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SURVEY RESULTS FROM THE

IOWA 2000

Iowa Department of Public Health

State Center for Health Statistics

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INTRODUCTION

For quite some time health departments have recorded morbidity and mortality data. However, previously there was not an ongoing attempt to monitor behaviors associated with premature death and disability. In 1981, the Centers for Disease Control and Prevention (CDC) began assisting states in conducting such a risk factor survey.

A point-in-time survey was done in Iowa in 1982. In 1988, Iowa began full participation in CDC's Behavioral Risk Factor Surveillance System (BRFSS). The Iowa Behavioral Risk Factor Surveillance System is an ongoing telephone survey. It is financially and technically supported by the Centers for Disease Control and Prevention.

The BRFSS is designed to collect information on the health risk behaviors of residents over the age of 18. It also monitors the prevalence of these behaviors over time. The risk factors surveyed are major contributors to illness, disability, and premature death.

The BRFSS information is used to design, implement, and support public health activities. These are designed to reduce the premature death and disability of Iowa residents. Comparable surveillance methods are used in other states. This allows for comparisons among states and for the assessment of geographic patterns of risk factor prevalence.

The survey consists of three parts: core questions, optional modules, and state-added questions. All states that conduct the BRFSS survey must administer the core questionnaire developed by CDC. It contains questions asked annually and biannually. CDC also develops optional module questions, which can be individually selected by states. Many states, including Iowa, also administer their own state-added questions to provide more detailed information about specific issues of interest to the state. These are usually topics that other parts of the survey do not cover.

This report focuses on the data collected during calendar year 2000. The risk factors discussed are health care coverage, health status, cigarette smoking, alcohol consumption, body weight, hypertension and cholesterol awareness, women's health issues (including screening for breast and cervical cancer), diabetes, immunization, dental health, and HIV/AIDS awareness and behaviors.

Approximately 300 telephone interviews were conducted each month from January through December for 2000 for a total sample size of 3,611. Telephone numbers were randomly generated by the CDC.

Data were weighted to Iowa's population data for age and gender. This provides estimates of the risk factor prevalence among Iowa adults age 18 and older. The state's population estimates were derived from the most currently available census data files.

Standard telephone survey procedures were employed. Interviews were conducted during daytime, evenings, and weekends. The interviews were conducted throughout the calendar year to ensure that data were seasonally adjusted.

GOAL AND OBJECTIVES OF THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

State public health departments are responsible for planning, implementing, and evaluating disease prevention programs. Many of these programs deal with health risk behavior modification. Examples of health risk behavior modification programs in Iowa are seatbelt legislation, the Clean Indoor Air Act, healthy baby campaigns, and drinking and driving campaigns.

One way to assess program effectiveness is to monitor the prevalence of risk factors in the population. The Centers for Disease Control and Prevention developed the Behavioral Risk Factor Surveillance System to help states assess health risks and monitor trends.

Goal

To provide data to initiate and guide health promotion and disease prevention programs.

Objectives

1.   To determine the state specific prevalence of personal health behaviors related to the leading causes of premature death.

2.   To develop the capacity of state health departments to conduct credible telephone surveys.

3.   To advance the understanding that certain health-related behaviors are critical indicators of health.

METHODOLOGY

Questionnaire Design

The BRFSS questionnaire is analyzed and updated each year by the CDC and by BRFSS representatives from each participating state. Discussion of previously telephone-tested questions and current BRFSS questions occurs at the annual BRFSS conference.

The questionnaire consists of three sections: 1) the core questions required of all states participating in BRFSS; 2) a set of standardized modules developed by the CDC which states may opt to include in their survey; and 3) optional state-added questions which are designed and administered by individual states to address locally identified health problems.

Survey participants are also requested to provide such demographic information as age, sex, race, marital and employment status, household income, and educational level. Participation is random, anonymous, voluntary, and confidential.

Sampling Process

Households were selected randomly using the disproportionate stratified sampling technique (DSS). This sampling methodology was designed to produce a random sample of Iowa telephone numbers, including unlisted numbers and new subscribers.

The DSS method establishes groups of 100 numbers and divides these groups into two strata based on whether or not the first call is residential. If it is, this stratum is sampled at a much higher rate than if it is not. There is no set number to be sampled per group, and completed interviews are not thrown out.

Approximately 300 interviews per month were conducted. Interviewers made multiple attempts to reach a number to complete an interview before replacing that number.

One person, 18 years or older residing in the home, was randomly selected to answer the survey. If the person selected was not available, an appointment was made to complete the interview at another date and time. If the person was not available during the interview period, or if the person refused to participate, no other member of that household was interviewed.

The Interview Process

The interviews were conducted daytime, evenings, and weekends with appointments made as needed to schedule or complete interviews. The average time to complete an interview was 17.1 minutes.

A Computer Aided Telephone Interviewing (CATI) system was adopted. A computer program (CI3) was used in conjunction with the CATI system to automate the process of data collection.

Data then were edited for accuracy and completeness using the software (PC-Edit) provided by CDC. After editing, monthly data were submitted to the CDC.

Advantages and Limitations

Telephone interviews provide a means to conduct affordable surveys to monitor the prevalence of behavioral risk factors. Surveys based on telephone interviews are much faster to complete than surveys based on in-person interviews.

In one hour, an experienced telephone interviewer can handle busy numbers, calls not answered, and refusals to participate, and still successfully complete one and one-half interviews. In contrast, in one day of in-person interviewing, many miles of travel may be required with few interviews completed.

Another advantage of telephone surveys is the much higher response rate compared to self-administered surveys, such as mail surveys.

Supervision and administration are simpler for telephone interviews than for in-person interviews. All calls can be made from one central location, and supervisors can monitor interviewers for quality control.

There is one main limitation to telephone surveys. Because only about 97% of all Iowa households have telephones, approximately three percent of the population cannot be reached. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to own telephones and are therefore under-sampled. Also, the percentage of households with a telephone varies by region.

Despite this limitation, prevalence estimates from the BRFSS correspond well with findings from surveys based on in-person interviews, including studies conducted by the National Center for Health Statistics and the American Heart Association.

Some inaccuracy is expected from any survey based on self-reported information. For example, respondents are known to under-report their weight and inaccurately recall dietary habits. The potential for bias must always be kept in mind when interpreting self-reported data.

Finally, analyzing the data by such categories as age, sex, income, and educational level categories decreases the sample size of the particular group and decreases the ability to determine statistically significant differences. Some data may not be reported as significant solely due to small sample sizes. In data analysis, a general rule is that estimates based upon denominators less than 50 are statistically unreliable. Furthermore, denominators less than 500 should be reported as whole percents.

Some people refuse to answer select questions but choose to respond to the majority of the questions. Those interviews will still be used in the final count for the total sample size. However, they will not be counted on the specific questions they refused.

DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 3,611 respondents in the BRFSS for the year 2000 included 1,425 males and 2,186 females age 18 years and older. The following tables present the distribution of the respondent population by 1) age and gender, 2) household income, and 3) level of education.

Table 1: Distribution by Age and Gender for Year 2000 Iowa Survey Respondents

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	117	8.2	176	8.1	293	8.1
25-34	234	16.4	310	14.2	544	15.1
35-44	339	23.8	440	20.1	779	21.6
45-54	281	19.7	391	17.9	672	18.6
55-64	201	14.1	267	12.2	468	13.0
65+	253	17.8	602	27.5	855	23.7
Total	1,425	39.5	2,186	60.5	3,611	100.0

Table 2: Distribution by Household Income for Year 2000 Iowa Survey Respondents

Household Income	# of Total Respondents	% of Total Respondents
<$15000	356	9.9
$15,000-$24,999	658	18.2
$25,000-$49,999	1,291	35.8
$50,000-$74,999	505	14.0
>=$75,000	406	11.2
Unknown/Refused	395	10.9
Total	3,611	100.0

Table 3: Distribution by Level of Education for Year 2000 Iowa Survey Respondents

| Education	# of Total Respondents	% of Total Respondents
Never Attended School	2	0.1
Elementary	99	2.7
Some High School	185	5.1
High School Grad or GED	1,308	36.2
Some College or Technical School	1,110	30.8
College Graduate	900	24.9
Unknown/Refused	7	0.2
Total	3,611	100.0

HEALTH STATUS OF IOWANS

Background

Self-ratings of health, defined by responses to a single question such as "How is your health, in general?" have been found to be significant predictors of mortality.[1] Additional studies which controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue to find the risk of mortality two to six times greater for those individuals who had reported earlier that their health was bad or poor compared to those who had reported their health as excellent.[2,4]

Respondents reporting "fair" and "good" health also show elevated risks of mortality in a dose response fashion.[3] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[1,4]

Health Status in Iowa

In 2000, when asked how their health was in general, 22.1% of respondents reported excellent. Another 36.8% said very good. While 30.2% reported good health, 10.9% rated their health as fair or poor. The percentage of males reporting their health as excellent was 23.0%, with 21.3% of females reporting their health was excellent.

Self-Reported General Health Status by Age, 2000
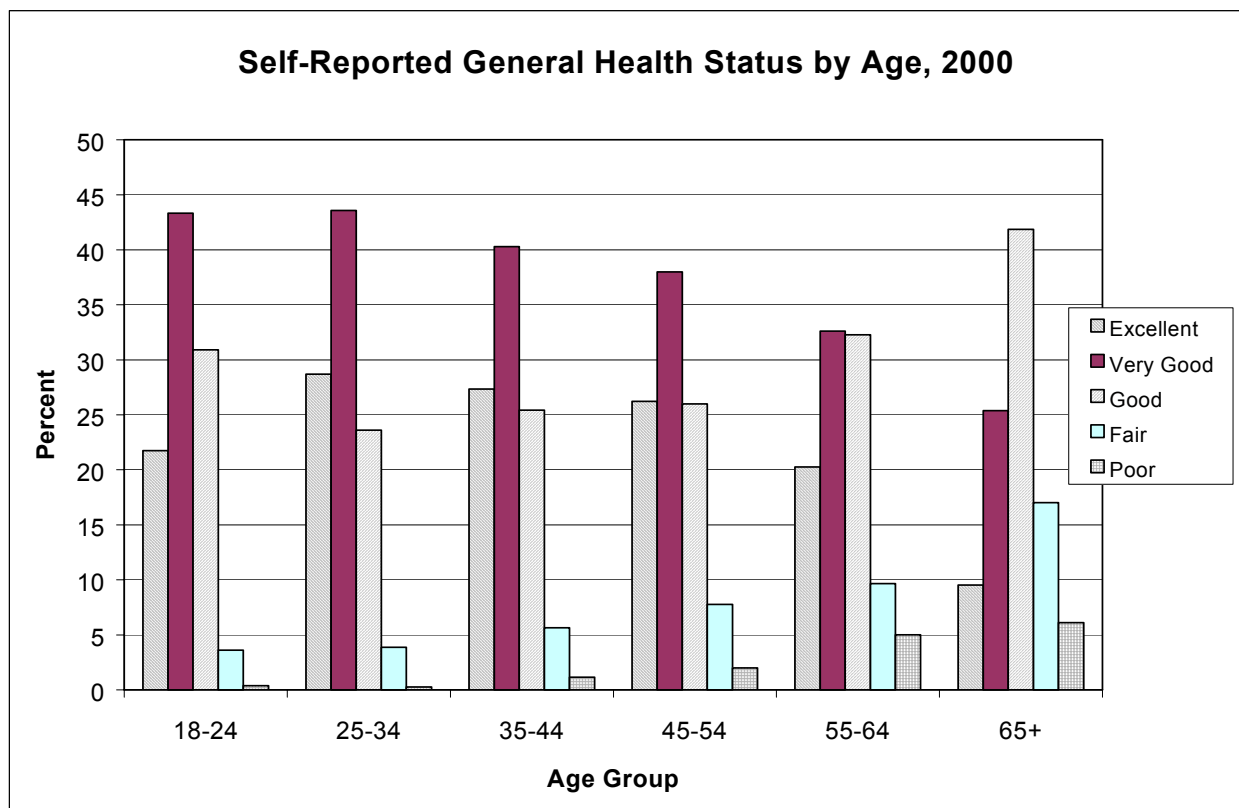
Respondents who were most likely to report having "excellent" or "very good" health included those between the ages of 25-34 and those with annual incomes of $75,000 and over.

Self-Reported General Health Status by Income, 2000
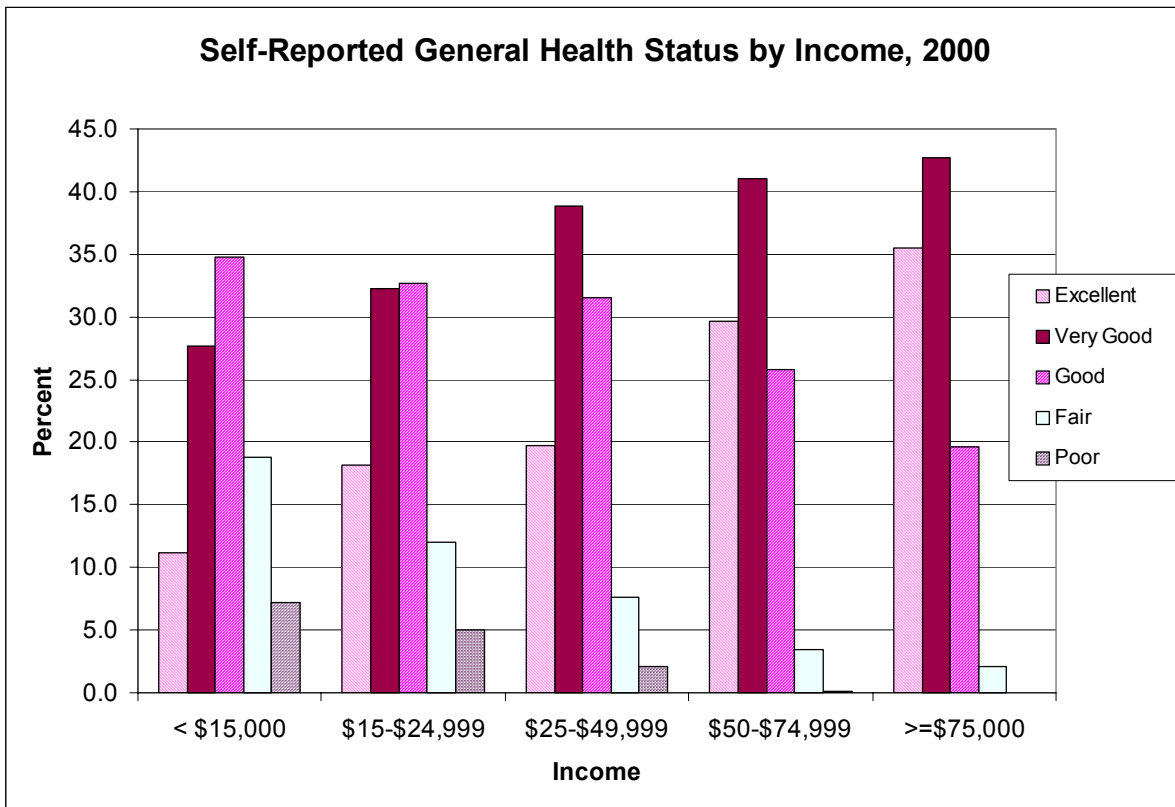
In answer to the question about how many days during the past 30 days was their physical health not good, 69.4% of respondents reported none of the days, 15.5% reported less than five days, and 5.8% reported between five and ten days. About 9.3% of respondents reported more than 10 days. The mean number of days of physical health not being good during the past 30 days was 2.4 for males and 3.3 for females.

When responding to the question of how many days during the past 30 days their mental health was not good, 69.3% of the respondents indicated none of the days, 15.6% reported less than five days and 8.3% reported five to ten days. About 6.8% of respondents said more than ten days.

The age group reporting the lowest percentage of respondents with no days of mental health not good during the past 30 days were between the ages of 18-24 (50.4%). The second lowest percentage of respondents were between the ages of 25-34 (60.6%). BRFSS respondents ages 65 and older had the greatest percentage of individuals reporting no days of mental health not good during the last 30 days. The mean number of days reported by males and females was 2.0 and 2.9 days, respectively.

Comparison with Other States[+]

In 2000, only three states had lower rates than Iowa in the number of respondents reporting health status as fair or poor. The national median was 14.0%, while Iowa's was 10.9%.
[+]

[++] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options are not considered in determining the state comparison figures.

Number of Reported Days of Poor Physical Health per Month by Age, 2000
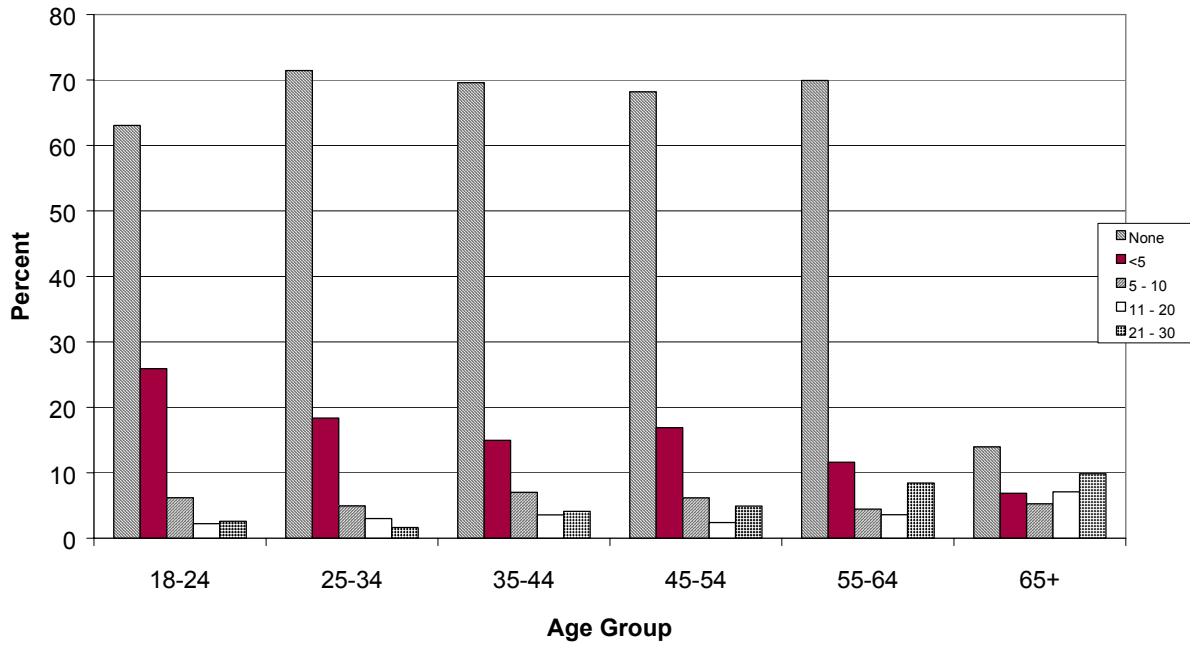
Number of Reported Days of Poor Mental Health per Month by Age, 2000

Eight of the 50 states plus Puerto Rico and the District of Columbia had a lower reported mean number of days respondents reported that their physical health was not good during the past 30 days. The national medianwas 3.3 days, with Iowa at 2.9 days.
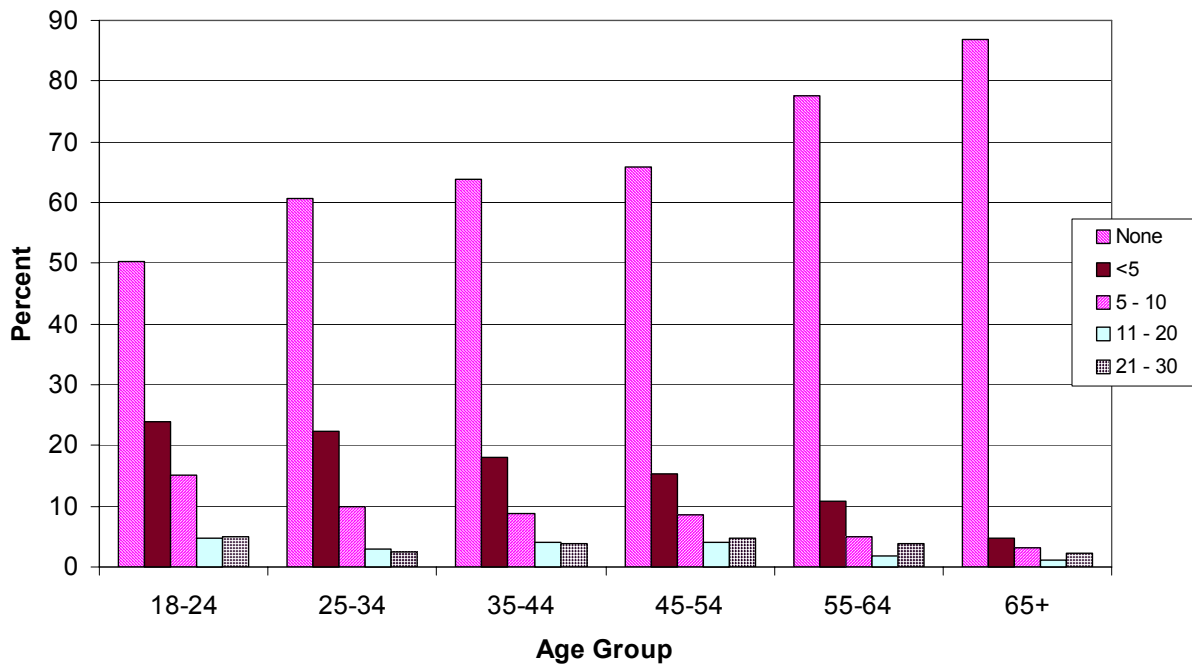
Five of the 50 states plus Puerto Rico and the District of Columbia reported a lower mean number of days during the past 30 days in which the mental health of respondents was not good. The median for the nation was 3.2, with Iowa at 2.5 days.

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2. Idler EL, Kasl S, Lemke JH, Self-Evaluated Health and Mortality among the Elderly in New Haven, Connecticut, and Iowa and Washington Counties, Iowa 1982-1986. *American Journal of Epidemiology*. The Johns Hopkins University School of Hygiene and Public Health. 1990.

3. Idler EL, Kasl S, Health Perceptions and Survival: Do Global Evaluations of Health Status Really Predict Mortality? *Journal of Gerontology*: Social Sciences, Vol. 46, No. 2, S55-65. 1991.

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HEALTH INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

Access to health care is important for the prevention of disease, the detection of illness through screening, treatment, and management of illness and injuries. Adults who have a usual source of care are much more likely to access the health care system and obtain needed services. [1]

For those who lack health insurance, it may be impossible to obtain adequate health care. This not only includes expensive surgery and hospital stays but also preventive care, management of chronic disorders such as diabetes or hypertension, and emergency treatment. Such a lack of access to health care allows small easily treatable problems to become major health problems for many individuals.

Accurate estimates of the uninsured are difficult to obtain. Much of this difficulty is due to the characteristics of the population lacking insurance. Examples include working in small companies that do not provide insurance as an employee benefit, being unemployed, or lacking a permanent residence.

Now health care costs are escalating at an ever-increasing rate. This is especially true of particular sectors of costs such as pharmaceuticals. Such increases hit harder on individuals without health insurance and/or those living on fixed incomes.

Health Coverage in Iowa

In 2000, 8.9% of the survey respondents reported they had no health insurance. Over 10.1% of males and 7.8% of females responded that they were uninsured. Respondents between the ages of 18-24 had the highest percentage of individuals without health care coverage (23.3%). Almost everyone age 65 and over has health care coverage due to Medicare.

Respondents who reported lower household incomes were more likely to not have health insurance. For those respondents who reported an annual income of less than $15,000, 14.3% reported no health insurance coverage. Only 2.1% of respondents who reported an annual income of $75,000 or more did not have any coverage.

Of individuals who responded that they did not have health insurance coverage, high school graduates were the most likely to not have health insurance coverage (12%). Only 5% of college graduates reported not having health care coverage.

