Annual Report

Survey Results

From the 2004 Iowa

BRFSS

Behavioral Risk Factor Surveillance System

Iowa Dept. of Public Health

125
YEARS

Advancing Health
Through the Generations

Iowa Department of Public Health
Bureau of Health Statistics

Thomas J. Vilsack, Governor, Sally J. Pederson, Lt. Governor
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1. INTRODUCTION

History

In 1981, the Centers for Disease Control and Prevention (CDC) began assisting states in conducting a risk factor survey to monitor behaviors associated with premature death and disability. In 1984, the CDC launched the Behavioral Risk Factor Surveillance System (BRFSS), working in an ongoing fashion with several states to assess the health status and health risk behaviors of their citizens.

A point-in-time survey was done in Iowa in 1982. In 1988, Iowa began full participation in BRFSS. The BRFSS is now conducted in all 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

Nature of the Survey

The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey. It is financially and technically supported by the Centers for Disease Control and Prevention with further financial support from public and private sources within the state.

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

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. Most core questions are asked annually or biannually. CDC also develops optional module questions. These modules 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 2004. Some of the risk factors discussed are:
- General health status.
- Health care coverage.
- Cigarette smoking.
- Alcohol consumption.
- Body weight.
- Hypertension and cholesterol awareness.
- Cancer screening for colorectal cancer.
- Women's health issues, including screening for breast and cervical cancer.
- Diabetes.
- Asthma.
- Oral health.
- and HIV/AIDS awareness.

Objectives

The objectives of the BRFSS are:

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.

Use of BRFSS Data

The Centers for Disease Control and Prevention developed the Behavioral Risk Factor Surveillance System to help states assess health risks and monitor trends. Comparable surveillance methods are used in all states. This allows for comparisons among states and for the assessment of geographic patterns of risk factor prevalence.

The BRFSS information is used to design, implement, and support public health activities. These activities are designed to reduce the premature death and disability of Iowa residents. State public health departments are responsible for planning, implementing, and evaluating disease prevention programs. Many of these programs involve health risk behavior modification. Examples of health risk behavior modification programs in Iowa are the Clean Indoor Air Act, healthy baby campaigns, nutrition and physical activity campaigns, tobacco counter-marketing campaigns, and campaigns against problem drinking.

One way to assess program effectiveness is to monitor the prevalence of risk factors in the population. Comparing different times, demographic groups, or geographic areas may be quite useful in developing, implementing, and evaluating intervention programs.

2. Methodology

Questionnaire Design

The BRFSS questionnaire is updated each year by the CDC and BRFSS representatives from each participating state.

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 that states may include in their survey; and 3) state-added questions that are designed and administered by individual states to address locally identified health problems. Core and optional module questions were previously tested. Any changes in them were discussed, and determinations whether to include them were made at the annual BRFSS conference. A group of interested individuals from the Iowa Department of Public Health, guided by the state coordinator, met to discuss which optional modules and state-added questions to include in the coming year.

Survey participants are asked to provide demographic information such 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 list-assisted random digit dialing. This method provides a list of randomly chosen phone numbers from the pool of all existing phone numbers. These numbers are not drawn in a simple random fashion, but use what is known as 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, in an efficient fashion.

The DSS method divides phone numbers into two strata. The first stratum is residential, but unlisted. The second stratum is composed of residential listed numbers. Each stratum was sampled at a different rate. The listed residential numbers were sampled at the highest rate. Some numbers were marked by the list provider as not to be called because they have been predetermined to be nonresidential or nonworking. No calls are made to cell phones. There was no set number to be sampled per group, and completed interviews were not thrown out.

The sample was also stratified into six geographic regions. These regions are the same regions used by health resource and emergency planning groups within the state. Geographic regions were represented at the same proportion as their population within the state. Four of these regions were further subdivided into counties having a relatively high minority population and counties having low or no minority population based on the 2000 census. The minority counties were sampled at a higher rate than the non-minority counties in an effort to better represent minority groups in the Iowa sample.

Approximately equal numbers of interviews per month were conducted from January through December in 2004 for a total sample size of 5,048. Interviews were conducted in both English and Spanish. There were 5,002 English interviews and 46 Spanish interviews. Interviewers

made multiple attempts to reach a number to complete an interview before replacing that number.

One person residing in the home, 18 years old or older, 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 19.2 minutes. Spanish interviews took much longer. The response rate, defined as completed interviews plus partial completes divided by all eligibles called was 47.5%. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures.

A Computer Aided Telephone Interviewing (CATI) system was used. The CATI system helps interviewers present the questionnaire and record the responses; it also helps keep track of appointments and callback attempts and reports statistics of call dispositions.
Data then were edited for accuracy and completeness using the software (Ed itFix) provided by CDC. After editing, monthly data were submitted to the CDC and to the Iowa Department of Public Health.

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 1.5 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 3% of the population cannot be reached. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to have a telephone and are therefore under-sampled. In addition, the percentage of households with a telephone varies by region.

New telephone technology such as caller I.D., cell phones, and call blockers that block telemarketers also pose problems for telephone surveys. Increasingly, young people are opting not to use traditional landline telephone service in favor of cell phones.

Despite these limitations, 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.

Analysis of the Data

When analyzing BRFSS data, conclusions are to be drawn about the entire adult population of the state of Iowa. Since only a sample of randomly chosen people is asked the questions, the true prevalence in the population can only be estimated. Some of the factors involved in making such estimates must be considered. First, data were weighted to Iowa's population. Weighting took into consideration the facts that the number of adults per household and the number of phones per household influence a person's likelihood of being included in the survey. Next, weights were adjusted to match Iowa's age and gender. The state's population estimates were derived from the most currently available census data files.

The judgment of the value of a prevalence in a population such as the state, based on the prevalence within a sample, always involves educated guesswork. The values from the survey and the real state population values may differ by some amount, but the probability of the amount of difference can be determined.

Charts and tables in this report will indicate a range of values in which there is a 95% chance of the true Iowa population value falling based on the survey. This range is referred to as a 95% confidence interval (CI). Charts will indicate this by use of a black line at the end of the bars in the chart. The end of the bar is the sample value while the value in the population is probably somewhere in the range represented by the line. It is usually the case that when the CIs of two or more groups do not overlap, their population values are truly different.

An important factor in determining how well we can judge the response of all Iowans from the survey sample is the number of responses to the questions. The smaller the number of responses, the less well we can draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there is a smaller number of interviews in each particular group. Furthermore, whether many questions are asked depends on the answer to previous questions. For instance, a person would only be asked at what age they were diagnosed with diabetes if they answer "yes" to whether they have ever been diagnosed with diabetes. These smaller numbers decrease 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 less than 50 individuals are statistically unreliable.

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 to answer. Unless otherwise indicated, prevalence measures do not include those who refused to answer a question or said they did not know.

3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 5,048 respondents in the BRFSS for the year 2004 included 1,924 males and 3,124 females age 18 years old and older. The following tables present the distribution of the respondent sample by 1) age and gender, 2) race/ethnicity, 3) level of education, and 4) household income.

Table 3.1: Distribution of Iowa Survey Respondents by Age and Gender for Year 2004

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	114	5.9	200	6.4	314	6.2
25-34	267	13.9	443	14.2	710	14.1
35-44	397	20.6	538	17.2	935	18.5
45-54	410	21.3	583	18.7	993	19.7
55-64	336	17.5	479	15.3	815	16.1
65-74	208	10.8	422	13.5	630	12.5
75+	183	9.5	440	14.1	623	12.3
Unk/Ref	9	0.5	19	0.6	28	0.6
Total	1,924	38.1	3,124	61.9	5,048	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2004

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	4,749	94.1
Black Non-Hispanic	78	1.5
Other Non-Hispanic[1]	83	1.6
Hispanic	115	2.3
Refused	23	0.5
Total	5,048	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2004

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	392	7.8
High School Grad or GED	1,813	35.9
Some College or Technical School	1,380	27.3
College Graduate	1,450	28.7
Unknown/Refused	13	0.3
Total	5,048	100.0

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[1] Other Non-Hispanic also includes those who chose multiple race categories.

Table 3.4: Distribution of Iowa Survey Respondents by Household Income for Year 2004

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	462	9.2
$15,000-$24,999	817	16.2
$25,000- 34,999	712	14.1
$35,000-$49,999	874	17.3
$50,000-$74,999	771	15.3
>=$75,000	849	16.8
Unknown/Refused	563	11.2
Total	5,048	100.0

4. GENERAL HEALTH STATUS OF IOWANS

Background

In public health and in medicine, the concept of health-related quality of life refers to a person's or group's perceived physical and mental health over time. Physicians have often used health-related quality of life (HRQOL) to measure the effects of chronic illness in their patients to understand better how an illness interferes with a person's day-to-day life. Similarly, public health professionals use health-related quality of life to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. Tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health.[1]

Self-ratings of health, or health-related quality of life, seek to determine how people perceive their own health and how well they function physically and psychologically during their usual daily activities. These indicators are important because they can assess dysfunction and disability that are not measured by standard morbidity and mortality measures.

General health status defined by responses to a single question such as "How is your health, in general?" have been found to be significant predictors of mortality.[3] Additional studies that controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue to find that the risk of mortality is 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] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[4]

General Health Status Results

In 2004, when asked how their health was in general, 20.8% of respondents reported that it was excellent. Another 36.9% said it was very good. While 29.9% reported good health, 12.4% rated their health as fair or poor. This figure for fair or poor health is higher than the 11.7% figure found in 2003 and is the highest figure ever reported. Figure 4.1 shows that the trend in prevalence of fair or poor health has been upward in recent years.

Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Respondents who were most likely to report having fair or poor health were those with less than a high school education (31.3%). Hispanics and those with household incomes of less than $15,000 also reported more than 30% having fair or poor health. The least likely to report fair or poor health were those with household incomes of $75,000 or more (4.2%). Those 18 to 24 years old, those with a college education, and those with household incomes between $50,000 and $75,000 all reported less than 6% with fair or poor health.

In answer to the question about how many days during the past 30 days was their physical health not good, 67.8% of respondents reported none of the days, 21.8% reported one to seven days,
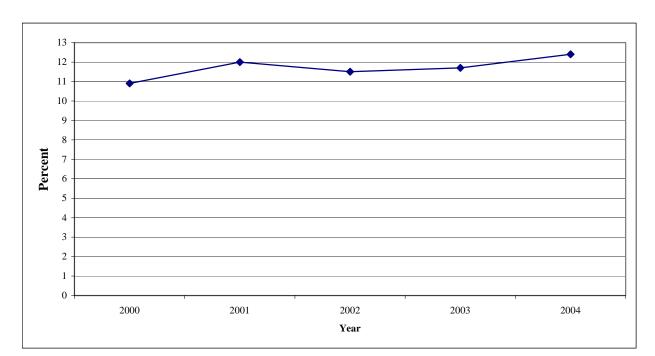
Figure 4.1: Percentage of Iowans Reporting Their Health as Fair or Poor 2000-2004

3.1% reported eight to 14 days, and 7.3% reported more than 14 days. As shown in Table 4.2, males had fewer days of physical health not being good than females. There were also fewer bad physical days with younger age, higher education, and higher income. African Americans also reported fewer days of bad physical health. People of other non-Hispanic race had the lowest percentage with no bad physical health days (47.8%), while people with household incomes of $75,000 or more had the highest (75.4%). On the other end, people with incomes less than $15,000 had the highest percentage with 15 or more bad physical health days in the past 30 (21.3%), while people age 18 to 24 years old had the lowest (2.1%).

When responding to the question of how many days during the past 30 days their mental health was not good, 70.6% of the respondents indicated none of the days, 19.9% reported one to seven days 2.7% reported eight to 14 days, and 6.8% reported more than 14 days. Table 4.2 shows the pattern for bad mental health days. The group with the lowest percentage of no bad mental health days was age 18 to 24 (50.4%), while those with the highest percentage were age 75 and over (87.6%). On the other hand, those with the lowest percentage of 15 or more bad mental health days were those with household incomes of $75,000 or more (3.4%), while those with the highest were those with incomes of less than $15,000 (14.0%).

When asked how many days poor physical or mental health kept them from performing their usual activities, 64.9% of those with some days of either bad physical or mental health said none. On the other hand, 8.6% said 15 days or more. This level increased with increasing age (until age 75 and up), decreasing education, and decreasing income. Age was the main factor affecting the prevalence of 15 or more days of inability to pursue usual activities. Only 1.3% of 18 to 24 year olds reported this, while 18.8% of those 65 to 74 years old reported it.

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2004

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	12.4	(11.4-13.4)
SEX		
Male	12.3	(10.6-14)
Female	12.5	(11.3-13.7)
RACE/ETHNICITY		
White/Non-Hisp.	11.6	(10.6-12.5)
Black/Non-Hisp.	25.4	(12-38.8)
Oth. Race/Non-Hisp.	14.7	(7-22.4)
Hispanic	31.1	(18.9-43.2)
AGE		
18-24	5.4	(2.4-8.4)
25-34	6.1	(3.9-8.3)
35-44	8.3	(6.2-10.5)
45-54	11.7	(9.4-13.9)
55-64	15.8	(13.1-18.5)
65-74	21.3	(17.7-24.9)
75+	28.4	(24.6-32.3)
EDUCATION		
Less Than H.S.	31.3	(25.5-37.2)
H.S. or G.E.D.	15.3	(13.5-17.2)
Some Post-H.S.	9.4	(7.7-11.1)
College Graduate	5.7	(4.4-7)
HOUSEHOLD INCOME		
<$15,000	30.8	(25.8-35.7)
$15,000- 24,999	23.6	(19.8-27.4)
$25,000- 34,999	11.8	(9.2-14.3)
$35,000- 49,999	9.8	(7.7-11.9)
$50,000- 74,999	5.1	(3.4-6.8)
$75,000+	4.2	(2.7-5.7)

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and territories ranged from 10.0% to 34.8%, with a median value of 15.2%. Iowa ranked 14th best in the nation in ratings of fair or poor health at 12.4%. While this is still above average compared to other states, it is not as high as Iowa has ranked in previous years.

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Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2004

DEMOGRAPHIC GROUP	Days of Poor Physical Health		Days of Poor Mental Health		Days Poor Health Kept from Usual Activities	
	None	15 --30 days	None	15 --30 days	None	15 --30 days
TOTAL	67.8	7.3	70.6	6.8	64.9	8.6
SEX						
Male	71.1	5.9	75.3	4.8	65.8	8.5
Female	64.7	8.5	66.2	8.7	64.3	8.7
AGE GROUP						
18-24	59.7	2.1	50.4	8.1	70.2	1.3
25-34	67.1	3.3	65.4	7.2	65.4	5.2
35-44	69.9	4.3	67.7	8.3	64.7	8.0
45-54	71.6	7.6	70.4	7.5	64.2	9.9
55-64	69.8	11.8	77.9	6.2	55.7	16.9
65-74	72.0	10.6	86.7	4.1	62.7	18.8
75+	62.6	16.9	87.2	4.1	69.0	11.5
EDUCATION						
Less than H.S.	59.3	14.9	65.9	8.9	61.9	12.7
H.S. or G.E.D.	67.6	8.3	71.2	8.6	63.8	9.3
Some Post-H.S.	68.0	6.7	69.1	6.0	67.9	8.9
College Graduate	70.5	4.2	73.0	4.5	64.9	5.7
HOUSEHOLD INCOME						
Less than $15,000	51.6	21.3	59.9	14.0	60.9	17.0
$15,000- 24,999	61.1	9.9	64.7	10.9	56.8	12.8
$25,000- 34,999	65.9	7.3	70.1	7.7	68.5	5.2
$35,000- 49,999	69.1	5.1	69.9	5.6	72.4	5.7
$50,000- 74,999	73.5	4.7	73.6	4.1	65.5	7.7
$75,000+	75.4	2.5	73.4	3.4	63.4	4.2
RACE/ETHNICITY						
White/Non-Hisp.	68.3	7.4	71.0	6.7		
Black/Non-Hisp.	72.9	3.5	67.9	8.1		
Other/Non-Hisp.	47.8	7.6	69.9	11.9		
Hispanic	64.2	6.1	56.6	6.6		

5. 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 use 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.
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Health care costs are escalating at an ever-increasing rateThis 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 Results

In 2004, 10.6% of the survey respondents reported they had no health insurance. This is a decrease compared to the 11.9% with no health insurance found in 2003. The 2004 figure is still much higher than those seen in the years before 2003 (see figure 5.1).

Table 5.1 shows that more males lacked health insurance than females. Furthermore, younger people, less educated people, people with lower incomes, and racial and ethnic minorities were more likely to lack any health care coverage. Hispanic respondents had the highest percentage of individuals without health care coverage (41.2%). Almost everyone age 65 years and older had health care coverage due to Medicare. The group with the second lowest percentage of uninsured was those with household incomes of $75,000 and higher (2.6%). The difference between men and women in the percentage that did not have health insurance was most pronounced in the 18 to 24 year age group (see figure 6.2). There was no real sex difference at most other ages.

Two other demographic variables that had a major impact on health care coverage were employment status and marital status. Those respondents who were out of work had the highest percentage not covered by health insurance (47.5%). Only 2.3% of retirees were without health insurance.

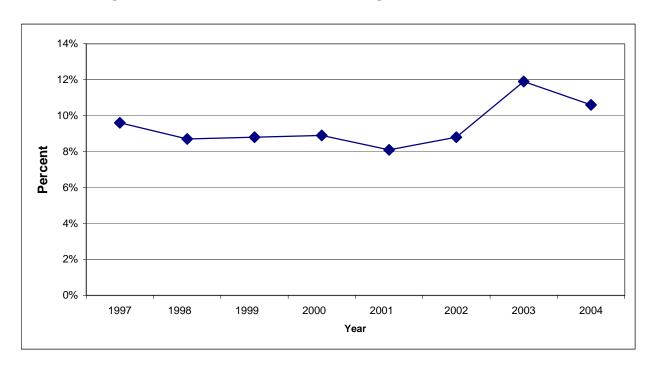**Figure 5.1: No Health Insurance Coverage Trend Iowa 1997 – 2004**

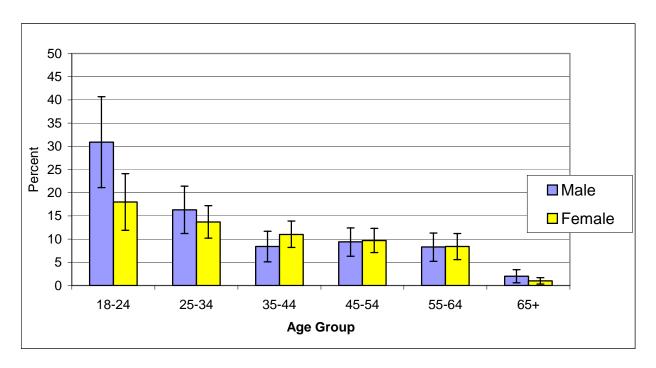**Figure 5.2: Percentage of Iowans Reporting No Health Insurance Coverage by Sex and Age, 2004**

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Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2004

DEMOGRAPHIC GROUPS	No Health Insurance Coverage		Time Couldn't Afford Help		Have One Person As Health Provider	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	10.6	(9.5-11.8)	8.4	(7.4-9.4)	76.8	(75.3-78.2)
SEX						
Male	11.9	(9.9-13.9)	7.5	(5.9-9.1)	70.2	(67.8-72.7)
Female	9.5	(8.2-10.8)	9.3	(8-10.6)	82.9	(81.3-84.5)
AGE						
18-24	24.2	(18.4-30)	13.3	(8.8-17.9)	61.7	(55.5-67.9)
25-34	15.1	(11.9-18.3)	11.6	(8.7-14.5)	68.6	(64.5-72.6)
35-44	9.7	(7.5-11.9)	8.7	(6.5-11)	73.8	(70.4-77.1)
45-54	9.5	(7.5-11.6)	8.9	(6.9-10.9)	81.6	(78.8-84.3)
55-64	8.3	(6.3-10.4)	7.7	(5.6-9.8)	84.9	(82.3-87.6)
65+	1.4	(0.7-2.2)	1.9	(1.1-2.7)	86.9	(84.8-89)
EDUCATION						
Less than H.S.	26.1	(19.8-32.5)	16.3	(10.9-21.7)	68.9	(62.6-75.3)
H.S. or G.E.D.	14.2	(12-16.4)	9.4	(7.7-11.1)	76.6	(74.1-79)
Some Post-H.S.	8.3	(6.5-10.1)	8.8	(7-10.7)	77.7	(74.9-80.5)
College Graduate	3.8	(2.6-5.1)	4.2	(2.8-5.7)	78.3	(75.7-80.9)
HOUSEHOLD INCOME						
Less than $15,000	25.3	(20.1-30.5)	15.7	(11.4-20)	66.0	(60.3-71.7)
$15,000- 24,999	23.1	(19-27.3)	17.4	(13.6-21.3)	70.4	(66-74.7)
$25,000- 34,999	12.6	(8.8-16.3)	10.4	(7.4-13.4)	77.9	(73.9-81.8)
$35,000- 49,999	5.7	(3.9-7.6)	6.9	(5-8.9)	75.9	(72.4-79.5)
$50,000- 74,999	5.5	(3.3-7.7)	4.8	(2.7-6.9)	81.2	(77.9-84.5)
$75,000+	2.6	(1-4.2)	2.4	(1.2-3.6)	83.1	(80.2-86.1)
RACE/ETHNICITY						
Non-Hispanic White	9.3	(8.2-10.4)	7.5	(6.6-8.5)	77.9	(76.4-79.4)
Non-Hispanic Black	22.2	(9.8-34.5)	20.3	(6.9-33.7)	77.5	(63.8-91.2)
Non-Hispanic Other	21.4	(8.1-34.7)	23.2	(9.9-36.5)	72.2	(61.3-83.1)
Hispanic	41.2	(28.9-53.6)	18.8	(9-28.7)	44.5	(32.7-56.3)

People who were married were much more likely to have health care coverage than those who were not. Only 6.8% of married respondents were without coverage, while 18.0% of unmarried respondents were without it.

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 8.4% said that there was. The percentage was higher for females, younger people, people with less education, people with lower incomes, and racial and ethnic

minorities. The lowest percentage (1.9%) was for people age 65 and over. The highest percentage (23.2%) was for people reporting their race as other.

Since it is important that care be coordinated, respondents were asked if they had one person they thought of as their personal doctor or health care provider. A positive reply was given by 76.8% of respondents. Women, older people, and people with higher household incomes were more likely to report a regular provider. Least likely were those reporting Hispanic ethnicity (44.5%), while those age 65 years old and older were most likely (86.9%).

Comparison with Other States

Seven states had an equal or lower percentage of residents without health insurance when the elderly who are generally covered by Medicare are excluded. Iowa had 13% of its non-elderly respondents reporting not having any insurance. The median for states and territories was 17.2%. In 2003, the figure for Iowa was 14.5%. The median percentage of uninsured nationwide was 16.2%. While Iowa has improved in the last year, the nation as a whole has continued to decline in insurance coverage.

