

IOWA

HEALTH RISK BEHAVIORS

1997 - 1998

FINAL REPORT

FROM THE



Iowa Department of Public Health

State Center for Health Statistics

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Completed in cooperation with the Centers for Disease Control and Prevention,
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Acknowledgments

Thanks to the staff at the Center for Social and Behavioral Research, University of Northern Iowa, Gene Lutz, director; Mary Jane Crew, interviewer supervisor; and the interviewers who, under a contract with the Iowa Department of Public Health (IDPH), State Center for Health Statistics, collected the current data. Also, thanks to various IDPH programs whose individual staff members contributed by reviewing this report: Lorrie Graaf, Sandi Ryan, Frank Biagioli, Pat Young, Roger Chapman, Jill Myers-Geadelmann, Dr. Ronald Eckoff, Tim Lane, Phyllis Blood, Kathy Widelski, and Ralph Wilmoth.

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May 2000

The data reviewed in this report are made possible by the participation of Iowa residents. The Iowa Department of Public Health is very appreciative of the willingness of Iowans to take the time to participate in the survey.

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INTRODUCTION

Morbidity and mortality data have been recorded by health departments for quite some time. 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.

All states use a core questionnaire developed by CDC. It contains questions asked annually, and questions asked on a rotating basis, usually

every other year. Many states, including Iowa, also add questions of their own to provide more detailed information on issues of special interest.

This report focuses on the data collected during calendar year 1997 and 1998. Additionally, trends for some risk factors are also presented. The risk factors discussed are health care coverage, health status, cigarette smoking, alcohol consumption, body weight, hypertension and cholesterol awareness, injury control, women's health issues (including screening for breast and cervical cancer), diabetes, immunization, colorectal cancer screening, dental health, and HIV/AIDS awareness and behaviors.

Approximately 300 telephone interviews were conducted each month from January through December for 1997 and 1998 for a total annual minimum sample size of 3,600. 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 questions which are designed and administered by individual states to address locally identified health problems.

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

The sampling methodology in 1998 was changed from that used in 1997 and previous years. In 1997, households were selected randomly using the modified Waksberg three-stage cluster sampling technique. In 1998, a simpler disproportionate Stratified Sampling technique (DSS) was adopted. The sampling methodologies are designed to produce a random sample of Iowa telephone numbers, including unlisted numbers and new subscribers. The Waksberg method generates telephone numbers by using the first eight digits (the area code, prefix, and the first two suffix numbers) of the 10-digit telephone numbers.

From that number, a “cluster” of 100 numbers is further generated using the last two telephone suffix digits. These clusters are then screened by calling only the first telephone number generated in the cluster. If the number is residential, the entire cluster of 100 numbers is accepted. Once a cluster is screened and accepted, the 100 randomly ordered phone

numbers are called until three interviews are completed within each cluster. Business and non-working numbers are rejected. If three interviews from a cluster are not attained, all interviews from that cluster are destroyed and a new cluster is substituted.

When the first number in a cluster is a residential number, there is a high probability the cluster will contain a majority of residential numbers. This screening mechanism improves survey efficiency by 10 to 20 percentage points.

The DSS method also establishes groups of 100 numbers, but does not consider them as clusters. Instead, it divides these groups into two strata based on whether the first call is residential. If it is, this strata 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.

A total of approximately 300 interviews per month are conducted. Interviewers make multiple attempts to reach a number to complete an interview before replacing that number.

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

The Interview Process

The interviews were conducted daytime, evenings, and weekends with appointments made as needed to schedule or complete interviews. The phone calls started the second Wednesday of the month and continued for seven days or until the necessary interviews were completed. The average time to complete an interview was approximately 15 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 might be required, and few interviews might be completed.

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

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 percent 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.

However, 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. Further, denominators less than 500 should be reported as whole percents.

In addition, some people refuse to answer select questions but choose to complete the majority of the questions. Those interviews will still be used in the final count for the total sample size. However, as a result, they will not be counted on the specific questions they refused.

DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 3,600 respondents to the 1997 BRFSS included 1,477 adult males and 2,123 adult females. In 1998, the breakdown included 1450 males and 2204 females for a total sample of 3,654. A breakdown by gender, age, income and education follows.

Age and Gender Breakdowns For 1997 and 1998 Iowa Survey Respondents

Age	1997						1998					
	Male #	%	Fem #	%	Total #	%	Male #	%	Fem #	%	Total #	%
18-24	132	13.7	152	11.9	284	12.8	130	13.8	173	12.0	303	12.9
25-34	275	18.7	345	16.8	620	17.7	262	18.3	345	16.4	607	17.3
35-44	345	20.9	407	19.4	752	20.1	329	20.6	462	19.2	791	19.9
45-54	281	16.8	342	15.4	623	16.1	269	17.3	362	16.0	631	16.6
55-64	183	11.7	266	11.5	449	11.6	188	11.9	279	11.7	467	11.8
65-74	142	10.5	286	12.6	428	11.6	161	11.5	283	13.3	444	12.4
75+	116	7.5	317	12.0	433	9.8	110	6.5	296	11.3	406	9.0
Unk/ Ref*	3	0.2	8	0.3	11	0.2	1	0.0	4	0.1	5	0.1
Total	1,477	47.6	2,123	52.4	3,600	100.0	1,450	47.6	2,204	52.4	3,654	100.0

*Unknown or Refused

Income Distribution in 1997 For Iowa Survey Respondents

Income	1997#	1997%
<\$10,000	162	3.5
\$10,000- \$14,999	258	5.9
\$15,000- \$19,999	327	8.0
\$20,000- \$24,999	427	11.2
\$25,000- \$34,999	668	19.5
\$35,000- \$49,000	695	19.9
\$50,000- \$74,999	466	14.2
>\$75,000	286	8.5
Unk/Ref*	311	9.2
Total	3,600	100.00

*Unknown or Refused

**Income Distribution in 1998
For Iowa Survey Respondents**

Income	1998#	1998%
<\$15,000	392	9.3
\$15,000- \$24,999	735	18.4
\$25,000- \$49,999	1,346	38.0
\$50,000- \$74,999	524	15.6
>\$75,000	323	9.5
Unk/Ref	334	9.2
Total	3,654	100.0

*Unknown or Refused

**Educational Breakdown in 1997
For Iowa Survey Respondents**

Education	1997#	1997%
Never Attended School	4	0.1
Elementary	154	4.1
Some High School	234	6.7
High School Grad or GED	1361	38.4
Some College or Tech School	1005	28.6
College Grad	838	22.0
Unknown/ Refused	4	0.1
Total	3,600	100.00

**Educational Breakdown in 1998
For Iowa Survey Respondents**

Education	1998#	1998%
Less than High School Graduate	337	9.7
High School Grad or GED	1,375	38.4
Some College or Tech School	1,078	29.2
College Graduate	858	22.6
Unknown/ Refused	6	0.2
Total	3,654	100.00

HEALTH STATUS OF IOWANS

Background

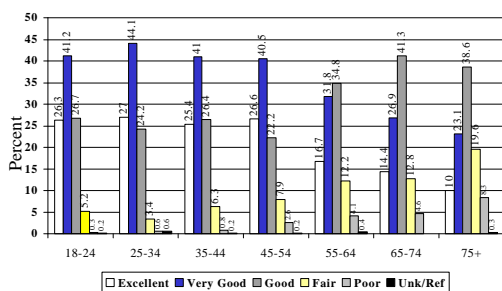
Self-ratings of health, defined by responses to a single question such as "How is your health, in general?," have been found to be significant predictors of mortality.¹ Additional studies which controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue 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 1998, when asked how their health was in general, 22.2% (1997=23.3%) of respondents reported excellent. Another 37% (1997=37.1%) said very good. While 29.3% (1997=28.1%) said good. 8.6% (1997=8.5%) reported fair, and 2.5% (1997=2.9%) said poor. The percentage of males reporting their health as excellent was 21.5% (1997=23.7%), with 22.8% (1997=22.9%) of females reporting their health was excellent.

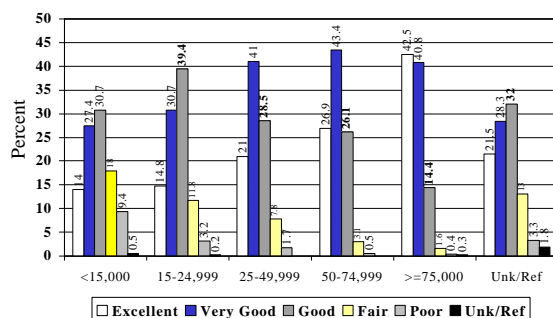
Self-Reported General Health Status by Age, 1998



Respondents who were most likely to report having "excellent" or "very good" health

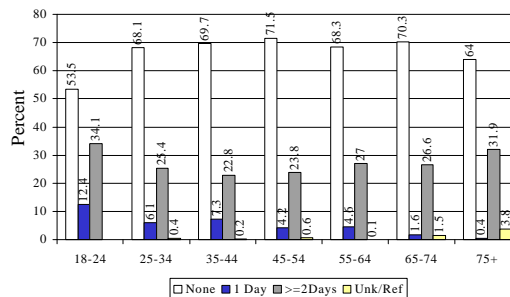
included those aged 25-34 (1998=71.1%; 1997=73.4%); those with annual income \geq \$75,000 (1998=83.3%; 1997=80.2%), and college graduates (1998=74.8%; 1997=73.7%).

Self-Reported General Health Status by Income, 1998



In answer to the question on how many days was their physical health not good in the last 30 days, 67% (1997=67.4%) of respondents reported none; while 5.6% (1997=5.8%) reported one day, and 26.7% (1997=26.2%) reported two or more days. When asked the number of days physical health was not good, the mean was 3.7 days (1997=2.9), with males reporting 3.1 days (1997=2.4) and females 4.2 days (1997=3.4).

Number of Days Physical Health Not Good by Age, 1998

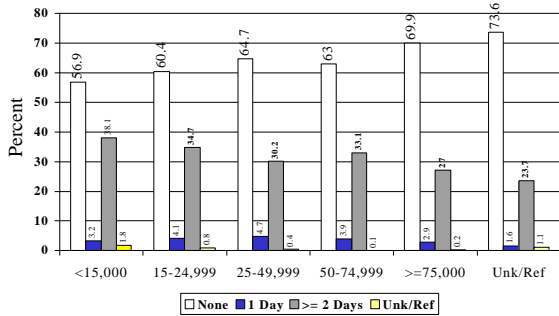


In general the likelihood that individuals reported their physical health as not being good for two or more days in the last 30 days increased as income levels lowered.

When responding to the question of how many days during the past 30 days their mental health was not good, 64.2% (1997=65.7%) of the respondents indicated none; 3.8% (1997=5%) one day; and 31.3% (1997=28.6%) two or more days. The mean number of days respondents mental health was not good was 3.6 days (1997=2.9), with males at 2.8 days(1997=2.2) and females at 4.3 days (1997=3.4).

The age group with the highest risk of reporting that it had two or more days in the last 30 days in which its mental health was not good was that aged 18-24 at 49.1% (1997=40.6%). The next closest age group was 25-34 at 39.2% (1997=36.8%).