Percentage of Iowans Reporting No Health Insurance Coverage by Age, 2000
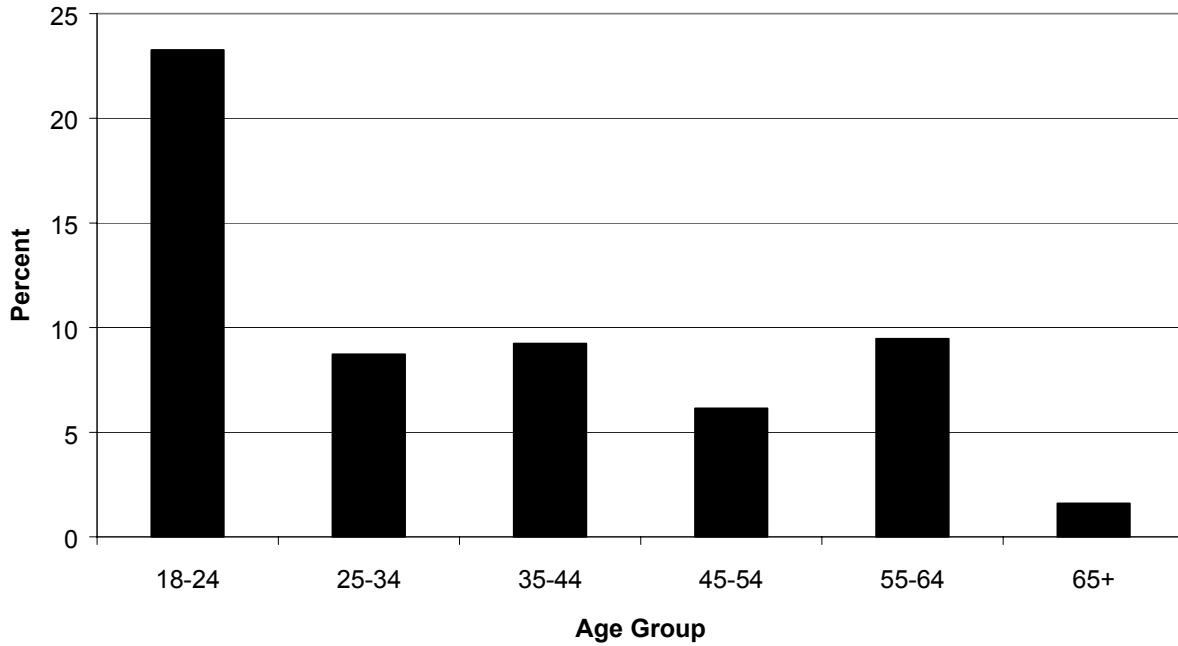
Survey Participants Reporting TheyCan Not Afford to See A Doctor by Income, 2000
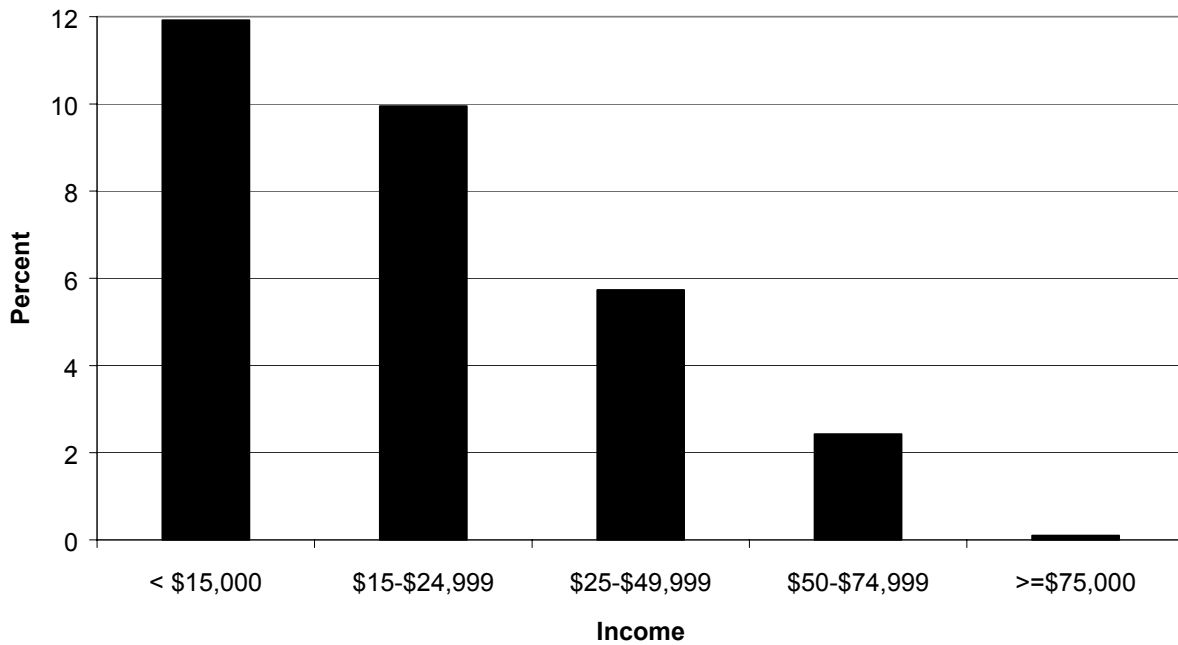
Respondents were also asked whether there was ever a time they could not afford to see a doctor because of cost. Of all respondents surveyed, 5.8% reported having a time when they could not afford to see a doctor. Approximately 4.7% of males and 6.8% of females reported experiencing such a time. Individuals between the ages of 18 and 24 were most likely to report not being able to afford to see a physician (10.5%). Individuals reporting a household income of $15,000 or less reported the highest percentage of all income groups (11.9%) while those reporting an income of $75,000 and over reported the lowest rate (0.1%).

Over 11% of respondents who reported attending some high school reported being unable to see a physician because of cost, while only 4% of college graduates reported such a time.

Around 70.8% of respondents reported having a routine medical checkup during the last year, including 79.4% of females and 61.3% of males. Respondents over age 65 were most likely to report having a routine checkup in the past 12 months (86.4%) compared to those between the ages of 25 and 34, who were the least likely to report having a routine checkup (59.7%). People having incomes less than $15,000 per year actually had the highest percentage of routine checkups within the past year at 75.6%. This compares to 67.2% for those with incomes between $50,000 and $74,999. Little variation was observed between educational levels. These estimates ranged from 70% to 71.9%.

Comparison With Other States[+]

Nine states had a lower percentage of residents without health insurance when the elderly who are generally covered by Medicare are excluded. Iowa had 10.9% of its non-elderly respondents reporting not having any insurance. The median percentage of uninsured nationwide was 13.9%.

BIBLIOGRAPHY FOR HEALTH INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

1. Centers for Disease Control and Prevention, CDC Fact Book 2000/2001. U.S. Department of Health and Human Services, Public Health Service. September 2000.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options are not considered in determining the state comparison figures.

HEART DISEASE

Background

Heart disease has been the leading cause of death in American adults since 1920. Deaths from heart disease peaked in the mid 1960s and then began to decline. In 1996, 621,000 fewer deaths occurred from coronary heart disease than would have been expected had the rate remained at its 1963 peak.[1]

This resulted from such changes as better medical diagnosis and treatment procedures, and the adoption of better lifestyle behavior choices such as smoking cessation and blood cholesterol reduction.[2,5] In the 1990s, the decline in heart disease deaths has somewhat slowed.[1,4]

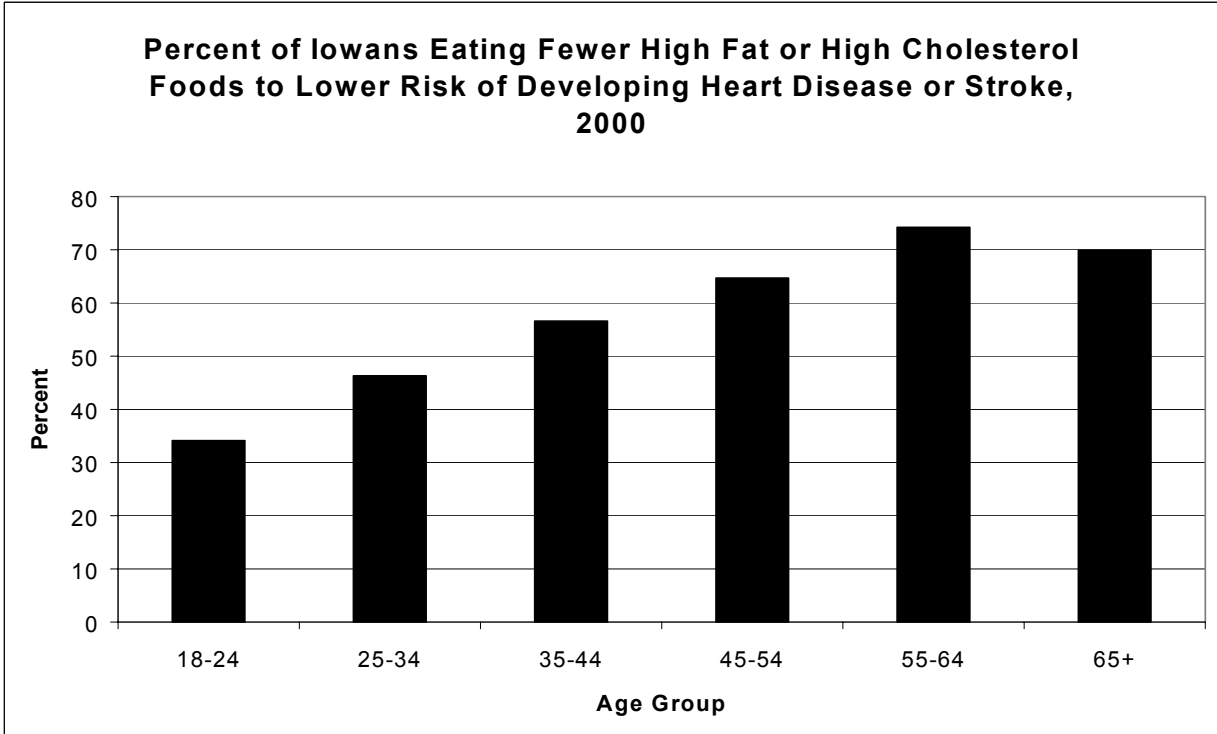Reducing heart disease risk requires an integrated strategy that includes:

1) Lifestyle behavior change -- weight management; increased physical activity; no tobacco use; and a low-fat, low-cholesterol diet with moderate sodium, sugar and alcohol intake.

2) Community environmental support such as population screening to identify individuals with high levels of blood cholesterol, blood pressure or blood glucose, and other individuals at risk for heart disease. Community support also includes interventions that teach the skills necessary for behavior change that make living a healthier life easier. One popular example is the establishment and upkeep of bicycle trails for use by the public.

3) Development of public policies that encourage healthy lifestyle behaviors such as smoke-free worksites.[3]

Clinical preventive measures can reduce heart disease risk. The measures include taking a small daily dose of aspirin (75 milligrams per day) after age 35; initiating hormone replacement therapy (especially estrogen therapy) at menopause; and increasing dietary folate intake to reduce homocysteine levels. All clinical approaches to cardiovascular risk reduction should be supervised by a physician.

Heart Disease in Iowa

In 2000, 58.3% of Iowans reported eating fewer high fat or high cholesterol foods than they had in order to lower their risk of heart disease. Estimated percentages in each age group ranged from 74.2% in respondents between the ages of 55-64 and 34.1% for those between 18-24 years. About 65.2% of females compared to 50.7% of males reported eating fewer high fat or high cholesterol foods

Percent of Iowans Eating Fewer High Fat or High Cholesterol Foods to Lower Risk of Developing Heart Disease or Stroke, 2000

Percent (y-axis)

Age Group (x-axis): 18-24, 25-34, 35-44, 45-54, 55-64, 65+

However, 22.1% of respondents reported their doctor advised them to eat fewer high fat and cholesterol calories. Respondents between the ages of 55 and 64 were most likely to have their doctor advise them to eat fewer of these foods (32.6%) compared to only 4.7% of those ages 18-24. For males 20% were advised to eat fewer fatty foods, while for females it was 24%.

Percent of Iowans Advised by Doctor to Eat Fewer High Fat Foods to Prevent Heart Disease, 2000

Percent (y-axis)

Age Group (x-axis): 18-24, 25-34, 35-44, 45-54, 55-64, 65+
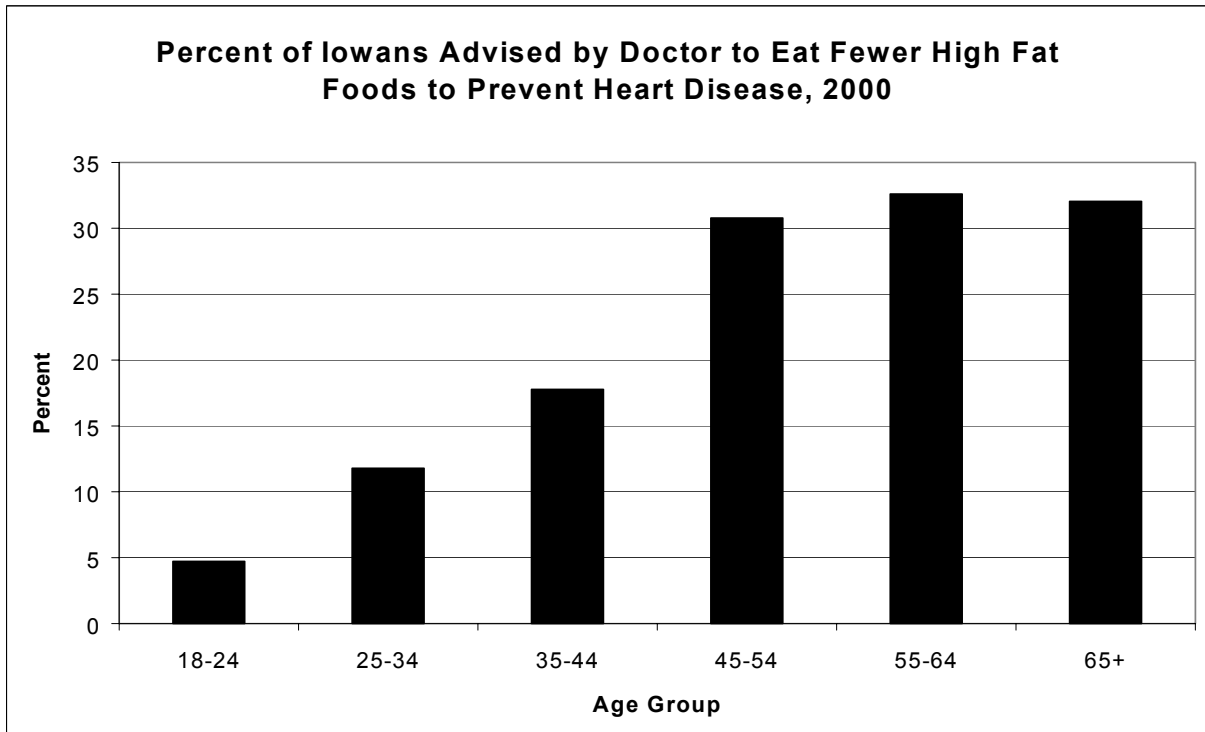
Approximately 44.4% of Iowans are exercising more to lower their risk of developing heart disease or stroke. Almost 48.9% of those aged 45-54 reported increasing their activity level. The lowest percentage of respondents reporting that they exercised more were aged 18-24 (37.4%). About 47.7% of females compared to 40.9% of males were exercising more.

Percentage of Iowans Exercising More to Lower their Risk of Heart Disease or Stroke, 2000
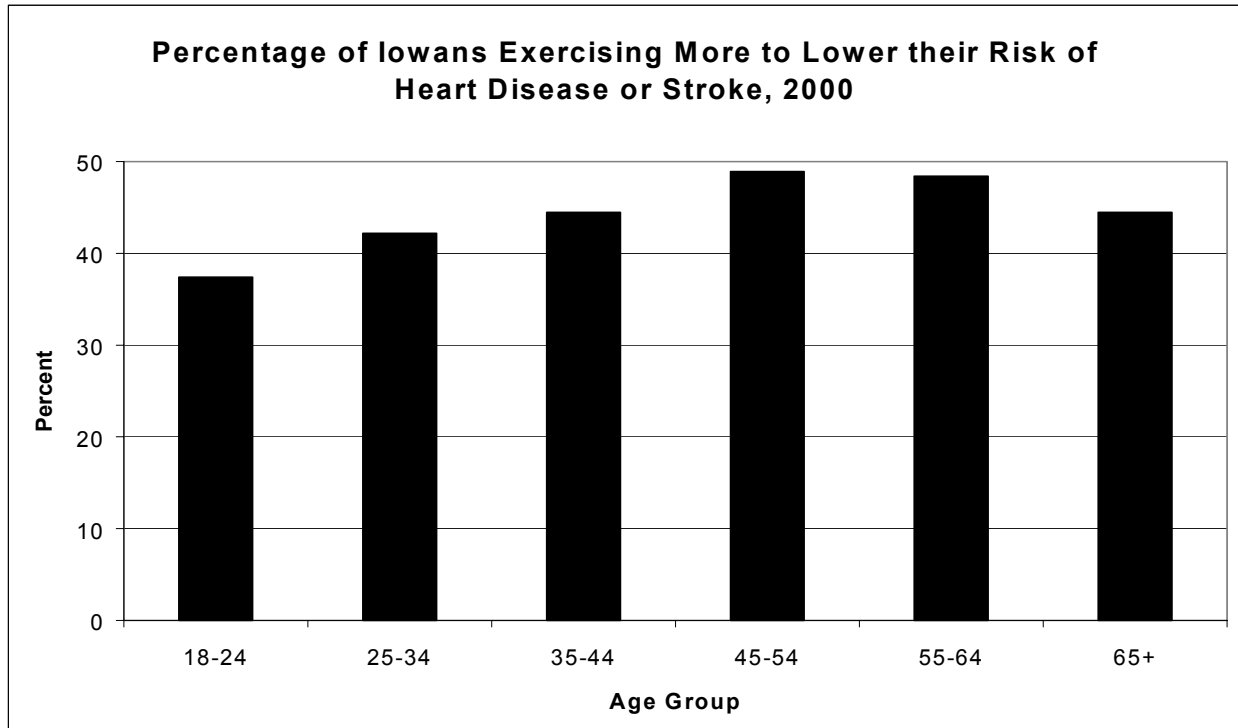
Of those surveyed, 28.1% reported that their doctor advised them to exercise more. Of those who were told to exercise more, 41.9% of respondents were between the ages of 55-6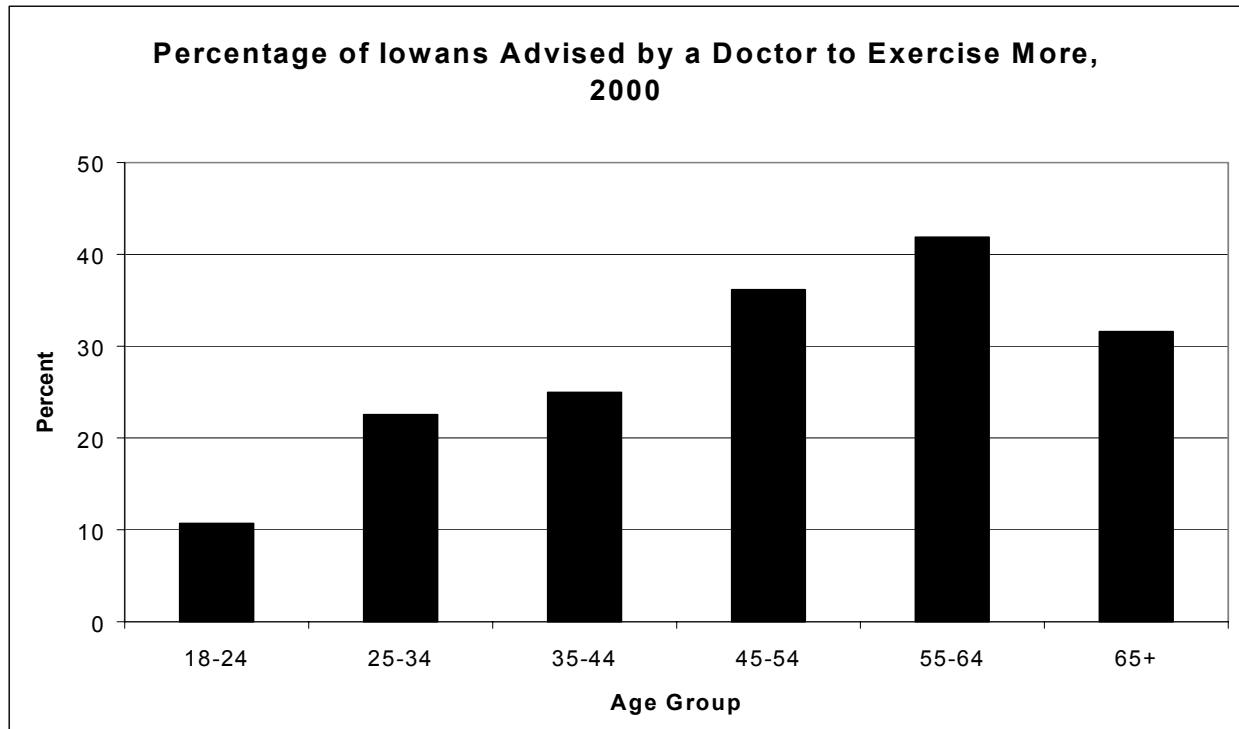4. On the other hand, only 10.7% of respondents between 18-24 were given similar advice. Females were more likely to be advised to exercise more compared to their male counterparts (30.2 % vs. 25.9%, respectively).

Respondents were asked if they were ever told by a doctor that they had a heart attack. Approximately 4% reported yes, while 93.7% said no. The majority of these respondents were male and over age 65 (17.6%). Less than 1.5% of respondents less than age 45 reported having a heart attack. Iowans surveyed also were asked whether a doctor ever told them they had coronary heart disease and 3.9% said yes. Again, a greater percentage of males age 65 and over reported ever being told they have coronary heart disease (17.7%).

Taking aspirin daily has been recommended as a preventive measure to reduce the risk of heart disease for people over age 35. Around 31.2% of respondents surveyed reported taking aspirin daily or every other day. All respondents using aspirin daily were over age 35. Percentages of

Percentage of Iowans Advised by a Doctor to Exercise More, 2000

Percent

Age Group	
18-24	~11
25-34	~22.5
35-44	~25
45-54	~36
55-64	~42
65+	~31.5

Age Group

use directly increased with age. Only 11.1% of respondents between 35 and 44 reported daily use compared to 49.4% of respondents ages 65 and older. Over 34.8% of males compared to 28% of females reported daily or every other day use. When asked why they take aspirin, 75.8% said it was to reduce the risk of heart attack, and 68.4% said to reduce the risk of stroke.

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2. Centers for Disease Control and Prevention, *Evaluating Community Efforts to Prevent Cardiovascular Diseases*. U.S. Department of Health and Human Services, Public Health Service. 1995.

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HIGH BLOOD PRESSURE

Background

Since 1950, age-adjusted death rates from cardiovascular disease (CVD) have declined 60%, representing one of the most important public health achievements of the 20th century. Age-adjusted death rates for stroke have declined steadily since the beginning of the century. Since 1950, stroke rates have declined 70%, from 88.8% in 1950 to 26.5% in 1996. The decline in the total age-adjusted CVD death rates accounted for approximately 73% of the decline in all causes of death during the same period. [1,3]

Even so, cardiovascular diseases, primarily coronary heart disease and stroke, kill nearly as many Americans as all other diseases combined. Cardiovascular disease is one of the leading causes of disability. Major modifiable cardiovascular risk factors are high blood pressure, high blood cholesterol, tobacco use, obesity, and physical inactivity.[2]

Blood pressure is typically recorded as two numbers — the systolic pressure (as the heart beats) over the diastolic pressure (as the heart relaxes between beats). A consistent blood pressure reading of 140/90 mm Hg or higher is considered high blood pressure, another term for hypertension.[6]

Average adult American blood pressure levels and the prevalence of high blood pressure declined between 1976 and 1991.[5] Nearly one-fourth of adults--as many as 50 million Americans--have elevated blood pressure or take antihypertensive medication.[4] High blood pressure is most prevalent in older individuals, African-Americans, and in individuals with less education and low socioeconomic status.[1] In young adulthood and early middle age, men are more likely to have high blood pressure than women; after that, the reverse is true.[4]

Primary prevention of hypertension can be accomplished through two complementary approaches: 1) a population strategy to lower the incidence of high blood pressure in the entire population by lowering individual blood pressure levels; and 2) a targeted strategy to lower blood pressure among populations at high risk.[5]

High Blood Pressure in Iowa

In 2000, 87.4% of survey respondents reported they had their blood pressure taken during the past 12 months by a health professional (90.7% of females and 83.7% of males). The age distribution varied from 84% for persons between the ages of 45-54, and 93.1% for those 65 and over. Interestingly, respondents ages 18 to 24 were the third least frequent to report having their blood pressure taken during the past year (84.8%).

