Health in Iowa

Annual Report

From the 2007 Iowa
Behavioral Risk Factor Surveillance System
(BRFSS)

Iowa Department of Public Health
Bureau of Health Statistics

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Completed in cooperation with the Centers for Disease Control
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TABLE OF CONTENTS

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. Then, 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 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 conditions, health risk behaviors, attitudes, and awareness of residents aged 18 and over. It also monitors the prevalence of these indicators over time. The indicators surveyed are major contributors to illness, disability and premature death.

This report focuses on the data collected during calendar year 2007. Some of the risk factors discussed are: general health status; health care coverage; cigarette smoking; alcohol consumption; body weight; physical activity, diet, cancer screening for colorectal cancer; diabetes; asthma; 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 such as Iowans Fit for Life, 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 by 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 which states may opt to include in their survey; and 3) state-added questions which 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 were made about including them 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.

Participation by Iowans in the BRFSS survey is random, anonymous, voluntary and confidential. Survey participants are requested to provide such demographic information as age, sex, race, marital and employment status, household income, educational level, and location of residence by county and zip code. This location information is suppressed in public use data when the numbers are so small that the respondent might be identified.

Sampling Process

Only adults residing in households were interviewed. People residing in group homes or institutions were not sampled. Interviews were also not performed with people over cell phones. Households were selected 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. 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 most recent census estimates and past survey experience. 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 2007 for a total sample size of 5,428. Interviews were conducted in both English and Spanish. There were 5,369 English interviews and 59 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 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. Attempts were made to convert initial refusals into participants.

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 25.2 minutes. Spanish interviews took much longer. The response rate, defined as completed interviews + partial completes divided by all eligible households called, was 43.6%. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures. There was a higher than usual number of partial completes in 2007 due to the extraordinary length of time needed to complete the interview. Of the 5,428 interviews conducted, 438 were partial interviews. This means that results from module and state-added questions are determined from a somewhat smaller sample than core questions.

A Computer Aided Telephone Interviewing (CATI) system was used. The CATI system not only assists interviewers in presenting the questionnaire and recording 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 software 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 one and one-half interviews. In contrast, in one day of in-person interviewing, many miles of travel may be required with few interviews completed.

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

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

There is one main limitation to telephone surveys. All Iowans are not reachable by traditional telephone service. Some do not live in households but are in institutions such as nursing homes or prisons. Some households do not have telephones. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to own telephones and are therefore under-sampled. Increasingly many people, including the young, single, ethnic minorities, and renters are opting not to use traditional landline telephone service in favor of cell phones.[8,36] Furthermore, the percentage of households with a telephone varies by region. New telephone technology such as caller I.D., and call blockers that block telemarketers also pose problems for telephone surveys.

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 Iowa. However, 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 phone numbers per household influence a person's likelihood of being included in the survey. Next, weights were adjusted to match Iowa’s population by age, gender, and region. The state's population estimates were derived from the most currently available census data files.

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

Charts and tables in this report will indicate a range of values based on the value determined from thsurvey in which the true Iowa value should fall 95% of the time. 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 poorer is our ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there are a smaller number of interviews in each particular group than in the whole survey. Furthermore, many questions are only answered depending on the answer to previous questions. For instance, persons would only be asked at what age they were diagnosed with diabetes if they answer "yes" to whether they have ever been told they had 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 general, data in which the number of observations is less than 50 or the 95% confidence interval is larger than 20% will not be reported since these data are considered highly unreliable.

Some people refuse to answer select questions but choose to respond to the majority of the questions. Those interviews were still used in the final count for the total sample size. However, they were not counted on the specific questions they refused. 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 5,428 respondents in the BRFSS for the year 2007 included 2,114 males and 3,314 females age 18 years 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 2007

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	79	3.7	121	3.6	200	3.7
25-34	230	10.9	336	10.1	566	10.4
35-44	362	17.1	525	15.8	887	16.3
45-54	475	22.5	692	20.9	1,167	21.5
55-64	417	19.7	577	17.4	994	18.3
65-74	308	14.6	457	13.8	765	14.1
75+	230	10.9	584	17.6	814	15.0
Unk/Ref	13	0.6	22	0.7	35	0.6
Total	2,114	39.0	3,314	61.0	5,428	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2007

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	5,087	93.7
Black Non-Hispanic	81	1.5
Other Non-Hispanic[1]	102	1.9
Hispanic	133	2.5
Refused	25	0.5
Total	5,428	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2007

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	413	7.6
High School Grad or GED	1,980	36.5
Some College or Technical School	1,460	26.9
College Graduate	1,553	28.6
Unknown/Refused	22	0.4
Total	5,428	100.0

[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 2007

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	423	7.8
$15,000-$24,999	742	13.7
$25,000- 34,999	621	11.4
$35,000-$49,999	833	15.3
$50,000-$74,999	942	17.4
>=$75,000	1,145	21.1
Unknown/Refused	722	13.3
Total	5,437	100.0

4. General Health Status and Health-Related Quality of Life

Background

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.[37] 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.[27,40] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[40]

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.[15]

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 Results

In 2007, when asked how their health was in general, 18.5% of respondents reported that it was excellent. Another 38.2% said it was very good. While 30.9% reported good health, 12.4% rated their health as fair or poor. This figure for fair or poor health is lower than the 13% figure found in 2006 but is about the same as it was in 2005. Figure 4.1 shows that, despite the decline in the past year, the trend in prevalence of fair or poor health has been mildly upward in recent years.

Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Household income had the most impact on reporting fair or poor health. While only 3.3% of those with incomes of $75,000 or over reported fair or poor health, 33% of those with incomes below $15,000 did so (see figure 4.2). Other respondents who were more likely to report having fair or poor health were those with less than a high school education, Hispanics, and those 75 years old and older. Those with a college education, those with household incomes $50,000 or higher, and those age 18 to 35 years all reported less than 7% with fair or poor health.

Figure 4.1: Percentage of Iowans Reporting Their Health as Fair or Poor 2000-2007

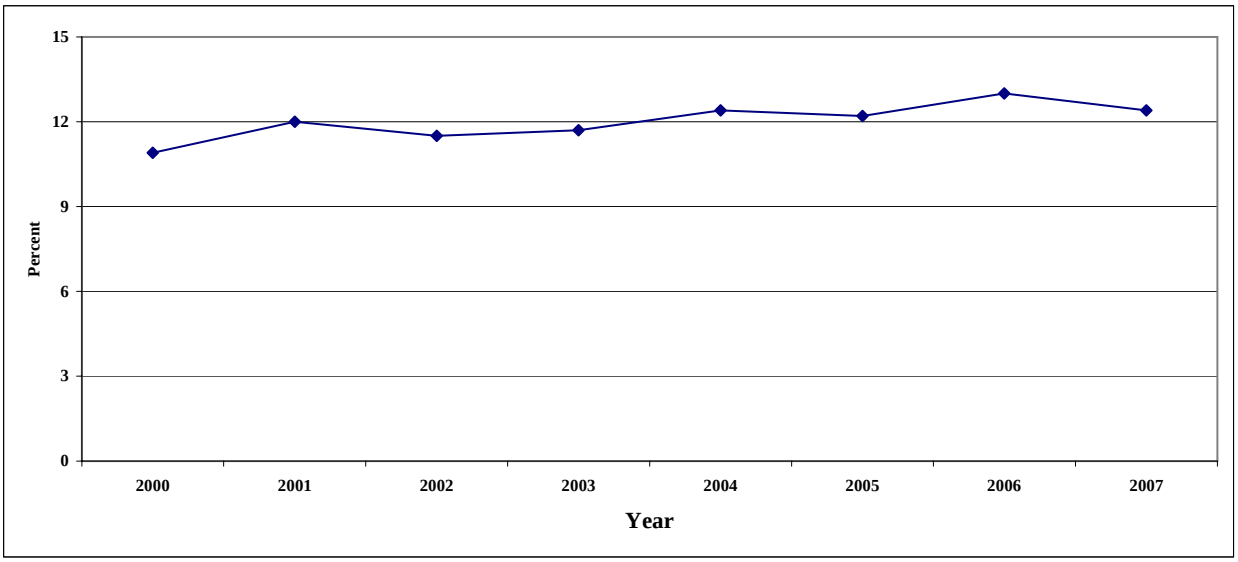
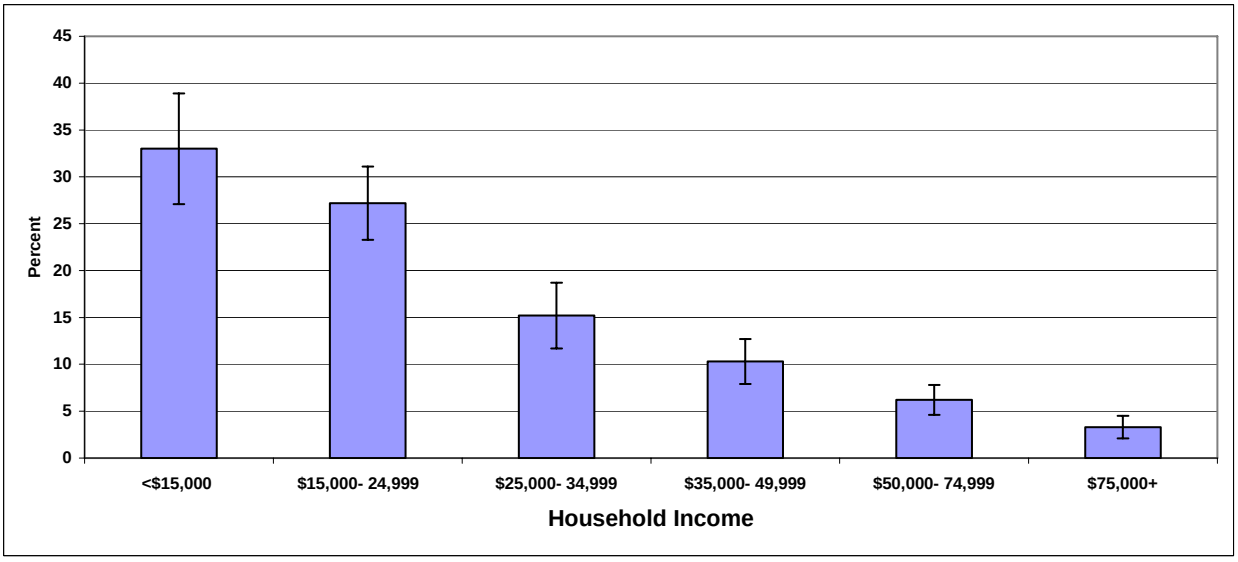


Figure 4.2: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2007



In answer to the question about how many days during the past 30 days was their physical health not good, 68.9% of respondents reported none of the days, 20.5% reported one to seven days, 1.9% reported eight to 13 days, and 8.7% reported 14 days or more. 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. Non-White Hispanics also reported fewer days of bad physical health. Once again, household income had the greatest impact. Only 55.3% of people with household incomes less than $15,000 reported no bad physical health days, while people with household incomes of $75,000 or more had the highest

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2007

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	12.4	(11.4-13.4)
SEX		
Male	12.3	(10.7-13.9)
Female	12.5	(11.3-13.7)
RACE/ETHNICITY		
White/Non-Hisp.	12.0	(11-13)
Black/Non-Hisp.	14.6	(5.4-23.8)
Other/Non-Hisp.	13.0	(6.2-19.8)
Hispanic	21.3	(12.9-29.7)
AGE		
18-24	6.2	(2.9-9.5)
25-34	6.1	(3.9-8.3)
35-44	8.1	(5.9-10.3)
45-54	11.9	(9.9-13.9)
55-64	15.8	(13.3-18.3)
65-74	19.0	(16-22.1)
75+	28.7	(25.3-32.1)
EDUCATION		
Less Than H.S.	25.7	(20.6-30.8)
H.S. or G.E.D.	15.5	(13.7-17.3)
Some Post-H.S.	11.3	(9.3-13.3)
College Graduate	5.3	(4.1-6.5)
HOUSEHOLD INCOME		
<$15,000	33.0	(27.1-38.9)
$15,000- 24,999	27.2	(23.3-31.1)
$25,000- 34,999	15.2	(11.7-18.7)
$35,000- 49,999	10.3	(7.9-12.7)
$50,000- 74,999	6.2	(4.6-7.8)
$75,000+	3.3	(2.1-4.5)

percentage (74.1%). People age 25 to 34 years old actually had the lowest percent reporting 14 or more bad physical health days (2.8%).

When responding to the question of how many days during the past 30 days their mental health was not good, 72.6% of the respondents indicated none of the days, 18.3% reported one to seven days 1.8% reported eight to 13 days, and 7.2% reported 14 or more 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 (55.5%), while those with the highest percentage were age 75 and older (88.1%). This age group was also the one with the lowest percentage experiencing frequent mental distress (14 or more bad mental health days) (3%), while those with the highest were those with household incomes of less than $15,000 (16.7%).

When asked how many days poor physical or mental health kept them from performing their usual activities, 62.2% of those with some days of either bad physical or mental health said none. On the other hand, 10% said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income. Due to small numbers, however, some of these demographic groups had to be collapsed.

When asked how often they got the emotional support they needed 47.4% of Iowans responded always and another 35.7% responded usually. Never was reported by 2.7%. Groups with the highest percentage reporting no emotional support were Other Non-Hispanic (13.4%) and Hispanic (9.8%) race/ethnicity groups.

When asked in general how satisfied they were with their lives, 96.4% of Iowans reported either very satisfied or satisfied. Satisfaction was less likely for lower education and lower income individuals. In no case was combined very satisfied and satisfied responses given by less than

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days and Impact on Usual Activities, 2007

DEMOGRAPHIC GROUP	Days of Poor Physical Health		Days of Poor Mental Health	
	None	14 –30 days	None	14 --30 days
TOTAL	68.9	8.7	72.6	7.2
SEX				
Male	72.0	8.3	78.6	5.1
Female	65.9	9.1	66.9	9.3
RACE/ETHNICITY				
White/Non-Hisp.	68.6	8.9	72.6	7.2
Non-White or Hisp.	72.9	5.7	72.0	7.9
AGE GROUP				
18-24	67.5	5.0	55.5	9.6
25-34	72.1	2.6	70.3	8.3
35-44	69.2	6.6	69.9	6.4
45-54	70.4	9.6	72.4	9.0
55-64	68.6	10.9	76.0	7.4
65-74	69.3	13.6	85.2	3.7
75+	62.0	18.0	88.1	3.0
EDUCATION				
Less than H.S.	58.8	14.4	71.1	13.9
H.S. or G.E.D.	70.6	10.1	75.7	7.2
Some Post-H.S.	67.5	9.1	68.4	8.7
College Graduate	71.2	4.6	73.4	3.6
HOUSEHOLD INCOME				
Less than $15,000	55.3	26.6	66.2	16.7
$15,000- 24,999	58.4	15.4	68.1	10.4
$25,000- 34,999	67.0	11.1	71.9	8.1
$35,000- 49,999	69.2	6.8	72.6	7.4
$50,000- 74,999	73.8	4.2	71.9	5.4
$75,000+	74.1	3.6	75.4	4.7

90% of a particular group. The least satisfaction was reported by Iowans with incomes less than $15,000 per year. In this group 24.1% were very satisfied, 66.7% were satisfied. Combined this was 90.8%.

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and territories ranged from 10.9% to 32.2%. The worst state seemed to be an outlier, since the second worst rate was only 23.1%. The median value was 15.2%. Iowa ranked quite well with only 12.4%

rating their health as fair or poor. There were only five states with a lower percent reporting fair or poor health.

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.[43]

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.[26]

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.

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

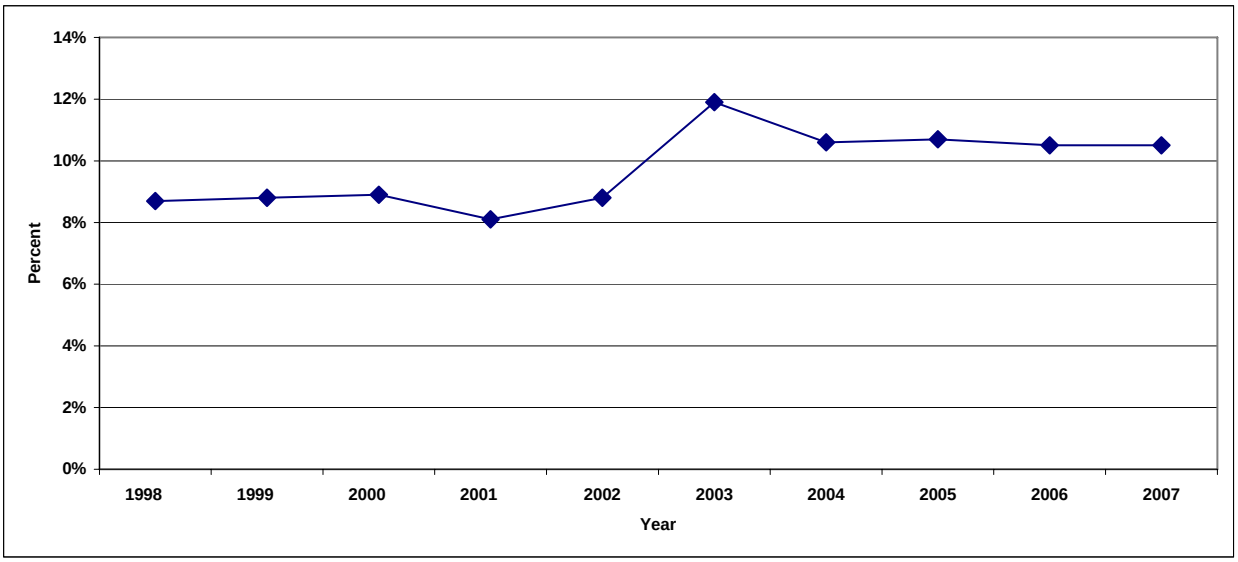
Insurance Coverage and Access to Health Care Results

In 2007, 10.5% of the survey respondents reported they had no health insurance. This is the same as that found in 2006. The rate of uninsured Iowans has been nearly unchanged for the past four years (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. Non-White or Hispanic respondents had the highest percentage of individuals without health care coverage (33.2%). 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 (2.7%).

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 (22.2%). Only 2.2% of retirees were without health insurance.

Figure 5.1: No Health Insurance Coverage Trend Iowa 1998 – 2007



People who were married were much more likely to have health care coverage than those who were not. Only 6.2% of married respondents were without coverage, while 19.1% 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, 7.8% 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 (2.2%) was for people with household incomes of $75,000 or more. The highest percentage (20.7%) was for people with household incomes between $15,000 and $25,000.

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 77.1% of respondents. Women, White non-Hispanics, older people, people with more education, and people with higher household incomes were more likely to report a regular provider. Respondents age 18 to 24 years were least likely to report one regular provider (59.5%), while those age 65 years old and older were most likely (85.9%).

When asked how long it had been since their last regular check up, 66.3% said less than one year. An additional 13.8% said one to two years. On the other end, 1.6% said they had never had a checkup. People who were female, older, and better educated were more likely to have a checkup in the past year. Respondents who were 65 years old or older were most likely to have a checkup (83.5%), while those from age 25 to 34 were least likely (51%).

Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2007

DEMOGRAPHIC GROUPS	No Health Insurance Coverage		Time Couldn't Afford Help		Have One Person As Health Provider		Had checkup in past year	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	10.5	(9.1-11.9)	7.8	(6.8-8.8)	77.1	(75.5-78.7)	66.3	(64.5-68.1)
SEX								
Male	12.0	(9.8-14.2)	6.9	(5.5-8.3)	71.6	(68.9-74.3)	56.9	(54.2-59.6)
Female	9.1	(7.5-10.7)	8.6	(7.4-9.8)	82.3	(80.5-84.1)	75.1	(73.1-77.1)
RACE/ETHNICITY								
Non-Hispanic White	8.6	(7.4-9.8)	6.8	(6-7.6)	78.5	(76.9-80.1)	66.3	(64.5-68.1)
Non-White or Hisp.	33.2	(25.7-40.6)	19.6	(13.7-25.5)	60.3	(52.8-67.9)	63.8	(56.3-71.2)
AGE								
18-24	29.1	(21.7-36.5)	9.4	(5.1-13.7)	59.5	(51.7-67.3)	60.7	(52.9-68.5)
25-34	13.7	(10.4-17)	11.4	(8.5-14.3)	68.8	(64.5-73.1)	51.0	(46.5-55.5)
35-44	9.4	(7.2-11.6)	9.0	(6.8-11.2)	78.6	(75.7-81.5)	58.4	(54.9-61.9)
45-54	7.4	(5.6-9.2)	8.6	(6.8-10.4)	81.1	(78.6-83.6)	66.0	(62.9-69.1)
55-64	8.5	(6.5-10.5)	6.0	(4.4-7.6)	83.9	(81.4-86.4)	76.3	(73.4-79.2)
65+	1.1	(0.5-1.7)	2.6	(1.6-3.6)	85.9	(83.9-87.9)	83.5	(81.3-85.7)
EDUCATION								
Less than H.S.	29.4	(22-36.8)	14.4	(9.5-19.3)	65.7	(58.3-73.1)	61.1	(53.7-68.5)
H.S. or G.E.D.	11.7	(9.5-13.9)	8.2	(6.6-9.8)	76.3	(73.6-79)	65.4	(62.7-68.1)
Some Post-H.S.	9.5	(7-12)	8.2	(6.4-10)	78.7	(75.8-81.6)	65.6	(62.3-68.9)
College Graduate	4.1	(2.7-5.5)	4.6	(3.2-6)	80.2	(77.7-82.7)	69.3	(66.6-72)
HOUSEHOLD INCOME								
Less than $15,000	24.9	(18.6-31.2)	16.5	(11.8-21.2)	65.4	(58.3-72.5)	63.3	(56.2-70.4)
$15,000- 24,999	20.5	(16.2-24.8)	20.7	(16.4-25)	76.9	(72.4-81.4)	65.6	(60.9-70.3)
$25,000- 34,999	13.4	(9.1-17.7)	11.0	(7.7-14.3)	73.6	(68.3-78.9)	60.6	(55.1-66.1)
$35,000- 49,999	10.5	(7-14)	5.9	(3.9-7.9)	75.8	(71.7-79.9)	62.3	(57.8-66.8)
$50,000- 74,999	4.6	(2.2-7)	5.1	(3.5-6.7)	79.9	(76.6-83.2)	68.0	(64.5-71.5)
$75,000+	2.7	(1.3-4.1)	2.2	(1.2-3.2)	82.7	(80-85.4)	67.3	(64-70.6)

Comparison with Other States

In the fifty states and territories, the percent of non-elderly people without health insurance ranged from 7.1% to 31.4%. Since the highest percent is from a territory and may represent an outlier, the second highest was 29.1%.Nine states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 12.8% of its non-elderly respondents reporting not having any insurance. The median for states and territories was 16.6%. These figures are nearly identical to those obtained for the previous three years for both Iowa and the nation.

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 87.2% of the non-elderly have coverage. This is far short of the goal.

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" is most often refers to as coronary heart disease, heart attack or heart failure. "Stroke" refers to a sudden impairment of brain function, sometimes termed "brain attack", which results from interruption of circulation to one or another part of the brain. Heart disease and stroke are mainly consequences of clogged arteries (atherosclerosis) and high blood pressure (hypertension).

Since 1900, CVD has been the No. 1 killer in the United States every year except 1918. Nearly 2,400 Americans die of CVD each day, an average of one death every 36 seconds. According to the CDC/NCHS, if all forms of major CVD were eliminated, life expectancy would rise by almost seven years.[4] Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all annual deaths.[10]

Deaths are only part of the picture. More than 79 million Americans currently live with a cardiovascular disease. For example, coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly 1 million Americans. More than 6 million hospitalizations each year are because of cardiovascular diseases.[10]

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. Fifteen to 30 per cent of stroke survivors are permanently disabled.[4] Stroke is a leading cause of serious, long-term disability in the United States.

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be $431.8 billion in 2007, including health care expenditures and lost productivity from death and disability.[10]

In Iowa deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 344.9 in 1991 to 239.4 in 2006. The rate of deaths from stroke has gone from 74.7 in 1991 to 57.4 in 2006. Deaths from cardiovascular diseases were 35.1% of all deaths in 2006 in Iowa. Diseases of the heart made up 74.6% and cerebrovascular disease 17.9% of the cardiovascular deaths.[30]

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, 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.[4]

Cardiovascular Diseases Results

In 2007, 4.7% of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction, 3.7% had been told they had coronary heart disease or angina, and 2.7% had been told they had a stroke. Although these percents may seem small, they represent around 90,000 Iowans with a heart attack or heart disease and 60,000 with a stroke. Eight percent of Iowans reported being told they had any of the three conditions.