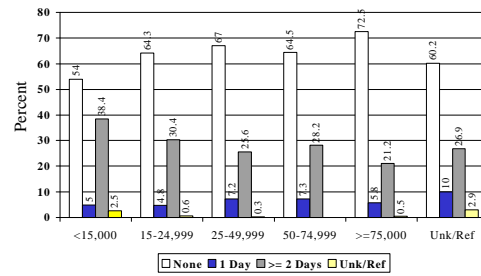
Number of Days Mental Health Not Good by Income, 1998



Respondents were also asked how many days during the past 30 days they were limited in their usual activities. Answers showed that 64.4% (1997=64.5%) of respondents reported none; 6.6% (1997=7.6%) reported one day; and 28.2% (1997=27.6%) reported two or more days. The mean number of days activities were limited for Iowans was 3.6 (1997=3), with the mean for

males at 4 days (1997=3.1), and for females at 3.4 days (1997=2.9).

Number of Days Limited in Usual Activities by Income, 1998



Comparison With Other States

In 1998, 43 states had higher rates than Iowa in the number of respondents reporting health status as fair or poor. The national median was 12.7%, while Iowa's was 11.2%.

Thirty-five of the 50 states plus Puerto Rico had a higher reported mean number of days respondents reported that their physical health was not good in the past 30 days. The national average was 3.1 days with Iowa at 2.9 days.

Nineteen of the 50 states plus Puerto Rico had a higher mean number of reported days in the past 30 days that the mental health of respondents was not good. The average for the nation was 3.0, with Iowa at 2.9 days.

Forty-four of the 50 states plus Puerto Rico had a higher mean number of days in the past 30 days where physical activities were limited because of physical or mental stresses. The median for the nation was 3.7 days, with Iowa at 2.9 days.

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HEALTH INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

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.

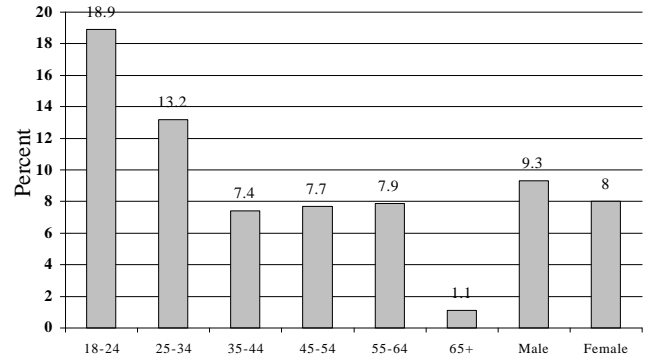
As noted in this study, the national median for individuals with no insurance is 13.0%. Now health care costs are escalating at an ever-increasing rate. This is especially true of particular sectors of costs such as pharmaceuticals. Such increases hit harder on individuals without health insurance and/or those living on fixed incomes.

Medicaid coverage of the non-elderly adult population is more common in the East, South Central, and Pacific regions of the United States than elsewhere. In addition, the percentage of the population insured through Medicaid varies considerably across the states. The insurance rate in New Hampshire was lowest at 4.8%. West Virginia at 16.0% and the District of Columbia at 19.6% had the highest. Iowa had 7.2% with Medicaid coverage compared to 10.9% of the United States non-elderly population.¹

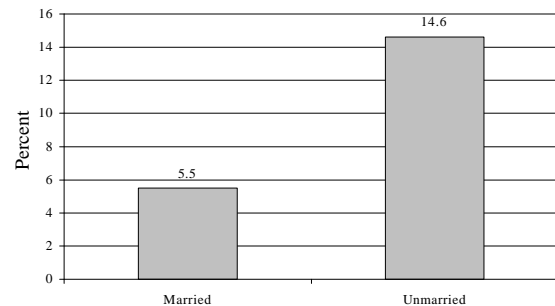
Health Coverage in Iowa

In 1998, 8.6% (1997=9.6%) of the survey respondents reported they had no health care plan (insurance). Specifically 9.3% (1997=10.4%) of males and 8.0% (1997=8.8%) of females responded that they had no health insurance.

Iowans With No Health Care Plan by Age and Gender, 1998



Iowans With No Health Care Plan by Marital Status, 1998

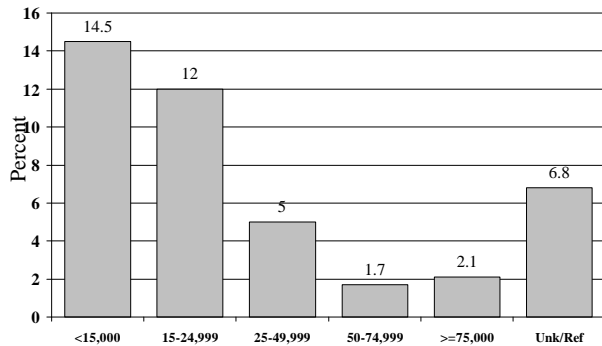


Individuals between ages 18-24 were least likely to have health insurance at 18.9 percent. Other individuals least likely to have insurance included the income group of <\$15,000 (17.9%), those who were unemployed (37.3%), those who were unmarried (14.6%), and those who weren't high school graduates (14.6%).

The survey also asked people if they could not afford to see a doctor in the last year on at least one occasion. Approximately 6.5% of the respondents answered "yes" to that question. A categorical breakdown shows the age group from 18-24 with 9.9%, those in the income category <\$15,000 at 14.5%, and those age 25-34 at 9.5% had the highest rate responding that they could not afford to see a doctor.

Respondents were asked how long it had been since they had visited a doctor for a routine checkup. 67.6% (1997=63.4%) said less than one year; 12.2% (1997=15.1%) said it was one year to less than two years; 8% (1997=8.8%) said two to less than five years, and 11.1% (1997=11.3%) said more than five years.

Iowans Unable to See Doctor Due to Cost by Income, 1998



Responding females were much more likely to have had a routine checkup within the last year (77.1% as opposed to 57.2% of males). Respondents over 65 were also more likely to have had a routine checkup in the last year (79%) than other groups.

Between 60 and 66 percent of those in each of the age groups up to age 55 who responded reported they had a routine checkup in the last year. When looking at income, there was relatively little variation. Respondents in all income groups reported a routine checkup rate between 66.3 and 71.3 percent.

Comparison With Other States

Only five states had a lower percentage of residents without health insurance. Iowa had 8.7% of its non-elderly population reporting no insurance. The median percentage for no health insurance in the 50 states and Puerto Rico was 13.0%.

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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. The age-adjusted mortality rate for coronary heart disease declined 42 percent between 1963 and 1985.

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.³ In the 1990s, the decline in heart disease deaths has slowed.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.¹

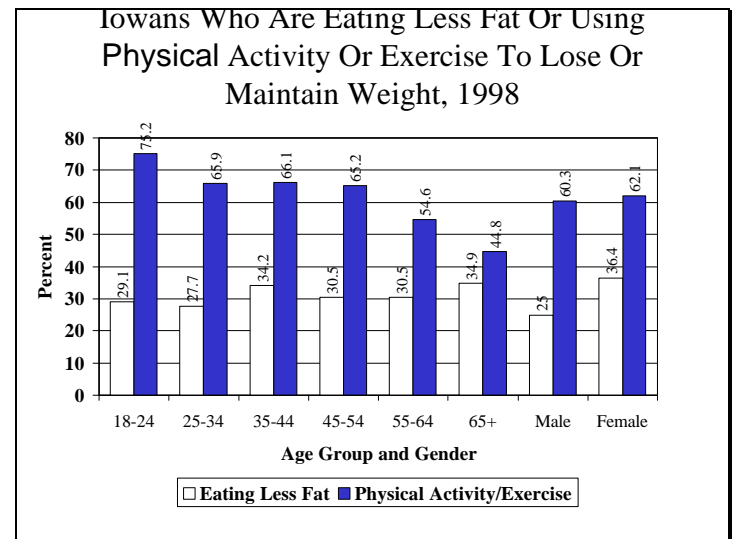
Clinical preventive measures can reduce heart disease risk. The measures include taking a small daily dose of aspirin (75 milligrams per day) after age 35; initiating hormone replacement therapy

Heart Disease in Iowa

(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.²

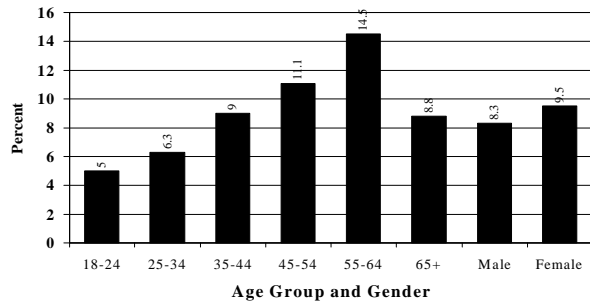
Heart Disease in Iowa

In 1998, 31.5% of Iowa respondents reported eating less fat. Responding females (36.4%) were more likely to eat less fat than males (25.0%).



It turns out that losing weight was not entirely the idea of survey respondents. Nine percent of them reported they were advised by a health care provider to lose weight for better health.

Iowans Who Have Been Advised By A Health Professional To Lose Weight, 1998



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HIGH BLOOD PRESSURE

Background

The death rate for cardiovascular disease declined dramatically Between 1973 and 1993.: It declined 46% for all cardiovascular diseases, 51% for coronary heart disease, and 60% for stroke.

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.¹

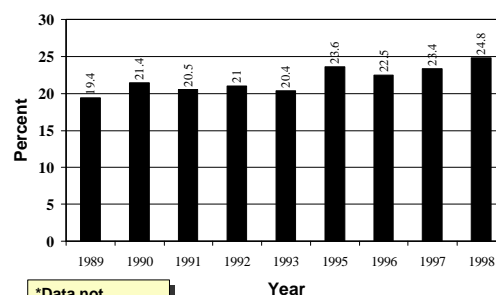
Average adult American blood pressure levels and the prevalence of high blood pressure declined between 1976 and 1991.³ However, since 1993, deaths from coronary heart disease have evened out, and progress in blood pressure detection, treatment and control has slowed.

High blood pressure is defined as systolic blood pressure that is greater than or equal to (\geq) 140 millimeters of mercury (mm hg) and/or diastolic blood pressure \geq 90 mm hg.

Nearly one-fourth of adults--as many as 50 million Americans--have elevated blood pressure or take antihypertensive medication.² 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.²

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.³

Iowans Who Have Ever Been Told Blood Pressure Is High, *1989-1998



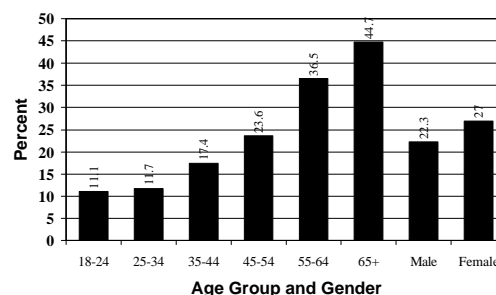
*Data not collected in 1994.

High Blood Pressure in Iowa

Survey respondents In 1998, reported that 86.7% of them had their blood pressure taken by a professional in the previous year.