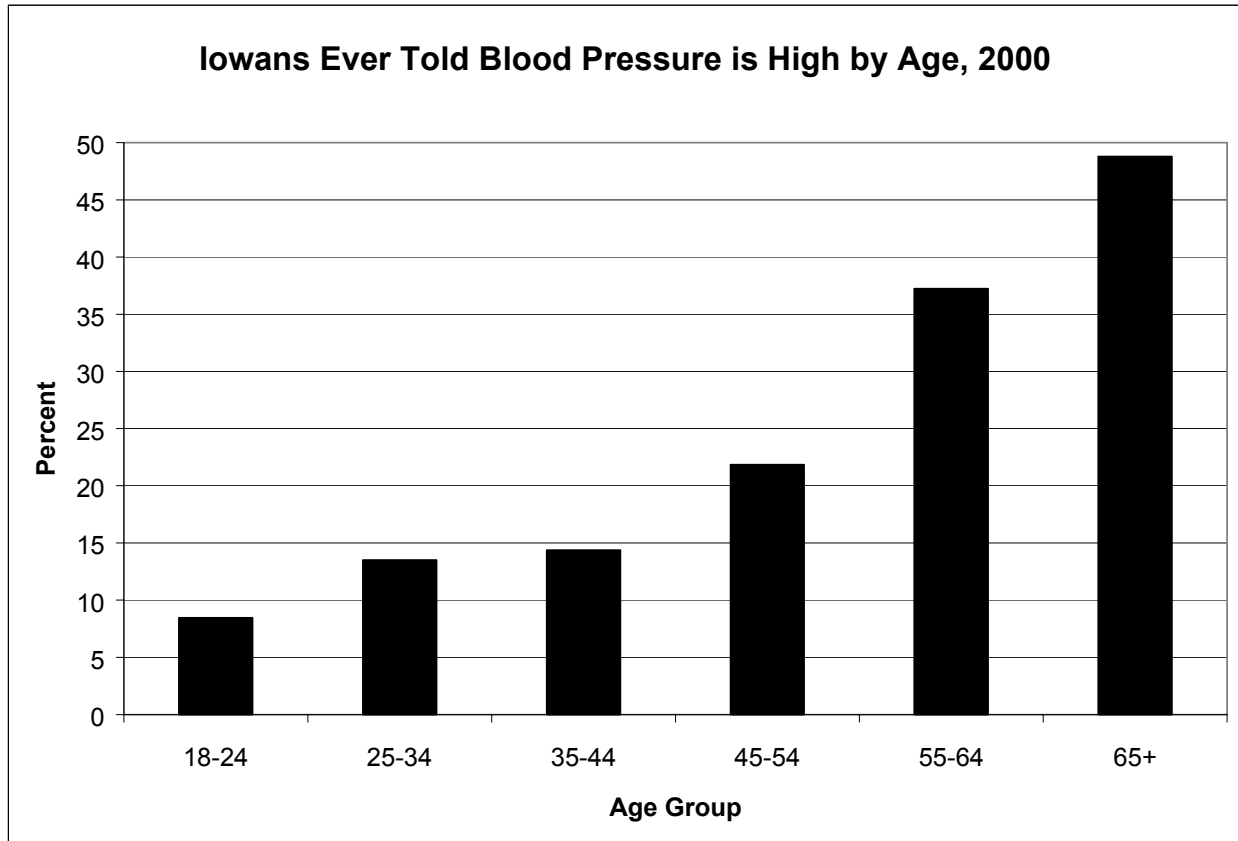## Percentage of Iowans Who Had Blood Pressure Taken in the Past Year, 2000
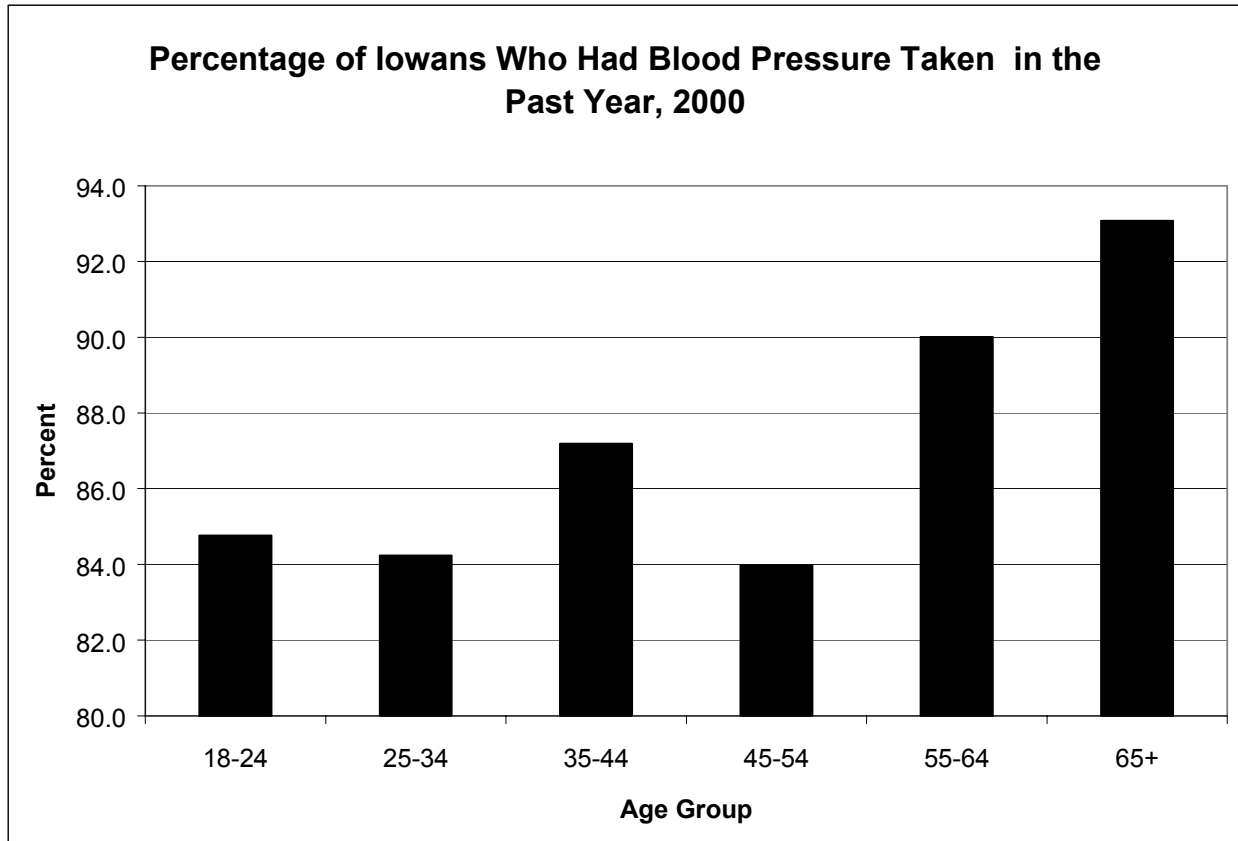
Of all respondents, 24.7% reported ever being told they had high blood pressure. The highest percentage of respondents were ages 65 and older (48.8%). More females reported having high blood pressure than males (25.3% vs. 24.1%).

Lower income also appeared to be associated with having high blood pressure. An estimated 35.6% of respondents who indicated an income from $15,000 to $24,999 reported ever having high blood pressure compared to only 14.4% of respondents with an income of $50,000 to $74,999. For some reason the most extreme income categories reported somewhat more moderate percentages of high blood pressure than the ones next to them.

Year 2010 Health Objectives for the Nation

According to the national health objectives for the year 2010 for high blood pressure 95% of adults should have their blood pressure checked within the past two years. Only 92.8% of Iowans met this goal in 2000. Another national health objective calls for only 16% of the adult population to report having high blood pressure. This is nearly 9% lower than is currently the case in Iowa.

Iowans Ever Told Blood Pressure is High by Age, 2000

A bar chart with the vertical axis labeled "Percent" ranging from 0 to 50, and the horizontal axis labeled "Age Group." Approximate values:

Age Group	Percent
18-24	8.5
25-34	13.5
35-44	14.5
45-54	22
55-64	37
65+	49

BIBLIOGRAPHY FOR HIGH BLOOD PRESSURE

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CHOLESTEROL

Background

High blood cholesterol levels are associated with increased incidence of coronary heart disease. High cholesterol means a concentration of cholesterol in the blood of greater than or equal to ($\geq$ 240 milligrams per deciliter (mg/dl)). Reducing high levels of blood cholesterol helps to decrease a person's risk for heart disease.[4]

For nearly three decades, average blood cholesterol levels in the United States have fallen. Between the early 1960s and 1993, average adult cholesterol dropped from 222 mg/dl to 203 mg/dl. During the same time period, the proportion of adults with high blood cholesterol ($\geq$ 240 mg/dl) dropped substantially, from 33.3% to 19%.[2][3]

Despite this progress, half of the U.S. population has blood cholesterol levels $\geq$ 200 mg/dl, defined as borderline high levels. Activities using two different approaches can help lower blood cholesterol levels:

1) a clinical approach to identify and treat at-risk individuals; and
2) a population based strategy to reduce the population's average cholesterol level by lowering individual blood cholesterol levels.

These approaches complement one another and represent a coordinated strategy for reducing the risk of coronary heart disease.[1]

Healthy American adults over age 20 can lower their blood cholesterol levels by adopting a low-fat, low-cholesterol diet and by having blood cholesterol measured every five years. Each 10% reduction in the U.S. population's average blood cholesterol level can reduce deaths from coronary heart disease by 20%.[1]

High Blood Cholesterol in Iowa

In 2000, the percentage of Iowans reporting ever having their blood cholesterol checked was 69.7%. More females than males reported having their blood cholesterol checked (72.7% vs. 66.4%).

The proportion of respondents reporting ever having their blood cholesterol checked increased with age. Over 90% of respondents between 55-64 and 85.6% of respondents 65 and over reported ever having their blood cholesterol checked.

About 64.7% of respondents reported having their blood cholesterol checked by a health professional during the past year. Similar responses were reported for both males and females. Respondents in older age groups were more likely to report having a more recent blood cholesterol test than younger respondents.

**Iowans Ever Having Their Blood Cholesterol Checked by Age, 2000**
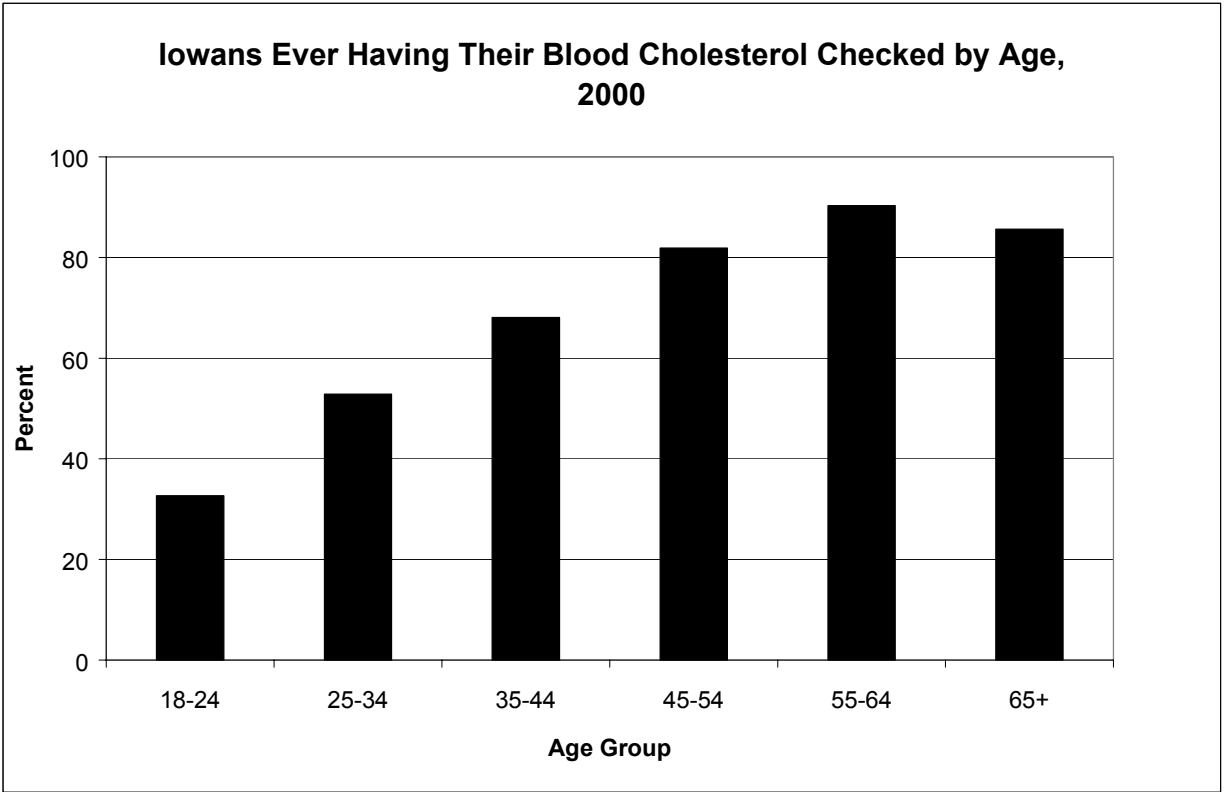
Of all year 2000 BRFSS respondents, 31% reported that they had ever been told by a doctor or other health professional that their blood cholesterol was high. There was little difference between the percentage of males and females who had ever been told their cholesterol was high. Most respondents reporting high cholesterol were in the older age groups. This included approximately 40.5% of respondents between the ages of 55-64 and 42.4% of those 65 and over.

Year 2010 Health Objectives for the Nation

Based on the national health objectives for the year 2010, no more than 20% of adults aged 20 through 74 should have a blood cholesterol level of 240 mg/dl or greater. The year 2000 BRFSS sample shows that about 70% of Iowans age 18 and older have had their blood cholesterol checked at least once in their lifetime. Of those who ever had their blood cholesterol checked, about 31% were told that their blood cholesterol levels were high.

Iowans Ever Told Their Cholesterol Was High by Age, 2000
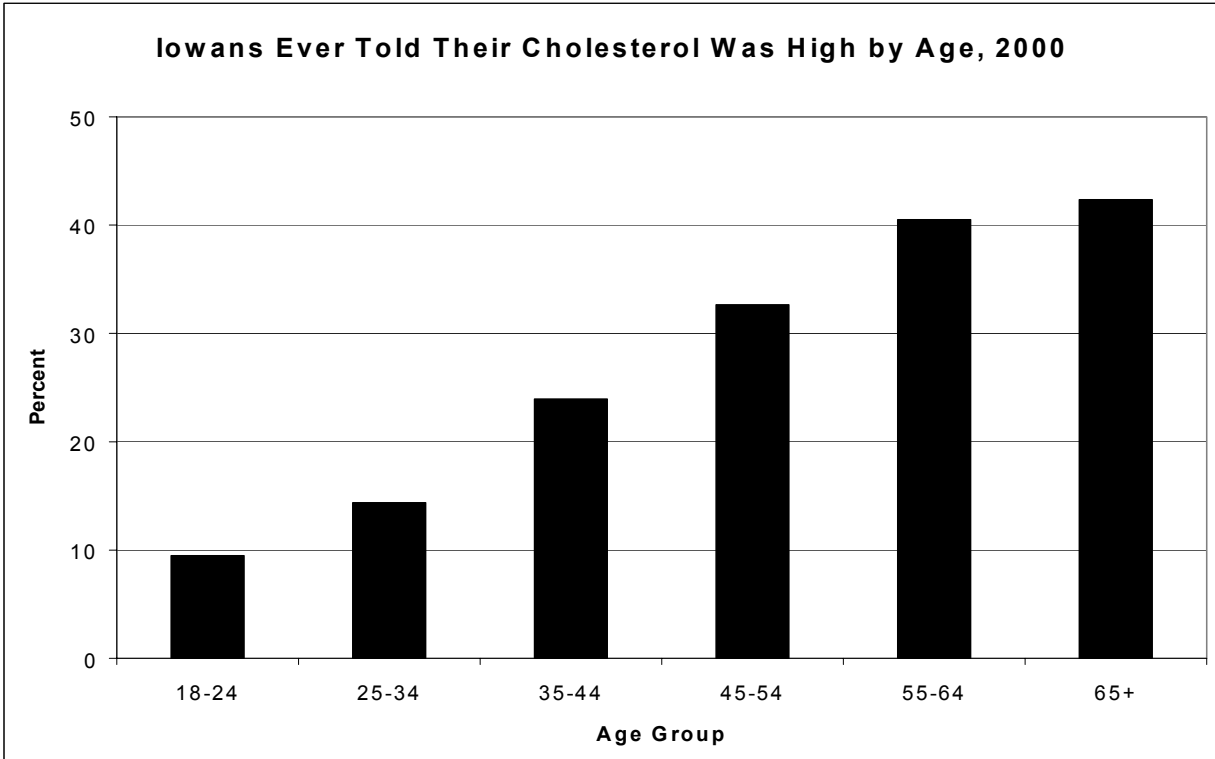
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PHYSICAL ACTIVITY

Background

A lifestyle lacking in regular physical activity has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, and other debilitating conditions.[1,2,3] Despite its risks, a large proportion of Americans remain inactive.

In spite of many positive developments in Iowa to try to increase the physical activity level of its citizens, the percentage who do not engage in regular physical activity remains high. These positive developments include:

1) Iowa's increasingly great recreational trails.
2) Increased regular media attention to physical activity and related topics.
3) Worksite wellness programs.
4) Various wellness initiatives.
5) Conferences and training on physical fitness.
6) Continuous promotion of physical activity by the Iowa Department of Public Health and other organizations.
7) Continued development of programs by Parks and Recreation Departments.
8) The individual commitment of thousands of Iowans to make healthier choices.

Encouraging people to have a less sedentary lifestyle by engaging in regular physical activity continues to be a significant step toward a healthier Iowa.

Physical Activity in Iowa

In 2000, 72.7% of respondents reported that they had engaged in some sort of physical activity for exercise during the past month. This was a decline from 73.3% in 1998. When those who exercised were asked to choose from a long list what type of exercise they had spent the most time doing the most often mentioned was walking (51.6%). This was distantly followed by other (7%) and gardening (5.4%).

Regular and vigorous physical activity is defined as activity for 20 or more minutes, 3 or more times per week at 50% of functional capacity. Only 12.3% of all respondents said they had engaged in regular and vigorous physical activity. This is an increase from 1998 when the figure was 10.6%.

The percentage of respondents reporting they had engaged in regular and vigorous physical activity increased with age. Only 5.3% of 18 -24 year-olds reported engaging in the desired level of physical activity, while this applied to 18.9% of those 65 years and over. Although there was very little overall difference between the sexes in engaging in physical activity, more women at a younger age reported engaging in physical activity than men in a similar age group.

Percentage of Iowans Engaging in Regular and Vigorous Physical Activity by Age and Sex, 2000
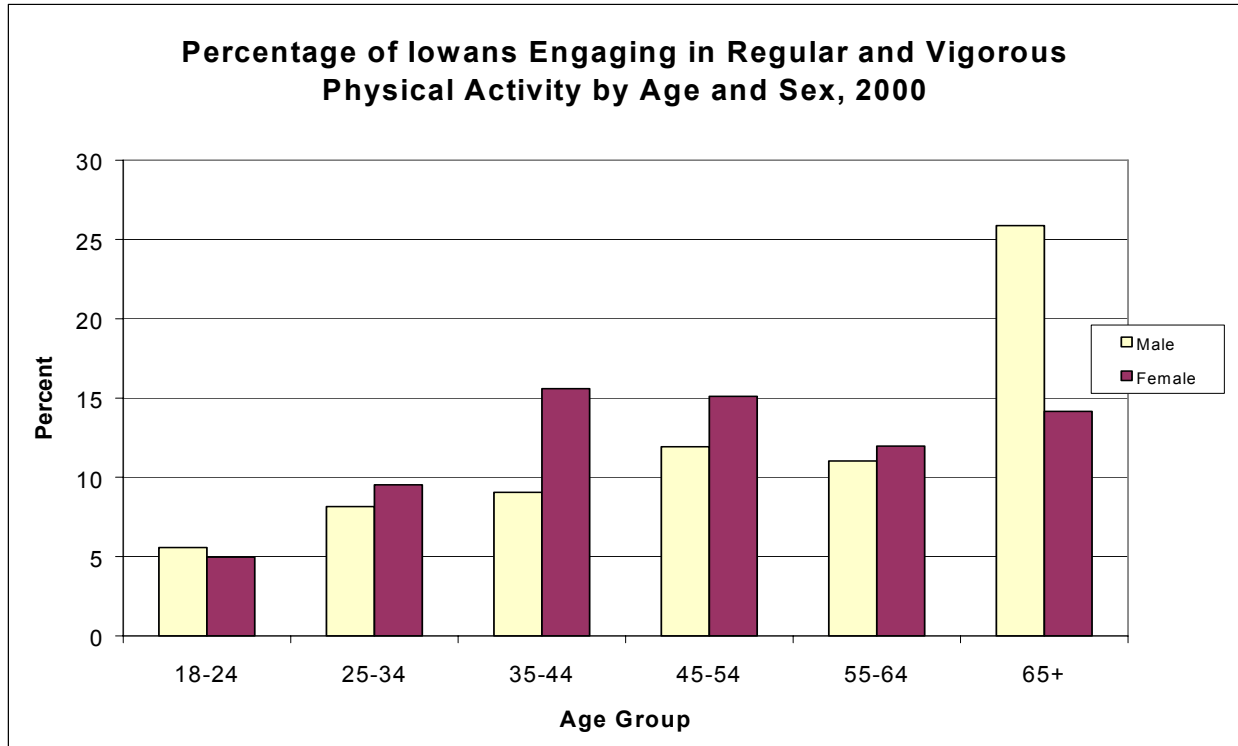
A larger percentage of those who were married (13.5% vs. 10% for unmarried), better educated (18.6% for college graduates vs. 7.3% for those less than high school), and had a higher income (17.3% for those with $75,000 or more vs. 9% for those under $15,000) engaged in regular and vigorous physical activity.

Comparison With Other States[+]

Iowa ranked 28th on the measure of not engaging in leisure time physical activity. Approximately 27.3% of Iowa respondents reported not engaging in any leisure activity, while the median for the nation was 26.9%. Iowa ranked 42nd on the measure of not engaging in regular and vigorous physical activity. Around 87.7% of Iowans reported no regular or vigorous physical activity, while the median for the nation was 86%.

Year 2010 Health Objectives for the Nation

The target for objective 22.1, reducing the proportion of adults who engage in no leisure-time physical activity, is 20 percent.[4] Iowa's level of 27.3% is higher than this target. The target for objective 22.3, to increase the proportion of adults engaging in regular and vigorous physical activity, is 30%. Iowa respondents report only 12.3%. This is very far below the target.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options' are not considered in determining the state comparison figures

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DIET AND OVERWEIGHT

Background

Poor nutrition is an important modifiable risk factor for several chronic diseases, including some cancers and cardiovascular diseases (CVD).[1] A diet rich in fruits and vegetables may protect against cancer. Antioxidant vitamins and other compounds in fruits and vegetables slow or stop processes in the body that can lead to cancers or CVD.[8]

People who eat more fruits, vegetables and whole grains have significantly lower rates of cancer of the colon, breast, prostate, ovary, lining of the uterus, esophagus, stomach, and liver. Fruits and vegetables may protect against these cancers because eating more of them: increases fiber intake, decreases calorie intake, increases antioxidant vitamin intake, decreases fat intake, and reduces the actions of some cancer-causing compounds.[1,8]

Individuals over age 2 can reduce chronic disease risk by eating more vegetables, fruits, whole grains, seeds, and nuts. They should be encouraged to eat five or more servings of fruits and vegetables daily to meet current dietary guidelines set by the federal government.[5]

Obesity is probably the most serious nutrition problem in America today. Health experts agree that being overweight is a risk factor for many diseases. Obesity is associated with the onset and progression of high blood pressure, diabetes, and atherosclerosis (hardening of the arteries).[6] Overweight and obese adults are also at increased risk for gallbladder disease, respiratory disease, some types of cancer, gout, and arthritis.[4]

The origin of overweight involves many factors. It reflects inherited, environmental, cultural and socioeconomic traits.[6] Findings from the Third National Health Examination Surveys (NHANES III 1988-1994) conducted by the Centers for Disease Control and Prevention, indicate that substantial proportions of children, adolescents, and adults in the United States were overweight.[3]

The prevalence of being overweight among adults has not declined for 20 years.[6] Being overweight tends to increase with age until about age 50 for men and age 70 for women.[7]

Exact measurements of body fat require sophisticated equipment. To eliminate this, problem obesity is often estimated from weight standards that are adjusted for body frame. Carefully measured weight and height remain the most easily performed and useful means to determine nutritional status and to predict mortality for the general population.[2]

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m^2)]. Estimations of the prevalence of overweight and obesity in this report are based on BMI. Overweight is considered to be a BMI value ≥ 25 and < 30, and obesity is considered to be a BMI ≥ 30. These criteria have been changed since the last time overweight was reported. However, past years have been recalculated to allow trends to be shown.

The increase in the prevalence of being overweight is a result of a shift in energy balance in which energy taken in from food is greater than energy used in physical activity.[3]

Rigid, calorie-restricted diets are not recommended for weight management. They limit the type, amount, palatability, and variety of food intake. Often, they are nutritionally unbalanced, unsafe, and difficult to follow.

Since weight management is difficult for most people, the *Healthy People 2010* goals set for adults are ambitious. However, any reduction in the prevalence of overweight individuals provides considerable public health benefits and deserves attention and emphasis.

Appropriate strategies to achieve nutrition and weight control objectives include (1) improved accessibility of culturally relevant nutrition information and education to the general public, and (2) a strong national program of basic and applied nutrition research.

Fruit and Vegetable Intake in Iowa

The percentage of Iowans who eat five or more servings of fruits and vegetables per day was 18.1% in 2000. More females ate five or more servings of fruit and vegetables per day than males (22.6% vs. 13.2% respectively).

Older Iowans were more likely to report meeting the five-a-day standard than younger. People 65 and over met the criterion at the rate of 29.9%, while the 35-44 age group only obtained a rate of 11.8%. Interestingly, the female superiority at meeting the five-a-day criterion was reversed for the 18-24 age group.

Percentage of Iowans Who Eat 5 Portions A Day of Fruits and Vegetables by Age and Gender, 2000
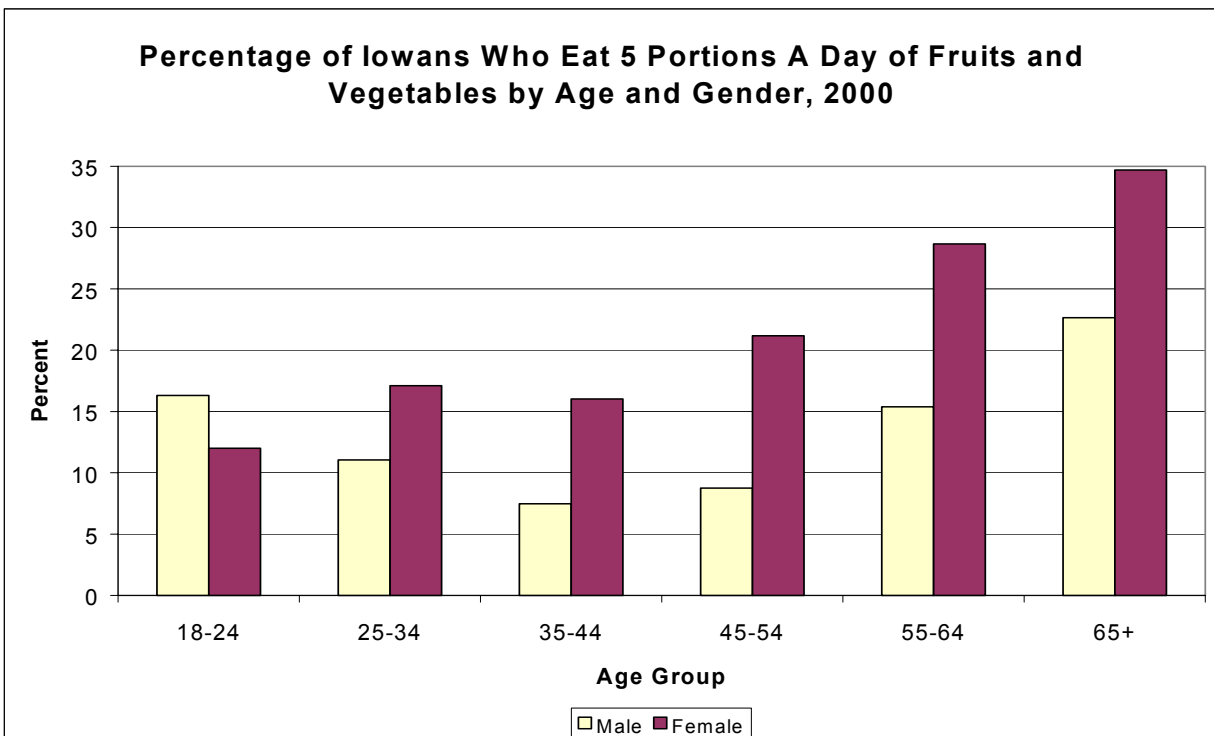
Overweight in Iowa

The BRFSS data show that 38.5% of Iowans are overweight and 21.6% are obese based on BMI. More importantly, the percentage of Iowans who are overweight and obese has steadily increased since 1990.