Table 6.1 shows the distribution of these conditions by demographic groups. To get at all heart disease conditions, myocardial infarction and angina are combined when looking at the influence of various demographic factors.

Age is the variable with the most impact on having had these conditions. No one in our sample age 25 to 34 years had heart disease conditions, while 22.8% of those 75 years or older had them. Nobody age 18 to 24 reported having a stroke, while 10.3% of those age 75 and older did so. In the case of having any of the three conditions, only 0.3% of those age 25 to 34 years was included, while 28.5% of those age 75 years and older were. Lower education and lower income, also increase the prevalence of all conditions. Being male increased the prevalence of heart conditions, but not strokes. More males were represented in having any of the three conditions.

These results represent those who have survived these cardiovascular events. That may not match the actual prevalence of these conditions. Events ending in death on their first occurrence could not be considered here. Mortality data is required to complement the information from this survey.

Table 6.1: Prevalence Among Iowans of Heart Attack, Heart Disease, and Stroke, 2007

DEMOGRAPHIC GROUPS	Had any Heart Disease (MI or CHD))		Had Stroke		Had Any Cardio-vascular Disease	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.3	(5.7-7)	2.7	(2.3-3.1)	8.0	(7.2-8.7)
SEX						
Male	8.2	(7.1-9.4)	2.6	(2-3.2)	9.6	(8.3-10.8)
Female	4.5	(3.8-5.2)	2.8	(2.2-3.4)	6.4	(5.6-7.2)
RACE/ETHNICITY						
White/Non-Hisp.	6.4	(5.7-7.1)	2.8	(2.4-3.2)	8.1	(7.3-8.8)
Black/Non-Hisp.	7.0	(0.4-13.5)	1.9	(0-3.9)	8.2	(1.6-14.7)
Other/Non-Hisp.	6.0	(2.2-9.9)	0.9	(0-2.6)	6.0	(2.2-9.9)
Hispanic	4.5	(0.3-8.6)	2.2	(0-4.4)	6.2	(1.7-10.7)
AGE						
18-24	0.9	(0-1.9)	0.0	(0-0)	0.9	(0-1.9)
25-34	0.0	(0-0)	0.3	(0-0.7)	0.3	(0-0.7)
35-44	1.5	(0.4-2.6)	0.9	(0.1-1.7)	2.4	(1-3.8)
45-54	4.8	(3.5-6.2)	2.7	(1.7-3.7)	6.3	(4.8-7.9)
55-64	7.9	(6-9.8)	2.5	(1.5-3.5)	9.5	(7.4-11.6)
65-74	17.0	(14-20)	6.7	(4.7-8.7)	21.0	(17.8-24.2)
75+	22.8	(19.6-26.1)	10.3	(8-12.6)	28.5	(25-32)
EDUCATION						
Less Than H.S.	8.2	(5.5-11)	5.4	(3.4-7.4)	12.0	(8.7-15.2)
H.S. or G.E.D.	8.6	(7.4-9.9)	3.4	(2.6-4.2)	10.5	(9.1-11.9)
Some Post-H.S.	4.8	(3.6-5.9)	2.5	(1.7-3.3)	6.5	(5.1-7.8)
College Graduate	4.2	(3.2-5.3)	1.1	(0.5-1.7)	4.8	(3.7-5.9)
HOUSEHOLD INCOME						
Less than $15,000	11.6	(8.5-14.7)	6.6	(4.2-9)	14.6	(11.1-18)
$15,000- 24,999	12.7	(10-15.5)	5.5	(3.7-7.3)	16.1	(13-19.1)
$25,000- 34,999	8.7	(6.4-11)	4.7	(2.9-6.5)	11.7	(9-14.4)
$35,000- 49,999	5.7	(4.1-7.4)	1.4	(0.6-2.2)	6.3	(4.6-8)
$50,000- 74,999	3.2	(2.1-4.2)	1.4	(0.6-2.2)	4.2	(2.9-5.5)
$75,000+	3.4	(2.3-4.5)	0.7	(0.3-1.1)	0.9	(0.3-1.5)

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.[44]

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.[44]

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.[23]

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.[44]

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.[49]

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.[49]

Hypertension Awareness Results

In 2007, 26.8% of all respondents reported ever being told they had high blood pressure. This is a substantial increase from the 24.5% reported in 2005. This is the highest prevalence of high blood pressure that has ever been reported in this survey (see figure 7.1).

Figure 7.1: Percentage of Iowans Ever Told Blood Pressure is High by Year, 1998-2007

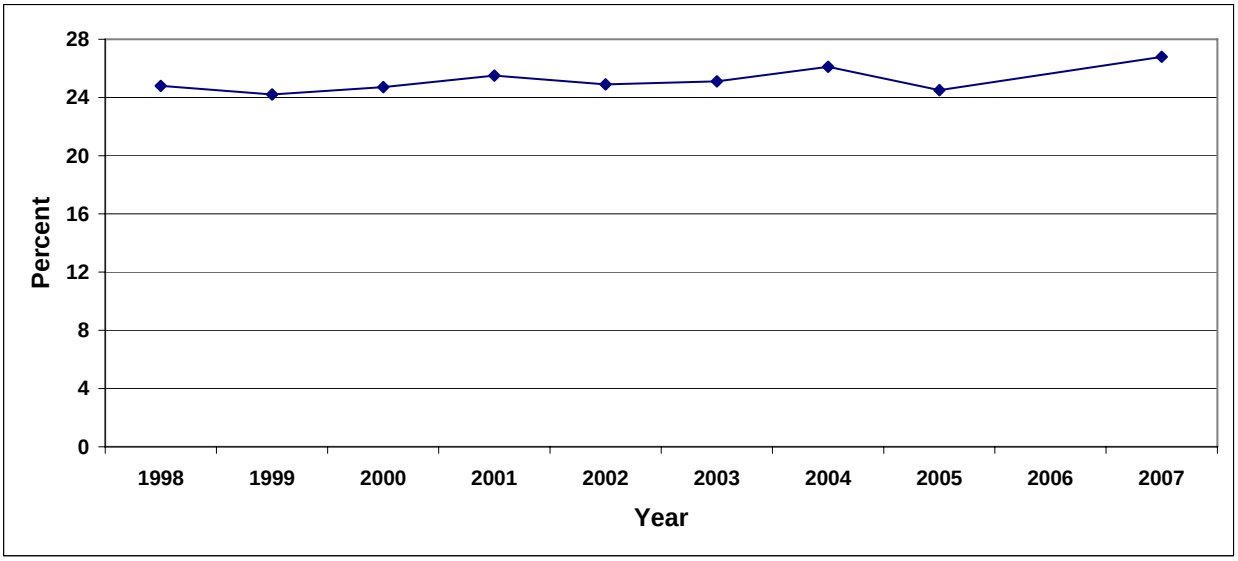


Figure 7.2: Iowans Ever Told Blood Pressure is High by Age, 2007

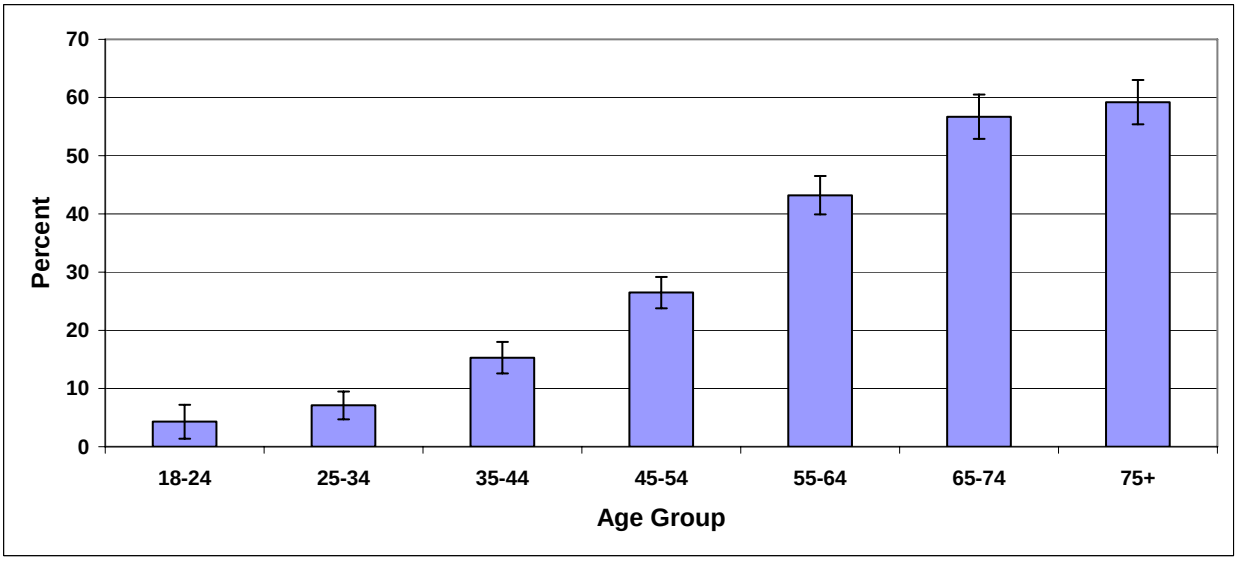


Table 7.1: Percentage of Iowans Told Blood Pressure Is High, 2007

DEMOGRAPHIC GROUPS	%	C.I. (95%)
TOTAL	26.8	(25.4-28.2)
SEX		
Male	27.8	(25.6-30)
Female	26.0	(24.4-27.6)
RACE/ETHNICITY		
Non-Hispanic White	27.3	(25.9-28.7)
Non-White or Hisp.	21.2	(15.7-26.7)
AGE		
18-24	4.3	(1.4-7.2)
25-34	7.1	(4.7-9.5)
35-44	15.3	(12.6-18)
45-54	26.5	(23.8-29.2)
55-64	43.2	(39.9-46.5)
65-74	56.7	(52.9-60.5)
75+	59.2	(55.4-63)
EDUCATION		
Less than H.S.	29.7	(24.4-35)
H.S. or G.E.D.	32.1	(29.7-34.5)
Some Post-H.S.	25.3	(22.8-27.8)
College Graduate	20.7	(18.5-22.9)
HOUSEHOLD INCOME		
Less than $15,000	39.2	(33.3-45.1)
$15,000- 24,999	35.2	(30.9-39.5)
$25,000- 34,999	31.4	(27.1-35.7)
$35,000- 49,999	25.0	(21.7-28.3)
$50,000- 74,999	23.6	(20.5-26.7)
$75,000	18.7	(16.3-21.1)

Age had the greatest impact on the percentage of respondents reporting high blood pressure. The highest percentage was ages 75 and older (59.2%), while the lowest was age 18 to 24 (4.3%) (see Figure 7.2). The prevalence of high blood pressure also increased with lower levels of education and household income. Non-White or Hispanics reported a low percentage of being told they had high blood pressure. More men reported being told they had high blood pressure than women. (see table 7.1)

Of those reporting high blood pressure, 81.1% reported taking medication for their condition. Like high blood pressure itself, this percentage increases steadily with age reaching a high of 96% for those 75 years old and over. More females with high blood pressure took blood pressure medicine than males (86.5% versus 75.8%). There was a small tendency for those with lower education and income to be more likely to use blood pressure medication, but it was not very pronounced.

Comparison with Other States

Among the states and territories prevalence of reported hypertension ranged from 19.7% to 33.8%. The median value was 27.5%. Iowa's prevalence of 26.8% was slightly better than the median. Both Iowa and the nation showed an increase in reported hypertension in 2007.

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 considerably less than what is currently the case in Iowa. The *Healthy Iowans 2010* goal is even stricter at 14%. The prevalence of high blood pressure is moving in the opposite direction from the 2010 goals.

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 is your risk for developing heart disease or having a heart attack.

Cholesterol is a fat-like substance in your blood. When there is too much cholesterol, 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.[46]

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 their cholesterol measured at least once every 5 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.[47]

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)--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 your LDL.[46]

Blood Cholesterol Awareness Results

In 2007, the percentage of Iowans reporting ever having their blood cholesterol checked was 76.5%. When asked whether they had their blood cholesterol checked by a health professional

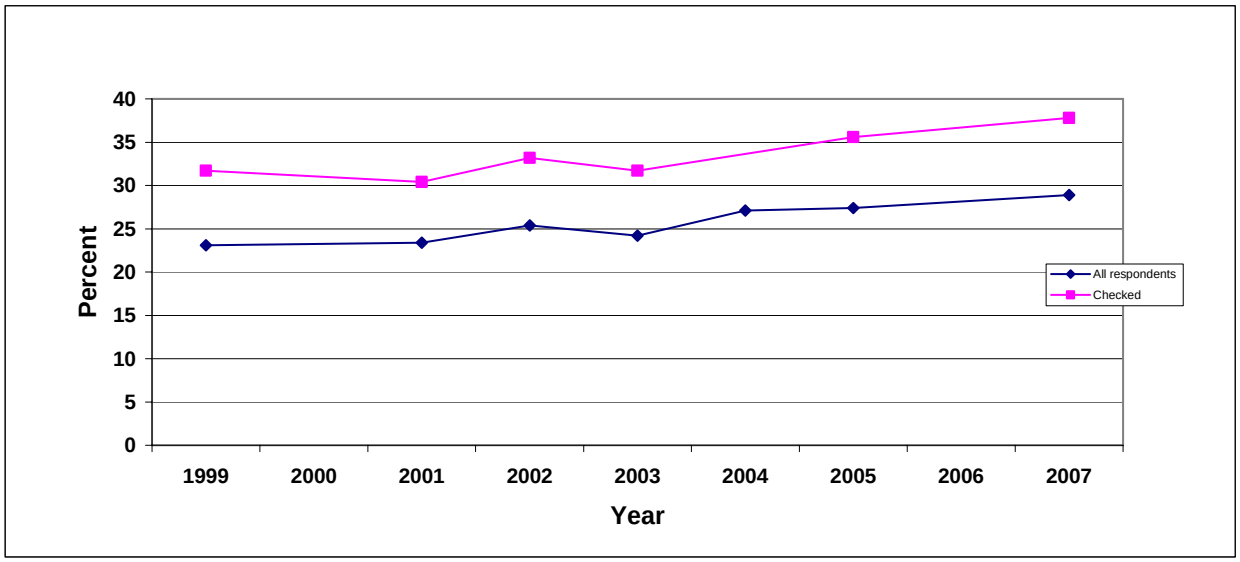
Table 8.1: Blood Cholesterol in Iowans, 2007

Demographic Groups	Had Blood Cholesterol Checked in Past Five Years		Ever Been Told Blood Cholesterol High	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	72.7	(70.9-74.5)	37.8	(36.2-39.4)
SEX				
Male	69.1	(66.4-71.8)	39.0	(36.5-41.5)
Female	76.2	(74-78.4)	36.8	(34.8-38.8)
RACE/ETHNICITY				
White/Non-Hisp.	74.6	(72.8-76.4)	38.5	(36.7-40.3)
Non-White or Hisp.	49.6	(42.1-57.1)	27.1	(20.3-34)
AGE				
18-24	29.5	(22.1-36.9)	7.0	(0.1-13.9)
25-34	52.5	(47.8-57.2)	14.2	(10.1-18.3)
35-44	71.1	(67.8-74.4)	26.8	(23.1-30.5)
45-54	84.6	(82.2-87)	39.2	(35.9-42.5)
55-64	90.9	(88.9-92.9)	50.5	(47-54)
65-74	93.7	(91.8-95.5)	58.1	(54.2-62.1)
75+	92.8	(90.4-95.1)	49.1	(45.2-53)
EDUCATION				
Less than H.S.	59.9	(52.3-67.5)	35.5	(28.8-42.2)
H.S. or G.E.D.	70.9	(68-73.8)	43.1	(40.4-45.8)
Some Post-H.S.	71.7	(68.4-75)	35.7	(32.6-38.8)
College Graduate	79.9	(77.2-82.6)	34.4	(31.7-37.1)
HOUSEHOLD INCOME				
Less than $15,000	65.1	(57.7-72.5)	42.6	(36.3-48.9)
$15,000- 24,999	65.1	(60-70.2)	43.9	(38.8-49)
$25,000- 34,999	64.6	(58.9-70.3)	42.8	(37.7-47.9)
$35,000- 49,999	69.3	(64.8-73.8)	38.7	(34.6-42.8)
$50,000- 74,999	80.1	(77-83.2)	35.6	(31.9-39.3)
$75,000+	80.9	(77.8-84)	32.3	(29.2-35.4)

during the past five years, 72.7% of respondents reported having it. Women, respondents in older age groups, people with more education and higher household income were more likely to report having a blood cholesterol test within the last five years. Hispanics and non-White races were less likely to have a cholesterol test in the past five years (see table 8.1).

Of the respondents who had their cholesterol tested, 37.8% 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 35.6% found in 2005. This is the largest percentage of high cholesterol ever reported in this survey. The long-term trend in high cholesterol shown in figure 8.1 has been steadily higher for the past several years. Also shown on Figure 8.1 is the prevalence based on the

Figure 8.1: Trend in Reporting High Cholesterol in Adult Iowans, 1999-2007



percentage out of the entire adult population. This was done to accommodate some years in which the questions about testing were not asked, so that the population could not be limited to those tested and told their cholesterol was high. Regardless of how it is determined, the overall trend has been an increase in the percent of Iowans told their cholesterol is high.

Age made a considerable difference in reporting high cholesterol with the 65 to 74 year old age group reporting over eight times greater prevalence of high cholesterol than the 18 to 24 year-olds. However, the relationship did not hold for the 75 year-old and older age group (see figure 8.2). Males and lower income people were somewhat more likely to report high cholesterol. While non-Whites or Hispanics were much less likely to report being told they had high cholesterol (see table 8.1).

Comparison with Other States

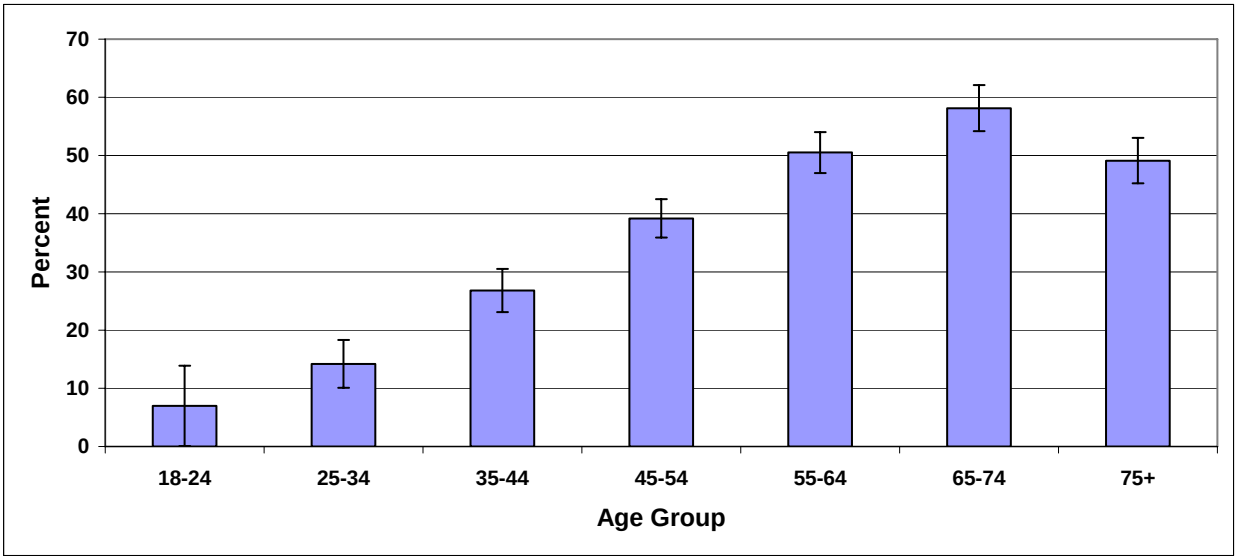
The percentage of people having their cholesterol checked within the past five years among all the states and territories ranged from 65.9% to 85%. Iowa's value of 72.7% was below the median of 74.8%. It appears that while Iowa remained nearly the same as in the previous year in having their cholesterol checked, the nation as a whole has improved somewhat.

In terms of those tested being told their cholesterol was high, the range was from 27.2% to 42.4%. Iowa's value of 37.8% was a little above the median of 37.5%.

Year 2010 Health Objectives for the Nation

Based on the national health objectives for the year 2010, 80% of adults should have their blood cholesterol checked within the past five years. In 2007, only 76.5% of Iowans age 18 and older have had their blood cholesterol checked at least once in their lifetime, and only 72.7% had their blood cholesterol checked within the past five years.

Figure 8.2: Tested Iowans Ever Told Their Cholesterol Was High by Age, 2007



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.[39,43,55] Despite its risks, a large proportion of people remain inactive.

Although the percentage of people who do not engage in regular physical activity remains high, many efforts are underway to try to increase the physical activity level of Iowans. Iowans Fit for Life, a program of the Iowa Department of Public Health, is activity working to increase the physical activity levels 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) Development of worksite wellness programs.
4) Creating a culture where physical activity is the easy choice..
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.

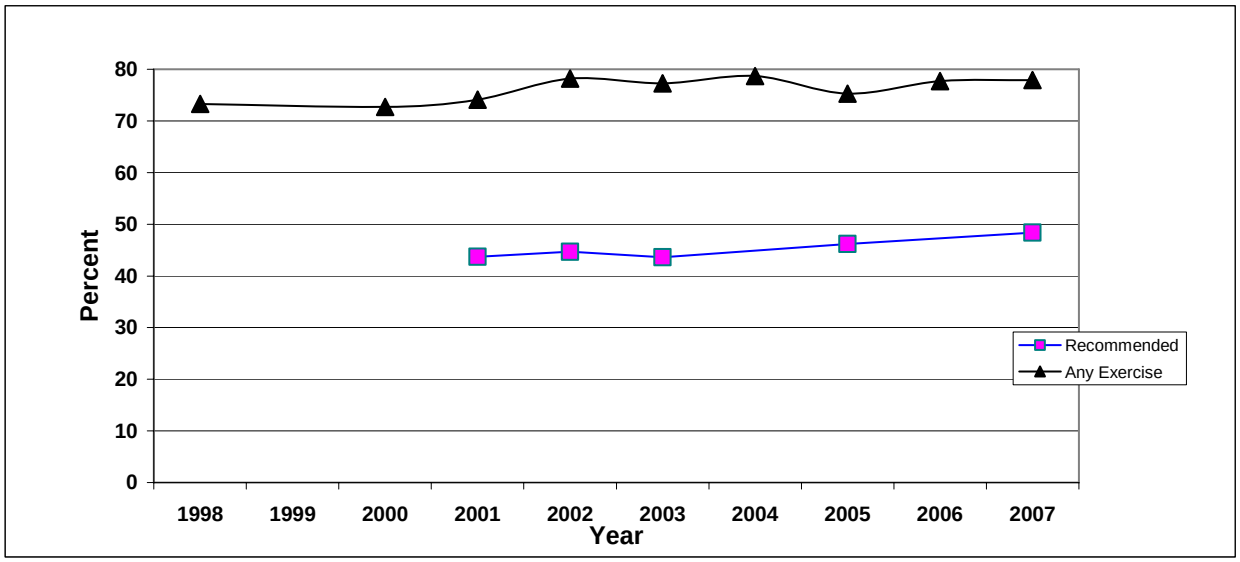
Exercise & Physical Activity Results

In 2007, 77.9% 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 about the same as the 77.7% found in 2006 (see figure 9.1).

A larger proportion of 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 percentage was higher for White non-Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for those from households earning less than $15,000 per year (57.6%), while the highest was for those with an annual household income of $75,000 or more (89.4%) (see table 9.1).

Physical activity may be classified as either moderate or vigorous. Vigorous activities cause large increases in breathing or heart rate while moderate activities cause small increases in breathing or heart rate. The recommended level of physical activity may be either regular moderate physical activity or regular vigorous physical activity. Regular and moderate physical activity is defined as moderate activity for 30 or more minutes per day for 5 or more days per week. Regular and vigorous physical activity is defined as vigorous activity for 20 or more minutes per day, 3 or more days per week.

Figure 9.1: Trend in Physical Activity in Iowa by Year



The percentage of respondents who met the recommended level of physical activity in 2007 was 48.4%. At the other end, 11.9% of respondents reported engaging in no physical activity at all.