Year 2010 Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010* and *Healthy People 2010* goals for health insurance coverage are to see all people be covered by some form of health insurance. In Iowa, only 87.1% of the non-elderly have coverage. This is far short of the goal.

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6. CARDIOVASCULAR DISEASES

Background

"Cardiovascular diseases" (CVD) refer in principle to any or all of the many disorders that can affect the circulatory system. CVD most often means coronary heart disease, heart failure, and stroke taken together, which are the circulatory system disorders of greatest public health concern in the United States today. "Heart disease" most often refers to coronary heart disease, heart attack, or heart failure. Other times, this term refers to several conditions or all diseases affecting the heart (e.g., "heart disease deaths"). "Stroke" refers to a sudden impairment of brain function, sometimes termed "brain attack," that results from interruption of circulation to one or another part of the brain. Heart disease and stroke are mainly consequences of atherosclerosis and high blood pressure (hypertension).[5] Since 1900, CVD has been the number one killer in the United States every year except 1918. Nearly 2,600 Americans die of CVD each day, an average of 1 death every 34 seconds. According to the CDC/NCHS, if all forms of major CVD were eliminated, life expectancy would rise by almost seven years.[1]

Deaths are only part of the picture. Of the 64.4 million Americans (almost one-fourth of the population) living with one or more types of CVD, 25.3 million are estimated to be age 65 and older.[7] Coronary heart disease is the leading cause of premature, permanent disability in the U.S. labor force, accounting for 19% of disability allowances by the Social Security Administration.

Each year, about 700,000 people experience a new or recurrent stroke. On average, every 45 seconds, someone in the United States has a stroke. Of stroke survivors, 15 to 30 per cent are permanently disabled.[1] Stroke is a leading cause of serious, long-term disability in the United States, with about 4.7 million stroke survivors alive today.[2]

The economic impact of CVD on the U.S. health care system continues to grow as the population ages. In 2004, the estimated direct and indirect cost of CVD is $368.4 billion.[1] And, Americans will pay about $54 billion for stroke-related medical costs and disability.[4]

In Iowa, deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 344.9 in 1991 to 265.8 in 2003. The downward trend for deaths from stroke reached a plateau between years 2000 through 2002. The rate of deaths from stroke has gone from 74.7 in 1991 to 70.4 in 2003. Deaths from cardiovascular diseases were 38.4% of all deaths in 2003 in Iowa. Diseases of the heart made up 72.8% and cerebrovascular disease (stroke) made up 19.3% of the CVD deaths.[6]

Reducing cardiovascular disease risk requires an integrated strategy that includes:

1) Lifestyle behavior change: weight management; increased physical activity; no tobacco use; a low-fat, low-cholesterol diet with moderate sodium, sugar, and alcohol intake; and control of high blood cholesterol, elevated blood pressure, and diabetes.

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. These may be implemented in the form of laws, regulations, standards, or guidelines that contribute to setting these and other social and environmental conditions. For example, dietary patterns result from the influences of food production policies, marketing practices, product availability, cost, convenience, knowledge, choices that affect health, and preferences that are often based on early-life habits.[5]

Cardiovascular Diseases Results

In 2004, 62.4% of Iowans reported eating fewer high-fat or high-cholesterol foods than they had previously to lower their risk of heart disease. This figure is down from 66.9% in 2003.

Many more women than men were eating fewer of these foods (see table 6.1). The percentage of people eating fewer high-fat foods increased with education. More African Americans said they were eating fewer high-fat and high-cholesterol foods than any other race. Age had the greatest impact on this measure, but the age group with the highest percentage of people eating fewer high-fat and high-cholesterol foods was 55 to 64 years (74%). The 18 to 24 year age group had the lowest number (41.8%).

Within the past 12 months, only 20.3% of respondents had been told by a doctor, nurse, or other health professional to eat fewer high-fat or high-cholesterol foods.

In 2004, 73.7% of Iowans were eating more fruits and vegetables to lower their risk of developing heart disease or stroke. This figure is up from 69.4% in 2003.

More women than men were eating more of these foods (see table 6.1). The percentage of people eating more fruits and vegetables also increased with age and education. More African Americans said they were eating more fruit and vegetables than any other race. The group with the highest percentage eating more fruits and vegetables was those age 75 and over (86.8%), while the lowest percentage was in the 18 to 24 year age group (58.7%).

Within the past 12 months, only 28.7% of respondents had been told by a doctor, nurse, or other health professional to eat more fruit and vegetables.

In 2004, 68.1% of Iowans were exercising more to lower their risk of developing heart disease or stroke. This figure is essentially unchanged from 67.9% in 2003.

Increased exercise was found more frequently among females than males. The percentage also increased with education and income. The highest percentage of respondents reporting that they exercised more were those classifying themselves as other non-Hispanic (81.8%) , while those with household incomes less than $15,000 per year had the lowest percentage (60.7%).

Table 6.1: Percentage of Iowans Involved in Various Actions to Lower Risk of Developing Heart Disease or Stroke, 2004

DEMOGRAPHIC GROUPS	Eating fewer high-fat or high-cholesterol foods?		Eating more fruits and vegetables?		More physically active?	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	62.4	(60.7-64.1)	73.7	(72.1-75.2)	68.1	(66.6-69.7)
SEX						
Male	56.4	(53.7-59.1)	66.5	(63.9-69.1)	66.3	(63.8-68.9)
Female	67.9	(65.9-69.9)	80.2	(78.5-82)	69.8	(67.9-71.7)
AGE						
18-24	41.8	(35.3-48.2)	58.7	(52.2-65.2)	68.1	(62-74.2)
25-34	52.5	(48.2-56.8)	63.9	(59.7-68)	68.5	(64.5-72.6)
35-44	59.5	(55.8-63.1)	71.9	(68.6-75.1)	70.3	(66.9-73.6)
45-54	69.7	(66.4-72.9)	76.8	(73.9-79.8)	70.6	(67.4-73.8)
55-64	77.0	(73.8-80.2)	82.3	(79.3-85.3)	68.6	(65-72.2)
65-74	74.6	(70.6-78.6)	83.6	(80.2-87.1)	65.1	(60.9-69.4)
75+	67.6	(63.3-71.9)	86.8	(83.9-89.7)	60.8	(56.3-65.3)
EUDCATION						
Less than H.S.	48.3	(41.6-54.9)	66.6	(59.8-73.3)	63.3	(56.9-69.7)
H.S. or G.E.D.	59.8	(57-62.6)	73.1	(70.5-75.7)	63.5	(60.8-66.2)
Some Post-H.S.	65.3	(62.2-68.3)	74.1	(71.3-77)	71.0	(68.2-73.8)
College Graduate	67.0	(64.1-70)	76.3	(73.6-78.9)	72.7	(70-75.4)
HOUSEHOLD INCOME						
< $15,000	52.8	(46.9-58.8)	68.5	(62.7-74.2)	60.7	(55-66.4)
$15,000- 24,999	58.9	(54.3-63.4)	73.1	(68.8-77.5)	63.1	(58.7-67.5)
$25,000- 34,999	65.0	(60.4-69.6)	74.9	(70.8-78.9)	70.3	(66.2-74.5)
$35,000- 49,999	60.4	(56.5-64.2)	71.0	(67.4-74.7)	68.4	(64.8-72.1)
$50,000- 74,999	64.0	(60.1-68)	74.4	(70.8-78)	72.3	(68.7-75.9)
$75,000+	68.1	(64.4-71.8)	76.7	(73.4-80)	72.5	(69-75.9)
RACE/ETHNICITY						
White/Non-Hisp.	63.2	(61.5-64.9)	73.7	(72.1-75.3)	67.8	(66.2-69.4)
Black/Non-Hisp.	64.9	(50.4-79.4)	81.2	(67.7-94.7)	61.8	(46.1-77.5)
Other/Non-Hisp.	53.7	(39.7-67.7)	75.9	(64.7-87.1)	81.8	(71.7-92)
Hispanic	43.0	(30.9-55.2)	67.2	(54.2-80.3)	72.0	(59.2-84.7)

Within the past 12 months, only 32% of respondents had been told by a doctor, nurse, or other health professional to be more physically active.

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7. HYPERTENSION AWARENESS

Background

Blood pressure is the force of blood against the walls of arteries. Blood pressure rises and falls during the day. When blood pressure stays elevated over time, it is called high blood pressure or hypertension.[4]

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. Those with systolic blood pressure of 120-139 mm Hg and/or diastolic blood pressure of 80-89 mm Hg are now classified as pre-hypertensive, requiring health-promoting lifestyle modifications to prevent cardiovascular disease. There is also an exception to the definition of high blood pressure. A blood pressure of 130/80 or higher is considered high blood pressure in persons with diabetes and chronic kidney disease.[4]

This disorder, which is often symptomless, is a major risk factor for heart disease and stroke. Lowering of diastolic blood pressure by a mere 2 mm could result in a 17% decrease in the prevalence of hypertension, a 6% decrease in coronary artery disease, and a 15% reduction in stroke.[1]

Nationally, only 55.4% of adults maintain their blood pressure at an adequate level. Those who do not have high blood pressure at age 55 face a 90% chance of developing it during their lifetimes. Therefore, high blood pressure is a condition that most people have at some point in their lives.[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.[3]

The population-based lifestyle intervention recommendations are weight loss, dietary sodium restrictions, increased physical activity, moderation in alcohol consumption, and a heart-healthy diet rich in fiber and low in saturated and total fat.[2]

Hypertension Awareness Results

In 2004, 26.1% of all respondents reported ever being told they had high blood pressure. This is an increase from the 25.1% reported in 2003 and is a new high. The long-term trend in high blood pressure has been upward (see figure 7.1). This trend may even be stronger than it appears. Starting in 2002, gestational hypertension was considered a separate category and eliminated from consideration as hypertension.

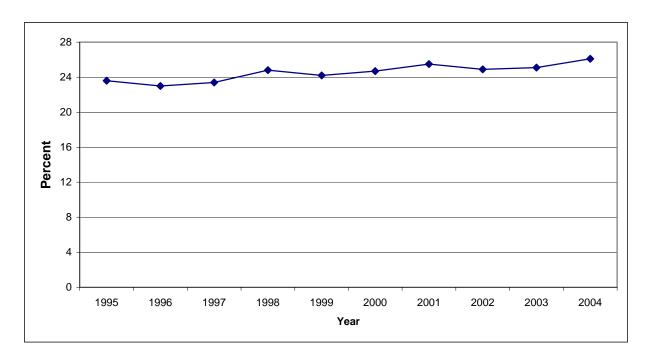**Figure 7.1: Percentage of Iowans Ever Told Blood Pressure is High by Year, 1995-2004**

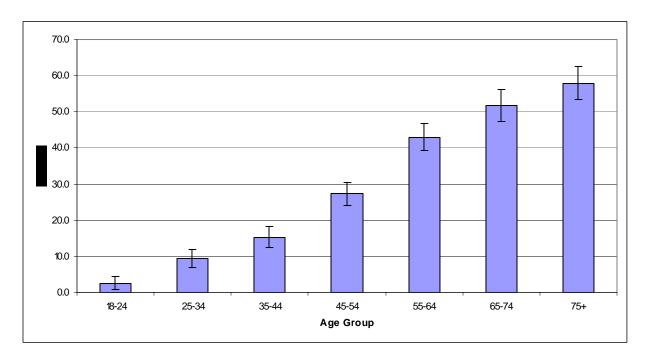**Figure 7.2: Iowans Ever Told Blood Pressure is High by Age, 2004**

Table 7.1: Percentage of Iowans Told Blood Pressure Is High, 2004

DEMOGRAPHIC GROUPS	%	C.I. (95%)
TOTAL	26.1	(24.8-27.5)
SEX		
Male	26.4	(24.2-28.6)
Female	25.9	(24.3-27.6)
AGE		
18-24	2.6	(0.8-4.5)
25-34	9.3	(6.8-11.8)
35-44	15.3	(12.4-18.2)
45-54	27.3	(24.1-30.5)
55-64	43.0	(39.3-46.8)
65-74	51.7	(47.3-56.1)
75+	57.9	(53.4-62.4)
EDUCATION		
Less than H.S.	34.4	(28.7-40.1)
H.S. or G.E.D.	31.9	(29.5-34.4)
Some Post-H.S.	23.5	(21-25.9)
College Graduate	18.9	(16.7-21.2)
HOUSEHOLD INCOME		
Less than $15,000	32.0	(27.2-36.9)
$15,000- 24,999	36.5	(32.4-40.6)
$25,000- 34,999	30.8	(26.9-34.7)
$35,000- 49,999	22.9	(19.9-25.9)
$50,000- 74,999	18.8	(15.8-21.7)
$75,000	19.9	(16.9-22.8)
RACE/ETHNICITY		
White/Non-Hisp.	26.4	(25-27.8)
Black/Non-Hisp.	24.8	(13.4-36.2)
Other/Non-Hisp.	29.6	(18.6-40.7)
Hispanic	15.4	(7.1-23.7)

Age had the greatest impact on the percentage of respondents reporting high blood pressure. The highest percentage was ages 75 and older (57.9%), while the lowest was age 18 to 24 (2.6%) (see Figure 7.2). The prevalence of high blood pressure also increased with lower levels of education and household income. Hispanics reported a lower percentage of high blood pressure than other race or ethnic groups (see table 7.1).

Of those reporting high blood pressure, 75.7% reported taking medication for their condition. Like high blood pressure itself, this percentage increases steadily with age reaching a high of 94.7% for those 65 to 74 years old. More females with high blood pressure took blood pressure medicine than males (81.7% versus 69.4%).

Year 2010 Health Objectives for Iowa and the Nation

According to *Healthy People 2010*, the objective for high blood pressure is that only 16% of the adult population should report having high blood pressure. This is more than 10% lower than is currently the case in Iowa. Furthermore, the long-term trend is in the opposite direction from the goal. The *Healthy Iowans 2010* goal is even stricter at 14.9%

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8. CHOLESTEROL AWARENESS

Background

High blood cholesterol is one of the major risk factors for heart disease. The higher your blood cholesterol level, the greater your risk for developing heart disease or having a heart attack. When there is too much cholesterol (a fat-like substance) in your blood, it builds up in the walls of your arteries. Over time, this buildup causes "hardening of the arteries" so that arteries become narrowed and blood flow to the heart is slowed down or blocked. The blood carries oxygen to the heart, and if enough blood and oxygen cannot reach your heart, you may suffer chest pain. If the blood supply to a portion of the heart is completely cut off by a blockage, the result is a heart attack.[3]

High blood cholesterol itself does not cause symptoms, so many people are unaware that their cholesterol level is too high. It is important to find out what your cholesterol numbers are because lowering cholesterol levels that are too high lessens the risk for developing heart disease and reduces the chance of a heart attack or dying of heart disease, even if you already have it.

Lowering cholesterol is important for everyone -- younger, middle age, and older adults; women and men; and people with or without heart disease. Everyone age 20 and older should have his or her cholesterol measured at least once every five years.

High cholesterol means a total cholesterol level greater than or equal to ($\geq$) 200 milligrams per deciliter (mg/dl). Not all cholesterol increases the risk of heart disease. The cholesterol carried by LDL (the so-called "bad" cholesterol) increases the risk; the cholesterol carried by HDL (the so-called "good" cholesterol) lowers the risk and is beneficial. A level less than 40 mg/dL of HDL is low and is considered a major risk factor because it increases your risk for developing heart disease. HDL levels of 60 mg/dL or more help to lower your risk for heart disease. Cholesterol standards are more stringent for those people at high risk of heart attack due to other factors such as diabetes or coronary heart disease.[2]

The main goal of cholesterol-lowering treatment is to lower your LDL (bad) cholesterol level enough to reduce your risk of developing heart disease or having a heart attack. Methods include:

- Therapeutic Lifestyle Changes (TLC)—these include a cholesterol-lowering diet called the TLC diet, physical activity, and weight management. TLC is for anyone whose LDL is above goal.
- Drug treatment if cholesterol-lowering drugs are needed; they are used together with TLC treatment to help lower LDL.[1]

Cholesterol Awareness Results

In 2004, 27.1% of all respondents reported that they had ever been told by a doctor or other health professional that their blood cholesterol was high. This is an increase from the 24.2% of all respondents found in 2003. This continues the long-term trend of an increase in the percentage of Iowans told their cholesterol is high (see figure 8.1).

Table 8.1: Blood Cholesterol in Iowans, 2004

DEMOGRAPHIC GROUPS	Ever Been Told Blood Cholesterol High		Currently Take Medication for High Cholesterol	
			%	C.I. (95%)
TOTAL	27.1	(25.7-28.5)	52.1	(49.1-55)
SEX				
Male	28.5	(26.2-30.8)	58.8	(54.3-63.4)
Female	25.8	(24.1-27.5)	45.2	(41.6-48.8)
AGE				
18-24	3.3	(1.1-5.5)		
25-34	8.3	(6-10.6)	*19.5	(8.7-30.2)
35-44	20.0	(16.9-23.1)	29.3	(20.6-38)
45-54	33.3	(29.9-36.6)	43.3	(37.1-49.6)
55-64	45.0	(41.2-48.7)	55.2	(49.5-60.9)
65-74	52.0	(47.6-56.5)	72.7	(67.1-78.3)
75+	45.9	(41.4-50.5)	70.0	(63.9-76.1)
EDUCATION				
Less than H.S.	28.2	(22.9-33.5)	57.1	(46.7-67.4)
H.S. or G.E.D.	29.1	(26.7-31.4)	56.9	(52.4-61.5)
Some Post-H.S.	25.9	(23.3-28.5)	46.4	(40.8-52.1)
College Graduate	25.6	(23-28.2)	49.1	(43.2-54.9)
HOUSEHOLD INCOME				
Less than $15,000	26.9	(22.2-31.6)	60.3	(50.6-69.9)
$15,000- 24,999	31.4	(27.4-35.4)	57.5	(49.9-65)
$25,000- 34,999	29.1	(25.3-32.9)	59.8	(52.5-67.1)
$35,000- 49,999	26.3	(23.2-29.5)	52.5	(45.8-59.2)
$50,000- 74,999	24.5	(21.2-27.8)	43.4	(35.9-50.9)
$75,000+	24.2	(21.1-27.4)	41.9	(34.6-49.1)
RACE/ETHNICITY				
Non-Hispanic White	28.2	(26.7-29.6)		
Non-Hispanic Black	15.1	(6.9-23.4)		
Non-Hispanic Other	15.0	(7-23)		
Hispanic	8.8	(1.7-16)		

* For ages 18-34.

However, the question was not asked in its normal context or form in 2004. Previously, the question was only asked if the person stated that they had ever had their blood cholesterol checked. That question was not asked in 2004. Even though the trend was recalculated for previous years considering all respondents, this lowers the confidence with which such a strong increase can be inferred.

The percentage of males reporting high cholesterol was higher than the percentage of females. Age made a considerable difference in reporting high cholesterol with the oldest age group

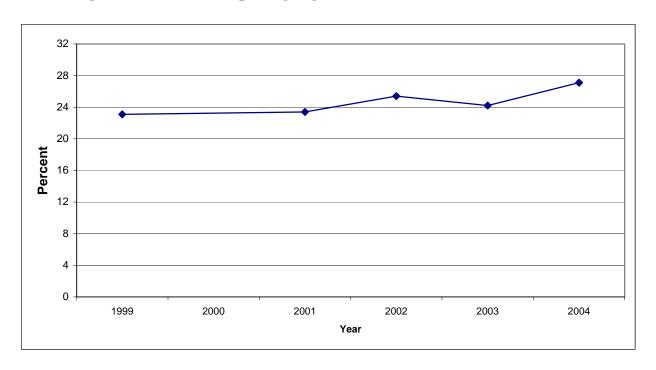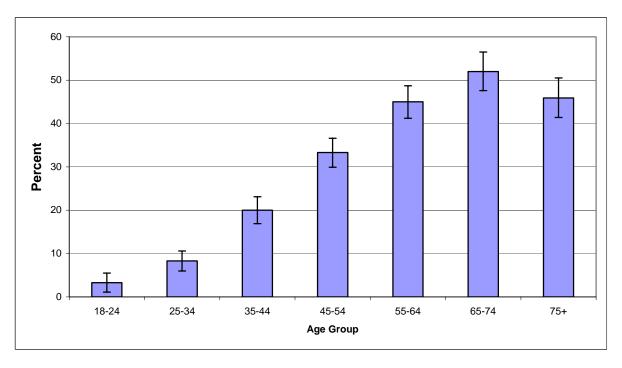**Figure 8.1: Trend in Reporting High Cholesterol in All Iowans, 1999-2004**

Figure 8.2: Iowans Ever Told Their Cholesterol was High by Age, 2004

reporting more than 16 times greater prevalence of high cholesterol than the youngest (see figure 8.2). Hispanics and other minorities were less likely to report high cholesterol. People with higher education and higher income were a little less likely to report high cholesterol (see table 8.1).

Of the Iowa respondents reporting high cholesterol, 51.2% also reported currently taking medication for their cholesterol. More males, older people, less educated people, and lower income people reported taking medication. Age had the greatest impact on taking medication with the lowest prevalence being in the 18 to 34 year age group (19.5%) and the highest prevalence being in the 65 to 74 year age group (72.7%).

Year 2010 Health Objectives for Iowa

The *Healthy Iowans 2010* goal for proportion of people having high cholesterol is 28.5%. Even with the increase in reported high cholesterol in 2004, Iowa is still below the goal at 27.1%.

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9. EXERCISE AND 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 people remain inactive.

Although the percentage who do not engage in regular physical activity remains high, many efforts are underway to try to increase the physical activity level of Iowans. Interventions to increase physical activity include:

1) An increased number of great recreational trails.
2) Increased regular media attention to physical activity and related topics.
3) Worksite wellness programs.
4) Conferences and training on physical fitness.
5) Continuous promotion of physical activity by the Iowa Department of Public Health and other organizations.
6) Continued development of programs by Parks and Recreation Departments.
7) 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.

Exercise and Physical Activity Results

In 2004, 78.7% of respondents reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. This is an increase from the 77.3% found in 2003 and marks the highest level the survey has recorded (see figure 9.1).