Overweight Iowans by Year Based on Body Mass Index (BMI), 1991-2000
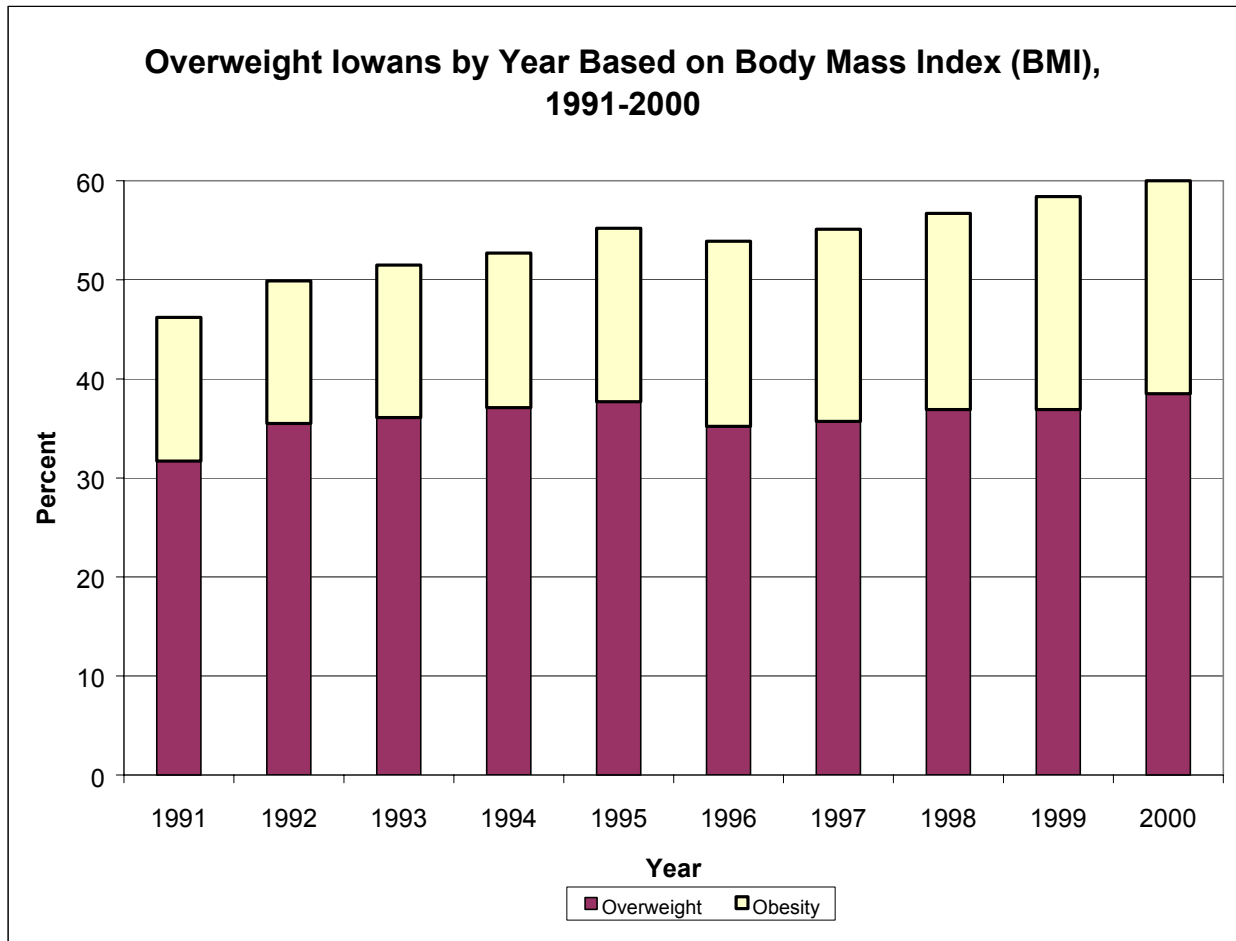
The self-reported weights show 45.8% of males and 31.3% of females are overweight, while 22.4% of males and 20.6% of females are obese based on BMI. The 18-to-24-year-old group had the lowest percentage of overweight individuals (males 32.6% and females 21.2%). The 65--year-old and over age category were at highest risk for being overweight (males 51.4% and females 39.2%). Obesity did not follow exactly the same pattern. It was also lowest in the 18-to-24-year-old group (males 12.6% and females 14.2%), but it was highest in the 55-to-64 age group (males 33.6% and females 31.9%). There was also a much less consistent sex difference for obesity among the different age groups.

Other categories showing the highest risk for overweight or obesity include married people, those in the $25,000-49,999 income category, and those who were high school graduates.

Overweight and Obese Iowans Based on BMI by Age and Sex, 2000
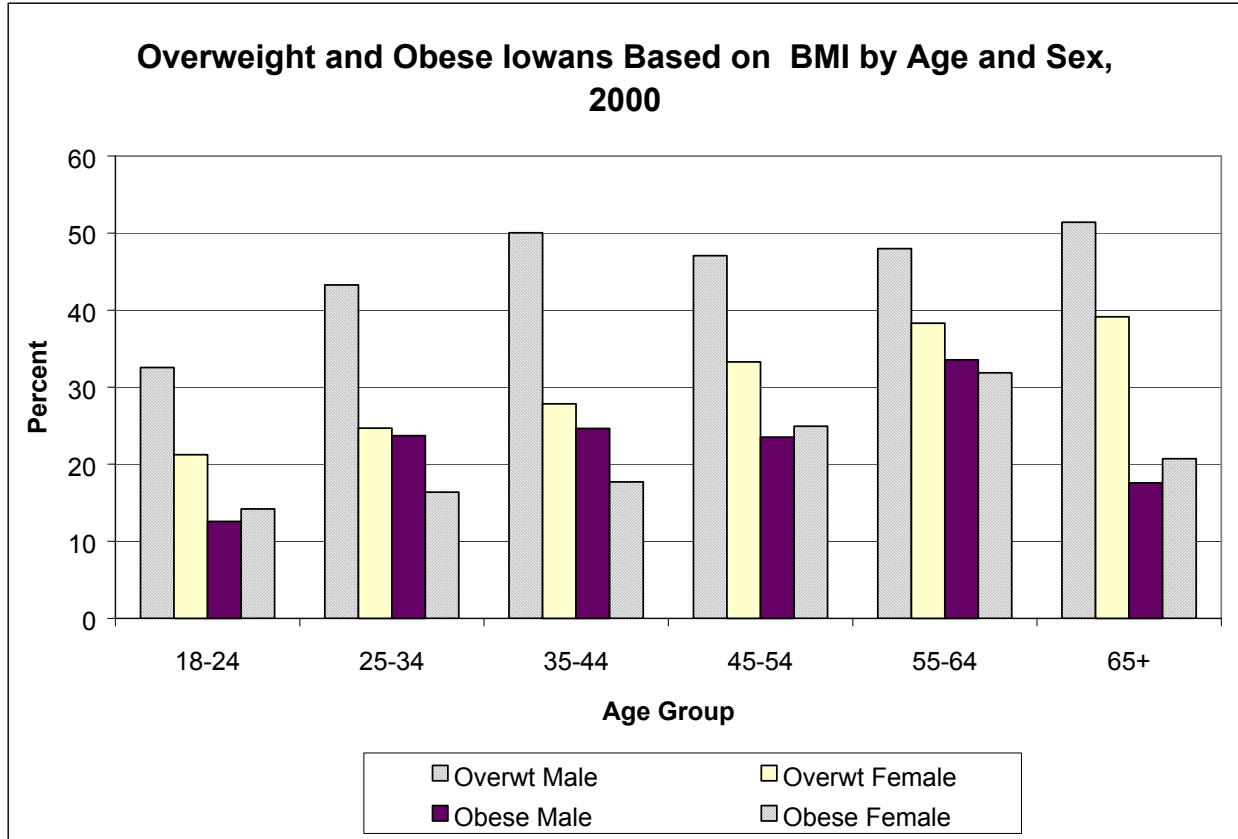
Weight Control

Around 38% of respondents in the year 2000 survey reported that they were trying to lose weight. Of those who responded trying to lose weight 29.7% were male and 45.6% were female.

Comparison with Other States[+]

Iowa's year 2000 five-a-day fruit and vegetable intake (18.1%) remains significantly lower than the national median (23.1%). In fact, the only states or territories to rank lower were Louisiana and Puerto Rico.

Sixty percent of Iowans were either overweight or obese (BMI $\geq$ 25) in 2000. This was higher than the median of 57.1%. It was tied in ranking with Louisiana at 45th most prevalent.

In the year 2000 survey, 54.7% of Iowans reported not eating fewer calories or less fat to try to lose weight. This compares to a national median of 52.3%. Given Iowa's high ranking in prevalence of overweight, this is disappointing.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options are not considered in determining the state comparison figures.

Year 2010 Health Objectives for the Nation

According to the national health objectives for the year 2010 75% of people over two years old need to consume two helpings of fruit daily and 50% need to consume three helpings of vegetables daily. Although this goal can not be directly assessed by the BRFSS, the percentage of adult Iowans consuming five or more helpings of fruits or vegetables daily has fallen far below this goal at only 18.1%.

The health objectives on weight for the nation to be achieved by the year 2010 call for increasing the prevalence of healthy weight (neither overweight nor obese) to 60% among adults age 20 and over. The trend in Iowa is in the opposite direction. In fact, Iowa has 60% currently who are above healthy weight. The Healthy People 2010 target for obesity is 15%. Iowa's percentage of 21.6% indicates the state has a major obstacle to overcome if it is to achieve the national target by 2010.

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DIABETES

Background

Diabetes rates in the United States are approaching epidemic proportions. More than 10 million people in the United States live with the burden of diabetes daily and another 5 million have the disease and don't know it. The number of persons diagnosed with diabetes increased fivefold between 1958 and 1997, at a direct cost of over $40 billion and an indirect cost of another $50 billion annually from absenteeism, disability, and premature death.[1]

An alarming new trend is the growing number of children and adolescents who are being diagnosed with type 2 (adult-onset) diabetes. This is attributed to overweight and inactivity among youth.

Those at highest risk include older Americans, low-income people, physically inactive people, those with a family history of diabetes, and overweight individuals.[2] Hispanic, African American and Native Americans have a significantly higher risk of the disease and its ensuing complications. Preventive measures to avoid or delay onset of the disease include maintaining a recommended weight and being physically active.

The complications of diabetes are severe and include cardiovascular disease, hypertension, renal disease, blindness, and lower extremity amputations. However, complications can be minimized when diabetes is diagnosed early and the patient is taught to manage the disease through blood glucose control, weight control, taking medications appropriately, stopping smoking and being physically active.

The Diabetes Control Program in the Iowa Department of Public Health provides health updates for professionals on the latest guidelines for diabetes care, coordinates a statewide diabetes network, collaborates with local community projects to develop initiatives on public awareness and prevention of complications, and assists certified programs to maintain quality standards for outpatient education.
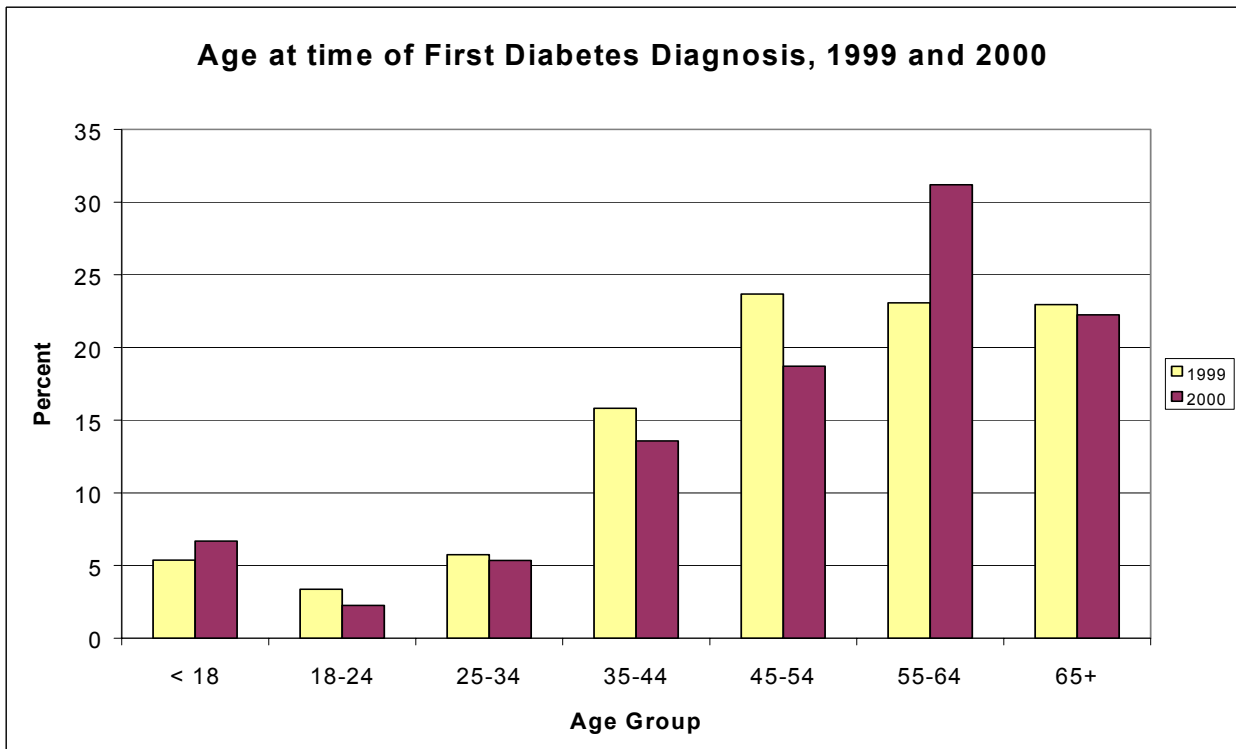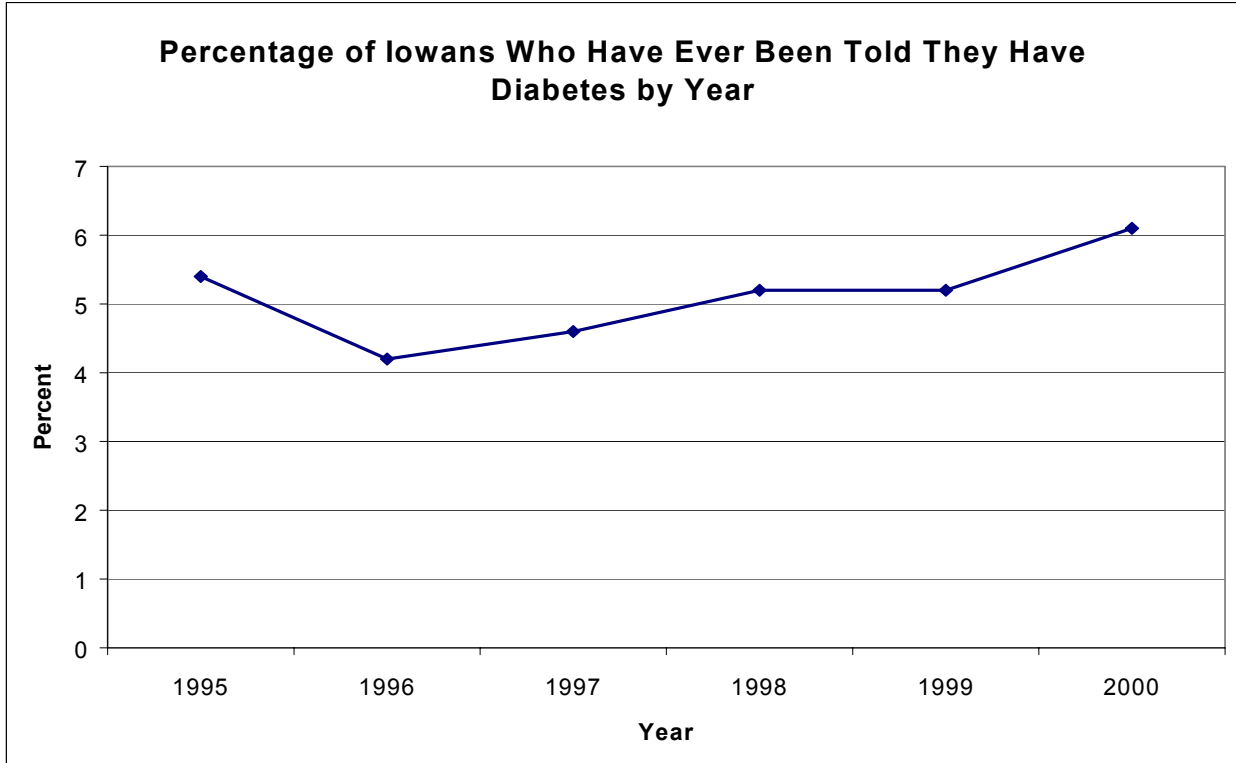
Diabetes in Iowa

In 2000, 6.1% of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This is up nearly one percent from 5.2% the previous year. Of respondents 65 years and over, 15.6% had ever been told they had diabetes. Among individuals who had been told they had diabetes, most (31.2%) reported being first diagnosed between ages 55-64. The age group in which the least (2.3%) reported being first diagnosed was between the ages of 18 and 24. Furthermore, the greatest increase in age of first diagnosis from the previous year was in the 55 to 64 age group.[*]

Of those ever told by a physician that they have diabetes, 35.8% reported currently taking insulin. On the other hand, 59.3% reported currently taking diabetes pills to control the disease.

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* Last year's report erroneously reported the percent of the age group having ever been told they had diabetes as the percent of the age group of first diagnosis.

Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year

## Age at time of First Diabetes Diagnosis, 1999 and 2000

Respondents told by a physician they had diabetes were asked how many times they had their glycosylated hemoglobin checked in the past 12 months. 72.1% reported between one and four times, about 8.8% reported none, and 2.6% had reported they had never heard of it. Another

12% reported they were unsure. It is recommended that this test be done at least twice a year and at least three months apart.

Besides having their glycosylated hemoglobin checked, individuals with diabetes should have their feet checked for sores and irritations. When asked how many times they had their feet checked, 59.2% of respondents who were ever diagnosed with diabetes claimed to have had them checked by a health professional at least once within the past twelve months, while 38.2% reported none. On the other hand, 58.4% reported that they or a friend or family member checked their feet daily. Still 10.8% reported no one ever check their feet.

Because persons with diabetes are at high risk of eye complications leading to blindness, regular eye examinations, including pupil dilation, are important. Respondents who reported ever having diabetes were asked when they had their last eye exam where their pupils were dilated. About 71.8% reported within the last year, while 5.2% reported never.

Iowans with Diabetes Reporting Time Since Last Eye Exam with Pupils Dilated
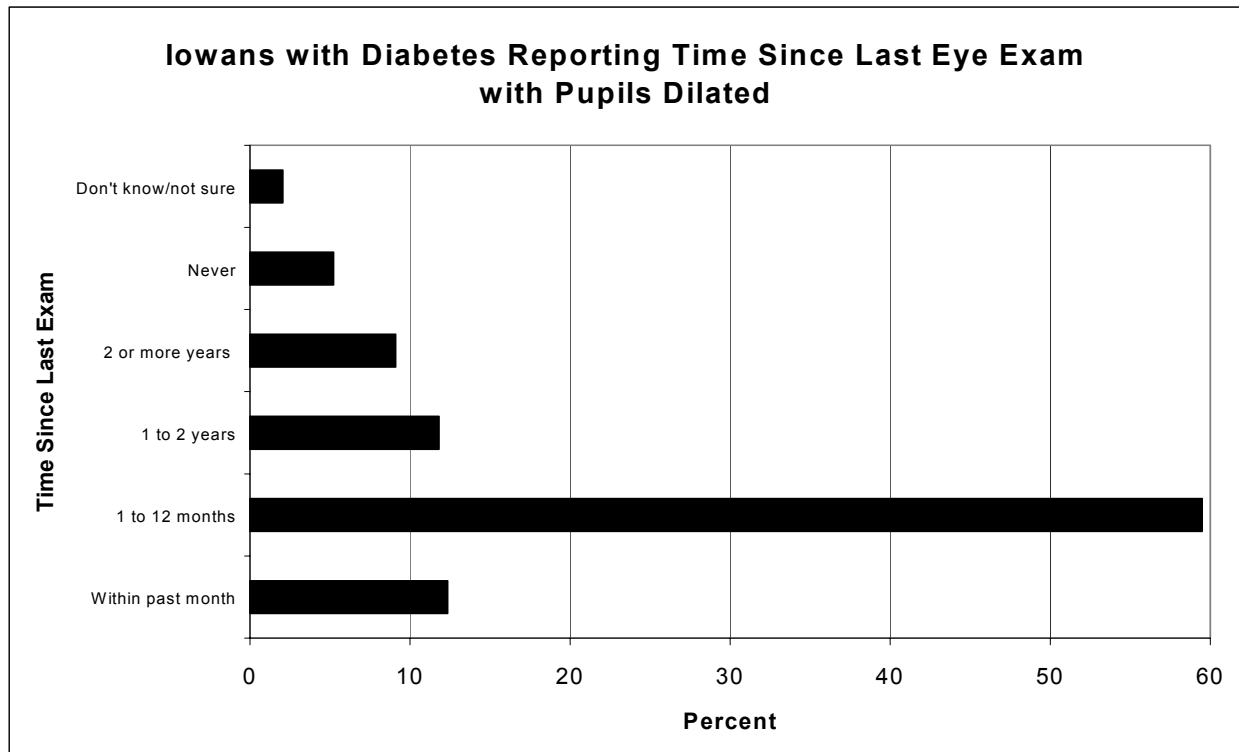
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ORAL HEALTH

Background

Despite the fact that dental decay has significantly declined over the past two decades in the U.S., a disproportionate number of American children continue to suffer with dental caries (tooth decay) and other oral health conditions. This fact inspired the first-ever *Surgeon General's Report on Oral Health*, which identified a "silent epidemic" of dental and oral diseases, and called for a national effort to improve oral health among Americans.

Left untreated, the pain and infection caused by dental caries can lead to problems in eating, speaking, and the ability to learn.

It has been well documented that children from families with low incomes have five times more untreated dental caries then children from higher income families.

Studies have also concluded that for each child without medical insurance, there are almost three children without dental insurance. This means that only about 50% of white children, 39% of African-American children, and 32% of Mexican-American children have dental insurance.

The American Academy of Pediatric Dentistry recommends that professional intervention begin at approximately 12 months of age or shortly after the primary teeth begin to erupt. The goal of the first dental visit is to assess the risk for dental disease, initiate a preventive program, provide anticipatory guidance, and decide on the periodicity of subsequent visits.

Beginning in 1999, the Iowa BRFSS survey has included five dental health questions. The goal of including these questions was two-fold. The first was to determine how frequently Iowans utilize dental services. The second was to determine the self-reported number of Iowans participating in the monthly telephone survey claiming to have dental insurance coverage.

Oral Health in Iowa

In 2000, 72% of Iowans surveyed reported visiting a dentist within the past year. However, 10.9% reported their last dental visit more than 5 years ago or never. Overall, females were more likely than males to report a dental visit during the past 12 months (73.3% vs. 70.7%). A greater percentage of males reported their last dental visit more than 5 years ago or never (11.2% vs. 10.6%).

Greater income was related to the likelihood of visiting a dentist. About 88.1% of respondents reporting an income of $75,000 or more reported a dental visit in the last year compared to 50.5% of those making less than $15,000.

