Health in Iowa

Annual Report

From the 2008 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 and Prevention,
Division of Adult and Community Health, NCCDPHP,
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ACKNOWLEDGEMENTS

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We acknowledge the contributions of the following:

- The Centers for Disease Control and Prevention (CDC) Behavioral Surveillance Branch provided financial and technical support for developing the questionnaire, implementing the survey, and processing and weighting data.
- Staff and interviewers at The Center for Social and Behavioral Research, University of Northern Iowa under the direction of Gene Lutz, Director, and Mary Jane Crew, Interviewer Supervisor, who conducted all telephone interviews and captured the data from them.
- The various IDPH programs and other organizations provided supplemental funding for the conduct and analysis of the survey.
- The staff in various IDPH programs contributed in reviewing chapters of this report.
- Louise Lex and Donna Johnson provided document review.

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

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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, Guam, and the Virgin Islands.

Nature of the Survey

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

The BRFSS is designed to collect information on the health conditions, health risk behaviors, attitudes, and awareness of residents age 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 2008. Some of the risk factors discussed are: general health status, health care coverage, cigarette smoking, alcohol consumption, body weight, physical activity, various types of cancer screening, 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 Diabetes Prevention and Control Program, nutrition and physical activity campaigns such as Iowans Fit for Life, tobacco cessation and 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 whether to include 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. 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 2008 for a total sample size of 6,012. Interviews were conducted in both English and Spanish. There were 5,970 English interviews and 42 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.

In 2008, for the first time, another stratum was added devoted to cell phone numbers. All other strata excluded cell phones. The cell phone sample was a statewide sample of adults and was not further stratified geographically. These respondents were only asked the core questions in the survey along with some procedural questions to shorten the interview time. For instance, respondents were asked if they were doing anything that would make it unsafe to conduct the interview and not interviewed if they were. Furthermore, they were offered compensation of ten dollars in the form of an online gift certificate for participation to defray costs that many cell phone users are charged for incoming calls. Two hundred and fifty interviews were conducted with this cell phone sample over the course of eight months from February through September. Since data from the cell phone stratum were only collected in 18 states and since many of the collection procedures for cell phones are still somewhat experimental, the data from cell phones will not be used in the main body of this report. A special appendix will compare responses from the cell phone sample to the landline sample. In the future the two groups are likely to be combined in reporting.

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 a landline interview was 20.7 minutes. Spanish interviews took longer. The response rate, defined as completed interviews plus partial completes divided by all eligible households called, was 41.3%. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures. Of the 6,012 interviews conducted, 287 were partial interviews. This means that results from questions later in the questionnaire are determined from a somewhat smaller sample than earlier questions, even when not restricted to some sub-sample such as a particular age group. See Appendix 3 for the questions and their order.

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 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. 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.

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.[1,2] The BRFSS is attempting to include these people in 2008, but several complications exist in combining this data with the interviews done by landline telephone. For instance, a landline telephone is seen as a household appliance, while a cell phone is more frequently seen as an individual possession.

Despite these limitations, prevalence estimates from 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 socially undesirable habits. The potential for bias must always be kept in mind when interpreting self-reported data.

Analysis of the data

When analyzing BRFSS data, conclusions are to be drawn about the entire adult population of the state of Iowa. However, since only people from a randomly chosen sample are 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 a range of real state values can be determined with a high degree of confidence from the prevalence in the sample.

Charts and tables in this report will indicate a range of values in which there is a 95% chance of the true Iowa value falling. 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 to 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 the 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, a person 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 responses is less than 50 or the 95% confidence interval is larger than 20% will not be reported since this data is 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.

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3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 6,012 respondents in the BRFSS for the year 2008 included 2,307 males and 3,705 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 2008

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	88	3.8	88	2.4	176	2.9
25-34	229	9.9	367	9.9	596	9.9
35-44	399	17.3	555	15.0	954	15.9
45-54	474	20.6	703	19.0	1,177	19.6
55-64	484	21.0	711	19.2	1,195	19.9
65-74	342	14.8	579	15.6	921	15.3
75+	277	12.0	659	17.8	936	15.6
Unk/Ref	14	0.6	43	1.2	57	0.9
Total	2,307	38.4	3,705	61.6	6,012	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2008

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	5,689	94.6
Black Non-Hispanic	80	1.3
Other Non-Hispanic[1]	87	1.4
Hispanic	120	2.0
Refused	36	0.6
Total	6,012	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2008

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	349	5.8
High School Grad or GED	2,135	35.5
Some College or Technical School	1,699	28.3
College Graduate	1,810	30.1
Unknown/Refused	19	0.3
Total	6,012	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 2008

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	434	7.2
$15,000-$24,999	778	13.0
$25,000- 34,999	658	10.9
$35,000-$49,999	953	15.9
$50,000-$74,999	1,042	17.3
>=$75,000	1,349	22.4
Unknown/Refused	315	5.2
Total	6,012	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.[3] Additional studies that controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue to find that the risk of mortality is two to six times greater for those individuals who had reported earlier that their health was bad or poor, compared to those who had reported their health as excellent.[2,4] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[4]

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

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

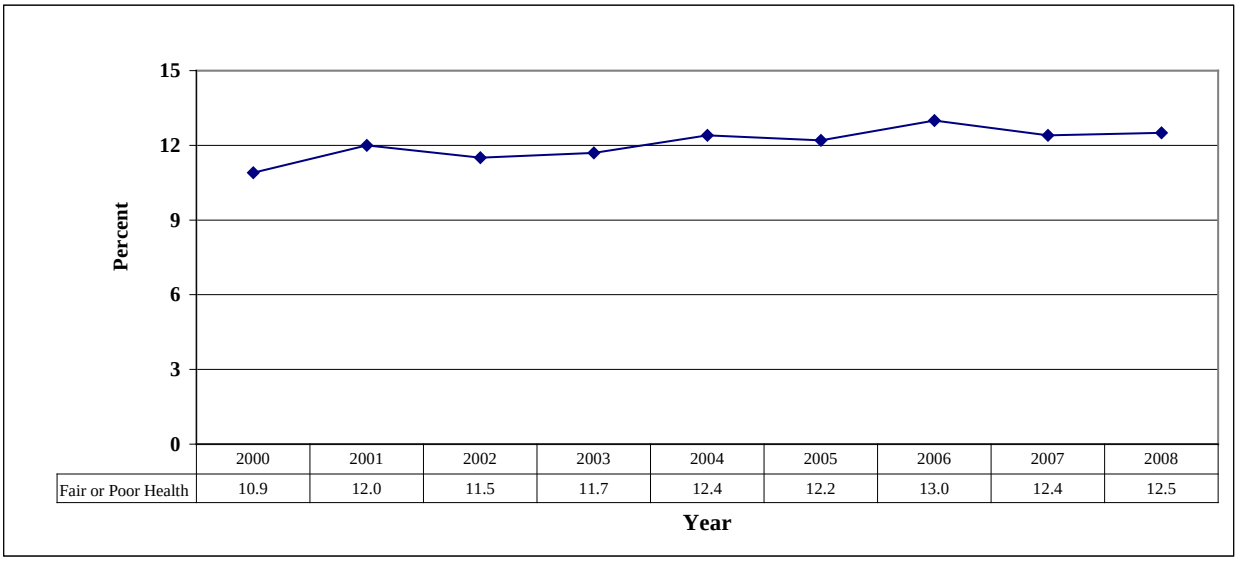
Emotional support and life satisfaction have become regularly occurring core measures in BRFSS. While they are not technically health-related quality of life measures, they certainly reflect a person's general quality of life. They are likely to influence or be influenced by the person's general health status.

General Health Status Results

In 2008, when asked how their health was in general, 19.8% of respondents reported that it was excellent. Another 36.2% said it was very good. While 31.5% reported good health, 12.5% rated their health as fair or poor. This figure for fair or poor health is about the same as the 12.4% figure found in 2007. Figure 4.1 shows that the trend in prevalence of fair or poor health has been mildly upward until the last couple of years.

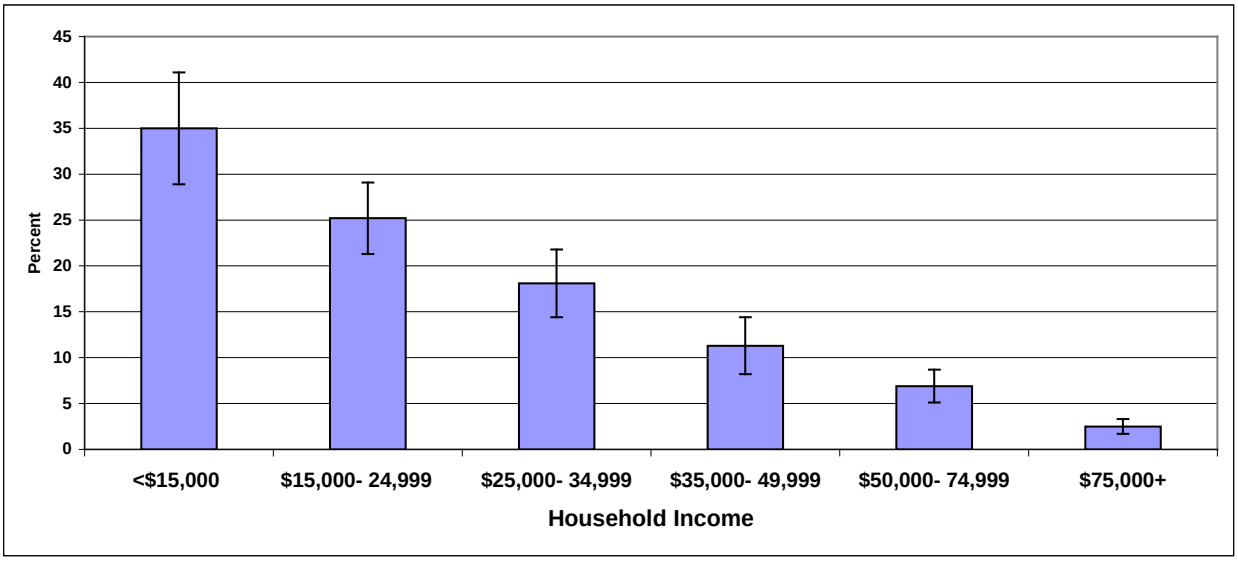
Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Household income had the most impact on reporting fair or poor health. While only 2.5% of those with incomes of $75,000 or over reported fair or poor health, 35% of those with 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, racial and ethnic minorities, 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 45 years all reported less

Figure 4.1: Percentage of Iowans Reporting Their Health as Fair or Poor 2000-2008



	2000	2001	2002	2003	2004	2005	2006	2007	2008
Fair or Poor Health	10.9	12.0	11.5	11.7	12.4	12.2	13.0	12.4	12.5

Figure 4.2: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2008



than 8% with fair or poor health.

In answer to the question about how many days during the past 30 days was their physical health not good, 66.7% of respondents reported none of the days and 9.4% 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

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2008

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	12.5	(11.5-13.5)
SEX		
Male	12.2	(10.6-13.8)
Female	12.8	(11.4-14.2)
RACE/ETHNICITY		
White/Non-Hisp.	12.1	(11.1-13.1)
Black/Non-Hisp.	17.1	(7.5-26.7)
Other/Non-Hisp.	19.3	(9.6-28.9)
Hispanic	19.0	(9.6-28.4)
AGE		
18-24	7.4	(2.3-12.5)
25-34	7.9	(5.4-10.4)
35-44	7.7	(5.5-9.9)
45-54	11.9	(9.7-14.1)
55-64	14.0	(11.8-16.2)
65-74	19.1	(16.3-21.9)
75+	28.4	(25.2-31.6)
EDUCATION		
Less Than H.S.	28.8	(22.7-34.9)
H.S. or G.E.D.	17.4	(15.2-19.6)
Some Post-H.S.	10.3	(8.7-11.9)
College Graduate	5.5	(3.7-7.3)
HOUSEHOLD INCOME		
<$15,000	35.0	(28.9-41.1)
$15,000- 24,999	25.2	(21.3-29.1)
$25,000- 34,999	18.1	(14.4-21.8)
$35,000- 49,999	11.3	(8.2-14.4)
$50,000- 74,999	6.9	(5.1-8.7)
$75,000+	2.5	(1.7-3.3)

income had the greatest impact. People with household incomes less than $15,000 reported 27.7% having fourteen days or more bad physical health days, while people with household incomes of $75,000 or more had the lowest percentage (3.2%).

When responding to the question of how many days during the past 30 days their mental health was not good, 70.2% of the respondents indicated none of the days and 8.1% reported 14 or more days. Table 4.2 shows the pattern for bad mental health days. Fourteen or more days in the past 30 of bad mental health is referred to as frequent mental distress (FMD).

More women, racial and ethnic minorities, younger people, those with low education, and those with low income had a greater prevalence of FMD. Those people age 75 and older had the lowest prevalence of FMD (4.6%), while those with an annual household income of $15,000 or less had the most (19.5%).

When asked how many days poor physical or mental health kept them from performing their usual activities, 63.8% of those with some days of either bad physical or mental health said none. On the other hand, 10.3% said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income.

When asked how often they got the emotional support they needed 47.6% of Iowans responded always and another 38.7% responded usually. Never was reported by 2.5%.

Groups with higher prevalences reporting no emotional support were racial minorities, people age 65 and older, people with less education, and people with lower household incomes. When asked, in general, how satisfied they were with their lives, 95.7% of Iowans reported either very satisfied or satisfied. Satisfaction was less likely for lower education and lower income

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2008

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	9.4	(8.5-10.3)	8.1	(7.2-9.1)
SEX				
Male	8.5	(7.1-9.9)	6.1	(4.9-7.3)
Female	10.3	(9.1-11.5)	10.1	(8.7-11.5)
RACE/ETHNICITY				
White/Non-Hisp.	9.2	(8.3-9.1)	7.7	(6.7-8.6)
Non-White or Hisp.	12.7	(8.2-17.2)	13.9	(8.8-19)
AGE GROUP				
18-24	6.4	(2.8-10.1)	12.4	(7.2-17.6)
25-34	5.6	(3.4-7.8)	8.7	(6.4-11.1)
35-44	7.1	(5.1-9.2)	9.5	(7.4-11.6)
45-54	8.0	(6.3-9.7)	8.3	(6.6-10)
55-64	11.6	(9.5-13.6)	6.8	(5.2-8.3)
65-74	14.6	(12.1-17.2)	4.9	(3.4-6.4)
75+	19.3	(16.4-22.2)	4.6	(2.9-6.2)
EDUCATION				
Less than H.S.	20.6	(15.2-25.9)	11.4	(7-15.9)
H.S. or G.E.D.	11.8	(10.1-13.6)	8.3	(6.8-9.9)
Some Post-H.S.	8.2	(6.8-9.7)	10.1	(8-12.1)
College Graduate	5.4	(4.1-6.6)	5.1	(4-6.3)
HOUSEHOLD INCOME				
Less than $15,000	27.7	(13.4-20.5)	19.5	(14-25)
$15,000- 24,999	16.9	(10.7-16.8)	14	(10.3-17.7)
$25,000- 34,999	13.8	(10.7-16.8)	11.4	(7.9-14.9)
$35,000- 49,999	7.8	(5.8-9.9)	5.5	(3.8-7.1)
$50,000- 74,999	5.7	(3.9-7.5)	6.8	(4.9-8.6)
$75,000+	3.2	(2.2-4.3)	5.5	(3.7-7.2)

individuals. In no case was the combined very satisfied and satisfied responses given by less than 80% of a particular group. The least satisfaction was reported by Iowans with incomes less than $15,000 per year. In this group 30.5% were very satisfied, 50.9% were satisfied. Combined this percentage was 81.4%.

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and territories ranged from 10.7% to 32.2%. The worst case seemed to be an outlier, since the second worst

rate was only 24.1%. The median value was 15%. Iowa ranked quite well with only 12.5% rating their health as fair or poor.

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5. INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

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

For those who lack health insurance, it may be impossible to obtain adequate health care. This not only includes expensive surgery and hospital stays, but also preventive care, management of chronic disorders such as diabetes or hypertension, and emergency treatment. Such a lack of access to health care allows small easily treatable problems to become major health problems for many individuals.[2]

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.

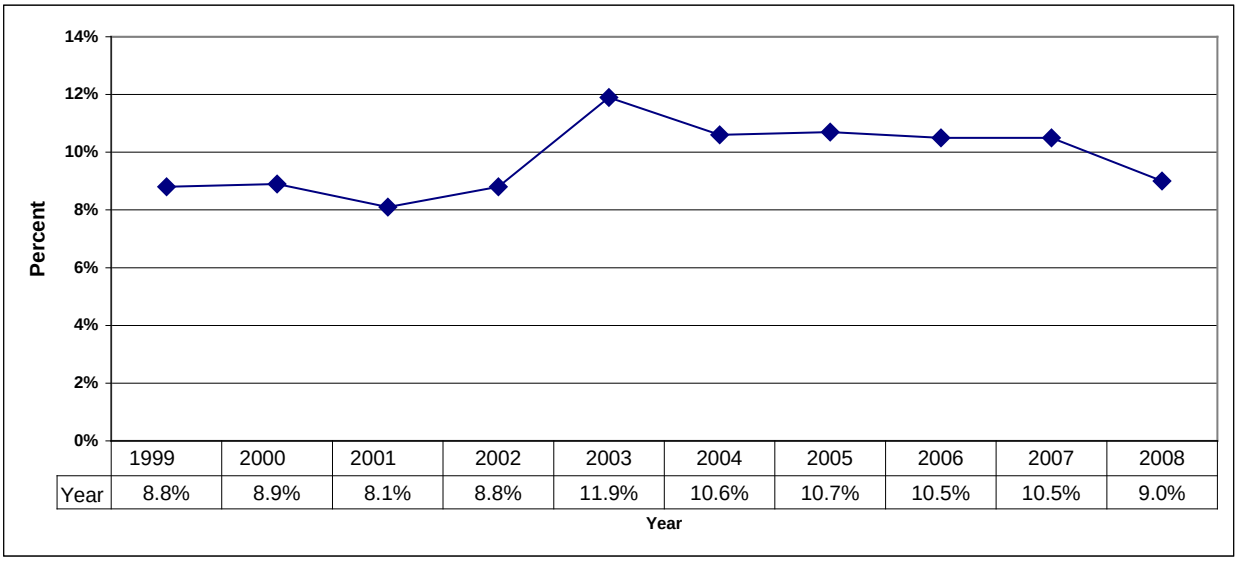
Insurance Coverage and Access to Health Care Results

In 2008, 9.0% of the survey respondents reported they had no health insurance. This is a decline from the 10.5% found in 2007. Until this year, the rate of uninsured Iowans has been nearly unchanged for several 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. Respondents with less than a high school education had the highest percentage of individuals without health care coverage (27.9%). This was followed closely by non-White or Hispanic respondents. Almost everyone age 65 years and older had health care coverage due to Medicare. The second lowest percentage of uninsured was those with household incomes of $75,000 and higher. In this group only (2.0% were uninsured).

Two other demographic variables that had a major impact on health care coverage were employment status and marital status. Those respondents who were unable to work had the highest percentage not covered by health insurance (17.3%). Only 3.1% of retirees were without health insurance.

Figure 5.1: No Health Insurance Coverage Trend Iowa 1999 – 2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Year	8.8%	8.9%	8.1%	8.8%	11.9%	10.6%	10.7%	10.5%	10.5%	9.0%

People who were married were much more likely to have health care coverage than those who were not. Only 5.9% of married respondents were without coverage, while 15.4% of unmarried respondents were without it.

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 8.9% 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 (3.0%) was for people age 65 and older. This was followed closely by people with household incomes of $75,000 or more. The highest percentage (23.4%) 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 76.6% 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. Non-White or Hispanic respondents were least likely to report one regular provider (56.0%), while those age 65 years old and older were most likely (86.2%).

When asked how long it had been since their last regular check up, 68.7% said less than one year. On the other end, 1.5% said they had never had a checkup. People who were female, older, and White non-Hispanic 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 (85.5%), while those from age 25 to 34 were least likely (57.9%).