More younger respondents reported engaging in leisure physical activity than older respondents. The percentage of respondents who exercised also increased with education and household income. This

Table 9.1: Leisure Physical Activity in Iowans, 2004

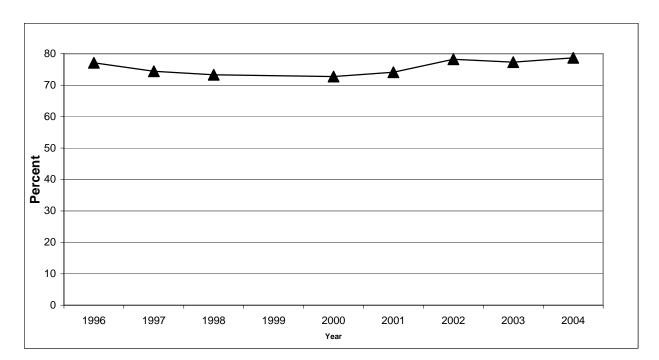| DEMOGRAPHIC GROUPS	Any Leisure Physical Exercise in Last Month	
	%	C.I. (95%)
TOTAL	78.7	(77.4-80)
SEX		
Male	80.1	(78.1-82.2)
Female	77.4	(75.7-79)
AGE		
18-24	85.7	(80.9-90.4)
25-34	82.7	(79.4-86)
35-44	81.1	(78.3-83.9)
45-54	80.6	(77.9-83.3)
55-64	75.6	(72.3-78.9)
65-74	70.4	(66.4-74.4)
75+	66.1	(62.1-70.2)
EDUCATION		
Less than H.S.	61.7	55.6-67.8
H.S. or G.E.D.	70.7	68.2-73.2
Some Post-H.S.	84.1	82.0-86.2
College Graduate	88.8	87.0-90.7
HOUSEHOLD INCOME		
Less than $15,000	66.0	60.8-71.2
$15,000- 24,999	68.6	64.6-72.6
$25,000- 34,999	74.0	70.2-77.9
$35,000- 49,999	79.1	76.0-82.2
$50,000- 74,999	87.0	84.5-89.6
$75,000+	90.2	87.9-92.5
RACE/ETHNICITY		
White/Non-Hisp	79.3	(78-80.6)
Black./Non-Hisp	70.0	(56.9-83.1)
Other/Non-Hisp.	84.6	(76.8-92.4)
Hispanic	58.5	(46.2-70.9)

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Figure 9.1: Trend in Leisure Physical Activity in Iowa 1996-2004

percentage was lower for Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for Hispanics (58.5%), while the highest was for those with a household income of $75,000 or more (90.2%) (see table 9.1).

Respondents were asked if they did moderate or vigorous physical activities for at least ten minutes in a usual week. In the case of vigorous physical activity, 59.2% said they did at least ten minutes in a typical week. In the case of moderate physical activity, the figure rose to 84.7%. This figure is higher than the level of reported leisure physical activity in the past 30 days and so may reflect activity done at work. It is also possible that the very short time interval specified caused respondents to consider activities that they had not considered for the leisure activity question.

Respondents were also asked how often they took a walk to get exercise. Every day or almost every day was the most frequent answer. It was given by 29% of the respondents. On the other hand, 14.5% said they never took a walk for exercise.

Comparison with Other States

Iowa ranked above the median on the measure of engaging in leisure time physical activity. The median for the nation reported engaging in any leisure activity in the past 30 days was 77.2%, while Iowa reported 78.7%.

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%.[4] Iowa's level of 21.3% is higher than this target. However, it is closer to the target than we have ever been.

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10. OVERWEIGHT AND OBESITY

Background

Overweight and obesity are probably the most serious health problems in America today. Obesity is a condition linked to risk factors for cardiovascular disease, cancer, and stroke, which are the first, second and third leading causes of death in Iowa. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, and osteoarthritis. [6]

Obesity is already a significant factor in rising health care costs and is expected to increase. The national cost of obesity in 1998 was $78.5 billion, half of which was paid by Medicare and Medicaid.[1] Iowa's price tag is $780 million, of which $198 million is paid by Medicaid and $165 million, by Medicare. In 2002, nearly $149 million was spent on Iowa hospital visits, in which obesity was reported in Any Discharge Diagnosis. This was an increase of 18% from the previous year and an increase of 54% from 1999.[3]

The origin of overweight involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits.[5] 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.[2]

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.[4]
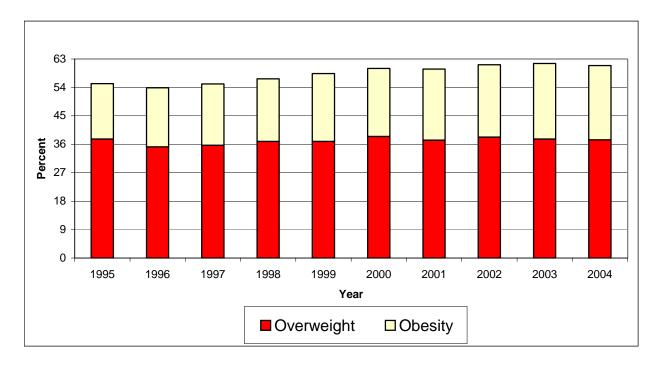
Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m^2)]. Estimations of the prevalence of overweight and obesity in this report are based on BMI. In adults, overweight is considered to be a BMI value greater than or equal to 25 and less than 30. Obesity is considered to be a BMI greater than or equal to 30.

Overweight & Obesity Results

The BRFSS data show that 37.4% of Iowans are overweight and 23.5% are obese, based on BMI. The percentage of overweight and obese combined is 60.9%. This reverses a long trend of increasing overweight and obesity (see figure 10.1). It may is hoped that this is not just a momentary lull in the long-term obesity epidemic's progression.

The self-reported weights show many more males than females are overweight, while the sex difference in prevalence of obesity is much less. Both overweight and obesity increase with age, although the trend reverses for the oldest respondents. Obesity shows a very sharp decrease after age 65.

Figure 10.1: Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 1995-2004

The effects of income are opposite for overweight and obesity. The percentage overweight increases with increasing income. On the other hand, the lowest income is most likely to be obese, while the highest income is least likely to be obese. These effects somewhat cancel each other when overweight and obesity are combined. The percentage of all those over their healthy weight is lower for those with incomes less than $15,000, but about the same for all the other levels (see table 10.1).

In terms of race and ethnicity, African Americans have the highest percentage overweight and are significantly higher for obesity than all other groups. There is no difference in other racial /ethnic groups in overweight, but other non-Hispanics are lower in obesity than other groups (see table 10.1).

The demographic group with the highest prevalence of people over their healthy weight (combined overweight and obesity) is African Americans with 78.6%. The group with the lowest prevalence over their healthy weight is those 18 to 24 years old (36.2%).

Comparison with Other States

Iowa's figure of 60.9% either overweight or obese in 2004 was only slightly higher than the median of 60.4%. Iowa's standing with respect to the rest of the United States is improving. While the prevalence of overweight and obesity declined from 2003 in Iowa, the median for the nation continued to increase. Iowa moved from ranking among the heaviest states to ranking just above the median.

Table 10.1: Overweight and Obese Iowans Based on BMI, 2004

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	37.4	(35.8-38.9)	23.5	(22.2-24.9)	60.9	(59.3-62.5)
SEX						
Male	44.9	(42.3-47.5)	24.6	(22.4-26.8)	69.5	(67-72.1)
Female	30.0	(28.2-31.8)	22.5	(20.9-24)	52.5	(50.5-54.5)
AGE GROUP						
18 - 24	24.0	(18.6-29.4)	12.2	(8.3-16.1)	36.2	(30.2-42.2)
25 - 34	36.5	(32.5-40.6)	22.5	(19.1-26)	59.1	(55-63.2)
35 - 44	36.9	(33.5-40.4)	26.0	(22.7-29.2)	62.9	(59.4-66.3)
45 - 54	42.1	(38.7-45.6)	26.7	(23.7-29.8)	68.9	(65.7-72.1)
55 - 64	44.6	(40.9-48.4)	27.5	(24.1-30.8)	72.1	(68.7-75.6)
65-74	38.9	(34.5-43.3)	31.1	(26.9-35.3)	70.0	(66-74)
75+	38.3	(34-42.6)	17.7	(14.3-21.1)	56.0	(51.6-60.4)
EDUCATION						
Less than H.S.	33.4	(27.4-39.5)	24.0	19.3-28.6	57.4	(50.9-63.9)
H.S. or G.E.D.	37.9	(35.2-40.5)	26.5	24.2-28.9	64.4	(61.7-67.1)
Some Post-H.S.	36.5	(33.6-39.4)	24.4	21.8-26.9	60.8	(57.8-63.9)
College Graduate	38.6	(35.7-41.5)	19.0	16.6-21.4	57.6	(54.7-60.5)
HOUSEHOLD INCOME						
Less than $15,000	29.2	(23.6-34.8)	28.2	23.5-33.0	57.4	(51.7-63.1)
$15,000- 24,999	34.2	(30.3-38.1)	25.2	21.6-28.9	62.8	(58.5-67.1)
$25,000- 34,999	38.5	(34.4-42.5)	25.1	21.5-28.7	58.0	(53.6-62.5)
$35,000- 49,999	38.1	(34.4-41.8)	26.0	22.8-29.3	64.3	(60.6-68.1)
$50,000- 74,999	38.2	(34.3-42.1)	24.4	21.0-27.8	64.1	(60.3-67.9)
$75,000+	43.0	(38.7-47.3)	19.1	16.2-22.0	60.1	(56.3-63.8)
RACE/ETHNICITY						
White/Non-Hisp.	37.4	(35.8-38.9)	23.6	(22.2-25)	60.9	(59.2-62.6)
Black/Non-Hisp.	43.8	(29.2-58.4)	34.8	(22.4-47.2)	78.6	(66.5-90.8)
Other/Non-Hisp.	38.0	(24.5-51.4)	16.6	(8.4-24.8)	54.5	(41.1-68)
Hispanic	35.3	(23.2-47.4)	23.4	(15.4-31.5)	58.7	(46.8-70.7)

Year 2010 Health Objectives for Iowa and the Nation

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 years and older. Although Iowa may be slowing the epidemic of obesity, more than 60% of the population is above healthy weight. The *Healthy People 2010* target for obesity is 15%. Iowa exceeds that by more than half at 23.5%. The *Healthy Iowans 2010* goals for overweight and obesity are to halt the increasing prevalence. This was accomplished in 2004 compared to 2003. However, obesity is still higher than in 2002, which was used as the baseline in the goal.

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11. DIABETES

Background

Diabetes rates in the United States are approaching epidemic proportions. An estimated 18.2 million people in the United States – 6.2% of the population – have diabetes. More than 13 million people live with the burden of diabetes daily, and another 5.2 million have the disease and do not know it. Skyrocketing costs accompany this epidemic with an estimated total annual cost (direct and indirect) of $132 billion. This includes direct medical costs of $92 billion and indirect costs of another $40 billion related to disability, work loss, and premature death.[1]

The good news is that research studies have found that positive lifestyle changes can prevent or delay the onset of Type 2 diabetes among high–risk adults. Lifestyle interventions included diet modification, weight loss and moderate-intensity physical activity (such as walking for 2 ½ hours each week).

Pre-diabetes is a relatively new term used to distinguish people with impaired fasting glucose or impaired glucose tolerance levels or both who are at increased risk of developing diabetes and are also at risk for other adverse health outcomes. Progression to diabetes among those with pre-diabetes is not inevitable. In one large prevention study of people at high risk for diabetes, the development of diabetes was reduced 58% over three years by implementing positive lifestyle interventions.

The complications of diabetes are many and severe. They can include heart disease, stroke, high blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, biochemical imbalances such as ketoacidosis and diabetic coma, and lower resistance to other diseases. However, complications can be minimized when diabetes is diagnosed early and the patient is taught to self manage their disease through blood glucose control, weight control, taking medications appropriately, decreasing unhealthy lifestyles such as smoking, and implementing healthy lifestyle interventions as mentioned earlier.

The Diabetes Prevention and Control Program at the Iowa Department of Public Health acts as a resource for health care professionals regarding the latest guidelines for diabetes care, coordinates a statewide diabetes network, and collaborates with local community projects to develop initiatives on public awareness, prevention, and other areas of disease management. It also certifies programs for Medicaid reimbursement and assists certified programs in maintaining quality standards for outpatient education.

Diabetes Results

In 2004, 6.4% of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is slightly lower than the 6.7% found in 2003. Although encouraging, it is too early to say that the rapid upward trend in diabetes may have ended (see figure 11.1). Since 1996, there has been over a 50% increase in the rate of diabetes.

Figure 11.1: Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year, 1995-2004
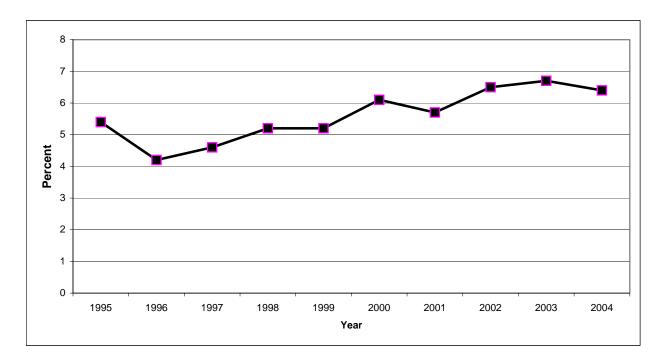

Table 11.1 shows that the rate of diabetes is much higher when respondents are older, lower in education, and have a lower household income. It is higher in African Americans, but lower in the other racial and ethnic minority groups considered.

Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 60 years and older (33.1%). The age group in which the least reported being first diagnosed was less than age 16 years (2.6%).

Of those ever told by a physician that they have diabetes, 27.2% reported currently taking insulin. At the same time, 68.4% reported currently taking oral medication to control the disease.

When asked how many times they had seen a health professional for their diabetes in the last year, the most common answer was four (38.3%), while 4.6% said never.

Respondents told by a physician they had diabetes were asked how many times they had their blood sugar checked in the past 12 months. About 63.6% checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 6.8% reported never testing their blood sugar. Around 86.2% had it checked at least once within the past year by a health professional through a glycosylated hemoglobin test, frequently referred to as an A1C. Around 5.8% reported never having had the A1C test. Another 8% reported they had never heard of such a test. It is recommended that this test be done at least twice a year and at least three months apart.

Table 11.1. Iowans Ever Ben Told They Had Diabetes, 2004

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	6.4	(5.7-7.1)
SEX		
Male	6.4	(5.3-7.6)
Female	6.4	(5.5-7.3)
AGE GROUP		
18-24	0.9	(0-2.2)
25-34	1.1	(0.2-2)
35-44	2.4	(1.4-3.5)
45-54	7.0	(5.2-8.8)
55-64	10.5	(8.3-12.8)
65-74	14.6	(11.5-17.6)
75+	15.8	(12.6-19.1)
EDUCATION		
Less than H.S.	10.1	(7.2-13)
H.S. or G.E.D.	8.0	(6.6-9.4)
Some Post-H.S.	4.8	(3.7-5.9)
College Graduate	4.9	(3.7-6.1)
HOUSEHOLDINCOME		
Less than $15,000	11.0	8.13-14.0
$15,000- 24,999	7.4	5.47-9.27
$25,000- 34,999	8.5	6.17-10.8
$35,000- 49,999	5.8	4.15-7.45
$50,000- 74,999	3.5	2.23-4.85
$75,000+	4.4	2.79-6.05
RACE/ETHNICITY		
White/Non-Hisp	6.5	(5.7-7.2)
Black/Non-Hisp	11.4	(5.1-17.7)
Other/Non-Hisp	2.1	(0-5.1)
Hispanic	5.8	(2.1-9.6)

Individuals with diabetes should check their feet daily for sores and irritations and should have them checked at least once a year by their health care provider. When asked how often they check their feet, 67.1% of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 11.5% said they never checked them. Around 70.4% of respondents with feet reported they had their feet checked by a health professional at least once within the past 12 months.

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 77.3% reported within the last year, while 4% reported never having such an examination.

Learning how to manage diabetes is very important to those who have the condition to keep it from leading to deteriorating health. Only 62.7% of those with diabetes in 2004 reported having taken a class on how to manage it.

Comparison with Other States

The median prevalence of diabetes for the states and territories was 7.0% in 2004. The figure for Iowa was below the median at 6.4%. Diabetes prevalence ranged from a low of 4.2% to a high of 10.9%. Both Iowa and the nation showed a decrease in diabetes prevalence in 2004, although both were fairly small. The national decline was much smaller than that for the state.

Year 2010 Health Objectives for Iowa

The *Healthy Iowans 2010* objective set for prevalence of diabetes was 6.7% with an increase of no more than 0.2% per year. Iowa is currently at 6.4%, which is below the initial baseline. 2004 is the first year in a while that the diabetes prevalence in the state has gone down. Time will tell if Iowa has passed a peak or is merely experiencing a short-term decline.

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12. ASTHMA

Background

Asthma, a chronic inflammatory disease of the lungs characterized by recurrent wheezing, breathlessness, coughing, and chest tightness, is now one of the most common chronic diseases of children and adults.[4] Prevalence among adults and children has doubled in the last 15 years, and more than 200,000 Iowans now have asthma.[2,3,5]

Asthma is a leading cause of inpatient admission and of unscheduled emergency department and physician office visits. Many of these admissions and visits could be avoided if medical and self-management of asthma were carried out according to national guidelines.

The direct medical costs of asthma, including inpatient and outpatient care and medications, are estimated to be about $85 million, and indirect socio-economic costs are close to $64 million each year.[1,5] Based on national data, it is estimated about 140,000 days of school are missed each year due to asthma by Iowa children,[3] and half of all children and a quarter of all adults with asthma miss at least one day of school or work each year.[9]

The causes of asthma are not completely understood, but are most likely a combination of personal and environmental risk factors. Those risk factors for asthma include family history of asthma and allergies, acute respiratory infections, 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. After developing asthma, a person often becomes especially sensitive to any exposures to the environmental risk factors listed.[6,7,8]

Asthma Results

In 2004, 10.5% of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 6.6% currently have asthma, and 3.9% formerly had asthma. The percentage of Iowa adults with current asthma is up somewhat from the 6.2% reported in 2003, reversing a recent downward trend (See figure 12.1).

In Iowa, more women currently have asthma than do men (8.4% vs. 4.7%). Household income and race/ethnicity seemed to be the most powerful factors in determining asthma prevalence. The group with the highest percentage currently having asthma had household incomes less than $15,000 (13.2%). The lowest percentage of current asthma was seen in Hispanics (1.5%) (see table 12.1).

Of those respondents who had ever been told they had asthma, 35.7% were diagnosed with the disorder at age 10 years or younger.
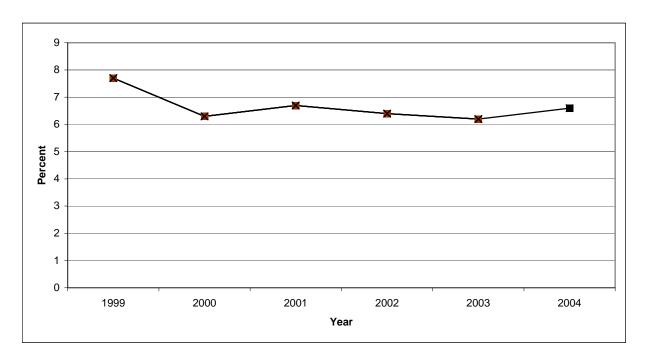
Figure 12.1: Current Asthma in Iowa by Year, 1999 - 2004

Of those who currently have asthma, 47.1% had an asthma attack in the past 12 months. About 9% had visited an emergency room or urgent care facility for their asthma at least once in the past 12 months. About 21% had seen a health professional for urgent care at least once in the past 12 months. However, 48.4% did not see a health professional at all for even a routine checkup for their asthma in the past 12 months.

Of those who currently have asthma, 14.4% reported one or more days in which their activities were limited for a day or more due to asthma in the past year. The range reported was from one to 360 days of limitation with a median of three days.

Of those who currently have asthma, 26.6% took prescription asthma medication more than twice a day in the past 30 days, while 31.3% took no asthma medication at all.

There are two types of asthma medication. One treats asthma symptoms when they occur (rescue medication), and the other prevents asthma symptoms from occurring (maintenance or controller medication). In the case of rescue medications, 39.4% reported taking them once a week or less in the past 30 days. On the other hand, 31.8% took maintenance medications once a day with another 24.2% nearly once a day. Even if they did not take any asthma medications in the past 30 days, 19.8% of Iowans with asthma reported that they had taken rescue medications in the last 12 months. Over the same time, 20.7% took maintenance medications

Table 12.1: Iowans Currently and Formerly Having Asthma, 2004

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.6	(5.9-7.4)	3.9	(3.2-4.6)
SEX				
Male	4.7	(3.7-5.8)	4.3	(3.1-5.6)
Female	8.4	(7.3-9.5)	3.4	(2.7-4.2)
AGE				
18-24	6.5	(3.7-9.4)	6.9	(3.5-10.3)
25-34	7.4	(5.4-9.4)	3.2	(1.9-4.5)
35-44	6.5	(4.7-8.3)	4.0	(2.2-5.8)
45-54	6.7	(5-8.4)	3.6	(2.3-4.9)
55-64	5.3	(3.6-7)	3.8	(2.3-5.3)
65-74	7.6	(5.4-9.8)	3.1	(1.6-4.7)
75+	6.7	(4.5-8.9)	2.1	(0.9-3.3)
EDUCATION				
Less than H.S.	5.8	(3.2-8.4)	4.9	(1.9-7.8)
H.S. or G.E.D.	7.1	(5.8-8.5)	3.1	(2-4.3)
Some Post-H.S.	7.4	(5.8-9)	4.2	(3-5.4)
College Graduate	5.5	(4.3-6.7)	4.1	(2.8-5.5)
HOUSEHOLD INCOME				
Less than $15,000	13.2	(9.2-17.1)	1.8	(0.7-2.9)
$15,000- 24,999	6.1	(4.2-8)	4.8	(2.5-7.2)
$25,000- 34,999	7.4	(5.2-9.6)	2.7	(1.4-3.9)
$35,000- 49,999	5.6	(3.8-7.3)	3.0	(1.8-4.2)
$50,000- 74,999	6.3	(4.4-8.3)	4.5	(2.6-6.4)
$75,000+	4.4	(2.9-6)	4.2	(2.5-5.8)
RACE/ETHNICITY				
Non-Hispanic White	6.6	(5.8-7.4)	3.8	(3.1-4.6)
Non-Hispanic Black	11.0	(4.6-17.4)	6.4	(0.4-12.5)
Non-Hispanic Other	12.4	(3.5-21.3)	9.4	(0-20.2)
Hispanic	1.5	(0-3.7)	0.0	(0-0)

For more information about asthma in Iowa see the web site
http://www.idph.state.ia.us/hpcdp/asthma.asp.

Comparison with Other States

Among the states and territories, there were only four with a lower prevalence of current asthma sufferers. While Iowa reported 6.2% of the entire adult population currently suffering from asthma, the median for the nation was 7.5%. Prevalence ranged from a low of 4.5% to a high of 10.8%.

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13. TOBACCO USE

Background

Tobacco use remains the leading preventable cause of death in the United States. It is responsible for more than 440,000 deaths each year, or one in every five deaths.[2,3] Over $75 billion is spent every year on direct medical expenditures, and another $82 billion on indirect costs such as lost work time resulting from tobacco use.[2,3]

Tobacco use is known to cause heart disease, peripheral vascular disease, and 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. In fact, smoking causes diseases in nearly every organ of the body.[3]

Consequences of smoking during pregnancy include spontaneous abortions, low birth weight babies, and sudden infant death syndrome (SIDS).[1] Secondhand Smoke (SHS) increases the risk of heart disease and lung cancer in adults. SHS also affects children by increasing lower respiratory tract infections and asthma and by decreasing pulmonary function.[8]

Exposure to SHS is significant. In one study, 87.9% of children and adult non-users of tobacco had detectable levels of serum cotinine, a biomarker for cigarette smoke exposure.[7] Every year, exposure to SHS kills an estimated 53,000 nonsmoking Americans (500 Iowans) and causes up to 300,000 children to suffer from lower respiratory tract infections.[5]

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.[2] After a leveling off in the 1990s, these rates have recently begun to further decline.