Dental Visits Within the Past 12 Months by Income

The Time Since Respondents Had Their Last Teeth Cleaning by Age, 2000
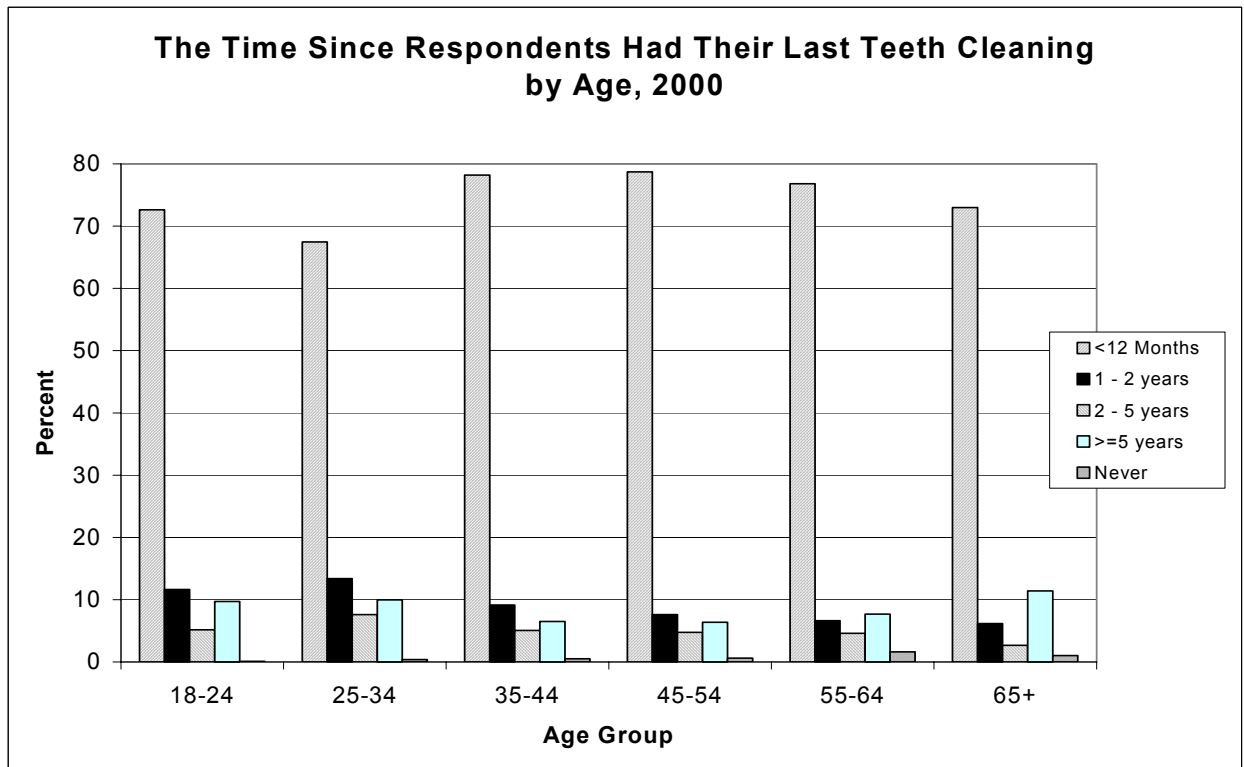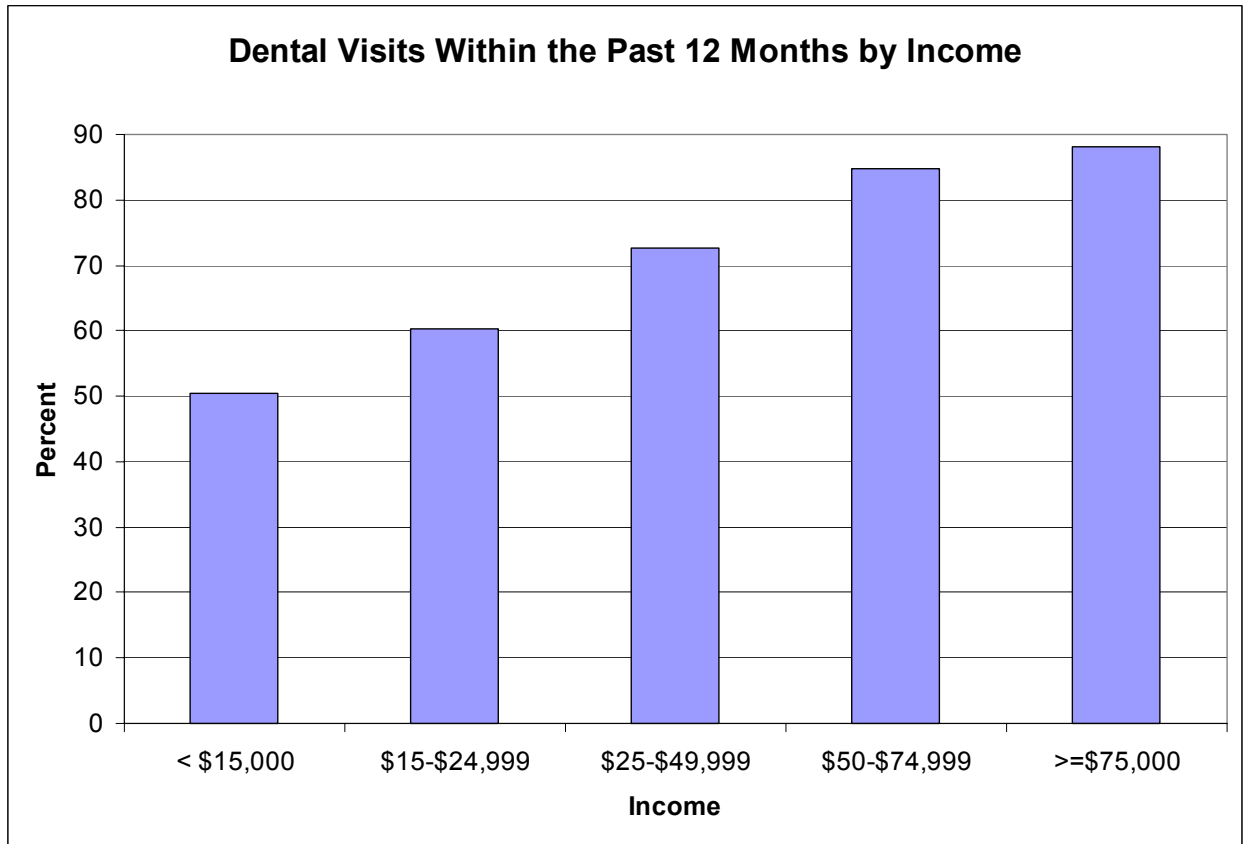
Almost 74.5% of respondents reported having their teeth cleaned within the past year. More female respondents reported having their teeth cleaned during the past year than male respondents (76.3% vs. 72.5%).

Respondents between 25 and 34 years old were the least likely to report having their teeth cleaned within the past year. However, the age group of 65 and over had the greatest percentage of respondents having their teeth cleaned 5 or more years ago. Those between the ages of 45 and 54 had the greatest percentage of respondents having their teeth cleaned during the past 12 months.

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TOBACCO USE

Background

Tobacco use remains the leading preventable cause of death in the United States. It is responsible for more than 430,000 deaths each year, or one in every five deaths.[1] Over $50 billion is spent every year on direct medical expenditures, and another $50 billion on indirect costs such as lost work time, resulting from tobacco use.[1]

Tobacco use is known to cause heart disease, peripheral vascular disease, chronic lung disease, as well as cancers of the lung, larynx, esophagus, pharynx, mouth, and bladder. In addition, cigarette smoking contributes to cancer of the pancreas, kidney, and cervix.

Consequences of smoking during pregnancy include spontaneous abortions, low birthweight babies, and sudden infant death syndrome (SIDS).[5] Environmental tobacco smoke (ETS) increases the risk of heart disease and lung cancer in adults. ETS also affects children by increasing lower respiratory tract infections and asthma, and by decreasing pulmonary functioning.[7]

Exposure to ETS is significant. In one study, 87.9% of children and adult nonusers of tobacco had detectable levels of serum cotinine, a biomarker for cigarette smoke exposure.[6] Every year, exposure to ETS causes an estimated 3,000 nonsmoking Americans to die of lung cancer and causes up to 300,000 children to suffer from lower respiratory tract infections.[3]

Public health efforts to reduce the prevalence of tobacco use began after the health risks were announced in the first surgeon general report on tobacco in 1964. Smoking prevalence declined from 42.4% in 1965, to 24.7% in 1997.[1] However, since 1990, these rates have not continued to decline. Prevalence has remained constant for adults, and has increased among high school students (now at a prevalence rate of 36.5%).[1]

Preventing initiation of tobacco use has become a priority in reducing prevalence since more than 80% of current adult tobacco users started smoking cigarettes before the age of 18.[2]

In the past 20 years, the use of smokeless tobacco such as chewing tobacco has increased by 40% for adolescent males. Furthermore, new forms of tobacco in the United States have also grown in popularity among youth, including such formerly exotic items as bidis, and kreteks. Use of these substances among high school users is now at almost the same percentage rate as users of smokeless tobacco –- 5 to 7 percent.[4]

There are large disparities in tobacco use and health outcomes across racial and ethnic groups and socioeconomic status.[1] American Indians and Alaska Natives had the highest smoking prevalence, in 1998, with Black and Southeast Asian men second.[1]

A dramatic increase in tobacco use worldwide prompted the World Health Organization and the World Health Assembly to launch global tobacco control strategies.[1]

Tobacco Use in Iowa

Of all respondents surveyed in 2000, 23.2% reported being a current smoker. Current smoking was defined as smoking some days or everyday during the past 30 days and smoking at least 100 cigarettes in a lifetime. The proportion of current smokers generally declined with age. Respondents between ages 18 and 24 reported the greatest percentage of smokers (38.9%). Current smoking percentages for those between 25-54 ranged from 23.6% to 29.3%. Only 7.6% of respondents ages 65 and older were current smokers.

Current Smokers by Age, 2000
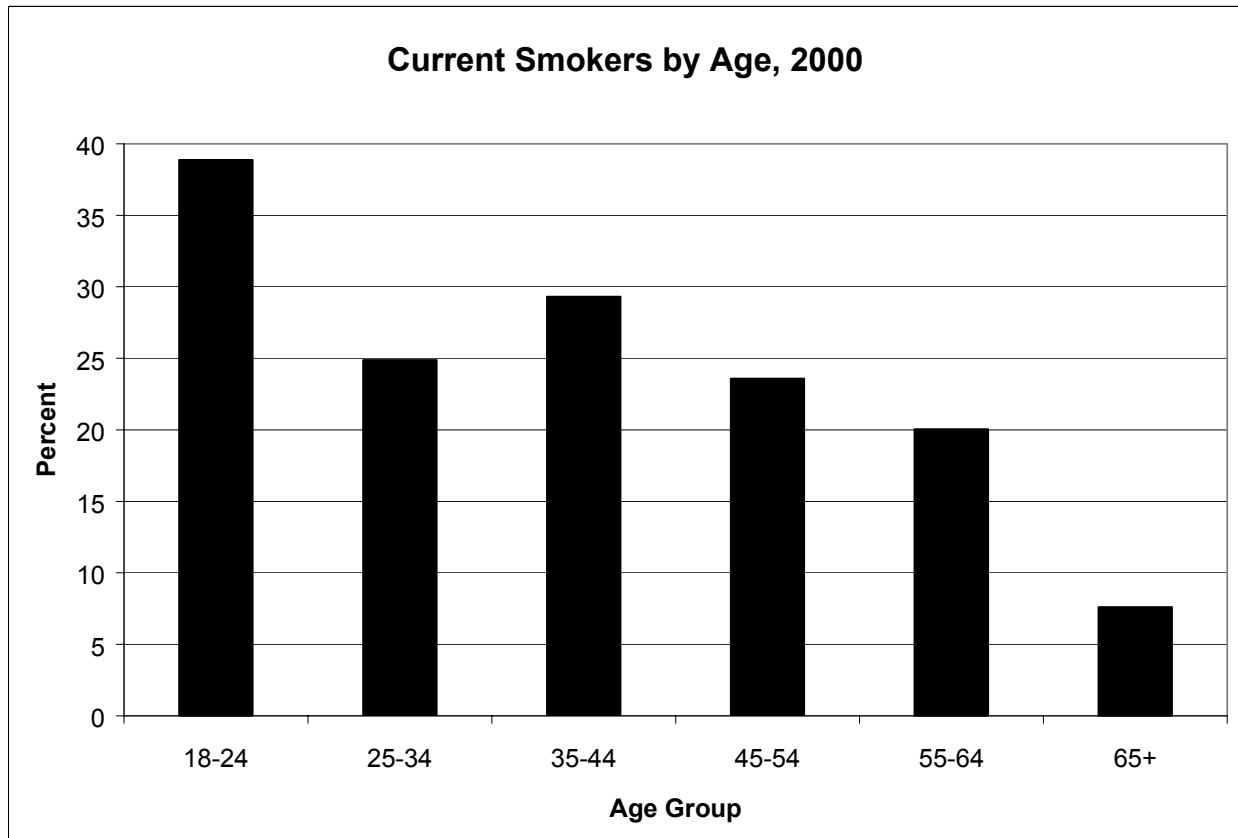
Males were more likely to be current smokers than females. Around 25.7% of males reported being current smokers compared to 20.9% of females.

Respondents with an income of $75,000 or greater were significantly less likely than lower income groups to smoke. Around 12.1% of respondents who reported an income of $75,000 or greater were current smokers compared to 31.4% for individuals reporting an income less than $15,000.

Of the current smokers who smoke everyday, 25.8% smoke half a pack a day or less. Furthermore, 83.4% smoke a pack or less, while 1.2% smoke more than two packs a day. Overall, females reported smoking fewer cigarettes than males. Just under 35% of females compared to 17.8% of males currently smoke a half pack or less per day. Approximately 54.4% of females and 60.2% of males smoke half to one pack per day. Almost 1.6% of males, but only 0.6% of females, smoke more than two packs per day.

Current Smokers by Income, 2000
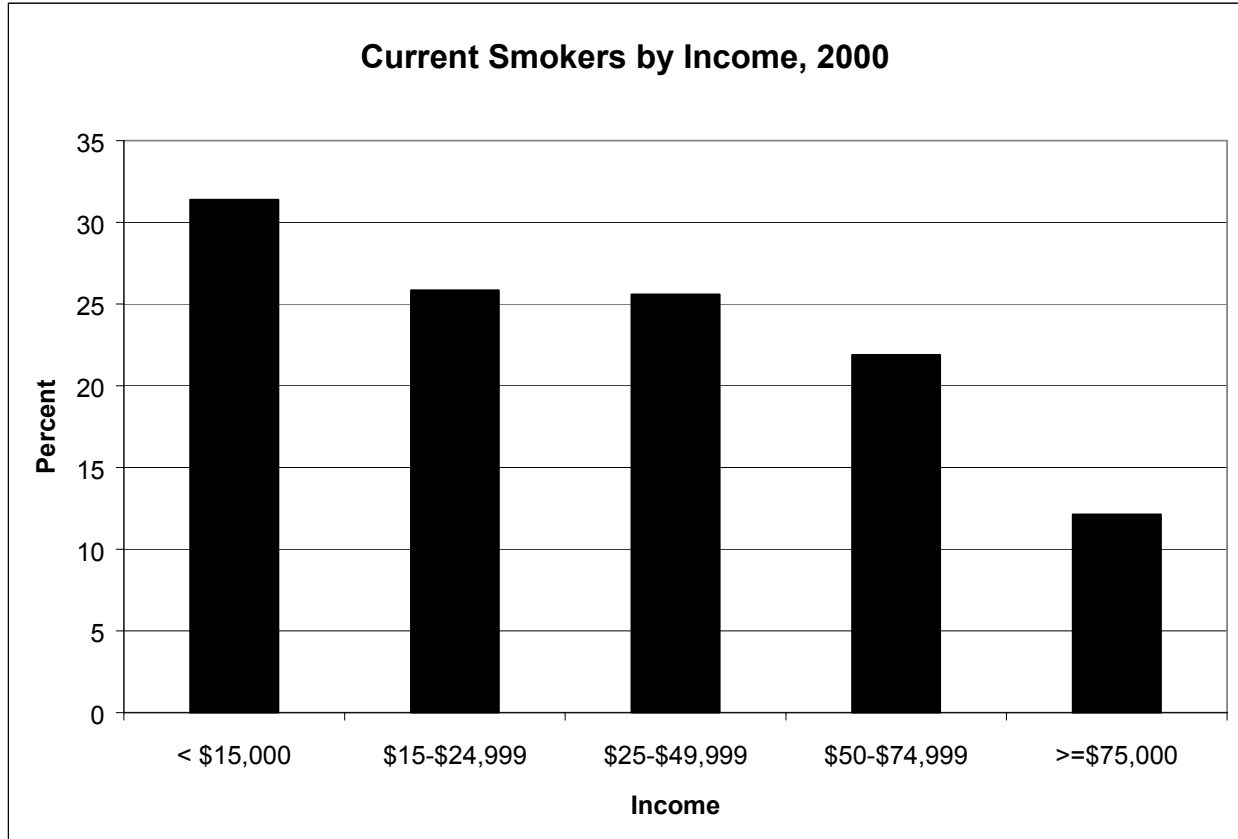
The majority of current smokers in each age group report smoking one pack per day or less. Over 86.3% of current smokers between the ages of 18 and 24 and 89.4% of current smokers between the ages of 25 and 34 reported smoking one pack or less per day. Although respondents ranging in age from 45-54 had the lowest percentage of current smokers using one pack or less per day, they reported the greatest percentage smoking one to two packs per day. [*]
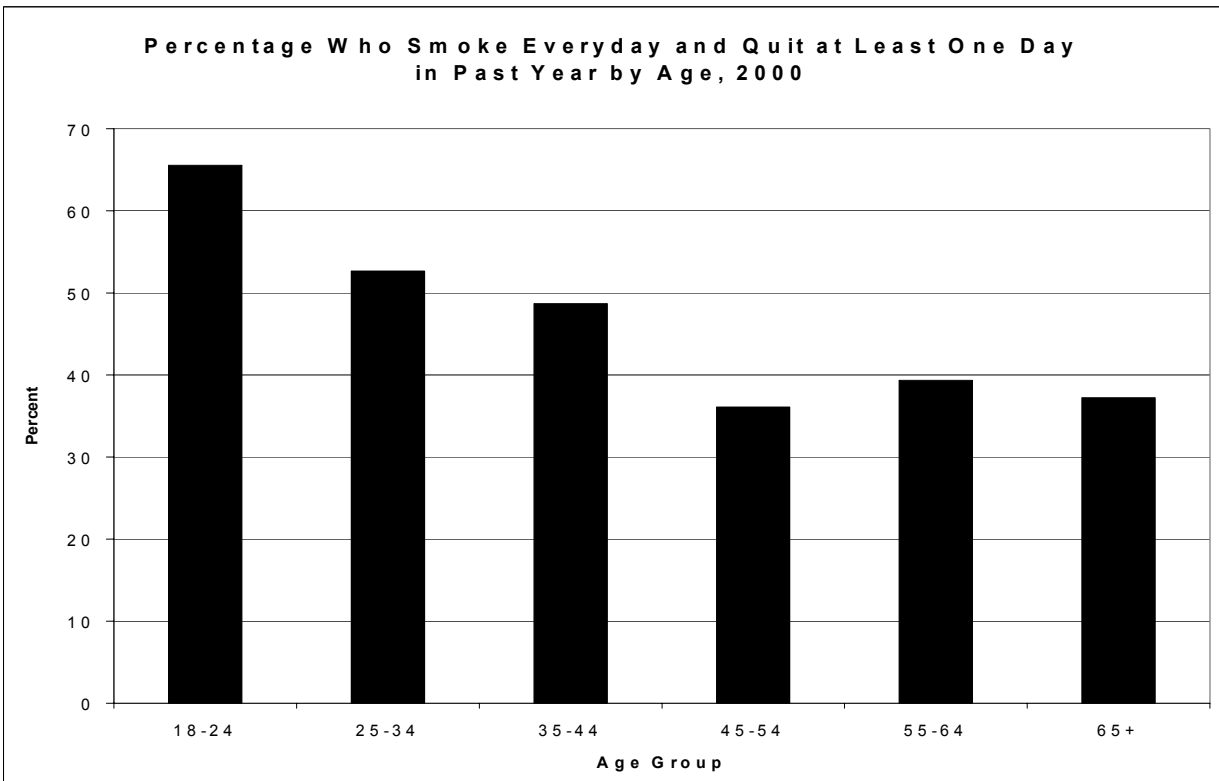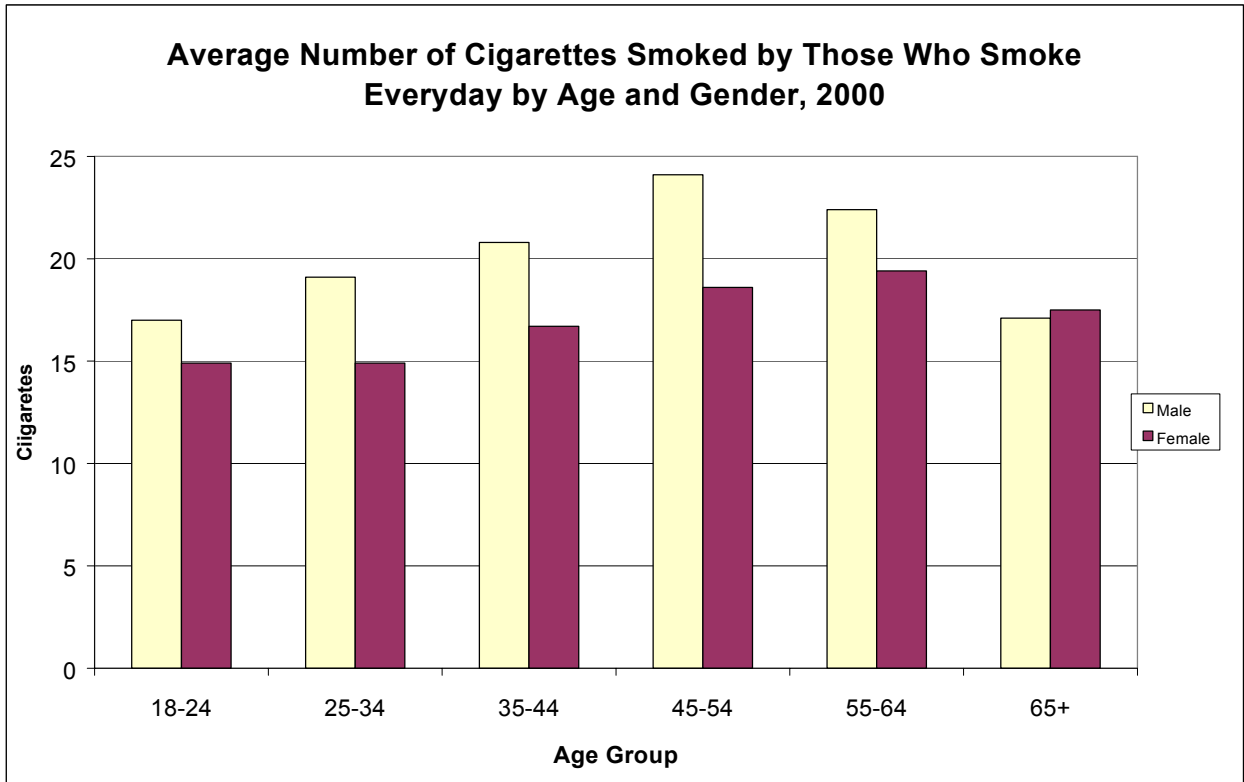
Almost 48.7% of Iowa respondents quit smoking for a day or more during the past year. A slightly larger percentage of females than males quit for at least one day (50.8% vs. 46.9%). Younger respondents were more likely to report trying to quit during the past year. Close to 65.6% of individuals surveyed between ages 18-24 reported trying to quit compared to 37.2% of persons age 65 and older. Respondents between the ages of 45 and 54 were least likely to report trying to quit. Only 36.1% reported quitting for a day or more during the past year.

2010 Health Objectives for Iowa and the Nation

Iowa and 45 other states agreed to a master settlement with the tobacco industry on November 23, 1998. A portion of the settlement provided from this agreement is allocated to reducing tobacco use.

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[*] A pack of cigarettes contains 20 cigarettes.

Average Number of Cigarettes Smoked by Those Who Smoke Everyday by Age and Gender, 2000

Percentage Who Smoke Everyday and Quit at Least One Day in Past Year by Age, 2000

40

The key settlement program components include: reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction, and working toward changing social norms and environments that support tobacco use. The last component of the settlement involves counter-advertising and promotion, product regulation and economic incentives against tobacco.[4]

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ALCOHOL CONSUMPTION

Background

For most people who drink, alcohol is a pleasant accompaniment to social activities. Moderate alcohol use—up to two drinks per day for men and one drink per day for women and older people—is not harmful for most adults. (A standard drink is one 12-ounce bottle or can of either beer or wine cooler, one 5-ounce glass of wine, or 1.5 ounces of 80-proof distilled spirits.) Nonetheless, a large number of people get into serious trouble because of their drinking. Currently, nearly 14 million Americans—1 in every 13 adults—abuse alcohol or are alcoholic. Several million more adults engage in risky drinking that could lead to alcohol problems. These patterns include binge drinking and heavy drinking on a regular basis. In addition, 53% of men and women in the United States report that one or more of their close relatives have a drinking problem.[2]

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. Alcoholism, also known as alcohol dependence, is a disease that includes the following four symptoms:

- Craving--A strong need, or urge, to drink.
- Loss of control--Not being able to stop drinking once drinking has begun.
- Physical dependence--Withdrawal symptoms, such as nausea, sweating, shakiness, and anxiety after stopping drinking.
- Tolerance--The need to drink greater amounts of alcohol to get "high."

This chronic disease is dependent on both heredity and lifestyle. Alcoholism cannot be cured at this time. Even if an alcoholic hasn't been drinking for a long time, he or she can still suffer a relapse. To guard against a relapse, an alcoholic must continue to avoid all alcoholic beverages.

Alcohol abuse differs from alcoholism in that it does not include an extremely strong craving for alcohol, loss of control over drinking, or physical dependence. Alcohol abuse is defined as a pattern of drinking that results in one or more of the following situations within a 12-month period:

- failure to fulfill major work, school, or home responsibilities;
- drinking in situations that are physically dangerous, such as while driving a car or operating machinery;
- having recurring alcohol-related legal problems, such as being arrested for driving under the influence of alcohol or for physically hurting someone while drunk; and
- continued drinking despite having ongoing relationship problems that are caused or worsened by the drinking.

Although alcohol abuse is basically different from alcoholism, alcoholics also experience many effects of alcohol abuse.

The consequences of alcohol misuse are serious—in many cases, life threatening. Heavy drinking can increase the risk for certain cancers, especially those of the liver, esophagus, throat, and larynx (voice box). Heavy drinking can also cause liver cirrhosis, immune system problems, brain damage, and harm to the fetus during pregnancy. Drinking increases the risk of death from

automobile crashes as well as recreational and on-the-job injuries. Furthermore, both homicides and suicides are more likely to be committed by persons who have been drinking. In purely economic terms, alcohol-related problems cost society approximately $185 billion per year. In human terms, the costs cannot be calculated.