The percentage of respondents reporting they had engaged in the recommended amount of physical activity was slightly higher for males than for females. In addition, physical activity decreased with age. A larger percentage of those who had a higher household income engaged in the recommended amount of physical activity. The lowest percent for all demographic groups considered was for those age 75 and over (31.5%), while the highest percent was for those age 18 to 24 years (65.1%) (see table 9.1).

Comparison with Other States

Values for the measure of not engaging in leisure time physical activity ranged from a low of 16.7% to a high of 31.8%. This excludes one region with such a greatly higher value that it can be considered unusually extreme. Iowa ranked slightly below the median on not engaging in leisure time physical activity. The median for the nation reported not engaging in any leisure activity was 23%, while Iowa reported 22.1%.

Year 2010 Health Objectives for Iowa and the Nation

The national target for objective 22.1, reducing the proportion of adults who engage in no leisure-time physical activity, is 20 percent.[55] Iowa's level of 22.1% is higher than this target.

The national targets for objective 22.2 and 22.3, to increase the proportion of adults engaging in regular moderate or regular vigorous physical activity, are both 30%. Iowa respondents report 48.4% regular moderate physical activity, but only 25% regular vigorous physical activity. Iowa is well above the target for moderate, but below the target for vigorous physical activity.

Table 9.1: Physical Activity in Iowans, 2007

Demographic Groups	Any Leisure Physical Exercise in Last Month		Recommended Level of Physical Activity	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	77.9	(76.5-79.3)	48.4	(46.6-50.2)
SEX				
Male	79.0	(76.8-81.2)	51.4	(48.7-54.1)
Female	76.8	(75-78.6)	45.7	(43.5-47.9)
RACE/ETHNICITY				
White/Non-Hisp.	78.3	(76.9-79.6)	48.5	(46.7-50.4)
Non-White or Hisp.	74.0	(67.3-80.8)	47.7	27.5-55.4
AGE				
18-24	83.1	(77-89.2)	65.1	(57.5-72.7)
25-34	84.0	(80.7-87.3)	53.2	(48.5-57.9)
35-44	82.4	(79.7-85.1)	47.3	(43.6-51)
45-54	79.6	(77.1-82.1)	49.0	(45.7-52.3)
55-64	76.6	(73.7-79.5)	42.6	(39.1-46.1)
65-74	70.5	(67-74)	41.7	(37.7-45.7)
75+	59.4	(55.6-63.1)	31.5	(27.4-35.6)
EDUCATION				
Less than H.S.	62.1	(55.6-68.6)	46.9	(39.1-54.7)
H.S. or G.E.D.	72.6	(70.2-75)	46.1	(43.2-49)
Some Post-H.S.	80.0	(77.3-82.7)	50.6	(47.1-54.1)
College Graduate	87.5	(85.7-89.3)	49.9	(47-52.8)
HOUSEHOLD INCOME				
Less than $15,000	57.6	(51.1-64.1)	34.3	(27.2-41.4)
$15,000- 24,999	68.7	(64.6-72.8)	44.4	(39.3-49.5)
$25,000- 34,999	75.2	(71.1-79.3)	47.2	(41.7-52.7)
$35,000- 49,999	78.6	(75.1-82.1)	50.2	(45.7-54.7)
$50,000- 74,999	83.1	(80.2-86)	48.3	(44.4-52.2)
$75,000+	89.4	(87.4-91.4)	56.4	(53.1-59.7)

Healthy Iowans 2010 had a goal that the BRFSS should be able to measure the prevalence of attaining the recommended level of moderate physical activity. This ability has existed for the past few years, although only in odd numbered years.

10. DIET AND NUTRITION

Background

Eating a diet high in fruits and vegetables as part of an overall healthful diet can help lower chronic disease risk and aid in weight management. Fruits and vegetables contain essential vitamins, mineral, fiber, and other bioactive compounds; a diet high in these foods is associated with lower risk for numerous chronic diseases, including certain cancers and cardiovascular disease.[7,62]

Fruits and non-starchy vegetables are generally low energy-dense foods and may have a role in preventing weight gain that could lead to obesity – a risk factor in some cancers. Evidence that vegetables and fruits protect against some cancers is supported by evidence on foods containing various micronutrients, found especially in vegetables, fruits, and pulses (legumes), and nuts and seeds, as well as in cereals, roots, tubers, and other plant foods. There is evidence that non-starchy vegetables and also fruits probably protect against cancers of the mouth, larynx, pharynx, esophagus, and stomach, and that fruits also probably protect against lung cancer; and that allium vegetables, and garlic specifically, probably protect against stomach cancer.[63]

Increased consumption of fruits and vegetables by individuals over age 2 is a practical and important means for optimizing nutrition to reduce disease risk and maximize good health. The most recent *Dietary Guidelines for Americans (2005)* recommends 3 ½ to 6 ½ cups of fruits and vegetables each day for adults, based on age, sex and physical activity.[60]

Diet and Nutrition Results

The BRFSS asks a series of questions about how often the respondent eats various fruit or vegetables. From the answers to these questions an index is computed showing the total average consumption per day of fruit and vegetables.

The percentage of Iowans who eat five or more servings of fruits and vegetables per day was 19.9% in 2007. This is a little higher than the 19.5%found in 2005. The trend in prevalence of five or more portions a day of fruit and vegetables has been upward for the past five years, but was rather erratic prior to that (see figure 10.1).

Table 10.1 shows that significantly more females ate five or more servings of fruits and vegetables per day than males. Also, older Iowans were more likely to report meeting the five-a-day standard than younger Iowans. This was also true for those with a college education. Respondents who were non-White or Hispanic were also more likely to meet the fruit and vegetable recommendation. The demographic group most likely to eat five or more fruit and vegetable portions a day was those 75 years old or older (31.4%), while those least likely were age 18 to 24 years old (14.3%).

Table 10.1:
Iowans Eating 5 or More Portions of Fruits & Vegetables per Day, 2007

Demographic Groups	%	C.I. (95%)
TOTAL	19.9	(18.5-21.3)
GENDER		
Male	14.6	(12.6-16.6)
Female	24.8	(23-26.6)
RACE/ETHNICITY		
White/Non-Hisp.	19.5	(18.1-20.9)
Non-White or Hisp.	23.6	(17-30.1)
AGE		
18 - 24	14.3	(8.8-19.8)
25 - 34	16.3	(13-19.6)
35 - 44	17.6	(14.9-20.3)
45 - 54	18.9	(16.4-21.4)
55 - 64	22.3	(19.4-25.2)
65-74	24.4	(21.1-27.7)
75+	31.4	(27.8-35)
EDUCATION		
Less than H.S.	21.3	(15.4-27.2)
H.S. or G.E.D.	15.3	(13.5-17.1)
Some Post-H.S.	18.3	(15.9-20.7)
College Graduate	26.9	(24.4-29.4)
HOUSEHOLD INCOME		
Less than $15,000	19.6	(14.5-24.7)
$15,000- 24,999	19.5	(15.8-23.2)
$25,000- 34,999	17.0	(13.5-20.5)
$35,000- 49,999	18.6	(15.5-21.7)
$50,000- 74,999	19.5	(16.8-22.2)
$75,000+	22.4	(19.7-25.1)

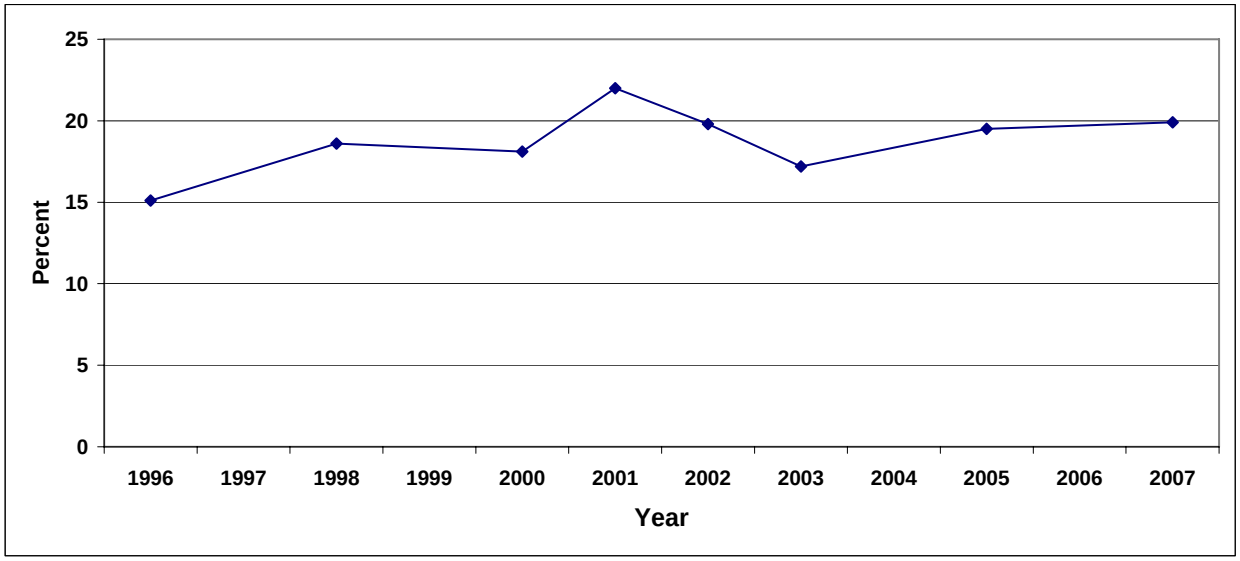
Comparison with Other States

Consumption of five or more servings of fruit or vegetables per day in the states and territories ranged from a low of 13.7% to a high of 32.5%. Iowa's level of 19.9% is below the median of 24.3%. Although both the nation and Iowa have increased the percentage of their population meeting the recommended level of fruit and vegetable consumption since 2005, Iowa's relative standing is higher than it was. Iowa has moved from fifth lowest to eleventh lowest in percent meeting the recommendation for fruit and vegetable consumption.

Year 2010 Health Objectives for Iowa and the Nation

According to the national health objectives for the year 2010, 75% of people over two years old need to consume two helpings of fruit daily and 50% need to consume three helpings of vegetables daily.[53] The Healthy Iowans 2010 goal was simpler at 50% of adults eating five helpings a day of fruit or vegetables. The percentage of adult Iowans consuming five or more helpings of fruits or vegetables daily is far below any of these goals at only 19.9%.

Figure 10.1: Trend for Adequate Fruit & Vegetable Consumption in Iowa, 1998-2007



11. 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 heart disease, cancer, and stroke, which are the first, second and third leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis.[59] Obesity has been increasing so rapidly that it may be regarded as an epidemic.[25]

Obesity is already a significant factor in rising health care costs. Increase in its prevalence is driving these costs even higher. Obesity costs the United States $117 billion each year.[29] Iowa's direct costs attributable to obesity were estimated from data from the late 1990s to be $783 million, of which $198 million is paid by Medicaid and $165 million, by Medicare.[24]

The origin of overweight involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits. 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.[48]

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.[48]

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 determined from self-reported weight and height. 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. This self report method is likely to result in an underestimation of the actual extent of obesity. However, comparisons among demographic groups, years, and geographic regions (states) are likely to be valid. Furthermore, this is the only measure of overweight and obesity available on the state level.

Overweight & Obesity Results

The BRFSS data show that in 2007 37% of Iowans are overweight and 27.7% are obese, based on BMI. The combined percentage of individuals who are overweight or obese is 64.7%. Although the percent overweight is about the same as in 2006, the percent obese and the percent of overweight and obese combined are much higher. In 2006, 63% reported being either overweight or obese. This continues a long trend of increasing overweight and obesity (see figure 11.1).

The self-reported weights show many more males than females are overweight and obese. Overweight and obesity increase with age until late middle age after which a decline is seen.

Figure 11.1: Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 1998 - 2007

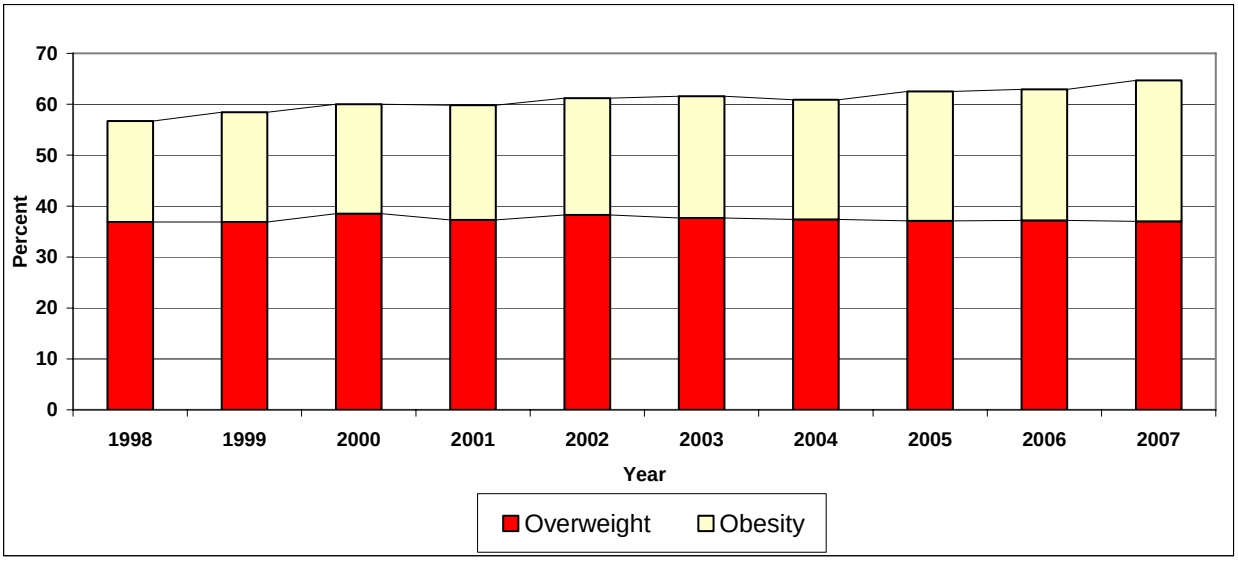
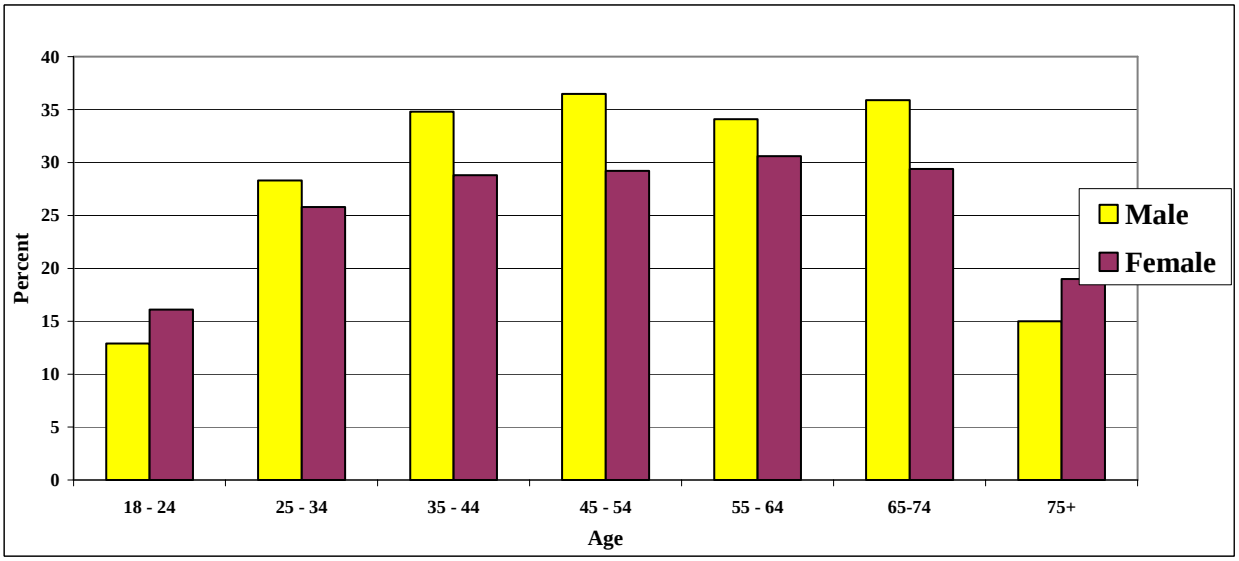


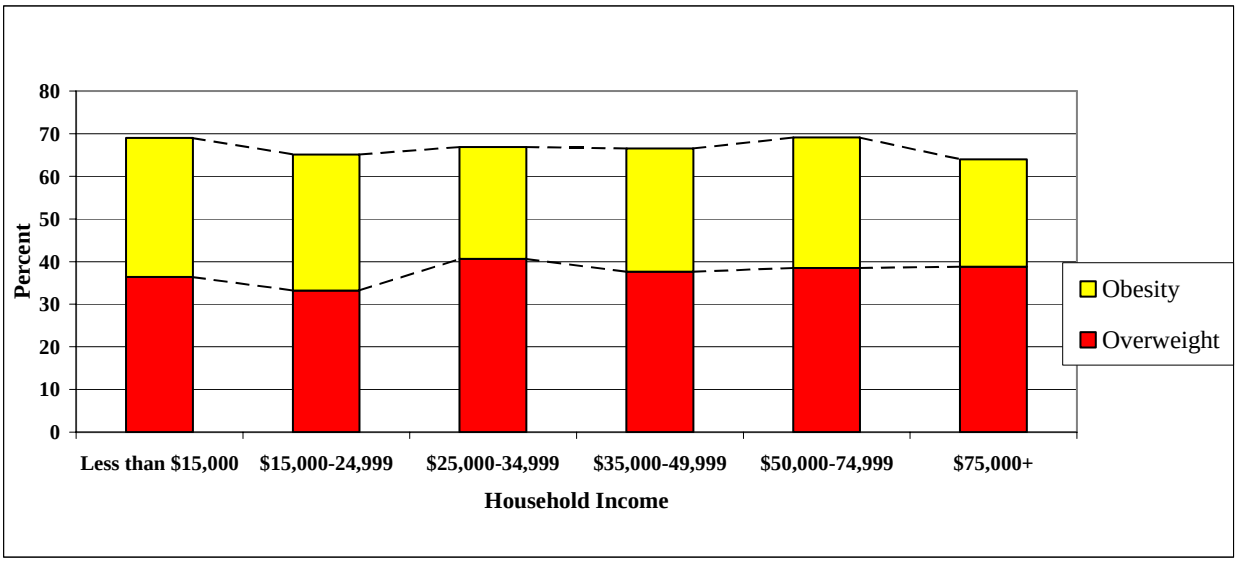
Figure 11.2: Obesity by Age and Sex, Iowa 2007



Males are not more obese than females at the extreme age groups. There is really no difference between the sexes in the 18 to 34 year old age group. Obesity shows a very sharp decrease for both sexes in the 75 year old and over age groups. This decline is even more pronounced for men (see figure 11.2). There is a much stronger sex difference for overweight than for obesity. More men are overweight than women at all ages except 18 to 24 years old.

The effects of income are different for overweight and obesity. The percentage overweight tends to increase a little with increasing income. On the other hand, obesity tends to decrease with

Figure 11.3: Overweight and Obesity by Income, Iowa 2007



higher income levels. These effects somewhat cancel each other when overweight and obesity are combined (see table 11.1 and figure 11.3).

This tendency for overweight and obesity to be oppositely related to demographic variables also is shown with race/ethnicity and education. In terms of race and ethnicity, White non-Hispanics have a higher rate of combined overweight and obesity than Non-White or Hispanics, but non-White or Hispanics have more obesity (see table 11.1). People with less than a high school education have the lowest rate of overweight, but college graduates have the lowest rate of obesity.

The demographic group with the highest prevalence of people over their healthy weight (combined overweight and obesity) is people age 55 to 64 years with 73.6%. The group with the lowest prevalence over their healthy weight is those 18 to 24 years old (39.8%).

Comparison with Other States

Iowa's figure of 27.7% obese in 2007 was higher than the median of 26.3%. Likewise, Iowa's figure of 64.7% either overweight or obese was also higher than the median of 63%. The range of prevalence among the states and territories was from a low of 19.3% to a high of 32.6% for obesity or a low of 55.3% to a high of 69.1% for overweight or obesity combined. The prevalence of being over a healthy weight (either overweight or obese), and particularly obesity, increased from 2006 in both Iowa and the nation.

Table 11.1: Overweight and Obese Iowans Based on BMI, 2007

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	37.0	(35.4-38.6)	27.7	(26.1-29.3)	64.7	(61.2-64.8)
SEX						
Male	42.4	(39.9-44.9)	29.5	(27.1-31.9)	71.9	(69.2-74.6)
Female	31.6	(29.6-33.6)	25.9	(23.9-27.9)	57.4	(55.2-59.6)
RACE/ETHNICITY						
White/non-Hisp.	37.3	(35.5-39.1)	27.5	(25.9-29.1)	64.9	(63.1-66.7)
Non-White or Hisp.	34.0	(26.9-41)	29.8	(23.1-36.6)	63.8	(56-71.6)
AGE GROUP						
18 - 24	25.4	(18.5-32.3)	14.4	(9.1-19.7)	39.8	(32-47.6)
25 - 34	35.4	(30.9-39.9)	27.1	(22.8-31.4)	62.5	(58-67)
35 - 44	36.1	(32.6-39.6)	32.0	(28.5-35.5)	68.1	(64.8-71.4)
45 - 54	40.6	(37.3-43.9)	33.0	(29.9-36.1)	73.5	(70.8-76.2)
55 - 64	41.2	(37.7-44.7)	32.4	(29.1-35.7)	73.6	(70.5-76.7)
65-74	39.3	(35.5-43.2)	32.5	(28.8-36.2)	71.8	(68.3-75.3)
75+	42.1	(38.3-46)	17.4	(14.5-20.3)	59.5	(55.7-63.3)
EDUCATION						
Less than H.S.	31.6	(25.5-37.7)	28.2	19.3-28.6	59.8	(51.8-67.8)
H.S. or G.E.D.	38.7	(36-41.4)	28.7	24.2-28.9	67.4	(64.5-70.3)
Some Post-H.S.	36.6	(33.3-39.9)	29.1	21.8-26.9	65.8	(62.5-69.1)
College Graduate	37.0	(34.1-39.9)	24.7	16.6-21.4	61.7	(58.8-64.6)
HOUSEHOLD INCOME						
Less than $15,000	36.4	(30.1-42.7)	32.6	23.5-33.0	69.0	(62.7-75.3)
$15,000- 24,999	33.2	(28.5-37.9)	31.9	21.6-28.9	65.1	(60-70.2)
$25,000- 34,999	40.6	(35.3-45.9)	26.3	21.5-28.7	66.9	(61.8-72)
$35,000- 49,999	37.6	(33.5-41.7)	28.9	22.8-29.3	66.5	(62-71)
$50,000- 74,999	38.5	(34.8-42.2)	30.6	21.0-27.8	69.1	(65.4-72.8)
$75,000+	38.8	(35.5-42.1)	25.2	16.2-22.0	64.0	(60.7-67.3)

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. In Iowa, more than 60% of the population is above healthy weight. The *Healthy People 2010* target for obesity is 15%. Iowa has a prevalence that is almost double that at 28.4% for those over age 20. The *Healthy Iowans 2010* goals for overweight and obesity are to halt the increasing prevalence. . While there has been no increase in recent years for percent overweight. This goal has not been accomplished for obesity.

12. DIABETES

Background

Diabetes rates in the United States are approaching epidemic proportions. Almost 16 million people live with the burden of diabetes daily, and another 5.2 million may have the disease and do not know it. In 2001–2004, 11% of persons 40 to 59 years of age and more than one-fifth (23%) of adults 60 years and over had diabetes, including those with diabetes previously diagnosed by a physician and those with undiagnosed diabetes determined by results of a fasting blood sugar test.[43] From 1980 through 2005, the crude prevalence of diagnosed diabetes increased 120%.[20]

Skyrocketing costs accompany this epidemic with an estimated total annual cost (direct and indirect) in 2007 of $174 billion. This includes direct medical costs of 116 billion and indirect costs resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality of another $58 billion. This is an increase of $42 billion since 2002. This 32% increase means the dollar amount has risen over $8 billion more each year.[3]

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).

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.