The proportion of Iowans who were ever told that their blood pressure was high was 24.8%. For males, the prevalence was 22.3%, while it was 27.0% for females. Of those who had been told their blood pressure was high, 74.0% reported they had been told that more than once.

Iowans Who Have Ever Been Told Blood Pressure Is High By Age, 1998



It is important to keep in mind that there are limitations in interpreting self-reported data. The validity of the survey results depends on the accuracy of responses by the participants. Regarding high blood pressure (hypertension), the survey participants must understand the definition of hypertension. They must also be seen by a health care professional who is working with them to lower their high blood pressure

Comparison With Other States

Iowa was well above the median for all states in the number of people with high blood pressure. In 1997, the number of adults who were told their blood pressure was high amounted to a national median of 23.0%. (No figure is available yet for

1998.) Iowa reported 24.8% of its adult population as having high blood pressure in 1998 (1997=23.4).

Year 2000 Health Objectives for the Nation

The national health objectives for the year 2000 for high blood pressure state that at least 90% of the people with high blood pressure should take action to help control it. Their blood pressure should be kept at or below 140 over 90. No conclusions based upon BRFSS questions can be drawn to determine if 90% of Iowans are taking the necessary action to control their blood pressure.

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DIET AND OVERWEIGHT

Background

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).⁴ Overweight and obese adults are also at increased risk for gallbladder disease, respiratory disease, some types of cancer, gout, and arthritis.³

The origin of overweight involves many factors. It reflects inherited, environmental, cultural and socioeconomic traits.⁴ 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.²

The prevalence of overweight among adults has not declined for 20 years.⁴ Overweight tends to increase with age until about age 50 for men and age 70 for women.⁵

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.¹

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 (m²)]. Estimations of the prevalence of overweight in this report are based on BMI. Overweight For females is considered to be a BMI value ≥ 27.3 , and for males it is considered to be a BMI ≥ 27.8 .

The increase in the prevalence of 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.²

Health experts recommend a well-balanced, low-fat, high-fiber diet which offers a wide variety of foods as the best way to control weight. Such a diet enables individuals to maintain good lifelong dietary habits.

Regular physical activity, too, is important to successful weight management. Physical activity burns excess calories and improves the body's overall fitness.

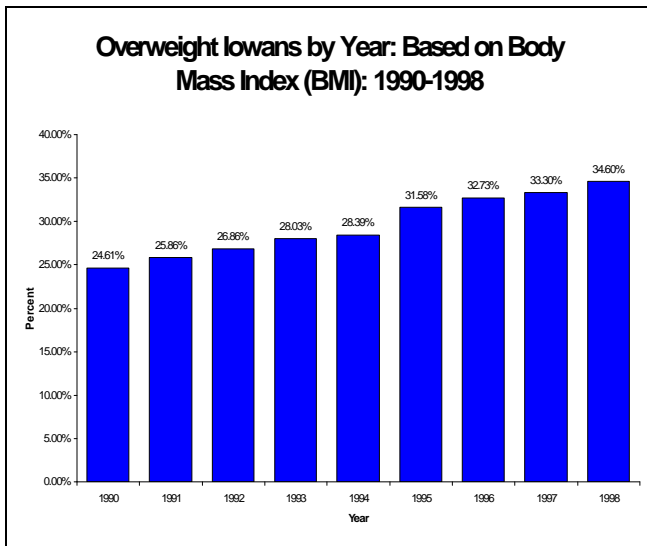
Rigid, calorie-restricted diets are not recommended for weight management. They limit the type, amount, palatability, and variety of food intake. Often, they are nutritionally unbalanced, unsafe, and difficult to follow.

Since weight management is difficult for most people, the *Healthy People 2000* 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.

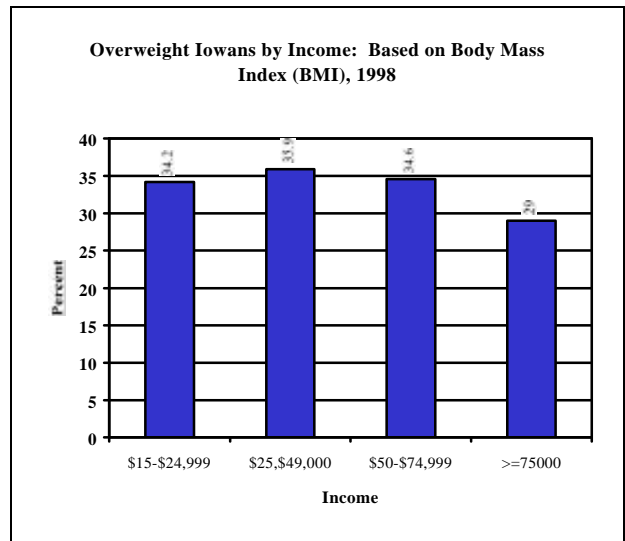
Strategies to achieve this objective include (1) improved accessibility of culturally relevant nutrition information and education to the general public, (2) a strong national program of basic and applied nutrition research, (3) development of the scope and magnitude of the National Nutrition Monitoring System, and (4) development of a sustained program to implement and evaluate the nutrition objectives.¹

Overweight in Iowa

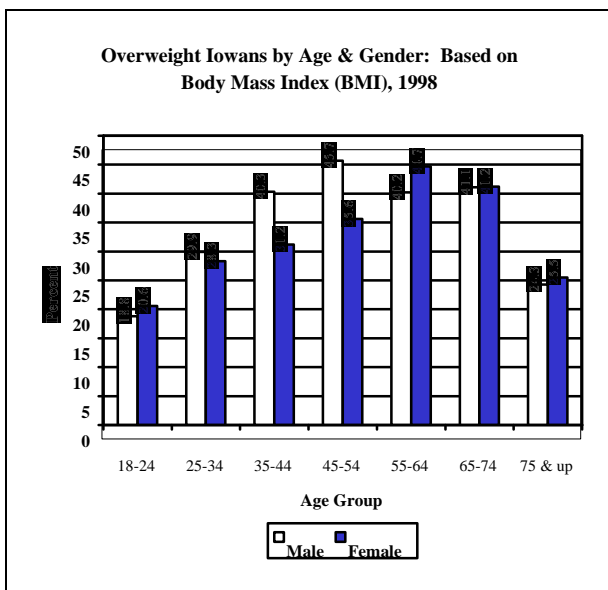
The BRFSS data show that 34.5% of Iowans are overweight based on BMI. More importantly, the percentage of Iowans who are overweight has steadily increased since 1990.



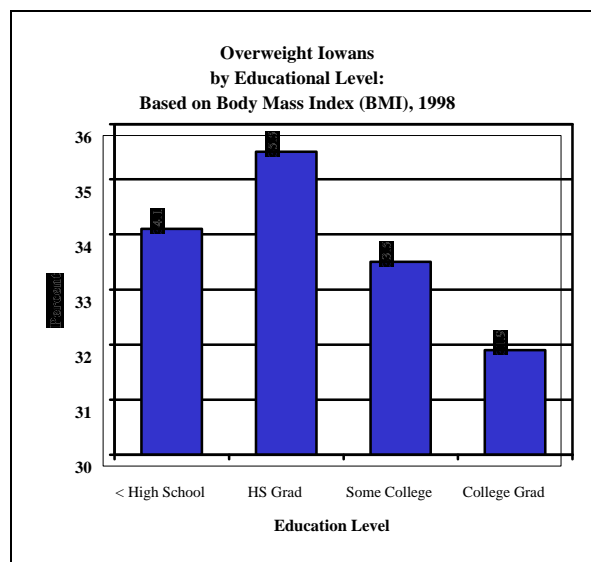
The self-reported weights show 35.8% of males and 33.3% of females are overweight based on BMI. The 18-to-24-year-old group had the lowest percentage of overweight individuals (males 18.8% and females 20.6%). Men in the 45-54-year-old age category were at highest risk for being overweight at 45.7%. Women in the 55-64-year-old age category were highest at 44.7% -- an increase from previous years.



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



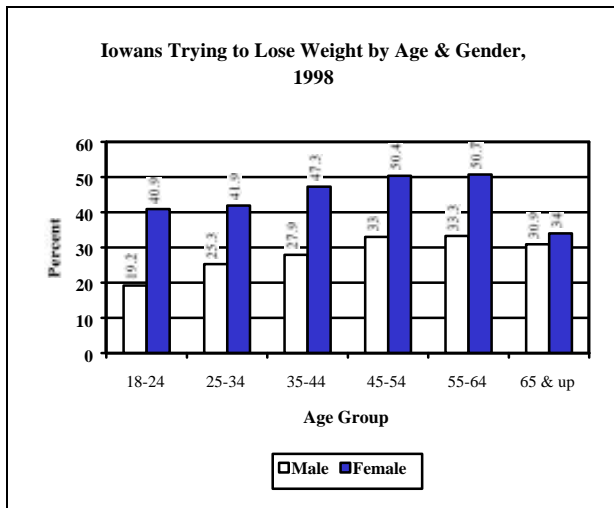
The survey showed that 36.5% of married Iowans were overweight, while 28.9% of unmarried Iowans were overweight.



Weight Control

Respondents in the 1998 survey reported that 36.1% of them were trying to lose weight. Of those who responded "yes," 28.3% were male and 43.2% were female.

When asked the difference between actual weight versus desired weight females (81.4%) were more likely to report weighing more than their desired weight than men (67.6%).



Year 2000 Health Objectives for the Nation

The weight health objectives for the nation for the year 2000 state the prevalence of overweight should be reduced to 20% among people ages 20 through 74 years. The trend in Iowa is in the opposite direction and this objective was not met in Iowa by the year 2000.

Difference Between Actual and Desired Weight By Gender, 1998

	Under Desired Weight	At Desired Weight	1-10 Pounds Over Desired Weight	11-20 Pounds Over Desired Weight	More Than 20 Pounds Over Desired Weight
Male	4.5%	27.9%	23.0%	18.7%	25.9%
Female	0.8%	17.8%	27.0%	19.3%	35.0%
Total	2.4%	22.2%	25.3%	19.0%	31.1%

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PHYSICAL ACTIVITY

Background

The proportion of Iowans with a health risk from a sedentary lifestyle hit an all-time low of 55% in 1997. This percent continued a downward trend evident since 1992. This level of 55% was down from a high of 63% in 1989. The 1998 figure for sedentary lifestyle, however, was an increase at 58.2%. This increase is creating a serious health concern.