There were 19,515 alcohol-induced deaths in the United States each year, not including motor vehicle fatalities. There were 25,192 deaths in the United States from chronic liver disease and cirrhosis. Chronic liver disease and cirrhosis is the 10th leading cause of death in the United States.[3]

Binge drinking is a serious problem that has been on the increase. It has been a particularly serious problem on college campuses. Students who binge drink are more likely to damage property, have trouble with authorities, miss classes, have hangovers, and experience injuries than those who do not. Alcohol-related problems of this nature increased between the early and late 1980's. Interestingly, frequent binge drinkers and those who report experiencing specific alcohol-related problems do not perceive themselves as problem drinkers.[2]

Among men, research indicates that greater alcohol use is related to greater sexual aggression. Sixty-seven percent of the male sexual aggressors at one university, as well as about 50% of female victims, had been drinking at the time of the sexual assault or other incident of victimization. Binge drinkers appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge drink.[1]

Drinking and driving have been reported by more than 60% of college men and almost 50% of college women who binge drink at least three times in a two-week period. By comparison, 20% of college men and 13% of college women who do not binge drink have reported drinking and driving.
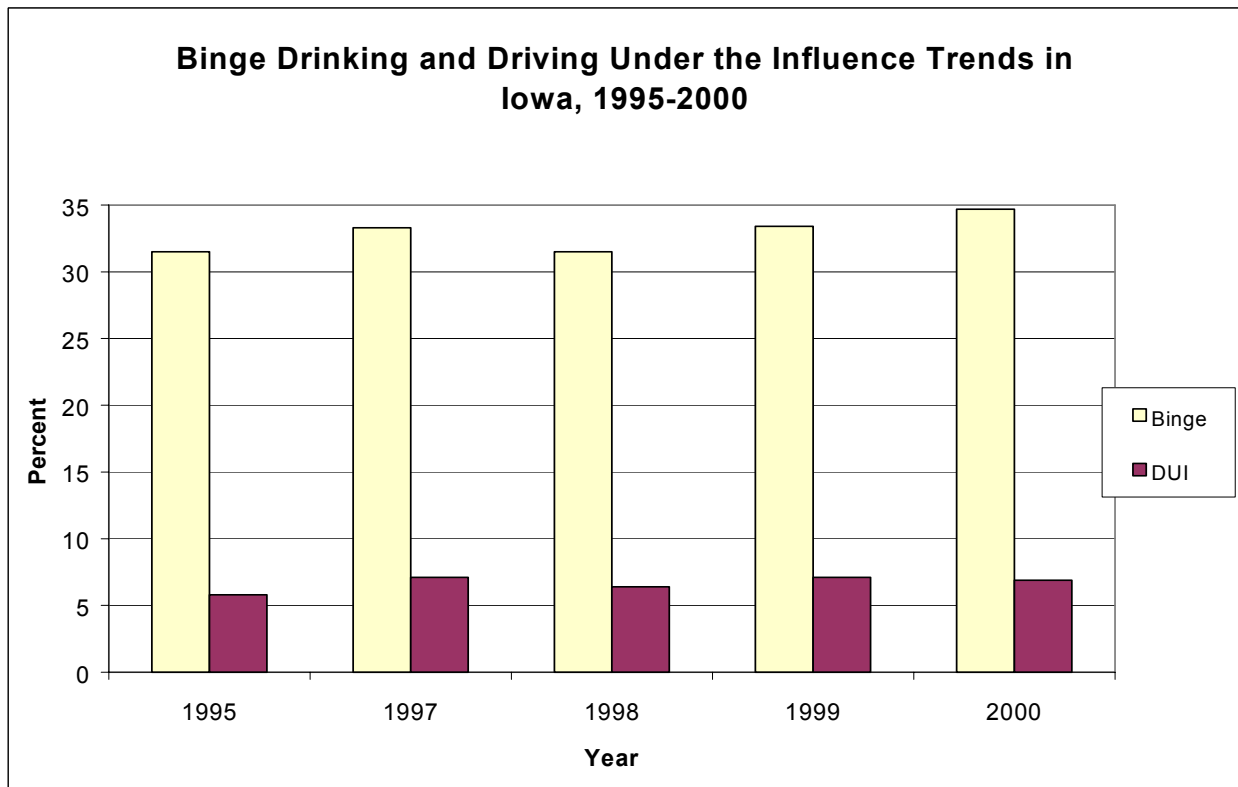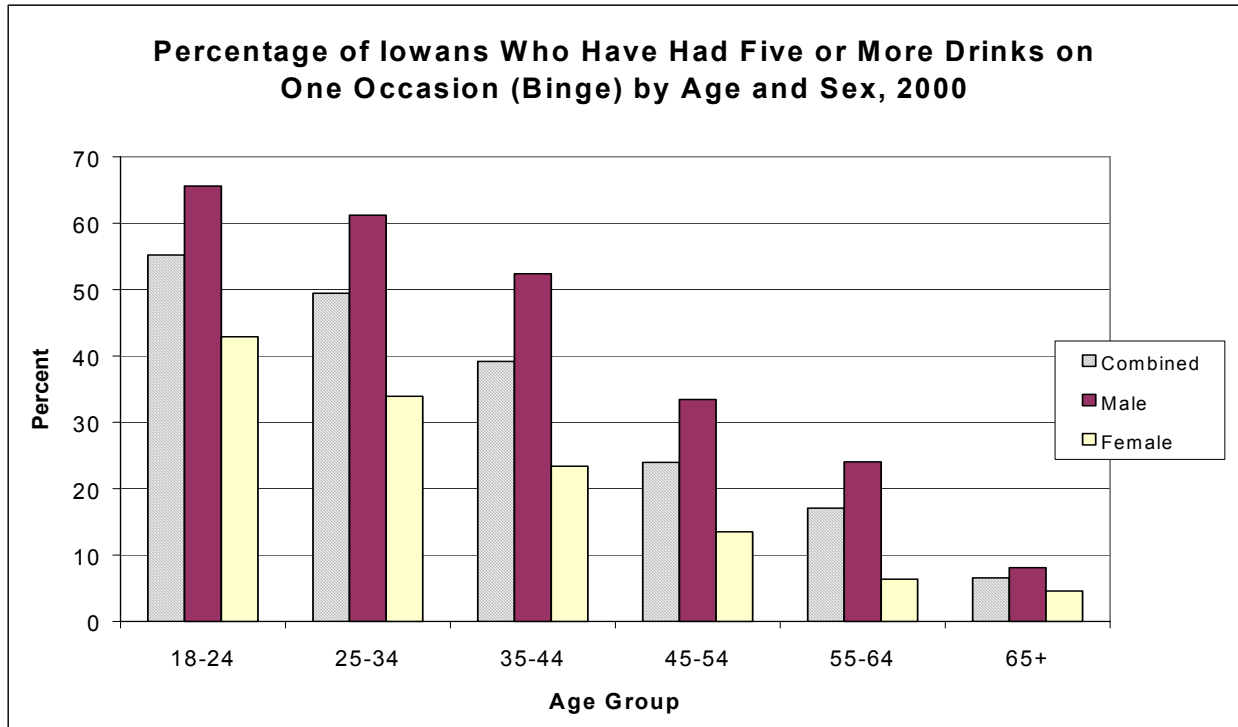
From 1977 through 1998 an average of approximately 45,000 people per year died in traffic crashes. There were 41,501 traffic crash fatalities in 1998, a decrease of 1.2 percent from the 1997 total of 42,013. Of these fatalities, the proportion that was alcohol-related was 30.5 percent in 1998, the lowest point since 1977.[4]

Alcohol Consumption in Iowa

In 2000, 58.1% of Iowans sampled reported that they had at least one drink of alcohol in the past month. On the days when they drank they reported drinking an average of 2.67 drinks per day. However, 10% reported drinking an average of more than five drinks per day.   The average person, who drank, drank 20.6 drinks during the month. However, 1.4% reported drinking over 150 drinks during the month.

A person is considered to binge if he or she drinks more than five drinks on one occasion. Of the people who reported drinking at all in the past month 34.7% reported at least one binge episode. This is an increase from 33.4% in 1999. Males binge much more than females (44.7% vs. 23.2%). In addition, the likelihood of bingeing decreases with age from 55.2% for 18-24 year-olds to only 6.5% for those 65 and over.

The percentage of respondents who said they had driven at least once in the past month when they had had too much to drink was 6.9% This level has held nearly steady since 1997.

Percentage of Iowans Who Have Had Five or More Drinks on One Occasion (Binge) by Age and Sex, 2000

Binge Drinking and Driving Under the Influence Trends in Iowa, 1995-2000

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PROBLEM GAMBLING

Background

The **Iowa Gambling Treatment Program** located in the Iowa Department of Public Health provides education, referral, and counseling services for persons affected directly or indirectly by problem gambling behavior. The program receives money from the gambling treatment fund, which gets 0.3 percent from the gross lottery revenue, the adjusted gross receipts from the riverboat casinos, and the adjusted gross receipts from casino games at the racetracks. An advisory committee provides advice and guidance on the program structure and services.

A 1-800-BETS OFF telephone helpline assists callers in accessing treatment and education services from providers located throughout the state. Gamblers and concerned persons receive counseling services on an outpatient basis. The http://www.1800betsoff.org website provides Internet users with information on the program and problem gambling behavior.
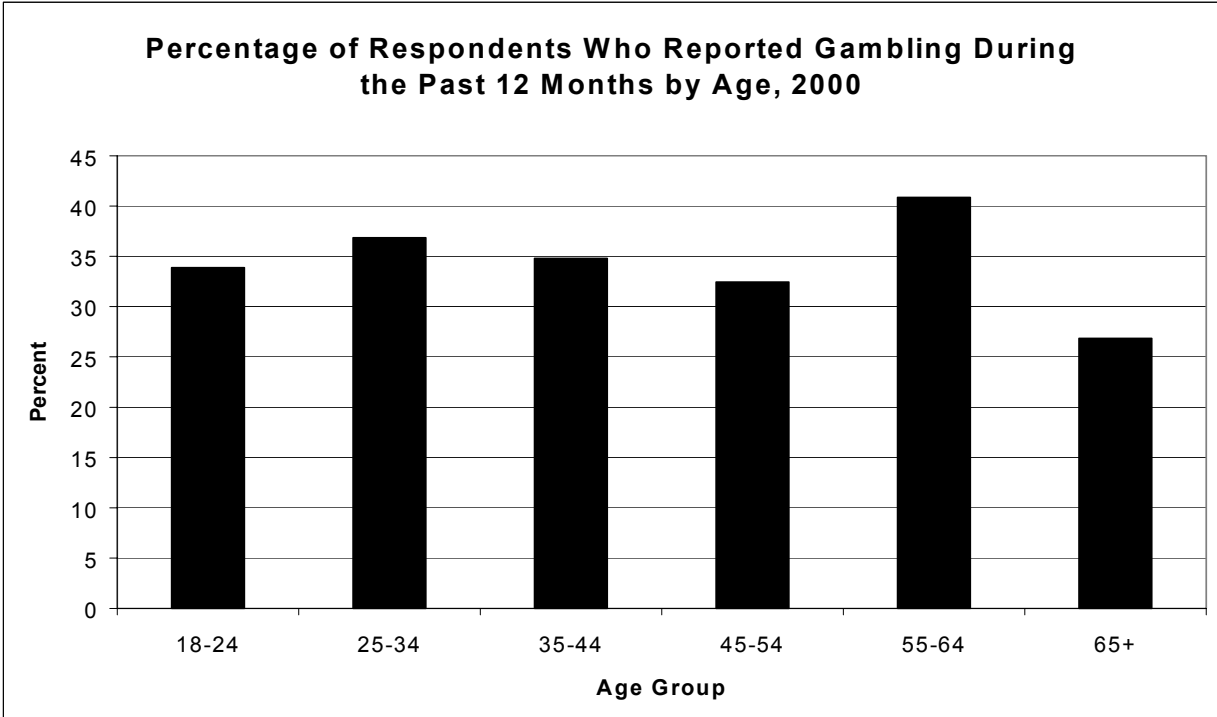
Training sessions using experts on problem gambling are held over the Iowa Communications Network. Sessions reach a variety of interested people including counselors, clergy, human resource personnel, mental health clinicians, social workers, and health care professionals. Statewide multi-media messages educate people about problem gambling behavior and its effects on gamblers, family members, and friends. A resource library and clearinghouse distributes problem gambling videotapes, brochures, curriculum guides, and other materials.

Iowa gambling activities include bingo; raffles; limited social betting; lottery games; ten riverboat casinos and three Indian casinos with table games, slot machines, and video poker, blackjack, and keno; and three pari-mutuel racetracks with slot machines and simulcast wagering. The Iowa Racing and Gaming Commission and the Iowa Lottery address problem gambling behavior, stay informed on the issue, and cooperate with the Iowa Gambling Treatment Program.

Starting in 1997, three gambling questions were included in the BRFSS's state-added questions. The questions are: "Have you gambled in the last 12 months?", "Has the money you spent gambling led to financial problems?" and "Has the time you spent gambling led to problems in your family, work, or personal life?"

Gambling in Iowa

In Iowa, 33.7% of respondents reported they had gambled in the last 12 months while 63.6% said no. Almost 2.7% of respondents refused to answer this question. The highest prevalence of gambling was among those ages 55-64 (40.96%) followed by 36.9% of respondents ages 25-34. The lowest percentage of gambling during the past year was reported for those ages 65 and older. This age group also had the largest percentage who refused to answer the question.

Percentage of Respondents Who Reported Gambling During the Past 12 Months by Age, 2000

A bar chart showing Percent (y-axis, 0 to 45) by Age Group (x-axis):
- 18-24: approximately 34
- 25-34: approximately 37
- 35-44: approximately 35
- 45-54: approximately 32.5
- 55-64: approximately 41
- 65+: approximately 27

Among the respondents who reported gambling during the past year, the self-employed group was the most likely to gamble (38.7%). Those employed for wages (36.5%) and those unemployed for less than a year (36.6%) were nearly equal in proportion who gambled. Individuals with an annual income of $50,000 to $74,999 were the most likely to report gambling compared to respondents at other income levels (41.6%). Respondents with incomes less than $15,000 were the least likely to report gambling during the past year (28.1%) and also more likely to refuse to answer the question. Finally, males (36.8%) were more likely to gamble than their female (30.9%) counterparts.

In 2000, 98.4% of respondents who had gambled in the past 12 months said the money they spent gambling had not led to financial problems. Likewise, 99% reported the time spent gambling had not led to problems in family, work, or personal life.

Percentage of Respondents Who Reported Gambling During the Past 12 Months by Income, 2000
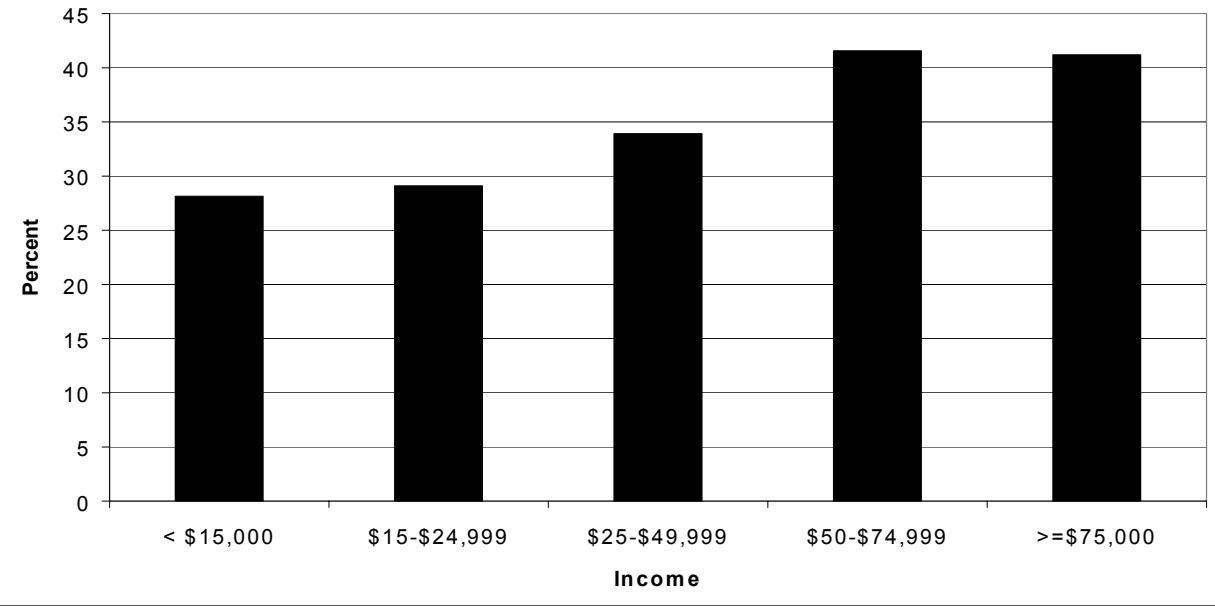
MAMMOGRAPHY

Background

An estimated 2,300 new cases of breast cancer were expected among women in Iowa in 2001, according to the Iowa Cancer Registry. That makes breast cancer the most common cancer among Iowa women, accounting for 31% of all cancers.[5]

Each year 470 Iowa women are estimated to die from breast cancer, accounting for 16% of all cancer deaths among Iowa women.[4] Data for 1994 through 1996 indicate that two-thirds of all female breast cancer deaths in Iowa occurred among women aged 65 and older. [4]

On average, a woman's lifetime risk of developing breast cancer is 1 in 8. Secondary prevention strategies, involving early detection with subsequent diagnosis and treatment, are the best methods for substantially reducing breast cancer mortality.

Detecting malignancies through mammography on a regular basis in conjunction with a clinical breast examination (CBE) is the most effective method for discovering the tumor at an early stage (*in situ* and/or localized). If all women 50 to 74 years of age complied with screening recommendations, up to 39% of breast cancer mortality could be avoided. [4]

The American Cancer Society (ACS) recommends monthly breast self-examination for all women. Women ages 20 to 39 should also have a CBE by a health care professional every three years. Women 40 and older should have both a mammogram and a CBE every year.[3]

In 1987, despite the known advantages of early breast cancer detection from mammography, 64% of women aged 40 and older had never received a clinical breast exam and mammography.[5] Fortunately, this number has decreased significantly in the years following 1987. In 1994 only 10.1% had not received a clinical breast examination and 20.4% had not had a mammogram.[2] This positive trend continues in recent years as programs have expanded that target under-screened populations.

The two reasons women cite most often for not having a mammogram are that they did not know they needed to have one and that their doctor did not recommend it.[1] Barriers mentioned by physicians to having mammograms include high cost, a belief that the examinations are unnecessary, and a concern about the risk of radiation exposure.[2] Other factors associated with barriers to mammography include low income, Hispanic ethnicity, low educational attainment, age greater than 65, and residence in a rural area.[5]

Mammography in Iowa

In 2000, 89.7% of women surveyed reported ever having a clinical breast examination by a physician. The greatest percentage was reported by women between the ages of 35-44. Women 18-24 years reported the lowest percentage ever having a clinical breast exam.

Women Reporting Ever Having Clinical Breast Exam by Age, 2000
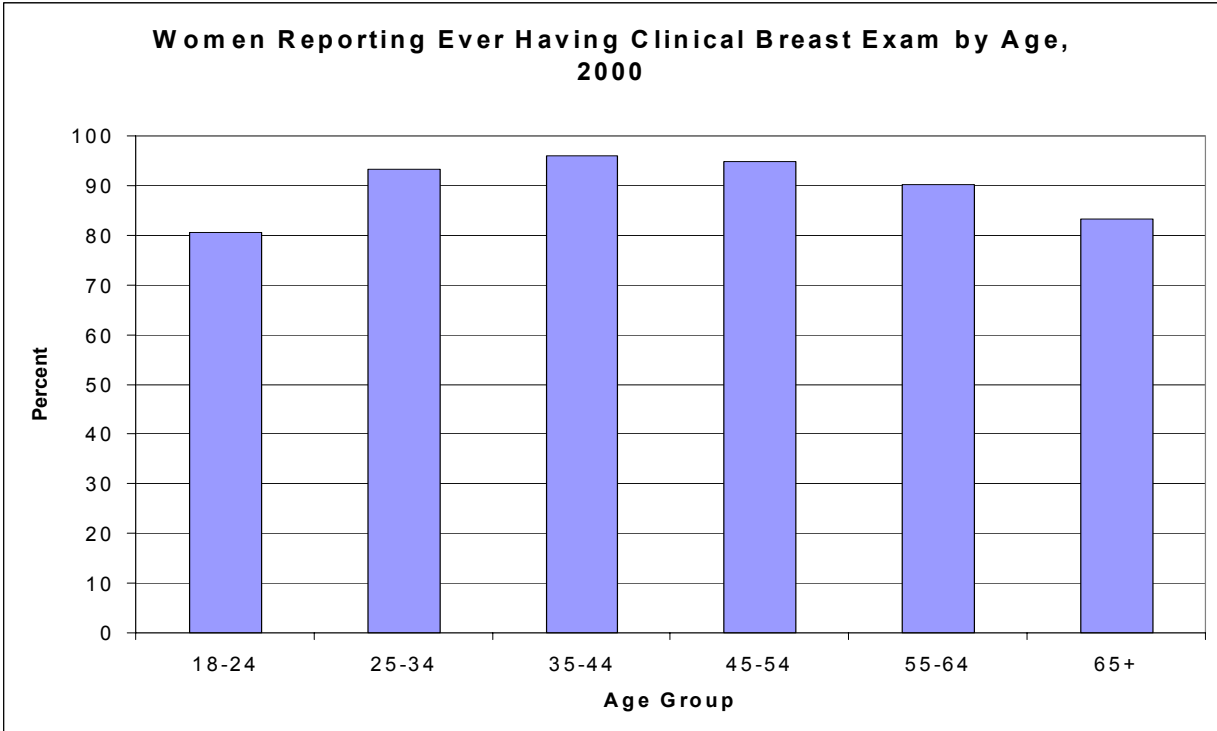
Education also appeared to be directly related to the likelihood of ever having an exam. About 95.2% of college graduates reported an exam compared to 87.2% of high school graduates and 74.8% of those who never completed high school.

Women Reporting Ever Having Clinical Breast Exam by Education, 2000
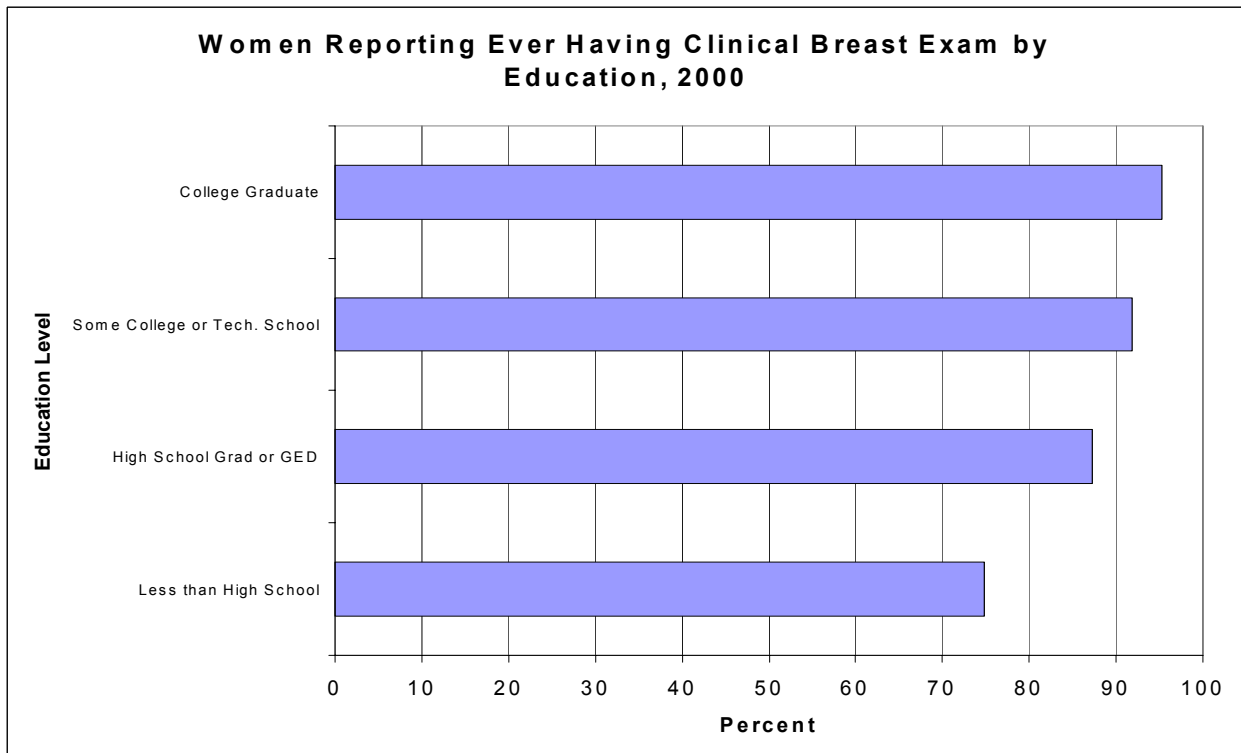
Around 96.7% of women reporting a household income between $50,000 and $74,999 had a breast exam compared to only 77.1% of women with an income of less than $15,000.