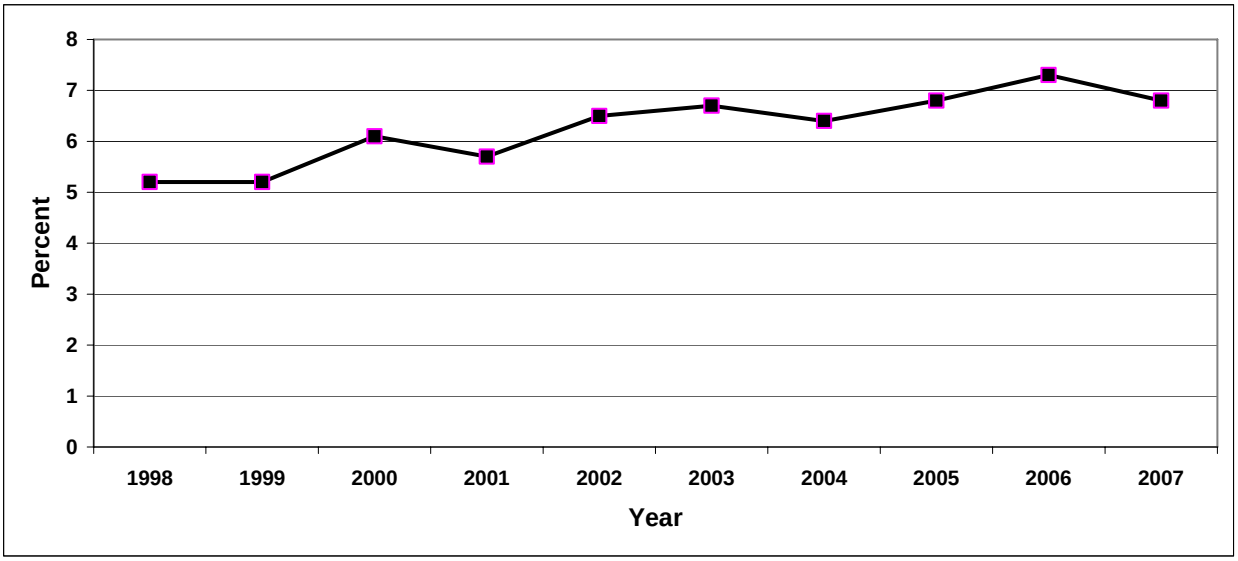
The Diabetes Prevention and Control Program at the Iowa Department of Public Health acts as a resource for health care professionals regarding the latest guidelines for diabetes care, coordinates a statewide diabetes network, and collaborates with local community projects to develop initiatives on public 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 2007, 6.8% of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is lower than the 7.3% found in 2006 and is the same as that found in 2005 (see figure 12.1). Although this could be a random fluctuation, it offers hope that the increase in diabetes is ending.

Table 12.1 shows that the rate of diabetes is much higher when respondents are older, lower in education, and have a lower household income. It is lower in the other racial minority groups considered and Hispanics. The demographic group with the highest percentage of diagnosed

Figure 12.1: Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year, 1998-2007



diabetics is people age 65 to 74 years (17%), while the group with the lowest percentage is people age 18 to 24 years (0.4%).

Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (41%). The age group in which the least reported being first diagnosed was less than age 16 years (1%).

Of those ever told by a physician that they have diabetes, 26.7% reported currently taking insulin. At the same time, 73% 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 (26.9%), while 8.7% 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 64.6% checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 7.4% reported never testing their blood sugar. Around 87% 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 3.8% reported not having had the A1C test. Another 9.2% reported they had never

Table 12.1: Iowans Ever Been Told They Had Diabetes, 2007

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	6.8	(6.2-7.4)
SEX		
Male	6.8	(5.8-7.8)
Female	6.7	(5.9-7.5)
RACE/ETHNICITY		
White/Non-Hisp.	6.8	(6-7.6)
Black/Non-Hisp.	6.8	(1.5-12.1)
Other/Non-Hisp.	5.0	(1.2-8.8)
Hispanic	6.3	(1.6-11)
AGE GROUP		
18-24	0.4	(0-1.2)
25-34	0.9	(0.1-1.7)
35-44	3.5	(2.1-4.9)
45-54	5.6	(4.2-7)
55-64	12.1	(9.9-14.3)
65-74	17.0	(14.1-19.9)
75+	15.6	(12.8-18.3)
EDUCATION		
Less than H.S.	9.1	(6-12.2)
H.S. or G.E.D.	7.9	(6.7-9.1)
Some Post-H.S.	6.6	(5.2-8)
College Graduate	4.8	(3.8-5.8)
HOUSEHOLDINCOME		
Less than $15,000	11.1	(8.2-14)
$15,000- 24,999	13.6	(10.9-16.3)
$25,000- 34,999	7.1	(4.9-9.3)
$35,000- 49,999	4.7	(3.3-6.1)
$50,000- 74,999	5.0	(3.6-6.4)
$75,000+	4.2	(3-5.4)

heard of such a test. It is recommended that this test be done at least twice a year and at least three months apart.

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, 65.7% of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 10.7% said they never checked them. Around 74.2% 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 73.4% reported within the last year, while 2.3% 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 60.4% of those with diabetes in 2007 reported having taken a class on how to manage it.

Comparison with Other States

The median prevalence of diagnosed diabetes for the states and territories was 8.1% in 2007. Prevalence ranged from 5.3% to 12.5%. The figure for Iowa was well below the median at 6.8%. There were only eight states with a lower prevalence of diabetes than Iowa in 2007. The prevalence of diabetes continues to rise nationwide, but this trend has broken in Iowa.

Year 2010 Health Objectives for Iowa

The *Healthy Iowans 2010* objective set for prevalence of diabetes was for an increase of no more than 0.2% per year. This would make the desired prevalence in 2007 no higher than 7.1%. Iowa is currently at 6.8% which is below the maximum goal. Healthy Iowans 2010 also had objective 3.3.2 concerning goals for the management of diabetes. Of all people with diabetes 80% should receive annual dilated eye exams. The figure obtained was 73.4%. Of all people with diabetes 75% should receive at least an annual foot exam from a health professional. The figure obtained was 74.2%. Of all people with diabetes 95% should receive a glycosylated hemoglobin test at least annually. The figure was only 87%. More than five percent reported having not even heard of the test. None of these three diabetes management objectives were met, although the annual foot exam was close.

13. ASTHMA

Background

Asthma is a chronic, inflammatory disease of the lungs in which the airways become blocked or narrowed causing breathing difficulty. It is characterized by recurrent wheezing, breathlessness, coughing, and chest tightness.[6]

This chronic disease affects 20 million Americans of all ages.1 Asthma is the most common chronic disease of childhood. At least five million children in the U.S. suffer from asthma. Prevalence among adults and children has increased sharply since 1980. 2, 3 More than 200,000 Iowans now have asthma.5

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.[45]

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 and indirect costs of asthma, including inpatient and outpatient care and medications, and socio-economic costs are estimated to exceed $12 billion each year.[6,30] Based on national data, it is estimated about 140,000 days of school are missed each year due to asthma by Iowa children,[21] and half of all children and a quarter of all adults with asthma miss at least one day of school or work each year.[52]

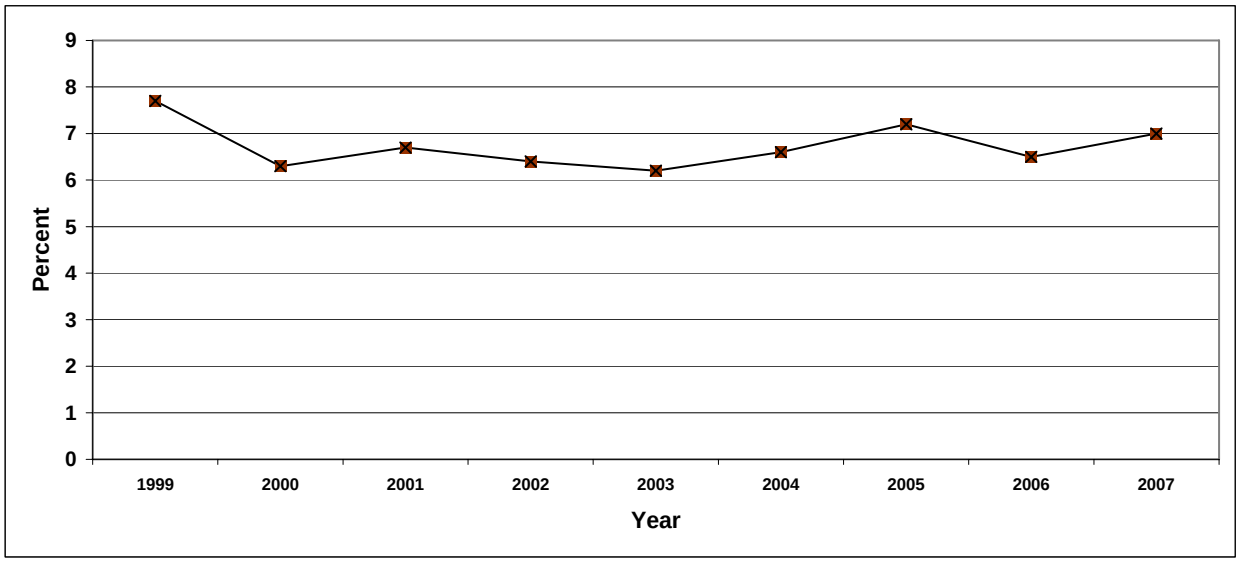
Asthma Results

In 2007, 10.2% of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 7% currently had asthma, and 2.9% formerly had asthma.[*] The percentage of Iowa adults with either lifetime or current asthma is up from 2006. In that year the percent of current asthma was 6.5%. The figure for 2007 was quite similar to that for 2005. (see figure 13.1).

In Iowa, significantly more women currently had asthma than did men (8.9% vs. 5%). People with a college education had a lower rate of current asthma, while Hispanics and members of multiple or other race groups had a higher rate. Household income seemed to be the most powerful factor determining asthma prevalence. The group with the highest percentage currently

[*] For some who had ever had asthma, their current status could not be determined.

Figure 13.1: Current Asthma in Iowa by Year, 1999 - 2007



having asthma was found among people with annual household incomes less than $15,000 (12.5%). The lowest percentage of current asthma was seen in people with household incomes between $50,000 and $75,000 per year (4.1%) (see table 13.1).

Even though an adult is interviewed in the BRFSS survey, two questions about asthma are asked for a randomly determined child in the household. It was reported that 8.4% of the children had ever been told they had asthma and that 5% of all children still have asthma. This is a decrease from the figures for 2006 when 9.1% had ever been told they had asthma and 6.5% still had it. Contrary to the situation for adults, about the same percent of boys were reported to currently have asthma as girls (5.1% vs. 4.8%).

Starting in 2006 the BRFSS collected a considerable amount of information from the people who reported they or their children had ever had asthma in a special callback survey. Most of the data from that survey is not included in this report, but will be presented in a report of its own. From the 2006 callback survey, however, it was found that adults with asthma having asthma-related emergency or urgent care visits far surpassed the Healthy Iowans 2010 goal. While the goal was to have 12.2% of people with asthma have urgent or emergency care visits, Iowa only had 4.6% needing such visits.

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

Comparison with Other States

In 2007 only six states and territories had a lower prevalence of current asthma than Iowa. While Iowa reported 7% of the entire adult population currently suffering from asthma, the median for the nation was 8.3%. Prevalence ranged from a low of 5.4% to a high of 10.3%. Whether the

ranking is a matter of a real lack of asthma or a matter of differential diagnosis, Iowa appears to be if good standing in the battle against asthma.

Table 13.1: Iowans Currently and Formerly Having Asthma, 2007

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	7.0	(6.2-7.8)	2.9	(2.3-3.5)
SEX				
Male	5.0	(3.8-6.2)	2.8	(1.8-3.8)
Female	8.9	(7.5-10.3)	3.0	(2.2-3.8)
RACE/ETHNICITY				
Non-Hispanic White	6.9	(5.9-7.9)	2.8	(2.2-3.4)
Non-Hispanic Black	5.3	(1.2-9.4)	1.0	(0-2.4)
Non-Hispanic Other	10.1	(2.4-17.9)	2.9	(0-5.8)
Hispanic	7.4	(1.1-13.7)	4.9	(0-10.2)
AGE				
18-24	9.4	(4.9-13.9)	4.9	(1.6-8.2)
25-34	7.0	(4.6-9.4)	4.2	(2.4-6)
35-44	6.2	(4.6-7.8)	2.5	(1.3-3.7)
45-54	5.8	(4.4-7.2)	2.6	(1.6-3.6)
55-64	7.9	(6.1-9.7)	1.6	(0.8-2.4)
65-74	7.0	(5.1-8.9)	3.0	(1.7-4.4)
75+	6.1	(4.3-7.9)	1.2	(0.3-2)
EDUCATION				
Less than H.S.	7.0	(4.1-9.9)	2.0	(0.6-3.4)
H.S. or G.E.D.	7.8	(6.2-9.4)	2.9	(1.7-4.1)
Some Post-H.S.	7.8	(5.8-9.8)	2.7	(1.7-3.7)
College Graduate	4.9	(3.7-6.1)	3.4	(2.2-4.6)
HOUSEHOLD INCOME				
Less than $15,000	12.5	(8.4-16.6)	4.3	(1.2-7.4)
$15,000- 24,999	8.9	(6.2-11.6)	4.5	(2-7)
$25,000- 34,999	7.7	(5.2-10.2)	4.4	(1.7-7.1)
$35,000- 49,999	6.4	(4.2-8.6)	2.0	(1-3)
$50,000- 74,999	4.1	(2.7-5.5)	2.9	(1.7-4.1)
$75,000+	6.1	(4.1-8.1)	2.1	(1.3-2.9)

14. 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.[11,58] 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.[11,58]

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.[58]

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. According to the surgeon general there is no safe level of exposure to secondhand smoke.[57]

Public health efforts to reduce the prevalence of tobacco use began after the health risks were announced in the first surgeon general's report on tobacco in 1964. Smoking prevalence declined from 42.4% in 1965 to 24.7% in 1997.[11] After a leveling off in the 1990s, these rates have recently begun to further decline.

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.[32]

In March of 2007, the Iowa state legislature passed a one dollar increase in the tax on a pack of cigarettes. Although the number of interviews conducted per month in this survey were too small to establish that this had any immediate effect on the number of smokers, evidence from other sources suggests that it will in the long run further reduce the number of smokers by inducing people to try to quit and by making it less likely that new people will start.

Tobacco Use Results

Current smoking was defined as smoking at least 100 cigarettes in a lifetime and smoking everyday or some days during the past 30 days. Of all respondents surveyed in 2007, 19.8% reported being a current smoker. This was a decrease from the 21.4% found in 2006 and is the lowest prevalence ever reported in this survey (see Figure 14.1).

Figure 14.1: Trend in Percentage of Current Smokers in Iowa, 1998-2007

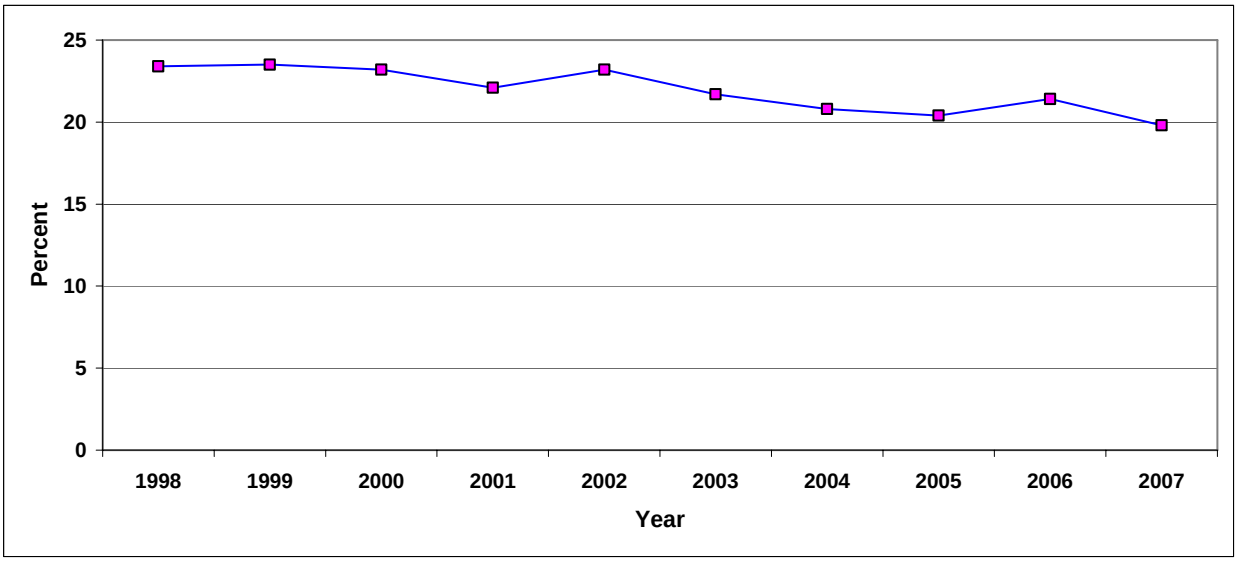


Figure 14.2: Percentage of Current and Former Smokers by Age, 2007

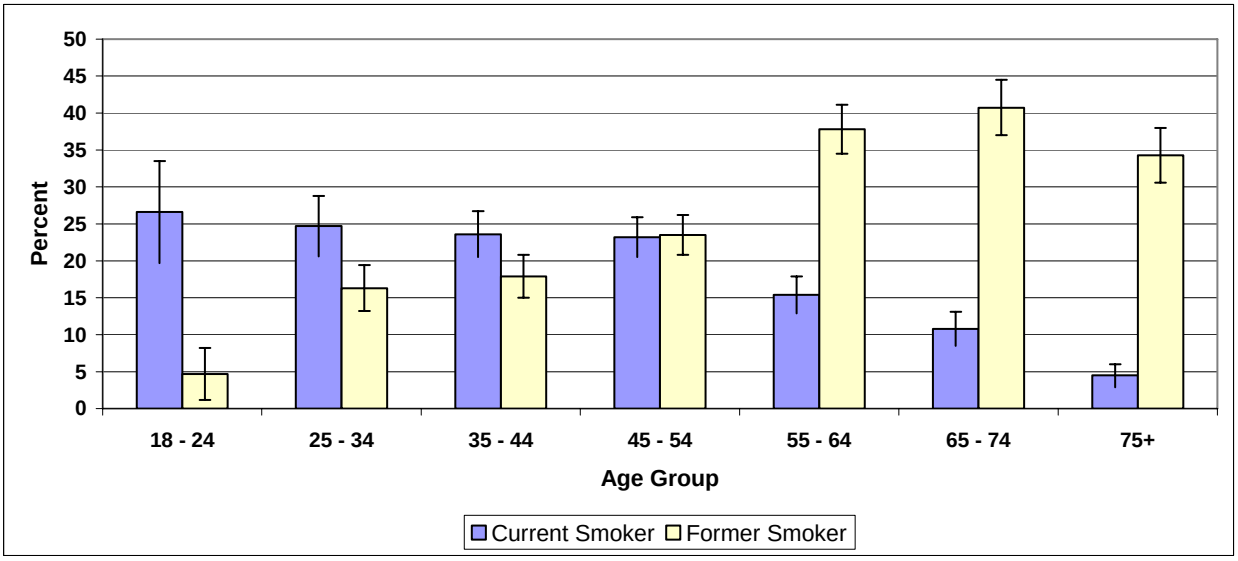


Table 14.1: Percentage of Current and Former Smokers in Iowa, 2007

DEMOGRAPHIC	Current Smoker		Former Smoker	
GROUPS	%	C.I. (95%)	%	C.I. (95%)
TOTAL	19.8	(18.4-21.2)	23.5	(22.1-24.9)
SEX				
Male	21.3	(18.9-23.7)	27.5	(25.3-29.7)
Female	18.4	(16.6-20.2)	19.7	(18.1-21.3)
RACE/ETHNICITY				
White/Non-Hisp.	19.5	(18.1-20.9)	24.2	(22.8-25.6)
Non-White or Hisp.	24.9	(18.3-31.5)	15.3	(11-19.5)
AGE				
18-24	26.6	(19.7-33.5)	4.7	(1.2-8.2)
25-34	24.7	(20.6-28.8)	16.3	(13.2-19.4)
35-44	23.6	(20.5-26.7)	17.9	(15-20.8)
45-54	23.2	(20.5-25.9)	23.5	(20.8-26.2)
55-64	15.4	(12.9-17.9)	37.8	(34.5-41.1)
65-74	10.8	(8.5-13.1)	40.7	(37-44.5)
75+	4.5	(2.9-6)	34.3	(30.6-38)
EDUCATION				
Less than H.S.	33.6	(26.2-41)	21.3	(16.8-25.8)
H.S. or G.E.D.	23.7	(21.2-26.2)	26.4	(24-28.8)
Some Post-H.S.	21.1	(18.4-23.8)	24.3	(21.8-26.8)
College Graduate	9.4	(7.6-11.2)	19.6	(17.4-21.8)
HOUSEHOLD INCOME				
Less than $15,000	31.8	(25.1-38.5)	21.8	(17.3-26.3)
$15,000-24,999	25.7	(21.2-30.2)	26.6	(22.9-30.3)
$25,000-34,999	25.7	(21.2-30.2)	24.2	(20.1-28.3)
$35,000-49,999	20.9	(17-24.8)	24.2	(20.9-27.5)
$50,000-74,999	18.4	(15.3-21.5)	26.4	(23.1-29.7)
$75,000+	14.7	(12-17.4)	20.7	(18.2-23.2)

The proportion of current smokers was higher for males than for females. Smoking generally declined with increasing age, education, and income. People of minority race/ethnicity had a higher proportion of smokers. Respondents with less than a high school education reported the highest proportion of current smokers (33.6%). Only 4.5% of respondents age 75 years and older were current smokers (see table 14.1).

Nearly 23.5% 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 4.7% former smokers, while the 65 to 74 year age group had 40.7% (see figure 14.2). White non-Hispanics had a higher prevalence of former smokers than minority racial or ethnic groups.

When asked about attempts to quit smoking, 55.5% of Iowa's current smokers reported they quit smoking for a day or more during the past year. Younger smokers were more likely to report trying to quit during the past year. Individuals 18 to 34 years old reported trying to quit most often (62.7%), compared to 46.1% of persons age 65 years old and older who were least likely. Little could be said about many demographic groups since the small number of smokers in these groups led to a lack of confidence in the interpretation of the resulting figures. The percent of smokers trying to quit has increased substantially from the figure of only 49.2% in 2006. This increase held true for both young and old.

Table 14.2: Percentage of Current Smokers in Iowa Trying to Quit, 2007

DEMOGRAPHIC GROUPS	Tried to Quit Smoking	
	%	C.I. (95%)
TOTAL	55.5	(51.4-59.6)
SEX		
Male	55.0	(48.9-61.1)
Female	56.1	(50.8-61.4)
AGE GROUP		
18-34	62.7	(54.2-71.2)
35-44	57.4	(50-64.8)
45-54	46.9	(40.4-53.4)
55-64	52.2	(43.4-61)
65+	46.1	(36.7-55.5)

Questions were asked about policies concerning exposure to secondhand smoke. Most Iowans (75.3%) said they had rules against smoking anywhere in their home. However, 16% said they allowed smoking anywhere in the house or had no rules concerning smoking in the house

Among employed Iowans who worked indoors most of the time, 81.3% said no smoking was allowed in public areas at work, and 87.4% said no smoking was allowed in work areas. The Iowa state legislature in 2008 passed a statewide smoking ban in most public places which will make the issue of secondhand smoke policies in the workplace less important for future planning purposes.

Comparison with Other States

In all the states and territories, smoking prevalence ranged from a low of 8.7% to a high of 31%. Iowa's current smoking prevalence of 19.8% was slightly above the median of 19.7% for all reporting states and territories.

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 those reporting smoking is down in Iowa in 2007 to 19.8%. For ages 18 to 24 years, it is 26.6%. For household incomes less than $25,000, it is 27.8%. This does not achieve either the state or national overall goal or the state goal for income, although the state rate in this income range dropped quite a lot. 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 55.5% the rate rose substantially, but it still falls almost 20 percentage points short of the goal.

Healthy Iowans 2010 has a goal of no more than 10% of people exposed to secondhand smoke at work. This goal has not been met since indoor Iowa workers report that 18.7% do not have rules against smoking in public areas at work and 12.6% do not have rules against smoking in work areas. In 2008 the Iowa legislature passed a bill banning smoking in most public places, which should mean that the goal will be met in future years.

The *Healthy Iowans 2010* goal was 69% for people having rules against smoking in their home. This goal was surpassed with 75.3% saying they had such rules.

