Health in Iowa

Annual Report

From the
Behavioral Risk Factor Surveillance System

Iowa 2009

Iowa Department of Public Health

Chester J. Culver, Governor, Patty Judge, Lt. Governor
Thomas Newton MPP f REHS, Director

Completed in cooperation with the Centers for Disease
Control and Prevention,
Division of Behavioral Surveillance

IDPH
Iowa Department
of Public Health

ACKNOWLEDGEMENTS

This report was prepared by Donald H. Shepherd, Ph.D.
Iowa BRFSS Coordinator
Iowa Department of Public Health

We acknowledge the contributions of the following:

- The Centers for Disease Control and Prevention (CDC) Division of Behavioral Surveillance provided financial and technical support for developing the questionnaire, implementing the survey, and processing and weighting data.
- The Center for Social and Behavioral Research staff and interviewers, University of Northern Iowa, Gene Lutz, Director, Mary Jane Crew, Interviewer Supervisor, 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.
- XXX provided document review.

The data 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.

For additional information, contact Donald Shepherd
(515) 281-7132
dshepher@idph.state.ia.us

TABLE OF CONTENTS

1. INTRODUCTION

History

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

A point-in-time survey was done in Iowa in 1982. In 1988, Iowa began full participation in BRFSS. The BRFSS is now conducted in all 50 states, the District of Columbia, Puerto Rico, 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 2009. Some of the risk factors discussed are: general health status, health care coverage, cigarette smoking, alcohol consumption, body weight, physical activity, diet, 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 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.

The BRFSS questionnaire is updated each year by the CDC and by each participating state. In 2009, several optional modules were included for only a part of the year. In January and February a pandemic flu module was included to examine respondents attitudes toward a possible pandemic flu epidemic. The H1N1 epidemic prompted the inclusion of influenza like illness (ILI) modules from September through December and H1N1 vaccination modules from October through December. These continued into 2010. In association with these the childhood immunization module was included for most of the year. A cognitive impairment module was piloted in the survey from April through December. The questionnaire that appears in appendix 2 will not show the modules included for less than half of the year. The responses from these modules will not be discussed since their numbers are only adequate to be meaningful at the national level.

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 2009 for a total sample size of 6,024. Interviews were conducted in both English and Spanish. There were 5,976 English interviews and 48 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 2009 another stratum was added devoted to households having cell phones only. All other strata excluded cell phones. However, if they had both cell phones and landline phones, it was considered that they could be included in the landline sample, and, therefore, not interviewed on their cell phone. The cell phone only 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, they 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. Three hundred and one interviews were conducted with this cell phone sample over the course of ten months from February through November. 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 only 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 26.24 minutes. Spanish interviews took longer. Time varied greatly per month as the part-year modules were added and removed. The response rate, defined as completed interviews + partial completes divided by all eligible households called, was 43.0%. 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 6,024 interviews conducted, 421 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 2 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 the CDC and to the Iowa Department of Public Health.

Advantages and Limitations

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

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

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

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

There is one main limitation to telephone surveys. All Iowans are not reachable by traditional telephone service. Some do not live in households but are in institutions such as nursing homes or prisons. Some households do not have telephones. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to own telephones and are therefore under-sampled. 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 2009, 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. Dormitory residents were included in the 2009 cell phone stratum.

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

Some inaccuracy is expected from any survey based on self-reported information. For example, respondents are known to under-report their weight and inaccurately recall 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 a sample of randomly chosen people is asked the questions, the true prevalence in the population can only be estimated. Some of the factors involved in making such estimates must be considered. First, data were weighted to Iowa's population. Weighting took into consideration the facts that the number of adults per household and the number of phone numbers per household influence a person's likelihood of being included in the survey. Next, weights were adjusted to match Iowa's population by age, gender, and region. The state's population estimates were derived from the most currently available census data files.