Preventing initiation of tobacco use has become a priority in reducing prevalence since more than 90% of current adult tobacco users started smoking cigarettes before the age of 18 years.[4]

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. Currently, funding for tobacco prevention and control programs in Iowa is almost 70% below the Centers for Disease Control and Prevention minimum recommended funding level for Iowa of $19.35 million.

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.[6]

Tobacco Use Results

Current smoking was defined as smoking at least 100 cigarettes in a lifetime and smoking some days or everyday during the past 30 days. Of all respondents surveyed in 2004, 20.8% reported being a current smoker. This was a decrease from the 21.7% found in 2003. This is the lowest prevalence of current smoking seen in the last ten years and continues a downward trend over the last three years (see Figure 13.1).
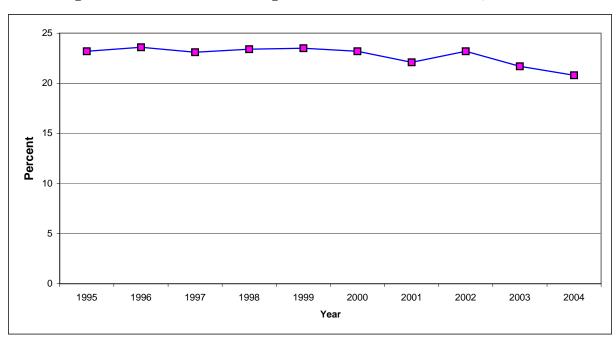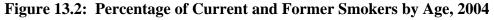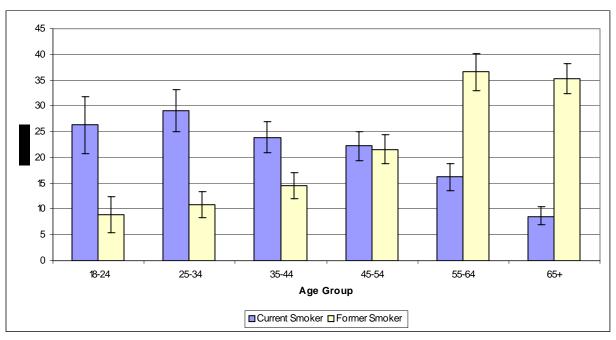
Figure 13.1: Trend in Percentage of Current Smokers in Iowa, 1995-2004

Figure 13.2: Percentage of Current and Former Smokers by Age, 2004

Table 13.1: Percentage of Current and Former Smokers in Iowa, 2004

DEMOGRAPHIC GROUPS	Current Smoker		Former Smoker	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	20.8	19.5-22.2	21.4	20.1-22.6
SEX				
Male	22.8	20.5-25.0	25.5	23.4-27.6
Female	19.0	17.4-20.6	17.5	16.0-18.9
AGE				
18-24	26.3	20.8-31.8	8.9	5.4-12.4
25-34	29.1	25.1-33.1	10.8	8.3-13.3
35-44	23.9	20.9-27.0	14.5	12.0-17.0
45-54	22.3	19.4-25.1	21.6	18.8-24.4
55-64	16.2	13.6-18.9	36.6	32.9-40.2
65+	8.6	6.9-10.4	35.3	32.3-38.3
EDUCATION				
Less than H.S.	31.3	25.3-37.2	21.9	17.1-26.7
H.S. or G.E.D.	26.4	24.0-28.9	24.1	21.9-26.3
Some Post-H.S.	21.2	18.7-23.7	21.3	18.9-23.7
College Graduate	10.3	8.4-12.2	17.8	15.7-19.9
HOUSEHOLD INCOME				
Less than $15,000	27.7	22.5-32.8	21.1	16.7-25.6
$15,000- 24,999	26.0	22.2-29.8	21.4	18.2-24.7
$25,000- 34,999	25.9	21.8-29.9	21.9	18.5-25.2
$35,000- 49,999	24.2	20.9-27.6	23.3	20.2-26.4
$50,000- 74,999	17.0	13.9-20.0	21.0	17.8-24.3
$75,000+	12.7	10.0-15.4	20.1	17.3-22.9
RACE/ETHNICITY				
White/Non-Hisp.	20.8	19.4-22.2	21.8	20.5-23.1
Black/Non-Hisp.	18.9	7.4-30.5	13.0	4.4-21.6
Other/Non-Hisp.	29.7	17.4-41.9	16.7	5.7-27.7
Hispanic	18.0	9.4-26.7	14.2	6.3-22.0

The proportion of current smokers was higher for males than for females. Smoking generally declined with increasing age, education, and income. The other non-Hispanic race/ethnicity group had a higher proportion of smokers. This group would be made up of Asians and Native Americans, among others. Respondents with less than a high school education reported the highest proportion of current smokers (31.3%). Only 8.6% of respondents age 65 years and older were current smokers (see table 13.1).

Nearly 21.4% of respondents were former smokers. This means that they had smoked at least 100 cigarettes in their lifetime, but did not smoke now. While more males were former smokers than females, the age trend for former smokers was the opposite of that for current smokers. The 18 to 24 age group had only 8.9% former smokers, while the 55 to 64 year age group had 36.6% (see figure 13.2).

When asked about attempts to quit smoking, 49.2% of Iowa's current smokers reported they quit smoking for a day or more during the past year. A larger percentage of females than males quit for at least one day. Younger smokers were more likely to report trying to quit during the past year. Individuals 18 to 24 years old reported trying to quit most often (58.1%), compared to 35% of persons age 65 years old and older who were least likely. Respondents with a college education were more likely to try to quit than those with less education (see table 13.2).

Of current smokers who had seen a doctor or health professional in the past 12 months, 58.7% reported having been advised to quit smoking on at least one occasion. Of these health professionals, 27.4% advised using aids such as the nicotine patch or gum, and 21.4% advised some non-medical approach to help quit smoking.

Most Iowans (70.4%) said they had rules against any smoking in their house. However, 16.6% said they had no rules concerning smoking in the house. Among employed Iowans, 81.1% said no smoking was allowed in public areas at work, and 86.4% said no smoking was allowed in work areas.

Table 13.2: Percentage of Current Smokers in Iowa Trying to Quit, 2004

DEMOGRAPHIC GROUPS	Tried to Quit Smoking	
	%	C.I. (95%)
TOTAL	49.2	(45.4-52.9)
SEX		
Male	48.7	(43-54.4)
Female	49.7	(45-54.3)
AGE GROUP		
18-24	58.1	46.3-70.0
25-34	57.9	49.6-66.2
35-44	46.3	39.0-53.5
45-54	45.8	38.5-53.1
55-64	40.2	31.5-48.8
65+	35.0	25.1-44.8
EDUCATION		
Less than H.S.	41.8	30.3-53.4
H.S. or G.E.D.	49.0	43.5-54.6
Some Post-H.S.	49.3	42.6-56.0
College Graduate	56.5	46.7-66.4
HOUSEHOLD INCOME		
Less than $15,000	53.4	42.5-64.3
$15,000- 24,999	49.2	40.8-57.6
$25,000- 34,999	42.9	33.4-52.3
$35,000- 49,999	50.8	42.9-58.8
$50,000- 74,999	45.3	35.6-55.0
$75,000+	53.5	41.9-65.1

Comparison with Other States

Iowa's current smoking prevalence of 20.8% was right at the median for all reporting states and territories. Smoking prevalence ranged from a low of 9.4% to a high of 27.5%.

Year 2010 Health Objectives for Iowa and the Nation

The goal for *Healthy People 2010* is to reduce the percentage of smokers to 12%, while the goal for *Healthy Iowans 2010* is 18%. *Healthy Iowans 2010* also has a goal of reducing to 28% the proportion of smokers between the ages of 18 to 24 years and to 25% the proportion of smokers with a household income of less than $25,000. The prevalence of smoking is down in Iowa again in 2004 to 20.8%. For ages 18 to 24 years, it is 26.3%. For household incomes less than $25,000, it is 26.6%. This does not achieve either the state or national overall goal or the state goal for income. It does achieve the state goal for ages 18 to 24 years.

Iowa fell far short of the revised *Healthy Iowans 2010* goal to have 75% of current smokers attempt to quit in the past year. At 49.2%, the proportion trying to quit in Iowa is not quite two-thirds of the goal.

Healthy Iowans 2010 has a goal of no more than 20% of people exposed to secondhand smoke at work. This goal has been met since Iowa workers report that only 18.9% have no rules against smoking in public areas at work. The percentage is even lower for work-related areas. The *Healthy Iowans 2010* goal was 69% for people having rules against smoking in their home. This goal was surpassed with 70.4% saying they had such rules.

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14. ALCOHOL CONSUMPTION

Background

A large number of people get into serious trouble because of their consumption of alcohol. Alcohol consumed on an occasional basis at a rate of no more than one ounce per hour will pose little risk to most people. Even at this level, factors such as family history, health condition, and use of medications can pose problems.

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 (drinking too much at one time) and heavy drinking (drinking a large quantity of alcohol 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. The consequences of alcohol misuse are serious and 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). Chronic 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.

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.

Among men, research indicates that greater alcohol use is related to greater sexual aggression. Binge drinkers appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge.[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. Of these fatalities, the proportion that was alcohol-related was 30.5%.[4]

Alcohol consumption has been considered to lead to 85,000 deaths (3.5% of all deaths) in the United States in 2000.[3]

Alcohol Consumption Results

In the BRFSS survey, a standard drink is defined as 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. Although this definition does not always work out to the same quantity of alcohol, results discussed here must be based on the definition given in the questions asked.

In 2004, 56.9% of Iowans reported that they had at least one drink of alcohol in the past month. On the days when they drank, 37.3% had only one drink. The median was two drinks. About 4.1% reported drinking more than six drinks per day on the average.

In our analysis, heavy drinking was defined to be greater than two drinks per day for men and one drink per day for women. According to this definition, 5.8% of all respondents were heavy drinkers. This is slightly lower than the 6% found in 2003. This continues a mild downward trend in the percentage of heavy drinking seen over the last three years, which reverses an upward trend seen before that (See figure 14.1).

Figure 14.1: Trend of Binge and Heavy Drinking in Iowa

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 7.6% of men were considered to be heavy drinkers, while only 4.2% of women were considered to be heavy drinkers. The strongest determinant of heavy drinking was age. While 12% of those 18to 24 years old engaged in heavy drinking, only 1.6% of those 75 years old and older did. An interesting finding that emerges when separating age 75 years old and older from those 65 to 74 years old is that the latter age group was the second highest age group engaging in heavy drinking (see table 14.1).

Table 14.1: Binge and Heavy Drinking Among Iowans, 2004

DEMOGRAPHIC GROUPS	Binge Drinking		Heavy Drinking	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	19.0	(17.6-20.4)	5.8	(5-6.6)
SEX				
Male	28.8	(26.4-31.2)	7.6	(6.2-9)
Female	9.8	(8.4-11.1)	4.2	(3.3-5.1)
AGE				
18-24	32.5	(26.6-38.5)	12.0	(7.9-16)
25-34	32.3	(28.3-36.3)	5.8	(3.7-7.8)
35-44	23.4	(20.3-26.5)	6.1	(4.4-7.9)
45-54	16.7	(14-19.4)	5.1	(3.6-6.6)
55-64	9.2	(6.9-11.5)	3.6	(2.2-5)
65-74	5.0	(2.8-7.2)	6.2	(4-8.4)
75+	0.5	(0.1-0.9)	1.6	(0.4-2.8)
EDUCATION				
Less than H.S.	8.8	(5-12.6)	4.8	(2.6-7)
H.S. or G.E.D.	21	(18.4-23.5)	6.7	(5.2-8.2)
Some Post-H.S.	20.9	(18.2-23.6)	7.0	(5.1-8.8)
College Graduate	17.8	(15.4-20.2)	4.0	(2.9-5.2)
HOUSEHOLD INCOME				
Less than $15,000	16.9	(12-21.9)	11.0	(6.7-15.3)
$15,000- 24,999	15.2	(11.9-18.5)	5.4	(3.4-7.4)
$25,000- 34,999	17.1	(13.2-21)	5.0	(2.8-7.2)
$35,000- 49,999	21.7	(18.4-25)	5.8	(3.9-7.7)
$50,000- 74,999	21.4	(17.8-24.9)	5.0	(3.1-6.8)
$75,000+	24.6	(21.2-28.1)	6.2	(4.2-8.2)
RACE/ETHNICITY				
White/Non-Hisp.	19.2	(17.8-20.6)	5.9	(5-6.8)
Black/Non-Hisp.	9.7	(1.8-17.6)	4.9	(0-11.5)
Other/Non-Hisp.	15.8	(4.2-27.3)	6.0	(0-12.1)
Hispanic	20.2	(10.2-30.2)	5.6	(0.8-10.3)

A person is considered to binge if he or she drinks more than five drinks on one occasion. Among all adult Iowans, 19% reported at least one binge episode in the last month. This is a small decrease from the 19.4% found in 2003. Although the trend for binge drinking has been more erratic than for heavy drinking, this also marks a mildly decreasing trend over the past three years (see figure 14.1).

Males binge much more than females (28.8% versus 9.8%). In addition, the likelihood of bingeing decreases with age from 32.5% for 18 to 24 years old to only 0.5% for those 75 years old and older. The large sex difference is true at every age (see figure 14.2). Unlike most risky behaviors, respondents with higher education and those with a higher household income were

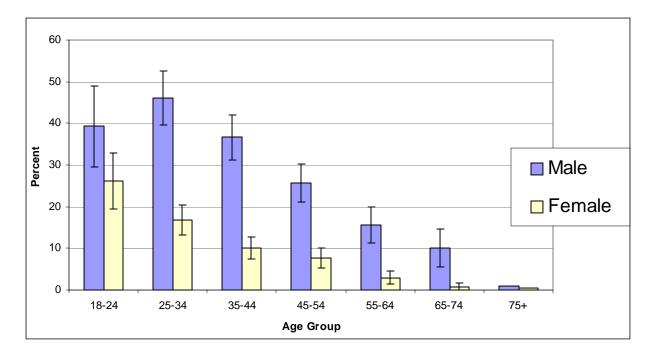somewhat more likely to binge drink. Hispanics are also somewhat more likely to binge (see table 14.1).

Figure 14.2: Percentage of Iowans Who Binge by Age and Sex, 2004

Comparison with Other States

The percentage of people reporting heavy drinking in Iowa is a little above the median for the states and territories. Iowa's figure is 5.8% compared to the median of 4.8%. The percentage ranges from 2.8% to 7.4%. The national trend in heavy drinking saw a steeper decline than did the state.

For binge drinking, however, Iowa is exceeded by only three states. The range is from a low of 8.3% to a high of 21.8% with a median of 14.9%. Iowa's figure of 19% is closer to the high end. The top four binge drinking states are all in the upper Midwest.

Year 2010 Health Objectives for the Nation

The *Healthy People 2010* goal for the nation for binge drinking is only 6%. No state has achieved that goal. Iowa exceeds it by more than three times.

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15. PROBLEM GAMBLING

Background

The **Iowa Gambling Treatment Program,** which is 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% 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 help line 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.

Gambling Results

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?
- Has the time you spent gambling led to problems in your family, work, or personal life?

In 2004, 27.1% of all respondents, including those who replied they did not know or refused to answer, reported they had gambled in the last 12 months. This is lower than the 32.4% figure found in 2003. Self-reported gambling prevalence has declined from the first years in which data were collected, and the rate of decline seems to be getting more pronounced (see figure 15.1).

More men than women reported gambling in the past 12 months. Gambling tended to be more prevalent for people with moderate income. People with a high school education or some college gambled more than those with more extreme levels of education (see table 15.1). The widest range of gambling prevalence was seen among different ages. The highest percentage of

Table 15.1: Percentage of Iowans Who Report They Have Gambled in the Past 12 Months, 2004

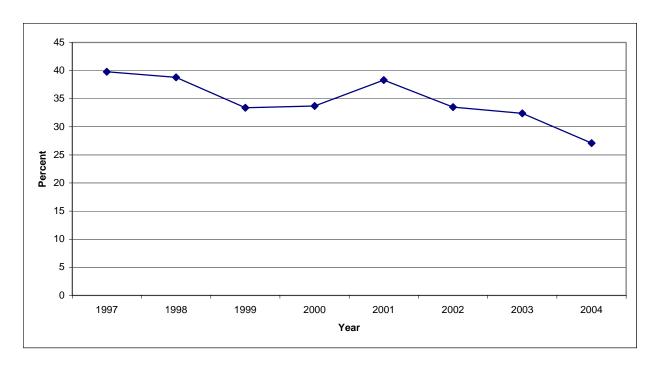| DEMOGRAPHIC GROUPS	Gambled %	C.I. (95%)
TOTAL	27.1	(25.6-28.6)
SEX		
Male	31.2	(28.7-33.7)
Female	23.4	(21.6-25.1)
AGE		
18-24	30.9	(24.9-37)
25-34	35.5	(31.4-39.6)
35-44	23.4	(20.3-26.4)
45-54	25.4	(22.4-28.5)
55-64	27.3	(23.9-30.7)
65-74	28.6	(24.6-32.7)
75+	16.7	(13.3-20.2)
EDUCATION		
Less than H.S.	23.0	(17.7-28.4)
H.S. or G.E.D.	28.3	(25.7-30.9)
Some Post-H.S.	28.3	(25.4-31.2)
College Graduate	25.7	(23.1-28.3)
HOUSEHOLD INCOME		
Less than $15,000	21.1	(15.9-26.3)
$15,000- 24,999	20.5	(17.1-24)
$25,000- 34,999	28.8	(24.5-33.1)
$35,000- 49,999	33.1	(29.4-36.9)
$50,000- 74,999	30.2	(26.4-34)
$75,000+	28.4	(25-31.9)
RACE/ETHNICITY		
Non-Hispanic White	27.2	(25.7-28.7)
Non-Hispanic Black	24.2	(12.8-35.6)
Non-Hispanic Other	33.9	(19.8-47.9)
Hispanic	20.9	(11.5-30.4)

gambling during the past year was reported for those age 25 to 34 (35.5%). The lowest was for those age 75 and above (16.7%).

In 2004, 98.8% of respondents who had gambled in the past 12 months said the money they spent gambling had not led to financial problems. Likewise, 98.5% reported the time spent gambling had not led to problems in family, work, or personal life.

Year 2010 Health Objectives for Iowa

The goals in *Healthy Iowans 2010* for problem gambling are that no more than 1.6% of gamblers should report financial problems and no more than 1.7% should report personal problems caused by their gambling. In 2004, Iowa respondents reported levels better than both goals.

Figure 15.1: Trend for Prevalence of Gambling in Iowa 1997-2004

16. WOMEN'S HEALTH

Breast Cancer Screening

Background

Breast cancer is a malignant (cancerous) tumor that starts from cells of the breast. The disease occurs mostly in women, but men can get breast cancer as well.

Other than skin cancer, breast cancer is the most common cancer among women. After lung cancer, it is the second leading cause of cancer death in women. About 211,240 women in the United States will be found to have invasive breast cancer in 2005. About 40,410 women will die from the disease this year. Currently, there are slightly over 2 million women living in the U.S. who have been treated for breast cancer.[1]

The chance of a woman having invasive breast cancer some time during her life is about 1 in 7. The chance of dying from breast cancer is about 1 in 33. Breast cancer death rates are going down. This decline is probably the result of earlier detection and improved treatment.[1] In Iowa, 457 women died from breast cancer in 2003.[5]

The chance of getting breast cancer increases as a woman gets older. Nearly 8 out of 10 breast cancers are found in women over age 50.[1] Individual factors other than age that increase the risk for developing breast cancer include family history, a personal history of breast cancer, race, earlier abnormal breast biopsy, a long menstrual history, obesity after menopause, recent use of oral contraceptives, postmenopausal hormone therapy, never having children or having a first child after age 30, consuming one or more alcoholic beverages per day, and lack of exercise.[1] Detecting breast cancer early is key to surviving the disease, and regular screening is key to detecting the disease early.

Among the methods for early detection of breast cancer are clinical breast exam (CBE) and mammography. CBE is a clinical examination that involves a health care provider's physical examination of breast tissue. Mammography involves an x-ray examination of the breast and can detect abnormalities in the breast before they can be felt. Because the risk of developing breast cancer increases as women get older, mammography, with its increased sensitivity, is recommended for older women, while clinical breast exams should be part of the regular health routine for all adult women.

Due to increased survival rates for breast cancer when detected early, the National Cancer Institute recommends:

- Women age 40 years and older should be screened every one to two years with mammography.
- Women at higher than average risk of breast cancer should seek expert medical advice about whether they should begin screening before age 40 and the frequency of screening.[6]

Most cancer organizations also believe that women should have a clinical breast exam by a health care provider as part of regular, routine care.

Although there is some disagreement among professionals about exactly when screening should begin and how often it should be done, there is no doubt that screening for breast cancer saves lives.[3]

Breast Cancer Screening Results

In 2004, 91.3% of women surveyed reported ever having a clinical breast examination by a physician. The percentage increased with education and household income. It was most prevalent for women in the middle age groups, declining for those both younger and older. Also, non-Hispanic white women tend to have a higher percentage of having a CBE than non-white or Hispanic women (see table 16.1).

Table 16.1: Breast Examination Measures for Iowa Women, 2004

DEMOGRAPHIC GROUPS	Ever had a mammogram		Had mammogram in last 2 years		Ever had clinical breast exam	
	Age 40 and over					
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL FEMALES	89.1	(87.5-90.8)	75.3	(73.2-77.3)	91.3	(90-92.6)
AGE						
18 - 39					89.3	(86.7-92)
40 - 49	83.7	(80.2-87.1)	68.6	(64.3-72.9)	96.0	(94.3-97.8)
50 - 59	93.0	(90.5-95.6)	81.6	(78-85.3)	96.9	(95.1-98.7)
60 - 69	92.3	(89.7-95)	81.5	(77.6-85.4)	94.3	(92.2-96.4)
70 & up	89.9	(87-92.8)	72.3	(68.2-76.4)	83.0	(79.5-86.5)
EDUCATION						
Less than H.S.	81.3	(74.7-87.9)	58.5	(50.5-66.6)	72.0	64.1-79.9
H.S. or G.E.D.	87.3	(84.7-90)	72.8	(69.4-76.2)	89.8	87.6-92.1
Some Post-H.S.	92.3	(89.9-94.7)	79.6	(76-83.1)	93.9	92.1-95.7
College Graduate	92.1	(89.4-94.9)	80.7	(76.8-84.7)	96.0	94.5-97.5
HOUSEHOLD INCOME						
Less than $15,000	84.8	(79.6-90)	61.6	(54.6-68.6)	79.2	73.6-84.9
$15,000- 24,999	85.4	(81.1-89.8)	69.5	(64.3-74.8)	86.6	82.5-90.7
$25,000- 34,999	89.0	(84.5-93.4)	73.8	(68.2-79.5)	92.3	89.2-95.4
$35,000- 49,999	91.1	(87.6-94.6)	77.3	(72.1-82.5)	97.3	95.8-98.9
$50,000- 74,999	93.1	(89.6-96.7)	82.8	(77.8-87.7)	97.1	95.2-99.0
$75,000+	93.1	(89.9-96.4)	84.3	(79.6-89)	95.1	92.4-97.9
RACE/ETHNICITY						
Non-Hisp. White	89.8	(88.3-91.3)	75.9	(73.8-77.9)	92.1	(90.9-93.3)
Non-White or Hisp.	78.8	(68.1-89.6)	60.5	(48.6-72.5)	77.8	(68.6-87.1)

When asked if they had ever had a mammogram, 89.1% of all female Iowa respondents ages 40 and older reported having one. Women in the middle age groups were more likely to have a mammogram than those in younger and older groups. Also, women with higher education and income were more likely to have a mammogram (see table 16.1).