Table 5.1 Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2008

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	9.0	(7.8-10.2)	8.9	(7.7-10.1)	76.6	(75-78.2)	68.7	(67.1-70.3)
SEX								
Male	10.3	(8.5-12.1)	8.2	(6.4-10)	69.4	(66.9-71.9)	59.8	(57.3-62.3)
Female	7.7	(6.4-9.2)	9.5	(7.9-11.1)	83.4	(81.4-85.4)	77.1	(75.1-79.1)
RACE/ETHNICITY								
Non-Hispanic White	7.7	(6.7-8.7)	8.3	(7.1-9.5)	78.1	(76.5-79.7)	69.1	#REF!
Non-White or Hisp.	27.4	(19.8-34.9)	17.9	(11.7-24.1)	56.0	(47.8-64.2)	63.1	(55.1-71.2)
AGE								
18-24	19.8	(13.1-26.5)	17.7	(10.6-24.8)	56.8	(48.4-65.2)	65.1	(56.9-73.3)
25-34	11.9	(8.8-15)	9.9	(7-12.8)	69.0	(64.7-73.3)	57.9	(53.4-62.4)
35-44	8.4	(6.4-10.4)	10.1	(7.7-12.5)	78.2	(75.3-81.1)	61.9	(58.4-65.4)
45-54	8.3	(6.5-10.1)	8.8	(6.8-10.8)	79.9	(77.2-82.6)	65.3	(62.2-68.4)
55-64	7.9	(6.1-9.7)	7.0	(5.4-8.6)	83.1	(80.6-85.6)	76.2	(73.5-78.9)
65+	1.9	(1.1-2.7)	3.0	(2.2-3.8)	86.2	(84.4-88)	85.5	(83.7-87.3)
EDUCATION								
Less than H.S.	27.9	(20.5-35.3)	18.9	(12.8-25)	61.0	(53.4-68.6)	70.6	(63.5-77.7)
H.S. or G.E.D.	11.2	(9-13.4)	10.3	(8.1-12.5)	76.4	(73.9-78.9)	68.7	(66-71.4)
Some Post-H.S.	8.1	(6.3-9.9)	9.7	(7.5-11.9)	77.8	(74.7-80.9)	68.4	(65.3-71.5)
College Graduate	3.4	(2.4-4.4)	4.2	(2.6-5.8)	78.9	(76.2-81.6)	68.6	(65.7-71.5)
HOUSEHOLD INCOME								
Less than $15,000	19.1	(13.2-25)	22.5	(16.6-28.4)	69.6	(62.3-76.9)	67.1	(60.2-74)
$15,000- 24,999	26.0	(21.3-30.7)	23.4	(18.7-28.1)	69.0	(64.1-73.9)	63.0	(58.1-67.9)
$25,000- 34,999	11.0	(7.5-14.5)	10.8	(7.5-14.1)	72.4	(67.7-77.1)	69.0	(64.1-73.9)
$35,000- 49,999	8.0	(5.5-10.5)	7.8	(4.7-10.9)	77.9	(73.6-82.2)	64.8	(60.5-69.1)
$50,000- 74,999	4.7	(2.9-6.5)	4.1	(2.7-5.5)	80.5	(77.4-83.6)	68.8	(65.3-72.3)
$75,000+	2.0	(0.6-3.4)	3.4	(1.4-5.4)	82.8	(80.3-85.3)	70.6	(67.5-73.7)

In 2008 two questions were asked concerning the respondent's type of healthcare plan. The second simply asked if there were another type, so that a person could respond with two types. The percents for the two combined responses are given in table 5.2.

Table 5.2: Type of Healthcare Plan for Iowans, 2008

Type	Percent
Your employer or your spouse's employer	34.8
A plan that you or someone else buys for you	8.1
Medicare, Medicare supplemental or MEDIGAP	11.8
MEDICAID or title XIX	2.3
The military, CHAMPUS, or the VA	1.5
Insurance through some other source	1.6
None (out of pocket)	39.8

The vast majority of healthcare plans were either out of pocket or employer provided. Each of these was more than three times the percent receiving Medicare, which was the only other option serving more than ten percent of respondents.

Comparison with Other States

In the fifty-four states and territories, the percent of non-elderly people without health insurance ranged from 5% to 30.6%. The highest percent was from an American territory, while the lowest was from Massachusetts, which was the first state to pass major health reform legislation. Seven states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 10.6% of its non-elderly respondents reporting not having any insurance. The median for states and territories was 17.1%. These figures are nearly identical to those obtained for the previous three years for the nation, while Iowa has improved.

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 89.4% of the non-elderly have coverage. Though an improvement, this is far short of the goal.

References

1. National Center for Health Statistics. *Health, United States. 2007, with Chartbook on Trends in the Health of Americans,* Hyattsville, Maryland: 2008.

2. Hadley J. Insurance Coverage, Medical Care Use, and Short-term Health Changes Following an Unintentional Injury or the Onset of a Chronic Condition. *Journal of the American Medical Association,* Vol 297, No. 10; March, 2007.

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 referred 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 top killer in the United States every year except 1918. Nearly 2,400 Americans die of CVD each day, an average of 1 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.[1] 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.[2]

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.[2]

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 percent of stroke survivors are permanently disabled.[1] 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 estimated to be $431.8 billion in 2007, including health care expenditures and lost productivity from death and disability.[2]

In Iowa deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 319.3 in 1997 to 229.0 in 2007. The rate of deaths from stroke has gone from 75.5 in 1997 to 56.2 in 2007. Deaths from cardiovascular diseases were 34.0% of all deaths in 2007 in Iowa. Diseases of the heart made up 74.4% and cerebrovascular disease 18.3% of the cardiovascular deaths.[3]

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.[1]

Cardiovascular Diseases Results

In 2008, 4.2% of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction, 4.2% had also 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. About 8.3% 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. Only 1.2% of people 35 to 44 years old had them, while 22.8% of those 75 years or older had them. Nobody age 18 to 24 reported having a stroke, while 10.5% of those age 75 and older did so. In the case of having any of the three conditions, only 1.5% of those age 18 to 24 years were included, while 29.2% 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.

Since BRFSS relies on self reported events, these results must represent survivors of these cardiovascular events. Events ending in death on their first occurrence could not be considered here. Mortality data is required to complement the information from this survey.

References

1. American Heart Association and American Stroke Association. Heart Disease and Stroke Statistics – 2007 Update. 2007.

2. Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention. Addressing the Nation's Leading Killers: At a Glance. 2007.

3. Iowa Department of Public Health. *2007 Vital Statistics of Iowa*. 2009.

Table 6.1: Prevalence among Iowans of Heart Attack, Heart Disease, and Stroke, 2008

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	6.5	(5.8-7.2)	2.7	(2.3-3.1)	8.3	(7.6-9.1)
SEX						
Male	8.2	(7-9.3)	2.9	(2.3-3.5)	10.0	(8.7-11.3)
Female	4.9	(4.1-5.7)	2.5	(2.1-2.9)	6.7	(5.9-7.6)
RACE/ETHNICITY						
White/Non-Hisp.	6.5	(5.8-7.2)	2.8	(2.4-3.2)	8.4	(7.6-9.2)
Black/Non-Hisp.	2.9	(0.1-5.7)	2.0	(0-4.2)	3.3	(0.4-6.2)
Other/Non-Hisp.	10.5	(3.1-17.8)	1.3	(0-2.9)	10.9	(3.4-18.3)
Hispanic	7.0	(0-14.5)	0.0	(0-0)	7.0	(0-14.5)
AGE						
18-24	1.5	(0-3.7)	0.0	(0-0)	1.5	(0-3.7)
25-34	1.5	(0.3-2.8)	0.6	(0-1.4)	2.2	(0.7-3.6)
35-44	1.2	(0-2.4)	0.4	(0-0.8)	1.6	(0.3-2.9)
45-54	3.3	(2.1-4.6)	2.2	(1.2-3.2)	5.0	(3.5-6.5)
55-64	9.0	(7.1-10.9)	3.2	(2-4.4)	11.2	(9.1-13.3)
65-74	17.9	(15.1-20.8)	6.2	(4.5-7.8)	22.0	(18.9-25)
75+	22.8	(19.9-25.7)	10.5	(8.4-12.5)	29.2	(26-32.4)
EDUCATION						
Less Than H.S.	12.0	(7.7-16.2)	6.7	(4-9.4)	15.7	(11-20.4)
H.S. or G.E.D.	8.0	(6.7-9.3)	4.0	(3.2-4.8)	10.9	(9.4-12.3)
Some Post-H.S.	5.7	(4.6-6.9)	1.8	(1.2-2.4)	6.9	(5.6-8.2)
College Graduate	4.4	(3.3-5.4)	1.2	(0.6-1.8)	5.2	(4.1-6.3)
HOUSEHOLD INCOME						
Less than $15,000	12.0	(8.8-15.2)	7.2	(4.5-9.9)	15.5	(11.7-19.2)
$15,000- 24,999	9.5	(7.1-11.9)	4.3	(2.9-5.7)	12.3	(9.7-14.9)
$25,000- 34,999	9.6	(7.1-12.1)	3.0	(1.6-4.4)	11.8	(9.1-14.6)
$35,000- 49,999	7.9	(5.9-9.8)	2.6	(1.6-3.6)	9.5	(7.4-11.6)
$50,000- 74,999	3.9	(2.6-5.2)	1.3	(0.7-1.9)	5.0	(3.6-6.4)
$75,000+	3.4	(2.4-4.3)	1.3	(0.5-2.1)	4.4	(3.2-5.6)

7. EXERCISE AND PHYSICAL ACTIVITY

Background

A lifestyle lacking in regular physical activity has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, and other debilitating conditions.[1,2,4] 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 actively 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 2008, 75% 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 a bit lower than the 77.9% found in 2007 (See figure 7.1).

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 with less than a high school education (54.1%), while the highest was for those with a college education (86.5%). This was closely followed by those having an annual household income of $75,000 or more (86.3%) (See table 7.1).

Comparison with Other States

Values for the measure of not engaging in leisure time physical activity ranged from a low of 18.1% to a high of 33.2%. This excludes one region with such a greatly higher value that it can be considered unusually extreme. Iowa ranked exactly at the median on not engaging in leisure time physical activity.

Table 7.1: Physical Activity in Iowans, 2008

DEMOGRAPHIC GROUPS	Any Leisure Physical Exercise in Last Month	
	%	C.I. (95%)
TOTAL	75.0	(73.6-76.4)
SEX		
Male	75.1	(72.9-77.3)
Female	74.8	(73-76.6)
RACE/ETHNICITY		
White/Non-Hisp.	76.1	(74.7-77.5)
Non-White or Hisp.	58.6	(50.7-66.5)
AGE		
18-24	83.2	(77.3-89.1)
25-34	75.9	(72-79.8)
35-44	80.4	(77.7-83.1)
45-54	74.8	(72.1-77.5)
55-64	72.9	(70.2-75.6)
65-74	69.3	(65.9-72.6)
75+	62.6	(59.2-66.1)
EDUCATION		
Less than H.S.	54.1	(46.8-61.4)
H.S. or G.E.D.	68.2	(65.7-70.7)
Some Post-H.S.	75.7	(73.2-78.2)
College Graduate	86.5	(84.7-88.3)
HOUSEHOLD INCOME		
Less than $15,000	67.0	(61.1-72.9)
$15,000- 24,999	63.4	(58.9-67.9)
$25,000- 34,999	65.9	(61.2-70.6)
$35,000- 49,999	72.9	(69.4-76.4)
$50,000- 74,999	78.2	(75.3-81.1)
$75,000+	86.3	(83.9-88.7)

Year 2010 Health Objectives for 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.[3] Iowa's level of 25% is higher than this target and is moving in the wrong direction.

References

1. Mokdad AH, Marks JS, Stroop DF, Gerberding JL. Actual Causes of Death in the United States, 2000. Journal of the American Medical Association, 291; 2004. 1238-1245.
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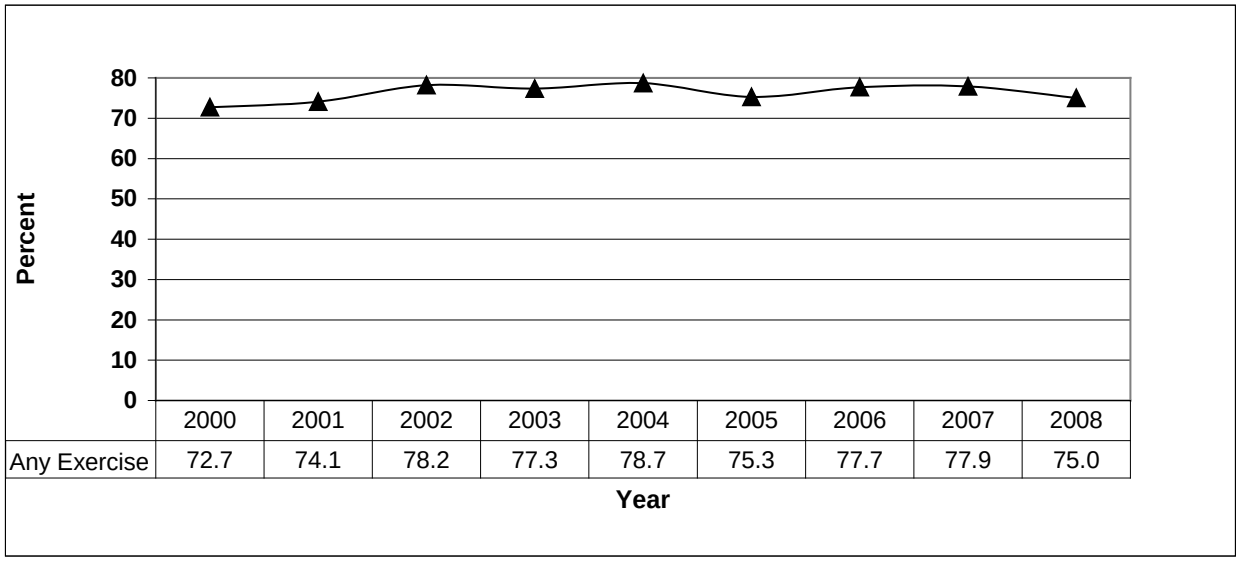
3. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd Ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office; November 2000.
4. U.S. Department of Health and Human Services. Surgeon General's Report on Physical Activity and Health. 1996.

Figure 7.1: Trend in Physical Activity in Iowa by Year



	2000	2001	2002	2003	2004	2005	2006	2007	2008
Any Exercise	72.7	74.1	78.2	77.3	78.7	75.3	77.7	77.9	75.0

8. 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. Obesity is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis.[5] Obesity has been increasing so rapidly that it may be regarded as an epidemic.

The obesity epidemic is a big contributor to the skyrocketing health care costs in the United States. As the Baby Boomer generation ages, obesity-related costs to Medicare and Medicaid are likely to grow significantly because of the large number of people in this population and its high rate of obesity.[4] Direct medical costs are easiest to calculate, coming in at $93 billion, or 9%, of our national medical bill. The most recent estimate of Iowa's direct costs attributable to obesity were to be $783 million, of which $198 million is paid by Medicaid and $165 million by Medicare.[4] These estimates were from the late 1990s, and are, therefore, likely to be quite low. There are other costs as well that are harder to pin down. For instance, obese people miss more work, costing employers something on the order of $4 billion. Because people are fatter, airlines spend more on jet fuel, and the obese themselves spend more on gas.[2]

The origin of overweight and obesity involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits. The increase in the prevalence of overweight and obesity is a result of a shift in energy balance in which energy taken in from food is greater than energy used in physical activity.[3]

Strategies to Combat Obesity would seek to advance policies that

- Increase the availability of affordable healthy foods in all communities;
- Increase the frequency, intensity, and duration of physical activity;
- Improve access to safe and healthy places to live, work, learn, and play;
- Limit screen time; and
- Encourage employers to provide workplace wellness programs.[4]

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.[3]

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 2008 37.6% of Iowans are overweight and 26.7% are obese, based on BMI. The combined percentage of individuals who are overweight or obese is 64.3%. Although the overweight percent is a little higher than in 2007, the obese percent is lower. The

Figure 8.1: Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 1999 - 2008

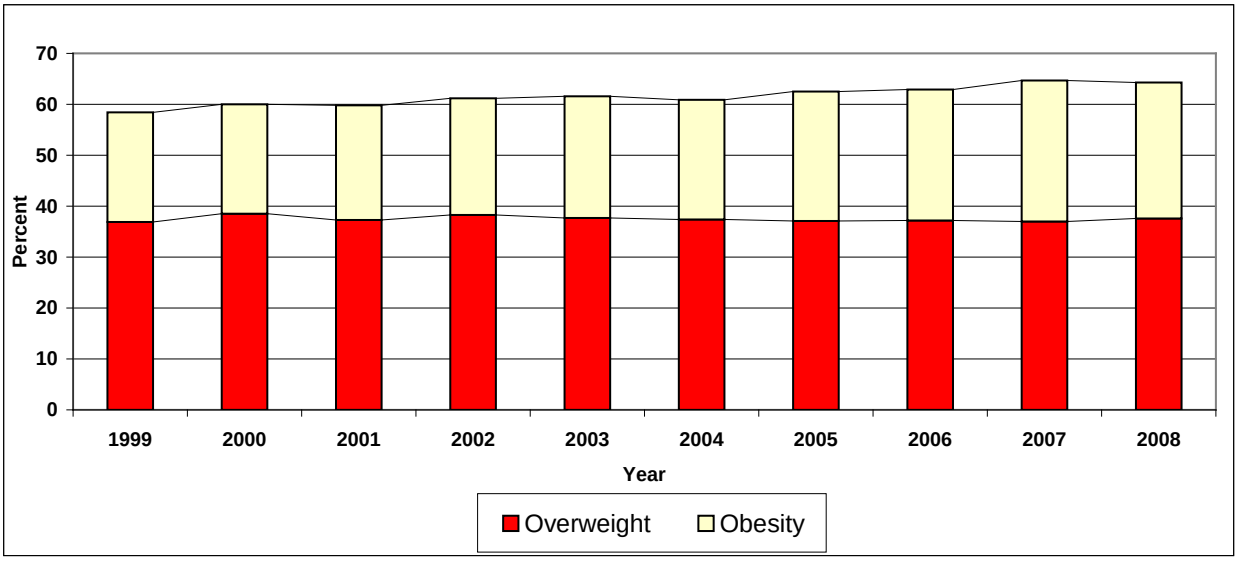
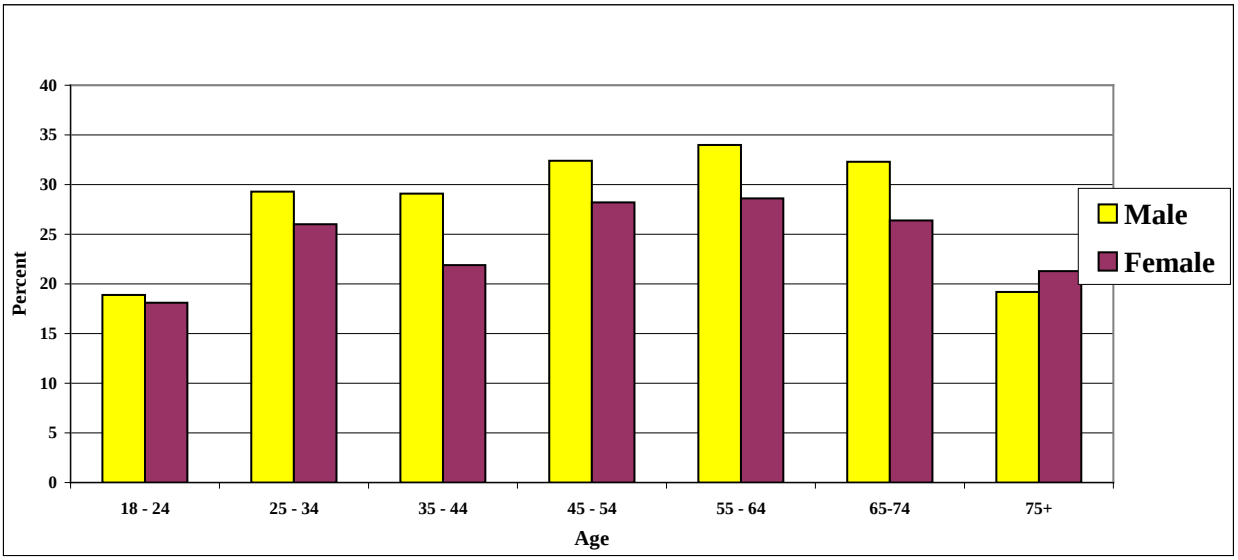


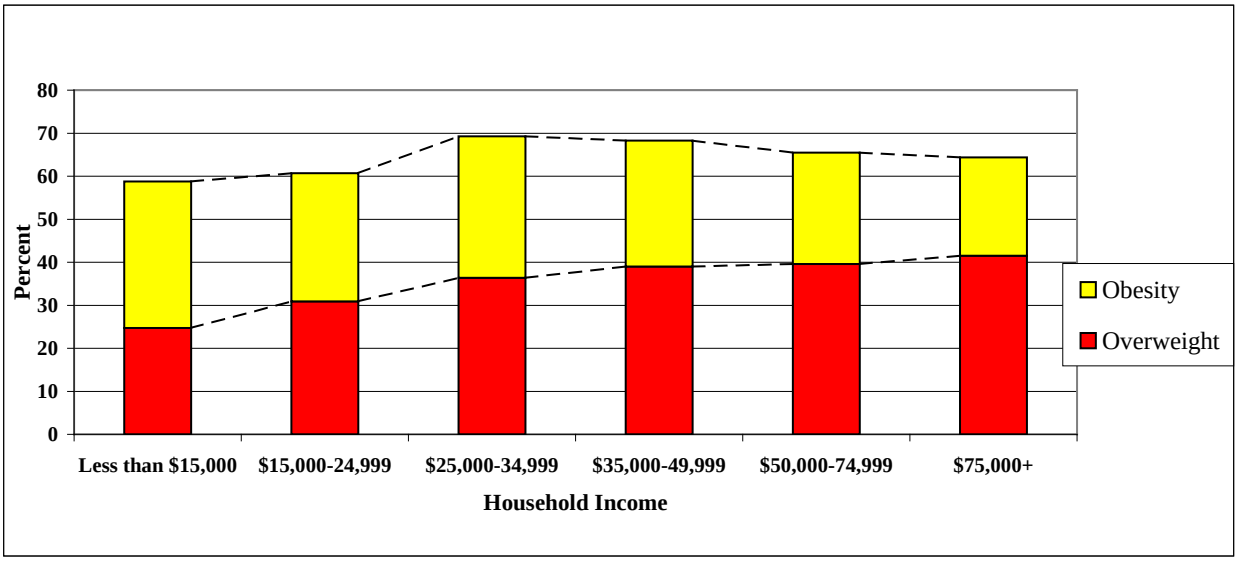
Figure 8.2: Obesity by Age and Sex, 2008



percent of overweight and obese combined are about the same. In 2007, 64.7% reported being either overweight or obese. This departs from the long trend of increasing overweight and obesity (See Figure 8.1).