The judgment of the value of prevalence in a population, such as the state based on the prevalence within a sample, always involves educated guesswork. The prevalence values from the survey and the real state prevalence values may differ by some amount, but 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 well we can judge the response of all Iowans from the survey sample is the number of responses to the questions. The smaller the number of responses, the poorer is our ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there are a smaller number of interviews in each particular group than in the whole survey. Furthermore, many questions are only answered depending on the answer to previous questions. For instance, 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.

References

1. Blumberg, SJ, Luke, JV, Cynamon, ML. Telephone Coverage and Health Survey Estimates: Evaluating the Need for Concern About Wireless Substitution. *American Journal of Public Health.* Vol. 96, No. 5; May, 2006. 926-931.
2. Link MW, Battaglia MP, Frankel MR, Osborn L, Mokdad AH. Reaching the U.S. Cell Phone Generation: Comparison of Cell Phone Survey Results With an Ongoing Landline Telephone Survey. *Public Opinion Quarterly,* Vol 71, No. 5; 2007. 814–839.

3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 6,024 respondents in the landline portion of the BRFSS for the year 2009 included 2,346 males and 3,678 females age 18 years and older. The following tables present the distribution of this 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 2009

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	82	3.5	90	2.4	178	2.9
25-34	199	8.5	349	9.5	548	9.1
35-44	333	14.2	498	13.5	831	13.8
45-54	495	21.1	671	18.2	1,166	19.4
55-64	528	22.5	726	19.7	1,254	20.8
65-74	360	15.4	596	16.2	956	15.9
75+	336	14.3	694	18.9	1,030	17.1
Unk/Ref	13	0.6	54	1.5	67	1.1
Total	2,346	38.9	3,678	61.1	6,024	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2009

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	5,696	94.4
Black Non-Hispanic	81	1.3
Other Non-Hispanic[1]	85	1.4
Hispanic	124	2.1
Refused	38	0.6
Total	6,024	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2009

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	393	6.5
High School Grad or GED	2,085	34.6
Some College or Technical School	1,703	28.3
College Graduate	1,824	30.3
Unknown/Refused	19	0.3
Total	6,024	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 2009

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	437	7.3
$15,000-$24,999	835	13.9
$25,000- 34,999	640	10.6
$35,000-$49,999	911	15.1
$50,000-$74,999	941	15.6
>=$75,000	1,427	23.7
Unknown/Refused	833	13.8
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. 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] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[3]

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.