When asked if they had a mammogram in the past two years, 75.3% of all Iowa women over age 40 said they had. The percentages for women in the middle age groups were higher than those for women in younger and older groups. In addition, the women with a higher education level and with a higher household income tended to have higher percentages of having a mammogram in the past two years (see table 16.1).

Year 2010 Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 70% of women age 40 and older who have had a mammogram within the preceding two years. The *Healthy Iowans 2010* goal is only 65%. Since 75.3% of Iowa women age 40 years old and older have had mammograms within the past two years, the goal has already been met.

Cervical Cancer Screening

Background

Approximately 10,370 new cases of invasive cervical cancer and 3,710 cervical cancer-related deaths were projected to occur in 2005 in the United States.[1] Rates in the United States have decreased from 14.2 new cases per 100,000 women in 1973 to 7.5 cases per 100,000 women in 2002.[1]

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. Introduction of screening programs to populations naive to screening reduces cervical cancer rates by 60 to 90% within three years of implementation.[4,7,8] This reduction of mortality and morbidity with introduction of the Pap test is consistent and dramatic across populations.

The American Cancer Society recommends annual Pap tests begin about three years after a woman begins having sexual intercourse, but no later than age 21 years.[1] At the discretion of the woman's physician, less frequent exams may be necessary after three consecutive normal exams. Pap tests may not be necessary for women who have had a total hysterectomy.[1]

Cervical Cancer Screening Results

When asked if they ever had a Pap test, 95.6% of female respondents reported having it. Reported rates for ever having a Pap test ranged from 80.7% for women from ages 18 to 24 years old to 99.7% for women with household incomes between $50,000 and $75,000. Almost equally high (99.6%) were women between the ages of 45 and 54. The proportion of women who ever had a Pap test also increased with level of education. These numbers were so nearly at the maximum of 100% that there was little room to show differences (see table 16.2).

In 2004, 86% of female respondents reported that they had their last Pap test within the last three years. The percentage having a Pap test within three years increased with education and income. Women with less than a high school education had the lowest percentage (58.2%), while women between the ages of 25 to 34 had the highest percentage (94.4%) (see table 16.2). In addition,

Table 16.2 shows that white non-Hispanic women tend to have a higher percentage of having a Pap test within three years than non-white or Hispanic women.

Year 2010 Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 97% in the proportion of women over the age of 18 who have ever had a Pap test. The figure for 2004 of 95.6% is close to this goal.

The national health objectives for the year 2010 also include an increase to at least 90% in the proportion of women over the age of 18 who have had a Pap test in the last three years. The figure for 2003 of 86% is somewhat short of this goal. However, the obtained result exceeds the *Healthy Iowans 2010* goal of only 83%.

Table 16.2: Proportion of Iowa Women Having Cervical Cancer Examinations, 2004

DEMOGRAPHIC GROUPS	Ever had a Pap test		Had Pap test in last 3 years	
	%	C.I. (95%)	%	C.I. (95%)
FEMALES	95.6	(94.5-96.7)	86.0	(84.3-87.8)
AGE				
18-24	80.7	(74.1-87.2)	80.0	(73.3-86.6)
25-34	97.4	(95.7-99.2)	94.4	(92-96.9)
35-44	99.4	(98.8-100)	90.8	(87.9-93.6)
45-54	99.6	(99.2-100)	89.7	(86.4-93)
55-64	99.1	(98.1-100)	88.0	(84.1-91.9)
65-74	97.6	(96-99.3)	77.5	(71.5-83.5)
75+	92.5	(89.3-95.7)	64.4	(57.4-71.4)
EDUCATION				
Less than H.S.	81.6	(73.7-89.5)	58.2	(48.1-68.4)
H.S. or G.E.D.	95.3	(93.5-97.1)	81.3	(78-84.6)
Some Post-H.S.	97.7	(96.4-99.1)	90.8	(88.4-93.3)
College Graduate	97.8	(96.3-99.3)	92.8	(90.5-95.2)
HOUSEHOLD INCOME				
Less than $15,000	89.6	(85.1-94.2)	68.5	(60.8-76.1)
$15,000- 24,999	93.0	(89.2-96.9)	79.7	(74-85.4)
$25,000- 34,999	97.2	(94.7-99.6)	85.9	(81.4-90.4)
$35,000- 49,999	98.6	(97.5-99.8)	92.4	(89.5-95.2)
$50,000- 74,999	99.7	(99.3-100)	93.9	(90.9-96.8)
$75,000+	96.7	(94.2-99.2)	92.6	(89.2-96)
RACE/ETHNICITY				
Non-Hisp. White	96.5	(95.5-97.5)	87.0	(85.4-88.7)
Non-White or Hisp.	81.1	(71.7-90.5)	70.9	(59.9-82)

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17. FAMILY PLANNING

Background

Unintended pregnancy affects both men and women and can affect the health of the infant. Unintended pregnancies, defined as pregnancies for which at the time of conception a woman either wanted to be pregnant later (mistimed) or did not want to be pregnant at any time (unwanted), are common among all population subgroups. However, the risk is higher for certain populations, such as teenagers, women 40 years of age and older, women with lower levels of education, women who are not married, and women with low income.

Unintended pregnancy resulting in a live birth is associated with delayed entry into prenatal care. This may be due to women with unintended pregnancies being less likely to realize they are pregnant in the first trimester than women with intended pregnancies. Other adverse behaviors associated with unintended pregnancy include poor maternal nutrition, cigarette smoking, and use of alcohol and other drugs. Unintended pregnancy may also be associated with adverse birth outcomes. Women with mistimed or unwanted pregnancies were more likely to give birth to infants who were premature, low birthweight, or small for gestational age than women with intended pregnancies.

The consequences of an unintended pregnancy do not end at birth, as evidenced by the associations between unintended births and breast-feeding initiation and duration and between unintended births and child abuse and neglect. Children under two years that were mistimed or unwanted were found to score lower on several psychometric measures, indicating reduced cognitive, behavioral, and emotional development.

Use of contraception can reduce unintended pregnancies and births. Lack of use or improper use of contraception can result in unintended pregnancies and births, but also can result in breaks in career plans and educational plans and can affect healthy relationships.

A woman's partner can be an important determinant in her intent to become pregnant and/or to continue a pregnancy, contraceptive method choice, intention to change methods, and the regularity of use of a method.

Women who were non-users of contraception accounted for more than 50% of all unintended pregnancies; if they were to use contraception, the overall rate of unintended pregnancy could be cut in half.

Family Planning Results

Family planning questions are only asked of people of child-bearing age. They are not asked if the respondent is female and 45 years of age or older, is pregnant, or is male 60 years or older.

In 2004, 73.6% of the respondents who were sexually active used some method to prevent pregnancy. Use of a preventive method was more likely for women, non-Hispanic

Table 17.1:
Sexually Active Iowans Reporting Use of
Some Birth Control Method in Iowa, 2004

DEMOGRAPHIC GROUPS	Birth Control Use	
	%	C.I. (95%)
TOTAL	73.6	(71.4-75.9)
SEX		
Male	68.2	(65.1-71.4)
Female	82.1	(79.3-84.8)
RACE /ETHNICITY		
Non-Hisp. White	74.6	(72.4-76.8)
Non-White or Hisp.	63.2	(52.9-73.5)
AGE		
18-24	80.5	(74.6-86.3)
25-34	72.8	(68.2-77.3)
35-44	77.2	(73.7-80.7)
45-59	64.3	(59.7-68.9)
EDUCATION		
Less Than H.S.	65.4	(54-76.8)
H.S. or G.E.D.	72.9	(68.7-77.1)
Some Post-H.S.	74.4	(70.3-78.5)
College Graduate	75.2	(71.8-78.6)
HOUSEHOLD INCOME		
<$15,000	80.1	(70.4-89.8)
$15,000- 24,999	69.4	(61.1-77.6)
$25,000- 34,999	73.1	(66.4-79.8)
$35,000- 49,999	73.5	(68.7-78.3)
$50,000- 74,999	70.5	(65.8-75.3)
$75,000+	76.5	(72.5-80.5)

Whites, younger people, and the better educated (see table 17.1) women had the highest percentage reporting use of birth control (82.1%), while non-White or Hispanics had the lowest (63.2%). There were not sufficient responses to consider race/ethnicity more precisely.

The methods most commonly mentioned were surgical in nature, including tubes tied, hysterectomy, and vasectomy. This category made up 43.9% of all responses . The next most common methods involved drugs such as the pill or shots. These represented 34.6% of responses. Almost all of these responses referred to the birth control pill. Condoms were mentioned by 15.3% of respondents.

Demographics played a large role in determining which method of pregnancy prevention was used (see table 17.2). Age made the largest difference with surgical methods increasing rapidly with increasing age, while the other methods decreased. More men reported use of surgical methods, condoms, and natural methods such as abstinence and withdrawl, while more women reported use of drugs or external methods such as diaphragm and IUD. White non-Hispanics were more likely to report use of surgical methods, drugs, and natural methods, while other race and Hispanics were much more likely to report using condoms. Drug methods were more often reported with increasing education. Those with less than a high school education more often reported reliance on condoms. Use of surgical methods tended to be reported more with increasing income.

Many reasons were given for not using some method of birth control. The leading ones were: pregnancy was wanted (20.5%), unable to get pregnant due to age (15.6%), or had some form of sterilization (28%). A large number of people used the "do not know" option or refused to answer this question. Even though questions were not asked of people who were in some of these conditions, the answer could refer to their partner.

Table 17.2: Type of Birth Control Method Used in Iowa, 2004

DEMOGRAPHIC GROUPS	Surgical %	C.I. (95%)	Drugs %	C.I. (95%)	Condoms %	C.I. (95%)	External %	C.I. (95%)	Natural %	C.I. (95%)
TOTAL	43.9	42.1-45.8	34.6	32.9-36.4	15.3	14.0-16.7	2.8	2.3-3.3	3.3	2.8-3.8
SEX										
Male	50.6	48.1-53.2	26.7	24.6-28.9	17.4	15.4-19.3	1.6	1.0-2.1	3.7	3.0-4.4
Female	35.3	32.8-37.8	44.8	41.8-47.8	12.8	11.0-14.5	4.4	3.4-5.3	2.7	2.0-3.4
RACE /ETNHICITY										
Non-Hisp. White	44.7	41.7-47.7	35.1	32.2-38.0	14.3	11.9-16.6	2.6	1.7-3.6	3.3	2.3-4.2
Non-White or Hisp.	35.6	25.1-46.1	28.5	17.5-39.6	30.1	19.1-41.1	4.9	0.1-9.7	0.9	0.0-2.6
AGE										
18-24	4.0	2.7-5.4	65.0	59.5-70.5	28.5	24.0-33.0	2.5	1.2-3.8	0.0	0.0-0.0
25-34	28.7	25.8-31.7	44.6	41.0-48.2	18.7	16.1-21.3	4.1	2.9-5.3	3.8	2.7-4.9
35-44	59.8	56.3-63.4	24.5	22.1-27.0	9.5	7.9-11.0	3.2	2.3-4.1	3.0	2.1-3.9
45-59	78.0	72.7-83.3	7.8	4.1-11.5	7.4	4.4-10.8	0.5	0.0-1.2	6.1	3.1-9.1
EDUCATION										
Less Than H.S.	44.3	37.5-51.2	22.5	16.9-28.1	31.3	23.5-39.2	0.8	0.1-1.5	1.0	0.1-1.9
H.S. or G.E.D.	53.9	50.4-57.3	26.4	23.6-29.3	13.4	11.1-15.7	3.1	2.0-4.2	3.2	2.2-4.1
Some Post-H.S.	43.8	40.4-47.2	37.8	34.3-41.4	13.2	10.8-15.6	2.7	1.8-3.6	2.5	1.6-3.3
College Graduate	36.0	33.0-39.1	40.8	37.5-44.0	15.8	13.7-17.9	3.0	2.1-3.8	4.4	3.3-5.5
HOUSEHOLD INCOME										
<$15,000	20.3	16.0-24.7	54.5	46.6-62.5	19.4	14.1-24.8	2.5	1.0-3.9	3.2	1.6-4.8
$15,000- 24,999	33.7	28.7-38.6	38.5	33.3-43.7	21.6	17.1-26.2	3.1	1.9-4.4	3.1	1.6-4.6
$25,000- 34,999	42.3	37.1-47.5	30.5	25.9-35.2	21.8	17.4-26.2	3.6	1.4-5.8	1.8	0.7-2.9
$35,000- 49,999	47.0	42.7-51.3	36.6	32.5-40.8	9.8	7.5-12.2	2.4	1.4-3.4	4.2	2.8-5.6
$50,000- 74,999	46.4	42.2-50.7	32.9	29.0-36.8	14.7	11.7-17.6	2.1	1.1-3.0	4.0	2.6-5.4
$75,000+	49.7	45.5-54.0	31.2	27.3-35.1	13.0	10.1-15.8	2.9	1.8-4.0	3.2	2.0-4.3

18. COLORECTAL CANCER SCREENING

Background

Colorectal cancer is the second leading cause of cancer-related deaths in the United States and in Iowa. In 2004 in the United States, an estimated 146,940 new cases of colorectal cancer will be diagnosed, and an estimated 56,730 deaths will occur. In Iowa in 2004, an estimated 2,100 new cases will be diagnosed, and an estimated 740 deaths will occur.[1]

The one- and five-year relative survival rates for patients with colorectal cancer are 82.8% and 65.9% respectively. When colorectal cancers are detected in an early, localized stage, the five-year relative survival rate is 95%; however, only 39% of colorectal cancers are discovered at an early stage. After the cancer has spread regionally to involve adjacent organs or lymph nodes, the survival rate drops to 70%. Another 37% of colorectal cancers are diagnosed at this stage. The survival rate for persons with distant metastases is only 10%, and 18% of colorectal cancers are diagnosed at this stage.[1]

Although the exact causes of colorectal cancer are unknown, it appears to be caused by both inherited and lifestyle factors. Genetics may determine a person's susceptibility to the disease, while lifestyle factors, such as diets high in fat and low in fruits and vegetables, smoking, or sedentary lifestyle may determine which at-risk persons actually go on to develop colorectal cancer.[2] Risk factors include:

- **Age** – Approximately 93% of colorectal cancer cases occur in people age 50 and older, and the risk of developing the disease increases with age.
- **Family History** –Those who have family members diagnosed with colorectal cancer or polyps are at high risk for the disease.
- **Personal History** – Persons who have inflammatory bowel diseases are at increased risk.
- **Race** – African Americans are more likely than whites to be diagnosed at a more advanced disease stage and have lower survival rates.

Colorectal cancer usually develops from precancerous polyps in the colon and rectum. Screening tests can detect polyps so they can be removed before they turn into cancer.[3]

The American Cancer Society recommends that men and women at average risk begin regular screening for colorectal cancer at age 50 years. Recommended options include the following:

- A fecal occult blood test (FOBT). An FOBT is a chemical test that detects blood that is not visible in a stool sample. If results are normal, repeat FOBT annually.

- Flexible Sigmoidoscopy. Flexible sigmoidoscopy uses a hollow, lighted tube to visually inspect the wall of the rectum and part of the colon. If results are normal, repeat flexible sigmoidoscopy every five years.

- Colonoscopy. This is a test that uses a hollow, lighted tube to inspect the interior walls of the rectum and the entire colon visually. If it is normal, the test should be repeated every 10 years.

- Double-contrast barium enema. This is a series of x-rays of the colon and rectum. If it is normal, the test should be repeated every five years.

- Digital rectal examination (DRE). The test is a physical examination of the rectum, which is the last few inches of the bowel. It should be performed at the same time as sigmoidoscopy, colonoscopy, or double-contrast barium enema.

Colorectal Cancer Screening Results

In 2004, 49.2% of Iowans 50 years old or older reported ever using a home blood-stool testing kit (FOBT). This is slightly lower than the 50.7% found in 2003 (see figure 18.1).
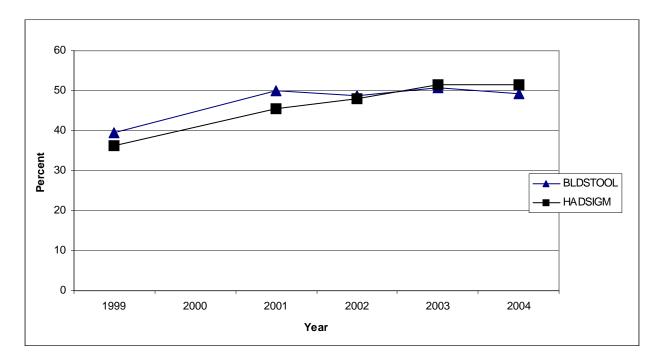
Figure 18.1: Ever Had Colorectal Cancer Screening Test by Year, 1999-2004

Females reported a higher percentage of use than males (52.9% versus 45.3%). Respondents with some college education had the highest percentage using the kit (54.1%). Respondents with a household income of less than $15,000 per year were least likely to use it (38.4%).

Of all respondents 50 years old or older, 31.7% had used the blood stool test within the past two years. This ranged from 19.1% among those with a household income of $15,000 or less to 36% among those with a household income of $75,000 or higher. Although the income demographic variable contained the extreme values for recent use of the kit, the relationship with income was not a simple one (see table 18.1).

Table 18.1: Proportion of Colorectal Cancer screening in Iowans 50 Years Old or More, 2004

DEMOGRAPHIC GROUPS	Ever had blood stool test		Had Blood Stool Test in Past Two Year		Ever Had Sigmoidoscopy/ Colonoscopy		Had Sigmoidoscopy/ Colonoscopy in Past 5 Years	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	49.2	(47-51.4)	31.7	(29.7-33.7)	51.4	(49.3-53.6)	44.1	(41.9-46.2)
SEX								
Male	45.3	(41.8-48.8)	30.3	(27.1-33.6)	49.8	(46.2-53.3)	44.2	(40.6-47.7)
Female	52.9	(50.2-55.6)	32.8	(30.3-35.3)	53.2	(50.5-55.9)	44.0	(41.3-46.6)
EDUCATION								
Less than H.S.	46.0	(39-52.9)	26.0	(19.9-32.1)	51.5	(44.5-58.5)	41.3	(34.2-48.3)
H.S. or G.E.D.	46.9	(43.5-50.3)	28.4	(25.3-31.5)	48.9	(45.6-52.3)	41.7	(38.4-45.1)
Some Post-H.S.	54.1	(49.8-58.4)	35.9	(31.8-40)	55.7	(51.4-60)	47.0	(42.7-51.3)
College Graduate	50.7	(46.3-55.1)	35.8	(31.5-40)	52.1	(47.7-56.6)	46.5	(42.1-50.9)
HOUSEHOLD INCOME								
Less than $15,000	38.4	(32-44.8)	19.1	(14.2-24)	43.6	(37.1-50.2)	34.0	(27.6-40.4)
$15,000- 24,999	50.4	(45.5-55.4)	30.8	(26.3-35.3)	49.3	(44.3-54.2)	41.8	(36.8-46.7)
$25,000- 34,999	50.9	(45.4-56.4)	35.0	(29.7-40.3)	54.7	(49.3-60.2)	47.2	(41.8-52.7)
$35,000- 49,999	48.0	(42.6-53.4)	31.0	(26.1-36)	53.9	(48.5-59.3)	44.7	(39.4-50)
$50,000- 74,999	49.1	(43.1-55.1)	28.7	(23.3-34)	46.0	(40.1-52)	40.8	(35-46.5)
$75,000+	50.6	(44.6-56.5)	36.0	(30.3-41.7)	53.7	(47.8-59.7)	48.9	(43.1-54.7)

In 2004, 51.6% of Iowans 50 years old or older reported ever having a sigmoidoscopy or colonoscopy screening test. Although a very slight increase from the 51.4% found in 2003, this continues an upward trend seen over the last few years (see figure 18.1).

As was true with FOBT, those with some college education were more likely to have the test (55.7%), while those with household incomes less than $15,000 per year were least likely to have it (43.6%). Again, the relationship of having the test with the demographic variables was not straightforward(see table 18.1).

Of all respondents 50 years old or older, 44.1% had a sigmoidoscopy or colonoscopy within the past five years.

Those with low income and less education were less likely to have the test in the prescribed time. The lowest percentage (34%) was found among those with household income below $15,000 per year, while the highest percentage (48.9%) was found among those with incomes of $75,000 a year or higher (see table 18.1). As was true for FOBT, the income demographic variable contained the extreme values for recently having a sigmoidoscopy or colonoscopy, but the relationship with income was not simple.

Starting in 2004, a number of additional questions were included in the survey concerning colorectal cancer screening. A few findings from these are given here. A health care professional had talked to a respondent 50 years old or older about colorectal screening in 53.3% of the cases. When the health care professional talked about screening, 72.2% recommended

having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 76.2% then had the test.

Out of all respondents, only 47% reported seeing any articles or advertising about the risks of colorectal cancer in the past six months. Television was the main medium of exposure to this advertising (47.7%).

Most respondents (53.5%) considered their own risk of colorectal cancer low. Only 4.7% considered it high. When only respondents 50 years old and older were considered, these figures became only slightly different at 50.9% and 5.2% respectively.