15. ALCOHOL CONSUMPTION

Background

A large number of people get into serious trouble because of their consumption of alcohol. Alcohol consumed on an occasional basis will pose little risk to most people and may even promote health. Even at this level, factors such as family history, health condition, and use of medications can pose problems. Furthermore, many people find it impossible to consume alcohol in a controlled manner.

Nearly 14 million Americans 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 chronic 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 has a drinking problem.[51]

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. Chronic alcohol use affects every organ and system of the body. It also can lead to medical disorders (e.g., fetal alcohol syndrome, liver disease, cardiomyopathy, and pancreatitis). Heavy drinking can increase the risk for certain cancers. 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. 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 who are students appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge.[50]

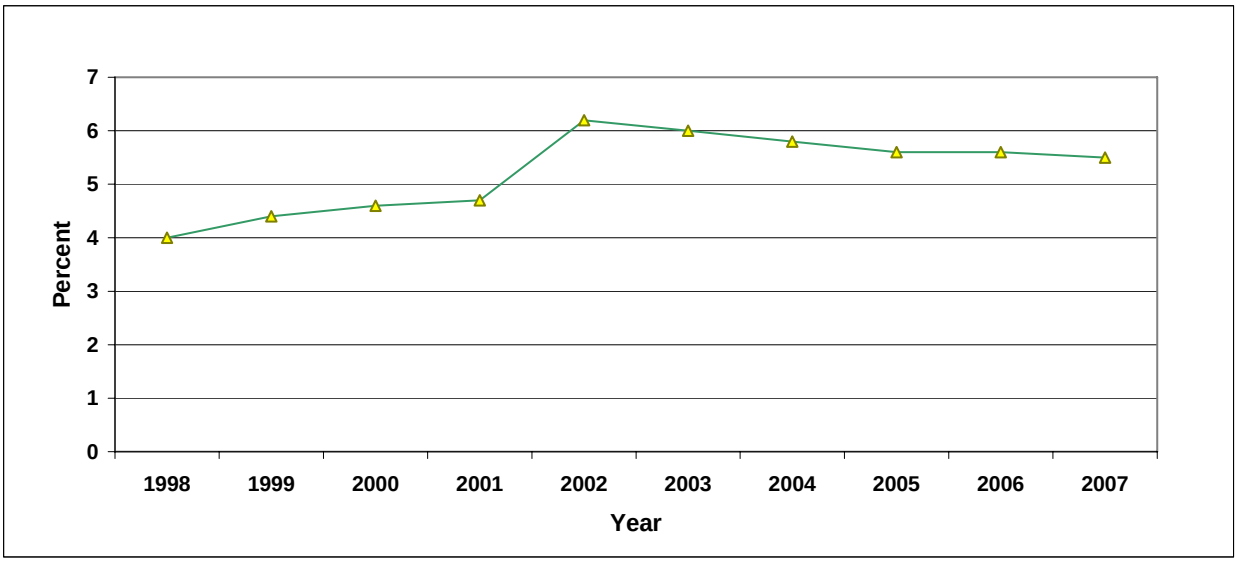
Alcohol consumption has been considered to lead to 85,000 deaths (3.5% of all deaths) in the United States in 2000.[39]

Alcohol Consumption Results

In the BRFSS survey, a standard drink is defined as one 12-ounce beer, one 5-ounce glass of wine, or a drink with one shot of hard liquor.

In 2007, 56.7% of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 37.1% had only one drink. The median was two drinks. About 14.4% reported drinking five or more drinks per day on the average.

Figure 15.1: Trend of Chronic Heavy Drinking in Iowa, 1998-2007



In our analysis, chronic 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, 5.5% of all respondents were heavy drinkers. This is essentially the same prevalence found in 2006. The trend has been mildly downward in the percentage of heavy drinking over the last six years with a tendency to flatten completely in the most recent years (See figure 15.1).

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 7.5% of men were considered to be heavy drinkers, while only 3.6% of women were considered to be heavy drinkers. Age and race/ethnicity were also associated with the prevalence of heavy drinking. The highest prevalence of heavy drinking was among those 18to 24 years old (9.6%). Only 1.4% of non-Hispanic African Americans reported heavy drinking (see table 15.1).

The definition of binge drinking changed for the BRFSS in 2006. A person is considered to binge if a man drinks more than five drinks or a woman drinks more than four drinks on one occasion. Previously the definition had been five drinks regardless of gender. Among all adult Iowans, 19.9% reported at least one binge episode in the last 30 days. This is a decrease from the 20.5% reported in 2006.

Even with the lessened requirement on females from the new definition, males binge much more than females (27% versus 13.3%). In addition, the likelihood of bingeing decreases with age from 31.2% for those 25 to 34 years old to only 1.5% for those 75 years old and older. The large sex difference is true at every age except 75 years and older (see figure 15.2). Unlike most risky behaviors, respondents with higher education and those with a higher household income were somewhat more likely to binge drink. Racial minorities are also somewhat less likely to report binge drinking (see table 15.2).

Table 15.1
Binge Drinking Among Iowans, 2007

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	19.9	(18.3-21.5)
SEX		
Male	27.0	(24.5-29.5)
Female	13.3	(11.7-14.9)
RACE/ETHNICITY		
White/Non-Hisp.	20.2	(18.6-21.8)
Hispanic or other	17.0	(11.3-22.8)
AGE		
18-24	30.8	(23.5-38.1)
25-34	31.2	(27.1-35.3)
35-44	26.4	(23.1-29.7)
45-54	20.7	(18.2-23.2)
55-64	11.0	(8.8-13.2)
65-74	4.0	(2.5-5.5)
75+	1.5	(0.6-2.4)
EDUCATION		
Less than H.S.	13.7	(8.8-18.6)
H.S. or G.E.D.	18.4	(15.9-20.9)
Some Post-H.S.	22.3	(19.4-25.2)
College Graduate	21.4	(18.9-23.9)
HOUSEHOLD INCOME		
Less than $15,000	11.1	(6.8-15.4)
$15,000- 24,999	14.3	(10-18.6)
$25,000- 34,999	18.1	(13.8-22.4)
$35,000- 49,999	22.2	(18.3-26.1)
$50,000- 74,999	22.4	(19.1-25.7)
$75,000+	27.9	(24.8-31)

Table 15.2
Heavy Drinking Among Iowans, 2007

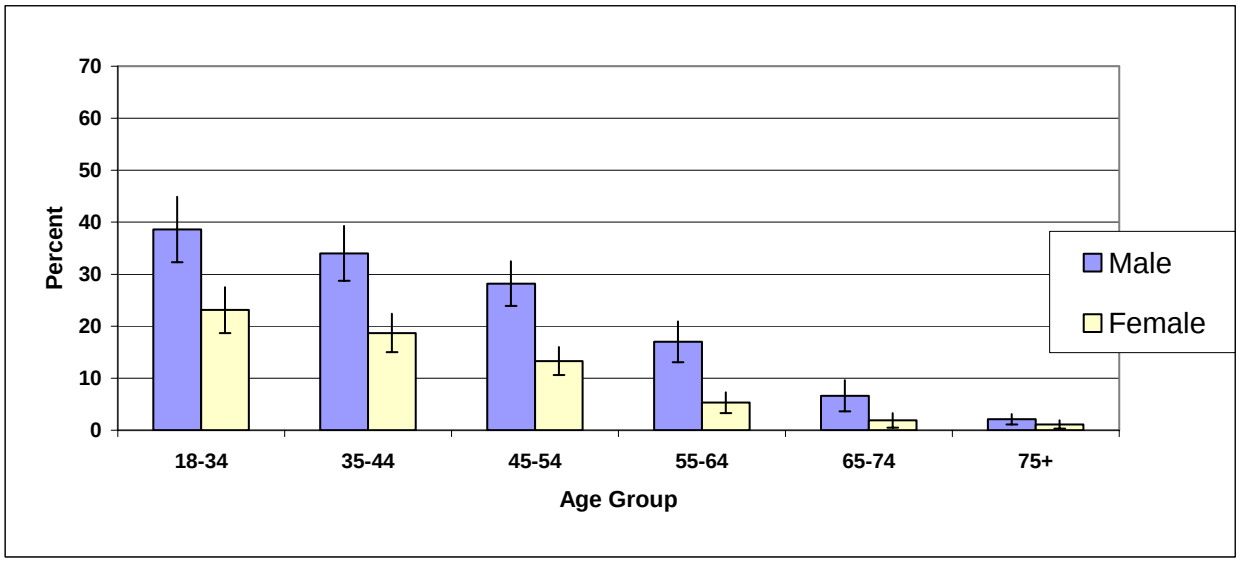
DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	5.5	(4.7-6.3)
SEX		
Male	7.5	(5.9-9.1)
Female	3.6	(2.8-4.4)
RACE/ETHNICITY		
White/Non-Hisp.	5.8	(4.8-6.8)
Black/Non-Hisp.	1.4	(0-3.6)
Other/Non-Hisp.	5.5	(0.1-10.8)
Hispanic	1.8	(0-4.3)
AGE		
18-24	10.5	(5.6-15.4)
25-34	4.3	(2.5-6.1)
35-44	6.4	(4.6-8.2)
45-54	5.6	(4.2-7)
55-64	5.7	(4.1-7.3)
65-74	2.8	(1.5-4.1)
75+	1.5	(0.6-2.4)
EDUCATION		
Less than H.S.	3.9	(1.5-6.3)
H.S. or G.E.D.	5.4	(3.8-7)
Some Post-H.S.	7.2	(5-9.4)
College Graduate	4.4	(3.2-5.6)
HOUSEHOLD INCOME		
Less than $15,000	5.6	(2.1-9.1)
$15,000- 24,999	5.0	(2.3-7.7)
$25,000- 34,999	6.1	(3-9.2)
$35,000- 49,999	7.1	(4.4-9.8)
$50,000- 74,999	5.2	(3.4-7)
$75,000+	6.4	(4.8-8)

Comparison with Other States

The percentage of people reporting heavy drinking ranges from 2.5% to 7.7%. The percentage in Iowa is above the median for the states and territories. Iowa's figure is 5.5% compared to the median of 5.2%.

For binge drinking, however, Iowa's figure of 19.9% is exceeded by only two states. The range is from a low of 8.2% to a high of 23.4% with a median of 15.7%. The top four binge drinking states are all in the upper Midwest.

Figure 15.2: Percentage of Iowans Who Binge by Age and Sex, 2007



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. Furthermore, the revised definition for binge drinking makes it even more difficult to achieve.

16. PROBLEM GAMBLING

Background

To gamble is to stake or risk money, or anything of value, on the outcome of something involving chance. Gambling can vary from the purchase of an occasional raffle or lottery ticket to spending hours at a time at a casino spending hundreds of dollars per day. Gambling, like alcohol consumption, is a very widespread recreational activity that can lead to problems for several individuals. Problem gamblers for whom gambling is an uncontrolled addiction can destroy their lives financially and socially.

The purpose of the Iowa Gambling Treatment Program is to promote and protect the health of Iowans by reducing problem gambling behavior. Since 1988 the program has funded agencies statewide to provide services to assist problem gamblers and concerned others as well as educational services to inform Iowans about the risks of gambling.

Current Iowa Gambling Treatment Program services include:

- Counseling for persons affected directly or indirectly by problem gambling. The counseling services are provided through 10 treatment providers in 11 regions around the state.
- Evidence-based prevention and education services which aims to decrease the number of persons who are problem gamblers. These services provide information to Iowans about the potential risks associated with gambling and tips on responsible gambling.
- Information about problem gambling and provider referral through the 1-800-BETS OFF helpline.
- Transitional housing services for persons receiving problem gambling treatment and who have no other safe housing option.
- Counselor training for clinicians providing problem gambling treatment and common co-occurring disorders.
- Evaluation of treatment services.

The Iowa Gambling Treatment Fund receives 0.5 percent of the gross lottery revenue and the adjusted gross receipts from the licensed casinos. The casinos operated by Native Americans are not included. The Iowa Gambling Treatment Fund also receives any money or thing of value that has been obtained by, or is owed to a voluntarily excluded person by a casino licensee as a result of wagers made by the person after the person has been voluntarily excluded. The fund is capped at $6 million annually.

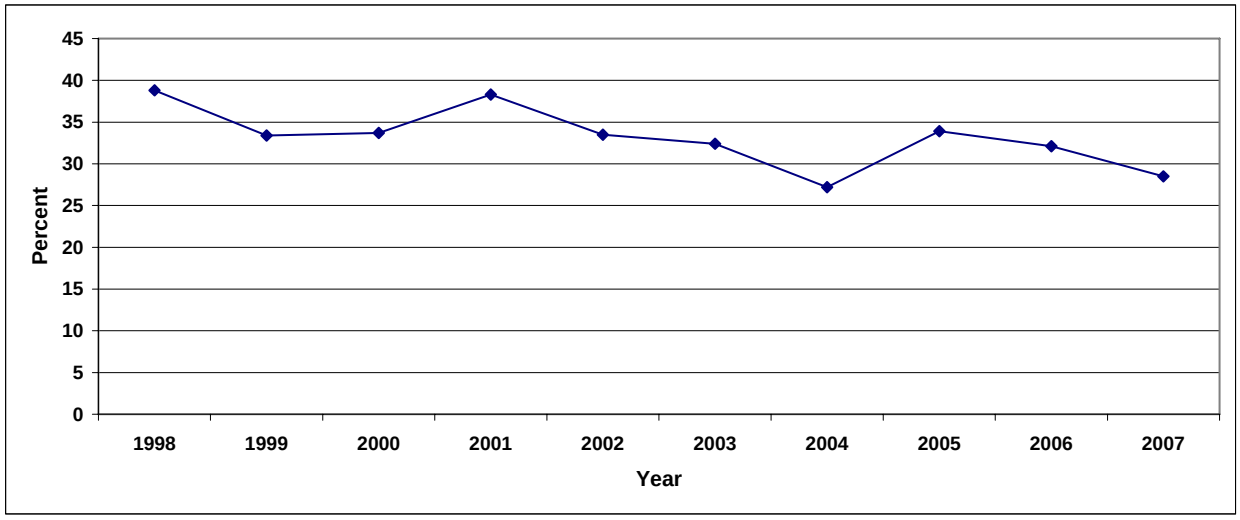
Problem Gambling Results

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?

The last two questions are only asked of people who have said they have gambled. People who do not answer a definite 'yes' or 'no' to these questions are not counted in determining the prevalence. This is the general practice in epidemiological research

Figure 16.1: Trend for Prevalence of Gambling in Iowa 1998-2007



In 2007, 28.5% of all respondents reported they had gambled in the last 12 months. This is lower than the 32.1% figure found in 2006. It is the second lowest figure ever reported (see figure 16.1). .

Significantly more men than women reported gambling in the past 12 months (33.8% vs. 23.5%). Also significantly fewer minority race or ethnic groups reported gambling than did non-Hispanic Whites (20% vs. 29.2%). Otherwise, gambling tended to be less prevalent for people with either extreme of age, income or education (see table 16.1). The highest percentage of gambling during the past year was reported for people with household income between $35,000 and $49,999 (34.1%). The lowest was reported for people age 75 or older (18.8%).

In 2007, only 0.7% of respondents who had gambled in the past 12 months said the money they spent gambling had led to financial problems. Likewise, 1.1% reported the time spent gambling had 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 there should not be an increase in the number experiencing problems from gambling. The baseline figures here were 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 2007, Iowa respondents reported levels better than both goals.

Table 16.1: Percentage of Iowans Who Report They Have Gambled in the Past 12 Months, 2007

DEMOGRAPHIC GROUPS	Gambled	
	%	C.I. (95%)
TOTAL	28.5	(26.9-30.1)
SEX		
Male	33.8	(31.1-36.6)
Female	23.5	(21.8-25.3)
RACE/ETHNICITY		
Non-Hispanic White	29.2	(27.5-30.8)
Non-White or Hisp.	20.0	(13.9-26.2)
AGE		
18-24	25.8	(18.4-33.1)
25-34	33.6	(29.1-38.1)
35-44	28.0	(24.7-31.3)
45-54	29.9	(26.9-32.9)
55-64	29.8	(26.6-33.1)
65-74	29.6	(26-33.3)
75+	18.8	(15.7-22)
EDUCATION		
Less than H.S.	18.0	(11.6-24.5)
H.S. or G.E.D.	30.4	(27.7-33.2)
Some Post-H.S.	31.7	(28.5-34.9)
College Graduate	25.9	(23.3-28.5)
HOUSEHOLD INCOME		
Less than $15,000	18.6	(12.7-24.4)
$15,000- 24,999	20.1	(16.2-24)
$25,000- 34,999	28.8	(23.8-33.7)
$35,000- 49,999	34.1	(29.5-38.6)
$50,000- 74,999	31.0	(27.4-34.6)
$75,000+	32.4	(29.1-35.7)

17. COLORECTAL CANCER SCREENING

Background

Colorectal cancer is cancer that occurs in the colon or rectum. Sometimes it is called colon cancer, for short. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.

Colorectal cancer is the second leading cause of cancer-related deaths in the United States and in Iowa. There are estimated to be 148,810 new cases of colon and rectal cancer in the United States in 2008. There are estimated to be 49,960 deaths.[2] In 2006 In Iowa, 685 deaths occurred due to colorectal cancer.[30] Incidence and mortality rates have been decreasing for most of the last two decades. The decline has been steeper in the most recent time period, partly due to an increase in screening, which can result in the detection and removal of colorectal polyps before they progress to cancer.

Although the exact causes of colorectal cancer are unknown, 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.

Modifiable risk factors include smoking, heavy alcohol use, obesity, a diet low in fruit and vegetables, a diet high in red meat, and physical inactivity ,

Colorectal cancer usually develops from abnormal growths known as precancerous polyps in the colon and rectum. In the early stages there are often no symptoms. Screening tests can detect polyps so they can be removed before they turn into cancer.[13] The American Cancer Society recommends that men and women at average risk begin regular screening for colorectal cancer at age 50 years. If everybody aged 50 or older had regular screening tests, as many as 60% of deaths from colorectal cancer could be prevented. 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.[61]

Colorectal Cancer Screening Results

In 2007, 44.3% of Iowans 50 years old or older reported ever using a home blood-stool testing kit (FOBT). This is a decline from the 47% found in 2006 and continues a decline that has been seen for the past five years (see figure 17.1).

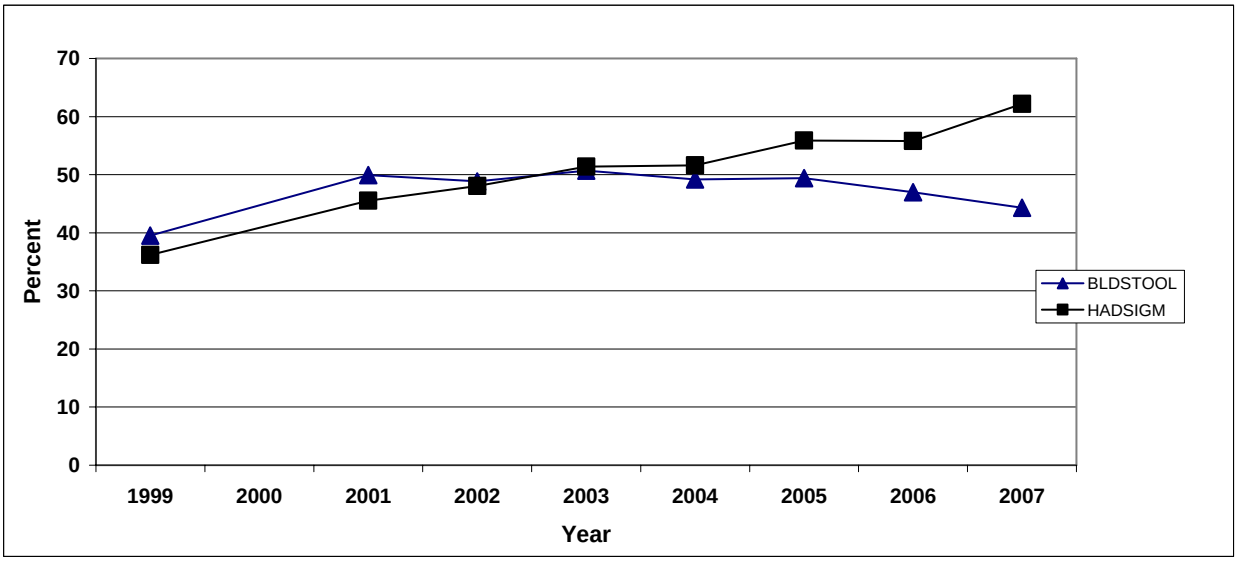
Females reported a significantly higher percentage of use than males (51.2% versus 35.9%). In fact, women were the demographic group with the highest percentage having the test.

Education was also related to use of the test. Respondents with less than a high school education were least likely to use it (30.4%). Only the highest household income was associated with more prevalent use of this test (see table 17.1).

Of all respondents 50 years old or older, 23.3% had used the blood stool test within the past two years. This was also a decline from 24.9% in 2006 and also showed a multi-year decline. The prevalence ranged from 13.8% among those with less than a high school education to 29.7% among those with an annual household income of $75,000 or more (see table 17.1).

In 2007, 62.2% of Iowans 50 years old or older reported ever having a sigmoidoscopy or colonoscopy screening test. This was an increase from the 55.8% found in 2006. This continues an upward trend seen over the last few years (see figure 17.1).

Figure 17.1: Ever Had Colorectal Cancer Screening Test by Year, 1999-2007



As was true with FOBT, education made the most difference in who was more likely to have the test. Those who had less than a high school education were least likely to have the test (51.1%). Those with annual household incomes of $75,000 or more were most likely to have the test (68.8%), Although no consistent pattern was evident for the rest of the range of incomes. Unlike FOBT, there was no significant sex difference in prevalence of ever having a sigmoidoscopy or colonoscopy (see table 17.1).

Table 17.1: Proportion of Colorectal Cancer screening in Iowans 50 Years Old or Older, 2007

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	44.3	(42.3-46.3)	23.3	(21.6-25)	62.2	(60.2-64.2)	52.0	(50-54.1)
SEX								
Male	35.9	(32.8-39)	19.9	(17.3-22.5)	61.9	(58.8-65)	52.4	(49.1-55.7)
Female	51.2	(48.7-53.7)	26.1	(23.8-28.3)	62.4	(60-64.8)	51.8	(49.3-54.3)
EDUCATION								
Less than H.S.	30.4	(24.3-36.5)	13.8	(9.2-18.3)	51.1	(44.2-58)	40.8	(34.1-47.5)
H.S. or G.E.D.	42.3	(39.4-45.2)	21.9	(19.3-24.4)	62.7	(59.8-65.6)	52.2	(49.1-55.4)
Some Post-H.S.	46.3	(42.2-50.4)	25.0	(21.4-28.6)	60.6	(56.5-64.7)	50.0	(45.9-54.1)
College Graduate	50.7	(46.8-54.6)	27.2	(23.7-30.8)	66.5	(62.8-70.2)	57.3	(53.4-61.2)
HOUSEHOLD INCOME								
Less than $15,000	41.9	(35.4-48.4)	22.1	(16.6-27.6)	59.5	(52.8-66.2)	47.3	(40.7-53.9)
$15,000- 24,999	44.0	(39.1-48.9)	23.8	(19.6-28)	56.9	(51.8-62)	46.9	(41.9-51.9)
$25,000- 34,999	40.1	(34.8-45.4)	17.7	(13.5-21.8)	62.1	(56.6-67.6)	48.1	(42.5-53.6)
$35,000- 49,999	41.0	(35.9-46.1)	20.9	(16.7-25.2)	56.5	(51.2-61.8)	47.4	(42.2-52.7)
$50,000- 74,999	40.7	(35.8-45.6)	19.6	(15.8-23.4)	61.7	(56.8-66.6)	53.3	(48.2-58.3)
$75,000+	50.9	(46-55.8)	29.7	(25.2-34.2)	68.8	(64.1-73.5)	62.0	(57.2-66.8)

Of all respondents 50 years old or older, 52% had a sigmoidoscopy or colonoscopy within the past five years. This was also an increase from the 46.8% figure found in 2006.

Those with less education were less likely to have the test in the prescribed time. Those with high income were more likely to have the test, although the relationship was not clear for other income levels. The lowest percentage (40.8%) was found among those with less than a high school education, while the highest percentage (62%) was found among those with annual household incomes of $75,000 or more (see table 17.1).

A question was asked this year to determine which test the respondent having a sigmoidoscopy or colonoscopy actually had. Colonoscopy was far more common (91.7%).