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. Males are not more obese than females at the extreme age groups. There is really no difference between the sexes in the 18 to 24 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 8.2). There is a much stronger sex difference for overweight than for obesity. More men are overweight than women and there is no decline or equalization at the oldest age group.

Figure 8.3: Overweight and Obesity by Income, Iowa 2008



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 higher income levels. These effects somewhat cancel each other when overweight and obesity are combined (See Table 8.1 and Figure 8.3).

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 8.1). 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 males with 72.9%. The 18 to 24 year old group had the lowest prevalence over their healthy weight (42.4%).

Respondents were also asked about their weight a year ago. If it was different from their current weight, they were asked if the change in weight was intentional. The range in weight change

from a year ago was from a loss of 290 pounds to a gain of 85 pounds. Only 51.2% of people with a change had lost weight. Of respondents with a change in weight 38.9% said the weight gain or loss was intentional. Of those who lost weight, 63% said it was intentional.

Comparison with Other States

Iowa's figure of 26.7% obese in 2008 was nearly the same as the national median of 26.6%. However, Iowa's figure of 64.3% either overweight or obese was higher than the national median of 63.4%. The range of prevalence of obesity among the states and territories was from a low of 19.1% to a high of 33.4% or a low of 55.1% to a high of 68.8% for overweight or obesity

Table 8.1: Overweight and Obese Iowans Based on BMI, 2008

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	37.6	(36-39.2)	26.7	(25.1-28.3)	64.3	(62.5-66.1)
SEX						
Male	44.1	(41.6-46.6)	28.8	(26.4-31.2)	72.9	(70.4-75.4)
Female	31.0	(29-33)	24.6	(22.8-26.4)	55.5	(53.3-57.7)
RACE/ETHNICITY						
White/non-Hisp.	38.0	(36.2-39.8)	26.5	(24.9-28.1)	64.5	(62.7-66.3)
Non-White or Hisp.	31.1	(24-38.3)	30.1	(21.8-38.5)	61.3	(53-69.5)
AGE GROUP						
18 - 24	23.9	(16.8-31)	18.5	(11.8-25.2)	42.4	(34-50.8)
25 - 34	36.9	(32.4-41.4)	27.7	(23.6-31.8)	64.6	(60.3-68.9)
35 - 44	37.8	(34.3-41.3)	25.7	(22.6-28.8)	63.5	(60.2-66.8)
45 - 54	40.5	(37.2-43.8)	30.4	(27.3-33.5)	70.9	(68-73.8)
55 - 64	40.9	(37.6-44.2)	31.5	(28.4-34.6)	72.4	(69.5-75.3)
65-74	42.1	(38.4-45.8)	29.2	(25.8-32.6)	71.3	(68.1-74.5)
75+	39.4	(35.8-43)	20.5	(17.5-23.4)	59.9	(56.3-63.4)
EDUCATION						
Less than H.S.	27.8	(21.5-34.1)	29.2	19.3-28.6	57.0	(49.4-64.6)
H.S. or G.E.D.	38.4	(35.7-41.1)	29.5	24.2-28.9	67.9	(65.2-70.6)
Some Post-H.S.	36.4	(33.3-39.5)	28.7	21.8-26.9	65.1	(61.8-68.4)
College Graduate	39.7	(36.8-42.6)	21.3	16.6-21.4	61.0	(58.1-63.9)
HOUSEHOLD INCOME						
Less than $15,000	24.7	(19.2-30.2)	34.1	23.5-33.0	58.7	(51.1-66.3)
$15,000- 24,999	30.9	(26.4-35.4)	29.8	21.6-28.9	60.7	(55.6-65.8)
$25,000- 34,999	36.4	(31.7-41.1)	32.9	21.5-28.7	69.3	(64.8-73.8)
$35,000- 49,999	39.0	(34.9-43.1)	29.3	22.8-29.3	68.3	(64.2-72.4)
$50,000- 74,999	39.6	(35.9-43.3)	25.9	21.0-27.8	65.4	(61.7-69.1)
$75,000+	41.5	(38.2-44.8)	22.9	16.2-22.0	64.4	(61.1-67.7)

combined. The prevalence of being over a healthy weight (either overweight or obese), and particularly obesity, increased from 2007 in the nation but not in Iowa.

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 27.2% 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. At the same time, taken together, indications show that Iowa may be stemming the tide of overweight and obesity.

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9. DIABETES

Background

Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. Diabetes can be associated with serious complications and premature death.

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.[3] From 1980 through 2005, the crude prevalence of diagnosed diabetes increased 120%.[2]

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.[1] One out of every five health care dollars is spent caring for someone with diagnosed diabetes.

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).

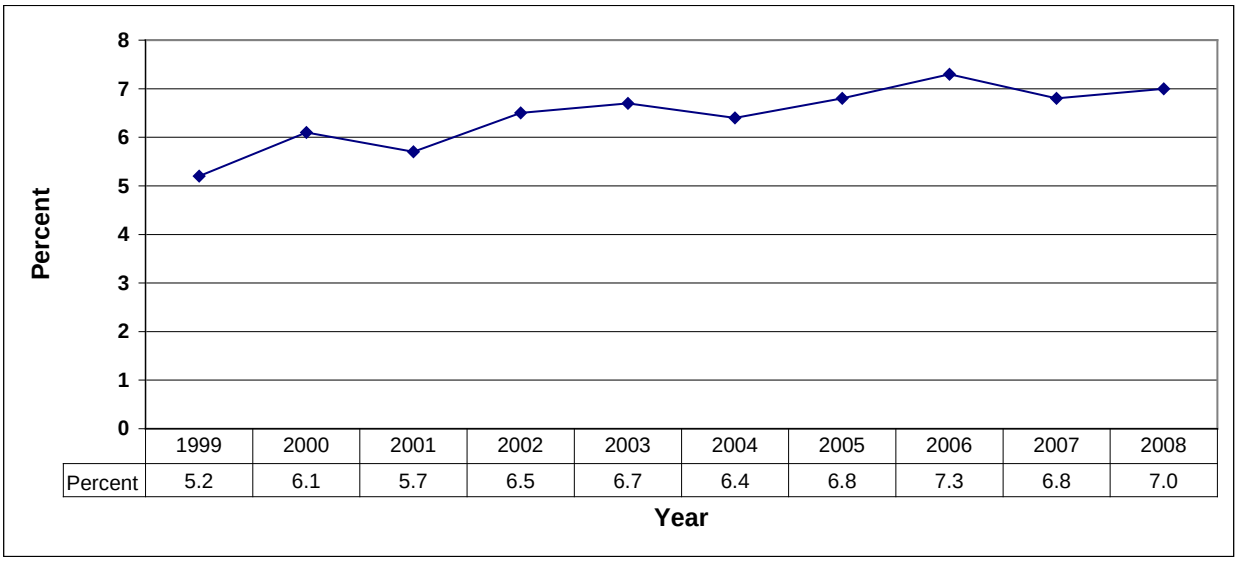
The complications of diabetes are many and severe. They can include heart disease, stroke, high blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, biochemical imbalances such as ketoacidosis and diabetic 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. The program also certifies programs for Medicaid reimbursement and assists certified programs in maintaining quality standards for outpatient education.

Diabetes Results

In 2008, 7.0% of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is slightly higher than the 6.8% found in 2007, but lower than the 7.3% found in 2006 (see figure 9.1). The prevalence of diabetes has been reasonably constant for the past four years in Iowa.

Figure 9.1: Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year, 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Percent	5.2	6.1	5.7	6.5	6.7	6.4	6.8	7.3	6.8	7.0

Table 9.1 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 diabetics is people age 75 years and older (16.9%), while the group with the lowest percentage is people age 18 to 24 years. No cases were present among survey respondents in that age group.

When asked if they had ever been tested for diabetes, 55.3% said they had.

More attention has been given lately to pre or borderline diabetes. It is thought that people who catch their diabetes before it is fully developed stand a good chance of avoiding it altogether by making lifestyle changes. In 2008, 4.7% of non-diabetic respondents were told they had pre-diabetes.

Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (38.8%). The age group in which the least reported being first diagnosed was less than age 16 years (1.6%).

Of those ever told by a physician that they have diabetes, 29.5% reported currently taking insulin.

Table 9.1: Iowans Ever Been Told They Had Diabetes, 2008

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	7.0	(6.4-7.6)
SEX		
Male	7.3	(6.3-8.3)
Female	6.7	(5.9-7.5)
RACE/ETHNICITY		
White/Non-Hisp.	7.2	(6.4-8)
Black/Non-Hisp.	6.0	(1.7-10.3)
Other/Non-Hisp.	4.8	(0.7-8.9)
Hispanic	3.5	(0.8-6.2)
AGE GROUP		
18-24	0.0	(0-0)
25-34	1.7	(0.9-2.5)
35-44	2.7	(1.7-3.7)
45-54	7.5	(5.7-9.3)
55-64	11.3	(9.3-13.3)
65-74	16.4	(13.7-19.1)
75+	16.9	(14.2-19.6)
EDUCATION		
Less than H.S.	10.8	(7.5-14.1)
H.S. or G.E.D.	8.6	(7.4-9.8)
Some Post-H.S.	6.9	(5.7-8.1)
College Graduate	4.5	(3.5-5.5)
HOUSEHOLD INCOME		
Less than $15,000	13.8	(10.3-17.3)
$15,000- 24,999	10.9	(8.5-13.3)
$25,000- 34,999	9.3	(6.9-11.7)
$35,000- 49,999	7.4	(5.8-9)
$50,000- 74,999	4.4	(3.2-5.6)
$75,000+	3.8	(2.6-5)

When asked how many times they had seen a health professional for their diabetes in the last year, the most common answer was four times (31.6%), while 13.8% 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 65.2% checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 9.9% reported never testing their blood sugar. Around 86% 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 7.2% reported not having had the A1C test. Another 6.8% reported they had never heard of such a test. It is recommended that this test be done at least twice a year and at least three months apart.

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, 69% of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 9.4% said they never checked them. Around 75.5% 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 75.8% reported within the last year, while 3.2% reported never having such an examination. Among Iowans with diabetes, 20.2% had been told it had affected their eyes.

Learning how to manage diabetes is very important to those who have the condition to keep it from leading to deteriorating health. Only 67.1% of those with diabetes in 2008 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 8.3% in 2008. Prevalence ranged from 5.9% to 12.4%. The figure for Iowa was well below the median at 7%. As in obesity, the prevalence of diabetes continues to rise nationwide, but this trend is not present 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 2008 no higher than 7.3%. Iowa is currently at 7% 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 75.8%. Of all people with diabetes 75% should receive at least an annual foot exam from a health professional. The figure obtained was 75.5%. Of all people with diabetes 95% should receive a glycosylated hemoglobin test at least annually. The figure was only 86%. Nearly seven percent reported having not even heard of the test. The only one of these three diabetes management objectives to be met was the annual foot exam.

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10. 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.

This chronic disease affects nearly 23 million Americans of all ages.[2] Asthma is the most common chronic disease of childhood. Over six and a half million children in the U.S. suffer from asthma. Prevalence among adults and children has increased sharply since 1980.[2] More than 200,000 Iowans now have asthma of which 148,000 are adults.[1]

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.[3]

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. Self management of asthma involves the use of drugs and the avoidance of known triggers.

The direct and indirect costs of asthma, including inpatient and outpatient care and medications, and socio-economic costs are estimated to exceed $11 billion each year.[1] Based on national data, half of all children and a quarter of all adults with asthma miss at least one day of school or work each year.[3]

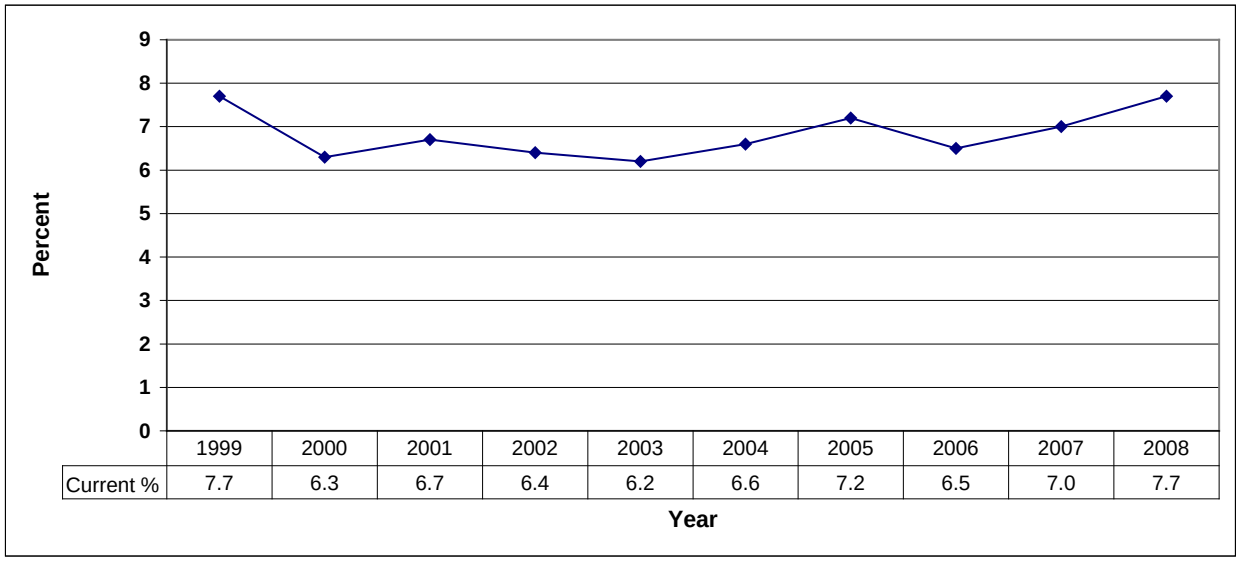
Asthma Results

In 2008, 10.7% of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 7.7% currently had asthma, and 2.6% formerly had asthma.[*] The percentage of Iowa adults with either lifetime or current asthma is up from 2007. In that year the percent of current asthma was 7%. (See figure 10.1).

In Iowa, more women currently have asthma than do men. People with more education had a lower rate of current asthma, while Hispanics and members of multiple or other race groups had a higher rate. People under 25 had a higher rate, while people age 75 years and older had a lower rate of current asthma. Household **income** seemed to be the most powerful factor determining asthma prevalence. The group with the highest percentage currently having asthma was found among people with annual household incomes less than

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

Figure 10.1: Current Asthma in Iowa by Year, 1999 - 2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Current %	7.7	6.3	6.7	6.4	6.2	6.6	7.2	6.5	7.0	7.7

$15,000 (16.9%). The lowest percentage of current asthma was found in people with household incomes between $25,000 and $35,000 per year (5.4%) (See Table 10.1).

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 9.2% of the children had ever been told they had asthma and that 6.6% of all children still have asthma. This is an increase from the figures for 2007 when 8.4% had ever been told they had asthma and 5% still had it. The 2008 figures were quite close to those for 2006, however, suggesting that 2007 may have been somewhat unusual. Contrary to the situation for adults, about the same percent of boys were reported to currently have asthma as the percent of girls.

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 2007 callback survey, however, it was found that adults with asthma having asthma-related emergency or urgent care visits was far better than the Healthy Iowans 2010 goal. While the goal was to have 12.6% of people with asthma have urgent or emergency care visits, Iowa only had 8.5% 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 2008 only nine states and territories had a lower prevalence of current asthma than Iowa. While Iowa reported 7.7% of the entire adult population currently suffering from asthma, the median for the nation was 8.7%. Prevalence ranged from a low of 4.5% to a high of 10.6%. The three lowest ranked regions were all territories, rather than states. Whether the ranking is a matter of a real lack of asthma or a matter of differential diagnosis, Iowa appears to be in good standing in the battle against asthma.

Table 10.1: Iowans Currently and Formerly Having Asthma, 2008

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	7.7	(6.7-8.7)	2.6	(2-3.2)
SEX				
Male	7.3	(5.9-8.7)	2.7	(1.7-3.7)
Female	8.2	(7-9.4)	2.6	(1.8-3.4)
RACE/ETHNICITY				
Non-Hispanic White	7.4	(6.4-8.4)	2.5	(1.9-3.1)
Non-White or Hispanic	13.3	(7.9-18.7)	4.3	(0-8.7)
AGE				
18-24	11.2	(6.3-16.1)	3.3	(0-6.8)
25-34	8.5	(6-11)	3.3	(1.7-4.9)
35-44	7.4	(5.4-9.4)	2.1	(0.9-3.3)
45-54	6.3	(4.7-7.9)	3.2	(2-4.4)
55-64	7.0	(5.4-8.6)	2.2	(1.2-3.2)
65-74	8.4	(6.4-10.3)	2.0	(1.1-3)
75+	5.9	(4.3-7.5)	1.8	(0.8-2.8)
EDUCATION				
Less than H.S.	12.7	(7.8-17.6)	2.9	(0-7)
H.S. or G.E.D.	8.0	(6.4-9.6)	2.5	(1.5-3.5)
Some Post-H.S.	7.5	(5.7-9.3)	2.3	(1.5-3.1)
College Graduate	6.6	(5-8.2)	3.0	(1.8-4.2)
HOUSEHOLD INCOME				
Less than $15,000	16.9	(11.6-22.2)	1.1	(0.3-1.9)
$15,000- 24,999	9.6	(6.7-12.5)	2.7	(0.2-5.2)
$25,000- 34,999	5.4	(3.4-7.4)	2.2	(1-3.4)
$35,000- 49,999	7.0	(5-9)	2.1	(1.1-3.1)
$50,000- 74,999	8.1	(5.7-10.5)	2.9	(1.7-4.1)
$75,000+	6.0	(4.4-7.6)	3.4	(2-4.8)

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11. TOBACCO USE

Background

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

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.[2]

Consequences of smoking during pregnancy include spontaneous abortions, low birth weight babies, and sudden infant death syndrome (SIDS).[2]

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.[3]

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.[1] 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.

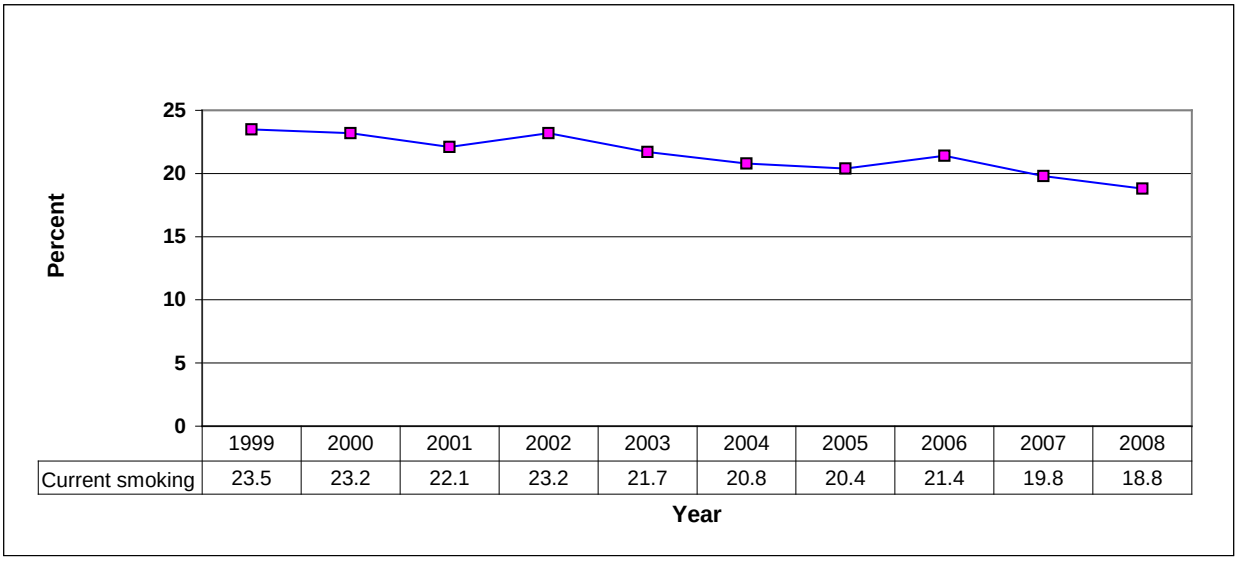
The key settlement program components include reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction, and working toward changing social norms and environments that support tobacco use. The last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

The legal environment in Iowa has recently made it much more difficult to continue smoking. In March of 2007, the Iowa State Legislature passed a one dollar increase in the tax on a pack of cigarettes. In the long run this should further reduce the number of smokers by inducing people to try to quit and by making it less likely that new people will start. On July 1, 2008, a smoking ban in most public places in the state took effect. This not only made it more difficult for smokers to find a place to smoke, but was quite beneficial at reducing exposure to secondhand smoke.