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19. PROSTATE SCREENING

Background

Prostate cancer is the most common type of cancer in men. It is a major health concern for older men. The annual number of deaths from prostate cancer in the United States in 2000 was 31,225.[2] In Iowa, 4,259 men died of prostate cancer from 1993 to 2002. The age-adjusted incidence rates of prostate cancer peaked in the early 1990s. Prostate cancer mortality has declined in the 1996-2002 period compared with the 1990-1995 period across all county groupings in Iowa.[4]

The causes of prostate cancer are not well understood. Doctors cannot explain why one man gets prostate cancer and another does not. Researchers are studying factors that may increase the risk of this disease. Studies have found that the following risk factors are associated with prostate cancer:

- **Age.** In the United States, prostate cancer is found mainly in men over age 55. The average age of patients at the time of diagnosis is 70.
- **Family history of prostate cancer.** A man's risk for developing prostate cancer is higher if his father or brother has had the disease.
- **Race.** This disease is much more common in African American men than in white men. It is less common in Asian and American Indian men.
- **Diet and dietary factors.** Some evidence suggests that a diet high in animal fat may increase the risk of prostate cancer, and a diet high in fruits and vegetables may decrease the risk. Studies are underway to learn whether men can reduce their risk of prostate cancer by taking certain dietary supplements.[3]

Many men with prostate cancer have no symptoms. If symptoms appear, they can include frequent or painful urination, blood in the urine or a decrease in the force of the urine stream, or constant pain in the lower back, pelvis, or upper thighs. Although these symptoms are also caused by other prostate problems that are not cancer, men who experience such problems should see a health care provider as soon as possible.[1]

Prostate cancer screening is testing for signs of the disease in men who have no symptoms. The two main methods for screening for prostate cancer are the prostate Specific Antigen (PSA) test and the digital rectal exam (DRE). The PSA test looks for elevated levels of this chemical in the blood. Elevated levels of PSA indicate that the prostate is under some kind of stress. The DRE is where a physician using a gloved finger checks the physical state of the prostate gland through the rectum. These tests cannot tell if a man has cancer; they can only suggest the need for further tests.

At the early stages, prostate cancer is 90 to 95 percent curable. In its later stages, those numbers go down dramatically.[1] But thanks to research, screening programs that detect the early stages of prostate cancer are significantly better today than in the past. The proof is that of the approximately 300,000 American men diagnosed this year, 85% will survive.

Medical experts agree that every man needs balanced information on the pros and cons of prostate cancer screening to help him make an informed decision. While different clinicians may approach prostate cancer differently, on one thing they all seem to agree: early detection opens the door to more treatment options and a far greater chance of survival.

Prostate Screening Results

The respondents to the prostate screening questions were only men age 40 and above. Of these respondents to the 2004 survey, 58.7% said they had ever had a PSA test. Education level was related to having the PSA test. The lowest percentage was 52.3% for less than high school graduates, compared to 67.1% for college graduates. Household income was less strongly related to having a PSA test. Respondents were more likely to have had a PSA test in the high or low income levels than in the middle-income levels. However, the confidence intervals are quite large with only this subpopulation being considered (see table 19.1).

Table 19.1: Prevalence of Prostate Screening in Iowa, 2004

DEMOGRAPHIC GROUPS	Had PSA Test %	C.I. (95%)	Had DRE %	C.I. (95%)
Men age 40 & up	58.7	(55.1-62.3)	76.6	(73.5-79.6)
EDUCATION				
Less than H.S.	52.3	(39.6-64.9)	65.6	(54.2-77)
H.S. or G.E.D.	56.4	(50.6-62.3)	70.0	(64.7-75.3)
Some Post-H.S.	54.2	(46.7-61.6)	79.3	(73.3-85.3)
College Graduate	67.1	(60.6-73.6)	86.6	(82.2-91.1)
HOUSEHOLD INCOME				
Less than $15,000	61.4	(47.8-75.1)	72.3	(59.6-85)
$15,000- 24,999	60.8	(51.5-70)	71.3	(63-79.7)
$25,000- 34,999	55.3	(45-65.7)	70.6	(60.7-80.5)
$35,000- 49,999	54.5	(46.2-62.7)	74.5	(67.4-81.5)
$50,000- 74,999	62.5	(54.8-70.3)	83.0	(77.2-88.7)
$75,000+	61.6	(53.2-70)	82.2	(76.1-88.3)

When asked if they had the digital rectal exam (DRE), 76.6% of the respondents to the prostate questions said they had. For this test as well, education level made more difference than income. Only 65.6% of those with less than a high school education had the DRE, while 86.6% of college graduates had it. Men with higher income were more likely to have the DRE (see table 19.1).

When asked if they had ever been told that they had prostate cancer, 3.2% of the respondents said they had. This would be the equivalent of 19,911 men 40 years of age and older in the Iowa population.

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20. ORAL HEALTH

Background

During the last 50 years, there have been dramatic improvements in oral health, and most middle-aged and younger Americans expect to retain their natural teeth over their lifetimes. However, profound disparities remain that affect those without the resources to achieve good oral care or the knowledge of its importance. This fact inspired the first *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 Americans' oral health.[1]
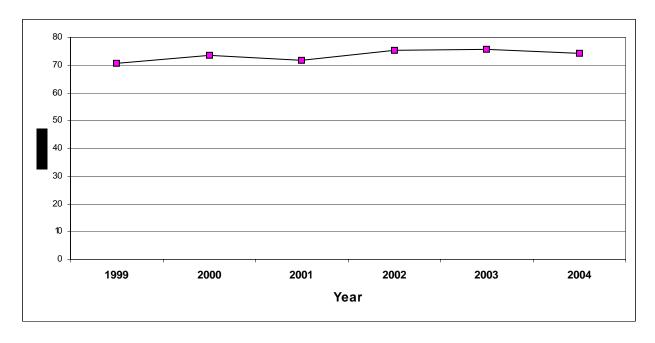
Oral health is integral to overall health. Left untreated, the pain and infection caused by dental disease can lead to problems in eating, speaking, the ability to learn, and the quality of life in general.

Major barriers to oral health include socioeconomic factors, such as lack of dental insurance, the inability to pay for dental care out of pocket, or problems of access that involve transportation and the need to take time off from work for health needs. Many studies have documented poorer dental care among those in poverty, racial minorities, and those in rural areas.[1,2,3]

Oral Health Results

In 2004, 74.1% of Iowans surveyed reported visiting a dentist within the past year. However, 8.8% reported never having a dental visit or having their last dental visit more than five years ago. The percentage having annual dental visits shows a decline from the 75.6% found in 2003 and reverses what had been an increasing trend (see figure 20.1).

Figure 20.1: Percentage of Iowans Having Annual Dental Visits by Year, 1999-2004

Females were more likely than males to report a dental visit during the past 12 months. Both higher education and greater income were related to the likelihood of visiting a dentist. Whites were more likely to have a dental visit than other race and ethnic groups. People in middle age were more likely to have a dental visit than either the younger or the older respondents. Respondents with an income of $75,000 or more had the highest proportion reporting recent dental visits (88.3%). At the other extreme, 52.8% of those having less than a high school education reported visiting a dentist in the past 12 months (see table 20.1).

Table 20.1:
Percentage of Iowans Having Dental Visits within the Past 12 Months, 2004

DEMOGRAPHIC GROUPS	Last dental visit within 12 months	
	%	C.I. (95%)
TOTAL	74.1	(72.6-75.6)
SEX		
Male	70.0	(67.5-72.5)
Female	77.9	(76.3-79.6)
AGE		
18-24	71.6	(65.7-77.5)
25-34	71.4	(67.4-75.4)
35-44	76.1	(72.8-79.3)
45-54	81.3	(78.6-84)
55-64	74.4	(71.1-77.7)
65-74	69.8	(65.7-73.8)
75+	68.3	(64.2-72.4)
EDUCATION		
Less than H.S.	52.8	(46.4-59.2)
H.S. or G.E.D.	70.5	(67.9-73.1)
Some Post-H.S.	76.9	(74.2-79.5)
College Graduate	82.5	(80-85)
HOUSEHOLD INCOME		
Less than $15,000	54.8	(49.1-60.4)
$15,000- 24,999	58.5	(54.1-63)
$25,000- 34,999	70.1	(65.8-74.5)
$35,000- 49,999	76.0	(72.7-79.3)
$50,000- 74,999	82.5	(79.3-85.8)
$75,000+	88.3	(85.7-90.9)
RACE/ETHNICITY		
White/Non-Hisp	74.9	(73.4-76.3)
Black/Non-Hisp	70.1	(56.3-83.9)
Other/Non-Hisp.	63.4	(49.5-77.2)
Hispanic	61.3	(49.4-73.1)

Among respondents who had permanent teeth and who had visited a dentist, 75.4% had their teeth cleaned within the past 12 months. However, 1.3% had never had their teeth cleaned.

A majority of 58.1% had no permanent teeth removed due to tooth decay or gum disease. On the other hand, 6.6% had all their permanent teeth removed. This level rose to 23.3% among Iowans 65 years old and older.

Year 2010 Health Objectives for Iowa and the Nation

Healthy Iowans 2010 has as a goal that 75% of Iowans 65 years old or older should have an annual dental visit. In 2004, this was not met, with 69% of respondents 65 and over reporting an annual visit.

A *Healthy People 2010* goal is for 42% of Americans age 35 to 44 years old who have not had permanent teeth extracted due to caries or periodontal disease. Iowa far exceeds this goal with 71% having no extractions.

A goal of both *Healthy Iowans 2010* and *Healthy People 2010* is to have no more than 20% of people age 65 and over to have all their permanent teeth extracted. Iowa falls short of this goal having 23.3% of this population with all permanent teeth extracted.

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21. IMMUNIZATION

Background

Influenza is a potentially life-threatening, contagious disease that is caused by a virus. When influenza attacks the lungs, the lining of the respiratory tract is damaged. The tissues temporarily become swollen and inflamed, but usually heal within two or more weeks.[1]

Influenza and pneumonia combined are the seventh leading cause of death among all Americans and the fifth leading cause of death among all Americans over the age of 65. Influenza and pneumonia together resulted in 65,313 deaths in 2002 in the U.S. and 940 in Iowa.[4] Influenza caused 1,765 deaths alone, with 15 in Iowa.

In 1996, there were more than 95 million estimated cases of influenza nationwide, resulting in 191.9 million bed days. There were an estimated 70.2 million work-loss days attributed to influenza in employed persons age 18 and over.

For healthy children and adults, influenza is typically a moderately severe illness. For unhealthy or elderly people, influenza can be very dangerous. Adults 65 years old and older who contract influenza are much more likely to have serious complications from this illness, which can affect their health and independence.

Influenza can be prevented with the influenza vaccine. This vaccine is produced each year so that it can be effective against influenza viruses that are expected to cause illness that year. A yearly influenza vaccination has been reported to be between 67% and 92% effective in preventing influenza and reducing the severity of the influenza. The best period to receive the influenza vaccine is soon after the vaccine becomes available in the fall of each year.

Influenza is a very serious illness for anyone at high risk. Certain diseases that place people at high risk include:

- Chronic lung disease such as asthma, emphysema, chronic bronchitis, tuberculosis, or cystic fibrosis,
- Heart disease,
- Chronic kidney disease,
- Diabetes or other chronic metabolic disorder,
- Severe anemia, or
- Diseases or treatments that depress immunity.

Some of the symptoms associated with influenza are fever, chills, coughing, weakness, loss of appetite, bodily aches and pains, sore throat, or dry cough.

In the United States, the estimated annual incidence of pneumococcal bacteremia among persons 65 years old and older is 50 to 83 cases per 100,000 persons,[2] and such infections are associated with a high case-fatality rate. The Advisory Committee on Immunization Practices (ACIP) recommends that persons aged 65 years old or older receive at least one lifetime dose of pneumococcal vaccine[2] and annual influenza vaccination[3].

Immunization Results

In 2004, 74.1% of Iowans age 65 and over reported having a flu shot in the past 12 months. This is lower than the 77.5% found in 2003. Except for the abnormally high level in 2003, there is a fairly steady upward trend over the last six years (see figure 21.1). This is in spite of the possibly negative effect of the shortage of flu vaccine at the end of 2004.
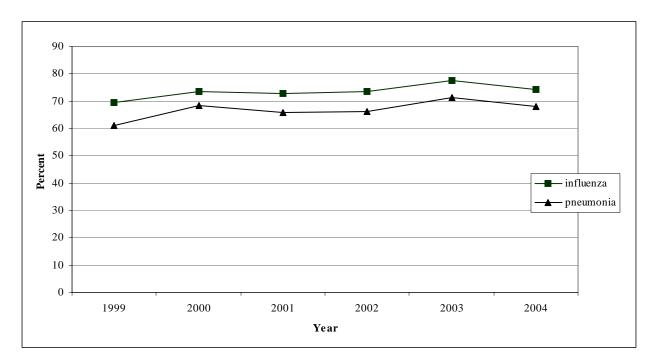
Figure 21.1: Immunizations in Iowans Age 65 and Over, 1999 – 2004

Among all adults, 39.9% had a flu immunization in the past 12 months. This was either in the form of a flu shot or a Flumist nasal spray. Females, older people, and Whites were more likely to have a flu immunization. Age had the greatest impact. The lowest percentage was found among those age 18 to 24 years (21.6%), while the highest was for those age 75 and older (77.8%) (see table 21.1).

In 2004, 68.2% of Iowans age 65 and over reported ever having a pneumonia vaccination. This is lower than the 71.4% found in 2003. The trend for pneumonia vaccination closely mirrors that for influenza vaccination (see figure 21.1).

Table 21.1: Percentage of Immunizations in Iowans, 2004

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	39.9	(38.3-41.5)	23.2	(22-24.5)
SEX				
Male	35.2	(32.8-37.6)	20.9	(19-22.9)
Female	44.3	(42.3-46.3)	25.3	(23.7-26.9)
AGE GROUP				
18-24	21.6	(16.3-26.8)	10.8	(6.9-14.7)
25-34	23.9	(20.4-27.4)	5.4	(3.8-7.2)
35-44	28.2	(25-31.4)	7.5	(5.6-9.3)
45-54	36.5	(33.2-39.8)	12.9	(10.6-15.2)
55-64	50.4	(46.7-54.2)	26.1	(22.8-29.5)
65-74	69.9	(65.9-73.9)	60.5	(56.2-64.8)
75+	77.8	(74.4-81.2)	75.1	(71.3-79)
EDUCATION				
Less than H.S.	45.6	(39.2-51.9)	35.2	29.7-40.7
H.S. or G.E.D.	38.1	(35.6-40.7)	28.0	25.7-30.3
Some Post-H.S.	38.2	(35.2-41.1)	20.8	18.5-23.1
College Graduate	41.8	(39-44.7)	15.8	13.9-17.8
HOUSEHOLD INCOME				
Less than $15,000	37.3	(32.1-42.5)	36.0	30.9-41.0
$15,000- 24,999	44.3	(40.1-48.6)	32.3	28.7-36.0
$25,000- 34,999	41.7	(37.5-46)	28.1	24.4-31.9
$35,000- 49,999	37.4	(33.7-41)	19.3	16.5-22.0
$50,000- 74,999	33.7	(30.1-37.3)	13.1	10.5-15.7
$75,000+	39.0	(35.7-42.3)	12.4	9.97-14.9
RACE/ETHNICITY				
White/Non-Hispanic	40.5	(38.9-42.1)	23.6	(22.3-25)
Black/Non-Hispanic	26.1	(13.1-39)	11.9	(5.1-18.7)
Oth. Race/ Non-Hisp.	26.2	(15.5-36.9)	22.1	(11.3-33)
Hispanic	38.2	(26.2-50.1)	13.8	(6.5-21.2)

Among all adults, 23.2% had ever received a pneumonia vaccination. Females, older people, people with lower education, people with lower income, and Whites were more likely to have pneumonia vaccinations. The lowest percentage of pneumonia vaccination occurred among those who were 25 to 34 years old (5.4%), while those 75 years old and older were highest by far (75.1%) (see table 21.1).

Those who had ever been told they had diabetes or asthma were more likely to receive their flu and pneumonia vaccinations than those who had not been told they had these conditions. Of all

respondents ever told they had diabetes, 70.7% had a flu vaccination and 61.7% had a pneumonia vaccination. The figures for those not told they had diabetes were 37.6% and 20.6% respectively.

Of all those ever told they had asthma, 46.1% had their flu vaccination, while 33.3% had a pneumonia vaccination. For those never told they had asthma, the figures were 39.2% and 22% respectively.

Comparison with Other States

The median percentage of the population age 65 and over who have had a flu shot in the past 12 months from all the states and territories was 67.9% in 2004. Iowa ranked ninth highest in the proportion age 65 and over who had a flu shot.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 64.6%. Here, Iowa ranked very similarly to how it did with influenza vaccination. Iowa ranked tenth highest of all reporting states and territories.

Year 2010 Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010* and *Healthy People 2010* goals for both having a flu shot in the past 12 months and ever having a pneumonia vaccination for people age 65 and over are 90%. Iowa's 2004 figures of 74.1% for having a flu shot and 68.2% for ever having a pneumonia vaccination, although among the highest in the nation, have a long way to go to meet these targets.

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22. DISABILITY

Background

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 number of non-institutionalized people with limitations in usual activities due to chronic conditions was 34.3 million in 2003.[2,3] This is 12.2% of U.S. residents.[1,3,4]

Census 2000 found that 21.3 million people or 11.9% of the working-age U.S. population (16 to 64 years old) had a disability that prevented or limited their ability to work at a job or business.[2]

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

Disability Results

In 2004, 14.5% of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. This is down sharply from the 17.1% reported in 2003 and suggests that year may have been an anomaly.

When asked whether they had a health problem requiring the use of special equipment, 5.1% of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. This is about the same as in 2003.

Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2004, 16.1% of respondents were considered to have a disability. This is sharply down from 18.8% in the anomalously high 2003, but is still higher than other previous years (see figure 22.1).

As shown in Table 22.1, females were more likely than males to report being disabled. Older people, people with less education, and people with lower household incomes also reported higher percentages of disability. Hispanics reported a far lower percentage of disability than other race or ethnic groups. Of the five demographic variables analyzed, Hispanics reported the lowest percentage (4.1%). Those with household incomes less than $15,000 reported 36.1% disability, which was the highest amount. The second highest reporting group was those age 75 and over (35.4%). This group is the most rapidly growing group in the population.

Table 22.1
Percentage Reporting Being Disabled, 2004

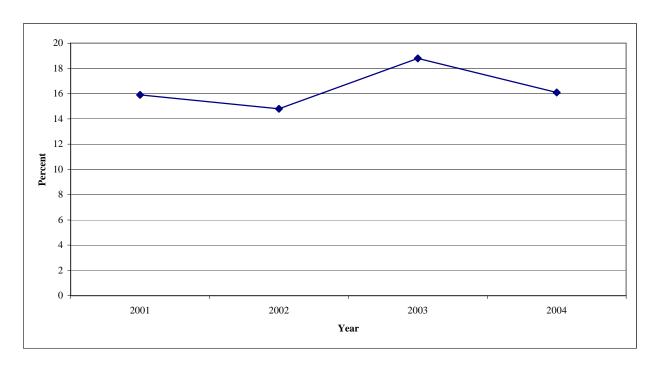| DEMOGRAPHIC GROUPS	Being Disabled	
	%	C.I. (95%)
TOTAL	16.1	(15-17.2)
SEX		
Male	14.4	(12.6-16.2)
Female	17.7	(16.2-19.1)
AGE		
18-24	6.5	(3.3-9.6)
25-34	6.1	(4.1-8.1)
35-44	11.0	(8.4-13.5)
45-54	17.2	(14.6-19.8)
55-64	23.2	(20-26.4)
65-74	25.5	(21.8-29.3)
75+	35.4	(31.2-39.7)
EDUCATION		
Less than H.S.	23.2	(18.3-28.1)
H.S. or G.E.D.	17.9	(16-19.9)
Some Post-H.S.	14.5	(12.4-16.5)
College Grad.	13.1	(11-15.1)
HOUSEHOLD INCOME		
<$15,000	36.1	(30.8-41.4)
$15,000- 24,999	22.7	(19.1-26.3)
$25,000- 34,999	15.2	(12.3-18.1)
$35,000- 49,999	12.6	(10.3-14.9)
$50,000- 74,999	10.0	(7.8-12.2)
$75,000+	9.7	(7.5-11.9)
RACE/ETHNICITY		
White/Non-Hisp	16.2	(15-17.4)
Black/Non-Hisp	20.2	(7-33.5)
Other/Non-Hisp.	18.9	(10.3-27.4)
Hispanic	4.1	(1.1-7.2)

Comparison with Other States

There were only four states or territories with a lower rate of people rating themselves as disabled. Among all the states, the percentage of people rating themselves as disabled ranged from 10.6% to 27.0% with a median of 19%. Iowa's prevalence was 16.1%.

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Figure 22.1: Disability Trend by Year, 2001 – 2004

23. HIV/AIDS

Background

Estimates suggest that 1,039,000 to 1,185,000 Americans were living with HIV or AIDS at the end of 2003, and at least 40,000 new infections occur each year in the United States.[2] HIV infection, the precursor to AIDS, was the sixth leading cause of death among people 25 to 44 years old in 2002. It accounted for 5.7% of deaths from all causes in this age group in the U.S.[6] AIDS accounted for 174.7 years of potential life lost before the age of 75 years per 100,000 population in the United States in 2000. This was 2.3% of all years of potential life lost.[1]

While "men who have sex with men" remains the largest exposure group, many of the new diagnoses are occurring among African Americans, Hispanics, women, and people infected heterosexually. 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 2.1% of the population, but account for 19% of all Iowans living with HIV/AIDS. The Hispanic population in Iowa is 2.8%, but Hispanics account for 8% of all Iowans living with HIV/AIDS.[5]

The number of persons living with HIV/AIDS continues to increase. At the end of 2003, an estimated 405,926 persons in the United States were living with AIDS.[3] No reports of the number of persons living with HIV are available because not all states report persons with HIV who have not developed AIDS. Since reporting began, 2,057 cases of HIV and AIDS have been reported in Iowa through December 31, 2004.[5] Approximately 59% of these persons were living on December 31, 2004.

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.

HIV/AIDS Results

AIDS questions were only asked of people between the ages of 18 and 64 years.

Responses indicated that Iowans' knowledge about HIV/AIDS was incomplete. When asked if a pregnant woman with HIV can get treatment to help reduce the chances that she will pass the virus on to her baby, only 48.7% said "yes." Another 33.6% said they did not know. More were aware that there were medical procedures to help a person with HIV to live longer (88.8%). Still, 8.6% said they did not know.

Only 29% of respondents reported ever being tested for HIV, not including as part of a blood donation. This is lower than the 2003 finding of 32.3% and is the lowest figure ever reported. Although not extreme, the trend in having an HIV test has been downward (see figure 23.1).

Table 23.1: Percentage of Iowans Tested for HIV/AIDS, 2004

DEMOGRAPHIC GROUPS	Had HIV Test %	C.I. (95%)
TOTAL	29.0	(27.3-30.8)
SEX		
Male	25.8	(23.2-28.4)
Female	32.2	(30-34.4)
AGE		
18-24	31.3	(25.4-37.1)
25-34	42.3	(38.2-46.5)
35-44	35.2	(31.7-38.7)
45-54	20.7	(17.9-23.5)
55-64	12.1	(9.7-14.4)
EDUCATION		
Less than H.S.	27.5	(19.3-35.7)
H.S. or G.E.D.	24.7	(21.8-27.6)
Some Post-H.S.	32.0	(28.8-35.3)
College Graduate	31.0	(28.1-34)
HOUSEHOLD INCOME		
Less than $15,000	28.9	(22.5-35.3)
$15,000- 24,999	36.4	(30.6-42.3)
$25,000- 34,999	28.0	(23.3-32.8)
$35,000- 49,999	31.2	(27.3-35.2)
$50,000- 74,999	25.3	(21.6-29.1)
$75,000+	27.7	(24.3-31.1)
RACE/ETHNICITY		
Non-Hispanic White	27.5	(25.8-29.2)
Non-Hispanic Black	64.4	(49.7-79)
Non-Hispanic Other	53.7	(38.6-68.7)
Hispanic	39.7	(26.4-53)

The largest proportion of respondents tested was among African Americans (64.4%). Only 12.1% of those between ages 55 to 64 years old reported ever being tested (see table 23.1).