In spite of the many factors that may play a role: in reducing the risk from a sedentary lifestyle, the prevalence of this risk is again rising. This is in spite of many positive developments in Iowa including:

- 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) The continuing strong economy.,
- 6) Conferences and training on physical fitness.
- 7) Continuous promotion of physical activity by the Iowa Department of Public Health and other organizations.
- 8) Continued development of programs by Parks and Recreation Departments.
- 9) The individual commitment of thousands of Iowans to make healthier choices,

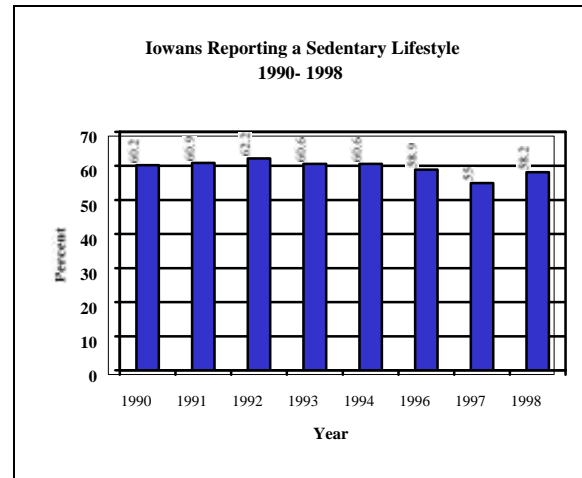
A sedentary lifestyle has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, and other debilitating conditions. Despite its risks; nearly 60% of Iowan adults remain inactive.

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

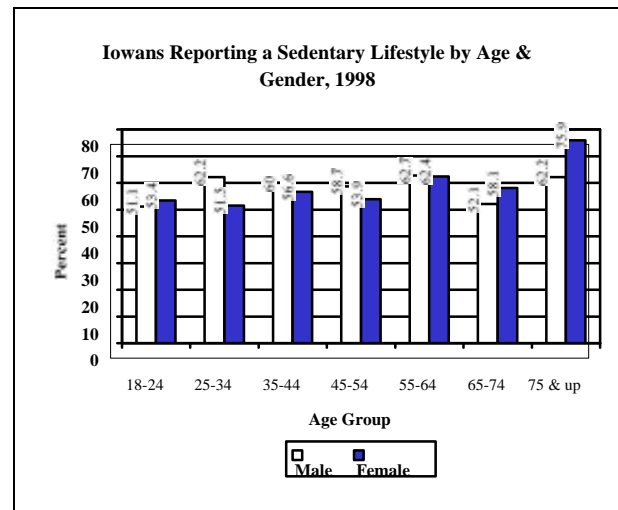
Physical Activity in Iowa

In 1998, a total of 58.2% of Iowans reported they lead sedentary lives (less than 20 minutes per session of activity, and/or less than three

sessions per week of activity during the past month). Inactive Iowans consisted of 58.5% of males and 58.0% of females.



Groups who showed a higher risk for a sedentary life included the widowed (68.4%), those over age 75 (71.2%), those in the \$10,000-14,999/year income category (70.3%), those unable to work (76.1%), and those who had only attended elementary school (76.0%).

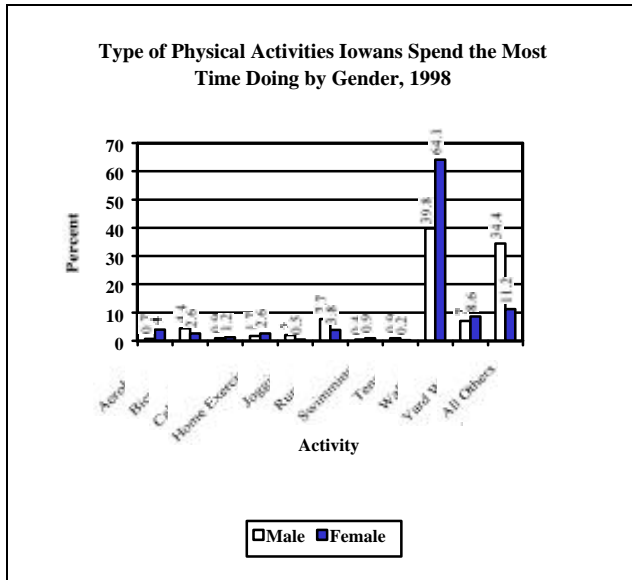


Almost half (52.5%) of adults who said they exercised reported walking as their primary activity. The next most prevalent activity reported was a classification of "all other activities" at 22.3%. Next is 7.8% for yard work and 5.7% for running. No other activity exceeded 5%.

Comparison With Other States

Iowa ranked 22nd for adults with no leisure time physical activity when compared to the 50 states plus the District of Columbia and Puerto Rico. Ranking is in ascending order. The median in the U.S. was 27.7%, while Iowa reported 26.7% of the adult population with no leisure time physical activity.

Also, in 1998, 23 states had a higher prevalence of those reporting regular and sustained physical activity than Iowa. The median percentage of adults engaging in regular and sustained physical activity for the U.S. was 20.4%, with Iowa reporting 19.8%.



In 1998, only 19.8% (19.9% in 1997) of the survey respondents reported they had regular and sustained patterns of physical activity. This means five or more times per week, 30 or more minutes per session, regardless of intensity). There was little difference between males (20.8%) and females (18.9%).

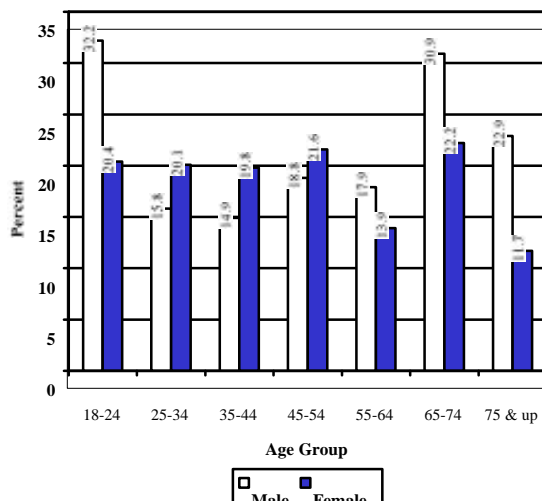
Those groups who were more likely to have had regular and sustained patterns of physical activities in 1998 included males ages 18-24 (32.2%), those whose annual income was over \$75,000 (28.2%), and college graduates (22.2%).

Year 2000 Health Objectives for the Nation

The national health objectives for the year 2000 call for an increase to at least 60% in the proportion of people age 6 and older who participate in moderate physical activity three or more days per week for 20 or more minutes per occasion.

Although the age groups are not directly comparable, it is clear that Iowans are not meeting this objective. According to the BRFSS, only 19.8% of Iowa's adults 18 and older are participating in regular physical activity.

Iowans Reporting a Regular & Sustained Pattern of Physical Activity by Age & Gender, 1998



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FRUIT AND VEGETABLE INTAKE

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.⁵

Populations that 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: 1) increases fiber intake, 2) decreases calorie intake, 3) increases antioxidant vitamin intake, 4) reduces the actions of some cancer-causing compounds, and 5) decreases fat intake.^{1,5}

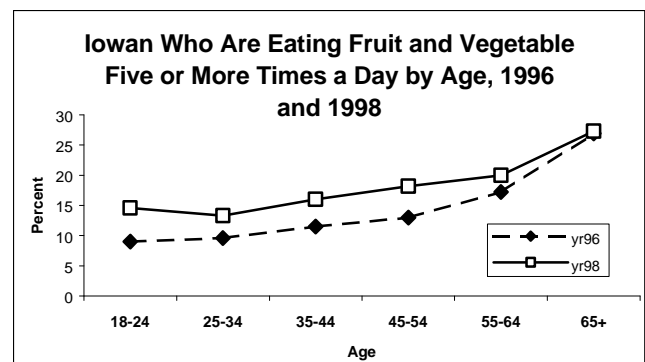
Individuals over age 2 can reduce chronic disease risk by eating more vegetables, fruits, whole grains, seeds, and nuts. They should be encouraged to eat five or more servings of fruits and vegetables daily to meet current dietary guidelines set by the federal government.²

Appropriate strategies to increase fruit and vegetable intake include: 1) improved nutrition education in schools; 2) development of a strong national nutrition research agenda; and 3) more readily available nutrition information and education for the general public.⁴

Fruit and Vegetable Intake in Iowa

Fruit and vegetable intake is increasing in the United States as well as in Iowa. The percentage of Iowans who eat five or more servings of fruits and vegetables per day increased from 15.1% in 1996 to 18.6% in 1998. The percentage of males eating five or more servings per day increased from 10.9% to 15.3%. The percentage of females eating five or more daily servings of fruits and vegetables increased from 18.9% to 21.7%.

The following figure shows that intake of five or more fruit and vegetable servings daily increased in every age group. Data on fruit and vegetable intake was not collected in 1997. In both 1996



and 1998, males ate fewer fruits and vegetables daily than females did.

Less than one-fifth of Iowans report eating five or more fruits and vegetables daily, except in the 65-and-over age group. These older Iowans reported meeting the five-a-day standard at the rate of 27.3%.

Groups at highest risk for not eating five or more fruits and vegetables per day are younger people ages 18-34 (<15%), and African American respondents of all ages (9.6%).

Comparison With Other States

Iowans' 1998 fruit and vegetable intake (18.6%) remains significantly lower than the national median (23.8%).

Year 2000 Health Objectives for the Nation

The national health objectives for the year 2000 state that 100% of adults need to increase complex carbohydrates and fiber-containing foods in their diets. This includes five or more daily servings of fruits and vegetables. The percentage of Iowans who actually meet this goal has fallen from a high of 19.2% in 1990 to the current 18.6%. Iowans continue to fall far below this goal.

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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.³

For nearly two decades, average blood cholesterol levels in the United States have fallen. Between 1976 and 1993, average adult cholesterol dropped from 213 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 27% to 19%.²

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.

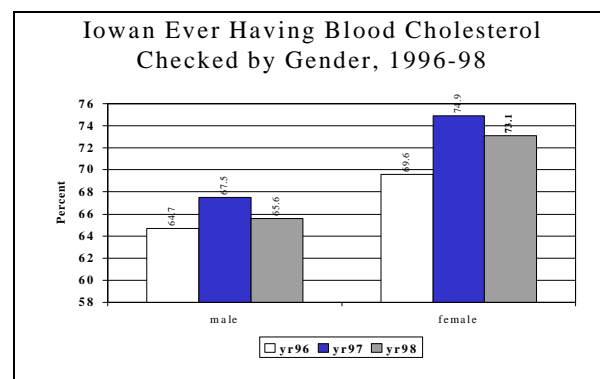
These approaches complement one another and represent a coordinated strategy for reducing the risk of coronary heart disease.¹

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

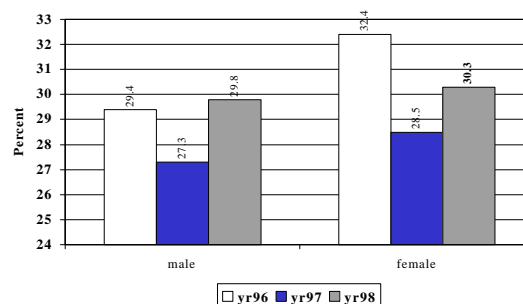
High Blood Cholesterol in Iowa

The percentage of Iowans reporting ever having their blood cholesterol checked increased slightly

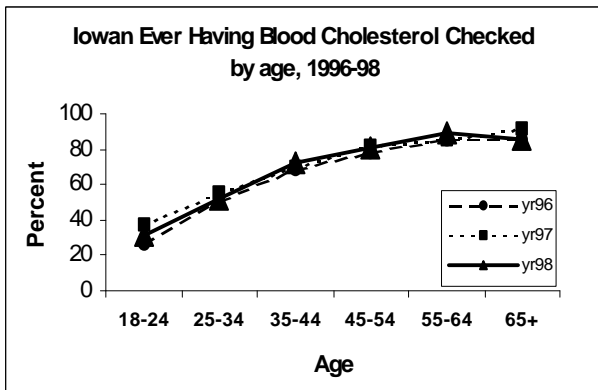
from 67.3% in 1996 to 69.8% in 1998. In both years, more females than males had their cholesterol checked.