Since the rate of FOBT is declining as the rate of sigmoidoscopy/colonoscopy is increasing, it seems likely that the percent of people being adequately screened for colorectal cancer may actually be fairly constant with only the preferred method undergoing a change. To determine the percentage of Iowans being adequately screened the percent of respondents who had either screening method within the proper time interval was calculated. The result was that 59.9% of Iowans 50 years old and older had met, at least, one of the colorectal screening criteria. This ranged from 44% of those with less than a high school education to 71% of those with annual household incomes of $75,000 or more (see table 17.2).

Table 17.2
Proportion Meeting either Colorectal Cancer screening Criteria, 2007

DEMOGRAPHIC GROUPS	Received Adequate Screening	
	%	C.I. (95%)
TOTAL	59.9	(58-61.9)
SEX		
Male	58.4	(55.2-61.7)
Female	61.2	(58.8-63.6)
EDUCATION		
Less than H.S.	44.0	(37.2-50.7)
H.S. or G.E.D.	59.5	(56.5-62.5)
Some Post-H.S.	59.2	(55.2-63.2)
College Graduate	66.7	(63-70.4)
HOUSEHOLD INCOME		
Less than $15,000	54.2	(47.7-60.8)
$15,000- 24,999	56.0	(51.1-61)
$25,000- 34,999	53.6	(48-59.1)
$35,000- 49,999	56.0	(50.8-61.2)
$50,000- 74,999	58.9	(53.9-63.9)
$75,000+	71.0	(66.5-75.5)

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 was reported to have talked to a respondent 50 years old or older about colorectal screening in 48.1% of the cases. When the health care professional talked about screening, 82.7% recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 71.6% then had the test. Even more had a recommended test when the doctor recommended more than one, but the respondent did not have them all.

Out of all respondents50 years old and older, 69.9% reported seeing any articles or advertising in the past six months about the risks of colorectal cancer. Television was the main medium of exposure to this advertising (42.9%).

Over half of the respondents (51.4%) considered their own risk of colorectal cancer low. Only 4.9% considered it high. Furthermore, 52.4% of respondents believed that if they had colorectal cancer, they would have symptoms. This is not true.

18. DISABILITY AND ARTHRITIS

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."[28]

Chronic physical, mental, and emotional conditions can limit the ability of adults to carry out important activities such as working and doing everyday household chores. With advancing age, an increasing percentage of adults experience activity limitation.[54]

The latest Census estimates for 2005 found that 36.9 million people 16 years old and older had a disability that prevented or limited their ability in some way.[54]

Arthritis and other musculo-skeletal conditions are the most frequently reported cause of activity limitation among both working-age and older adults However, people can experience a wide range of types and severity of impairments.

Many disabled Americans use Assistive Technology Devices (ATDs) to accommodate mobility impairments and other sensory and mental impairments. These can allow a person with a disability to work and otherwise live an independent life.

Disability Results

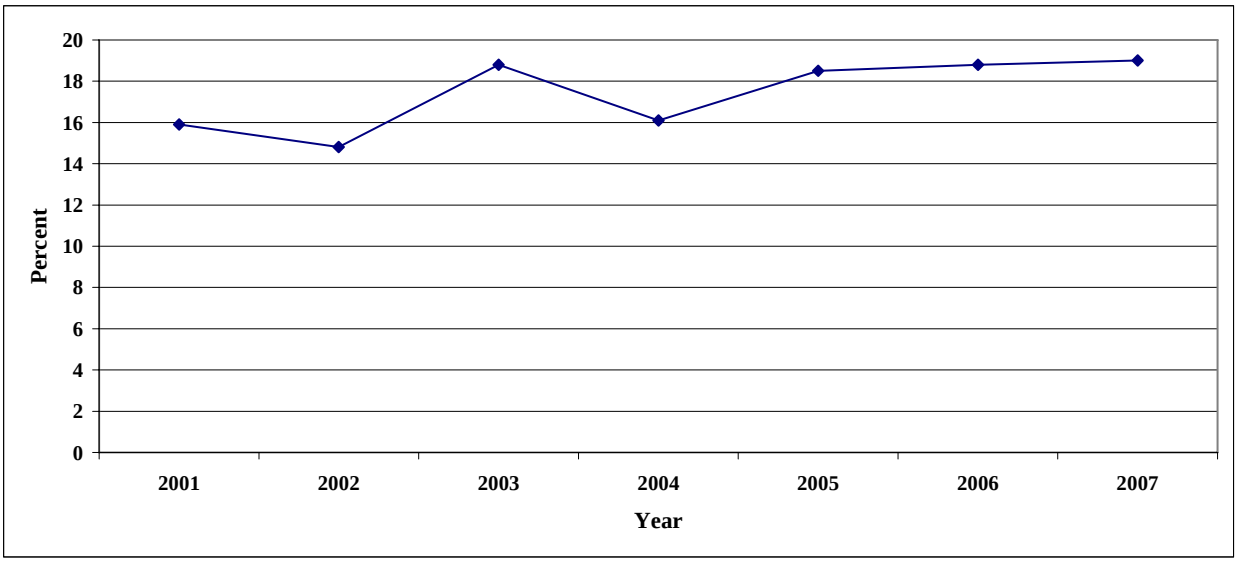
In 2007, 17.4% of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. This is up from the 16.9% reported in 2006.

When asked whether they had a health problem requiring the use of special equipment, 5.9% of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. This is down from 6.7% in 2006, but is the same as reported in 2005.

Whether someone is considered to have a disability in this analysis is based on a positive response to either or both of these two questions. In 2007, 19% of respondents were considered to have a disability. This is about the same as the 18.8% in 2006. The trend in people reporting disability has been stable for the past three years and generally shows a very slight increase (see figure 18.1).

As shown in Table 18.1, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Non-Whites and Hispanics reported a lower percentage of disability than non-Hispanic Whites. Of the five demographic variables analyzed, people aged 18 to 24 years reported the lowest percentage (9.2%). Those with household incomes less than $15,000 reported the highest percentage of disability (40.5%).

Figure 18.1: Disability Trend by Year, 2001 – 2007



The second highest group reporting disability was those aged 75 and over (39.9%). This group is the most rapidly growing group in the population.

Arthritis

Background

Arthritis is the name given to a group of over 100 different diseases and conditions that result in pain and reduction of functionality of the joints. The most common are osteoarthritis, rheumatoid arthritis, fibromyalgia, and gout.[14] Arthritis may be caused by a wearing down of cartilage, a change in bone composition, or inflammation in the joints.

Arthritis is the leading cause of disability in the United States.[14] It is surpassed only by heart disease as a cause of work disability. It also limits everyday activities and adversely affects the physical and mental health of those who are affected by it. It is particularly common in the elderly. Due to the aging of the population, it is predicted that the number of Americans with doctor diagnosed arthritis will reach 67 million people by the year 2030. [14]

Arthritis Results

In 2007, 38.7% of Iowans reported having symptoms of pain, aching, or stiffness in or around a joint in the past 30 days. This condition had persisted for at least three months for 80% of these respondents. Chronic joint pain is considered to be both of these conditions together. This means that 31% of all Iowans were considered to be affected by chronic joint pain.

Table 18.1
Percent Reporting Being Disabled, 2007

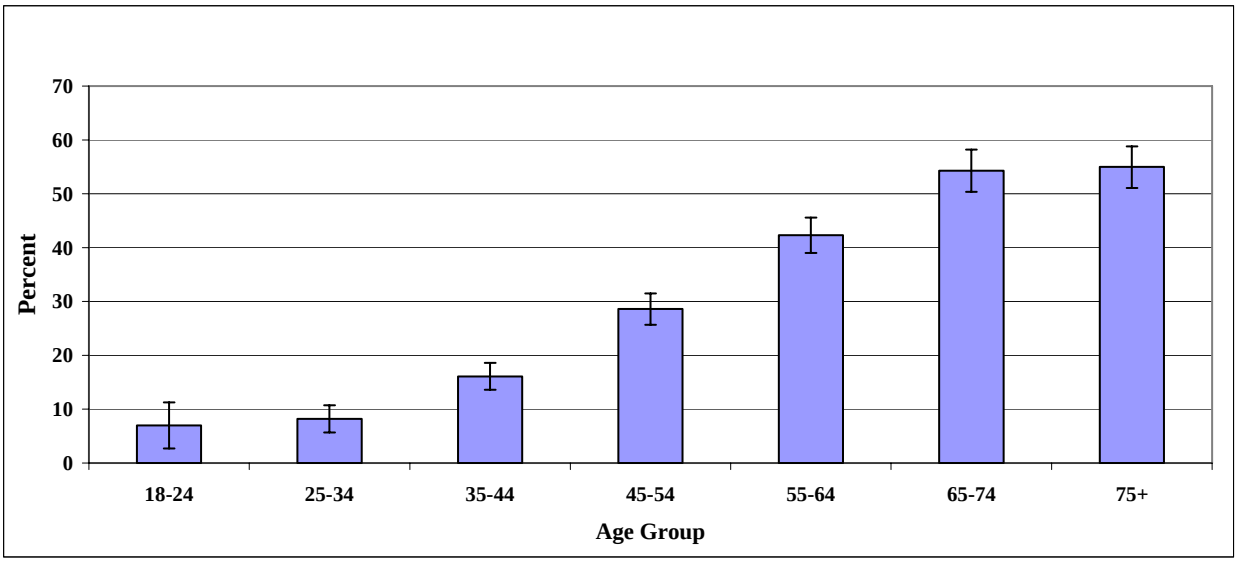
Demographic Groups	Limitation	
	%	C.I. (95%)
TOTAL	19.0	(17.8-20.3)
SEX		
Male	18.4	(16.5-20.4)
Female	19.6	(18-21.1)
RACE/ETHNICITY		
White/Non-Hisp.	19.2	(17.9-20.5)
Non-white or Hisp.	15.4	(10.3-20.5)
AGE		
18-24	9.2	(4.4-14)
25-34	9.7	(6.9-12.4)
35-44	13.1	(10.7-15.6)
45-54	18.6	(16.1-21.1)
55-64	27.1	(24-30.2)
65-74	25.9	(22.5-29.2)
75+	39.9	(36.2-43.7)
EDUCATION		
Less than H.S.	26.8	(20.7-32.9)
H.S. or G.E.D.	20.8	(18.7-22.9)
Some Post-H.S.	18.2	(15.9-20.4)
College Grad.	15.2	(13.3-17)
HOUSEHOLD INCOME		
<$15,000	40.5	(34.4-46.7)
$15,000- 24,999	28.1	(24.3-32)
$25,000- 34,999	21.7	(17.7-25.7)
$35,000- 49,999	17.2	(13.8-20.5)
$50,000- 74,999	13.3	(10.8-15.7)
$75,000+	11.5	(9.5-13.5)

Table 18.2
Percent Having Been Told by a Doctor They Had Some Form of Arthritis, 2007

DEMOGRAPHIC GROUPS	Told by doctor you have Arthritis	
	%	C.I. (95%)
TOTAL	27.1	(25.7-28.5)
SEX		
Male	24.5	(22.3-26.7)
Female	29.5	(27.7-31.3)
RACE/ETHNICITY		
White/Non-Hisp.	27.8	(26.4-29.2)
Non-white or Hisp.	17.3	(12.1-22.5)
AGE		
18-24	7.0	(2.7-11.3)
25-34	8.2	(5.7-10.7)
35-44	16.1	(13.6-18.6)
45-54	28.6	(25.7-31.5)
55-64	42.3	(39-45.6)
65-74	54.3	(50.4-58.2)
75+	55.0	(51.1-58.8)
EDUCATION		
Less Than H.S.	32.6	(26.3-38.9)
H.S. or G.E.D.	32.0	(29.6-34.4)
Some Post-H.S.	25.9	(23.4-28.4)
College Graduate	20.1	(17.9-22.3)
HOUSEHOLD INCOME		
<$15,000	42.7	(36.4-49)
$15,000- 24,999	35.6	(31.3-39.9)
$25,000- 34,999	29.9	(25.4-34.4)
$35,000- 49,999	25.8	(22.1-29.5)
$50,000- 74,999	22.6	(19.9-25.3)
$75,000+	20.7	(18.2-23.2)

A doctor had told 27.1% of Iowans that they had some form of arthritis. More women than men reported having arthritis. The prevalence decreased with greater education and income. Far fewer non-Whites or Hispanics reported having arthritis than White non-Hispanics (see table 18.2). Age was the strongest demographic factor in determining having arthritis, however. Over half (55%) of people age 75 and over had been told they had arthritis, while only 7% of those age 18 to 24 years had been told this (see figure 18.2).

Figure 18.2: Percent of Iowans with Arthritis by Age, 2007



People who had not been told they had arthritis but had chronic joint pain may be considered to have possible arthritis. In 2007 13.1% of Iowans met this criterion.

Of people who had been told they had arthritis or who reported having joint pain in the past 30 days 27.9% said they were limited in their activities by arthritis. Of the people with arthritis or possible arthritis, most said they could do most things they wanted to do. Over four fifths (80.3%) said they could do everything or most things they wanted to do. However, 4.1% said they could hardly do anything they wanted to do

For people with arthritis or possible arthritis, 26.7% had been told by a doctor to lose weight to control their arthritis, while 50.2% had been told by a doctor to get more physical activity to improve their arthritis. Only 9.5% reported having taken a class to learn to manage problems related to their arthritis.

Comparison with Other States

The percent of people reporting being disabled ranged from 11.3% to 27.3% with a median of 20.1%. Iowa ranked 16th from the least people affected by disability at 19%. The prevalence of disability has been quite stable both in Iowa and nationally.

For diagnosed arthritis, the range was from 13.7% to 35.6% with a median of 27.5%. Iowa was a little below the median at 27.1% with arthritis. This is an unexpectedly low figure considering the high numbers of elderly in Iowa and that the state prevalences are not adjusted to control for differences in age.

Year 2010 Health Objectives for the Nation

The Healthy People 2010 goal for people who are limited in their activities by arthritis is 21%. In Iowa, the percent of those with doctor diagnosed arthritis or possible arthritis (chronic joint symptoms) who report being limited is 27.9%. Although this is somewhat lower than reported in 2005 (28.9%), this is still much higher than the national 2010 goal.

19. VISUAL IMPAIRMENT AND ACCESS TO EYE CARE

Background

The sense of vision is relied upon most for information about the environment around us. Visual impairment is one of the four most significant contributors to the loss of independence among older Americans. Loss of vision can pose difficulties in managing household tasks, and getting to places outside the home. It can interfere with work and leisure activities.

Visual impairment can involve a large range of ability. Someone can be totally unable to see anything or may have light perception. To be legally blind someone must have a visual acuity of 20/200 or less in the better eye after correction or a visual angle of less than 20 degrees in diameter. Someone may be considered visually impaired if the corrected acuity is 20/40 or less in the best eye. Some visual impairment may only apply at particular distances such as near-sightedness or farsightedness.

The United States spends more than $50 billion a year on vision problems—and the prevalence and the costs to care for these conditions are rising fast. As the population ages, the number of people at risk for age-related eye diseases increase. The number of Americans with age-related eye disease and resulting vision impairment is projected to double within the next three decades.[41]

The leading causes of vision impairment in the United States are:

- Cataracts,
- Glaucoma,
- Macular degeneration and
- Diabetic retinopathy.[53]

A cataract is a clouding of the eye's lens. Glaucoma is a progressive eye disease where pressure within the eye damages the optic nerve. It has no symptoms in the early stages, and occurs so slowly that the sufferer may not notice the deterioration until it is quite advanced. Age-related macular degeneration affects the part of the eye that allows a sharp image of objects directly focused upon. Diabetic retinopathy is a deterioration of the blood vessels of the retina of the eye as a complication of diabetes.

Early intervention and regular eye exams are crucial in maintaining good vision. Between 40% and 50% of all blindness is preventable. For those already visually impaired, corrective action can often be taken either through treatment or rehabilitation.

Visual Impairment and Access to Eye Care Results

The BRFSS survey asked respondents 40 years old and older 10 questions about their vision and eye care.

Most respondents reported no difficulty seeing. No difficulty identifying someone from across the street was reported by 87.8%. A lower percentage of 72.8% reported no difficulty reading print such as the newspaper.

Around 66% of Iowans reported having their eyes examined by an eye doctor or professional within the past year. On the other hand, 20.1% of Iowans reported not visiting an eye care specialist in the past two years. This includes 1.5% who said they had never had their eyes examined. When asked the main reason for not having an eye examination in the past year, most (66.9%) reported no reason to go, i.e. no symptom or problem.

When asked how long it had been since they had a dilated eye exam, 55.1% of respondents reported it was within one year, while 23.4% had not had such a visit in the past two years. This question was asked separately for diabetics. For people with diabetes in the same 40 years and over age range, 73.5% had a dilated eye exam in the past year, while 52.8% of those not having diabetes had such an exam.

Table 19.1: Prevalence of Conditions Affecting Vision in Iowa, 2007

DEMOGRAPHIC GROUPS	Have Cataracts		Have Glaucoma		Have Macular Degeneration	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	14.8	(13.6-16)	4.1	(3.5-4.7)	4.2	(3.6-4.8)
SEX						
Male	10.7	(9.1-12.3)	3.6	(2.6-4.6)	3.2	(2.2-4.2)
Female	18.4	(16.8-20)	4.6	(3.8-5.4)	5.1	(4.1-6.1)
RACE/ETHNICITY						
White/Non-Hisp.	15.0	(13.9-16.2)	4.1	(3.4-4.7)	4.3	(3.7-5)
Non-White or Hisp.	7.4	(3.3-11.4)	4.6	(1.4-7.9)	1.4	(0-3.4)
AGE						
40-49	1.4	(0.7-2.1)	0.7	(0.2-1.2)	1.2	(0.4-2)
50-64	10.4	(8.8-12)	3.1	(2.1-4.1)	2.0	(1.3-2.7)
65-74	34.8	(31.1-38.5)	5.7	(3.8-7.5)	4.7	(3.1-6.3)
75+	32.6	(28.9-36.4)	11.7	(9.2-14.2)	15.1	(12.3-17.9)
EDUCATION						
Less Than H.S.	17.6	(13.3-21.9)	7.3	(4.4-10.2)	8.6	(5.5-11.7)
H.S. or G.E.D.	17.3	(15.3-19.3)	4.6	(3.4-5.8)	4.4	(3.4-5.4)
Some Post-H.S.	12.6	(10.4-14.8)	3.7	(2.5-4.9)	3.6	(2.4-4.8)
College Graduate	12.3	(10.3-14.3)	3.0	(1.8-4.2)	3.4	(2.2-4.6)
HOUSEHOLD INCOME						
Less than $15,000	23.1	(18.4-27.8)	7.4	(4.5-10.3)	11.9	(8.2-15.6)
$15,000- 24,999	21.7	(18-25.4)	8.6	(5.9-11.3)	6.0	(3.8-8.2)
$25,000- 34,999	18.4	(14.5-22.3)	4.4	(2.4-6.4)	4.5	(2.5-6.5)
$35,000- 49,999	14.2	(11.5-16.9)	3.0	(1.6-4.4)	4.2	(2.4-6)
$50,000- 74,999	9.4	(7.2-11.6)	1.8	(0.8-2.8)	2.8	(1.4-4.2)
$75,000+	8.0	(6.2-9.8)	1.4	(0.6-2.2)	1.2	(0.4-2)

A little more than half of the respondents, 53.2%, reported having health insurance that covered vision care. Household income had the most effect on having this insurance. People in households earning $75,000 or more had the highest percent with insurance covering vision (64.8%), while those earning $15,000 to $25,000 had the lowest (41.6%).

The prevalence of three conditions affecting vision was determined. When asked if they had cataracts, 14.8% said they did. Another 10.2% said they had them removed. Glaucoma was reported by 4.1% of respondents. Macular degeneration was reported by 4.2% of respondents.

Table 19.1 shows that prevalence of these conditions varies with the demographics of the respondent. In all cases the condition was more prevalent in women, as age increased, as education decreased, and as income decreased. Cataracts and macular degeneration, but not glaucoma, were more common among White non-Hispanics than Hispanics or other race respondents.

Ten percent of respondents reported they had a workplace eye injury at some time. Vastly more men had such an injury than women (18.2% vs. 2.7%).

20. 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.[5]

Influenza and pneumonia combined are the eighth leading cause of death among all Americans. Influenza and pneumonia together resulted in 63,000 deaths in 2005 in the U.S.[35] and 765 in Iowa in 2006.[30]

In 2004 influenza and pneumonia represented a cost of $37.5 billion to the U.S. economy, $5.6 billion due to indirect costs and $31.9 billion in direct costs.[5]

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 its severity. The vaccine may be taken by a shot or by nasal spray. The nasal spray is not recommended for people at high risk, however. The best time to receive the influenza vaccine is soon after the vaccine becomes available in the fall of each year.[18]

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.

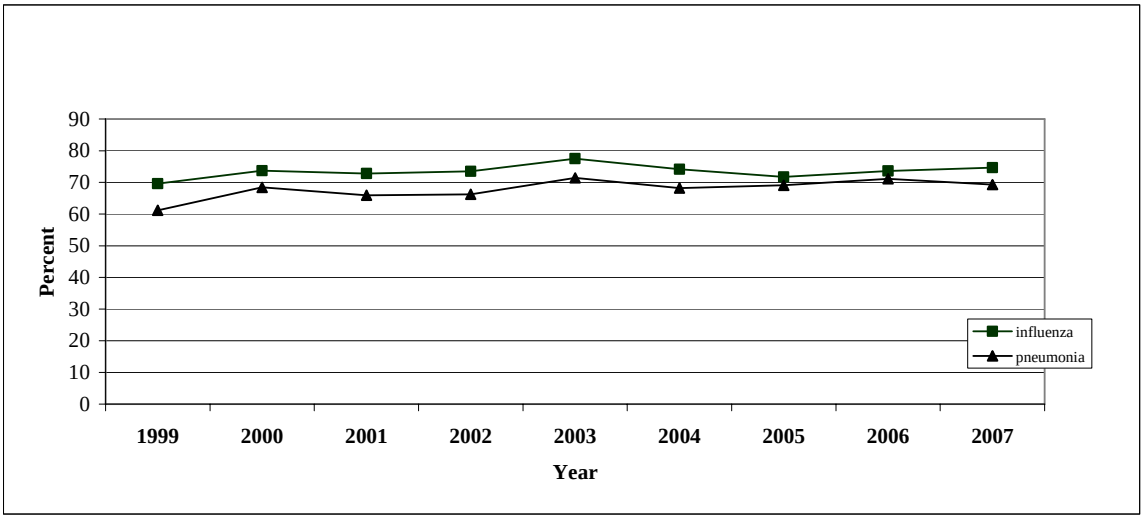
In the United States, the estimated annual incidence of bacterial pneumonia among persons 65 years old and older is 50 to 83 cases per 100,000 persons,[20] and such infections are associated with a high death rate. The Advisory Committee on Immunization Practices (ACIP) recommends that persons aged 65 years old or older receive at least one lifetime dose of pneumococcal vaccine[19] and annual influenza vaccination.[18]

Hepatitis B vaccination is the most effective measure to prevent hepatitis B virus (HBV) infection and its consequences, including cirrhosis of the liver, liver cancer, liver failure, and death. In adults, ongoing HBV transmission occurs primarily among unvaccinated persons with behavioral risks for HBV transmission (e.g., heterosexuals with multiple sex partners, injection-drug users [IDUs], and men who have sex with men (MSM) and among household contacts and sex partners of persons with chronic HBV infection.[9]

Immunization Results

In 2007, 74.6% of Iowans age 65 and over reported having a flu shot in the past 12 months. This is higher than the 73.6% found in 2006 and is the second highest rate that this survey has ever recorded. There was a fairly steady upward trend until 2003. Then the prevalence of immunization against flu fell off, but now appears to be returning to its earlier level (see figure 20.1). The break in the trend may possibly have been due to the negative effect of the shortage of flu vaccine in the 2004-2005 season.

Figure 20.1: Immunizations in Iowans Age 65 and Over, 1999 – 2007



Among all adults, 44.6% 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, Whites non-Hispanics, and people with a higher education were more likely to have a flu immunization. The lowest percentage was found among people between age 18 and 24 years (28.9%), while the highest was for those age 75 and older (80.1%) (see table 20.1).

In 2007, 69.3% of Iowans age 65 and over reported ever having a pneumonia vaccination. This is lower than the 71.1% found in 2006 and is about the same as the 69.1% found in 2005 (see figure 20.1).