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 2008, 18.8% reported being a current smoker. This was a decrease from the 19.8% found in 2007 and is the lowest prevalence ever reported in this survey (see Figure 11.1).

Figure 11.1: Trend in Percentage of Current Smokers in Iowa, 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Current smoking	23.5	23.2	22.1	23.2	21.7	20.8	20.4	21.4	19.8	18.8

Figure 11.2: Percentage of Current and Former Smokers by Age, 2008

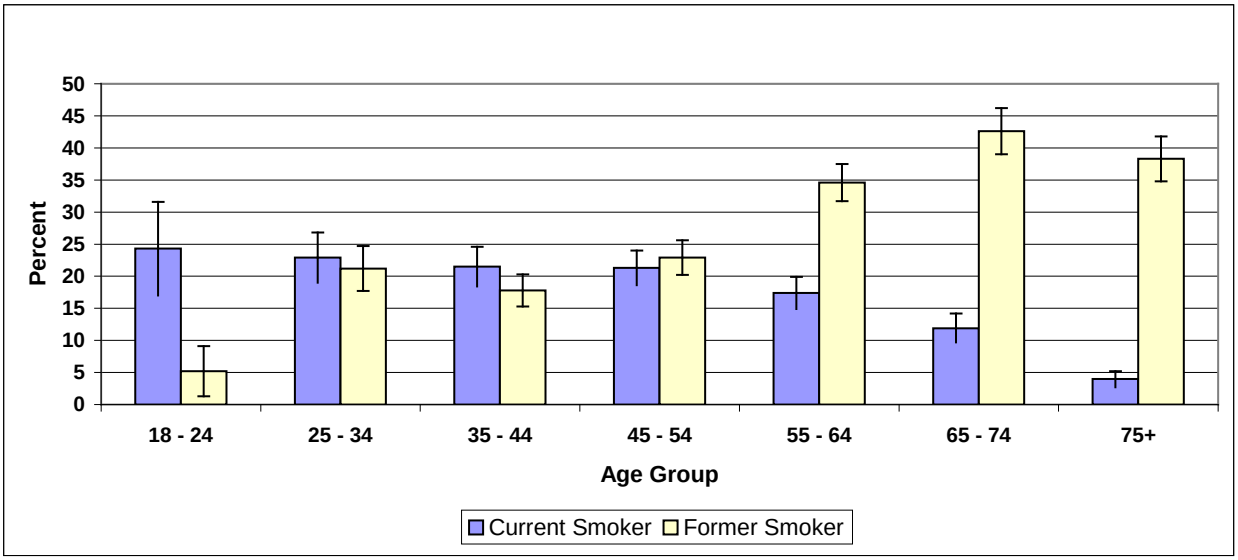


Table 11.1: Percentage of Current and Former Smokers in Iowa, 2008

DEMOGRAPHIC GROUPS	Current Smoker		Former Smoker	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	18.8	(17.4-20.2)	24.7	(23.3-26.1)
SEX				
Male	20.9	(18.5-23.3)	29.1	(26.9-31.3)
Female	16.7	(15.1-18.3)	20.4	(18.8-22)
RACE/ETHNICITY				
White/Non-Hisp.	18.1	(16.7-19.5)	25.4	(24-26.8)
Non-White or Hisp.	27.4	(20.1-34.7)	13.8	(6.1-21.4)
AGE			17.2	(9.7-24.7)
18-24	24.3	(17-31.6)	12.2	(2.2-22.2)
25-34	22.9	(19-26.8)		
35-44	21.5	(18.4-24.6)	5.2	(1.3-9.1)
45-54	21.3	(18.6-24)	21.2	(17.7-24.7)
55-64	17.4	(14.9-19.9)	17.8	(15.3-20.3)
65-74	11.9	(9.7-14.2)	22.9	(20.2-25.6)
75+	4.0	(2.7-5.2)	34.6	(31.7-37.5)
EDUCATION			42.6	(39-46.2)
Less than H.S.	36.0	(28.6-43.4)	38.3	(34.8-41.8)
H.S. or G.E.D.	25.9	(23.2-28.6)		
Some Post-H.S.	18.4	(15.9-20.9)	19.7	(15.2-24.2)
College Graduate	7.4	(6-8.8)	26.8	(24.6-29)
HOUSEHOLD INCOME				
Less than $15,000	31.7	(25.2-38.2)	22.7	(17.8-27.6)
$15,000-24,999	32.1	(27.2-37)	22.1	(18.8-25.4)
$25,000-34,999	20.4	(16.3-24.5)	29.1	(25-33.2)
$35,000-49,999	20.9	(17.6-24.2)	28.4	(24.9-31.9)
$50,000-74,999	16.8	(13.9-19.7)	24.4	(21.3-27.5)
$75,000+	10.4	(8.2-12.6)	23.7	(21.2-26.2)

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 (36%). Only 4% of respondents age 75 years and older were current smokers (see table 11.1).

Nearly 24.7% 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 5.2% former smokers, while the 65 to 74 year age group had 42.6% (see figure 11.2). White non-Hispanics had a higher prevalence of former smokers than minority racial or ethnic groups.

When asked about attempts to quit smoking, 56.4% 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 (67.3%), compared to 42.7% of persons age 45 to 54 years old who were least likely. Women were also more likely to try to quit than men. Little could be said about other 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 continued to increase from the figure of only 55.5% in 2007. This increase held true for women as well as for both young and old.

Table 11.2: Percentage of Current Smokers in Iowa Trying to Quit, 2008

DEMOGRAPHIC GROUPS	Tried to Quit Smoking	
	%	C.I. (95%)
TOTAL	56.4	(52.3-60.5)
SEX		
Male	52.4	(48.1-56.7)
Female	61.1	(56-66.2)
AGE GROUP		
18-34	67.3	(59-75.6)
35-44	55.9	(47.7-64.1)
45-54	42.7	(35.8-49.6)
55-64	50.6	(42.6-58.5)
65+	56.7	(46.7-66.8)

Questions were asked about policies concerning exposure to secondhand smoke. Most Iowans (78.1%) said they had rules against smoking anywhere in their home. However, 14% said they allowed smoking anywhere in the house or had no rules concerning smoking in the house.

Questions were only asked for the first half of the year concerning secondhand smoke in the workplace. This was due to the smoking ban passed by the Iowa state legislature which took effect on July 1, 2008. This law took the establishment of rules concerning workplace smoking out of the hands of most employers. Before the law took effect, 83.8% said no smoking was allowed in public areas at work, and 89.6% said no smoking was allowed in work areas.

In the second half of the year replacement questions were put into the survey for the secondhand smoke questions. Respondents who had smoked 100 cigarettes in their lifetime were asked if they were using fewer cigarettes but more smokeless tobacco. Of all smokers, 5.3% said this was true. The main reason given was health concerns. The smoking ban was mentioned by only 18% of those cutting back.

Another replacement question concerned the hours when a respondent worked and was exposed to secondhand smoke. The vast majority (83.2%) said not at all. Another 9.1% said an hour a week. Two hours was the only other response which occurred more than one percent of the time.

Comparison with Other States

In all the states and territories, smoking prevalence ranged from a low of 6.4% to a high of 27.4%. The lowest state had a prevalence rate of 9.3%. Iowa's current smoking prevalence rate of 18.8% was slightly above the median of 18.3% for all reporting states and territories. Smoking in both Iowa and the nation continues to decline.

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 2008 to 18.8%. For ages 18 to 24 years, it is 24.3%. For household incomes less than $25,000, it is 32%. This does not achieve either the state or national overall goal or the state goal for income. It does achieve the state goal for ages 18 to 24 years.

Iowa fell far short of the revised *Healthy Iowans 2010* goal to have 75% of current smokers attempt to quit in the past year. At 56.4% the rate continued to rise, 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 can be considered to be met and no longer relevant due to the legal ban on workplace smoking.

The *Healthy Iowans 2010* goal was 69% for people having rules against smoking in their home. This goal was surpassed with 78.1% saying they had such rules. This figure even further surpasses the goal than it had in previous years.

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12. 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.

Several million 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).

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. From 2001–2005, there were approximately 79,000 deaths annually attributable to excessive alcohol use (3.5% of all deaths) in the United States).[1] In fact, excessive alcohol use is the 3rd leading lifestyle-related cause of death for people in the United States each year.[2]

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.[3]

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.

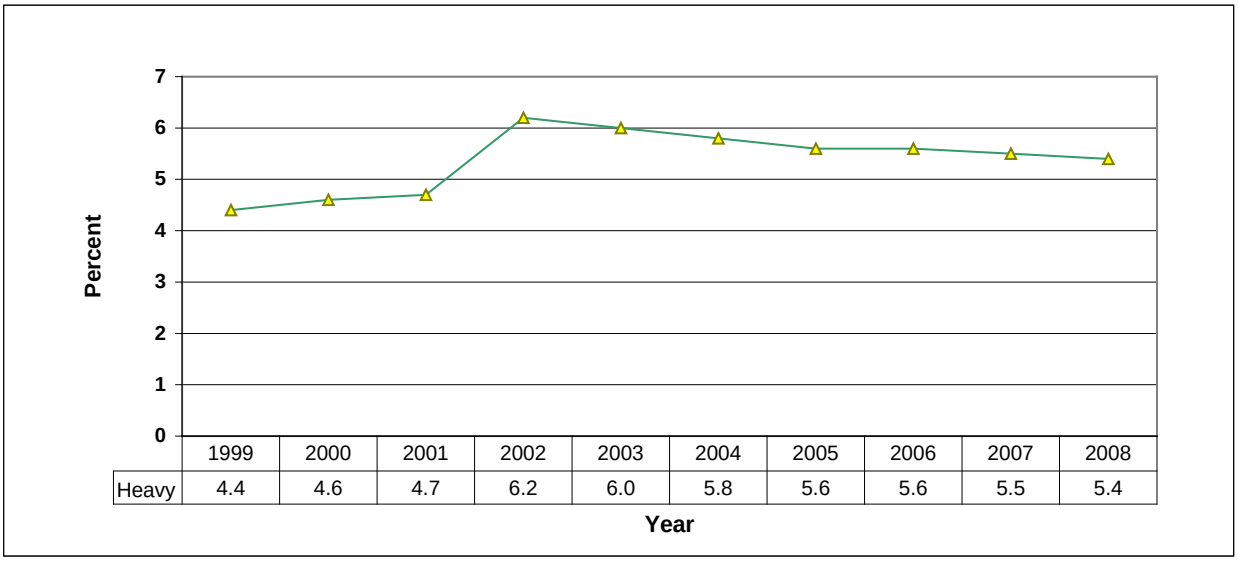
Among men, research indicates that greater alcohol use is related to greater sexual aggression. Binge drinkers appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge.[2]

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 2008, 58% of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 36.1% had only one drink. The median was two drinks. About 12.7% reported drinking five or more drinks per day on the average.

Figure 12.1: Trend of Chronic Heavy Drinking in Iowa, 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Heavy	4.4	4.6	4.7	6.2	6.0	5.8	5.6	5.6	5.5	5.4

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, 5.4% of all respondents were heavy drinkers. This is essentially the same prevalence found in 2007. The trend has been mildly downward in the percentage of heavy drinking over the last seven years with a tendency to flatten completely in the most recent years (See figure 12.1).

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 6.6% of men were considered to be heavy drinkers, while only 4.3% 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 18 to 24 years old (7.2%). Only 1.3% of respondents age 75 and older reported heavy drinking (See Table 12.1). There were more heavy drinkers among men than women at all ages except 18 to 24 years (See Figure 12.2). The confidence intervals for this age group were quite large, however.

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, 20.2% reported at least one binge episode in the last 30 days. This is a slight increase from the 19.9% reported in 2007 but is smaller than the figure for 2006.

Even with the lessened requirement on females from the new definition, many more males binge than females (26.9% versus 14%). In addition, the likelihood of bingeing decreases with age from 32.9% for 25 to 34 years old to only 1.2% for those 75 years old and older. 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 12.2).

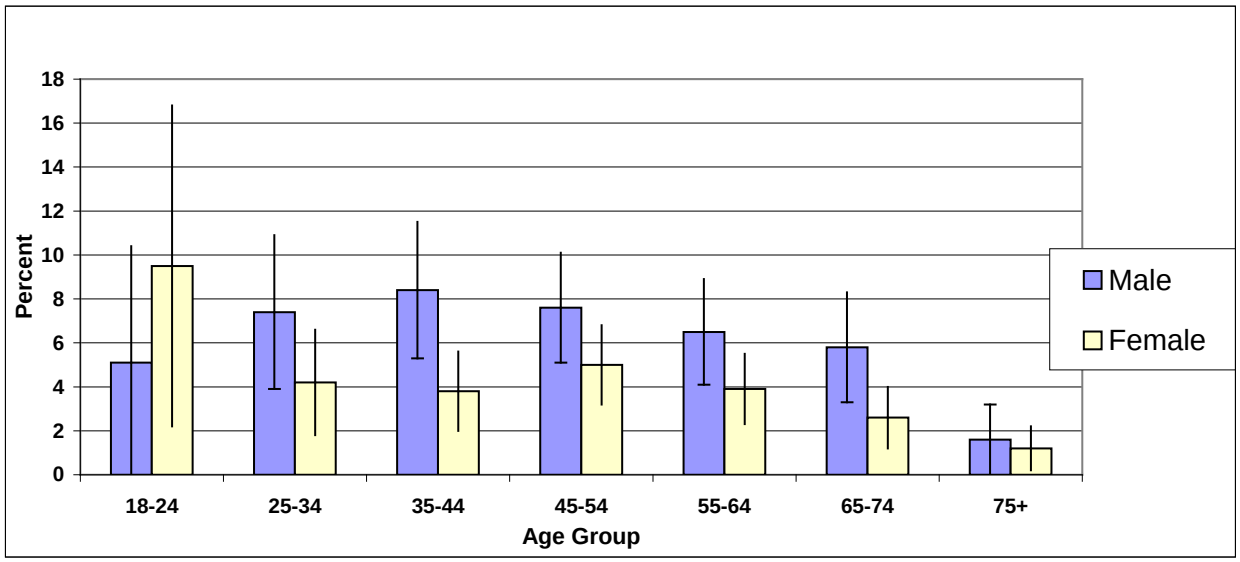
Table 12.1
Heavy Drinking Among Iowans, 2008

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	5.4	(4.6-6.2)
SEX		
Male	6.6	(5.4-7.8)
Female	4.3	(3.3-5.3)
RACE/ETHNICITY		
White/Non-Hisp.	5.6	(4.8-6.4)
Black/Non-Hisp.	3.9	(0-8.4)
Other/Non-Hisp.	3.6	(0-7.8)
Hispanic	1.8	(0-4)
AGE		
18-24	7.2	(2.7-11.7)
25-34	5.8	(3.6-8)
35-44	6.2	(4.4-8)
45-54	6.3	(4.7-7.9)
55-64	5.2	(3.8-6.6)
65-74	4.1	(2.7-5.5)
75+	1.3	(0.4-2.3)
EDUCATION		
Less than H.S.	3.1	(1.3-4.9)
H.S. or G.E.D.	5.7	(4.3-7.1)
Some Post-H.S.	6.1	(4.1-8.1)
College Graduate	4.8	(3.6-6)
HOUSEHOLD INCOME		
Less than $15,000	6.4	(1.9-10.9)
$15,000- 24,999	3.6	(1.8-5.4)
$25,000- 34,999	5.5	(2.8-8.2)
$35,000- 49,999	7.2	(5-9.4)
$50,000- 74,999	6.2	(4.2-8.2)
$75,000+	6.0	(4.4-7.6)

Table 12.2
Binge Drinking Among Iowans, 2008

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	20.2	(18.6-21.8)
SEX		
Male	26.9	(24.4-29.4)
Female	14.0	(12.2-15.8)
RACE/ETHNICITY		
White/Non-Hisp.	20.5	(18.9-22.1)
Hispanic or other	17.0	(9.9-24.1)
AGE		
18-24	31.7	(23.7-39.7)
25-34	32.9	(28.6-37.2)
35-44	24.8	(21.7-27.9)
45-54	21.2	(18.5-23.9)
55-64	11.5	(9.5-13.5)
65-74	4.6	(3-6.2)
75+	1.2	(0.3-2.1)
EDUCATION		
Less than H.S.	12.1	(6.8-17.4)
H.S. or G.E.D.	20.5	(18-23)
Some Post-H.S.	23.1	(20-26.2)
College Graduate	19.0	(16.5-21.5)
HOUSEHOLD INCOME		
Less than $15,000	20.0	(12.7-27.3)
$15,000- 24,999	12.5	(9-16)
$25,000- 34,999	15.5	(11.6-19.4)
$35,000- 49,999	20.8	(16.9-24.7)
$50,000- 74,999	25.9	(22.4-29.4)
$75,000+	25.1	(22-28.2)

Figure 12.2: Percentage of Iowans Who Report Heavy Drinking by Age and Sex, 2008



In 2008, an optional module with several more questions were asked of binge drinkers. They reported that, during the most recent binge episode, most (61.9%) had five or more beers. This was, by far, the favored drink for binge episodes. The most common location for the most recent binge episode was the respondent's residence (39.6%). A bar or club or another person's house both were mentioned by 20% or more as the location. Among binge drinkers, 9.6% said they had driven a motor vehicle within an hour or two after their most recent episode. Most binge drinkers (66.7%) said they paid less than $25 for their drinks on their most recent occasion. In fact, another 14.4% said they paid nothing at all.

Comparison with Other States

The percentage of people reporting heavy drinking in Iowa is above the median for the states and territories. Iowa's figure is 5.4% compared to the median of 5.1%. The percentage ranges from 2.9% to 8.2%.

For binge drinking, however, Iowa's figure of 20.2% is exceeded by only two states. The range is from a low of 8.2% to a high of 22.9% with a median of 15.5%. Six out of seven of the top binge drinking states are all in the upper Midwest.

Year 2010 Health Objectives for the Nation

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

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13. 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. This does not include the casinos operated by Native Americans. 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

Three gambling questions were included in the BRFSS's state-added questions. The questions are:

- In the past 12 months have you bet money or possessions on any of the following activities? Casino gaming including slot machines and table games; lottery including scratch tickets, pull tabs and lotto; sports betting; internet gambling; bingo or any other type of wagering.

- In the past 12 months, how often has your gambling caused any financial problems for you or your household?
- In the past 12 months, how often 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 give a definite answer to these questions are not counted in determining the prevalence. This is the general practice in epidemiological research.

Table 13.1: Percentage of Iowans Who Report They Have Gambled in the Past 12 Months, 2008

DEMOGRAPHIC GROUPS	Gambled	
	%	C.I. (95%)
TOTAL	35.8	(34.2-37.4)
SEX		
Male	41.2	(38.6-43.8)
Female	30.7	(28.8-33.6)
RACE/ETHNICITY		
Non-Hispanic White	36.4	(34.8-38.1)
Non-White or Hisp.	26.3	(19.4-33.1)
AGE		
18-24	15.2	(9.1-21.3)
25-34	37.1	(32.6-41.6)
35-44	38.6	(35.1-42.1)
45-54	42.5	(39.2-45.8)
55-64	42.2	(39-45.5)
65-74	39.9	(36.2-43.5)
75+	26.7	(23.2-30.1)
EDUCATION		
Less than H.S.	27.1	(20.4-33.8)
H.S. or G.E.D.	37.5	(34.7-40.3)
Some Post-H.S.	37.4	(34.3-40.5)
College Graduate	34.0	(31.3-36.8)
HOUSEHOLD INCOME		
Less than $15,000	20.2	(15.4-24.9)
$15,000- 24,999	31.8	(27-36.6)
$25,000- 34,999	34.5	(29.7-39.2)
$35,000- 49,999	38.6	(34.6-42.5)
$50,000- 74,999	44.0	(40.3-47.8)
$75,000+	39.3	(36-42.5)

In 2008, 35.8% of all respondents reported they had gambled in the last 12 months. This is higher than the 28.5% figure found in 2007. The gambling questions have been changed from the ones used in 2007 and previously, however, so a trend should be observed cautiously. Future years will establish whether the new questions have produced a change in reported prevalence.

Significantly more men than women reported gambling in the past 12 months (41.2% vs. 30.7%). Also significantly fewer minority race or ethnic groups reported gambling than did non-Hispanic Whites (26.3% vs. 36.4%). There was a higher prevalence of gambling among people with higher household incomes. Otherwise, gambling tended to be less prevalent for people with either extreme of age or education (See Table 13.1). The highest percentage of gambling during the past year was reported for people with household income between $50,000 and $74,999 (44%). The lowest was reported for people age 18 to 24 years (15.2%).