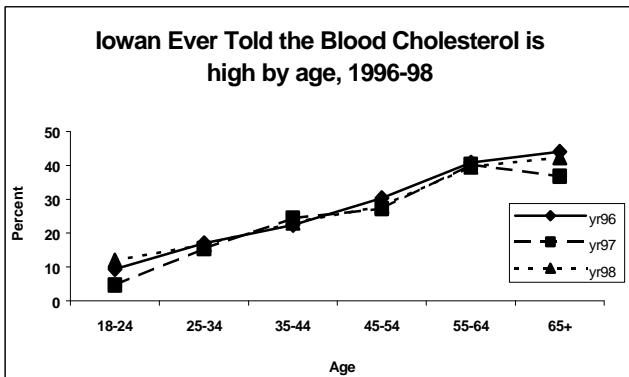
Iowan Ever Told the Blood Cholesterol is High by Gender, 1996-98



As age increased, the proportion of respondents reporting ever having their blood cholesterol checked increased, but even in the 65 and over



levels were high. Less than 10% of respondents in the 18-24 age group have been told their blood cholesterol levels are high, while around 40% of respondents in the 65 and over age group have been told their levels were high.



age group, about 20% of respondents reported never having had their blood cholesterol checked. These figures have not changed significantly in the past three years.

Each year, a slightly higher percentage of females than males have ever been told their cholesterol

Comparison With Other States

The percentage of Iowa adults who had their blood cholesterol checked (72.9%) fell slightly below the national median (74%) In 1998. Nationally, 28.8% of the adult population had been told their blood cholesterol was high. For Iowans the percentage was 28.1%.

Year 2000 Health Objectives for the Nation

The national health objectives for the year 2000 state that no more than 20% of adults aged 20 through 74 should have a blood cholesterol level of 240 mg/dl or greater. The 1998 BRFSS sample shows that about 73% 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 30% were told that their blood cholesterol levels were high. This objective has not been met in Iowa, or in the nation as a whole.

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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).⁴ In addition, 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.⁶

Exposure to ETS is significant. In one study, 87.9% of children and adult nonusers of tobacco had detectable levels of serum cotinine.⁵ 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.⁷

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 rate of cigarette smoking has declined for adolescent males, but the use of smokeless tobacco such as chewing tobacco has increased by 40%. In addition, 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.)³

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 coming in second.¹

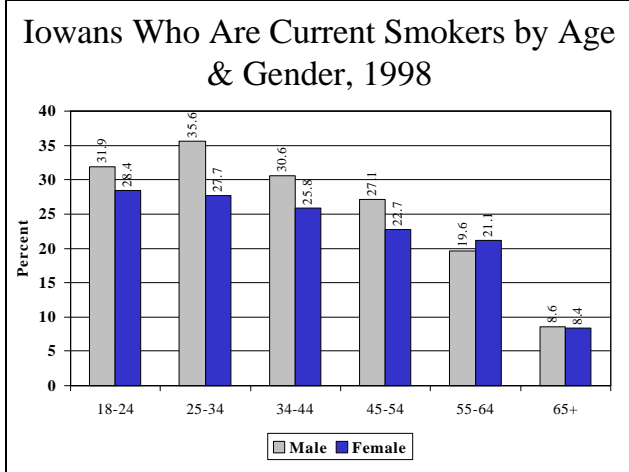
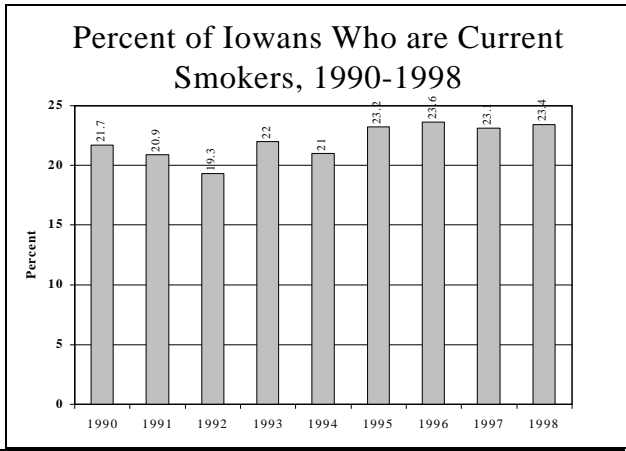
A dramatic increase in tobacco use worldwide prompted the World Health Organization and the World Health Assembly to launch global tobacco control strategies.¹

Tobacco Use in Iowa

Every year over 5,000 deaths in Iowa are the result of tobacco-related diseases. And \$610 million in medical expenditures are attributable to cigarette smoking.

If current trends continue, 53,000 Iowa youth alive today will eventually die from smoking.² In addition, an estimated 231,000 children in Iowa are exposed to environmental tobacco smoke at home.⁴

In 1998, 23.4% of adult Iowans reported they were current smokers, up from 23.1% in 1997. 25.8% of males reported to be current smokers, while 21.2% of females were current smokers.



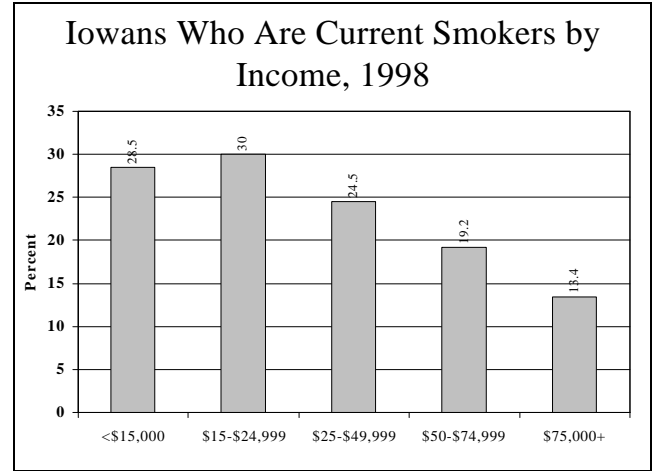
The male age groups of 18-24, 25-34, and 35-44 all had current smoking rates over 30%. The group with the highest rate of current smoking were males aged 25-34 (35.6%), a younger age bracket than just two years ago, when the 35-44 year age group was at highest risk.

Also, the groups with the least education had the highest percentages of current smokers, from 32.9% in the group who were less than high school graduates to 11.8% for college graduates.

Of those smokers who reported they smoked every day in the last 30 days, 20.6% had smoked less than a half pack a day, 57.0% smoked one-half to one pack a day, 19.2% smoked 1-2 packs a day, and 3.3% smoked more than 2 packs a day. The 1-2 packs a day group decreased from 26.2% in 1996.

Of the current smokers, 43.7% reported quitting for one day or longer in the past year. The percentages of those who attempted to quit were highest for both sexes in the 18-24 age group, at 61.2% for males and 77.8% of females.

Of persons who have smoked at least 100 cigarettes in their lifetime but did not currently smoke, most had smoked their last cigarette more than 15 years ago (44.5%). The figure was 28.6% for respondents who had quit 5-15 years ago. Among these respondents 16.2% had their last cigarette 1-5 years ago, 3.0% smoked last six to 12 months ago, and for 1.6% it was 3-6 months ago. Finally, 2.1% last smoked 1-3 months ago, and 2.3% smoked their last cigarette less than a month ago.



Some of the same disparities in smoking status across income levels and racial groups, exists In Iowa as on the national level. For example, The highest income levels had the fewest current smokers. Black, non-Hispanics had the highest percent of smokers at 33.8%, and the 'other' category had 29.2% current smokers. White, non-Hispanic and Hispanics had the lowest percent of current smokers at 23.0% and 26%, respectively.

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, to settle general lawsuits against the tobacco companies. A portion of the disbursements provided from this agreement will be allocated to reducing tobacco use.

The Iowa Department of Public Health and other groups has requested support for a comprehensive tobacco prevention and control program. Such a program would include state and local programs aimed at reducing tobacco

use, for monitoring and evaluation, public education, and enforcement of tobacco control laws to reduce youth access to tobacco.

The key settlement program components include: reducing exposure to ETS, 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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PROBLEM GAMBLING

Background

The Iowa Gambling Treatment Program located in the Iowa Department of Public Health is designed to deal with problem gambling. Program funding comes from a 0.3% tax on the gross Iowa lottery revenue and 0.3% tax on the adjusted gross receipts from riverboat casinos and racetracks in the state. Fiscal Year 1998 revenue was \$2.68 million.

The Iowa Gambling Treatment Program provides education, referral, and counseling services on an outpatient basis for individuals and family members affected by problem gambling behavior. A statewide 24-hour telephone helpline, 1-800-BETS OFF, connects Iowans with problem gambling and services. Information is also available on the program website at www.1800betsoff.org for Internet users seeking resources.

The gambling program sponsors statewide educational sessions on problem gambling behavior. These are provided for counselors, clergy, human resource personnel, mental health clinicians, social workers, health care professionals, gambling industry staff, and other interested parties.

A resource library and clearinghouse distributes problem gambling materials including videotapes, brochures, and curriculum guides. Statewide multi-media educational messages are placed on television, radio, billboards, and in newspapers to educate people about problem gambling and its effects on gamblers, family members, and friends. An advisory committee provides advice and guidance to direct gambling treatment program strategies.

A 1995 study on gambling in Iowa estimated that about one percent of adult Iowans were considered to be current pathological gamblers while 2.3 percent could be classified as current problem gamblers. The term "current" is used to refer to those individuals meeting the criteria in

the past year. In 1995 a lifetime prevalence rate was measured at 5.4 percent for both pathological and problem gamblers. The comparable rate for 1989 was 1.7 percent.^{2,3}

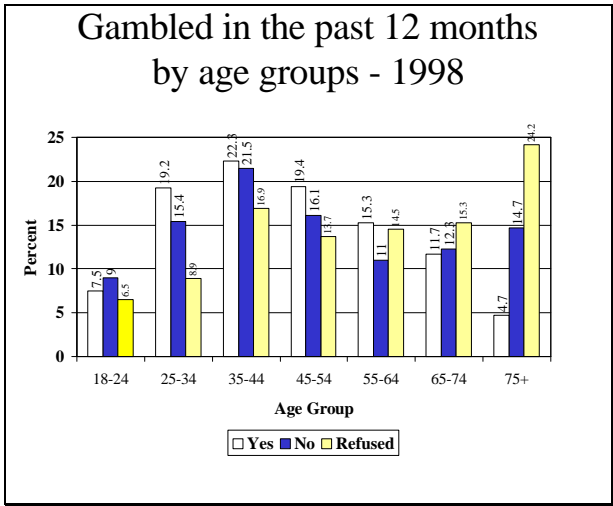
In 1998, Iowa gambling activities included three Indian casinos; three pari-mutuel racetracks with simulcasting of races from other tracks; nine riverboat casinos; slot machines; video poker, keno, and blackjack; table games; lottery games; bingo; raffles; and limited social betting.

