of systems that keep track of all patients and how their care compares to the *Population-Based Guideline* standards. At the time, managed care dominated the insurance market, and health plans were identified as significant players to influence change.

The Coalition has sponsored several important projects with partner groups to further the objectives from the 1999 Action Plan. The Oregon Diabetes Collaborative, in conjunction with OMPRO, assisted over 20 Oregon clinics as they switched from an acute care to a chronic care delivery model, significantly improving diabetes-related outcomes. The Coalition, with the Oregon Health Care Quality Corporation (Q-Corp), helped three clinics to implement tracking systems for diabetes and share their results with other clinics, also improving outcomes. The Coalition also joined the Oregon Asthma Network and the Q-Corp to sponsor the Chronic Disease Data Clearinghouse pilot project. This

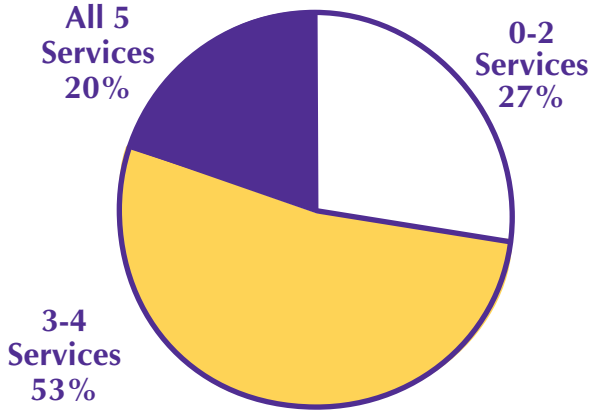
effort is pooling data from 12 health plans to create consolidated "tracking" and "alert" reports to help physicians with disease management. Coalition member organizations have undertaken numerous additional efforts individually to improve the quality of diabetes care in Oregon.

Moving Forward: the 2005 Plan

Coalition members reaffirmed the 1999 Action Plan's emphasis on improving systems for tracking and delivering consistent care. Given the success of the Coalition and partners' efforts over the past five years, Coalition members want those efforts to continue.

In addition, the Coalition noted that systematic care particularly breaks down when people with diabetes move between settings or between organizations. For example, inpatient, outpatient, and long-term care settings should be able to seamlessly share information to assure continuity of care.

Sum of receipt of diabetes-related preventive services* among adults age 18 or older with diabetes, Oregon, 2003[1]



*Includes annual foot exam, annual dilated eye exam, biannual A1c test, annual flu shot, and previous pneumonia vaccine.

Coalition members also highlighted the need for coordinated disease management that proactively provides help so people can self-manage their diabetes. Disease management can also help with complex case management. Cooperative efforts could increase the availability and quality of disease management.

Finally, Coalition members were adamant that changes in the health care system will not occur without changes in incentives. In the current reimbursement environment investments in things like disease management and tracking systems are challenging. Providers, insurers, and health systems need recognition and financial rewards for reporting key diabetes measures and giving high quality diabetes care.

The strategies in this plan have been chosen because of their potential to encourage systematic change across all the objectives.

Related Measures:

Measure	Data Source	Status		
		1999	2001	2003
Percentage of Oregonians with diabetes who have had at least 2 visits with a health care professional for diabetes in the past year	BRFSS, electronic systems data, medical record review	79% (BRFSS)	74% (BRFSS)	72% (BRFSS)
Percentage of Oregonians with diabetes who had at least two A1c tests in the past year	BRFSS, electronic systems data, medical record review	—	—	62% (BRFSS)
Percentage of Oregonians with diabetes who received a dilated eye exam in the past year	BRFSS, electronic systems data, medical record review	63% (BRFSS)	66% (BRFSS)	62% (BRFSS)
Percentage of Oregonians with diabetes who had a LDL-C (cholesterol) test performed in the past year	BRFSS, electronic systems data, medical record review	75% (BRFSS)	84% (BRFSS)	86% (BRFSS)
Percentage of Oregonians with at least one test for microalbumin during the past year (or evidence of medical attention for existing nephropathy)	Electronic systems data, medical record review	—	—	—
Percentage of Oregonians with diabetes who received a complete foot exam by a health care professional in the past year	BRFSS, electronic systems data, medical record review	75% (BRFSS)	68% (BRFSS)	74% (BRFSS)
Percentage of Oregonians with diabetes who receive all 5 of the following preventive services—biannual A1c test, annual foot exam, dilated eye exam, flu vaccination, and pneumococcal vaccination	BRFSS, electronic systems data, medical record review	—	—	20% (BRFSS)
Percentage of Oregonians with diabetes, age 40 years or older, who receive aspirin therapy	BRFSS	43%	53%	60%