Among all adults, 26.3% had ever received a pneumonia vaccination. Older people, females, people with lower education, and people with lower income, were more likely to have pneumonia vaccinations. Non-White or Hispanics were less likely to have a pneumonia vaccination. Age made the greatest difference in whether someone had a pneumonia vaccination. The lowest percentage of pneumonia vaccination occurred among those who were 25 to 34 years old (9.8%), while those 75 years old and older were highest by far (77.1%) (see table 20.1).

Table 20.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2007

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	44.6	(43-46.3)	26.3	(24.9-27.7)
SEX				
Male	39.7	(37.2-42.3)	25.2	(23-27.4)
Female	49.3	(47.2-51.4)	27.2	(25.4-29)
RACE/ETHNICITY				
White/Non-Hispanic	45.6	(43.9-47.3)	26.7	(25.3-28.1)
Non-White or Hisp.	32.1	(25.5-38.6)	19.3	(13.6-25)
AGE GROUP				
18-24	28.9	(21.7-36)	10.3	(5.4-15.2)
25-34	30.8	(26.7-34.8)	9.8	(6.7-12.9)
35-44	33.3	(29.9-36.6)	10.8	(8.4-13.2)
45-54	41.1	(38-44.2)	15.1	(12.7-17.5)
55-64	53.8	(50.4-57.2)	28.8	(25.7-31.9)
65-74	68.5	(64.9-72.1)	60.5	(56.6-64.3)
75+	80.1	(77.1-83.1)	77.1	(73.8-80.4)
EDUCATION				
Less than H.S.	41.7	(34.8-48.6)	30.1	(24.6-35.6)
H.S. or G.E.D.	41.9	(39.2-44.6)	31.1	(28.7-33.5)
Some Post-H.S.	41.8	(38.6-45)	23.1	(20.6-25.6)
College Graduate	51.9	(49-54.8)	21.6	(19.2-24)
HOUSEHOLD INCOME				
Less than $15,000	43.0	(36.5-49.4)	40.1	(33.8-46.4)
$15,000- 24,999	44.0	(39.4-48.7)	36.8	(32.5-41.1)
$25,000- 34,999	45.4	(40.2-50.5)	31.3	(26.8-35.8)
$35,000- 49,999	39.9	(35.8-44)	21.5	(18.2-24.8)
$50,000- 74,999	45.2	(41.5-48.9)	20.0	(17.1-22.9)
$75,000+	47.2	(43.9-50.6)	17.3	(14.8-19.8)

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, 73.2% had a flu vaccination and 63.9% had a pneumonia vaccination.

Table 20.2
Percent Reporting Immunization for Hepatitis B, 2007

Demographic Groups	Immunizations	
	%	C.I. (95%)
TOTAL	35.4	(33.6-37.2)
SEX		
Male	31.3	(28.4-34.2)
Female	39.0	(36.8-41.2)
RACE/ETHNICITY		
White/Non-Hisp.	34.9	(33.1-36.7)
Non-white or Hisp.	41.4	(33.6-49.3)
AGE		
18-24	59.9	(51.3-68.5)
25-34	49.5	(44.6-54.4)
35-44	42.3	(38.4-46.2)
45-54	36.9	(33.8-40)
55-64	25.1	(22-28.2)
65-74	13.6	(10.9-16.3)
75+	6.7	(4.7-8.6)
EDUCATION		
Less than H.S.	26.7	(18.9-34.5)
H.S. or G.E.D.	24.5	(21.8-27.2)
Some Post-H.S.	41.9	(38.4-45.4)
College Grad.	45.7	(42.6-48.8)
HOUSEHOLD INCOME		
<$15,000	25.9	(19-32.8)
$15,000- 24,999	30.5	(25.2-35.8)
$25,000- 34,999	29.0	(23.9-34.1)
$35,000- 49,999	32.5	(28-37)
$50,000- 74,999	44.1	(40-48.2)
$75,000+	42.9	(39.4-46.4)

Of all those ever told they had asthma, 49.8% had their flu vaccination, while 39.5% had a pneumonia vaccination.

Starting in 2006, a question was asked about immunization for Hepatitis B. Full vaccination for Hepatitis B (complete series of three shots) was reported by 35.4% of adult Iowans. Younger people, people with higher income and education, people of Hispanic or non-White race/ethnicity, and females more frequently reported receiving Hepatitis B immunization (see table 20.2). Age made the largest difference with 59.9% of people age 18 to 24 years reporting being immunized, while only 6.7% of those age 75 years or older reported this.

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 71.6% in 2007. The range was from 79.9% to 32.2%. Iowa's value of 74.6% put it well above the median for people 65 years and over having a flu shot in the past year.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 66.9%. The range was from 74% to 26.1%. However, after removing three of the territories, the low end becomes 55.9% and the median becomes 67.2%. Iowa's value of 69.3% is a little above the median.

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%. Although higher than the nation as a whole, Iowa's 2007 figures of 74.6% for having a flu shot in the past year and 69.3% for ever having a pneumonia vaccination have a long way to go to meet these targets.

21. HIV/AIDS

Background

HIV stands for human immunodeficiency virus. This is the virus that causes AIDS. HIV is different from most other viruses because it attacks the immune system. The immune system gives our bodies the ability to fight infections. HIV finds and destroys a type of white blood cell that the immune system must have to fight disease. AIDS stands for acquired immunodeficiency syndrome. AIDS is the final stage of HIV infection. It can take years for a person infected with HIV, even without treatment, to reach this stage. Having AIDS means that the virus has weakened the immune system to the point at which the body has a difficult time fighting infections.[16]

The HIV epidemic has now been with us for more than 25 years.[22] Estimates suggest that about one million people in the United States are living with HIV or AIDS. About one quarter of these people do not know that they are infected. Not knowing puts them and others at risk. At least 40,000 new infections occur each year in the United States.

HIV infection, the precursor to AIDS, was the sixth leading cause of death among people 25 to 44 years old in 2006. It accounted for 5.7% of deaths from all causes in this age group in the United States. AIDS killed over 14,000 people in the United States in 2006.[17] Over half of these were between the ages of 40 to 55 years.

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 2.5% of the population, but account for 20% of all Iowans living with HIV/AIDS. The Hispanic population in Iowa is 3.8%, but Hispanics account for 8% of all Iowans living with HIV/AIDS. Nearly 80% of HIV cases are among men.[33]

The number of persons living with HIV/AIDS continues to increase. In 2007 there were more new HIV cases diagnosed in Iowa than in any other year since records have been kept. Approximately 1,548 persons in Iowa were living with HIV/AIDS on December 31, 2007.[33]

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.

It is important that people who may be at risk of catching HIV be tested. This step can prevent them from unknowingly spreading the disease and permit early treatment before the disease advances to AIDS.

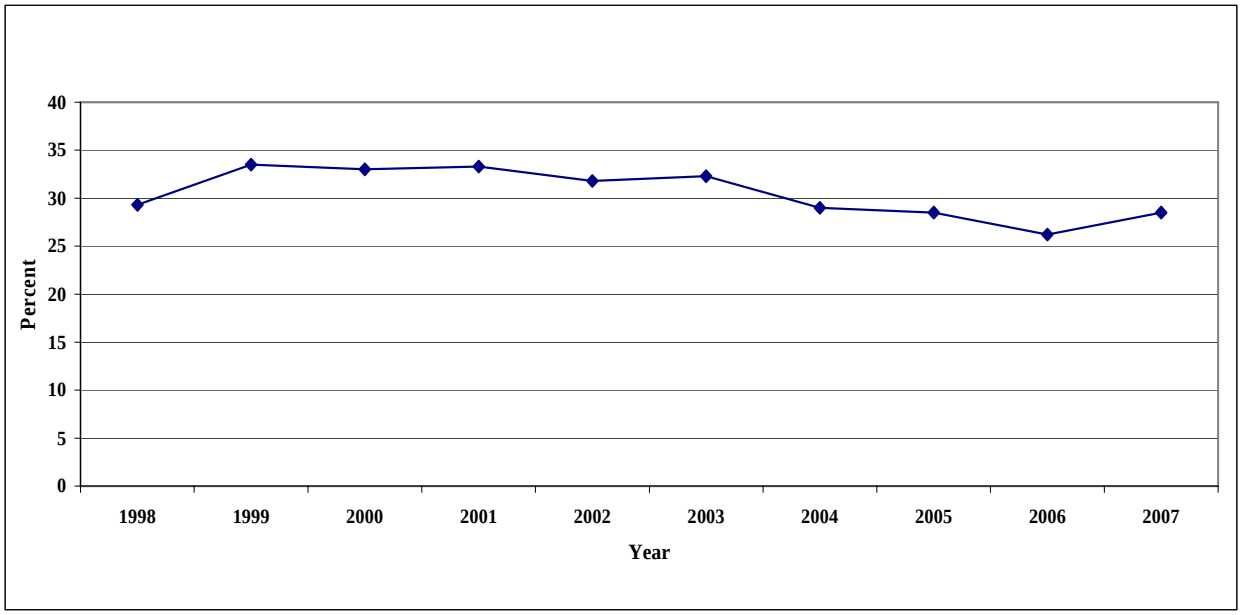
HIV/AIDS Results

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

In 2007 28.5% of respondents reported ever being tested for HIV, not including as part of a blood donation. This is higher than the 2006 finding of 26.2% and is the same as the 2005 finding. This reverses the trend in having an HIV test, which has been downward for the past several years (see figure 21.1).

The largest proportion of respondents tested was among the 25 to 34 year old age group (42.1%). This was closely followed by non-White or Hispanic race/ethnicity (41.8%). The smallest proportion reporting ever being tested was 11.6% of those between ages 55 to 64 years old (see table 21.1). In addition, females and people of lower income were more likely to be tested.

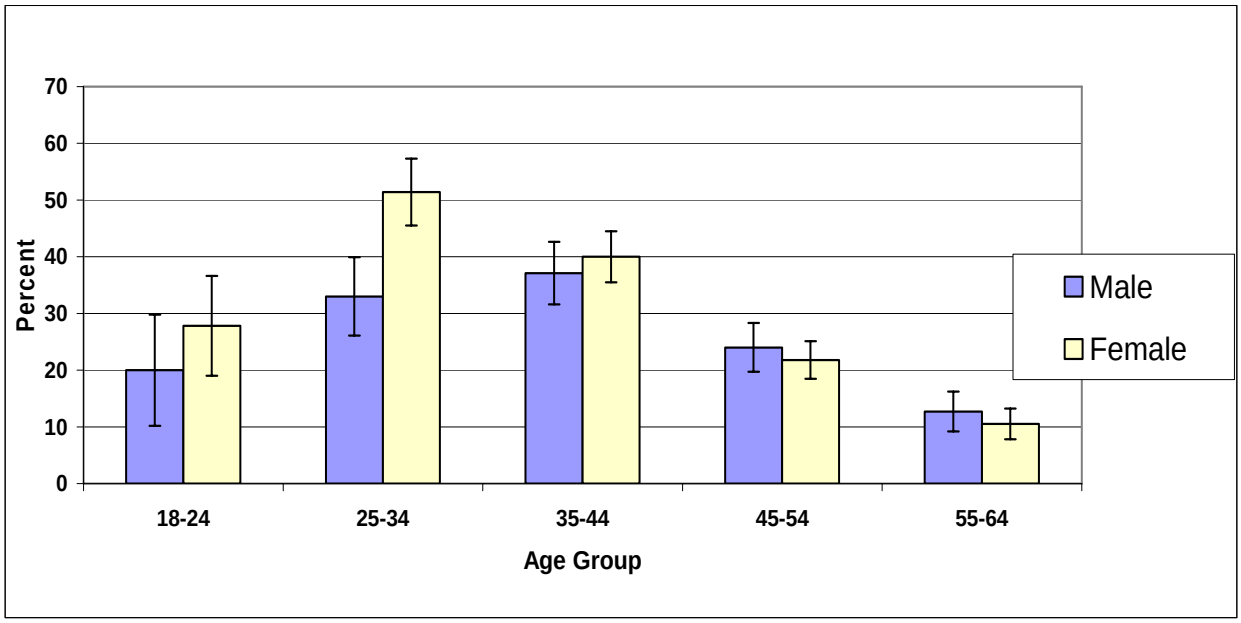
Figure 21.1: Percentage of Iowans Reporting Ever Being Tested for HIV 1998-2007



There is an interesting interaction between sex and age, however. Figure 21.2 shows that in the younger age groups, many more women have been tested, while there is little difference in the older age groups.

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 places were private doctor or HMO office (41.4%), clinic (26.6%), and hospital (26.3%). These three together made up the vast majority of locations.

Figure 21.2:
Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2007



A new development in the HIV testing area is rapid testing. This gives test takers the opportunity to know the results of their tests without a lengthy interval in between the test and the results. During this interval many test takers can be lost to the process and not receive their results. When those who had been tested for HIV within the past 12 months were asked if they had a rapid test, 18% said it was.

Comparison with Other States

The percentage of people aged 18 through 64 who had a test for HIV ranged from 23.6% to 69.8%. There were only three states with a lower percent being tested than Iowa at 28.4%. Six out of eight of the lowest tested states were in the upper Midwest. The median percent of people tested was 38%. Iowa and the nation as a whole seem to have experienced an increase in people being tested this year.

Table 21.1: Percentage of Iowans Tested for HIV/AIDS, 2007

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	28.5	(26.7-30.3)
SEX		
Male	26.2	(23.5-28.9)
Female	30.8	(28.4-33.2)
RACE/ETHNICITY		
Non-Hispanic White	27.3	(25.3-29.3)
Non-White or Hispanic	41.8	(33.8-49.9)
AGE		
18-24	23.9	(17.2-30.6)
25-34	42.1	(37.6-46.6)
35-44	38.5	(35-42)
45-54	22.9	(20.2-25.6)
55-64	11.6	(9.2-14)
EDUCATION		
Less than H.S.	32.8	(23.4-42.2)
H.S. or G.E.D.	23.1	(20-26.2)
Some Post-H.S.	31.0	(27.5-34.5)
College Graduate	30.7	(27.8-33.6)
HOUSEHOLD INCOME		
Less than $15,000	37.0	(27.6-46.4)
$15,000- 24,999	37.0	(30.1-43.9)
$25,000- 34,999	22.2	(16.9-27.5)
$35,000- 49,999	26.8	(22.3-31.3)
$50,000- 74,999	26.1	(22.6-29.6)
$75,000+	30.8	(27.5-34.1)

22. MENTAL ILLNESS AND STIGMA

Background

Mental Health is a general term referring not only to the absence of mental disorder, but also the ability of a person to successfully handle the daily challenges and social interactions of life.[32] Health is not merely physical health, but also mental health. Nor are these two independent of each other. Poor physical health can lead to poor mental health, and poor mental health can lead to poor physical health.

One of every five adults, or about 40 million Americans, experiences some type of mental disorder every year. Over 19 million suffer from anxiety disorder, the most common mental illness. More than 18 million people experience a depressive disorder each year.[32]Although depressive disorders are somewhat less common than anxiety disorders, they are often more serious. Almost six percent of the population meets the criteria for serious mental illness.[38]

The combined indirect and related costs of mental illness are immense and include the costs of lost productivity; lost earnings due to illness; and societal costs, such as increased criminal-justice and family-caregiver costs. Clinical depression alone costs the United States $43.7 billion annually; anxiety disorders, $46.8 billion; and schizophrenia, $65 billion.

Mental health and mental disorders also have a significant impact on the total health-care system. Up to half of all visits to primary care physicians are due to conditions caused by or made worse by mental or emotional problems. People with depression are more than four times as likely to have a heart attack as those without such a history. Roughly 37% of alcohol abusers and 53% of drug abusers also have at least one serious mental illness.[32]

Another characteristic of a lack of mental health (or mental illness) is stigma. People with mental problems are frequently viewed negatively and kept at a distance. This can put more stress on an already fragile mental condition.

Mental Illness and Stigma Results

Data in this chapter will come from a module to evaluate mental illness and stigma. For other information related to mental health see Chapter 4 on general health status and health-related quality of life.

The Mental Illness and stigma module contains ten questions. Results from the first six of these make up a single measure of mental illness called the K-6 scale. The questions in the K-6 scale all ask how often the respondent has felt a certain way. These are coded into numbers from zero to four and summed to obtain the K-6 score. The value of these scores which can range from zero to 24 can then be divided up to indicate levels of mental illness. A score of greater than 12 indicates serious mental illness (SMI).[34]

According to the K-6, 2.3% of adult Iowans are experiencing serious mental illness (SNI). SMI was more frequent among those with lower income, lower education, racial/ethnic minorities,

Table 22.1:
Serious Mental Illness in Iowans as Measured by the K-6 Scale, 2007

DEMOGRAPHIC GROUPS	Serious Mental Illness – K-6	
	%	C.I. (95%)
TOTAL	2.3	(1.8-2.7)
SEX		
Male	1.9	(1.1-2.6)
Female	2.6	(2-3.3)
RACE/ETHNICITY		
White/Non-Hisp.	2.1	(1.6-2.6)
Non-White or Hisp.	3.9	(1.4-6.5)
AGE		
18-24	2.1	(0.1-4.1)
25-34	2.0	(0.7-3.2)
35-44	2.3	(1.1-3.4)
45-54	2.7	(1.7-3.6)
55-64	2.6	(1.5-3.7)
65-74	0.8	(0.2-1.4)
75+	2.7	(1.2-4.2)
EDUCATION		
Less than H.S.	6.1	(3.3-8.9)
H.S. or G.E.D.	2.4	(1.6-3.3)
Some Post-H.S.	2.4	(1.4-3.4)
College Graduate	0.8	(0.3-1.3)
HOUSEHOLD INCOME		
Less than $15,000	5.7	(3.5-7.9)
$15,000-24,999	5.9	(3.6-8.2)
$25,000-34,999	2.3	(1-3.6)
$35,000-49,999	1.5	(0.5-2.5)
$50,000-74,999	1.5	(0.2-2.7)
$75,000+	0.4	(0.1-0.7)

and women (see table 22.1). Those with less than a high school education had the greatest percent reporting SMI (6.1%), while those with annual household incomes of $75,000 or more reported the lowest (0.4%).

In the next question, people were asked how many days out of the past 30 a mental health condition or emotional problem kept them from doing their work or other usual activities. Most people (92.8%) said none. However, 1.7% said 14 days or more. More than 6% of people with less than a high school education or with an annual household income of less than $15,000 said 14 days or more.

When asked if they were receiving treatment from a doctor or health professional for any kind of mental condition or emotional problem, 11.5% said yes. This was higher for people with low household incomes and for women. People with household income less than $15,000 per year had the highest percentage of people receiving treatment (21.7%). Men had the lowest percent at 8% see table 22.2).

The last two questions in the module involved attitudes toward people with mental illness. The first asked if the respondent thought treatment can help people with mental illness lead normal lives. The second asked whether the respondent thought people were generally caring and sympathetic to people with mental illness. Results from these two questions were combined to get an idea of the degree of stigma the respondent might feel toward the mentally ill. If they disagreed with both questions, their degree of stigma was considered high. If they agreed with both, their degree of stigma was considered low.

Most people (94.8%) agreed that treatment could help the mentally ill. A lower number (62%) agreed that people were generally caring for the mentally ill. About 1.7% of all respondents showed a high degree of stigma, while 52.1% showed a low degree of stigma. The remainder agreed with one question, while disagreeing with the other.

Table 22.2: Iowans Receiving Treatment for Mental Illness, 2007

DEMOGRAPHIC GROUPS	Receiving Treatment	
	%	C.I. (95%)
TOTAL	62.0	(60.3-63.7)
SEX		
Male	67.5	(65-70.1)
Female	56.8	(54.6-59)
RACE/ETHNICITY		
White/Non-Hisp.	61.8	(60-63.5)
Non-White or Hisp.	64.6	(57.4-71.8)
AGE		
18-24	68.3	(60.8-75.9)
25-34	64.0	(59.5-68.4)
35-44	58.1	(54.4-61.8)
45-54	57.6	(54.4-60.9)
55-64	58.4	(54.8-61.9)
65-74	65.2	(61.4-69.1)
75+	68.8	(64.9-72.8)
EDUCATION		
Less than H.S.	69.2	(61.8-76.7)
H.S. or G.E.D.	66.6	(63.9-69.3)
Some Post-H.S.	59.7	(56.3-63.1)
College Graduate	56.5	(53.5-59.5)
HOUSEHOLD INCOME		
Less than $15,000	58.4	(51.3-65.6)
$15,000-24,999	61.9	(57-66.8)
$25,000-34,999	65.4	(60.4-70.4)
$35,000-49,999	63.0	(58.8-67.2)
$50,000-74,999	61.7	(58-65.5)
$75,000+	59.2	(55.8-62.7)

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APPENDIX 1

Year 2010 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2007

Healthy People 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2007
Health Insurance (Objective #1.1) Ages ≥18	100%	89.5%
Specific Source of Ongoing Primary Care (Objective #1.4c) Ages ≥18	96%	77.1%
Limitation in Activities Due to Arthritis (Objective #2.2) Adults with Chronic Joint Symptoms, Ages ≥18	21%	27.9%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #3.12a) Ages ≥50	50%	23.3%
Sigmoidoscopy, Ever Had (Objective #3.12b) Ages ≥50	50%	62.2%
Diabetes, Increase proportion of persons with diabetes who receive formal diabetes education (Objective #5.1) Adults with diabetes, Ages ≥18	60%	60.4%
Cholesterol Screening, Within Past Five Years (Objective #12.15) Ages ≥18	80%	72.7%
Influenza Immunization, Within Past Year (Objective #14.29a) Ages ≥65	90%	74.6%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) Ages ≥65	90%	69.3%
Obese, BMI ≥ 30 (Objective #19.2) Ages ≥20	15%	28.4%
Reduce proportion of adults with high blood pressure	16%	26.8%
No Leisure Time Physical Activity (Objective # 22.1) Ages ≥18	20%	22.1%
Regular, Moderate Physical Activity, 5 or more Days/Week for 30 or more Minutes or vigorous physical activity 20 minutes or more per day, three or more days per week (Objective #22.2) Ages ≥18	30%	48.4%
Regular, Vigorous Physical Activity, 3 or more Days/Week for 20 or more Minutes (Objective #22.3) Ages ≥18	30%	25%
Binge Drinking, During the Past Month (Objective #26.11c) Ages ≥18	6%	19.9%
Cigarette Smoking (Objective #27.1a) Ages ≥18	12%	19.8%

[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 2007

Healthy Iowans 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2007
Health Insurance (Objective #1-1) Ages 18 – 64	100%	87.2%
Fecal Occult Blood Test (FOBT) Within Past Two Years **(Objective #2-7.1)** Ages ≥ 50	55%	23.3%
Sigmoidoscopy, Ever Had (Objective #2-7.1) Ages ≥50	64%	62.2%
Diabetes Prevalence (Objective #3-1)	7.1%	6.8%
People with diabetes receiving annual dilated eye exams (Objective #3.3.2)	80%	73.4%
People with diabetes receiving at least annual foot exams (Objective #3.3.2)	75%	74.2%
People with diabetes that have a glycosylated hemoglobin measurement at least once a year Objective #3.3.2)	95%	87%
Achieve identification and control of high blood pressure (Objective 9.3)	14.9%	26.8%
Reduce adult population with high blood cholesterol (Objective 9.4)	28.5%	28.9%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	74.6%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #10-2) Ages >= 65	90%	69.3%
Prevent a further rise in the percent of Iowans who are overweight (Objective 13.3)	38.3%	37%
Prevent a further rise in the percent of Iowans who are obese (Objective 13.3)	22.9%	27.7%
Meet the minimum daily average goal of at least five fruits and vegetables (Objective 13-5)	50%	19.9%
Meet the minimum recommendation of at least 30 minutes of moderate physical activity 5 days a week (Objective 16-9)	---	48.4%
Adults with asthma having asthma-related emergency or urgent care visits (Objective 18-1) Ages >= 18	12.6%	4.2%
Do not increase percent of gamblers where gambling led to financial problems (Objective 20-7)	1.6%	0.7%
Do not increase percent of gamblers where gambling led to personal problems (Objective 20-7)	1.7%	1.1%
Exposure to secondhand Smoke at Work (Objective 21-4)	10%	18.7%
Not allowing smoking anywhere in the home (Objective 21.6)	69%	75.3%
Cigarette Smoking (Objective 21.7) Ages > 18	18%	19.8%

Healthy Iowans 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2007
Cigarette Smoking (Objective 21.7) Ages 18-24	28%	26.6%
Cigarette Smoking (Objective 21.7) Household Income < $25,000	25%	27.8%
Cigarette smokers who stopped smoking cigarettes for a day or more (Objective #21-7)	75%	55.5%

[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 Iowans2010. See Healthy Iowans2010 for the exact definition of the objective

APPENDIX 2

Iowa 2007 Behavioral Risk Factor Surveillance System Questionnaire

Section 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 and Q2.2=88 (None), ⇨ Go to next section.