A breakdown of gambling revenues and gross wagering for 1995 through 1997 by type of gambling shows a major and growing trend for both increased gross revenues from consumer spending and in gross wagering in Iowa.¹ While gross revenues (consumer spending) in Iowa increased by 39 percent from 1995 to 1997, gross wagering increased by 78.8 percent during the same period.

Problem gambling questions are included in the Iowa Behavioral Risk Factor Surveillance System (BRFSS), an ongoing monthly telephone survey which is financially and technically supported by the Centers for Disease Control and Prevention (CDC).

BRFSS Questions

Starting in 1997, three gambling questions were included in the BRFSS survey's state added questions. The questions consist of: "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?" In 1998, an analysis of the responses showed that a total of 1,416 respondents answered the gambling questions.



Gambling in Iowa

Data from the BRFSS survey provided the following information. In Iowa. In 1998, 38.8 percent of respondents (39.8 percent in 1997) reported they had gambled in the last 12 months while 57.7 percent (58 percent in 1997) said no.

In 1998, 98.7 percent of respondents (same in 1997) said the money they spent gambling had not led to financial problems, while only 1.3 percent (1.2 percent in 1997) of the respondents said it did. In 1998, 98.8 percent of the respondents said that time spent on gambling had not led to problems. Only 1.1 percent said it did. Approximately 2 to 3 percent of respondents declined answering these questions in both years.

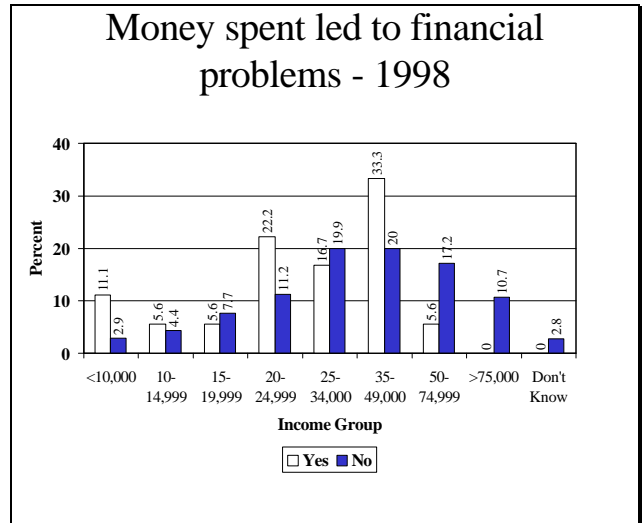
An overview of the general demographics of the respondents shows the following: The age distribution of respondents showed that the prevalence of gambling was almost evenly distributed among age groups. The highest prevalence (46.3 percent) was among the 55 to 64 age group. This was followed by those in the 25 to 34 age group at 44.8 percent and those in the 45 to 54 age group at 43.4 percent.

The race of respondents was the same as the racial and ethnic distribution in the state. (whites 98 percent, blacks 0.9 percent, Asian, Pacific

Islander 0.6 percent, American Indian and Alaska Native 0.3 percent. The category of “Others” was 0.2 percent.

High school graduates (39.6 percent), those respondents with some college education (31.4 percent) and college graduates (22.3 percent) were more likely to gamble than others.

Those who were employed for wages (62.6 percent) and retired individuals (16.2 percent) were more likely to gamble than others. Individuals with an annual income of \$20,000 to \$75,000 were more likely to gamble than others (ranging from 10 percent to 20.1 percent) . Finally, females (56.1 percent) were more likely to gamble than their male (43.9 percent) counterparts.



There are limitations in interpreting self-reported data. Accuracy/validity of the survey results depends on the accuracy of responses by the participants. Regarding the gambling questions, participants must have correctly understood the definition of problem gambling and that it included only those who had sought help from a health professional to deal with the problem.

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MAMMOGRAPHY

Background

An estimated 2,000 new cases of breast cancer were expected among women in Iowa In 1999, according to the Iowa Cancer Registry. That makes breast cancer the most common cancer among Iowa women.

Another 470 Iowa women are estimated to die from breast cancer, which accounts for 16% of all cancer deaths among Iowa women.⁶ Data for 1994 through 1996 indicate that two-thirds of all female breast cancer deaths in Iowa occurred among women age 65 and older.⁶

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.⁶

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.⁴ (Note: The effectiveness of screening women under 50 years of age is still being debated.⁵)

It is recommended that women 50 years of age and older without symptoms have a mammogram every year.³

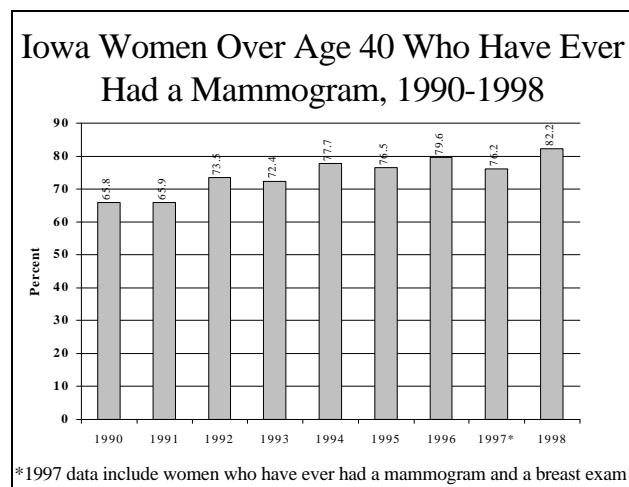
In 1987, despite the known advantages of early breast cancer detection from mammography, 64% of women aged 40 and older had never received a clinical breast exam and

mammography.⁷ Fortunately, this number has decreased significantly in the years following 1987. In 1994 only 10.1% had not received a clinical breast examinations and 20.4% had not had a mammograms.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

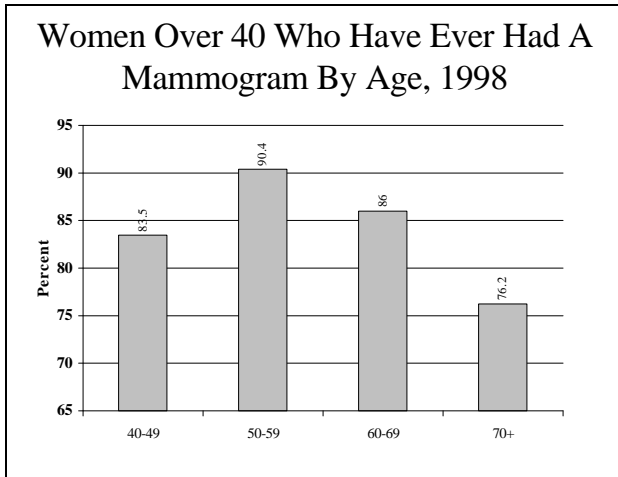
in 1998, 82.2% of Iowa women age 40 and older reported they had a mammogram.



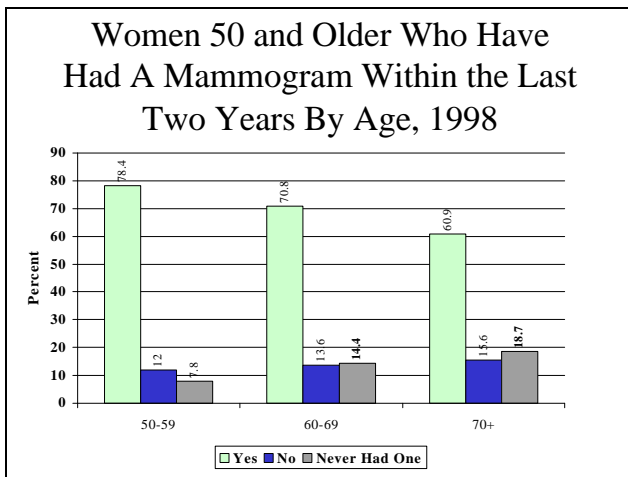
As in previous years, women of lower income levels were less likely to receive a mammogram. However, the difference among income levels is no more than a few percentage points. Of women who made less than \$15,000, 52.6% had a mammogram. This compares to 57.1% for those making \$15-\$24,999. Among those making \$25-\$49,999, 58.6% had a

mammogram. For those making \$50-\$74,999, 64.4% had a mammogram. And finally, 67.1% of those making \$75,000 or more had mammograms.

Mammography rates were similar across race and ethnic groups, as well as across education levels.



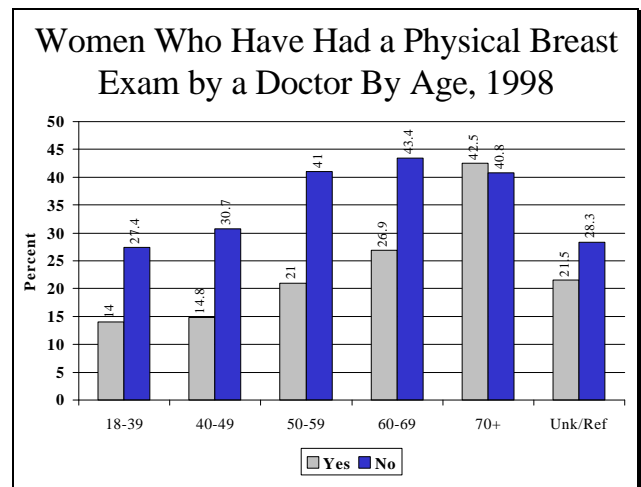
In 1998, 68.4% of Iowa women age 50 and older reported they had a mammogram in the past two years.



The most common reason for having had a mammogram was that it was part of a routine checkup. The rate was 90.2% for women 50 and over, and 82.6% for those under 50 years old. A breast problem was the second most common reason cited. 5.2% of women 50 and over responded with this choice, while 16.3% of those under 50 cited it..

When asked if they had ever had a physical breast exam by a doctor, 88.9% of the female respondents said “yes.” When asked how long

it had been since they had such an exam, 73.4% indicated less than a year, 11.5% one to less than two years, 5.2% two to less than three years, 3.5% three to less than five years, and 5.8% five years or over.



Black women were the most likely to have had their last breast exam within the previous year (88.5%), compared to white (73.2%) and Hispanic (73.7%). However, due to the small size of Iowa’s minority population, data on these populations are difficult to interpret.

The proportion of women who had their last breast exam less than a year ago was highest among the youngest age group (18-39 years) at 80.2% compared to 68.4% for those age 40 and over. Rates also increased slightly with increasing education and income levels.

Comparison With Other States

Iowa ranked 35th of all 50 states in the percentage of women 40 and over who had ever had a mammogram. The national median was 83.8%, while Iowa reported 82.2% of adult women in this category having had a mammogram.

Iowa ranked 46th of 50 states in the percentage of women over 50 who had a mammogram in the last two years. The national median was 70.4%, with Iowa reporting 62.1%.