Access to Diabetes Data

Goal:

Accurate diabetes data are integrated, accessible, and used.

Objective 1:
Implement and maintain processes that ensure the confidentiality, completeness, and quality of diabetes data collected and disseminated in Oregon.

Strategies:
- Evaluate the data security, quality, and completeness of diabetes data sources in Oregon.
- Share data issues with key stakeholders to guide efforts toward improving the confidentiality and quality of diabetes data.

Objective 2:
Improve data collection, analysis, and dissemination strategies among priority populations disproportionately affected by diabetes.

Strategies:
- Engage in partnerships with organizations that serve priority populations to review and explore data collection, analysis, and dissemination strategies and determine which options are available and feasible within these populations.
- Obtain funding to expand data collection among priority populations.

Objective 3:
Develop and integrate new data collection and analysis strategies to make diabetes health data more comprehensive and informative on both an individual and a population basis.

Strategies:
- Promote broader use and dissemination of electronic health data (e.g., automated claims/encounter, electronic medical record, or registry data) to track improvements in diabetes care on an individual and population basis.
- Develop data collection and analysis strategies to monitor emerging diabetes indicators.

Objective 4:
Promote the dissemination and use of data that informs health policies and identifies best practices for diabetes prevention and control at the community, health system, and individual level.

Strategies:
- Develop and implement user-friendly approaches for dissemination of data to different audiences.
- Develop and promote use of Web-based repository to house diabetes data information.
- Collaborate with academic and other research institutions on data projects that evaluate best practice interventions in community and primary care settings.

Definition

Statewide action promoting diabetes prevention and control depends on timely access to data that is presented in a manner to facilitate use. In Oregon, it is important to ensure that accurate diabetes data are integrated, made accessible, and used to: 1) monitor the health status of Oregonians; 2) solve community health problems; and 3) evaluate availability, utilization, effectiveness, and outcomes of personal and population-based health services.

Collecting, interpreting, and using diabetes-related health data on both an individual and population basis is vital to make informed health policy decisions, target preventive care funding, conduct program planning, and make quality improvement decisions. Key users of diabetes data include policy makers, advocates, public health practitioners, health care providers and purchasers, staff in professional and voluntary organizations, the press, and the general public.

History

Since the 1999 Action Plan for Diabetes was written, the data systems for measuring diabetes outcomes in Oregon have grown. Statewide and national efforts have sought to identify and define common measures for evaluating the quality of diabetes prevention and control strategies and health care practices. Data sources for tracking these outcomes in Oregon include: annual health surveys, hospital discharge data, vital statistics information on births and deaths, electronic systems data (patient registries, claims/encounter data, pharmacy and laboratory data), and medical record reviews.

Moving forward: the 2005 Plan

Coalition members seek to expand the collection, analysis, and dissemination of diabetes data in Oregon and to use the resulting information to calculate the long-term costs of diabetes, assess its impact on Oregonians, and guide efforts to improve care.

Specifically, members want to improve the extent and quality of data for Oregon's priority populations that are disproportionately affected by diabetes. These populations might include the uninsured or underinsured, racial or ethnic groups at higher risk (including black or African American, Asian, Native Hawaiian, Pacific Islander, American Indian or Alaskan Native, Hispanic or Latino), those of lower socioeconomic status, the elderly, and persons from rural areas. Furthermore, new approaches need to be explored for monitoring diabetes in youth and tracking the burden of pre-diabetes in our state.