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?

If "No," ask: "Is there more than one, or is there no person who 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 cost?

1 Yes
2 No

3.4. About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.

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

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: Diabetes

5.1. 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 3: Diabetes

To be asked following core Q5.1 if response is "yes"

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

If 5 5 5 "no feet" to Q5, go to Q10

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 6: Hypertension Awareness

6.1. 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 section**
3 No ⇨**Go to next section**
4 Told borderline high or pre-hypertensive ⇨Go to next section

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

Section 7: Cholesterol Awareness

7.1. Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked?
1 Yes
2 No ⇨**Go to next section**

7.2. About how long has it been since you last had your blood cholesterol checked?
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

7.3. Have you ever been told by a doctor, nurse or other health professional that your blood cholesterol is high?
1 Yes
2 No

Section 8: Cardiovascular Disease Prevalence

Now I would like to ask you some questions about cardiovascular disease.

Has a doctor, nurse, or other health professional EVER told you that you had any of the following?
For each, tell me **"Yes"**, **"No"**, or you're **"Not sure"**:

8.1. (Ever told) you had a heart attack, also called a myocardial infarction?
1 Yes
2 No
7 Don't know / Not sure

8.2. (Ever told) you had angina or coronary heart disease?
1 Yes
2 No
7 Don't know / Not sure

8.3. (Ever told) you had a stroke?
1 Yes
2 No
7 Don't know / Not sure

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: Immunization

10.1. A flu shot is an influenza vaccine injected in your arm. During the past 12 months, have you had a flu shot?
1 Yes
2 No

10.2. During the past 12 months, have you had a flu vaccine that was sprayed in your nose? The flu vaccine that is sprayed in the nose is also called FluMist™.
1 Yes
2 No

10.3. A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person's lifetime and is different from the flu shot. Have you ever had a pneumonia shot?
1 Yes
2 No

10.4. Have you EVER received the hepatitis B vaccine? The hepatitis B vaccine is completed after the third shot is given.
INTERVIEWER NOTE: Response is "Yes" only if respondent has received the entire series of three shots.
1 Yes
2 No

The next question is about behaviors related to Hepatitis B.

10.5. Please tell me if ANY of these statements is true for YOU. Do NOT tell me WHICH statement or statements are true for you, just if ANY of them are:

You have hemophilia and have received clotting factor concentrate
You have had sex with a man who has had sex with other men, even just one time
You have taken street drugs by needle, even just one time
You traded sex for money or drugs, even just one time
You have tested positive for HIV

You have had sex (even just one time) with someone who would answer "yes" to any of these statements
You had more than two sex partners in the past year

Are any of these statements true for you?
1 Yes, at least one statement is true
2 No, none of these statements is true

Section 11: Tobacco Use

11.1. Have you smoked at least 100 cigarettes in your entire life?
5 packs = 100 cigarettes
1 Yes
2 No ⇨Go to next section

11.2. 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**

11.3. 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 12: Demographics

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

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

12.3. 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]**

If more than one response to Q12.3, continue. Otherwise, go to Q12.5

12.4. 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]**

12.5. 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? Active duty does not include training for the Reserves or National Guard, but DOES include activation, for example, for the Persian Gulf War.
1 Yes
2 No

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

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

12.8. 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)

12.9. 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

12.10. Is your annual household income from all sources:
01 Less than $10,000
02 $10,000 to less than $15,000
03 $15,000 to less than $20,000
04 $20,000 to less than $25,000
05 $25,000 to less than $35,000
06 $35,000 to less than $50,000
07 $50,000 to less than $75,000
08 $75,000 or more

12.11. 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

12.12. 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

12.13. How much did you weigh a year ago?
If female respondent and age <46.
[If you were pregnant a year ago, *how much did you weigh* before your pregnancy?*]*:
Note: If respondent answers in metrics, put "9" in column 130.
Round fractions up
_ _ _ _ Weight
(pounds/kilograms)

12.14. Was the change between your current weight and your weight a year ago intentional?
1 Yes
2 No

12.15. What county do you live in?
__ __ _ County name

12.16. What is your ZIP Code where you live?
_ _ _ _ _ ZIP Code

12.17. 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 Q12.19**

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

12.19. 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

12.20. 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

12.21. To your knowledge, are you now pregnant?
1 Yes
2 No

Section 13: Alcohol Consumption

13.1. During the past 30 days, have you had at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?
1 Yes
2 No ⇨**Go to next section**

13.2. 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**

13.3. One drink is equivalent to a 12 ounce beer, a 5 ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?
__ __Number of drinks

13.4. Considering all types of alcoholic beverages, how many times during the past 30 days did you have **X [X = 5 for men, X = 4 for women]** or more drinks on one occasion?
__ __Number of times
8 8 None

13.5. During the past 30 days, what is the largest number of drinks you had on any occasion?
_ _ Number

Section 14: Disability
The following questions are about health problems or impairments you may have.
14.1. **Are** you limited in any way in any activities because of physical, mental, or emotional problems?
1 Yes
2 No

14.2. **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 15: Arthritis Burden
The next questions refer to the joints in your body. Please do NOT include the back or neck.
15.1. During the past 30 days, have you had symptoms of pain, aching, or stiffness in or around a joint?
1 Yes
2 No ⇨**Go to Q15.4**

15.2. Did your joint symptoms FIRST begin more than 3 months ago?
1 Yes
2 No ⇨**Go to Q15.4**

15.3. Have you EVER seen a doctor or other health professional for these joint symptoms?
1 Yes
2 No

15.4. Have you EVER been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?
1 Yes
2 No
INTERVIEWER NOTE: Arthritis diagnoses include:
- **rheumatism, polymyalgia rheumatica**
- **osteoarthritis (not osteoporosis)**
- **tendonitis, bursitis, bunion, tennis elbow**
- **carpal tunnel syndrome, tarsal tunnel syndrome**
- **joint infection, Reiter's syndrome**
- **ankylosing spondylitis; spondylosis**
- **rotator cuff syndrome**
- **connective tissue disease, scleroderma, polymyositis, Raynaud's syndrome**
- **vasculitis (giant cell arteritis, Henoch-Schonlein purpura, Wegener's granulomatosis, polyarteritis nodosa)**

If either Q15.2=1 (Yes) or Q15.4=1 (Yes), continue. Otherwise, **⇨Go to next section.**

15.5. Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?
1 Yes
2 No

Note: If a respondent question arises about medication, then the interviewer should reply: *"Please answer the question based on how you are when you are taking any of the medications or treatments you might use."*

Section 16: Fruits & Vegetables
These next questions are about the foods you usually eat or drink. Please tell me how often you eat or drink each one, for example, twice a week, three times a month, and so forth. Remember, I am only interested in the foods *you* eat. Include all foods *you* eat, both at home and away from home.
16.1. How often do you drink fruit juices such as orange, grapefruit, or tomato?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
4 _ _ Per year
5 5 5 Never

16.2. Not counting juice, how often do you eat fruit?
1 __ __Per day
2 __ __Per week
3 __ __Per month
4 __ __Per year
5 5 5 Never

16.3. How often do you eat green salad?
1 __ __ Per day
2 __ __ Per week
3 __ __ Per month
4 __ __ Per year
5 5 5 Never

16.4. How often do you eat potatoes not including french fries, fried potatoes, or potato chips?
1 __ __Per day
2 __ __Per week
3 __ __Per month
4 __ __Per year
5 5 5 Never

16.5. How often do you eat carrots?
1 __ __Per day
2 __ __Per week
3 __ __Per month
4 __ __Per year
5 5 5 Never

16.6. Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat?
1 __ __Per day
2 __ __ Per week
3 __ __ Per month
4 __ __ Per year
5 5 5 Never

Section 17: Physical Activity

CATI note: If Core Q12.9 = 1 (employed for wages) or 2 (self-employed) then continue. Otherwise, Go to Q17.2.

17.1. When you are at work, which of the following best describes what you do? Would you say:

If respondent has multiple jobs, include all jobs

1. Mostly sitting or standing
2. Mostly walking or
3. Mostly heavy labor or physically demanding work

We are interested in two types of physical activity: vigorous and moderate. Vigorous activities cause large increases in breathing or heart rate while moderate activities cause small increases in breathing or heart rate.

17.2. Now, thinking about the moderate physical activities you do **[fill in (when you are not working) if "employed" or "self- employed"]** in a usual week, do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes small increases in breathing or heart rate?

1. Yes
2. No ⇨ **Go to Q17.5**

17.3. How many days per week do you do these moderate activities for at least 10 minutes at a time?
__ __ Days per week
8 8 Do not do any moderate physical activity for at least 10 minutes at a time ⇨ **Go to Q17.5**

17.4. On days when you do moderate activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?
__:__ __ Hours and minutes per day

17.5. Now thinking about the vigorous physical activities you do **[fill in (when you are not working) if "employed" or "self-employed"]** in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?

1. Yes
2. No ⇨ **Go to next section**

17.6. How many days per week do you do these vigorous activities for at least 10 minutes at a time?
__ __ Days per week
8 8 Do not do any vigorous physical activity for at least 10 minutes at a time ⇨ **Go to next section**

17.7. On days when you do vigorous activities for at least 10 minutes at a time, how much total time per day do you spend doing these activities?
__:__ __ Hours and minutes per day

Section 18: 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.**

18.1. Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation. Include tests using fluid from your mouth.

1 Yes
2 No ⇨ Go to next section

18.2. 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".
CATI INSTRUCTION: If the respondent remembers the year but cannot remember the month, code the first two digits 77 and the last four digits for the year.
__ __/__ __ __ __ Code month and year

18.3. 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?

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

CATI note: Ask Q18.4; if Q18.2 = within last 12 months. Otherwise, go to next section.

18.4. Was it a rapid test where you could get your results within a couple of hours?

1 Yes
2 No

Section 19: Emotional Support & Life Satisfaction

The next two questions are about emotional support and your satisfaction with life.

19.1. How often do you get the social and emotional support you need?

INTERVIEWER NOTE: If asked, say "please include support from <u>any</u> source".

1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never

19.2. In general, how satisfied are you with your life?

1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied

Section 20: Food Safety

20.1. In the past 30 days, did you have diarrhea that began within the 30 day period? *Diarrhea is defined as 3 or more loose stools in a 24-hour period.*

1 Yes
2 No **[Go to Module 1]**

20.2. Did you visit a doctor, nurse or other health professional for this diarrheal illness?

Note: Do not answer "Yes" if you just had telephone contact with a health professional.

1 Yes
2 No **[Go to Module 1]**

20.3. When you visited your health care professional, did you provide a stool sample for testing?

1 Yes
2 No

Module 1: Random Child Selection

If response to core Q12.7 is '88' (none) or '99' (refused) go to next Module.

If Core Q12.7= 1; <u>INTERVIEWER</u>: "Previously, you indicated there was one child age 17 or younger in your household. I would like to ask you some questions about that child." ⇨**Go to Q1**.

If Core Q12.7 is > 1 and Core Q12.7 does not equal to 88 or 99; <u>INTERVIEWER</u>: "Previously, you indicated there were [number] children age 17 or younger in your household. Think about those [number] children in order of their birth, from oldest to youngest. The oldest child is the first child and the youngest child is the last. Please include children with the same birth date, including twins, in the order of their birth."

CATI INSTRUCTION: RANDOMLY SELECT ONE OF THE CHILDREN. This is the "Xth" child. Please substitute "Xth" child's number in all questions below.

<u>INTERVIEWER</u>: "I have some additional questions about one specific child. The child I will be referring to is the "Xth" child in your household. All following questions about children will be about the "Xth" child."

1. What is the birth month and year of the "**Xth**" child?
_ _/_ _ _ _ Code month and year

2. Is the child a boy or a girl?
1 Boy
2 Girl

3. Is the child Hispanic or Latino?
1 Yes
2 No

4. Which <u>one or more</u> of the following would you say is the race of the child?

[Check all that apply]

1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other [specify] _____

If more than one response to Q4; continue. Otherwise, ⇨Go to Q6.

5. Which <u>one</u> of these groups would you say best represents the child's race?

1 White
2 Black or African American
3 Asian
4 Native Hawaiian or Other Pacific Islander
5 American Indian, Alaska Native
6 Other

6. How are you related to the child?

1 Parent (mother or father) include biologic, step or adoptive parent
2 Grandparent
3 Foster parent or guardian [other than parent or grandparent]
4 Sibling (brother or sister) include biologic, step and adoptive sibling
5 Other relative
6 Not related in any way

<u>Module 2: Childhood Asthma Prevalence</u>

If response to core Q12.7 is '88' (none) or '99' (refused) go to next module.

The next two questions are about the "Xth" child.

1. Has a doctor, nurse or other health professional EVER said that the child has asthma?

1 Yes
2 No ⇨**Go to next module**

2. Does the child still have asthma?

1 Yes
2 No

State Added Health Insurance

SAHIQ1. Have you heard of Iowa's Child Health Insurance Program, called Hawk-I?

1 Yes
2 No

State Added Adult Asthma

SAAQ1. Have you ever been told by a doctor or health professional that you have emphysema or chronic obstructive pulmonary disease, also known as COPD?

1 Yes
2 No

SAAQ2. Have you ever been told by a doctor or health professional that you have chronic bronchitis?
1 Yes
2 No

State Added Utilities

SAUTQ1. Was there ever a time in the past 12 months when you wanted to use your main source of heat but could not for one or more of the following reasons:
You ran out of fuel oil, kerosene, LPG, propane, coal, or wood because you were unable to pay for a delivery; or the utility company disconnected your gas or electric service because you were unable to pay your bill?
1 Yes
2 No

SAUTQ2. In the past 12 months, did you keep your home at a temperature that you felt was unsafe or unhealthy at any time of the year because there wasn't enough money for your energy bill
1 Almost every month,
2 Some months,
3 Only 1 or 2 months, or
4 Never

State Added Secondhand Smoke Policy

SASSQ1. 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

If "employed" or "self-employed" to core Q12.9, continue. Otherwise, go to module 4.

SASSQ2. While working at your job, are you indoors most of the time?
1 Yes
2 No ⇨ **Go to Module 4**

SASSQ3. 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

SASSQ4. 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

Module 4: Visual Impairment and Access to Eye Care

If respondent is less than 40 years of age, go to next module.
I would like to ask you questions about how much difficulty, if any, you have doing certain activities. If you usually wear glasses or contact lenses, please rate your ability to do them while wearing glasses or contact lenses.

1. How much difficulty, if any, do you have in recognizing a friend across the street? Would you say:
1 No difficulty
2 A little difficulty
3 Moderate difficulty
4 Extreme difficulty
5 Unable to do because of eyesight
6 Unable to do for other reasons
8 Not applicable (Blind) [Go to next module]

2. How much difficulty, if any, do you have reading print in newspaper, magazine, recipe, menu, or numbers on the telephone? Would you say:
1 No difficulty
2 A little difficulty
3 Moderate difficulty
4 Extreme difficulty
5 Unable to do because of eyesight
6 Unable to do for other reasons
8 Not applicable (Blind) [Go to next module]

3. When was the last time you had your eyes examined by any doctor or eye care provider?
1 Within the past month (anytime less than 1 month ago) [Go to Q5]
2 Within the past year (1 month but less than 12 months ago) [Go to Q5]
3 Within the past 2 years (1 year but less than 2 years ago)
4 2 or more years ago
5 Never
8 Not applicable (Blind) [Go to next module]

4. What is the main reason you have not visited an eye care professional in the past 12 months?
0 1 Cost/insurance
0 2 Do not have/know an eye doctor
0 3 Can not get to the office/clinic (too far away, no transportation)
0 4 Could not get an appointment
0 5 No reason to go (no problem)
0 6 Have not thought of it
0 7 Other
0 8 Not Applicable (Blind) ⇨**Go to next module**

Note: Skip Q5, if any response to Module 3 (Diabetes) Q10.

5. 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 (more than 1 year but less than 2 years ago)
4 2 or more years ago
5 Never
8 Not applicable (Blind) [Go to next module]

6. Do you have any kind of health insurance coverage for eye care?
1 Yes
2 No
8 Not applicable (Blind) [Go to next module]

7. Have you been told by an eye doctor or other health care professional that you NOW have cataracts?
1 Yes
2 Yes, but had them removed
3 No
8 Not applicable (Blind) [Go to next module]

8. Have you EVER been told by an eye doctor or other health care professional that you had glaucoma?
1 Yes
2 No
8 Not applicable (Blind) [Go to next module]

Age-related Macular Degeneration (AMD) is a disease that blurs the sharp, central vision you need for "straight-ahead" activities such as reading, sewing, and driving. AMD affects the macula, the part of the eye that allows you to see fine detail

9. Have you EVER been told by an eye doctor or other health care professional that you had Age-related macular degeneration
1 Yes
2 No
8 Not applicable (Blind) [Go to next module]

10. Have you EVER had an eye injury that occurred at your workplace while you were doing your work?
1 Yes
2 No

State Added Healthy Days (Symptoms)
SAHDQ1: During the past 30 days, for about how many days did pain make it hard for you to do your usual activities, such as self-care, work, or recreation?
__ __ Number of days
8 8 None

Module 11: Colorectal Cancer Screening

If respondent 49 years old or younger, go to next module

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 Q3**

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

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 module**

4. For a sigmoidoscopy, a flexible tube is inserted into the rectum to look for problems. A colonoscopy is similar, but uses a longer tube, and you are usually given medication through a needle in your arm to make you sleepy and told to have someone else drive you home after the test. Was your MOST RECENT examination called a sigmoidoscopy or a colonoscopy?
1 Sigmoidoscopy
2 Colonoscopy
3 Something else

5. 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

State Added Colorectal Cancer Screening
[ASK IF AGE > 49]
SACCSQ1. Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No ⇨ **Go to SACCAQ1**

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)
3 Other test
4 Recommended both Blood Stool Kit and sigmoidoscopy or Colonoscopy **[Go to SACCSQ3b]**
5 Did not recommend a test **Go to SACCAQ1**

SACCSQ3a. Did you have the test your health care provider recommended?
1 Yes ⇨ **Go to SACCAQ1**
2 No [If SACCSQ2=1 then ⇨ GO TO SACCSQ4
If SACCSQ2=2 then ⇨ GO TO SACCSQ5
If SACCSQ2=3, ⇨ GO TO SACCAQ1]

SACCSQ3b. Did you have the tests your health care provider recommended?
1 Yes ⇨ Go to SACCAQ1
2 No, did not have either ⇨ GO TO SACCSQ4
3 No, but only did not have blood stool kit ⇨ **GO TO SACCSQ4**
4 No, but only did not have sigmoidoscopy/colonoscopy ⇨ GO TO SACCSQ5

SACCSQ4. 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 want to do the prep
21 Don't know where to get the test
22 Don't know how to do the test
23 Other

If SACCSQ3b = 2, continue; else go to SACCAQ1
SACCSQ5. 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
[ASKED IF AGE > 49]

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?
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?

SACCKQ9. If I had colorectal cancer, I would have symptoms.
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

State Added Colorectal Cancer Plans:
[Ask if Age > 49]

SACCPQ1. I'd like to get a sense of your plans regarding colorectal cancer screening. Which of the following best describes your plan for gathering information? Would you say…
[Interviewer note: repeat "about colorectal cancer screening" when necessary]
[SELECT BEST ANSWER]
1 You do not plan to get more information about colorectal cancer screening,
2 You will get more information at some point in the future,
3 You will get information within six months,
4 You will get information within the next month,
5 You have already received more information, or
6 You are already knowledgeable and do not need more information?

SACCPQ2. Which of the following best describes your plan for getting screened for colorectal cancer? Would you say…
[Interviewer note: repeat "for colorectal cancer" when necessary]
[SELECT BEST ANSWER]
1 You do not plan to get screened for colorectal cancer,
2 You plan on getting screened at some point in the future,
3 You plan on getting screened within the next six months,
4 You plan on getting screened within the next month, or
5 You have made an appointment to get screened?

State Added Colorectal Cancer Risk
[Ask if Age > 49]
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?

SACCRQ2. If a person is of average risk for colorectal cancer, at what age should the person be screened for the first time?
___ ___ ___ AGE [18-97]
97 97 years old or older

Module 13: **Arthritis Management**
[If Core Q15.2 or Q15.4= 1 (Yes); continue. Otherwise, ⇨Go to next module.]
1. Earlier you indicated that you had arthritis or joint symptoms. Thinking about your arthritis or joint symptoms, which of the following best describes you TODAY?
1 I can do everything I would like to do
2 I can do most things I would like to do
3 I can do some things I would like to do
4 I can hardly do anything I would like to do

2. Has a doctor or other health professional EVER suggested losing weight to help your arthritis or joint symptoms?
1 Yes
2 No

3. Has a doctor or other health professional EVER suggested physical activity or exercise to help your arthritis or joint symptoms?
Note: If the respondent is unclear about whether this means an increase or decrease in physical activity, this means increase.
1 Yes
2 No

4. Have you EVER taken an educational course or class to teach you how to manage problems related to your arthritis or joint symptoms?
1 Yes
2 No

Module 16: Mental Illness & Stigma
Now, I am going to ask you some questions about how you have been feeling during the past 30 days. ..

1. About how often during the past 30 days did you feel nervous — would you say all of the time, most of the time, some of the time, a little of the time, or none of the time?
1 All
2 Most
3 Some
4 A little
5 None

2. During the past 30 days, about how often did you feel hopeless — all of the time, most of the time, some of the time, a little of the time, or none of the time?
1 All
2 Most
3 Some
4 A little
5 None

3. During the past 30 days, about how often did you feel restless or fidgety?
[If necessary: all, most, some, a little, or none of the time?]
1 All
2 Most
3 Some
4 A little
5 None

4. During the past 30 days, about how often did you feel so depressed that nothing could cheer you up?
[If necessary: all, most, some, a little, or none of the time?]
1 All
2 Most
3 Some
4 A little
5 None

5. During the past 30 days, about how often did you feel that everything was an effort?
[If necessary: all, most, some, a little, or none of the time?]
1 All
2 Most
3 Some
4 A little
5 None

6. During the past 30 days, about how often did you feel worthless?
[If necessary: all, most, some, a little, or none of the time?]
1 All
2 Most
3 Some
4 A little
5 None

The next question asks if any type of mental health condition or emotional problem has recently kept you from doing your work or other usual activities.
7. During the past 30 days, for about how many days did a mental health condition or emotional problem keep you from doing your work or other usual activities?
_ _ Number of days
8 8 None
INTERVIEWER NOTE: If asked, "usual activities" includes housework, self-care, caregiving, volunteer work, attending school, studies, or recreation.

8. Are you now taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem?
1 Yes
2 No

These next questions ask about peoples' attitudes toward mental illness and its treatment. How much do you **agree** or **disagree** with these statements about people with mental illness...

9. Treatment can help people with mental illness lead normal lives. Do you agree slightly or strongly, or disagree slightly or strongly?
1 Agree strongly
2 Agree slightly
3 Neither agree nor disagree
4 Disagree slightly
5 Disagree strongly

10. People are generally caring and sympathetic to people with mental illness. Do you agree slightly or strongly, or disagree slightly or strongly?
1 Agree strongly
2 Agree slightly
3 Neither agree nor disagree
4 Disagree slightly
5 Disagree strongly

INTERVIEWER NOTE: If asked for the purpose of Q9 or Q10: say: "answers to these questions will be used by health planners to help understand public attitudes about mental illness and its treatment and to help guide health education programs".

State Added Emergency Preparedness

The next series of questions asks about large-scale disasters or emergencies. By large-scale disaster or emergency we mean any event that leaves you isolated in your home or displaces you from your home for at least 3 days. This might include natural disasters such as hurricanes, tornados, floods, and ice storms, or man-made disasters such as explosions, terrorist events, or blackouts.

SAEPQ1. How prepared do you feel your household is to handle a large-scale disaster or emergency? Would you say…
1 Well prepared
2 Somewhat prepared, or
3 Not prepared at all

SAEPQ2. Does your household have a disaster communication plan for how you will communicate with friends and relatives in case of a large-scale disaster or emergency?
1 Yes
2 No

SAEPQ3. Does your household have an emergency supply kit containing necessary items such as food, water, and extra medication you would need for survival in case of a large-scale disaster or emergency?
1 Yes
2 No

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

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