In 2008, only 1.4% of respondents who had gambled in the past 12 months said the money they spent gambling had ever led to financial problems even once. Likewise, 1.7% reported the time spent gambling had ever 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 2008, Iowa respondents reported levels better than the financial problem goal and equal to the personal problem goal.

14. WOMEN'S CANCER SCREENING

Breast Cancer Screening

Background

Cancer develops when a group of cells grows out of control. Breast cancer is a malignant (cancerous) tumor that starts from cells of the breast. The disease occurs mostly in women, but men can get breast cancer as well.[1]

Other than skin cancer, breast cancer is the most common cancer among women. After lung cancer, it is the second leading cause of cancer death in women. About 192,370 women in the United States will be found to have invasive breast cancer in 2009. About 40,170 women will die from the disease this year. Breast cancer death rates are going down. This is probably the result of finding the cancer earlier and improved treatment. Currently, there are two and a half million women living in the U.S. who have been treated for breast cancer.[1] In Iowa, 410 women died from breast cancer in 2007.[4]

The chance of getting breast cancer increases as a woman gets older. Nearly 8 out of 10 breast cancers are found in women over age 50.[1] Individual factors other than age that increase the risk for developing breast cancer include family history, a personal history of breast cancer, possession of certain genes (BRCA1 or BRCA2), race, earlier abnormal breast biopsy, a long menstrual history, obesity after menopause, recent use of oral contraceptives, postmenopausal hormone therapy, never having children or having a first child after age 30, consuming one or more alcoholic beverages per day, and lack of exercise.[1] However, many women develop breast cancer without having any of the usual known risk factors.

Early detection of breast cancer is key to surviving the disease, and regular screening is key to detecting the disease early. There may be no detectable symptoms apart from screening until the disease is quite advanced.

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

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

- Women age 40 years and older should be screened every one to two years with mammography.
- Women at higher than average risk of breast cancer should seek expert medical advice about whether they should begin screening before age 40 and the frequency of screening.[5]

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

Although no screening method is foolproof, there is no doubt that screening for breast cancer saves lives.[3]

Breast Cancer Screening Results

In 2008, 91.6% of women surveyed reported ever having a clinical breast examination (CBE) by a physician. The percentage increased with education and household income. It was most prevalent for women in the middle age groups, declining for those both younger and older. (See table 14.1).

Table 14.1: Breast Examination Measures for Iowa Women, 2008

DEMOGRAPHIC GROUPS	Ever had a mammogram		Had mammogram in last 2 years		Ever had clinical breast exam	
	Age 40 and over					
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL FEMALES	91.3	(90-92.5)	76.5	(74.7-78.3)	91.6	(90-93.2)
AGE						
18 - 39					87.6	(83.9-91.3)
40 – 49	82.3	(78.9-85.7)	69.1	(65-73.2)	97.3	(95.7-98.9)
50 - 59	94.9	(93.1-96.7)	81.0	(77.8-84.2)	96.2	(94.6-97.9)
60 - 69	96.0	(94.2-97.8)	81.3	(78-84.7)	96.3	(94.9-97.8)
70 & up	94.0	(92.3-95.8)	76.5	(73.5-79.5)	86.2	(83.8-88.7)
EDUCATION						
Less than H.S.	81.2	(73.9-88.5)	63.4	(54.8-72)	77.8	64.1-79.9
H.S. or G.E.D.	91.4	(89.3-93.4)	74.5	(71.6-77.4)	88.8	87.6-92.1
Some Post-H.S.	90.8	(88.5-93.2)	76.4	(73.3-79.5)	92.8	92.1-95.7
College Graduate	93.9	(91.9-95.9)	82.5	(79.4-85.6)	95.9	94.5-97.5
HOUSEHOLD INCOME						
Less than $15,000	87.5	(82.8-92.1)	61.0	(54.1-67.9)	78.8	73.6-84.9
$15,000- 24,999	86.9	(82.9-90.9)	66.5	(61.4-71.6)	79.6	82.5-90.7
$25,000- 34,999	89.8	(85.8-93.8)	78.7	(73.6-83.8)	91.0	89.2-95.4
$35,000- 49,999	90.6	(87.4-93.9)	75.3	(70.4-80.2)	95.7	95.8-98.9
$50,000- 74,999	91.4	(88-94.9)	77.9	(73.2-82.6)	95.8	95.2-99.0
$75,000+	93.8	(91.3-96.3)	83.4	(79.7-87.1)	97.0	92.4-97.9

When asked if they had ever had a mammogram, 91.3% of all female Iowa respondents ages 40 and older reported having one. Women in the middle age groups were more likely to have a mammogram than those in younger and older groups. Also, women with higher education and income were more likely to have a mammogram (see table 14.1).

When asked if they had a mammogram in the past two years, 76.5% of all Iowa women over age 40 said they had. This is a decrease from 77.5% in 2006 (See Figure 14.1). The percentages for

women in the middle age groups were higher than those for women in younger and older groups. In addition, the women with a higher education level and with a higher household income tended to have higher percentages of having a mammogram in the past two years (see table 14.1).

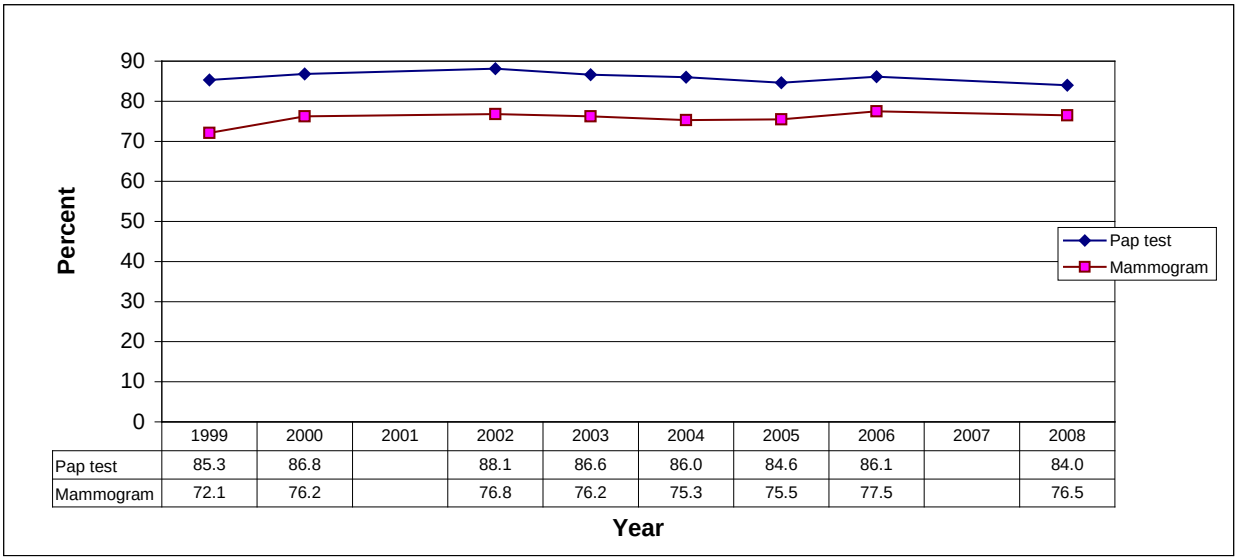
Comparison with Other States

In all states and territories, the percent of women age 40 and older who have had a mammogram in the past two years ranges from 63.8% to 84.9%. Iowa's figure of 76.5% is better than the median of 76%.

Year 2010 Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 70% of women age 40 and older who have had a mammogram within the preceding two years. The *Healthy Iowans 2010* goal is 85%. Since 76.5% of Iowa women age 40 years old and older have had mammograms within the past two years, the goal has been met for the nation but not for Iowa.

Figure 14.1: Cancer Screening in Iowa Women by Year, 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Pap test	85.3	86.8		88.1	86.6	86.0	84.6	86.1		84.0
Mammogram	72.1	76.2		76.8	76.2	75.3	75.5	77.5		76.5

Cervical Cancer Screening

Background

Cancer of the cervix begins in the lining of the cervix, the lower part of the uterus (womb). This cancer does not form suddenly. First, some cells begin to change from normal to pre-cancer and then to cancer. This can take a number of years, although sometimes it happens more quickly. These changes may go away without any treatment. More often, they need to be treated to keep them from changing into true cancer.[2]

Approximately 11,270 new cases of invasive cervical cancer and 4,070 cervical cancer-related deaths were projected to occur in 2009 in the United States.[2] Rates in the United States have decreased to less than half their level in the early 1970s. Overall rates of US women diagnosed with invasive cervical cancer declined 17% just between 1998 and 2002,

The most important risk factor for cervical cancer includes infection with the human papiloma virus (HPV). This virus is transmitted sexually. A vaccine now exists for HPV. Not all women infected with HPV get cervical cancer. Some other risk factors that may play a role are smoking, HIV infection, chlamydia infection, a diet low in fruit and vegetables, and obesity.[2]

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

The American Cancer Society recommends annual Pap tests begin about three years after a woman begins having sexual intercourse, but no later than age 21 years. The test should be done every year if the regular Pap test is used, or every 2 years if the newer liquid-based Pap test is used. At the discretion of the woman's physician, less frequent exams may be necessary after three consecutive normal exams when she is over thirty years olds. More frequent tests are recommended if the immune system is weakened. Pap tests are not necessary for women who have had a total hysterectomy that was not due to cancer.[2]

Cervical Cancer Screening Results

When asked if they ever had a Pap test, 95.4% of female respondents who had not had a hysterectomy reported having it. Reported rates for ever having a Pap test ranged from 79.4% for women from ages 18 to 24 years old to 99.4% for women between age 45 and 54 years. The proportion of women who ever had a Pap test also increased with level of education and household income. These numbers were so nearly at the maximum of 100% that there was little room to show differences (see table 14.2).

In 2008, 84% of female respondents reported that they had their last Pap test within the last three years. This is a decrease from 86.1% in 2006 (see figure 14.1). The percentage having a Pap test within three years increased with education and income. Women age 75 years and older had the lowest percentage (59.8%), while women who had a household income of $75,000 or higher had the highest percentage (92.9%) (See Table 14.2).

Comparison with Other States

In all states and territories the percent of adult women who have had a pap test in the past three years ranges from 66.6% to 88.9%. Iowa's figure of 84% is above the median of 82.8%. Both Iowa and the nation have seen a small decline in Pap test prevalence since 2006.

Year 2010 Health Objectives for Iowa and the Nation

The national health objectives for the year 2010 include an increase to at least 97% in the proportion of women over the age of 18 who have ever had a Pap test. The figure for 2008 of 95.4% is close to this goal but falls slightly short.

Table 14.2: Proportion of Iowa Women Having Pap Test, 2008

DEMOGRAPHIC GROUPS	Ever had a Pap test		Had Pap test in last 3 years	
	%	C.I. (95%)	%	C.I. (95%)
FEMALES	95.4	(94.2-96.6)	84.0	(82-86)
RACE/ETHNICITY				
Non-Hisp. White	95.5	(94.3-96.7)	83.7	(81.7-85.7)
Non-White or Hisp.	93.5	(87.2-99.7)	89.8	(82.3-97.4)
AGE				
18-24	79.4	(69.6-89.2)		
25-34	96.5	(94.1-98.9)	*86.2	(81.9-90.6)
35-44	98.7	(97.7-99.7)	92.1	(89.6-94.6)
45-54	99.4	(98.8-100)	85.7	(82.2-89.2)
55-64	98.5	(97.3-99.7)	83.4	(79.9-86.9)
65-74	96.3	(94.5-98.1)	76.2	(71.3-81.1)
75+	91.7	(89.3-94)	59.8	(54.2-65.5)
EDUCATION				
Less than H.S.	89.1	(83.6-94.6)	73.8	(63.8-83.8)
H.S. or G.E.D.	94.9	(92.7-97.1)	78.3	(74.8-81.8)
Some Post-H.S.	94.8	(92.1-97.5)	84.4	(80.7-88.1)
College Graduate	97.5	(96.1-98.9)	90.4	(88-92.8)
HOUSEHOLD INCOME				
Less than $15,000	90.4	(83.9-96.9)	70.3	(61.1-79.5)
$15,000- 24,999	90.8	(86.3-95.3)	65.1	(57.7-72.5)
$25,000- 34,999	95.0	(91.5-98.5)	78.2	(71.9-84.5)
$35,000- 49,999	96.9	(94.2-99.6)	85.9	(81.6-90.2)
$50,000- 74,999	98.7	(97.5-99.9)	91.5	(88.6-94.4)
$75,000+	97.6	(94.9-100)	92.9	(89.4-96.4)

Both the national and Iowa health objectives for the year 2010 also include an increase to at least 90% in the proportion of women over the age of 18 who have had a Pap test in the last three years. The figure for 2006 of 86.1% is somewhat short of this goal. It is slightly closer than was the case in 2005, when the figure was only 84.6%. The trend for both breast and cervical cancer screening in women may be seen in Figure 14.1.

*Due to unreliable data for 18 to 24 year olds, this figure is for 18 to 34 year olds.

References

1. American Cancer Society. All About Breast Cancer, Atlanta, Georgia: American Cancer Society, 2009. Available at: http://www.cancer.org.
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15. 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 146,970 new cases of colon and rectal cancer in the United States in 2009.[1] There are estimated to be 49,920 deaths.[1] In 2007 In Iowa, 666 deaths occurred due to colorectal cancer.[3] 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.[2]

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.
- Virtual Colonoscopy. This is a CT scan x-ray of the colon.[1]

The colonoscopy has the advantage that it can remove polyps as well as detect them. The FOBT has the advantage that it is simplest and least expensive to conduct, but it cannot find pre-cancerous polyps.

Colorectal Cancer Screening Results

In 2008, 45.5% of Iowans 50 years old or older reported ever using a home blood-stool testing kit (FOBT). This is a small increase from the 44.3% found in 2007 ending a decline that has been seen for the previous five years (see figure 15.1).

Females reported a significantly higher percentage of use than males (48.5% versus 42%). Education was also related to use of the test. Respondents with less than a high school education were least likely to use it (37.1%). College graduates were the most likely to have ever used it (52.6%) (See table 15.6).

Of all respondents 50 years old or older, 23.2% had used the blood stool test within the past two years. This was identical to the level in 2007 also ending a multi-year decline. The prevalence ranged from 17.2% among those with a household income less than $15,000 to 26% among those with an annual household income of $25,000 to $34,999 (see table 15.1).

In 2008, 63.8% of Iowans 50 years old or older reported ever having a sigmoidoscopy or colonoscopy screening test. This was an increase from the 62.2% found in 2007. This continues an upward trend seen over the last few years (See Figure 15.1).

Figure 15.1: Ever Had Colorectal Cancer Screening Test by Year, 1999-2008

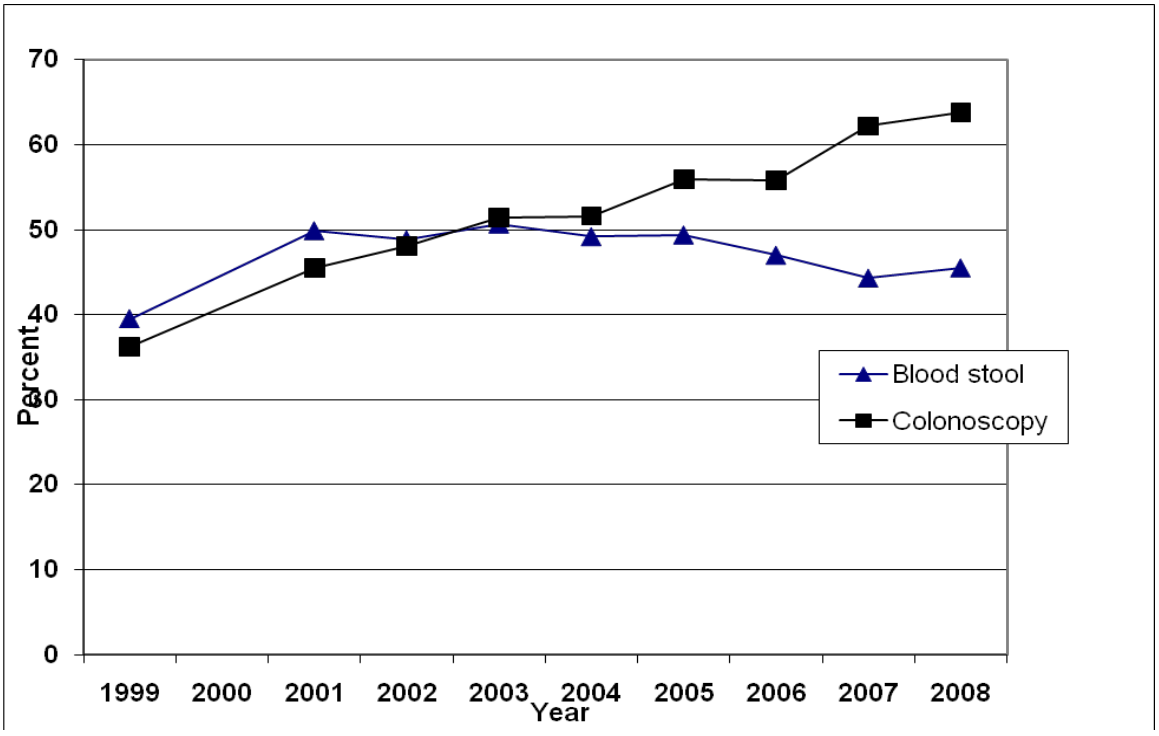

Table 15.1: Prevalence of Colorectal Cancer screening in Iowans 50 Years Old or Older, 2008

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	45.5	(43.7-47.3)	23.2	(21.6-24.8)	63.8	(62-65.6)	53.3	(51.5-55.2)
SEX								
Male	42.0	(39.1-44.9)	21.8	(19.3-24.3)	63.7	(60.8-66.6)	55.2	(52.1-58.2)
Female	48.5	(46.1-50.9)	24.3	(22.3-26.3)	63.9	(61.7-66.1)	51.8	(49.4-54.1)
EDUCATION								
Less than H.S.	37.1	(30.2-44)	18.9	(13.4-24.4)	58.7	(51.4-66)	51.5	(44.1-58.9)
H.S. or G.E.D.	42.9	(40-45.8)	21.4	(19-23.8)	61.9	(59-64.8)	50.3	(47.3-53.2)
Some Post-H.S.	45.3	(41.8-48.8)	24.4	(21.3-27.5)	63.1	(59.6-66.6)	54.3	(50.7-58)
College Graduate	52.6	(48.9-56.3)	25.9	(22.8-29)	68.9	(65.6-72.2)	58.0	(54.3-61.6)
HOUSEHOLD INCOME								
Less than $15,000	37.6	(31.1-44.1)	17.2	(12.1-22.3)	59.7	(53-66.4)	45.4	(38.5-52.2)
$15,000- 24,999	44.3	(39.6-49)	21.4	(17.5-25.3)	59.1	(54.2-64)	48.8	(44-53.6)
$25,000- 34,999	50.2	(44.9-55.5)	26.0	(21.3-30.7)	68.9	(64-73.8)	58.1	(52.9-63.3)
$35,000- 49,999	43.6	(39.1-48.1)	22.9	(18.8-26.7)	60.7	(56.2-65.2)	49.1	(44.5-53.7)
$50,000- 74,999	43.3	(38.6-48)	20.8	(17.1-24.5)	62.5	(57.6-67.4)	52.6	(47.8-57.5)
$75,000+	45.0	(40.7-49.3)	24.8	(21.1-28.5)	68.0	(63.9-72.1)	59.4	(55.1-63.7)

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 (58.7%). Those with a college education or better or those with annual household incomes of between $25,000 to $35,999 were equally most likely to have the test (68.9%). 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 15.1).

Of all respondents 50 years old or older, 53.3% had a sigmoidoscopy or colonoscopy within the past five years. This was also an increase from the 52% figure found in 2007.

Those with less education were less likely to have the test in the prescribed time. Those with higher income were more likely to have the test, although the relationship was not clear for middle income levels. The lowest percentage (45.4%) was found among those with less than a $15,000 annual household income, while the highest percentage (59.4%) was found among those with annual household incomes of $75,000 or more (See Table 15.1).

For people who ever had a sigmoidoscopy/colonoscopy, colonoscopy was far more common than sigmoidoscopy (94.6%). This is even a higher percentage than in 2007. It can be said that almost everyone having one of these tests has a colonoscopy.

Since the trend in the rate of FOBT and the rate of sigmoidoscopy/colonoscopy are in opposite directions, it seems likely that the trend in the percent of people being adequately screened for colorectal cancer may actually be somewhere in between the two 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 59.8% of Iowans 50 years old and older had met, at least, one of the colorectal screening criteria. This ranged from 50.6% of those with less than an annual household income of $15,000 to 65.9% of those with annual household incomes of $75,000 or more (See Table 15.2).