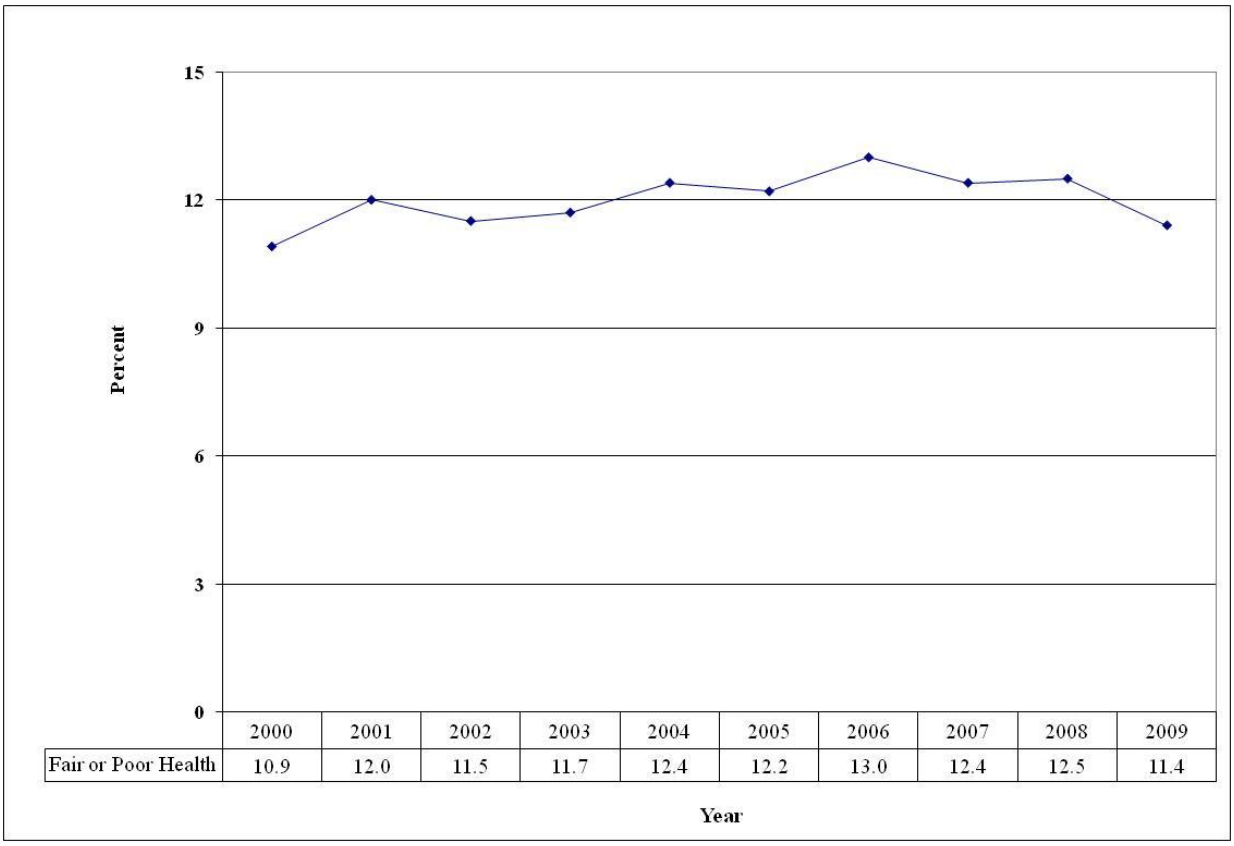
Emotional support and life satisfaction have become regularly occurring core measures in the BRFSS. While they are not technically health-related quality of life measures, they certainly reflect a person's general quality of life. They are likely to influence or be influenced by the person's general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

General Health Status Results

In 2009, when asked how their health was in general, 21% of respondents reported that it was excellent. Another 36.1% said it was very good. While 31.5% reported good health, 11.4% rated their health as fair or poor. This figure for fair or poor health is a little lower than the 12.5% figure found in 2008. Figure 4.1 shows that the trend in prevalence of fair or poor health reached a peak in 2006 and has been trending downward since.

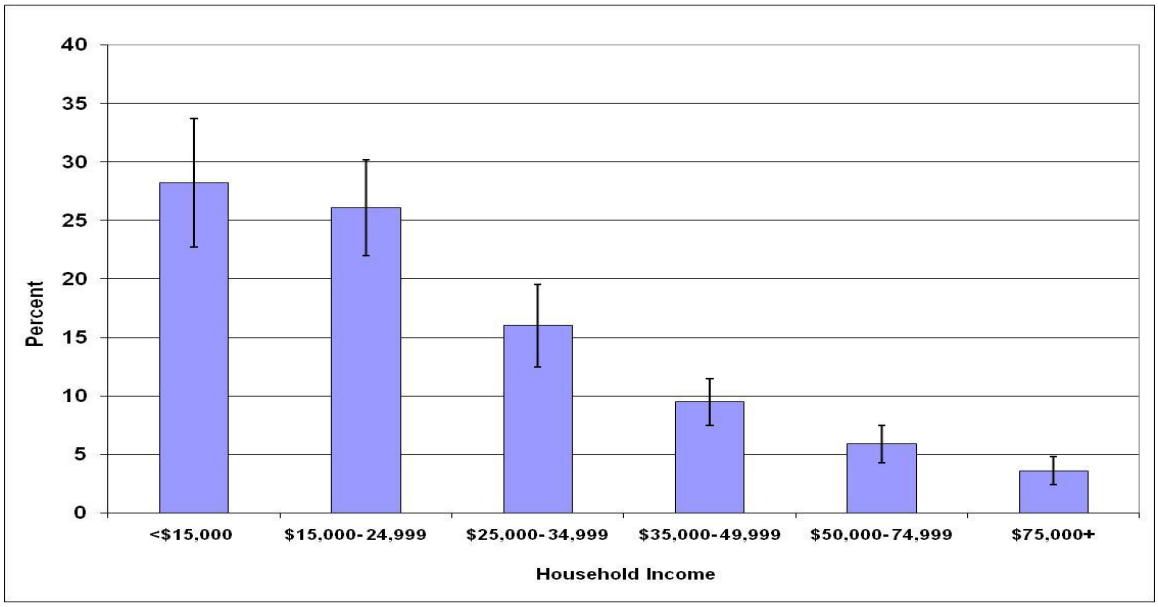
Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Household income had the most impact on reporting fair or poor health. While only 3.6% of those with incomes of $75,000 or over reported fair or poor health, 28.2% of those with 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,