Females were somewhat more likely to have an HIV test than males. There is an interesting interaction between sex and age, however. Figure 23.1 shows that in the younger age groups, many more women have been tested, while there is little difference in the older age groups.

When asked to give the main reason for their last HIV blood test, respondents gave many answers. The top response was "It was required" (29.3%). The second most common reason was "You were pregnant" (18.4%). Since only women would give this reason, it was the most common response for women. This reason also probably helps explain the pattern of results found in figure 23.1

Each of the respondents who had received an HIV test was asked to describe where the test occurred. Respondents gave a variety of answers. The most commonly reported place was "Private doctor or HMO" (35.1%). The next most common choices were hospital (23.5%), and clinic (20.7%). If hospital and clinic were considered to be the same thing, their combined percentage would make them the most common place to have an AIDS test.

Survey participants were read a list of conditions that produce a high risk of contracting HIV and asked if any of these conditions applied to them. They did not have to say which. These conditions involved sexual activity and drug use. Only 3.0% thought any of these conditions applied to them.

Respondents were asked if a doctor or health professional had talked to them about preventing sexually transmitted diseases other than HIV/AIDS through condom use. About 9.7% reported that they had. This was an increase from the figure of 8.2% reported in 2003.

Figure 23.1: Percentage of Iowans Reporting Ever Being Tested for HIV 1998-2004
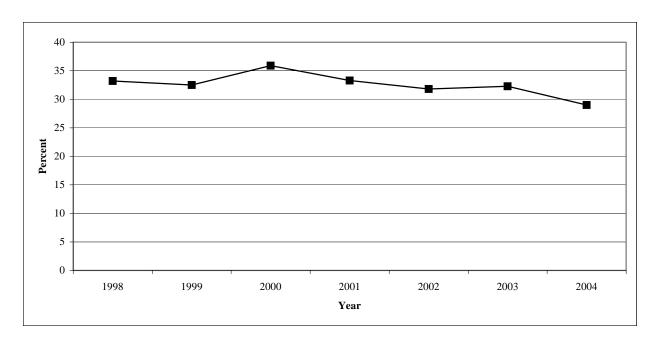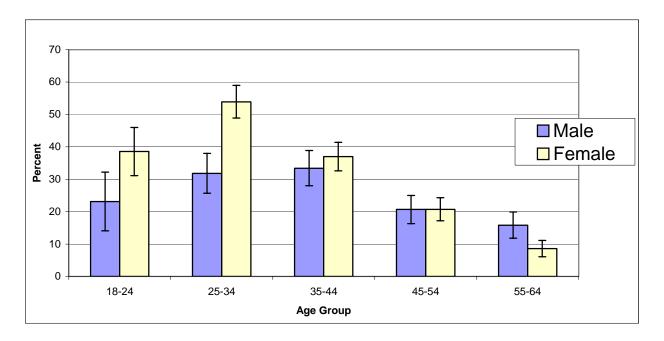

Figure 23.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2004

Although it is difficult to analyze racial differences in Iowa due to the small numbers of minorities, an attempt was made in the case of HIV because of its importance in the minority community.

Table 23.1 shows that all minority groups, particularly African Americans, were more likely to have had an AIDS test. Table 23.2 shows that all minority groups were more likely to have at least one of the risk factors and were more likely to have been talked to by a doctor concerning

condom use to prevent sexually transmitted diseases. African Americans were more than three times and Hispanics were more than twice as likely to have been talked to about sexually transmitted diseases than were non-Hispanic Whites.

Table 23.2: Comparison of Race and Ethnic Groups on HIV/AIDS Measures in Iowa, 2004

Race/Ethnicity	Any High Risk Situations Apply	Told by Doctor About STD Prevention by Condoms
White non-Hispanic	2.6	8.9
Black non-Hispanic	9.2	29.2
Other or Multiple Race	11.0	12.4
Hispanic	6.7	22.3

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Appendix 1

Year 2010 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2004

Healthy People 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2004
Health Insurance (Objective #1.1) Ages ≥18	100%	89.4%
Specific Source of Ongoing Primary Care (Objective #1.4c) Ages ≥18	96%	76.8%
Pap Smear, Ever Had (Objective #3.11a) Women, Ages ≥18	97%	95.6%
Pap Smear, Within Past Three Years (Objective #3.11b) Women, Ages ≥18	90%	86%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #3.12a) Ages ≥50	50%	31.7%
Sigmoidoscopy, Ever Had (Objective #3.12b) Ages ≥50	50%	51.6%
Mammogram, Within Past Two Years (Objective #3.14) Women, Ages ≥40	70%	75.3%
Diabetes, Diagnosed (Objective #5.4) Ages ≥20	80%	
Reduce proportion of adults with high blood pressure (Objective 12.9)	16%	26.1%
Influenza Immunization, Within Past Year (Objective #14.29a) Ages ≥65	90%	74.1%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) Ages ≥65	90%	68.2%
Obese, BMI ≥ 30 (Objective #19.2) Ages ≥20	15%	24.3%
(No) Permanent Teeth Extracted Due to Caries or Periodontal Disease (Objective #21.3) Ages 35-44	42%	71.0%
Extraction of All Natural Teeth (Objective # 21.4) Ages ≥65	20%	23.3%
No Leisure Time Physical Activity (Objective # 22.1) Ages ≥18	20%	21.3%
Binge Drinking, During the Past Month (Objective #26.11c) Ages ≥18	6%	19%
Cigarette Smoking (Objective #27.1a) Ages ≥18	12%	20.8%

[1] Behavioral Risk Factor Surveillance System

[2] Public Health Service. *Healthy People 2010: National Health Promotion and Disease Prevention Objectives*--full report with commentary. Washington, DC: U.S. Department of Health and Human Services, 2000.

[3] In some cases, BRFSS definitions of objectives differ slightly from those in *Healthy People 2010*. See *Healthy People 2010* for the exact definition of the objective.

Year 2010 Health Objectives for Iowa:
State Summary of BRFSS[1] Data for 2004

Healthy Iowans 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2004
Health Insurance (Objective #1-1) Ages < 65	100%	87.1%
Mammogram, Within Past Two Years (Objective #2-5.2) Women, Ages > 40	85%	75.3%
Pap Test, Within Past Three Years (Objective #2-6.1) Women, Ages > 18	90%	86%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #2-7.1) Ages > 50	55%	31.7%
Sigmoidoscopy, Ever Had (Objective #2-7.1) Ages >50	64%	51.6%
Diabetes Prevalence (Objective #3-1)	6.7%	6.4%
Achieve identification and control of high blood pressure (Objective 9.3)	14.9%	26.1%
Reduce adult population with high blood cholesterol (Objective 9.4)	28.5%	27.1%
Influenza Immunization, Within Past Year (Objective #10-2) Ages > 65	90%	74.1%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #10-2) Ages > 65	90%	68.2%
Prevent a further rise in the percentage of Iowans who are overweight (Objective 13.3)	38.3%	37.4%
Prevent a further rise in the percentage of Iowans who are obese (Objective 13.3)	22.9%	23.5%
Extraction of All Natural Teeth (Objective #15.3) Ages > 65	20%	23.3%
Had a dental visit within the past year (Objective #15-7) Ages > 65	75%	69.0%
Do not increase percentage of gamblers where gambling led to financial problems (Objective 20.7)	1.6%	1.2%
Do not increase percentage of gamblers where gambling led to personal problems (Objective 20.7)	1.7%	1.5%
Exposure to secondhand Smoke at Work (Objective #21-4)	20%	18.9%
Not allowing smoking anywhere in the home (Objective 21.6)	69%	70.4%
Not allowing smoking anywhere inside vehicles (Objective 21.6)	65%	
Cigarette Smoking (Objective 21.7) Ages > 18	18%	20.8%
Cigarette Smoking (Objective 21.7) Ages 18-24	28%	26.3%

Healthy Iowans 2010[2] **Objective**[3]	**Yr 2010 Target**	**Iowa, 2004**
Cigarette Smoking (Objective 21.7)	25%	26.6%
Household Income < $25,000		
Cigarette smokers who stopped smoking cigarettes for a day or more (Objective #21-7)	75%	49.2%

[1]Behavioral Risk Factor Surveillance System

[2]Iowa Department of Public Health. _Healthy Iowans 2010: Mid-Course Revision_, 2005.

[3]In some cases, BRFSS definitions of objectives differ slightly from those in _Healthy Iowans 2010_. See _Healthy Iowans2010_ for the exact definition of the objective.

Appendix 2

Iowa 2004 Behavioral Risk Factor Surveillance System Questionnaire

hSection 1: Health Status

1.1. Would you say that in general your health is:

1 Excellent
2 Very good
3 Good
4 Fair or
5 Poor

Section 2: Healthy Days - Health-related Quality of Life

2.1. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?
__ __ Number of days
8 8   None

2.2. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
__ __ Number of days
8 8   None **If Q2.1 also "None", skip to next module**

2.3. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?
__ __ Number of days
8 8   None

Section 3: Health Care Access

3.1. Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

1 Yes
2 No

3.2. Do you have one person you think of as your personal doctor or health care provider?

1 Yes, only one
2 More than one
3 No

3.3. Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?

1 Yes
2 No

Section 4: Exercise

4.1. During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

1 Yes
2 No

Section 5: Environmental Factors

The next two questions are about things in the air you breathe that may make you ill, not about an illness you can catch from other people, such as a cold.

5.1. Things like dust, mold, smoke, and chemicals inside the home or office can cause poor indoor air quality. In the past 12 months have you had an illness or symptom that you think was caused by something in the air inside a home, office, or other building?

Read if necessary:
> If you are experiencing an illness or symptom within the past 12 months that was caused by something in the air you encountered over 12 months ago, the answer is "Yes".

1Yes
2 No

5.2. Things like smog, automobile exhaust, and chemicals can cause outdoor air pollution. In the past 12 months have you had an illness or symptom that you think was caused by pollution in the air outdoors?

Read if necessary:
> This question does not refer to natural agents like pollen or dust in outdoor air. If respondent is experiencing an illness or symptom within the past 12 months that was caused by something in the air they encountered over 12 months ago, the answer is "Yes".

1 Yes
2 No

Section 6: Excess Sun Exposure

The next question is about sunburns including anytime that even a small part of your skin was red for more than 12 hours.

6.1. Have you had a sunburn within the past 12 months?   (86)
1 Yes
2 No **[Go to next section]**

6.2. Including times when even a small part of your skin was red for more than 12 hours, how many sunburns have you had within the past 12 months?

1 One
2 Two
3 Three
4 Four
5 Five
6 Six or more

Section 7: Tobacco Use

7.1. Have you smoked at least 100 cigarettes in your entire life?
   5 packs = 100 cigarettes

1 Yes
2 No **Go to next section**

7.2. Do you now smoke cigarettes every day, some days, or not at all?
1 Every day
2 Some days
3 Not at all **Go to next section**

7.3. During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?
1 Yes
2 No

Section 8: Alcohol Consumption

8.1. A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past 30 days, how many days per week or per month did you have at least 1 drink of any alcoholic beverage?

1 __ __ Days per week
2 __ __ Days in past 30
8 8 8   No drinks in past 30 days **Go to next section**

8.2. On the days when you drank, about how many drinks did you drink on the average?
__ __ Number of drinks

8.3. Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?
__ __ Number of times
8 8 None

8.4. During the past 30 days, how many times have you driven when you've had perhaps too much to drink?
_ _   Number of times
8 8 None

Section 9: Asthma

9.1. Have you ever been told by a doctor, nurse or other health professional that you had asthma?
1 Yes
2 No **Go to next section**

9.2. Do you still have asthma?
1 Yes
2 No

Section 10: Diabetes

10.1. Have you ever been told by a doctor that you have diabetes?
(If "Yes" and respondent is female, ask: "Was this only when you were pregnant?")
(If Respondent says pre-diabetes or borderline diabetes, use response code 4.)
1 Yes
2 Yes, but female told only during pregnancy
3 No
4 No, pre-diabetes or borderline diabetes

Module 1: Diabetes

1. How old were you when you were told you have diabetes?
__ __ Code age in years **[97 = 97 and older]**

2. Are you now taking insulin?

1 Yes
2 No

3. Are you now taking diabetes pills?
1 Yes
2 No

4. About how often do you check your blood for glucose or sugar? Include times when checked by a family member or friend, but do not include times when checked by a health professional.
1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year
8 8 8 Never

5. About how often do you check your feet for any sores or irritations? Include times when checked by a family member or friend, but do not include times when checked by a health professional.
1 __ __Times per day
2 __ __Times per week
3 __ __Times per month
4 __ __Times per year
8 8 8 Never
5 5 5 No feet

6. Have you ever had any sores or irritations on your feet that took more than four weeks to heal?
1 Yes
2 No

7. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?
__ __Number of times **[76 = 76 or more]**
8 8 None

8. A test for "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for "A one C"?
__ __Number of times **[76 = 76 or more]**
8 8 None
9 8 Never heard of "A one C" test

9.   About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?
__ __ Number of times **[76 = 76 or more]**
8 8 None

10. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.
1 Within the past month (anytime less than 1 month ago)
2 Within the past year (1 month but less than 12 months ago)
3 Within the past 2 years (1 year but less than 2 years ago)
4 2 or more years ago
8 Never

11. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?
1 Yes
2 No

12. Have you ever taken a course or class in how to manage your diabetes yourself?
1 Yes
2 No

Section 11: Oral Health

11.1. How long has it been since you last visited a dentist or a dental clinic?

NOTE: Include visits to dental specialists, such as orthodontists.

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8 Never

11.2. How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.

NOTE: If wisdom teeth are removed because of tooth decay or gum disease, they should be included in the count for lost teeth. Include teeth lost due to infection.

1 1 to 5
2 6 or more but not all
3 All
4 None

If Q11.1 = Never or Q11.2= All, go to next section

11.3. How long has it been since you had your teeth "cleaned" by a dentist or dental hygienist?

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8. Never

Section 12: Immunization

12.1. During the past 12 months, have you had a flu shot?

Read if necessary: We want to know if you had a flu shot injected in your arm.

1 Yes
2 No

12.2. During the past 12 months, have you had a flu vaccine that was sprayed in your nose?

1 Yes
2 No

12.3. Have you ever had a pneumonia shot? This shot is usually given only once or twice in a person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine.

1 Yes
2 No

Section 13: **Demographics**

13.1. What is your age?
__ __ Code age in years

13.2. Are you Hispanic or Latino?
1 Yes
2 No

13.3. Which one or more of the following would you say is your race?

Mark all that apply
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native or
6 Other **[specify]**
8 No additional choices

If more than one response to Q13.3, continue. Otherwise, go to Q13.5

13.4. Which one of these groups would you say best represents your race?
1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other **[specify]**

13.5. Are you:
1 Married
2 Divorced
3 Widowed
4 Separated
5 Never married or
6 A member of an unmarried couple

13.6. How many children less than 18 years of age live in your household?
__ __ Number of children
8 8 None

13.7. What is the highest grade or year of school you completed?
1 Never attended school or only attended kindergarten
2 Grades 1 through 8 (Elementary)
3 Grades 9 through 11 (Some high school)
4 Grade 12 or GED (High school graduate)
5 College 1 year to 3 years (Some college or technical school)
6 College 4 years or more (College graduate)

13.8. Are you currently:
1 Employed for wages
2 Self-employed
3 Out of work for more than 1 year
4 Out of work for less than 1 year
5 A Homemaker
6 A Student
7 Retired or
8 Unable to work

13.9. Is your annual household income from all sources:
04 Less than $25,000 **If "no," ask 05; if "yes," ask 03**
      ($20,000 to less than $25,000)
03 Less than $20,000 **If "no," code 04; if "yes," ask 02**
      ($15,000 to less than $20,000)
02 Less than $15,000 **If "no," code 03; if "yes," ask 01**
      ($10,000 to less than $15,000)
01 Less than $10,000 **If "no," code 02**
05 Less than $35,000 **If "no," ask 06**
      ($25,000 to less than $35,000)
06 Less than $50,000 **If "no," ask 07**
      ($35,000 to less than $50,000)
07 Less than $75,000 **If "no," code 08**
      ($50,000 to less than $75,000)
08 $75,000 or more

13.10. About how much do you weigh without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions up
__ __ __ Weight pounds/kilograms

13.11. About how tall are you without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions down
__/__ __ Height ft/inches/meters/centimeters

13.12. What county do you live in?

__ __ _FIPS county code

13.13. Do you have more than one telephone number in your household? Do not include cell phones or numbers that are only used by a computer or fax machine.

1 Yes
2 No   **Go to Q13.15**

13.14. How many of these are residential numbers?
__   Residential telephone numbers **[6=6 or more]**

13.15. During the past 12 months, has your household been without telephone service for 1 week or more?
Note: Do not include interruptions of phone service due to weather or natural disasters.
1 Yes
2 No

13.16. Indicate sex of respondent. Ask only if necessary.
1 Male **Go to next section.**
2 Female

If respondent 45 years old or older, go to next section.
13.17. To your knowledge, are you now pregnant?
1 Yes
2 No

Section 14: Veteran's Status
14.1 The next question relates to military service. Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit?
1 Yes
2 No **[Go to next section]**

14.2. Which of the following best describes your service in the United States military?
1 Currently on active duty **[Go to next section]**
2 Currently in a National Guard or Reserve unit **[Go to next section]**
3 Retired from military service
4 Medically discharged from military service
5 Discharged from military service

14.3. In the last 12 months have you received some or all of your health care from VA facilities?
If "yes" probe for "all" or "some" of the health care.
1 Yes, all of my health care
2 Yes, some of my health care
3 No, no VA health care received

Section 15: Women's Health
If respondent is male, go to next section.
15.1. A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?
1 Yes
2 No Go to Q15.3

15.2. How long has it been since you had your last mammogram?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less 5 years ago)
5 5 or more years ago

15.3. A clinical breast exam is when a doctor, nurse or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?
1 Yes
2 No Go to Q15.5

15.4. How long has it been since your last breast exam?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

15.5. A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?
1Yes
2 No Go to Q15.7

15.6. How long has it been since you had your last Pap test?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

NOTE: If response to core Q13.17 = 1 (is pregnant) then go to next module.
15.7. Have you had a hysterectomy?
A hysterectomy is an operation to remove the uterus (womb)
1 Yes
2 No

Section 16: Prostate Cancer Screening
If respondent is 39 years old or younger, or is female, go to next section
16.1. A prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever had a PSA test?
1 Yes
2 No **Go to Q16.3**

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16.2. How long has it been since you had your last PSA test?

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

16.3. A digital rectal exam is an exam in which a doctor, nurse or other health professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland. Have you ever had a digital rectal exam?

1 Yes
2 No Go to Q16.5

16.4. How long has it been since your last digital rectal exam?

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 3 years (2 years but less than 3 years ago)
4 Within the past 5 years (3 years but less than 5 years ago)
5 5 or more years ago

16.5. Have you ever been told by a doctor, nurse or other health professional that you had prostate cancer?

1 Yes
2 No

Section 17: **Colorectal Cancer Screening**
If respondent 49 years old or younger, go to next section

17.1. A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?

1 Yes
2 No **Go to Q17.3**

17.2. How long has it been since you had your last blood stool test using a home kit?

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago

17.3. Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?

1 Yes
2 No **Go to next section**

17.4. How long has it been since you had your last sigmoidoscopy or colonoscopy?

1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 Within the past 10 years (5 years but less than10 years ago)
5 10 or more years ago

Section 18: **Family Planning**
If respondent is female and 45 years of age or older, has had a hysterectomy, is pregnant , or male 60 years or older, go to next section.

The next set of questions asks you about your thoughts and experiences with family planning. Please remember that all of your answers will be kept confidential.

18.1. Some things people do to keep from getting pregnant include not having sex at certain times, using birth control methods such as the pill, implants, shots, condoms, diaphragm, foam, IUD, having their tubes tied, or having a vasectomy. Are you or your **[if female, insert husband/ partner; if male, insert wife/partner]** doing anything now to keep **[if female, insert "you"; if male, insert "her"]** from getting pregnant? **(If more than one partners, consider usual partner.)**

1 Yes
2 No **Go to Q18.3**
3 No partner/not sexually active **Go to next section**
4 Same sex partner **Go to next section**

18.2. What are you or your **[if female, insert husband/partner; if male, insert wife/partner]** doing now to keep **[if female, insert "you"; if male, insert "her"]** from getting pregnant?

01 Tubes tied (sterilization)   **Go to next section**
02 Hysterectomy (female sterilization)   **Go to next section**
03 Vasectomy (male sterilization)   **Go to next section**
04 Pill, all kinds (Seasonale, etc.) **Go to Q18.4**
05 Condoms (male or female) **Go to Q18.4**
06 Contraceptive implants (Jadelle or Implants) **Go to Q18.4**
07 Shots (Depo-Provera) **Go to Q18.4**
08 Shots (Lunelle) **Go to Q18.4**
09 Contraceptive Patch **Go to Q18.4**
10 Diaphragm, cervical ring, or cap (Nuvaring or others)
    Go to Q18.4
11 IUD (including Mirena) **Go to Q18.4**
12 Emergency contraception (EC) **Go to Q18.4**
13 Withdrawal **Go to Q18.4**
14 Not having sex at certain times (rhythm) **Go to Q18.4**
15 Other method (Foam, jelly, cream, etc.) **Go to Q18.4**

18.3. What is the main reason for not doing anything to keep [if female, insert "you," if male, insert "your wife/partner"] from getting pregnant?

01 Didn't think was going to have sex/no regular partner
02 You want a pregnancy
03 You or your partner don't want to use birth control
04 You or your partner don't like birth control/fear side effects
05 You can't pay for birth control
06 Lapse in use of a method
07 Don't think you or your partner can get pregnant
08 You or your partner had tubes tied (sterilization) **(Go to next section)**
09 You or your partner had a vasectomy (sterilization) **(Go to next section)**
10 You or your partner had a hysterectomy **(Go to next section)**
11 You or your partner are too old
12 You or your partner are currently breast-feeding
13 You or your partner just had a baby/postpartum
14 Other reason
15 Don't care if get pregnant
16 Partner is pregnant now **(Go to next section)**

18.4. How do you feel about having a child now or sometime in the future? Would you say

1 You don't want to have one **Go to next section**
2 You do want to have one **Go to Q18.5**
3 You're not sure if you do or don't **Go to next section**

18.5. How soon would you want to have a child? Would you say

1 Less than 12 months from now
2 Between 12 months to less than two years from now
3 Between two years to less than 5 years from now, or
4 5 or more years from now

Section 19: Disability
The following questions are about health problems or impairments you may have.