Table 15.2
Proportion Meeting either Colorectal Cancer screening Criteria, 2007

DEMOGRAPHIC GROUPS	Received Adequate Screening	
	%	C.I. (95%)
TOTAL	59.8	(57.9-61.6)
SEX		
Male	60.9	(57.9-63.8)
Female	58.8	(56.6-61.1)
EDUCATION		
Less than H.S.	53.5	(46.3-60.7)
H.S. or G.E.D.	56.5	(53.6-59.4)
Some Post-H.S.	61.9	(58.4-65.4)
College Graduate	64.9	(61.4-68.3)
HOUSEHOLD INCOME		
Less than $15,000	50.6	(43.8-57.3)
$15,000- 24,999	54.8	(50-59.6)
$25,000- 34,999	64.0	(59-69.1)
$35,000- 49,999	58.6	(54.1-63.1)
$50,000- 74,999	60.3	(55.5-65.2)
$75,000+	65.9	(61.8-70)

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 56% of the cases. When the health care professional talked about screening, 88.8% recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 79.3% then had the test or tests.

Out of all respondents 50 years old and older, 58.5% reported seeing any articles or advertising in the past six months about colorectal cancer screening. Television was the main medium of exposure to this advertising (43.7%).

Over half of the respondents (53.2%) considered their own risk of colorectal cancer low. Only 4.8% considered it high. When asked why they did not have the recommended test or why they did not plan to be tested, one of the most common answers was no symptoms. Colorectal cancer does not necessarily have symptoms until it is advanced.

Comparison with Other States

The proportion of people age 50 and older who have ever had a sigmoidoscopy or colonoscopy ranges from 37.8% to 74.2%. Iowa's prevalence of 63.7% is above the median of 61.7%. The use of sigmoidoscopy/colonoscopy continues to grow nationwide as well as in Iowa.

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16. 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".[1]

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 limitation of activity.

According to the 2006 American Community Survey, 15.1 percent of the civilian non-institutionalized population 5 years and over in the United States, or about 41.3 million people reported a disability.[3] In Iowa in 2007, 397,420 people had some kind of disability. They represent 14.5% of the civilian non-institutionalized population age 5 and over.[2] For Iowans age 65 and older, 35.9% had a disability—the highest of any age group.[2]

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

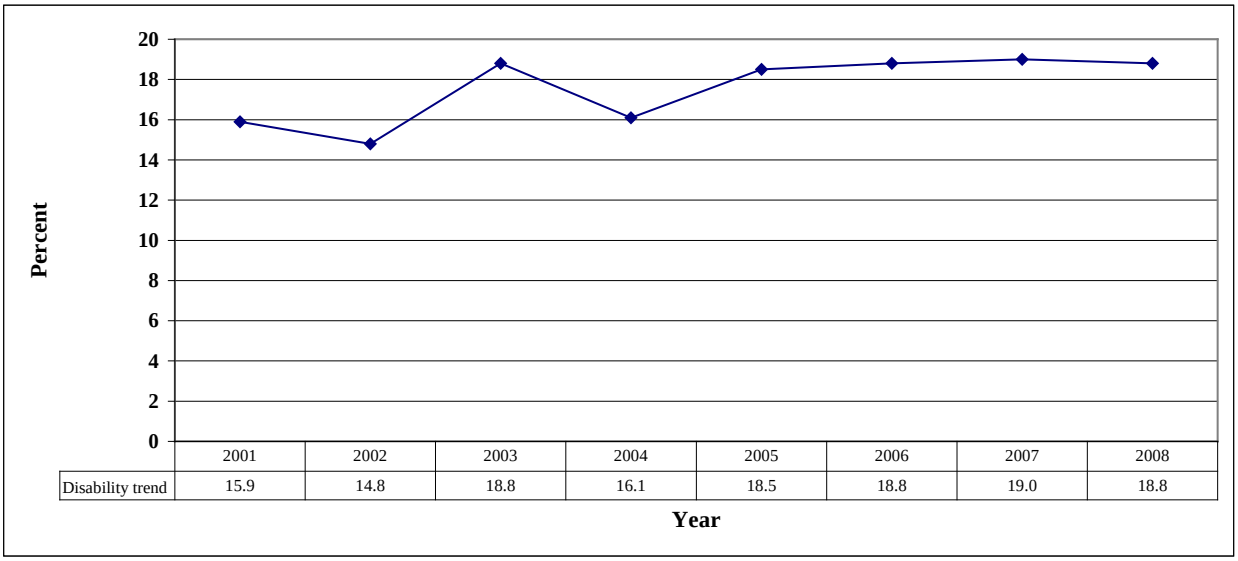
In 2008, 17% of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. This is down from the 17.4% reported in 2007, but is higher than 2006.

When asked whether they had a health problem requiring the use of special equipment, 6.2% of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. This is up from 5.9% in 2007, but is lower than reported in 2006.

Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2008, 18.8% of respondents were considered to have a disability. This is about the same as the 19% in 2007. The trend in people reporting disability has been stable for the past four years and generally shows a very slight increase (see figure 16.1).

As shown in Table 16.1, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Non-Whites and Hispanics reported a higher percentage of disability than White non-Hispanics. Of the five demographic

Figure 16.1: Disability Trend by Year, 2001 – 2008



	2001	2002	2003	2004	2005	2006	2007	2008
Disability trend	15.9	14.8	18.8	16.1	18.5	18.8	19.0	18.8

variables analyzed, people age 18 to 24 years reported the lowest percentage (5.8%). Those with household incomes less than $15,000 reported the highest percentage of disability (40.5%). The second highest reporting group was those age 75 and over (38.5%). This group is the most rapidly growing group in the population.

When asked what their main health condition or disability was, most (89.7%) said a physical impairment. When asked for how long their activities had been limited in years, answers ranged quite widely. The only answer receiving more than ten percent of the responses was five years (10.1%). The median was six years. Their whole life was the response from 5.7% of the respondents.

Several questions were asked concerning access to health care explicitly concerned with access problems posed by having a disability. Disabled respondents were asked if they had difficulty in finding a health provider who could understand their condition. Of these, 14.5% said that they did.

For people reporting disabilities, only 43.4% reported having insurance from their employer or spouse's employer and 39.3% reported having it through Medicare. For those not disabled, these figures were 71.1% and 12.6%.

For people reporting disabilities, 5.7% said they had been turned down for pre-existing conditions. For those not disabled, the figure was only 2.1%.

For people reporting disabilities, 14.1% said they had skipped prescribed medication in the past year because they could not afford it. For those not disabled, the figure was only 4.1%.

Table 16.1
Percent Reporting Being Disabled, 2008

DEMOGRAPHIC GROUPS	Disabled	
	%	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)

For people reporting disabilities, 19.8% said they had gone without needed health items such as eye glasses or special equipment in the past year due to cost. For those not disabled, the figure was only 8.4%.

For people reporting disabilities, 14.3% reported spending less on basic needs such as food or heat in the past year to pay for healthcare. For those not disabled, the figure was only 4.1%.

Comparison with Other States

The percent of people reporting being disabled ranged from 11.4% to 31.4% with a median of 22.2%. There were only four states or territories with a lower prevalence than Iowa's prevalence of reported disability of 18.8%. While the prevalence of disability has been quite stable in Iowa, it appears to have increased nationally. This has improved our relative standing to become one of the states with the least percentage of disabled individuals.

References

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17. INJURY CONTROL

Background

The 2008 BRFSS examines three areas related to injury control. These are falls, seatbelt use, and drinking and driving.

Falls

Unintentional falls are the leading cause of both fatal and nonfatal serious injuries among the fastest growing segment of the U.S. population, older adults. In the United States, one of every three people age 65 years and older falls each year.[4] The leading injuries resulting from falls are traumatic brain injuries (TBI), hip fractures, other fractures, and damage to internal organs.

In 2000, the total direct cost of all fall injuries for people 65 and older exceeded $19 billion.[3] The financial toll for older adult falls is expected to increase as the population ages, and may reach $54.9 billion by 2020 (adjusted to 2007 dollars).[3] This does not consider the costs of disabilities resulting from falls, but only the direct costs.

Elderly persons who survive a fall experience significant morbidity. Hospital stays are almost twice as long in elderly patients who are hospitalized after a fall than in elderly patients who are admitted for another reason. Compared with elderly persons who do not fall, those who fall experience greater functional decline in activities of daily living (ADLs) and in physical and social activities, and they are at greater risk for subsequent institutionalization.[4]

In 2005, 15,800 people 65 and older died from injuries related to unintentional falls; about 1.8 million people 65 and older were treated in emergency departments for nonfatal injuries from falls, and more than 433,000 of these patients were hospitalized.[4] In Iowa in 2007, the number of fatal falls was 355 with 279 being among those 75 years of age or older.[5] The number of people age 65 years and older is projected to double in the next 50 years. For people age 85 years and older, relative growth rates are even faster.

One of the strongest predictors of a fall is having sustained a previous fall.[1] A fall is often a marker of increasing fragility, functional decline, or neurological impairment, and may indicate the need for a secondary prevention strategy (e.g., hip protectors to prevent hip fractures).

Falls Results

The BRFSS defines a fall as when a person unintentionally comes to rest on the ground or another lower level. Respondents age 45 years and older were asked if they had experienced a fall in the last three months. In this group, 18.2% said they had. Of those who had fallen, 23.1% said that it injured them. In this instance, injury was defined as limiting activity for at least a day or caused them to see a doctor.

More people reported falls when they had lower household income and when they were age 75 and older. More people with some college or technical school reported falls than other educational levels. Non-White or Hispanics reported a much lower percentage of falls than other

Table 17.1: Prevalence of factors related to Injury in Iowans, 2008

DEMOGRAPHIC GROUPS	Falls		Always or Usually Wear Seatbelts		Drink and Drive	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	18.2	(16.9-19.5)	95.7	(95.1-96.3)	5.5	(4.5-6.5)
SEX						
Male	19.0	(16.8-21.2)	93.7	(92.5-94.9)	7.0	(5.4-8.6)
Female	17.5	(15.9-19.1)	97.6	(97-98.2)	3.8	(2.4-5.2)
RACE/ETHNICITY						
White/Non-Hisp.	18.2	(16.8-19.5)	95.7	(95.1-96.4)	5.6	(4.5-6.7)
Non-White or Hisp.	12.2	(6.7-17.7)	95.9	(93.3-98.5)	4.1	(0.7-7.5)
AGE						
18-24			97.5	(95.3-99.7)	6.4	(1.7-11.1)
25-34			94.6	(92.4-96.8)	7.4	(4.5-10.3)
35-44			96.4	(95-97.8)	6.8	(4.6-9)
45-54	18.1	(15.6-20.6)	95.1	(93.5-96.7)	5.6	(3.8-7.4)
55-64	17.3	(14.9-19.7)	95.3	(93.9-96.7)	4.5	(2.7-6.3)
65-74	17.7	(14.9-20.5)	95.5	(94-97.1)	1.3	(0.3-2.2)
75+	20.6	(17.6-23.5)	96.2	(94.8-97.6)	0.7	(0-2.1)
EDUCATION						
Less than H.S.	16.8	(11.9-21.7)	95.7	(92.8-98.6)	6.7	(0.4-13)
H.S. or G.E.D.	17.5	(15.3-19.7)	94.6	(93.4-95.8)	5.8	(3.8-7.8)
Some Post-H.S.	22.3	(19.4-25.2)	95.4	(94-96.8)	5.0	(3.2-6.8)
College Graduate	15.7	(13.3-18.1)	97.1	(96.1-98.1)	5.6	(4-7.2)
HOUSEHOLD INCOME						
Less than $15,000	29.8	(24.1-35.5)	95.0	(92.3-97.7)	6.2	(0-12.5)
$15,000- 24,999	20.7	(17-24.4)	94.2	(91.8-96.6)	3	(0.8-5.2)
$25,000- 34,999	20.5	(16.4-24.6)	94.6	(92.1-97.1)	7.1	(2.8-11.4)
$35,000- 49,999	19.2	(15.9-22.5)	95.8	(94.2-97.4)	6.8	(3.7-9.9)
$50,000- 74,999	15.6	(12.5-18.7)	95.6	(94-97.2)	5.2	(3.4-7)
$75,000+	15.3	(12.6-18)	96.1	(94.9-97.3)	6.5	(4.5-8.5)

groups (12.2%). The group reporting the highest prevalence of falls was those with a household income less than $15,000 per year (29.8%) (See table 17.1).

Seat belt Use

Motor vehicle crashes remain the ninth leading cause of death in the United States. More than 43,000 people die from motor vehicle-related injuries each year; 4 million more require Emergency Department visits. Traffic crashes account for more than $150 billion in total costs each year.[2]

Seat belts are the best protection in a car accident**.** Failure to wear a seat belt contributes to more fatalities than any other single traffic safety-related behavior. Sixty-three percent of people killed in accidents are not wearing seat belts. Unbelted occupants were five times more likely to die when involved in a crash than belted occupants. Wearing a seat belt is still the single most effective thing we can do to save lives and reduce injuries on America's roadways. The National Highway Traffic Safety Administration (NHTSA) estimates that approximately 270 lives are saved for every one percent increase in belt use.[7] Apart from this, seat belt use would lead to a substantial saving in hospital costs and disability, particularly from head trauma.

Seat belt Use Results

In 2008, when respondents were asked how often they wore a seat belt when driving or riding in a car, 95.7% said always or nearly always. This was more common among females than males (97.6% vs. 93.7%). There was really no other systematic difference among the demographic groups examined. The prevalence is so near 100% that there is little room for variation (See Table 17.1).

Drinking and Driving

About three in every ten Americans will be involved in an alcohol-related crash at some time in their lives. On average someone is killed by a drunk driver every forty minutes. In 2007, an estimated 12,998 people died in drunk driving related crashes—a decline of 3.7 percent from the 13,491 drunk driving related fatalities of 2006.[6]

Alcohol-related crashes in the United States cost the public an estimated $114.3 billion in 2000, including $51.1 billion in monetary costs and an estimated $63.2 billion in quality of life losses. People, other than the drinking driver, paid $71.6 billion of the alcohol-related crash bill, which is 63 percent of the total cost of these crashes.[6]

Drinking and Driving Results

In 2008, 5.5% of respondents reported that within the past 30 days they had driven when they had too much to drink at least once. More men than women had reported doing this (7.0% vs. 3.8%). A larger percentage of younger people also reported driving under the influence. The range was 7.4% for those age 25 to 34 years to only 0.7% for those age 75 and older (see table 17.1).

Comparison with Other States

In all states and territories the range of people reporting at least one fall in the last month ranged from 11.6% to 22.7% with a median of 16.5%. At 18.2%, Iowa was worse than the median. Both Iowa and the nation saw an increase in the prevalence of falls since 2006, but the increase was much greater in Iowa. Iowa went from being better than the median to being worse.

In terms of seat belt use, the percent reporting their use always or nearly always ranged from 81.3% to 97.9% with a national median of 92.6%. Iowa was better than the median here with

95.6%. There were only nine states or territories with a higher prevalence of always or nearly always using seat belts.

Drinking and driving at least once in the past month was reported from only 2.2% to 13.7% in all states and territories. The median was 3.9%. With 5.5%, Iowa was above the median. There were nine states and territories with a higher prevalence of people admitting to driving under the influence of alcohol.

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18. IMMUNIZATION

Background

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

Influenza and pneumonia combined are the eighth leading cause of death among all Americans and the sixth leading cause for people over age 65. Influenza and pneumonia together resulted in 56,326 deaths in 2006 in the U.S.[5] and 748 in Iowa in 2007.[6]

In 2005, influenza and pneumonia represented a cost of $40.2 billion to the U.S. economy, $6.0 billion due to indirect costs and $34.2 billion in direct costs.[1]

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.[4]

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.

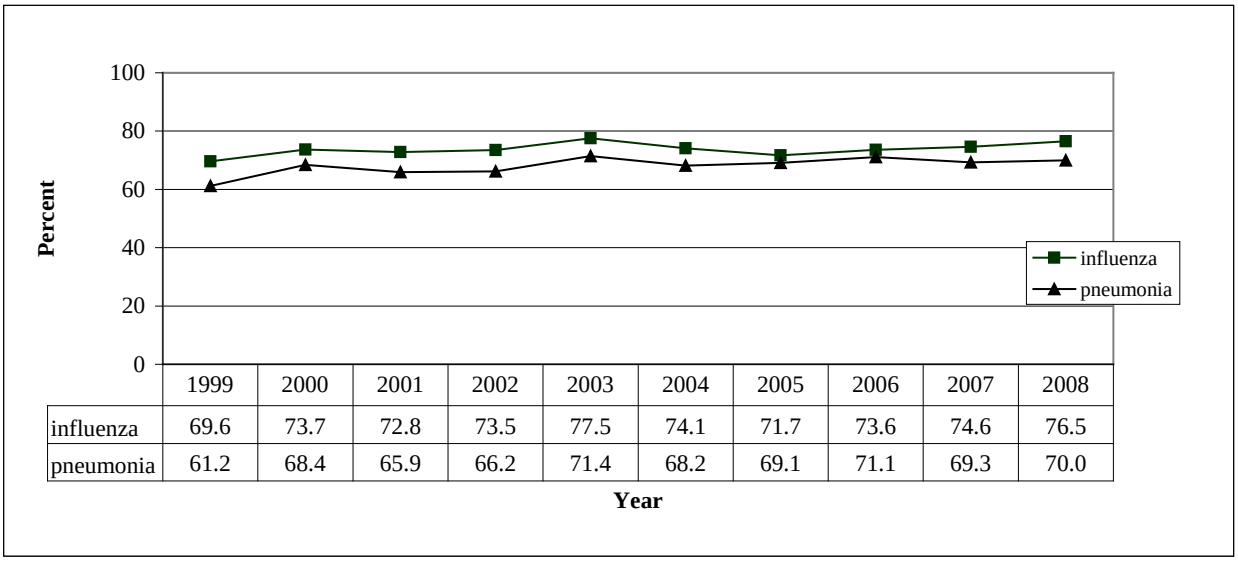
Pneumonia is a lung disease that can have over 30 different causes which include various chemicals, bacteria, viruses, and other infectious agents such as fungi. Certain diseases, such as tuberculosis, also can cause pneumonia. Pneumonia also can be caused by the inhalation of food, liquid, gases or dust. The most common cause of pneumonia is bacterium.[2] Pneumonia is frequently a complication of influenza and is responsible for the vast majority of deaths from the two.

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[3] and annual influenza vaccination.[3] People at higher risk should receive the pneumonia vaccine at age 19 and higher. Such people would be smokers or people with asthma, emphysema, or COPD.

Immunization Results

In 2008, 76.5% of Iowans age 65 and over reported having a flu shot in the past 12 months. This is higher than the 74.6% found in 2007 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 fell off, but now appears to be recovering (see figure 18.1). 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 18.1: Immunizations in Iowans Age 65 and Over, 1999 – 2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
influenza	69.6	73.7	72.8	73.5	77.5	74.1	71.7	73.6	74.6	76.5
pneumonia	61.2	68.4	65.9	66.2	71.4	68.2	69.1	71.1	69.3	70.0

Among all adults, 45.3% had a flu immunization in the past 12 months. This was either in the form of a flu shot or a FluMist™ nasal spray. Females, older people, and Whites non-Hispanics 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 (79%) (See Table 18.1).

In 2008, 70% of Iowans age 65 and over reported ever having a pneumonia vaccination. This is slightly higher than the 69.3% found in 2007, but lower than the figure found in 2006 (see figure 18.1).

Among all adults, 24.1% 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 35 to 44 years old (8.3%), while those 75 years old and older were highest by far (75%) (See Table 18.1). Pneumonia vaccination did not really increase with increasing age until age 45.

Table 18.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2008

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	45.3	(43.6-46.9)	24.1	(22.9-25.3)
SEX				
Male	40.4	(37.9-42.9)	21.7	(19.7-23.7)
Female	49.9	(47.8-52)	26.3	(24.7-27.9)
RACE/ETHNICITY				
White/Non-Hispanic	46.1	(44.4-47.8)	24.5	(23.1-25.9)
Non-White or Hisp.	33.2	(25.8-40.6)	17.8	(12.3-23.3)
AGE GROUP				
18-24	28.9	(21.2-36.7)	9.3	(4.2-14.4)
25-34	32.0	(27.8-36.1)	8.6	(6.1-11.1)
35-44	35.7	(32.4-39.1)	8.3	(6.3-10.3)
45-54	39.2	(36-42.3)	12.1	(9.9-14.3)
55-64	53.5	(50.3-56.7)	25.5	(22.8-28.2)
65-74	73.2	(69.9-76.4)	64.3	(60.8-67.9)
75+	79.0	(76.1-81.9)	75.0	(71.9-78.2)
EDUCATION				
Less than H.S.	46.1	(38.7-53.4)	33.2	(26.7-39.7)
H.S. or G.E.D.	41.9	(39.2-44.6)	28.9	(26.5-31.3)
Some Post-H.S.	46.0	(42.8-49.2)	21.3	(19.1-23.5)
College Graduate	48.1	(45.3-51)	19.4	(17.4-21.4)
HOUSEHOLD INCOME				
Less than $15,000	39.6	(33-46.3)	35.3	(29.2-41.4)
$15,000- 24,999	44.1	(39.4-48.9)	34.8	(30.5-39.1)
$25,000- 34,999	52.7	(47.7-57.6)	33.2	(28.9-37.5)
$35,000- 49,999	40.7	(36.8-44.6)	23.5	(20.4-26.6)
$50,000- 74,999	42.3	(38.7-45.9)	16.8	(14.3-19.3)
$75,000+	46.7	(43.4-50)	13.6	(11.6-15.6)

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, 71.7% had a flu vaccination and 62.8% had a pneumonia vaccination.