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%.⁶

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. They 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 2002.⁶

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PAP SMEARS

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.⁸ 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.^{3,4,10}

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

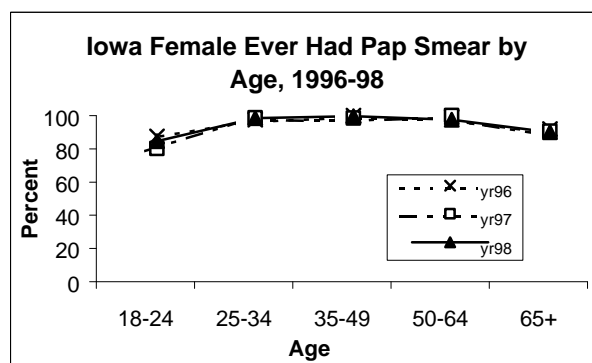
It has been suggested that Pap smear screening programs need to reach more older, high-risk women to be maximally effective in decreasing the morbidity and mortality of cervical cancer.⁶

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.

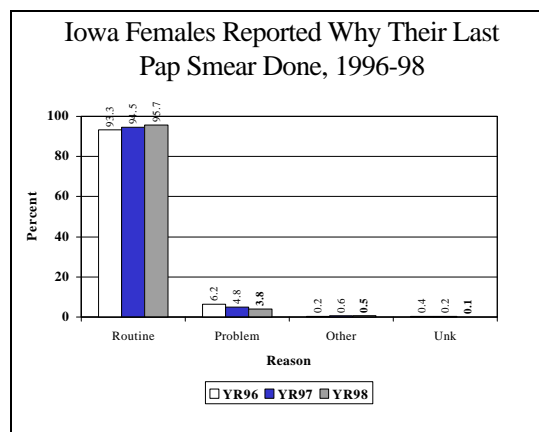
The American Cancer Society recommends annual Pap tests starting at age 18 or with the onset of sexual activity. At the discretion of the woman's physician, less frequent exams may be necessary after three consecutive normal exams.

Pap Smears in Iowa

In 1998, 93.3% of women age 18 or older who were surveyed reported they had a Pap smear at some time during their lives. Women age 18-24 consistently had the highest percentage for not having had a Pap smear. Statistics for this group were 17% in 1998, 21% in 1997 and 14% in 1996.

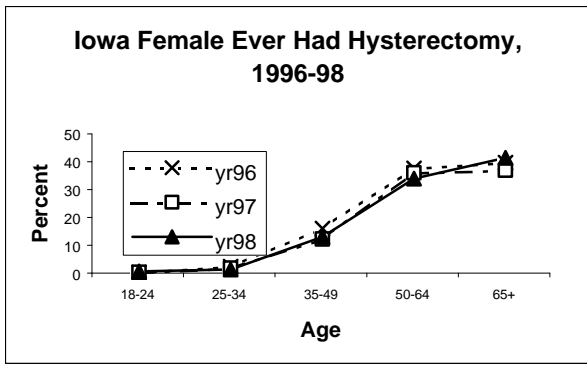


When asked why their last Pap smear was done, 95.7% of the responding females reported it was part of a routine exam. This percentage was up slightly from 1996 when it was 93.3%. In other words, the percentage of women reporting having a Pap smear because of a current or previous problem decreased from 6.2% in 1996 to 3.8% in 1998.



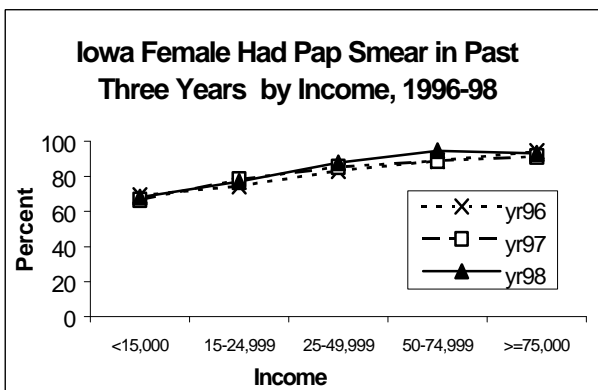
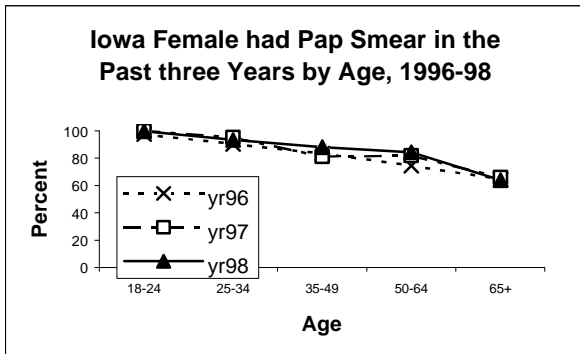
In order to separate respondents not at risk for uterine cancer, female respondents were asked if they had a hysterectomy (removal of the uterus). About 20% of the women surveyed in 1998 responded "yes". This was a decrease from the 31% reported in 1996.

About 50% fewer 25-34 year old women had a hysterectomy in 1998 as compared to 1996. For women age 35-49, 18% fewer had a hysterectomy in 1998, while 10% fewer had the surgery in the age range of 50-64.



Although they had had a Pap smear at one time in their lives, about 16% of responding women reported in 1998 that they had their last Pap smear done more than three years ago. This was lower than 1996, when it was 20%.

Of those who ever had Pap smears, the lower the income level or the older the woman, the less likely they had a Pap smear done in the past three years.



Comparison With Other States

The national median for the percentage of women who had ever had a Pap smear was 94.5% in 1998. For Iowa it was lower at 93.3%.

Iowa also had a lower median for the percentage of women having Pap smears in the past three years. In Iowa it was 83.9% compared to the national median of 86.2%.

In 1998, Iowa had a slightly higher percentage of Pap smears completed as a result of routine screening as compared to the national median. For Iowa it was 95.7% vs. 94.7% for the nation. The Iowa hysterectomy rate was also below the national median, 20% vs. 20.9%.

Year 2000 Health Objectives for the Nation

The national health objectives for the year 2000 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 smear.

The 1998 Iowa BRFSS sample reports that 94.3% of women over the age of 18 with an intact uterine cervix had ever had a Pap smear. This percentage is slightly lower than the Year 2000 Health Objective target.

The national health objective for the year 2000 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 smear in the last two years. The 1998 Iowa BRFSS sample reports that 79.5% of the above group had a Pap smear in the last two years.

Though this percentage does not meet the Year 2000 target, the 79.5% figure is up from the 73.8% reported in 1996 and the 75.2% reported in 1997.

Another national health objective on Pap smears wants at least 70% of women over the age of 70 with an intact uterine cervix to have had a Pap smear in the last two years.

The 1998 Iowa BRFSS sample reports 55.8% of women over the age of 70 with an intact uterine cervix had a Pap smear done in the last two years. This percentage is considerably below the national year 2000 target.

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AIDS

Background

As of June 1999, 711,344 Americans have been diagnosed with AIDS. At least 420,201 of them have died. 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.

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.

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. 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, is the leading cause of death among people 25-44 years old. It accounts for 19% of deaths from all causes in this age group in the U.S. AIDS is the tenth leading cause of years of potential life lost before the age of 65 in the United States.

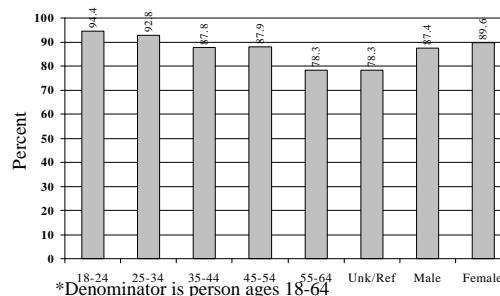
In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown from \$55,000 to \$155,000 or more per person. This amount represents the amount of money saved by preventing just one case of HIV.

AIDS in Iowa

When survey respondents were asked in what grade AIDS education should start, 45.6% said fourth to sixth grade, 23.2% said first to third grade, and 13.9% said in the seventh to ninth grade. Other responses included 8.4% who said AIDS education should start in kindergarten, 0.9% said in the tenth to twelfth grade, and 1.5% said never.

Respondents were asked if they would encourage use of a condom if they had a sexually active teenager. Of the respondents, 88.5% said yes (1997=89.4%), 2.2% (1997=1.3%) said no, and 6.2% (1997=7%) said they would give other advice.

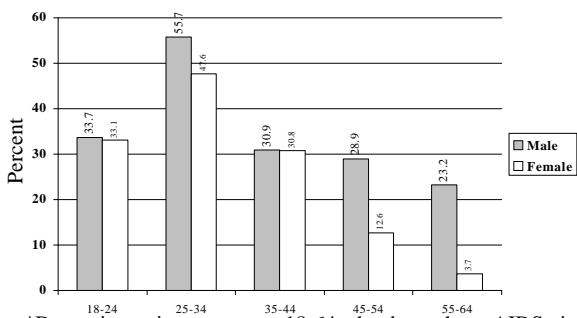
Iowans Who Would Encourage a Sexually Active Teen to Use Condoms*by Age, 1998



Respondents aged 18-64 were asked to indicate their likelihood of getting the AIDS virus. Respondents replies were: chance were high (1998 = 1.4%: 1997 = 1.4%), medium (1998 = 3.9%: 1997 = 4.1%), low (1998 = 28.7%: 1997 = 28.5%), and no chance (1998 = 63.7%: 1997 = 64.3%).

The group with the highest percentage of those who had their blood tested for the AIDS virus infection were males whose ages were 25-34 at 35.2% (1997= 45%, 1996 = 48.9%) and college graduates at 38.1% (1997 = 34.2, 1996 = 38.4%).

Iowans Tested for HIV by Age & Gender, 1998



*Denominator is person ages 18-64 who do not have AIDS virus

When asked the main reason for their last AIDS blood test, respondents gave the following answers:

Reason	Percent
Immigration	0.1
At Risk for HIV	0.3
Referred by Doctor	0.4
Referred by Sex Partner	0.4
Blood Donation Process	0.5
Occupational Exposure	0.6
Illness	0.8
Employment	1.4
Health Insurance	1.4
Military Induction	1.7
Hospitalization	1.9
Routine Checkup	2.8
Other	3
Life Insurance	4.4
Pregnancy Test	4.7
To see if infected	6
Unknown and/or Refused	69.6

The 18-24 age respondents were more apt to say they had the test to see if they were infected (1997=34.9%). Specifically males chose this reason at 24.3%(1997=21.2%) of the time and females at 21%(1997=16.3%).

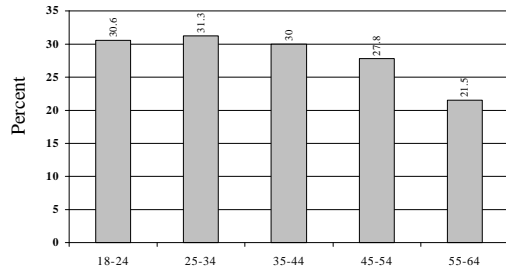
Each of the respondents who indicated they had received an AIDS virus blood test was asked the place for the test site. Respondents gave the following answers

Reason	Percent
AIDS Clinic or Test Site	0
Immigration Site	0.1
Blood Bank or Plasma Center	0.3
At Home, Self Testing Kit	0.3
Other	0.4
Company/Industry Clinic	0.5
Other Public Clinic	0.5
Prenatal Clinic or OBGyn Office	0.6
Community Health Clinic	1.3
Insurance Company Clinic	1.4
Health Department	1.6
Family Planning Clinic	1.6
Military Site	1.7
At Home, Nurse or Health Worker	2.5
Hospital or Emergency Room	7.2
Private Doctor or HMO	10
Unknown and/or Refused	69.9

The respondents who had an AIDS virus blood test were also asked if they had received the results of their last AIDS test. The results of the 1998 survey were inconclusive on this issue since 70.1% either did not know or did not respond to the question. 25.6% answered they had received their results (1997=71.3%). Of those who received the results of their tests, only 33% indicated they had received counseling with those results.