19.1. Are you limited in any way in any activities because of physical, mental, or emotional problems?

1 Yes
2 No

19.2. Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
Include occasional use or use in certain circumstances

1 Yes
2 No

Section 20: HIV/AIDS
If respondent is 65 years old or older, go to next section
The next few questions are about the national health problem of HIV, the virus that causes AIDS. Please remember that your answers are strictly confidential and that you don't have to answer every question if you don't want to. Although we will ask you about testing, we will not ask you about the results of any test you may have had.

I'm going to read two statements about HIV. After I read each one, please tell me whether you think it is true or false, or if you don't know.
20.1. A pregnant woman with HIV can get treatment to help reduce the chances that she will pass the virus on to her baby.

1 True
2 False
7 Don't know/Not Sure

20.2. There are medical treatments available that are intended to help a person who is infected with HIV to live longer.

1 True
2 False
7 Don't know/Not Sure

20.3. Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation.
Include saliva tests

1 Yes
2 No **Go to Q20.10**

20.4. In the past 12 months, how many times have you been tested for HIV, including times you did not get your results:

_ _ Times
8 8 None

20.5. Not including blood donations, in what month and year was your last HIV test?
Note: If response is before January 1985, code "Don't know".
Include saliva tests

__ __/__ __ __ __ Code month and year

20.6. I am going to read you a list of reasons why some people have been tested for HIV. Not including blood donations, which of these would you say was the MAIN reason for your last HIV test?
__ __ Reason code
01 It was required
02 Someone suggested you should be tested
03 You thought you may have gotten HIV through sex or drug use
04 You just wanted to find out whether you had HIV
05 You were worried that you could give HIV to someone
06 IF FEMALE: You were pregnant
07 It was done as part of a routine medical check-up
08 Or you were tested for some other reason

20.7. Where did you have your last HIV test–at a private doctor or HMO, at a counseling and testing site, at a hospital, at a clinic, in a jail or prison, **in a drug treatment facility,** at home, or somewhere else?
__ __ Facility code

01 Private doctor or HMO
02 Counseling and testing site
03 Hospital
04 Clinic
05 In a jail or prison (or other correctional facility)
06 Drug treatment facility
07 Home
08 Somewhere else

If Q20.7 is "04" (clinic) continue, if Q20.7 is "07" (at home) go to Q20.9, else go to Q20.10

20.8. What type of clinic did you go to for your last HIV test?
1 Family planning clinic
2 STD clinic
3 Prenatal clinic
4 Public health clinic
5 Community health clinic
6 Hospital clinic
8 Other

20.9. Was this test done by a nurse or other health worker, or with a home testing kit?
1 Nurse or health worker
2 A home testing kit

20.10. I'm going to read you a list. When I'm done, please tell me if any of the situations apply to you. You don't need to tell me which one.
You have used intravenous drugs in the past year
You have been treated for a sexually transmitted or venereal disease in the past year
You have given or received money or drugs in exchange for sex in the past year
You had anal sex without a condom in the past year
Do any of these situations apply to you?
1 Yes
2 No

20.11. The next question is about sexually transmitted diseases other than HIV, such as syphilis, gonorrhea, chlamydia, or genital herpes.

In the past 12 months, has a doctor, nurse, or other health professional talked to you about preventing sexually transmitted diseases through condom use?
1 Yes
2 No

Section 21: Firearms
The next questions are about firearms. We are asking these in a health survey because of our interest in firearm-related injuries. Please include weapons such as pistols, shotguns, and rifles; but not BB guns, starter pistols, or guns that cannot fire. Include those kept in a garage, outdoor storage area, or motor vehicle.
21.1. Are any firearms kept in or around your home?
1 Yes
2 No **Go to Module 3**

21.2. Are any of these firearms now loaded?
1 Yes
2 No **Go to Module 3**

21.3. Are any of these loaded firearms also unlocked? By unlocked, we mean you do not need a key or combination to get the gun or to fire it. We don't count a safety as a lock.
1 Yes
2 No

Module 3: Hypertension Awareness
1.   Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?
1 Yes
2 Yes, but female told only during pregnancy **Go to next module**
3 No **Go to next module**

2.   Are you currently taking medicine for your high blood pressure?
1 Yes
2 No

State Added Cholesterol Awareness
SACQ1. Blood cholesterol is a fatty substance found in the blood. Have you ever been told by a doctor, nurse or other health professional that your blood cholesterol is high?
1 Yes
2 No **Go to Next Module**

SACQ2. Are you currently taking medicine for your high cholesterol?
1 Yes
2 No

Module 9: Adult Asthma History
If "yes" to core Q9.1, continue. .
Previously you said you were told by a doctor, nurse or other health professional that you had asthma.
1. How old were you when you were first told by a doctor, nurse or other health professional that you had asthma?
__ __ Age in years 11 or older **[96 = 96 and older]**
9 7   Age 10 or younger

If "yes" to core Q9.2, continue. .
2. During the past 12 months, have you had an episode of asthma or an asthma attack?
1 Yes
2 No

3. During the past 12 months, how many times did you visit an emergency room or urgent care center because of your asthma?
__ __ Number of visits **[87 = 87 or more]**
8 8   None

4. [If one or more visits to Q3, fill in (Besides those emergency room visits,)] During the past 12 months, how many times did you see a doctor, nurse or other health professional for urgent treatment of worsening asthma symptoms?
__ __ Number of visits **[87 = 87 or more]**
8 8   None

5. During the past 12 months, how many times did you see a doctor, nurse or other health professional for a routine checkup for your asthma?
__ __ Number of visits **[87 = 87 or more]**
8 8   None

6. During the past 12 months, how many days were you unable to work or carry out your usual activities because of your asthma?
__ __ __ Number of days
8 8 8   None

7. Symptoms of asthma include cough, wheezing, shortness of breath, chest tightness and phlegm production when you don't have a cold or respiratory infection.   During the past 30 days, how often did you have any symptoms of asthma? Would you say:
8 Not at any time **Go to Q9**
1 Less than once a week
2 Once or twice a week
3 More than 2 times a week, but not every day
4 Every day, but not all the time or
5 Every day, all the time

8. During the past 30 days, how many days did symptoms of asthma make it difficult for you to stay asleep? Would you say:
8 None
1 One or two
2 Three to four
3 Five
4 Six to ten or
5 More than ten

9. During the past 30 days how often did you take asthma medication that was prescribed or given to you by doctor? This includes using an inhaler. Would you say:
8 Didn't take any
1 Less than once a week
2 Once or twice a week
3 More than 2 times a week, but not every day
4 Once every day or
5 2 or more times every day

State Added Adult Asthma
If answer to Q9 in Adult Asthma History Module is 7, 8 or 9, go to SAAAQ3
SAAAQ1. Prescription asthma medicines may be taken to either keep you from having asthma symptoms or to treat your symptoms once you start to have them.
In the past 30 days, how often did you take the kind of prescription asthma medications that help to prevent you from having symptoms--- the kind taken before you have symptoms? This includes an inhaler used to prevent you from having an attack.
[Explanation if needed: The kind of medicine that prevents asthma symptoms is sometimes called controller or maintenance medicine and is taken while one is feeling well and to prevent an attack in the future. These medicines may be taken by mouth or inhaled.]
Would you say...
8 Didn't take any,
1 Less than once a week,

2 Once or twice a week,

3 More than 2 times a week, but not every day,

4 Once every day, or

5 2 or more times every day?

SAAAQ2 In the past 30 days, how often did you take prescription asthma medications to treat an asthma attack or symptoms once you started to have problems breathing? This includes inhalers when used to treat or relieve your breathing problems.

[Explanation if needed: These medicines taken to relieve your symptoms are sometimes called reliever or quick relief medicines and may be taken by mouth or inhaled.]

Would you say…

8 Didn't take any,

1 Less than once a week,

2 Once or twice a week,

3 More than 2 times a week, but not every day,

4 Once every day, or

5 2 or more times every day?

If answer to Q9 in Asthma History Module is 1, 2, 3, 4, or 5, go to SAAAQ5

SAAAQ3. During the past 12 months did you take prescription asthma medications that help to prevent you from having asthma symptoms – the kind of medication taken BEFORE you have symptoms? This includes an inhaler used to prevent you from having an attack.

1 Yes

2 No

SAAAQ4. During the past 12 months did you take prescription asthma medications to treat an asthma attack or asthma symptoms – the kind of medication taken DURING an asthma attack? This includes inhalers when used to treat or relieve your asthma attack or asthma symptoms.

1 Yes

2 No

SAAAQ5. During the past 12 months, how many times did you stay overnight in a hospital because of your asthma?

__ __ Number of overnight hospital stays

8 8   None

SAAAQ6 An asthma management plan, or asthma action plan, is a printed form that tells when to change the amount or type of medicine, when to call the doctor for advice, and when to go to the emergency room.
Has a doctor or other health professional EVER given you an asthma management or action plan?

1 Yes

2 No

SAAAQ7. Was your asthma caused by or made worse by chemicals, smoke, fumes or dust in any job you ever had?

1 Yes

2 No

3 Never worked outside the home **[Go to Module 10]**

SAAAQ8. Did you ever tell a doctor or other medical person that your asthma was related to any job you ever had?

1 Yes

2 No

SAAAQ9. Were you ever told by a doctor or other medical person that your asthma was related to any job you ever had?

1 Yes

2 No

Module 10: Childhood Asthma

If response to core Q13.6 is '88' (none) or '99' (refused) go to Revised Module 12.

1. Earlier you said there were **[fill in number from core Q13.6]** children age 17 or younger living in your household. How many of these children have ever been diagnosed with asthma?

__ __ Number of children

8 8   None **Go to Next Module**

2. **[Fill in (Does this child/How many of these children) from Q1]** still have asthma?

If only one child from Q1 and response is "Yes" to Q2, code '01'. If response is "No", to Q2 code '88'.

__ __ Number of children

8 8   None

State Added Childhood Asthma

SACAQ1. **[Fill in** *(Has this child/How many of these children)* **from Q1]** had an asthma attack or experienced symptoms of asthma during the past 12 months?

If only one child from Q1 and response is "Yes" to SACAQ1, code '01'. If response is "No", to SACAQ1 code '88'.

__ __ Number of children

8 8   None

SACAQ2 **[Fill in** *(Has this child/How many of these children)* **from Q1]** had to visit an emergency room or urgent care center during the past 12 months, because of their asthma?

If only one child from Q1 and response is "Yes" to SACAQ2, code '01'. If response is "No", to SACAQ2 code '88'.

__ __ Number of children

8 8   None

SACAQ3 **[Fill in** *(Has this child/How many of these children)* **from Q1]** had to stay overnight in a hospital during the past 12 months, because of their asthma?

If only one child from Q1 and response is "Yes" to SACAQ3, code '01'. If response is "No", to SACAQ1 code '88'.

__ __ Number of children

8 8   None

SACAQ4 An asthma management plan, or asthma action plan, is a printed form that tells when to change the amount or type of medicine, when to call the doctor for advice, and when to go to the emergency room.
Has a doctor or other health professional EVER given **[Fill** in *(this child/How many of these children with asthma)* **from Q1]** an asthma management or action plan?

If only one child from Q1 and response is "Yes" to SACAQ4, code '01'. If response is "No", to SACAQ4 code '88'.

__ __ Number of children

8 8   None

State Added Revised Module 12: Cardiovascular Disease

1. To lower your risk of developing heart disease or stroke, are you....

a. Eating fewer high fat or high cholesterol foods?

1 Yes

2 No

b. Eating more fruits and vegetables?

1 Yes

2 No

c. More physically active?

1 Yes

2 No

2. Within the past 12 months, has a doctor, nurse, or other health professional told you to…

        a. Eat fewer high fat or high cholesterol foods?

1 Yes
2 No

        b. Eat more fruits and vegetables?

1 Yes
2 No

        c. Be more physically active?

1 Yes
2 No

State Added Revised Module 13: Folic Acid
3. Now about vitamins, do any of the vitamin pills or supplements you take contain folic acid?
1 Yes
2 No **Go to Q5**
3 Don't take vitamin pills or supplements **[Go to Q5]**

4. How often do you take this vitamin pill or supplement?
1 __ __Times per day
2___ __Times per week
3__ __ Times per month
4_____Times per year

5. Some health experts recommend that women take 400 micrograms of the B vitamin folic acid, for which one of the following reasons...
1 To make strong bones (Go to next module.)
2 To prevent birth defects
3 To prevent high blood pressure or (Go to next module.)
4 Some other reason (Go to next module.)

If 1, 3, 4, 7 or 9 in Q5 go to next Module.
SAFAQ1. To help prevent some birth defects, a woman needs to take a vitamin containing folic acid…?
1 During the second trimester of pregnancy,
2 At least one month before pregnancy,
3 During the first trimester of pregnancy, or
4 At least one month before pregnancy and during the first trimester of pregnancy?

Module 14: Other Tobacco Products

1. Have you ever used or tried any smokeless tobacco products such as chewing tobacco or snuff?

1 Yes
2 No **Go to Q3**

2. Do you currently use chewing tobacco or snuff every day, some days, or not at all?
1 Every day
2 Some days
3 Not at all

3. Do you currently use any tobacco products other than cigarettes, such as cigars, pipes, bidis, kreteks, or any other tobacco product?
**Note: Bidis are small, brown, hand-rolled cigarettes from India and other southeast Asian countries.
Kreteks are clove cigarettes made in Indonesia that contain clove extract and tobacco.**
1 Yes
2 No

Module 15: Smoking Cessation

Previously you said you have smoked cigarettes.
1. About how long has it been since you last smoked cigarettes ?
0 1 Within the past month (anytime less than 1 month ago)
0 2 Within the past 3 months (1 month but less than 3 months ago)
0 3 Within the past 6 months (3 months but less than 6 months ago)
0 4 Within the past year (6 months but less than 1 year ago)
0 5 Within the past 5 years (1 year but less than 5 years ago) **Go to** next module
0 6 Within the past 10 years (5 years but less than 10 years ago) **Go to** next module
0 7 10 or more years ago **[Go to** next module]

The next questions are about interactions you might have had with a doctor, nurse, or other health professional.

2. In the past 12 months, how many times have you seen a doctor, nurse or other health professional to get any kind of care for yourself?

__ __ Number of times (01-76)
8 8 None **Go to next module**

3. In the past 12 months **on how many visits were you advised to quit** smoking **by a doctor or other health provider?**
__ __ Number of times (01-76)
8 8 None **Go to next module**

4. On how many visits did your doctor, nurse or other health professional recommend or discuss medication to assist you with quitting smoking, such as nicotine gum, patch, nasal spray, inhaler, lozenge, or prescription medication such as Wellbutrin / Zyban/ Buproprion?
(Pronunciation: Well BYOU trin/ZEYE ban/byou PRO pee on)
__ __ Number of visits (01-76)
8 8 None

5. On how many visits did your doctor or health provider recommend or discuss methods and strategies other than medication to assist you with quitting smoking?
__ __ Number of visits (01-76)
8 8 None

Module 16: Secondhand Smoke Policy
1. Which statement best describes the rules about smoking inside your home?
1 Smoking is not allowed anywhere inside your home
2 Smoking is allowed in some places or at some times
3 Smoking is allowed anywhere inside the home or
4 There are no rules about smoking inside the home

2. While working at your job, are you indoors most of the time?
1 Yes
2 No **Go to Next Module**

3. Which of the following best describes your place of work's official smoking policy for indoor public or common areas, such as lobbies, rest rooms, and lunch rooms?

Note: For workers who visit clients or work at home, "place of work" means their base location. For self-employed persons who work at home, the official smoking policy means the home smoking policy.
1 Not allowed in any public areas
2 Allowed in some public areas
3 Allowed in all public areas or
4 No official policy

4. Which of the following best describes your place of work's official smoking policy for work areas?
1 Not allowed in any work areas
2 Allowed in some work areas
3 Allowed in all work areas or
4 No official policy

STATE ADDED TOBACCO
SATQ1. Which statement best describes the rules about smoking in your car or vehicle? Would you say...

1 Smoking is **not** allowed in your vehicle,
2 Smoking is allowed in your vehicle sometimes,
3 Smoking **is** allowed in your car or vehicle, or
4 There are no rules about smoking in your vehicle?
5 Do not have a vehicle

SATQ2. Now, how often have you seen anything on TV, heard anything on the radio or seen any billboards against smoking? Would you say...
1 A lot,
2 Sometimes,
3 Rarely, or
4 Never?

SATQ3. Now I would like to know if you have heard or seen anything at all about the anti-tobacco advertising campaign called "Just Eliminate Lies" or JEL?
1 Yes
2 No **Go to next module**

SATQ4. How well informed do you think you are about the JEL "Just Eliminate Lies" campaign? Would you say...
1 Very informed,
2 Somewhat informed,
3 Not very informed, or
4 Not at all informed? **Go to next module**

SATQ5. How much do you agree that the JEL, "Just Eliminate Lies," ads are believable or convincing? Would you say you ...
1 Strongly agree,
2 Agree,
3 Disagree, or
4 Strongly disagree?

State Added Colorectal Cancer Screening
[If respondent is 49 years old or younger or Refused or Didn't know age, go to SACCAQ1]
SACCSQ1. Earlier I asked you some general questions about colorectal cancer screening. Now, I'd like to ask a few very specific ones. Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No **Go to SACCSQ4**

SACCSQ2. What test did your health care provider recommend?
1 Blood Stool Kit
2 Sigmoidoscopy or colonoscopy (exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems)
6 Blood Stool Kit and sigmoidoscopy or colonoscopy
3 Other test
4 Recommended more than one test
5 Did not recommend a test **Go to SACCSQ4**

SACCSQ3. Did you have the test your health care provider recommended?
1 Yes Go to SACCAQ1
2 No If Q2=1 and Q3=2, then Q4
       If Q2=2 and Q3=2, then Q5
       If Q2=3, 4 or 6 and Q3=2; go to SACCAQ1

SACCSQ4. **[IF ANS=2 ON Q17.1 ASK]** What is the main reason you did not have a blood stool test using a home kit?
11 No symptoms
12 No family history of colorectal cancer
13 Cost/Not covered by insurance
14 Too old to have test
15 Too young to have test
16 No time
17 Test is distasteful
18 Embarrassment
19 Fear of finding cancer
20 Don't know where to get the test
21 Don't know how to do the test
22 Other
23 Don't want to do the prep
       After the response go to the Advertising Section

SACCSQ5. **[IF Q17.3 = 2 OR Q17.3 =1 AND Q17.4 = 4 OR 5, ASK]**
What is the main reason you did not have a sigmoidoscopy or colonoscopy?
11 No symptoms
12 No family history of colorectal cancer
13 Cost/Not covered by insurance
14 Too old to have test
15 Too young to have test
16 No time
17 Test is distasteful
18 Embarrassment
19 Fear of finding cancer
20 Don't know where to get the exam
21 Don't want to do the bowel/colon prep
22 Distance to travel for the test
23 No transportation available
24 Too long a wait for an appointment
25 Other

State Added Colorectal Cancer Advertising
SACCAQ1. In the past 6 months, have you seen any articles or advertising about the risks of colorectal cancer?
1 Yes
2 No **Go to SACCAQ3**

SACCAQ2. Where did you see this article or advertisement about the risks of colorectal cancer?
 [IF MORE THAN ONE, SELECT MOST FREQUENTLY SEEN]
1 Magazine
2 Doctor's Office
3 Television
4 Radio
5 Health Newsletter
6 Other

SACCAQ3. In the past 6 months, have you seen any articles or advertising about the potential benefits of early detection of colorectal cancer?   (407)
1 Yes
2 No   **Go to SACCKQ1**

SACCAQ4. Where did you see this article or advertisement about the potential benefits of early detection of colorectal cancer?
[IF MORE THAN ONE, SELECT MOST FREQUENTLY SEEN]
1 Magazine
2 Doctor's Office
3 Television
4 Radio
5 Health Newsletter
6 Other

State Added Colorectal Cancer Knowledge
SACCKQ1. Next, I'm going to read you several statements about colorectal cancer. After I read each one, please tell me if you strongly agree, somewhat agree, somewhat disagree or strongly disagree.
A person's age is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ2. A person's race or ethnicity is considered a risk factor for developing colorectal cancer. Would you say...

1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ3. A person's gender is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ4. Colorectal cancer in a blood relative is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ5. A person's use of tobacco is considered a risk factor for developing colorectal cancer.   Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ6. A person's diet is considered a risk factor in developing colorectal cancer.   Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ7. A person's weight is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

SACCKQ8. A person's alcohol intake is considered a risk factor in developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

State Added Colorectal Cancer Risk
SACCRQ1 In terms of your own risk, what would you say your chances are of developing colorectal cancer?   Would you say ...
1 High,
2 Medium,
3 Low, or
4 None?

STATE ADDED HEALTH INSURANCE
SAHIQ1. Have you heard of Iowa's Child Health Insurance Program, called Hawk-I?
1 Yes
2 No

STATE ADDED SNACK QUESTIONS
SASNQ1. Next, have you heard of or seen the message "Pick-A-Better Snack how easy is that"?
1 Yes
2 No

SASNQ2. Have you heard or seen any of the following messages?
                Wash. Bite. How easy is that?
                Peel. Eat. How easy is that?
                Slice. Eat. How easy is that?
                Dip. Eat. How easy is that?
1 Yes
2 No

SKIP TO SAPAQ1 IF SASNQ1 >1 AND SASNQ2 >1

SASNQ3. Where did you hear of the Pick-A-Better Snack
        message?
[SELECT ALL THAT APPLY]
11 School
12 Grocery store
13 Radio
14 Television
15 Newspaper
16 Billboard
17 Bus Sign
18 Community center or senior meal program
19 WIC (Women, Infant, Children)
20 Other

STATE ADDED PHYSICAL ACTIVITY
SAPAQ1. The next questions are about physical activities you do
        in a usual week.
        Please think about all your physical activities including work
        and leisure time.
In a usual week do you do any vigorous activities for at least 10
        minutes that cause heavy sweating, or large increases in
        breathing or heart rate? Some examples are running, lap
        swimming, aerobics classes, or fast bicycling?
1 Yes
2 No

SAPAQ2. In a usual week do you do any moderate activities for at
        least 10 minutes that cause only light sweating or a slight to
        moderate increase in breathing or heart rate? Some examples
        are brisk walking, bicycling for pleasure, golfing, or dancing
1 Yes
2 No

SAPAQ3. How often do you take a walk to get exercise?
11 Every day or almost every day
12 3-5 times a week
13 2 times a week
19 Once a week
14 Less than once a week
15 Once a month
16 Hardly ever
17 Never
18 Unable to walk

STATE ADDED GAMBLING
I have just a few more questions and we'll be finished.
SAGQ1. Have you gambled in the last 12 months?
1 Yes
2 No   [SKIP TO CLOSING]

SAGQ2. Has the money you spent gambling let to financial
         problems?
1 Yes
2 No

SAGQ3. Has the time you spent gambling led to problems in your
        family, work, or personal life?
1 Yes
2 No