Of all those ever told they had asthma, 46.9% had their flu vaccination, while 34.5% had a pneumonia vaccination.

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 70.9% in 2008. The range was from 78.1% to 30.6%. The lowest two values were from territories and were extreme. The lowest state prevalence was 57.1%. Iowa's value of 76.5% put it well above the median for people 65 years and over having a flu shot in the past year. In fact, there were only three states with a higher prevalence of influenza vaccination.

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 73% to 28.4%. However, the three territories (Guam, Puerto Rico, and the Virgin Islands) again were extremely low. After removing the three territories, the low end becomes 55.1%. The national median was unchanged. Iowa's value of 70% is well 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 much higher than the nation as a whole, Iowa's 2008 figures of 76.5% for having a flu shot and 70% for ever having a pneumonia vaccination have a long way to go to meet these targets.

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19. 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.[1]

The HIV epidemic has now been with us for more than 25 years.[2] Estimates suggest that over one million people in the United States are living with HIV or AIDS. Over one fifth of these people do not know that they are infected: not knowing puts them and others at risk. In 2006, an estimated 56,300 individuals were infected with HIV.

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, non-Hispanic Afro-Americans constitute only 2.5% of the population, but account for 16% of all Iowans living with HIV/AIDS. The Hispanic population in Iowa is 4%, but Hispanics account for 9.3% of all Iowans living with HIV/AIDS. Nearly 80% of HIV cases are among men.[3]

HIV/AIDS prevalence continues to increase in Iowa. There were 1,616 persons living with HIV/AIDS in Iowa on December 31, 2008, up from 1,522 a year earlier. [3]

For adults receiving regular care for their HIV infection (at least one visit every six months), direct medical expenditures on HIV care were estimated to be $20,000 per patient per year, in 1996.[4] Hospital care (46 percent) and pharmaceuticals (40 percent) accounted for the bulk of the expenditures. In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown considerably. People are living longer with the disease and consuming a complex cocktail of drugs to do so.

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

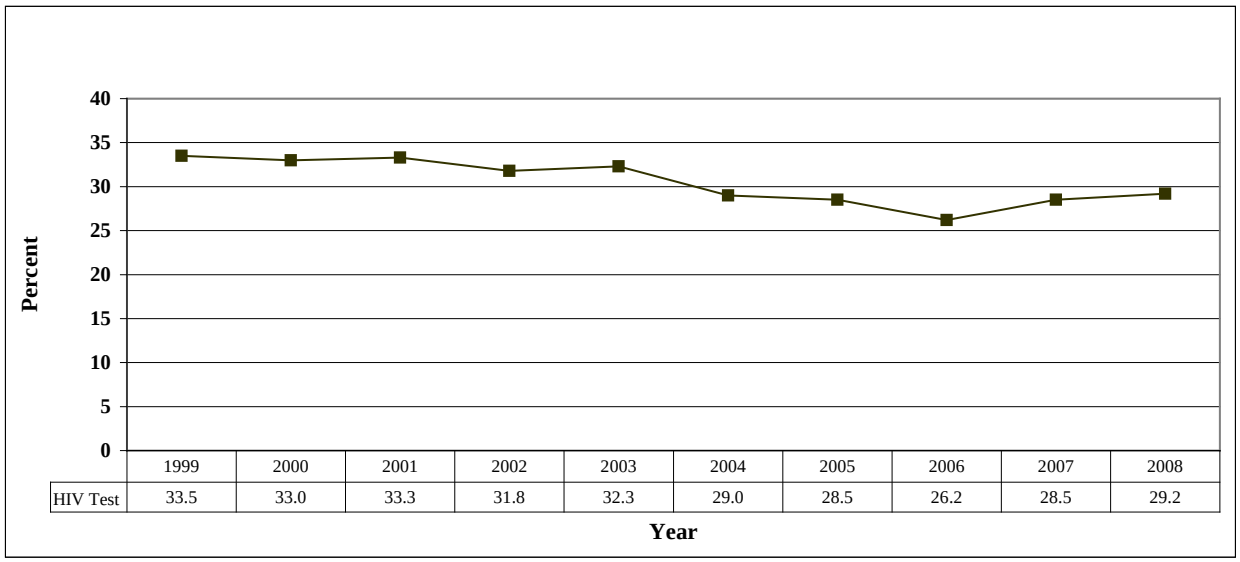
HIV/AIDS Results

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

In 2008 29.2% of respondents reported ever being tested for HIV, not including as part of a blood donation. This is higher than the 2007 finding of 28.5%. This is the second year in which the trend in having an HIV test has gone up. This trend had been downward for the past several years (see figure 19.1).

Females, non-White or Hispanic race/ethnicity, younger people except those under 25 years, and people of lower income were more likely to be tested. The largest proportion of respondents tested was among those age 25 to 34 years (44.5%). The smallest proportion reporting ever being tested was 14.3% of those between ages 55 to 64 years old (See Table 19.1).

Figure 19.1: Percentage of Iowans Reporting Ever Being Tested for HIV 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
HIV Test	33.5	33.0	33.3	31.8	32.3	29.0	28.5	26.2	28.5	29.2

There is an interesting interaction between sex and age, however. Figure 19.2 shows that in the younger age groups, many more women have been tested, while there is little difference in the older age groups. More men are tested over age 35 than under.

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 “hospital or clinic” (44.9%), and “private doctor or HMO office” (34.4%). These together made up the vast majority of locations.

A new development in the HIV testing area is rapid testing. This gives the test taker the opportunity to know the results of their test 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 people who had been tested for HIV within the past twelve months were asked if they had a rapid test, 18.1% said it was.

Table 19.1: Percentage of Iowans Tested for HIV/AIDS, 2008

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	29.2	(27.4-31)
SEX		
Male	26.1	(23.6-28.6)
Female	32.4	(29.9-34.9)
RACE/ETHNICITY		
Non-Hispanic White	28.3	(26.5-30.1)
Non-White or Hispanic	41.0	(32.3-49.7)
AGE		
18-24	24.3	(16.9-31.7)
25-34	44.5	(40-49)
35-44	39.4	(35.9-42.9)
45-54	18.8	(16.3-21.3)
55-64	14.3	(11.9-16.7)
EDUCATION		
Less than H.S.	32.0	(22.8-41.2)
H.S. or G.E.D.	23.8	(20.7-26.9)
Some Post-H.S.	30.7	(27.2-34.2)
College Graduate	32.4	(29.5-35.3)
HOUSEHOLD INCOME		
Less than $15,000	40.3	(30.9-49.7)
$15,000- 24,999	30.0	(23.3-36.7)
$25,000- 34,999	29.8	(23.9-35.7)
$35,000- 49,999	32.4	(27.7-37.1)
$50,000- 74,999	26.8	(23.1-30.5)
$75,000+	28.7	(25.8-31.6)

Comparison with Other States

The percentage of people age 18 through 64 who had a test for HIV ranged from 25.2% to 70%. The national median percentage of people tested was 36.7%. There were only four states with a lower percentage than Iowa's percentage being tested at 29.2%. Four out of five of the lowest tested states were in the upper Midwest. Iowa and the nation as a whole seem to have experienced a small increase in people being tested this year.

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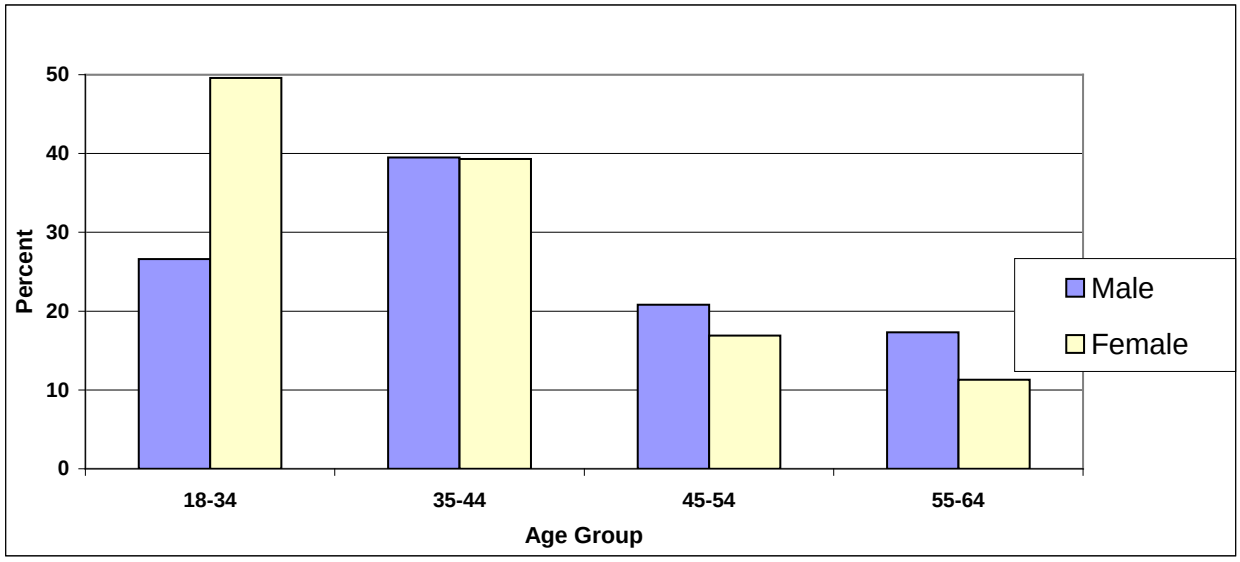
Figure 19.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2008



20. ORAL HEALTH

Background

During the last 50 years, there have been dramatic improvements in oral health, and most middle-aged and younger Americans expect to retain their natural teeth over their lifetimes. However, profound disparities remain that affect those without the resources to achieve good oral care or the knowledge of its importance. This fact inspired the first *Surgeon General's Report on Oral Health*, which identified a "silent epidemic" of dental and oral diseases and called for a national effort to improve Americans' oral health.[1]

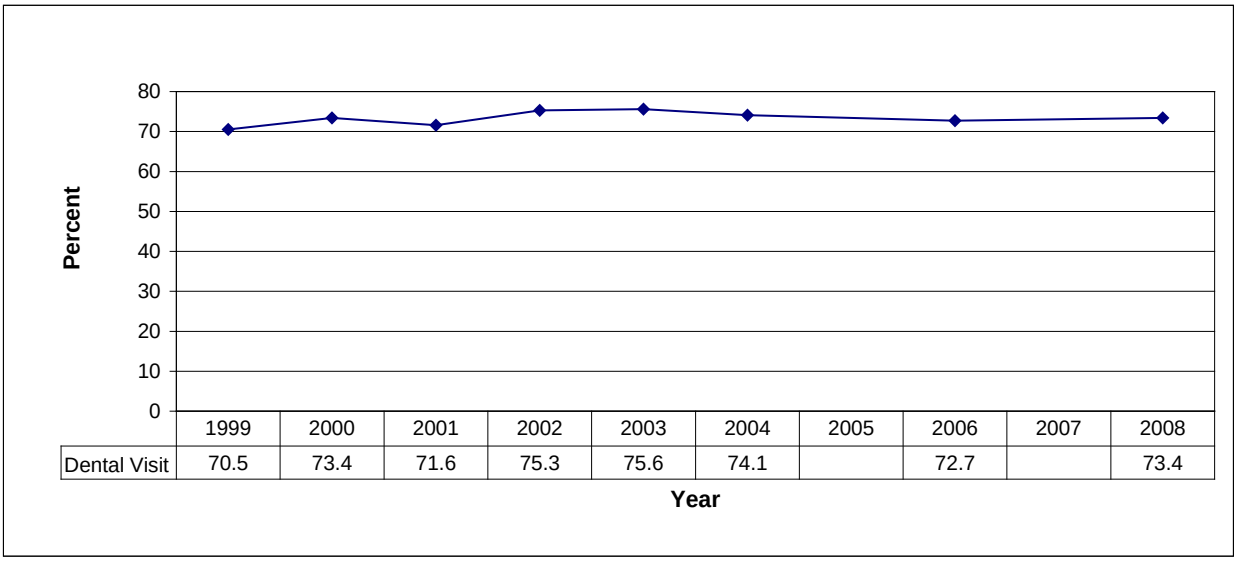
Oral health is integral to overall health. Left untreated, the pain and infection caused by dental disease can lead to problems in eating, speaking, the ability to learn, and the quality of life in general. A person may even die from oral based diseases.

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

Oral Health Results

In 2008, 73.4% of Iowans surveyed reported visiting a dentist within the past year. However, 10.1% reported never having a dental visit or having their last dental visit more than five years ago. The percentage having annual dental visits shows an increase from the 72.7% found in 2006 (See Figure 20.1).

Figure 20.1: Percentage of Iowans Having Annual Dental Visits by Year, 1999-2008



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Dental Visit	70.5	73.4	71.6	75.3	75.6	74.1		72.7		73.4

Females were more likely than males to report a dental visit during the past 12 months. Both higher education and greater income were related to the likelihood of visiting a dentist. White

non-Hispanics were more likely to have a dental visit than other race and ethnic groups. People in middle age were more likely to have a dental visit than either the younger or the older respondents. Respondents with an income of $75,000 or more had the highest proportion reporting recent dental visits (85.7%). At the other extreme, 47.8% of those with an annual household income less than $15,000 reported visiting a dentist in the past 12 months (See Table 20.1).

Table 20.1:
Percentage of Iowans Having Dental Visits within the Past 12 Months, 2008

DEMOGRAPHIC GROUPS	Last dental visit within 12 months	
	%	C.I. (95%)
TOTAL	73.4	(71.8-75)
SEX		
Male	70.4	(68-72.8)
Female	76.3	(74.3-78.3)
RACE/ETHNICITY		
White/Non-Hisp.	74.4	(72.8-76)
Non-White or Hisp.	59.6	(51.5-67.7)
AGE		
18-24	67.7	(59.7-75.7)
25-34	72.3	(68.2-76.4)
35-44	75.0	(71.9-78.1)
45-54	77.2	(74.5-79.9)
55-64	75.2	(72.5-77.9)
65-74	70.1	(66.7-73.4)
75+	69.9	(66.7-73.1)
EDUCATION		
Less than H.S.	50.0	(42.6-57.4)
H.S. or G.E.D.	66.2	(63.5-68.9)
Some Post-H.S.	77.1	(74.4-79.8)
College Graduate	82.9	(80.4-85.4)
HOUSEHOLD INCOME		
Less than $15,000	47.8	(40.5-55.1)
$15,000- 24,999	57.7	(52.8-62.6)
$25,000- 34,999	65.3	(60.6-70)
$35,000- 49,999	69.6	(65.3-73.9)
$50,000- 74,999	79.7	(76.6-82.8)
$75,000+	85.7	(83-88.4)

Among respondents who had permanent teeth and who had visited a dentist, 74.1% had their teeth cleaned within the past 12 months. However, 0.7% had never had their teeth cleaned by a dentist or dental hygienist.

A majority of 59.3% had no permanent teeth removed due to tooth decay or gum disease. On the other hand, 6% had all their permanent teeth removed. The percentage of those with all permanent teeth removed rose with increasing age, lower income, and lower education. It was highest for those with less than a high school education (19.3%).

Year 2010 Health Objectives for Iowa and the Nation

Healthy Iowans 2010 has as a goal that 75% of Iowans 65 years old or older should have an annual dental visit. In 2008, this was not met, with 70% of respondents 65 and over reporting an annual visit.

A Healthy People 2010 goal is for 42% of Americans age 35 to 44 years old not to have had any permanent teeth extracted due to caries or periodontal disease. Iowa far exceeds this goal with 73.9% having no extractions.

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

achieved this goal having 18.5% of this population with all permanent teeth extracted

References

1. National Institute of Dental and Craniofacial Research. 2000. *The Surgeon General's Report on Oral Health.* December 4, 2000. Available at http://www.nidcr.nih.gov/AboutNIDCR/SurgeonGeneral/.
2. U.S. General Accounting Office. *Oral Health: Dental Disease Is a Chronic Problem Among Low-Income Populations and Vulnerable Populations*. Washington, DC. 2000.

APPENDIX 1

Year 2010 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2008

STATE:	Iowa	
Healthy People 2010[2] Objective[3]	**Yr 2010 Target**	**State, 2008**
Health Insurance (Objective #1.1) Ages ≥18	100%	91%
Specific Source of Ongoing Primary Care (Objective #1.4c) Ages ≥18	96%	76.6%
Pap Smear, Ever Had (Objective #3.11a) Women, Ages ≥18	97%	95.4%
Pap Smear, Within Past Three Years (Objective #3.11b) Women, Ages ≥18	90%	84.0%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #3.12a) Ages ≥50	50%	23.2%
Sigmoidoscopy, Ever Had (Objective #3.12b) Ages ≥50	50%	63.8%
Mammogram, Within Past Two Years (Objective #3.14) Women, Ages ≥40	70%	76.5%
Diabetes, Increase proportion of persons with diabetes who receive formal diabetes education (Objective #5.1) Adults with diabetes, Ages ≥18	60%	67.1
Influenza Immunization, Within Past Year (Objective #14.29a) Ages ≥65	90%	76.5%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) Ages ≥65	90%	70%
Obese, BMI ≥ 30 (Objective #19.2) Ages ≥20	15%	27.2%
(No) Permanent Teeth Extracted Due to Caries or Periodontal Disease (Objective #21.3) Ages 35-44	42%	73.9%
Extraction of All Natural Teeth (Objective # 21.4) Ages ≥65	20%	18.5%
No Leisure Time Physical Activity (Objective # 22.1) Ages ≥18	20%	25%
Binge Drinking, During the Past Month (Objective #26.11c) Ages ≥18	6%	20.2%

Healthy People 2010[2] Objective[3]	**Yr 2010 Target**	**State, 2008**
Cigarette Smoking (Objective #27.1a) Ages ≥18	12%	18.8%

[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 2008

Healthy Iowans 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2008
Health Insurance (Objective #1-1) Ages 18 – 64	100%	89.3%
Mammogram, Within Past Two Years (Objective #2-5.1) Women, Ages ≥ 40	85%	76.5%
Pap Test, Within Past Three Years (Objective #2-6.1) Women, Ages ≥ 18	90%	84.0%
Fecal Occult Blood Test (FOBT) Within Past Two Years (Objective #2-7.1) Ages ≥ 50	55%	23.2%
Sigmoidoscopy/Colonoscopy, Ever Had (Objective #2-7.1) Ages ≥50	64%	63.8%
Diabetes Prevalence (Objective #3-1)	7.3%	7.0%
People with diabetes receiving annual dilated eye exams (Objective #3.3.2)	80%	75.8%
People with diabetes receiving at least annual foot exams (Objective #3.3.2)	75%	75.5%
People with diabetes that have a glycosylated hemoglobin measurement at least once a year Objective #3.3.2)	95%	86%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	76.5%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #10-2) Ages >= 65	90%	70.0%
Prevent a further rise in the percent of Iowans who are overweight (Objective 13.3)	38.3%	37.6%
Prevent a further rise in the percent of Iowans who are obese (Objective 13.3)	22.9%	26.7%
Adults with asthma having asthma-related emergency or urgent care visits (Objective 18-1) Ages >= 18	12.6%	8.5%
Extraction of All Natural Teeth (Objective #15.3) Ages ≥ 65	20%	**18.5%**
Had a dental visit within the past year (Objective #15-7) Ages ≥ 65	75%	70%
Do not increase percent of gamblers where gambling led to financial problems (Objective 20-7)	1.6%	1.4%
Do not increase percent of gamblers where gambling led to personal problems (Objective 20-7)	1.7%	1.7%

Healthy Iowans 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2008
Exposure to secondhand Smoke at Work (Objective 21-4)	10%	Met due to ban
Not allowing smoking anywhere in the home (Objective 21.6)	69%	78.1%
Cigarette Smoking (Objective 21.7) Ages > 18	18%	18.8%
Cigarette Smoking (Objective 21.7) Ages 18-24	28%	24.3%
Cigarette Smoking (Objective 21.7) Household Income < $25,000	25%	32.0%
Cigarette smokers who stopped smoking cigarettes for a day or more (Objective #21-7)	75%	56.4%

[1]Behavioral Risk Factor Surveillance System
[2]Iowa Department of Public Health. Healthy Iowans 2010 Mid-Course Revision, 2005.
[3]In some cases, BRFSS definitions of objectives differ slightly from those in Healthy Iowans 2010. See Healthy Iowans 2010 for the exact definition of the objective.