If respondents were aged 18-64 and had indicated they had never had their blood tested for the AIDS virus, they were asked if they had donated blood since March 1985. (All donated blood has been tested for the virus since that date. If the blood tested is positive for the virus, the donor is contacted and told they should see their doctor for further testing.)

Iowans Who Donated Blood Since March, 1985



*Denominator is person ages 18-64 who do not have HIV and have not had their blood tested for HIV

Of the 2,802 people who were asked this question, 28.6% indicated they had donated blood since that date. College graduates (38.1%) were most apt to have donated blood.

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Comparison With Other States

The percentage of respondents who said they would not encourage a sexually active teenager to use condoms was lower in 12 of 50 states plus Puerto Rico. The national median was 10.5% with Iowa at 8.7%.

Iowa ranked 44th of 50 states plus Puerto Rico for respondents reporting they had not had their blood tested for the AIDS virus infection. The median was 61.1%, with Iowa at 66.1%.

Quality of Life and Disability

Background

Quality of life is an individual's satisfaction or happiness with life in areas he or she considers important.¹ 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).¹ But many other areas play a role such as relationships; social, community and civic activities; personal development; fulfillment; and recreation.¹

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 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."³

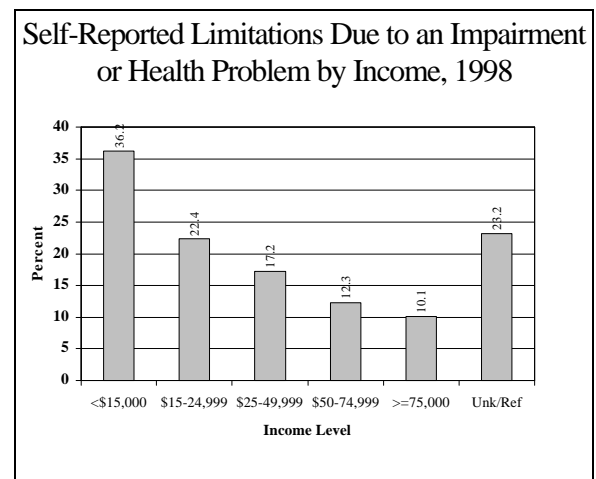
The Current Population Survey (CPS) asks people whether they have a [work disability](#) (a condition that limits the kind or amount of work they can do) or a [severe work disability](#) (a condition preventing them from working at all). According to this definition, 17.2 million people, or 9.9% of the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

old) had a disability that prevented or limited work.⁴

In 1994, approximately 7.4 million Americans used Assistive Technology Devices (ATDs) to accommodate mobility impairments in the United States.²

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.

In 1998, 19% responded "yes" to being limited in any way in activities due to any impairment or health problem. Women and older adults were at the greatest risk for limitations, with the highest rates in women aged 65 and older, at 35.7%. People with lesser education and lower income also reported higher numbers of limitations.



The types of major impairment or health problem listed for people who are limited in activities most commonly listed were back and neck problems (18.5%), arthritis or rheumatism (13.1%), fractures and/or bone

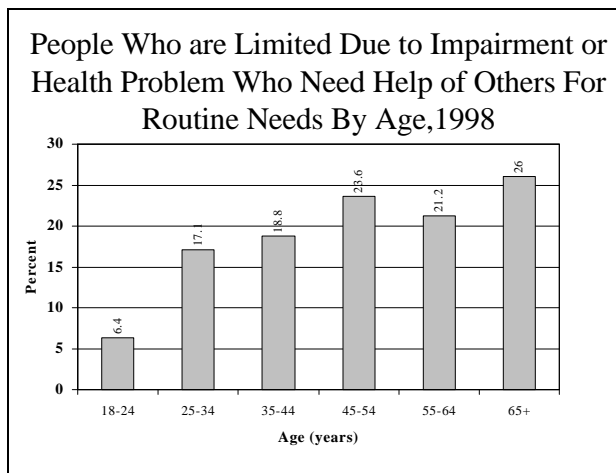
or joint injuries (12.6%), lung or breathing problems (10.4%), and heart problems (10.2%).

Rates of arthritis or rheumatism were higher for women (15.9%) than men (9.2%) and for those who were age 55 and older (18.9%) compared to those who were younger than 55 years (5.0%). Fractures and/or bone or joint injuries were more prevalent in men (16.3%) than women (9.9%).

Of the people who were limited in their activities, 85.2% reported being limited for 12-23 months. The greatest percent of those who indicated being limited for only 1-5 months were males in the 18-24 age group.

Of persons limited in their activities, 5.7% reported needing the help of others with their personal care needs. Those individuals with incomes less than \$15,000 were most likely to need help, at 11%.

A greater proportion, 21.7%, needed the help of others in handling their routine needs. This need increased with age, and was higher for those of lower income levels.

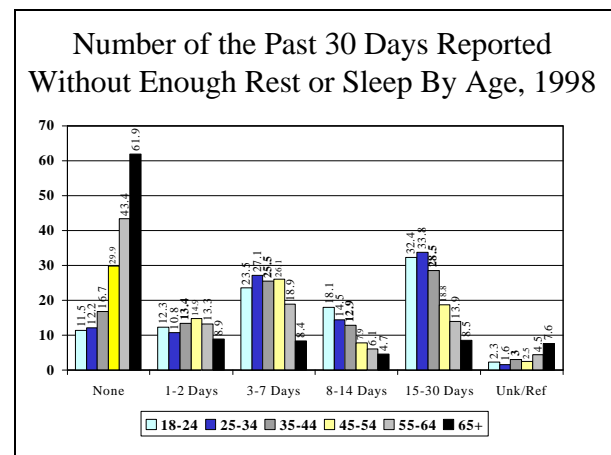


When asked how many of the past 30 days pain made it hard for them to do their usual activities, 23.7% of people reported at least one day in the past 30 days. Of these, 34.1% said 1-2 days, 26.3% said 3-7 days, 9.3% said 8-14 days, and 30.2% indicated 15-30 days of pain that restricted usual activities.

47.3% of people also reported feeling sad, blue, or depressed for at least one day of the past 30 days. 22.9% of people were sad, blue, or depressed for 1-2 days. For 14.5% lasted for 3-7 days. It was 3.2% for 8-14 days, and 6.7% for 15-30 days. Women tended to indicate having more sad, blue, or depressed days than men.

Within the past 30 days, 59.7% reported feeling worried, tense, or anxious for at least one day, and 12.9% of respondents reported having these feelings for 15-30 of the 30 days. Those with at least some college or who went to technical school had more days reported than high school graduates or those with lesser education levels.

The lowest income level (<\$15,000) had about twice the proportion of people reporting anxiety for 15-30 days (18.8%) than those at the highest income level (≥\$75,000; 8.1%).



Of the respondents asked how many days they felt they did not get enough rest or sleep, 66% reported not getting enough for at least one day of the past 30 days. Females tended to feel they did not get enough rest or sleep more than males did. The number of days without enough rest increased with educational level. The number of days people felt they did not get enough rest or sleep also decreased steadily as age increased.

The proportion of people who said they felt very healthy and full of energy 15-30 days during the past 30 days was 69.0% overall. 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 total environment. Goals for people with disabilities include the prevention of secondary conditions related to their disabilities that negatively impact their quality of life.

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OTHER AREAS OF INTEREST

Diabetes

In 1998, 5.2% of survey respondents reported that they had ever been told by a doctor they had diabetes. Of those who had been told, 24.4% were currently taking insulin.

Iowa ranked 23rd of 52 states (includes the District of Columbia and Puerto Rico) with respondents reporting they had been told by a doctor they had diabetes. The median for the nation was 5.4%. The Iowa percentage was up from 1996 when the figure was 4.2% and 1997 when it was 4.6%. However, the median for all states is up as well from 4.4% in 1996.

Sexual behaviors

Three sexual behavior questions were added to the BRFSS survey in 1997. About 77% of respondents said they have decreased the number of sexual partners or became abstinent during the past twelve months. This decrease is smaller than the 81.5% decrease identified nationally.

There is no significant difference between the decrease among male and female respondents with the exception that more 35-44-year-old males reported a decrease in the number of sexual partners than females in the same age group.

Have You Decreased the Number of Your Sexual Partners or Become Abstinent in the Past Twelve Months, by Age, 1997

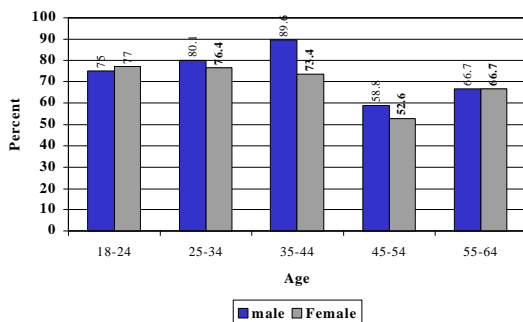
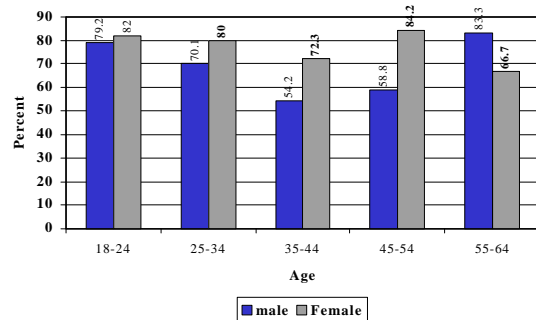


Figure 2 demonstrates the percent of Iowans who had sexual intercourse with the same partner in the past twelve months by age group. Significantly fewer 35-54-year-old males reported sexual intercourse with only the same partner than other groups. A higher percentage of females reported sexual intercourse with only one partner except in the 55-64-year-old group. Overall, fewer Iowa respondents reported sexual intercourse with only the same partner in the past twelve months when compared to national data, 74.7% to 80.1%.

Do You Have Sexual Intercourse With Only the Same Partner in the Past Twelve Months, by Age, 1997



Only 54.7% of Iowans reported always using condoms during sexual intercourse. This rate is slightly lower than the national median of 55.7%. With the increase of age, fewer people always use condoms regardless of gender except for 55-64-year-old females. However, since there were only four 55-64-year-old female respondents, the 50% positive answers is an inadequate representation of the age group (Figure 3). Females were consistently less likely to consider using a condom for protection, as demonstrated by the overall rate for females of 50% compared to 59.1% for males.

No trend information is available since these questions were only asked in 1997