Women Reporting Ever Having Clinical Breast Exam by Income, 2000

Women Reporting Ever Having Mammogram by Age, 2000
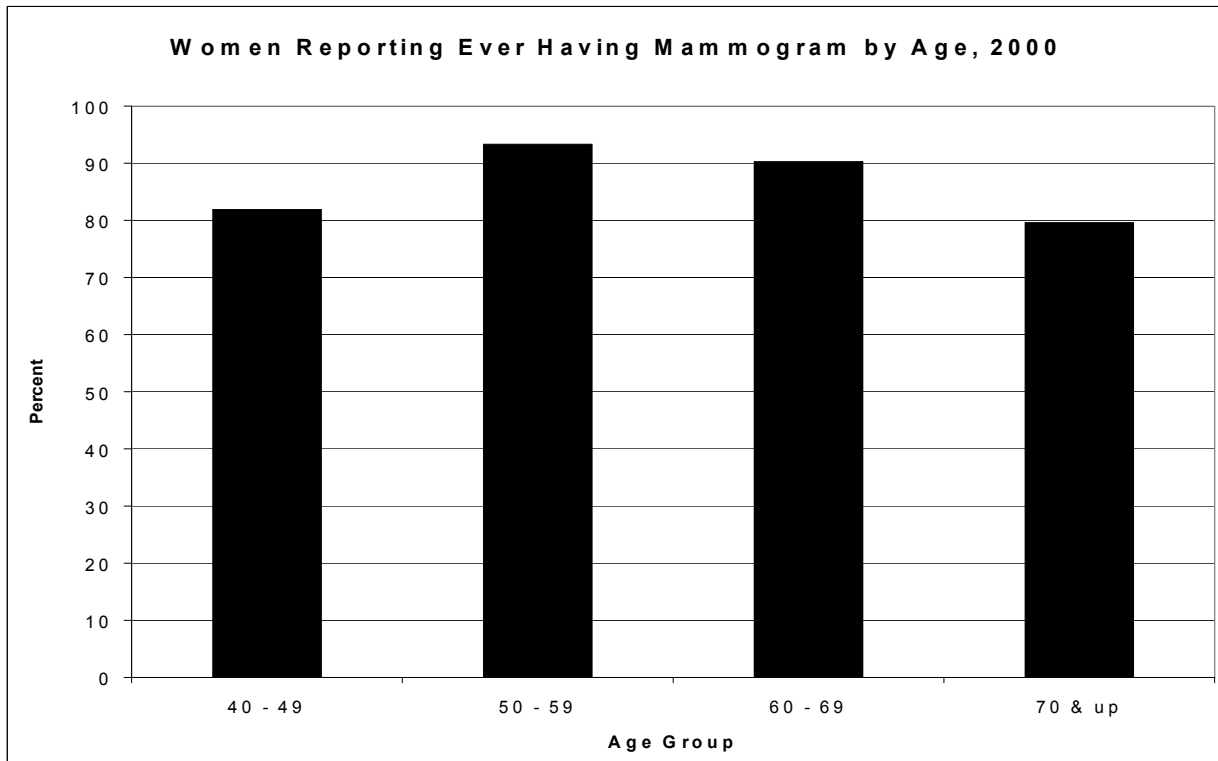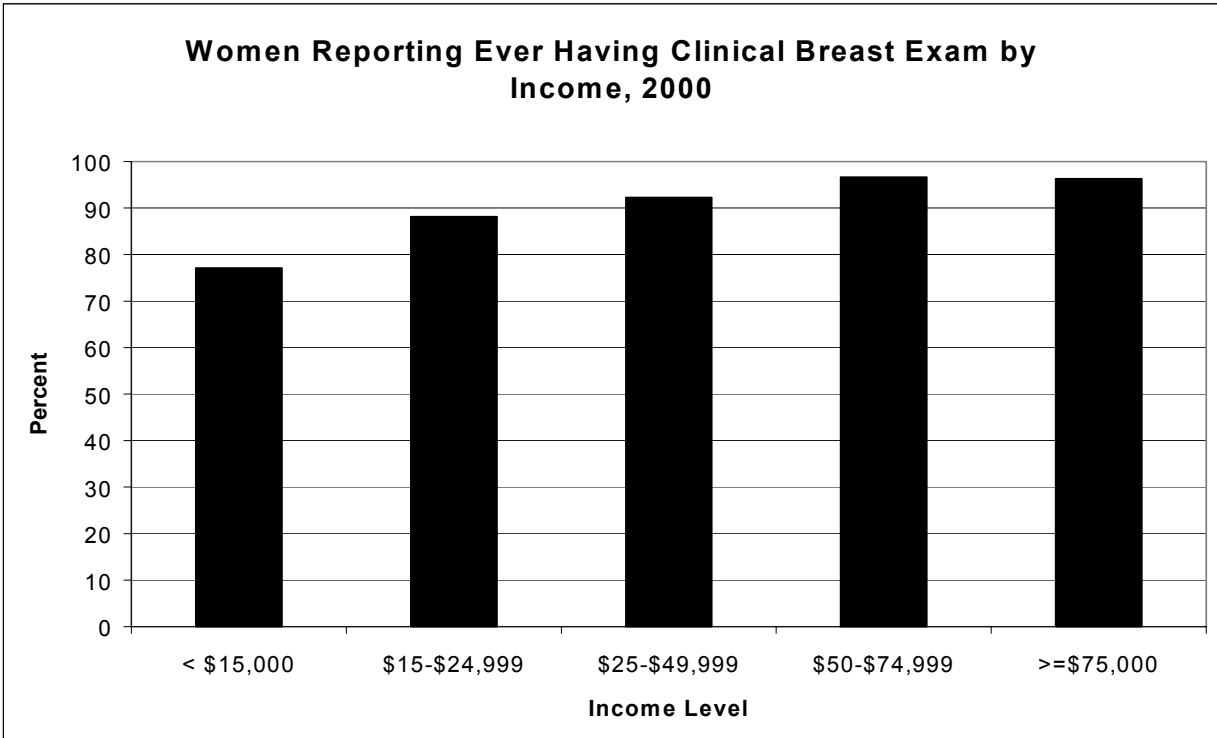
Mammograms are recommended for all women ages 40 and older. Almost 85.3% of all Iowa respondents ages 40 and older reported ever having a mammogram. The highest percentage was reported for women between the ages of 50 and 59. This percentage significantly decreases after age 70. Although 93.3% of women between 50 and 59 report ever having a mammogram, only 79.6% of women 70 and over reported ever having this screening test.

The likelihood of ever having a mammogram was related to both income and education. Respondents reporting an income of over $75,000 or having a college degree had the greatest percentage of women receiving mammograms.

Percent of Iowa Women Age 40 and Up Reporting Ever Having Mammogram by Income, 2000
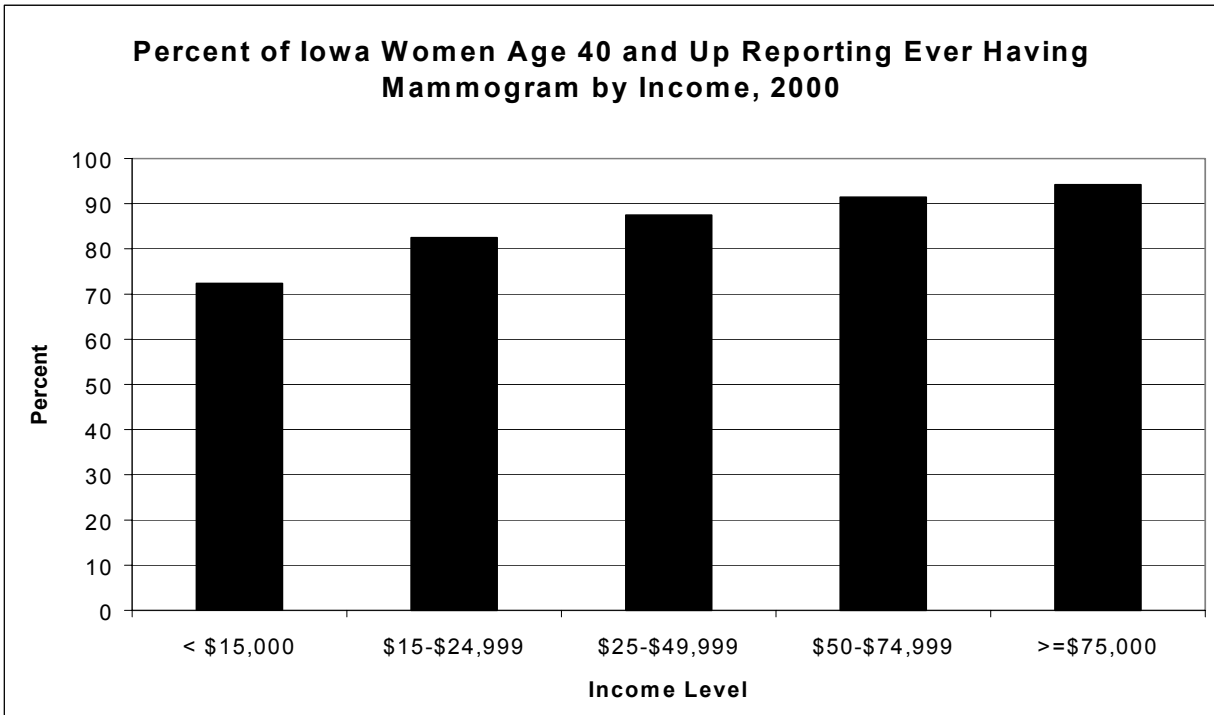
About 85.2% of all Iowa women who ever had a mammogram had it in the past two years. As in the case of the responses to whether or not they ever had a mammogram the percentage for having a mammogram within the past two years was higher for higher income and education levels. However, for women over 50 age was not an important factor.

Comparison With Other States[+]

Iowa ranked 16th of all 50 states and the District of Columbia in the percentage of women 40 and over who had ever had a mammogram. The national median was 88%, while Iowa reported 86.9% in this category. The national median percentage of women 50 and over who had a mammogram in the last two years was 78.8%, with Iowa reporting 78.6%.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options are not considered in determining the state comparison figures..

2010 Health Objectives for Iowa and the Nation

Iowa's goal is to reduce female breast cancer deaths to a rate of no more than 23.4 per 100,000 females. To accomplish this, an effort will be made to increase the percent of breast cancers diagnosed at an early stage to 80% by 2010. Movement toward this goal will be made by increasing the percent of women 40 years of age and older who had a mammogram in the preceding one to two years to at least 65%.[4]

Reaching this goal will involve efforts to increase access to breast cancer screening on a regular basis for women 40 years and older who are less likely to be screened. Primary care providers in Iowa will be encouraged to include available breast cancer screening guidelines into their practice by 2002. Providers will be encouraged, along with mammography facilities in Iowa, to use reminder systems to help ensure annual and/or regular screening for breast cancer, by 2002.[4]

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PAP TESTS

Background

There were 120 to 150 Iowa women diagnosed with cervical cancer annually during the past ten years. Of those, 40 to 45 die each year.[7] Although 90% of women with localized cervical cancer survive after five years, only about 40% of those diagnosed with advanced disease survive past five years.

Although all sexually active women are at risk for cervical cancer, the disease is more common among women of low socioeconomic status, those with a history of multiple sexual partners, and those who began having sexual intercourse at an early age.[3,4,8]

The principal screening test for cervical cancer is the Papanicolaou (Pap) test. Early detection through Pap tests can dramatically lower the incidence of invasive disease and can nearly eliminate deaths from cervical cancer.[1,2,5]

It has been suggested that Pap test screening programs need to reach more older and high-risk women to be maximally effective in decreasing the morbidity and mortality of cervical cancer.[6]

Educational programs need to target unscreened women who don't get tested because they don't realize its importance, they continually put off having it done, or because their medical care provider does not suggest the procedure.

The American Cancer Society recommends annual Pap tests starting at age 18 or with the onset of sexual activity. At the discretion of the woman's physician, less frequent exams may be necessary after three consecutive normal exams.

Pap Tests in Iowa

About 94.3% of female respondents reported ever having a Pap test. Reported rates for ever having a Pap test ranged from 86.2% for women from 18 to 24 to 97.3% for women between the ages of 55-64.

Higher reported income was associated with a higher percentage of having Pap tests. Women with an income of less than $15,000 reported 86.3% ever having a Pap test, while a nearly perfect 99.6% was reported for women with an income of $75,000 and over.

Those with less than a high school education reported lower percentages of women ever having a Pap test than women reporting higher educational levels. Approximately 81.7% of women with less than a high school education reported ever having a Pap test compared to 95.4% of those with a high school degree. Education beyond high school made little difference.

## Percent of Women Reporting Ever Having a PapTest by Age, 2000
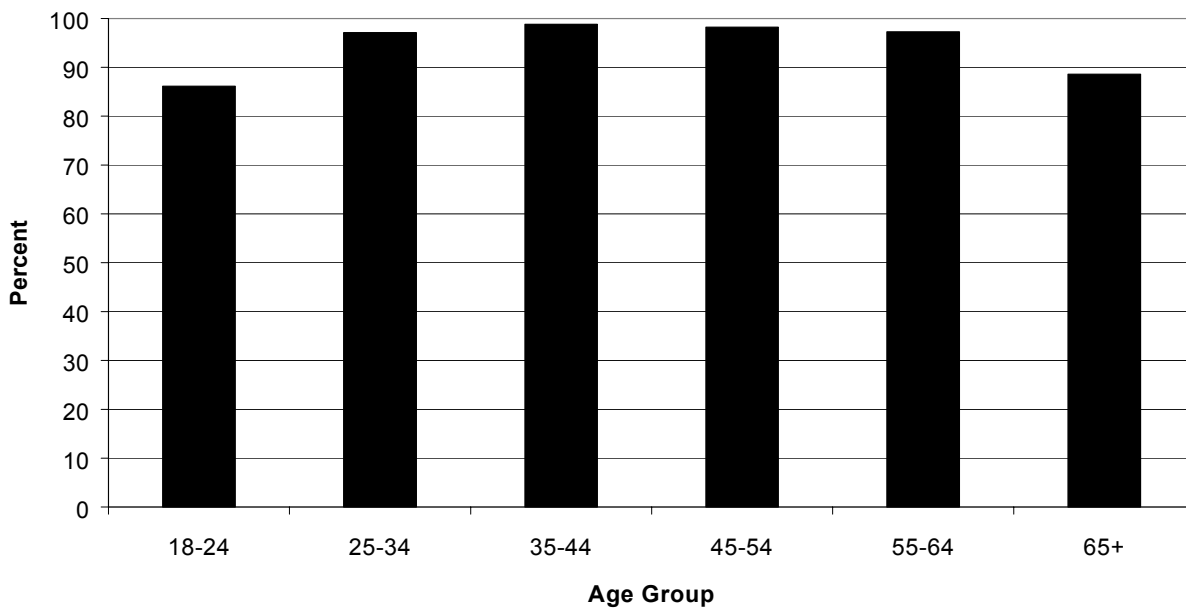
Percent of Women Reporting Ever Having a Pap Test by Income, 2000
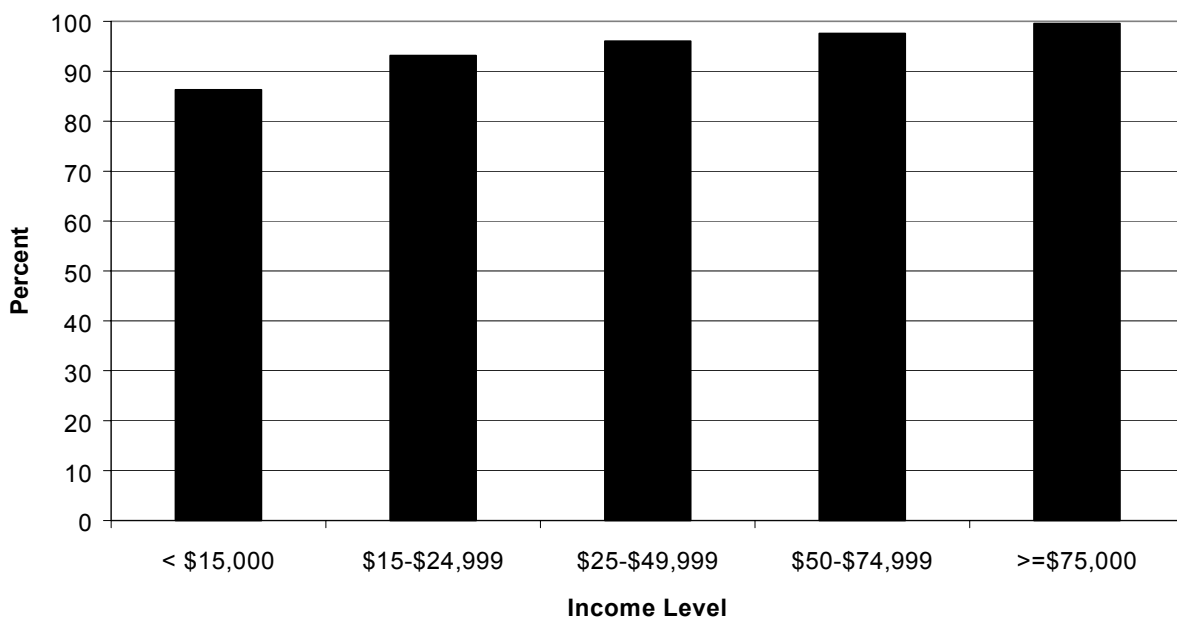
When asked why their last Pap test was done, 94.5% of the responding females reported it was part of a routine exam.   The greatest percentage of women reporting having their last Pap test done as part of a routine exam were ages 55-64 (97%). Approximately 5% reported having a current or previous problem as the reason for their Pap test. Respondents between the ages of 35 and 44 years had the highest percentage reporting that their last Pap test was done to check a current or previous problem (7%).

Although they had a Pap test at one time in their lives, about 13.4% of respondents reported in 2000 that they had their last Pap test more than three years ago. At the same time, 68.7% had their test within the last 12 months.

Respondents Reporting Length of Time Since Last Pap Test, 2000
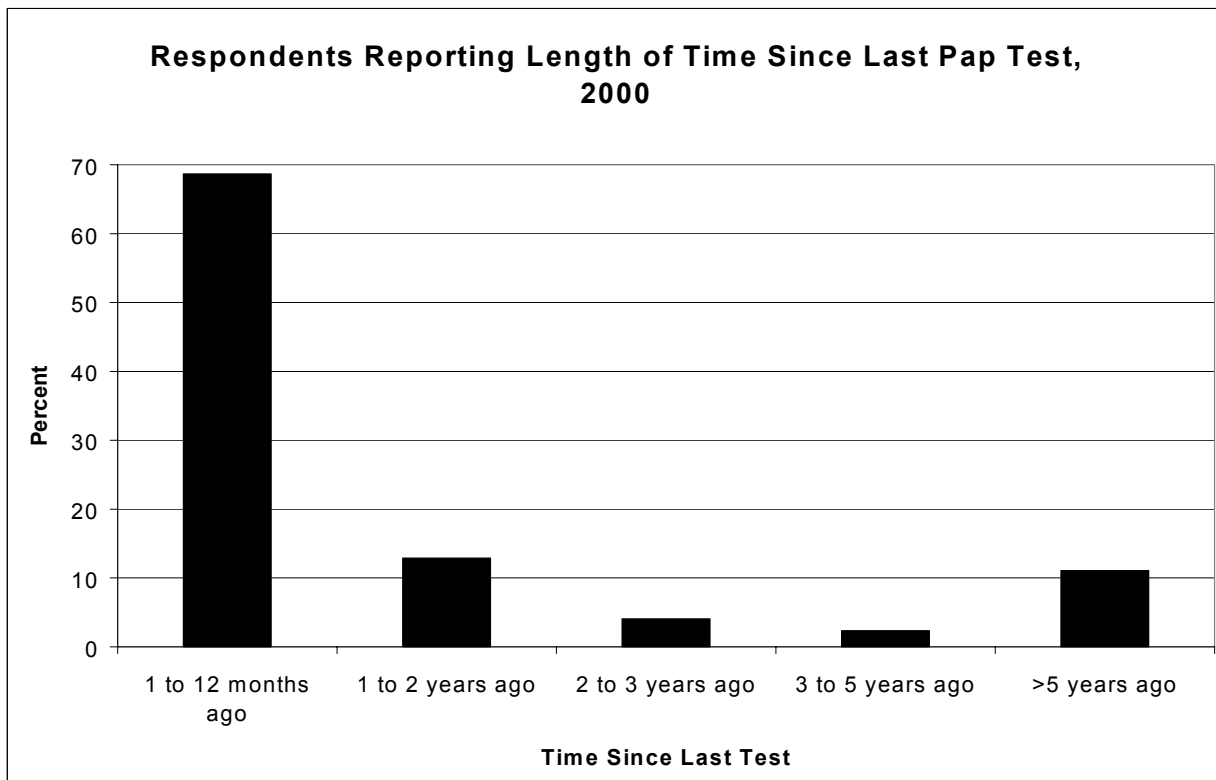
To separate respondents not at risk for uterine cancer, female respondents were asked if they had a hysterectomy (removal of the uterus). About 19.6% of the women surveyed in 2000 responded "yes." The largest percentage of respondents were ages 65+ (41.8%).

Comparison With Other States[+]

In 2000, the national median for the percentage of women who had ever had a Pap test was 94.9% compared to 95.8% in Iowa. A similar percentage of women reporting a Pap test during the past three years was observed. The percentage in Iowa was the same as the national median of 86.8%.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options are not considered in determining the state comparison figures.

Year 2010 Health Objectives for the Nation

The national health objectives for the year 2010 include an increase to at least 95% in the proportion of women over the age of 18 with an intact uterine cervix (never had a hysterectomy) who have ever had a Pap test. The 2000 Iowa BRFSS sample reports that 96% of women over the age of 18 with an intact uterine cervix had ever had a Pap test. This percentage exceeds the Year 2010 Health Objective target.

The national health objectives for the year 2010 also include an increase to at least 85% in the proportion of women over the age of 18 with an intact uterine cervix who have had a Pap test in the last two years. According to the 2000 Iowa BRFSS sample, 86.1% of this group had a Pap test in the last two years. This percentage meets the Year 2010 target, the first year this target has been met.

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HIV/AIDS

Background

As of December 2000, 774,467 Americans have been diagnosed with AIDS. At least 448,060 of them have died. In 1998 alone 13,426 people in the United States died of AIDS and there were 46,247 new cases. New cases of AIDS decreased 18% between 1996 and 1997. From 1997 to 1998, AIDS incidence decreased by only 11%, suggesting that the decrease in AIDS incidence is slowing. This same pattern held true in 1999.

A slowing in the decrease of AIDS incidence is paralleled by a slowing in the decrease in the number of AIDS deaths. Deaths decreased 42 % from 1996 to 1997, but by only 20 % from 1997 to 1998. Again, a similar decrease was seen from 1998 to 1999.

The number of persons living with AIDS continues to increase. At the end of 1997 there were 269,777 persons in the United States living with AIDS. By the end of 1998, there were 297,137 persons living with AIDS, a 10 % increase. In 1999 the number was around 320,000. Since reporting began, 1,196 cases of AIDS have been reported in Iowa through December 31, 1999.

The decreases in AIDS incidence and the number of AIDS deaths, first noted in 1996, are thought to be the result of new treatments. Although a substantial decline in AIDS incidence continues, the slowing rate of the decline may indicate that much of the benefit of new therapies has been realized.

Many of the new diagnoses are occurring among African-Americans, women, and people infected heterosexually, with an increase observed among Hispanics. These data must be used to ensure targeted prevention efforts to reach those in greatest need, with a primary focus on young African-American and Hispanic men and women at risk through sexual and drug-related behaviors.

In Iowa, Black non-Hispanic people constitute only 1.7% of the population, but account for 10% of all Iowa AIDS cases. The Hispanic population in Iowa is 1.2% but Hispanic AIDS cases are now at 3%.

Estimates suggest that 650,000 to 900,000 Americans are now living with HIV, and at least 40,000 new infections occur each year. HIV infection, the precursor to AIDS, was the fifth leading cause of death among people 25-44 years old in 1998. It accounted for 6.6% of deaths from all causes in this age group in the U.S. AIDS was the sixth leading cause of years of potential life lost before the age of 65 in the United States in 1990 accounting for 5.4%.

In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown from $55,000 to $155,000 or more per person. These figures represent the amount of money saved by preventing just one case of HIV.
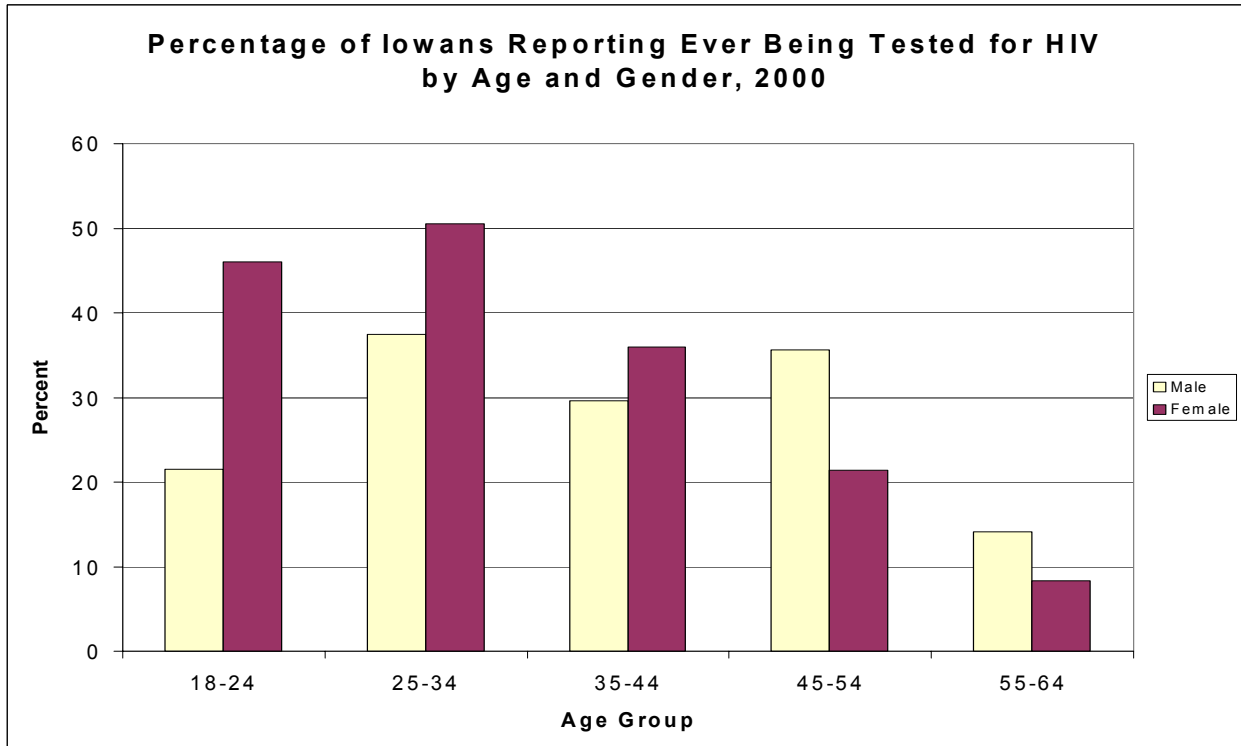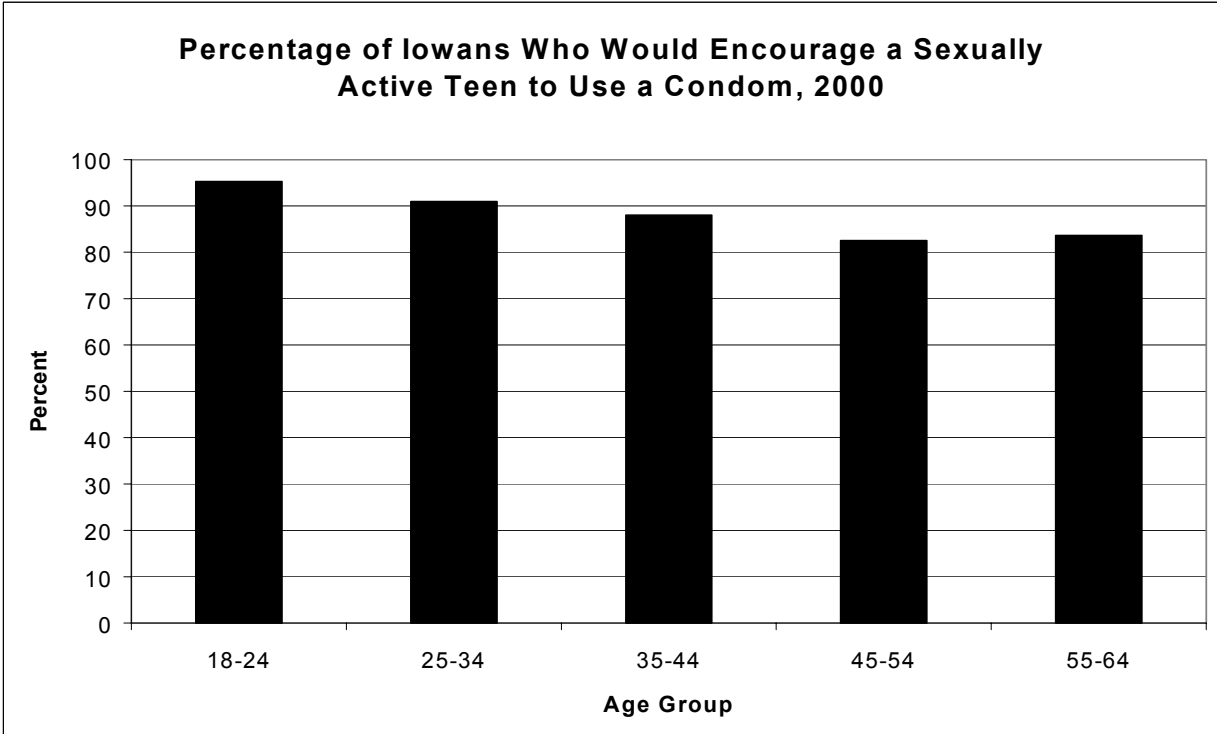
AIDS in Iowa

When survey respondents were asked in what grade AIDS education should start, 51.9% said first to fifth grade and 29.1% said grade sixth through eighth. Other responses included 6.7% in kindergarten and 3% between ninth and twelfth grades.