Figure 4.1: Percentage of Iowans Reporting Their Health as Fair or Poor 2000-2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Fair or Poor Health	10.9	12.0	11.5	11.7	12.4	12.2	13.0	12.4	12.5	11.4

Figure 4.2: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2009



Education, those with household incomes $50,000 or higher, and those age 18 to 45 years all reported less 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, 68.7% of respondents reported none of the days and 8.3% 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.

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2009

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	11.4	(10.4-12.4)
SEX		
Male	11.1	(9.7-12.5)
Female	11.5	(10.3-12.7)
RACE/ETHNICITY		
White/Non-Hisp.	10.9	(9.9-11.9)
Non-White or Hisp.	17.1	(12-22.2)
AGE		
18-24	5.9	(2.4-9.4)
25-34	7.2	(4.7-9.7)
35-44	5.8	(4-7.6)
45-54	9.1	(7.3-10.9)
55-64	16.7	(14.3-19.1)
65-74	16.4	(13.8-18.9)
75+	26.1	(23.1-29.1)
EDUCATION		
Less Than H.S.	21.7	(17-26.4)
H.S. or G.E.D.	14.6	(12.6-16.6)
Some Post-H.S.	10.5	(8.7-12.3)
College Graduate	5.9	(4.7-7.1)
HOUSEHOLD INCOME		
<$15,000	28.2	(22.7-33.7)
$15,000- 24,999	26.1	(22-30.2)
$25,000- 34,999	16.0	(12.5-19.5)
$35,000- 49,999	9.5	(7.5-11.5)
$50,000- 74,999	5.9	(4.3-7.5)
$75,000+	3.6	(2.4-4.8)

Once again, household income had the greatest impact. People with household incomes less than $15,000 reported 27.9% having fourteen or more bad physical health days, while people with household incomes of $75,000 or more had the lowest percentage (3.5%).

When responding to the question of how many days during the past 30 days their mental health was not good, 71.5% of the respondents indicated none of the days and 7.6% 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%), while those with an annual household income of $15,000 or less had the most (18.5%).

When asked how many days poor physical or mental health kept them from performing their usual activities, 61.4% of those with some days of either bad physical or mental health said none. On the other hand, 10.8% said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income.

