

IMPACT OF DIABETES IN IOWA- 2005

Diabetes mellitus, a chronic disease characterized by elevated blood sugar levels, is a significant contributor to morbidity and mortality in Iowa and throughout the United States.

Type 2 diabetes is a metabolic disorder resulting from the body's inability to make enough or properly use insulin. Diabetes can cause debilitating and costly complications such as blindness, renal failure, lower extremity amputations, and cardiovascular disease. However, *complications can be minimized when diabetes is diagnosed early and the patient is taught to manage their disease through blood glucose control, weight control (through good nutrition and physical activity), taking medications appropriately, and decreasing unhealthy lifestyle behaviors such as smoking.*

Pre-diabetes is a relatively new term used to distinguish people with impaired fasting glucose or impaired glucose tolerance levels or both who are at increased risk of developing diabetes and are also at risk for other adverse health outcomes. Progression to diabetes among those with pre-diabetes is not inevitable. In one large prevention study of people at high risk for diabetes, *the development of diabetes was reduced 58 percent by engaging in 30 minutes a day of moderate physical activity coupled with a 5-10% reduction in body weight* (www.diabetes.org)

Prevalence

Data from the 2004 Iowa BRFSS indicates **6.7 percent** (n ~ 149,000) adult Iowans (age 18 or older) have been told by a doctor that they have diabetes. This number is slightly lower than the national average of **7.0 percent**. The prevalence of Iowans diagnosed with diabetes has increased steadily from 1990 when **4.7 percent** of the population reported a diabetes diagnosis.

- The percentage of Iowans diagnosed with diabetes increases substantially as the population ages.
- The percentage of men and women reporting diabetes were similar.
- African-Americans reported an incidence rate of 11.4 percent (data from other ethnic groups are unavailable at this time)
- Those with higher education (some post high school) had lower incidence of diabetes (4.8%), compared to those with a HS/GED education (8.0%) or less than HS (10.1%).

Effects of Diabetes

Mortality

Diabetes was the eighth leading cause of death among Iowa residents in 2004 (representing 2.5% of all deaths). The most recent information available shows there were 626 deaths in Iowa with diabetes as an underlying cause and 2,500 deaths with diabetes as a contributing cause (2000).

Health Care Costs

- In 2003, total charges for inpatient hospitalizations in Iowa with diabetes as a primary diagnosis were \$44,426,567 (3,629 visits). Total charges for inpatient hospitalizations with diabetes as an additional diagnosis was \$808,022,143 (54,999 visits)
- The leading causes for hospitalization associated with diabetes were congestive heart failure, coronary atherosclerosis, and pneumonia
- Total charges for outpatient hospital visits with Diabetes as a primary diagnosis was \$6,949,057 while outpatient visits with diabetes as an additional diagnosis were \$135,556,303. (Source: Iowa Department of Public Health, Bureau of Health Statistics)
- According to the American Diabetes Association, it is estimated that one out of every ten health care dollars is spent on diabetes

Diabetes-related Complications

- Diabetes is the leading cause of blindness among working age adults: **24 percent** of Iowans with diabetes reported their doctor has told them they have retinopathy or damage to the eyes in 2004.
- Early detection through eye exams and effective interventions can substantially reduce blindness among people with diabetes: **77.3 percent** of Iowans with diabetes responded that they had their eyes dilated within the past year, 8.4percent greater than 1 year and less than 2 years, 10.3percent greater than 2 years, and 4percent had never had their eyes dilated. Twenty percent of those with less than a HS education had not had an eye exam greater than 2 years.

2004 Diabetes Health Indicators

The following steps can help to manage diabetes

(go to www.cdc.gov/diabetes/pubs/factsheet.htm for more complete information).

Diabetes Patient Education

- Self-management is critical to the effective management of diabetes and prevention of complications: **62.7 percent** of Iowans have taken a diabetes education course. Those over 65 years of age reported a significantly lower attendance (50.9%) than people ages 45-64. Higher education and higher income was associated with higher attendance rates. (*Healthy People 2010 Target: 60%*).
(Go to www.idph.state.ia.us/bhpl/healthy_iowans_2010.asp for the Healthy People 2010 Report).

Secondary Prevention for Persons with Diabetes

- Glycemic control is essential for preventing diabetes-related complications. A blood test called HbA1c provides information on blood sugar levels over 2 -3 months. The goal is to have the average HbA1c less than 8.0 percent. In 2004, **86.2 percent** of Iowans with diabetes reported being tested 1-2 times per year. There were no significant differences due to gender. Higher percentages of adults ages 35-54 reported being tested (93-96%) compared to those ages 55-64 (89.6%) and those 65+ (76.9%).

Higher education and higher income were associated with a greater percentage of people being tested for A1C.

Diabetes Self-care

- Routine foot examination among persons with diabetes increases the likelihood of early identification of foot ulcers and, ultimately, decreased the risk of lower extremity amputation: **67 percent** of Iowans with diabetes check their feet for sores or irritations daily.
- Self-monitoring of blood glucose is important to prevent acute glycemic reactions (high or low blood sugar) and long-term diabetes complications: **63.6 percent** of Iowans check their blood glucose 1-5 times per day, 29.6 percent check their blood glucose less than one time per day, and 6.8 percent of Iowans *never* check their blood glucose levels. (*Healthy People 2010 Target: 60%*).

Lifestyle

- Obesity is a risk factor for acquiring diabetes. From the 2004 BRFSS data, **37.4 percent** of adult Iowans are overweight, and **23.5 percent** are obese, which is higher than the national average. The proportion of Iowans at a healthy weight is **39 percent**. Overweight and obesity prevalence rises with increasing age up to age 64. Obesity prevalence is highest (28.2%) in those with income less than \$15,000. Thirty nine percent of Iowans are at risk for health problems related to being overweight. (*Healthy People 2010 Target for those at a healthy weight: 60%*).
- Sedentary Lifestyle is a risk factor for diabetes. Regular physical activity is associated with improved carbohydrate metabolism and insulin sensitivity, and therefore can contribute to the prevention and management of Type 2 diabetes. Moderate physical activity for 30 minutes most days of the week can help prevent and manage Type 2 diabetes. From the 2003 BRFSS data, **56.4 percent** of adult Iowans do not meet the recommended guidelines for moderate physical activity. Increasing age, less education, and income less than \$15,000 is associated with less physical activity. (Physical Activity and Nutrition are assessed every other year in the BRFSS. For the full 2003 BRFSS Report, go to www.idph.state.ia.us/brfss/).

Eliminating or reducing the health problems caused by diabetes through factors such as better access to preventive care, more widespread diagnosis, more intensive disease management, the advent of new medical technologies, and healthy lifestyle choices could significantly improve the quality of life for people with diabetes and their families while at the same time potentially reducing expenditures for health care services and increasing productivity in Iowa. For more information about the Iowa Diabetes Prevention & Control Program, go to our website at www.idph.state.ia.us/hpcdp/diabetes.asp, or call Jeanne Clawson, (515) 242-6516.

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