Grade in School in Which Respondents Think HIV and AIDS Education Should Begin, 2000
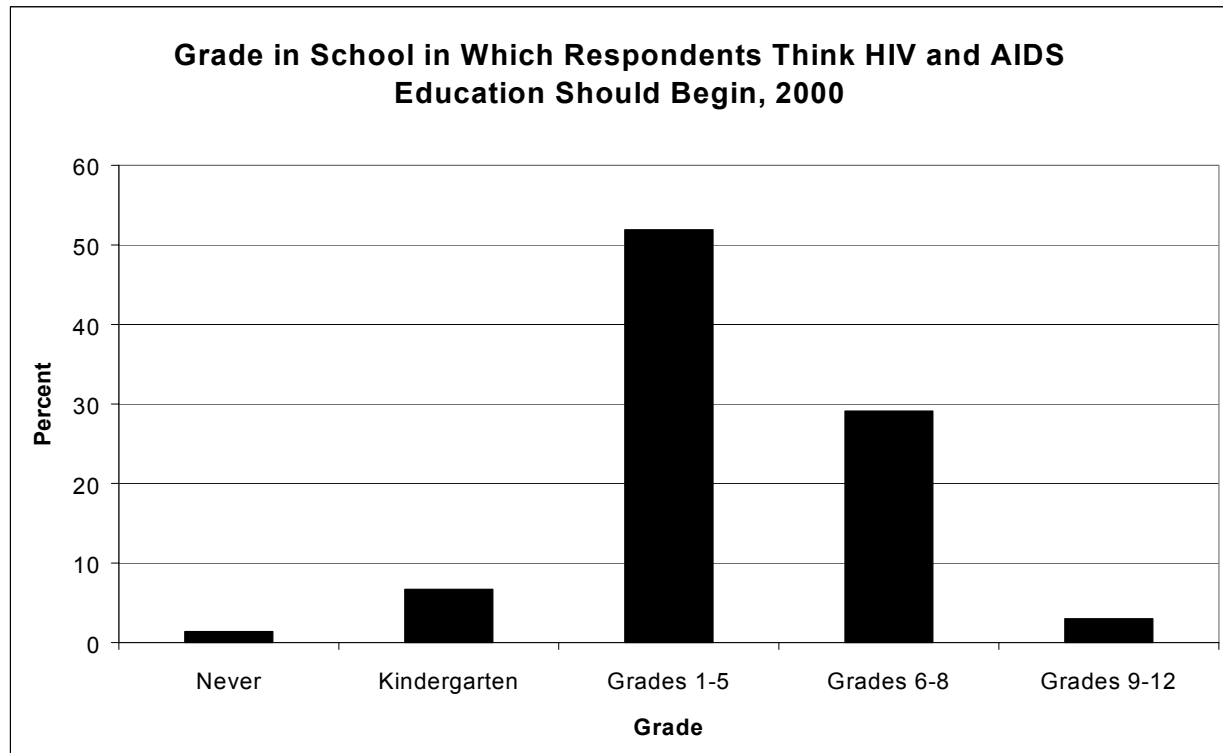
Respondents were asked whether they would encourage their sexually active teenager to use a condom. Eighty-eight percent said yes, 1.4% said no, and 7.6% said they would give other advice. Younger respondents were more likely than older respondents to report they would encourage a sexually active teen to use a condom. Approximately 95.3% of those between 18 and 24 years old responded affirmatively compared to 83.6% of respondents between ages 55 and 64. AIDS questions were not asked of people who were age 65 and over.

Respondents were asked about their chances of getting infected with Human Immunodeficiency Virus (HIV), the virus that causes AIDS. Of all respondents, 1.6% reported being at high risk, 3.6% medium risk, 25.5% low risk, and 67.4% reported having no risk of contracting HIV. The percentage of respondents reporting no risk increased by age, ranging from 53.3% between age 18-24 and 81.1% between ages 55-64.

Over 30.5% of respondents reported ever being tested for HIV, with the largest proportion of respondents between the ages of 25-34. Only 10.9% of those between 55-64 reported ever being tested. Almost 28.6% of males compared to 32.3% of females had been tested.

Percentage of Iowans Who Would Encourage a Sexually Active Teen to Use a Condom, 2000

Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2000

When asked to give the main reason for their last HIV blood test, respondents gave many answers. Although no one response had sufficient numbers to be reliable, the top responses were "Just to find out if you were infected", "pregnancy", and "to apply for life insurance".

Each of the respondents who had received an AIDS virus blood test was asked the place for the test site. Respondents gave the following answers: The two most commonly reported places were "Hospital, emergency room, outpatient clinic" (31.8%) and "Private doctor, HMO" (19.2%).

Respondents who had an HIV blood test were asked whether they received the results of the test. Almost 86.4% reported receiving the results while 13% did not. Of those respondents who received the results, only 35.4% indicated they received counseling for those results.

Comparison With Other States[+]

The percentage of respondents who said they would encourage a sexually active teenager to use condoms was higher in Iowa (90.8%) compared to the nationwide median (88.9%). Iowa also had a lower percentage of respondents not ever having their blood tested for the AIDS virus. Approximately 67.3% of Iowa respondents reported they were not tested for HIV within the past 12 months, compared to 64.3% of respondents nationwide. Furthermore, the state percentage not receiving an AIDS test within the past twelve months was up from 65.7% in 1999.

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3.   Iowa Department of Public Health, *Surveillance Report,* January 2000

4.   Murphy, SL, Deaths, *Final* Data for 1998, *National Vital Statistics Reports, Vol. 48, No.11,* Division of Vital Statistics, National Center for Health Statistics, 2000.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options are not considered in determining the state comparison figures.

QUALITY OF LIFE AND DISABILITY

Background

Quality of life may be defined as an individual's satisfaction or happiness with life in areas he or she considers important.[3] Quality of life is also known as life satisfaction, subjective well being, overall quality of life, or global quality of life.

It is a broad concept that includes many dimensions of life that contribute to its richness, pleasure, and pain. One such dimension is health (physical and mental well-being).[3] But many other areas play a role such as relationships; social, community and civic activities; personal development; fulfillment; and recreation.[3]

One's assessment of quality of life involves considerations of both how important a particular area of life is for that person, and how satisfied the person is with it. Most of the questions asked in this survey involved just the latter consideration, but they are related to concepts that are generally important to most people.

The World Health Organization's *International Classification of Impairments, Disabilities, and Handicaps*, defines disability as "any restriction (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being." Impairment is defined as "any loss or abnormality of psychological, physiological, or anatomical structure or function."[2]

The Current Population Survey (CPS) includes questions about work disability (a condition that limits the kind or amount of work they can do) or a severe work disability (a condition preventing them from working at all). According to this definition, 17.2 million people, or 9.9% of the 1998 working-age U.S. population (16-64 years old) had a disability that prevented or limited work.[1]

In 1994, approximately 7.4 million Americans used Assistive Technology Devices (ATDs) to accommodate mobility impairments in the United States.[4]

The percent of non-institutionalized persons reporting disability increases with age for every level of disability severity. In 1991, the total proportion of disabled was nearly twice as high among women as among men within each age group. Approximately 15% of women 45-64 years of age reported some disability. This proportion increased to 24% and 41% for women aged 65-74 years and 75 years of age and over, respectively.

Disability in Iowa

In 2000, 16% responded "yes" to being limited in any way in activities due to an impairment or health problem. There was little difference between males and females in reporting being limited in their activities (16.1% vs. 15.9%). Those age 65 and older were more likely to report being limited in their activities compared to younger respondents. Around 24.1% of this group reported being limited. People with less than a high school education (24.6%) and incomes less than $15,000 (26.8%) also reported higher percentages of limitations.

Self-Reported Limitation Due to an Impairment or Health Problem by Income, 2000
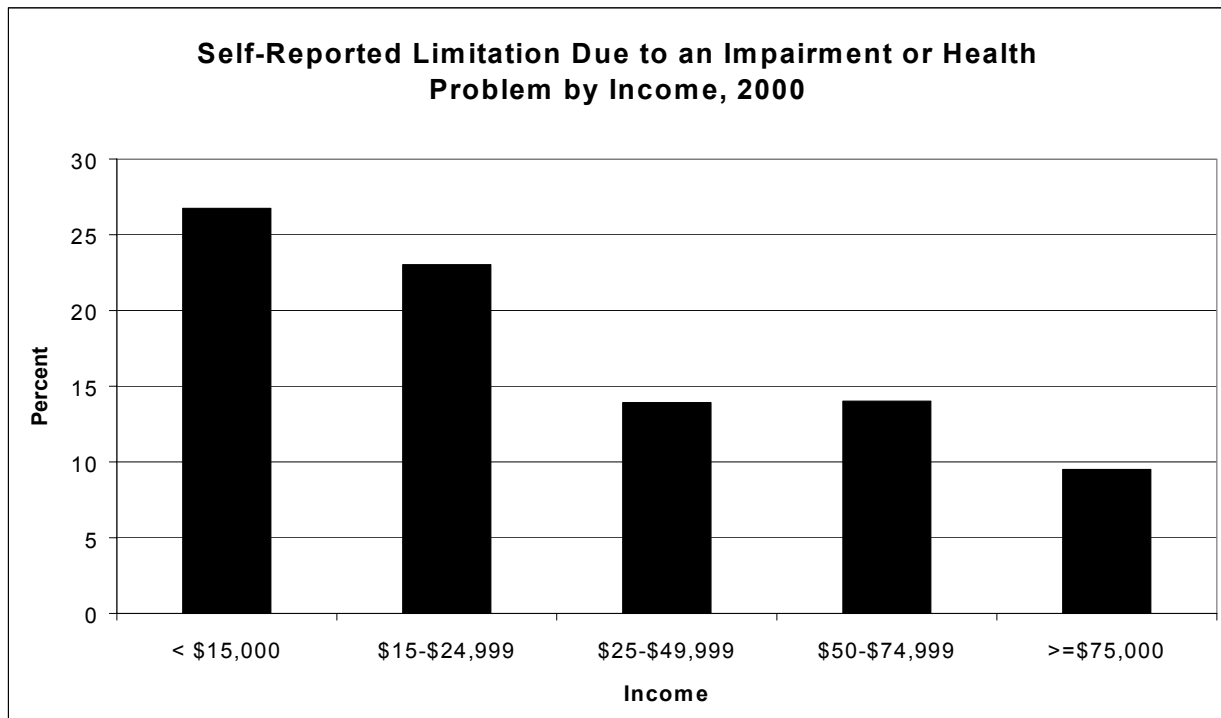
The types of major impairment or health problem listed for people who are limited in activities most commonly were back and neck problems (20.2%), arthritis or rheumatism (15.2%), and fractures and/or bone or joint injuries (10.3%). Almost 25% listed 'other impairment' indicating that the list of choices may not be as comprehensive as would be desirable.
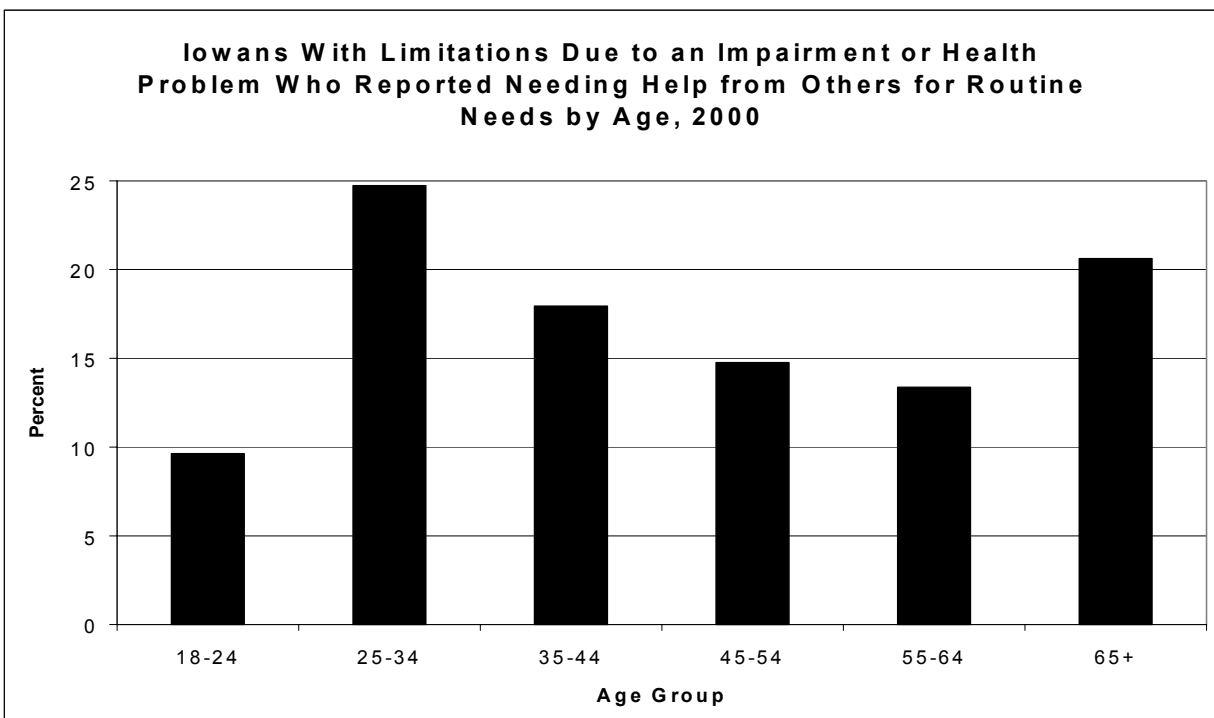
The rate of arthritis or rheumatism was higher for women (20%) than men (10.2%) making it the most extreme sex difference of any limiting health problem. It was also the most frequently mentioned limiting problem for those who were age 65 and older (22.5%).

About 3.7% of persons limited in their activities reported needing the help of others with their personal care needs. Females (5.2%) were more likely than males (2.2%) to report needing assistance. Those individuals between the ages of 25-34 years had the highest percentage needing assistance compared to all age groups (6.8%). Respondents with incomes less than $15,000 were most likely to need help compared with other respondents (12.4%).

A greater proportion, 17.6%, needed the help of others in handling their routine needs. This proportion was highest for the 25-34 year age group (24.7%), and an income less than $15,000 (30.4%).

When asked how many days in the past 30 days pain made it hard for them to do their usual activities, 22.8% of people reported at least one day in the past 30 days. Of these, 30.4% said 1-2 days, 25.9% said 3-7 days, 7.8% said 8-14 days, and 36% indicated 15-30 days of pain that restricted usual activities.

Around 43.6% of the respondents also reported feeling sad, blue, or depressed for at least one day of the past 30 days. Of those 50% of people were sad, blue, or depressed for 1-2 days. For 30.2% this feeling lasted for 3-7 days, 7% lasted 8-14 days, and 12.9% lasted 15-30 days. Women tended to indicate having more sad, blue, or depressed days than men.

Iowans With Limitations Due to an Impairment or Health Problem Who Reported Needing Help from Others for Routine Needs by Age, 2000

Within the past 30 days, 58% reported feeling worried, tense, or anxious for at least one day. Of those respondents, 36.5% reported these feelings one to two days during the past month, 34.8% reported 3-7 days, 10.8% reported 8-14 days, and 17.8% reported 15-30 days.

Of the respondents asked how many days they felt they did not get enough rest or sleep, 66.2% reported not getting enough sleep for at least one day of the past 30 days. The number of days without enough rest was highest when the educational level was some college or technical school (mean = 8.61 days) and decreased steadily with age from a mean of 11.56 days for 18-24 year-olds to 3.39 for 65 and up.

The proportion of people who said they felt very healthy and full of energy 15-30 days during the past 30 days was 77.1%. People of older age, those with less education, and persons with lower incomes were most likely to report feeling very healthy and full of energy for none of the past 30 days.

Objectives

While increasing perceived quality of life for all individuals is important, a very individualistic approach is often necessary, since one's quality of life depends on his or her unique values and the total environment. Goals for people with disabilities include the prevention of secondary conditions related to their disabilities that negatively impact their quality of life.

BIBLIOGRAPHY FOR QUALITY OF LIFE/DISABILITY

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ASTHMA

Background

Asthma, a chronic inflammatory airway disease of the lungs, is now the most common chronic disease of childhood. Prevalence among adults and children has doubled in the last 15 years with more than 200,000 Iowans experiencing at least one asthmatic episode in the last year.

Asthma is a leading cause of inpatient admission and of unscheduled emergency department and physician office visits in Iowa. The direct medical costs of asthma, including inpatient and outpatient care and medications, are estimated to be about $60 million and indirect socio-economic costs close to $40 million each year in Iowa. Based on national data, it is estimated about 100,000 days of school are missed each year due to asthma by Iowa children and half of all children and a quarter of all adults with asthma miss at least one day of school or work each year.

The causes of asthma are not known for certain but are most likely a combination of genetic and environmental risk factors. Those risk factors for asthma include family history of asthma and allergies, exposure to indoor air pollution (tobacco smoke, animal dander, dust mites, cockroaches, occupational exposures to more than 250 substances), outdoor air pollution (burning leaves, pollen, air pollutants), obesity and lack of exercise. Diet and early exposure to certain infectious agents may provide some protection. Once someone develops asthma, he/she often becomes especially sensitive to any exposures to the environmental risk factors listed.

Symptoms of asthma include repeated episodes of wheezing, coughing, and shortness of breath.

Asthma in Iowa

In 2000, 8.5% of respondents reported ever being diagnosed by a physician with asthma. Among these individuals, 74.4% currently have asthma, including a greater proportion of females (75.5%) than males (72.9%).

The greatest percentage of respondents who had ever been told they have asthma that currently have asthma were ages 65 and over (82.9%), followed by individuals between ages 25-34. The lowest percentage was observed in respondents between ages 18-24 (63.5%).

Individuals reporting lower incomes had a higher proportion of respondents who currently have asthma. Eighty-nine percent of those with an income of $15,000 or less have asthma compared to 60.6% of respondents with an income of $75,000 or more.

Percentage of Iowans Ever Having Asthma Who Reported They Currently Have Asthma by Age, 2000
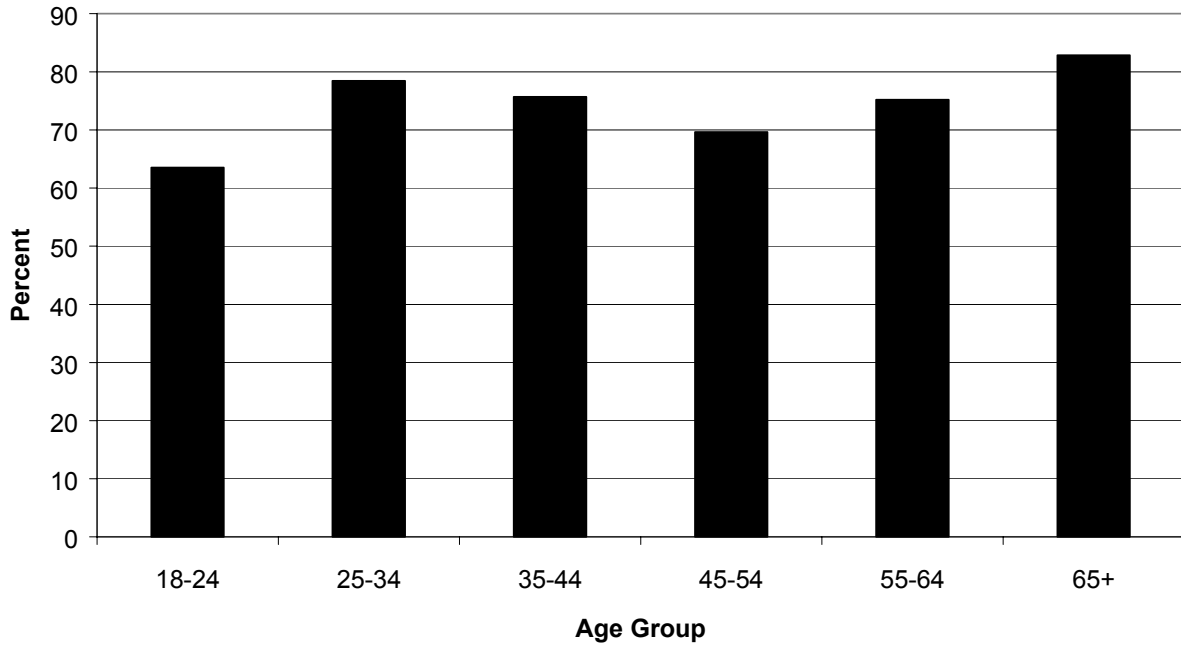
Percentage of Iowans Ever Having Asthma Who Reported They Currently Have Asthma by Income, 2000
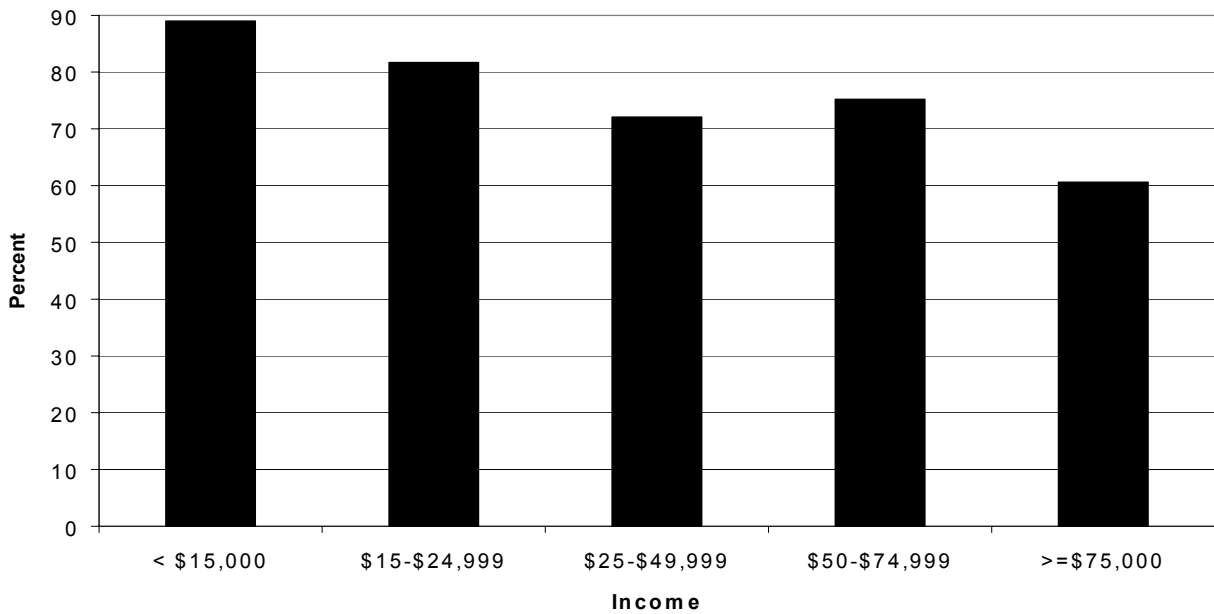
Comparison With Other States[+]

Approximately 8.5% of Iowans surveyed reported they were ever told by a doctor they had asthma. This percentage ranked third lowest of all the states. It was far lower than the 10.5% median for the nation as a whole.   However, Iowa's 77% figure for those who were ever told they had asthma who are reporting they currently have asthma is the fourth highest in the nation. The median is 71.7% for the nation.

[+] Figures in the comparison with other states section may not exactly agree with figures presented earlier. This is because 'Don't Know' and 'Refused' options' are not considered in determining the state comparison figures