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2009

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	**8.3**	**(7.5-9.2)**	**7.6**	**(6.7-8.5)**
SEX				
Male	**7.5**	**(6.2-8.8)**	**6.6**	**(5.3-8)**
Female	**9.2**	**(8-10.4)**	**8.6**	**(7.3-9.8)**
RACE/ETHNICITY				
White/Non-Hisp.	8.2	(7.3-9.1)	**7.3**	**(6.4-8.2)**
Non-White or Hisp.	9.4	(4.5-14.3)	**12.1**	**(6.3-17.9)**
AGE GROUP				
18-24	**7.1**	**(2.9-11.3)**	**8.4**	**(4-12.9)**
25-34	**3.5**	**(1.8-5.3)**	**9.4**	**(6.8-12)**
35-44	**4.9**	**(3.1-6.6)**	**7.9**	**(5.7-10)**
45-54	**7.9**	**(6.3-9.6)**	**8.8**	**(7-10.6)**
55-64	**12.1**	**(10.1-14.2)**	**7.6**	**(5.9-9.2)**
65-74	**10.4**	**(8.3-12.4)**	**4.6**	**(3.2-6)**
75+	**16.7**	**(14.2-19.3)**	**4.0**	**(2.7-5.4)**
EDUCATION				
Less than H.S.	**17.6**	**(12.1-23)**	**8.2**	**(4.2-12.1)**
H.S. or G.E.D.	**9.2**	**(7.7-10.8)**	**8.0**	**(6.4-9.7)**
Some Post-H.S.	**8.7**	**(7.1-10.4)**	**10.4**	**(8.4-12.4)**
College Graduate	**4.7**	**(3.6-5.8)**	**4.3**	**(3.2-5.4)**
HOUSEHOLD INCOME				
Less than $15,000	**27.9**	**(11.9-18.5)**	**18.5**	**(13.5-23.5)**
$15,000- 24,999	**15.2**	**(7.2-12.3)**	**14.1**	**(10.6-17.5)**
$25,000- 34,999	**9.8**	**(7.2-12.3)**	**6.9**	**(4.4-9.3)**
$35,000- 49,999	**5.3**	**(3.9-6.8)**	**8.9**	**(6.1-11.7)**
$50,000- 74,999	**5.9**	**(4-7.7)**	**5.5**	**(3.8-7.2)**
$75,000+	**3.5**	**(2.3-4.6)**	**4.3**	**(2.9-5.7)**

When asked how often they got the social and emotional support they needed 48% of Iowans responded always and another 34.8% responded usually. Never was reported by 3%.

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, 96.3% of Iowans reported either very satisfied or satisfied. Satisfaction was less likely for lower education and lower income individuals. In no case was combined very satisfied and satisfied responses given by less than

85% of a particular group. The least satisfaction was reported by Iowans with incomes less than $15,000 per year. In this group only 23.5% were very satisfied, but 62.9% were satisfied. Combined this was 86.4%.

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and territories ranged from 10.1% to 30.8%. The worst case seemed to be an outlier, since the second worst rate was only 23.7%. The median value was 14.6%. Iowa ranked quite well with only 11.4% rating their health as fair or poor. Only six regions had a lower percent of residents reporting fair or poor health.

References

i. 1. Centers for Disease Control and Prevention. Health Related Quality of Life. Available at http://www.cdc.gov/hrqol/. 2009.

ii. 2. DeSalvo KB, Bloser N, Reynolds K, He J, and Muntner P. Mortality Prediction with A Single General Self-Rated Health Question: A Meta-Analysis. *Journal of General Internal Medicine.* Springer New York, Volume 21, Number 3 / March, 2006, 267-275.

iii. 4. Mossey J, Shapiro E. Self-Rated Health: A Predictor of Mortality Among the Elderly. *American Journal of Public Health*, Vol. 72, No. 8; 1982.