In addition, Coalition members felt that data collection systems need to be in place to monitor the impact of new innovations in diabetes management and to track the effect of changes that continue to occur in Oregon's health care

system. The Coalition also supports the growth of collaborations between organizations to enhance use of clinic data for quality improvement and dissemination of such data for use by providers and consumers.

Finally, members were adamant that effective distribution of data needs to occur among a wide audience to drive improvements in diabetes screening, diagnosis, and management. The strategies in this section have been chosen because they support the expansion and improvement of data collection, analysis, and dissemination efforts in Oregon.

Related Measures:

		Status
Measure	Data Source	2004
Number of data systems available at the state and local level for monitoring the burden of diabetes and tracking quality of care	Progress report	6
Number of public and private partners integrating and sharing electronic health data	Progress report	To be determined

Measuring Our Progress

To track our progress towards achieving the Action Plan's goals and objectives over time, we will measure a variety of outcomes. These measures come from a review of standardized measurement sets established by national organizations (National Diabetes Quality Improvement Alliance, Indian Health Service, HEDIS, Centers for Disease Control (CDC) National Diabetes Prevention & Control Program, etc.) and from querying health plans and agencies known to be working on diabetes data activities in Oregon. Key diabetes measures, selected by Coalition partners, are highlighted throughout the Action Plan. Information on these and other important measures will be updated and distributed on an annual basis in a companion document known as "Oregon's Progress Report on Diabetes." For our assessment to be complete and meaningful, Coalition partners will collaborate and contribute information to collectively monitor our progress and success. Valuable information for tracking our diabetes outcomes will come from a variety of sources including statewide data systems, health care systems, and special data projects. More detailed descriptions of the data sources are available in the Progress Report.

For current information about our progress and success, check out Oregon's Progress Report on Diabetes at http://www.healthoregon.org/diabetes/.

Description of Diabetes Data Sources

Behavioral Risk Factor Surveillance System
The Behavioral Risk Factor Surveillance System (BRFSS) is an annual cross-sectional surveillance survey that collects state-specific data from a random sample of adults age 18 years and older living in households. People who self-report having diabetes are asked to provide additional information on health behaviors, self-care practices, receipt of preventive services, and experiences with diabetes care. Additional information about Oregon's BRFSS can be found at http://www.dhs.state.or.us/publichealth/chs/brfss.cfm.

Death Certificate Statistical File
The Death Certificate Statistical File includes information about deaths occurring in Oregon and out-of-state to Oregon residents. Information is obtained from the death certificates, which must be filed by law with the Oregon State Registrar. Diabetes mortality can be examined as either the underlying cause of death or as a contributing cause of death. Additional information about Oregon's mortality data can be found at http://www.dhs.state.or.us/publichealth/chs/death.cfm.

Hospital Discharge Database
This database provides information on all discharges from acute care hospitals in Oregon. Information includes the dates of admission and discharge, principal and additional diagnoses and procedures, financial charges, primary payor, and limited patient demographic information (excluding race/ethnicity). Information on diabetes comes from discharge diagnoses, while procedure codes provide information on diabetes-related procedures, such as lower-extremity amputations.

Birth Certificate Statistical File
Data from the Birth Certificate Statistical File are collected from birth certificates by the State Registrar and represent all births occurring in Oregon and out-of-state to Oregon residents. This database includes information about maternal diabetes. Data are used to examine trends in births with chronic or gestational diabetes for the state overall, and by age, sex, race, ethnicity, and geographic location. Additional information about Oregon's birth data can be found at http://www.dhs.state.or.us/publichealth/chs/birth.cfm.

Electronic systems data and medical record review
Automated data from electronic systems (e.g., patient registries, claims/encounter data, pharmacy and laboratory data) and or data from medical record reviews are sources of information that can be used to examine health care utilization and receipt of preventive services among different populations with diabetes.

Legislative Information Notification Update System
The Legislative Information Notification Update System (LINUS) is a "real-time" Legislative bill tracking system that allows state agencies to track bills throughout the legislative process. This is a web-based application that is available to employees of state agencies and their statutorily defined agents. Additional information about LINUS can be found at http://egov.oregon.gov/DAS/IRMD/linus.shtml.

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