APPENDIX 2

Differences between Cell Phone and Landline Respondents

In 2008, for the first time, cell phone numbers were called to collect BRFSS interviews. These respondents were only asked the core questions in the survey along with some procedural questions to shorten the interview time. Since data from cell phones were only collected in 18 states and since many of the collection procedures for cell phones are still somewhat experimental, the data from cell phones were not used in the main body of this report. This special appendix will compare responses from the cell phone sample to the landline sample. In the future the two groups are likely to be combined in reporting.

Comparison will be of unweighted data. This is because a weighting technique for cell phones is not complete at this time. This means the landline figures in the comparison will not agree with figures in the main report since they were weighted in that presentation. Weighted figures attempt to account for lack of coverage, and should actually be closer to the cell phone data than the unweighted figures. This comparison will merely give an idea of the direction and difference in results to expect from including a cell phone sample in survey responses.

Table 1: Comparison of selected BRFSS measures for cell phone and landline interviews For Iowa BRFSS, 2008

Measure	Landline	Cell Phone
Health Status fair or poor	14.9%*	11.4%
Have no health care coverage	6.8%	20.5%*
Do you have one person you think of as your personal doctor or health care provider?	81.7%*	57.5%
Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?	7.3%	19.7%*
Had checkup in past 5 years	91.8%*	85.2%
Exercise other than job in past 30 days	72.8%	78.6%*
Told by doctor you have diabetes	9.6%*	2.0%
Last visited a dentist in the past 5 years	89.2%	88.4%
Ever told you had a heart attack	5.7%*	1.2%
Ever told you had a stroke	3.9%*	2.0%
Have you ever been told that you had asthma?	10.4%	12.4%*
Have a disability	24.3%*	17.2%
Current smoker	16.5%	29.6%*
Stopped smoking a day or two to try to quit	53.1%	67.6%*
Age 18 – 24	3.0%	37.6*%*
Age 65+	31.2%*	4.0%
Hispanic	2.0%	3.6%*
marital status – Married	61.0%*	35.6%
Education level – High School grad or better	94.2%	92.8%
Employed	81.6%*	72.3%
Household income < $25,000	23.2%	40.5%*

Measure	Landline	Cell Phone
Overweight	37.5%*	31.8%
Obesity	27.2%	26.9%
Sex = Male	38.4%	54.4%*
Binge drink	14.6%	37.8%*
Had influenza vaccination in past 12 months	52.8%*	31.9%
Ever had pneumonia vaccination	32.8%*	14.5%
Fallen in past 3 months	18.4%	21.6%
Always or nearly always use seatbelts	96.0%	94.0%
Drinking and driving	4.8%	11.4%*
Ever had a mammogram	79.6%*	38.9%
Ever had a pap test	96.7%*	87.6%
Have you ever been tested for HIV?	27.7%	38.3%*
Always or usually get the social and emotional support you need?	84.7%*	78.8%
Satisfied with life	95.3%*	91.4%

The results show quite a large difference on many measures between the cell phone and landline sample. The larger value is marked with a "*" when the difference is considered to be significant. Major demographic differences were seen for age, gender, marital status, employment status, and household income. Most of the risk measure differences can be attributed to these different demographics. No real difference was found for last dental visit, percent high school graduates, obesity, and seatbelt use. Several measures that were only asked of older respondents did not have a sufficient number of interviews in the cell phone sample to be reliable. Only 250 cell phone interviews were conducted.

Appendix 3

Iowa 2008 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 also "None", skip to next module

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 the 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 yrs (two years but less than 5 years ago)
4 5 or more years ago
8 Never

Section 4: Sleep

The next question is about getting enough rest or sleep.

4.1: During the past 30 days, for about how many days have you felt you did not get enough rest or sleep?

_ _ Number of days
8 8 None

Section 5: Exercise

5.1: 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 6: Diabetes

6.1: Have you ever been told by a doctor that you have diabetes?
(If "Yes" and respondent is female, ask: "Was this only when you were pregnant?")
(If Respondent says pre-diabetes or borderline diabetes, use response code 4.)

1 Yes
2 Yes, but female told only during pregnancy
3 No
4 No, pre-diabetes or borderline diabetes

Module 1: Pre-Diabetes

NOTE: Only asked of those not responding "Yes" (code=1) to Core Q6.1 (Diabetes awareness question).

1. Have you had a test for high blood sugar or diabetes within the past three years?

1 Yes
2 No

CATI note: If Core Q6.1 = 4 (No, pre-diabetes or borderline diabetes); answer Q2 "Yes" (code = 1).

2. Have you ever been told by a doctor or other health professional that you have pre-diabetes or borderline diabetes?

1. Yes
2. No

Module 2: Diabetes

To be asked following core Q6.1 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. 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

4. 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

5. 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

6. 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

CATI note: If Q4 = 555 (No feet), go to Q8.
7. 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

8. 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

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

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

Section 7: Oral Health
7.1: How long has it been since you last visited a dentist or a dental clinic? Include visits to dental specialists, such as orthodontists**.**
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8 Never

7.2: How many of your permanent teeth have been removed because of tooth decay or gum disease? Do not include teeth lost for other reasons, such as injury or orthodontics.
NOTE: If wisdom teeth are removed because of tooth decay or gum disease, they should be included in the count for lost teeth.
1 1 to 5
1 6 or more but not all
2 All
8 None

CATI note: If Q7.1 = 8 (Never) or Q7.2= 3 (All), go to next section
7.3: How long has it been since you had your teeth "cleaned" by a dentist or dental hygienist?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago
8. Never

Section 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

8.2: (Ever told) you had angina or coronary heart disease?
1 Yes
2 No

8.3: (Ever told) you had a stroke?
1 Yes
2 No

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

10.2: 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 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]**

CATI note: 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 much do you weigh without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions up
__ __ __ Weight pounds/kilograms

CATI note: If Q12.11 = 7777 (Don't know/Not sure) or 9999 (Refused), skip Q12.13 and Q12.14).

12.12: 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

12.13: How much did you weigh a year ago? [If you were pregnant a year ago, how much did you weigh before your pregnancy?]
CATI: If female respondent and age <46.
NOTE: If respondent answers in metrics, put "9" in the first position. Round fractions up
__ __ __ Weight pounds/kilograms

CATI note: Subtract weight one year ago from current weight. If weight is same, skip Q12.14.
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?
Note: Do not include cell phones or numbers that are only used by a computer or fax machine.
1 Yes
2 No ⇨ **Go to Q11.16**

12.18: How many of these 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

Cell Phone Questions (12.19a through 12.19d) to be asked of all respondents with a landline telephone. Only ask during months conducting the cell phone pilot survey.
12.19a. Do you have a cell phone for personal use? Please include cell phones used for both business and personal use.
1 Yes [Go to Q12.19c]
2 No

12.19b. Do you share a cell phone for personal use (at least one-third of the time) with other adults?
1 Yes [Go to Q12.19d]
2 No [Go to Q12.20]

12.19c. Do you usually share this cell phone (at least one-third of the time) with any other adults?
1 Yes
2 No

12.19d. Thinking about all the phone calls that you receive, what percent, between 0 and 100, are received on your cell phone?
_ _ _ Enter Percent (1 to 100)
8 8 8 Zero

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?
NOTE: A 40 ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks
__ __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: Immunization

14.1: 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

14.3: 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

14.5: 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

Section 15: Falls
If respondent is 45 years or older continue, otherwise go to next section.
The next questions ask about recent falls. By a fall, we mean when a person unintentionally comes to rest on the ground or another lower level.
15.1**:** In the past 3 months, how many times have you fallen?
_ _ Number of times **[76 = 76 or more]**
8 8 None **[Go to next section]**

15.2: [Fill in "Did this fall (from Q15.1) cause an injury?"]. If only one fall from Q15.1 and response is "Yes" (caused an injury); code 01. If response is "No", code 88.
How many of these falls caused an injury? By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.
_ _ Number of falls **[76 = 76 or more]**
8 8 None **[Go to next section]**

Section 16: Seatbelt Use
16.1: How often do you use seat belts when you drive or ride in a car? Would you say …
1 Always
2 Nearly always
3 Sometimes
4 Seldom
5 Never
8 Never drive or ride in a car

Section 17: Drinking and driving
CATI note: If Q16.1 = 8 (Never drive or ride in a car), or If Q13.1 = 2 (No); go to Section 18, otherwise continue.
The next question is about drinking and driving.
17.1**:** During the past 30 days, how many times have you driven when you've had perhaps too much to drink?
_ _ Number of times
8 8 None

Section 18: Women's Health
CATI Note: If respondent is male, go to the next section.
The next questions are about breast and cervical cancer.
18.1: A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram**?**
1 Yes
2 No **Go to Q18.3**

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

18.3: A clinical breast exam is when a doctor, nurse or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?
1 Yes
2 No **Go to Q18.***5*

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

18.5: A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?
1Yes
2 No **Go to Q18.7**

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

CATI NOTE: If response to core Q12.21 = 1 (is pregnant) then go to next section.

18.7: Have you had a hysterectomy?
A hysterectomy is an operation to remove the uterus (womb)
1 Yes
2 No

Section 19: Prostate Cancer Screening
CATI Note: If respondent is ≤39 years of age, or is female, go to next section.
Now, I will ask you some questions about prostate cancer screening.

19.1: A Prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Have you ever had a PSA test?
1 Yes
2 No **[Go to Q19.3]**

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

19.3: A digital rectal exam is an exam in which a doctor, nurse, or other health professional places a gloved finger into the rectum to feel the size, shape, and hardness of the prostate gland. Have you ever had a digital rectal exam?
1 Yes
2 No **[Go to Q19.5]**

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

19.5: Have you ever been told by a doctor, nurse, or other health professional that you had prostate cancer?
1 Yes
2 No

Section 20: Colorectal Cancer Screening
CATI Note: If respondent is ≤ 49 years of age, go to next section

20.1: 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 Q20.3**

20.2**:** 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

20.3: Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?
1 Yes
2 No **Go to next section**

20.4: 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 exam a sigmoidoscopy or a colonoscopy?
1 Sigmoidoscopy
2 Colonoscopy

20.5: 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

Section 21: HIV/AIDS
CATI Note: 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.

21.1: 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**

21.2: 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 month is unknown enter 77 for the month and then the four digit year—Ex-772000.
__ __/__ __ __ __ Code month and year

21.3: Where did you have your last HIV test–at a private doctor or HMO office, 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 Q21.4 only if Q21.2 is within the last 12 months. Otherwise, go to Q21.5.

21.4*:* Was it a rapid test where you could get your results within a couple of hours
1 Yes
2 No

21.5: I'm going to read you a list. When I'm done, please tell me if any of the situations apply to you. You do not need to tell me which one**.**

- You have used intravenous drugs in the past year.
- You have been treated for a sexually transmitted or venereal disease in the past year.
- You have given or received money or drugs in exchange for sex in the past year.
- You had anal sex without a condom in the past year.

Do any of these situations apply to you?
1 Yes
2 No

Section 22: Emotional Support & Life Satisfaction
The next two questions are about emotional support and your satisfaction with life.
22.1: 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

22.2: In general, how satisfied are you with your life?
1 Very satisfied
2 Satisfied
3 Dissatisfied
4 Very dissatisfied

Module 6: Binge Drinking
CATI Note: If Q13.4 is ≥1, continue. Otherwise, go to next module.
Previously, you answered that you drank [5 or more for men, 4 or more for women] alcoholic beverages on at least one occasion in the past 30 days. The next questions are about the most recent occasion when this happened. For these questions, one drink equals 12 ounces of beer, 5 ounces of wine, or one and one-half ounces (one shot) of liquor. So, for example, a 40 ounce beer would count as 3 drinks, or a cocktail drink with 2 shots would count as 2 drinks.
INTERVIEWER NOTE: If asked, "occasion" means in a row or within a few hours.
1. During the most recent occasion when you had [5 or more for men, 4 or more for women] alcoholic beverages, about how many beers, including malt liquor, did you drink?
_ _ Number
8 8 None

2. During the same occasion, about how many glasses of wine did you drink?
_ _ Number
8 8 None

3. During the same occasion, about how many drinks of liquor, including cocktails, did you have?
_ _ Number
8 8 None

4. During the same occasion, about how many other pre-mixed, flavored drinks did you have? By that, we mean drinks such as hard lemonade, wine coolers, or Smirnoff Ice.
_ _ Number
8 8 None

5. During this most recent occasion, where were you when you did most of your drinking?
1 At your home, for example, your house, apartment, or dorm room
2 At another person's home
3 At a restaurant or banquet hall
4 At a bar or club
5 At a public place, such as at a park, concert, or sporting event
6 Other

6. Did you drive a motor vehicle such as a car, truck, or motorcycle during or within a couple of hours after this occasion?
INTERVIEWER NOTE: For those with concerns about this question, answering "Yes" is not meant to imply they were drunk driving or breaking the law.
1 Yes
2 No

CATI note: Ask Q7 only if response to Q5 = 3 (At a restaurant or banquet hall) or 4 (At a bar or club). Otherwise, go to next module.
7. During this most recent occasion, approximately how much did you pay for the alcohol which you drank?
INTERVIEWER NOTE: If anyone asks, they do not need to include the amount spent on tips.
_ _ _ Total amount
8 8 8 Paid nothing – all drinks free or paid for by others

Module 15: Random Child Selection
CATI note: If Core Q12.7 = 88, (no children under age 18 in the household, or 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; <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" **[CATI: please fill in correct number]** child in your household. All following questions about children will be about the "Xth" **[CATI: please fill in correct number]** 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
4 Sibling (include biologic, step and adoptive sibling)
5 Other relative
6 Not related in any way

Module 16: Childhood Asthma Prevalence
CATI Note: If response to core Q12.7 is '88' (none or refused) go to next module.
The next two questions are about the "Xth" **[CATI: please fill in correct number]** child.
1. Has a doctor, nurse or other health professional EVER said that the child has asthma
1Yes
2 No ⇨**Go to next module**

2. Does the child still have asthma?
1 Yes
2 No

State Added Youth Smoking
CATI note: If response to Module 16 q1 is missing or child age <= 10 years go to next section.
SAYSQ1. As far as you know, has the child ever tried cigarette smoking, even one or two puffs?
1 Yes
2 No **[Go to next section]**

SAYSQ2. Does the child now smoke cigarettes every day, some days, or not at all?
1 Every day
2 Some days
3 Not at all

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

State Added Respiratory
SARQ1. Have you ever been told by a doctor, nurse or other health professional that you have emphysema or chronic obstructive pulmonary disease, also known as COPD?
1 Yes
2 No

SARQ2. Have you ever been told by a doctor, nurse, or other health professional that you have chronic bronchitis?
1 Yes
2 No

State Added Antibiotic Awareness
SAAAQ1. When you get a cold, do you think antibiotics like penicillin help you get better?
1 Yes
2 No

SAAAQ2. Have you heard of antibiotic resistance?
1 Yes
2 No

State Added Colorectal Cancer Screening
[ASK IF AGE > 49]

SACCSQ1. Earlier I asked you some general questions about colorectal cancer screening. Now, I'd like to ask a few very specific ones. Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No **Go to 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
5 Did not recommend a test **Go to SACCAQ1**

SACCSQ3. Did you have the test if SACCSQ2 = 4 your health care provider recommended?
1 Yes **Go to SACCAQ1**
2 No

SACCSQ4. What is the main reason you did not have the test?
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

State Added Colorectal Cancer Advertising
[ASKED IF AGE > 49]
SACCAQ1. In the past 6 months, have you seen any articles or advertising about colorectal cancer screening?
1 Yes
2 No **Go to SACCKQ1**

SACCAQ2. Where did you see this article or advertisement about 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

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

SACCKQ2. A person's race or ethnicity is considered a risk factor for developing colorectal cancer. Would you say...
1 Strongly agree,
2 Somewhat agree,
3 Neither agree nor disagree,
4 Somewhat disagree, or
5 Strongly disagree?

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

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

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

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

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

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

State Added Colorectal Cancer Plans
[Ask MODULE ONLY 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]
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…
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
5 You have made an appointment to get screened , or
6 You have already been screened for colorectal cancer. **[Go to SACCRQ1]**

[IF 20.1 OR 20.3 = 1 or SACCSQ3 = 1 OR 2, SKIP TO SACCRQ1]
SACCPQ3**.** If you have not been screened for colorectal cancer, what has kept you from being screened?
1 No symptoms
2 No family history of colorectal or colon cancer
3 Cost/Not covered by insurance
4 Don't know where to get the exam
5 I am nervous about the procedure
6 OTHER

State Added Colorectal Cancer Risk
[Ask MODULE ONLY 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

State Added Disability
To be asked of people answering 'yes' to core questions 10.1 or 10.2, else skip to next module.
SADIQ1**.** What is your main health condition or disability that limits your activity? Would you say it is a...
11 Physical impairment or disability
12 Learning or intellectual disability
13 Memory or cognitive disability
14 Emotional problems, such as depression, bipolar disorder or schizophrenia
15 Hearing disability
16 Blindness
17 Speech impairment

SADIQ2**.** How long have your activities been limited due to this condition or impairment
1_____ Number of months (specify number of months)
2_____ Number of years (specify number of years)
6 6 6 All or almost all of my life

SADIQ3**.** Have you had difficulty finding a health care provider who understands your health condition or impairment?
1 Yes
2 No

State Added Health Care Access
If core question 3.1 is 'yes' continue, else skip to SAHCQ3
SAHCQ1**.** What type of health care insurance or coverage do you have? Is it coverage through…
11 Your employer or your spouse's employer
12 A plan that you or someone else buys for you
13 Medicare, Medicare supplemental, or MEDIGAP
14 MEDICAID or title XIX
15 The military, CHAMPUS, or the VA
16 Insurance through some other source
17 None (out of pocket)

SAHCQ2. Do you have any other type of coverage that you may not have considered?
11 Your employer or your spouse's employer
12 A plan that you or someone else buys for you
13 Medicare, Medicare supplemental, or MEDIGAP
14 MEDICAID or title XIX
15 The military, CHAMPUS, or the VA
16 Insurance through some other source
17 None

SAHCQ3. In the past 12 months have you been turned down for health insurance or found that your insurer would not cover care you needed because of a pre-existing condition?
1. Yes
2. No

SAHCQ4. In the last year, have you skipped medication doses because you could not afford your prescribed medications?
1 Yes
2 No

SAHDQ5. In the past 12 months, have you gone without needed health items such as eye glasses or special equipment due to cost?
Note: Special equipment includes such items as wheelchairs, walkers, hearing aids, or breathing aids.
1. Yes
2. No

SAHCQ6. In the last 12 months have you spent less on basic needs, such as food or heat, in order to pay for health care?
1. Yes
2. No

State Added Smoking [Added July 1, 2008]
If core question 11.1 is 'yes' continue, else skip to SASSQ1
SASQ1. Previously you said that you had smoked at least 100 cigarettes in your entire life. Over the past year have you been smoking fewer cigarettes, if any, but using more smokeless types of tobacco instead?
1 Yes
2 No **[Go to SASSQ1]**
3 No, haven't smoked cigarettes in the past year **[Go to SASSQ1]**

SASQ2. Why did you make that change? Was it…
[SELECT ALL THAT APPLY]
1 the price of cigarettes,
2 the ban on smoking in public areas,
3 concern about your health,
4 personal preference, or
5 something else?

State Added Secondhand Smoke [Revised July 1, 2008]
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

CATI note: If response to Core Q12.9 = 1 (Employed) or 2 (Self-employed), continue. Otherwise, go to next Module.
SASSQ5. In a typical week at work, how many hours would you say that you are in a room or car with smoke from someone else's cigarettes, cigars, or pipe?
____ ____ Number of hours per week
01 One hour or less
70 Seventy hours or more
88 None

State Added Mental Health Stigma
SAMHQ1. Do you agree or disagree with the following two statements about mental health?
People with serious mental illness can, with treatment, get well and return to productive lives.
1 agree
2 disagree
3 neutral

SAMHQ2. Locating a group home or apartments for people with mental illness in a residential area will not harm property values.
1 agree
2 disagree
3 neutral

SAMHQ3. What do you believe is the most common cause of mental illness?
[SELECT ONE]
11 alcohol or drug abuse
12 chemical imbalances
13 stress of life
14 accidental injury
15 inherited
16 lack of discipline
17 other

STATE ADDED GAMBLING
I have just a few more questions and we'll be finished.
SAGQ1. In the past 12 months have you bet money or possessions on any of the following activities? Casino gaming including slot machines and table games; lottery including scratch tickets, pull tabs and lotto; sports betting; internet gambling; bingo or any other type of wagering.
1 Yes
2 No **[Go to Asthma Follow-up Permission]**

SAGQ2. In the past 12 months, how often has your gambling caused any financial problems for you or your household?
1 Never
2 Sometimes
3 Most of the time
4 Always

SAGQ3. In the past 12 months, how often has the time you spent gambling led to problems in your family, work, or personal life?
1 Never
2 Sometimes
3 Most of the time
4 Always

Asthma Follow-up Permission Script
CATI note: Go to Closing Statement if there is not an eligible respondent for the Asthma Follow-up