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

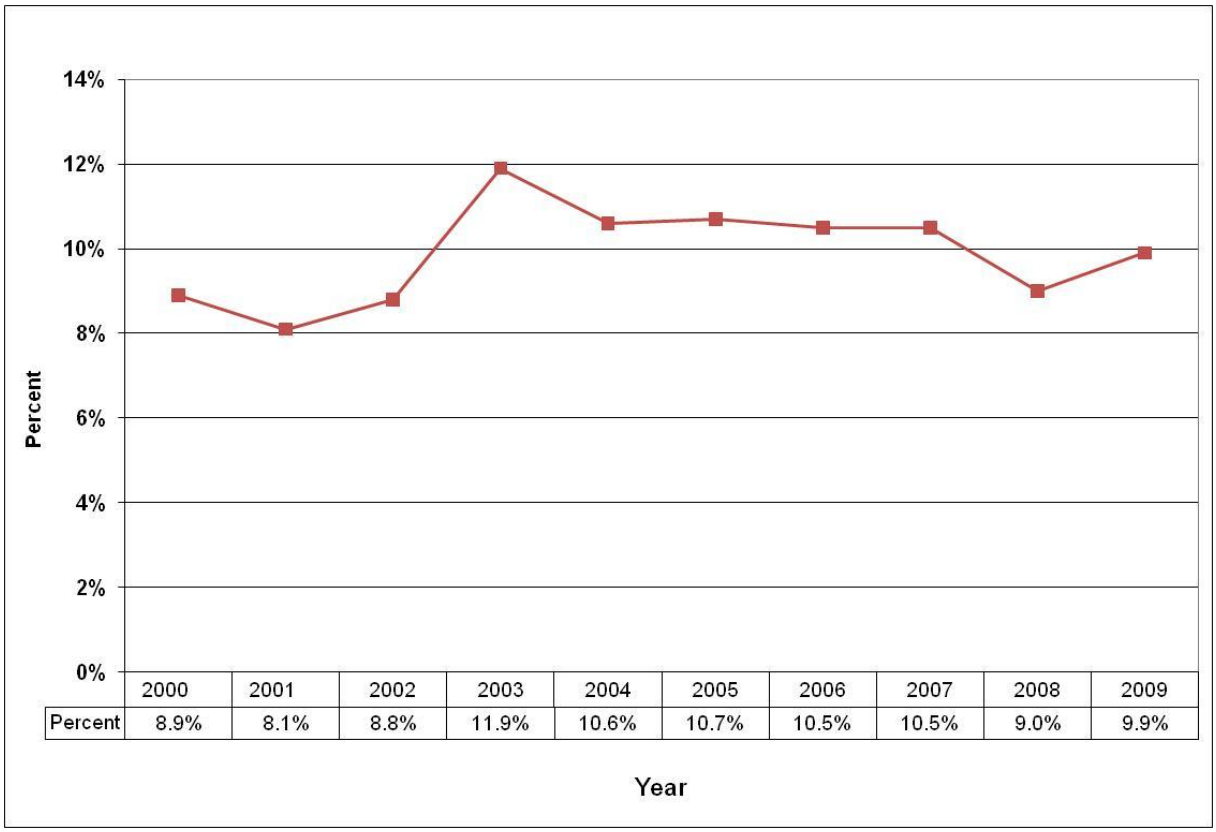
In 2009, 9.9% of the survey respondents reported they had no health insurance. This is an increase from the 9% found in 2008 but not as high as the 2007 level (see figure 5.1).

Table 5.1 shows that more males lacked health insurance than females. Furthermore, younger people, less educated people, people with lower incomes, and racial and ethnic minorities were more likely to lack any health care coverage. Non-White and Hispanic respondents had the highest percentage of individuals without health care coverage (31.8%). Almost everyone age 65 years and older had health care coverage due to Medicare. The group with the second lowest percentage of uninsured was those with a college education (3.0%).

Two other demographic variables that had a major impact on health care coverage were employment status and marital status. Unemployed respondents had 22.7% reporting they were not covered by health insurance. Only 3.1% of retirees were without health insurance.

People who were married were much more likely to have health care coverage than those who were not. Only 6.6% of married respondents were without coverage, while 16.6% of unmarried respondents were without it.

Figure 5.1: No Health Insurance Coverage Trend Iowa 2000 – 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Percent	8.9%	8.1%	8.8%	11.9%	10.6%	10.7%	10.5%	10.5%	9.0%	9.9%

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 7.9% 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 (2.4%) was for people with annual household incomes of $75,000 or more. This was followed closely by people age 65 years and older. The highest percentage (20.8%) 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 79.9% 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 (66.4%), while those age 65 years old and older were most likely (87.6%).

When asked how long it had been since their last regular check up, 70.1% said less than one year. On the other end, 1.5% said they had never had a checkup. People who were female, older, and had a higher household income 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 (85.4%), while those from age 25 to 34 were least likely (60.8%).

Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2009

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	9.9	(8.7-11.1)	7.9	(6.9-8.9)	79.9	(78.3-81.5)	70.1	(68.5-71.7)
SEX								
Male	11.4	(9.4-13.4)	6.4	(5-7.8)	73.8	(71.3-76.3)	61.7	(59-64.4)
Female	8.4	(7-9.8)	9.3	(7.9-10.7)	85.7	(83.9-87.5)	78.2	(76.2-80.2)
RACE/ETHNICITY								
Non-Hispanic White	8.3	(7.2-9.4)	7.2	(6.3-8.2)	81.0	(79.4-82.5)	70.4	(68.1-72.7)
Non-White or Hisp.	31.8	(24.2-39.5)	17.2	(11.1-23.2)	66.4	(58.4-74.4)	66.9	(59-74.8)
AGE								
18-24	18.3	(12-24.6)	9.9	(4.8-15)	71.8	(64-79.6)	65.4	(57.2-73.6)
25-34	14.6	(11.1-18.1)	12.6	(9.5-15.7)	72.6	(68.3-76.9)	60.8	(56.1-65.5)
35-44	10.6	(8.1-13.1)	8.7	(6.5-10.9)	78.9	(75.8-82)	63.5	(59.8-67.2)
45-54	9.5	(7.7-11.3)	7.9	(6.1-9.7)	80.5	(78-83)	66.3	(63.2-69.4)
55-64	7.8	(6.2-9.4)	6.8	(5.2-8.4)	85.4	(83.2-87.6)	76.6	(73.9-79.3)
65+	1.8	(1.2-2.4)	2.7	(1.9-3.5)	87.6	(86-89.2)	85.4	(83.6-87.2)
EDUCATION								
Less than H.S.	24.5	(17.6-31.4)	10.9	(6.8-15)	71.6	(64.5-78.7)	67.6	(60.3-74.9)
H.S. or G.E.D.	13.8	(11.4-16.2)	9.1	(6.9-11.3)	79.5	(76.8-82.2)	70	(67.1-72.9)
Some Post-H.S.	8.5	(6.7-10.3)	9.6	(7.6-11.6)	79.1	(76.2-82)	68.2	(65.1-71.3)
College Graduate	3.0	(2-4)	4.0	(2.8-5.2)	83.2	(81-85.4)	72.8	(70.3-75.3)
HOUSEHOLD INCOME								
Less than $15,000	20.2	(13.9-26.5)	16.7	(11.8-21.6)	74.9	(67.8-82)	65.6	(57.8-73.4)
$15,000- 24,999	24.7	(20.2-29.2)	20.8	(16.5-25.1)	71.3	(66.4-76.2)	63.8	(58.7-68.9)
$25,000- 34,999	12.4	(8.7-16.1)	9.9	(6-13.8)	79.2	(74.9-83.5)	69.3	(64-74.6)
$35,000- 49,999	8.8	(5.9-11.7)	8.6	(5.9-11.3)	79.8	(76.3-83.3)	69.7	(65.6-73.8)
$50,000- 74,999	5.8	(3.8-7.8)	4.1	(2.5-5.7)	81.7	(78.4-85)	71.7	(68-75.4)
$75,000+	3.4	(1.8-5)	2.4	(1.4-3.4)	83.4	(80.7-86.1)	70.7	(67.6-73.8)

Comparison with Other States

In the fifty-four states and territories, the percent of non-elderly people without health insurance ranged from 6.1% to 31.4%. 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. Eight states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 11.9% of its non-elderly respondents reporting not having any insurance. The median for states and territories was 17%. These figures are nearly identical to those obtained for the previous three years for the nation, while Iowa has slipped a little. Iowa is still doing quite well compared to the nation as a whole.

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 88.1% of the non-elderly have coverage. 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" most often includes coronary heart disease, heart attack (myocardial infarction), 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 2,300 Americans die of CVD each day, an average of 1 death every 38 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 women and first and fourth causes for men in the United States, accounting for nearly 40% of all annual deaths.[1]

Deaths are only part of the picture. More than 80 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.1

Each year about 795,000 people experience a new or recurrent stroke. On average, every 40 seconds someone in the United States has a stroke. Stroke is a leading cause of serious, long-term disability in the United States. Fifteen to 30 per cent of stroke survivors are permanently disabled.[1]

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be $503 billion in 2010, including health care expenditures and lost productivity from death and disability.[1]

In Iowa deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 319.1 in 1997 to 242.1 in 2008. The rate of deaths from stroke has gone from 75.4 in 1997 to 56.1 in 2008. The percent of total deaths from major cardiovascular diseases has gone from 43.9 in 1997 to 33.9 in 2008.[2] in Iowa.

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. 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 2009, 4.2% of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction, 3.8% had been told they had coronary heart disease or angina, and 2.4% 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 coronary heart disease/angina are combined when looking at the influence of various demographic factors.

More cardiovascular conditions were experienced by men, older people, people with lower education and people with lower household incomes. Age is the variable with the most impact on having had these conditions. No one under age 25 reported a heart condition and only 0.2% reported any of the cardiovascular conditions, while 21% of those 75 years or older reported a heart condition and 27.2% reported any of the three cardiovascular conditions. The sex difference was not present for having had a stroke.

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

The survey also examined the respondent's knowledge of the symptoms of a heart attack or a stroke. It asked if six different symptoms were true of each condition. Some of these were true, and some were not. Of heart attack symptoms: 62.1% knew that pain or discomfort in the jaw, neck, or back was a symptom; 66.7% thought that feeling faint, light-headed, or weak was a symptom; 95% knew that chest pain or discomfort was a symptom; only 41.2% knew that sudden trouble seeing in one or both eyes was not a symptom; 89% knew that pain or discomfort in the arm or shoulder was a symptom; and 87.9% knew that shortness of breath was a symptom of a heart attack. Only 16.7% correctly knew all six symptoms of a heart attack.

Table 6.1: Prevalence among Iowans of Heart Attack, Heart Disease, and Stroke, 2009

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	5.9	(5.3-6.5)	2.4	(2-2.8)	7.5	(6.8-8.2)
SEX						
Male	7.6	(6.6-8.6)	2.6	(2-3.2)	8.9	(7.8-10)
Female	4.3	(3.7-5)	2.3	(1.9-2.7)	6.1	(5.4-6.9)
RACE/ETHNICITY						
White/Non-Hisp.	6.0	(5.4-6.6)	2.5	(2.1-2.9)	7.7	(7-8.4)
Black/Non-Hisp.	9.2	(2.1-16.3)	1.9	(0-4.8)	9.7	(2.5-16.8)
Other/Non-Hisp.	5.5	(1.5-9.5)	2.2	(0-4.6)	5.9	(1.8-10)
Hispanic	1.3	(0-7.1)	1.1	(0-2.8)	1.5	(0-3.3)
AGE						
18-24	0.0	(0-0)	0.2	(0-0.6)	0.2	(0-0.6)
25-34	0.7	(0.1-1.3)	0.6	(0-1.3)	1.3	(0.4-2.2)
35-44	1.1	(0.2-1.9)	0.7	(0-1.4)	1.8	(0.7-2.9)
45-54	3.6	(2.3-4.8)	1.5	(0.6-2.4)	4.5	(3.1-5.9)
55-64	9.9	(8-11.7)	2.5	(1.6-3.4)	11.5	(9.5-13.4)
65-74	14.0	(11.4-16.5)	5.0	(3.4-6.6)	17.1	(14.4-19.8)
75+	21.0	(18.2-23.8)	10.7	(8.6-12.8)	27.2	(24.2-30.2)
EDUCATION						
Less Than H.S.	10.2	(7.4-13.1)	5.0	(2.8-7.2)	12.8	(9.5-16.1)
H.S. or G.E.D.	7.6	(6.4-8.8)	3.0	(2.2-3.8)	9.3	(8-10.7)
Some Post-H.S.	4.8	(3.8-5.7)	2.1	(1.5-2.7)	6.3	(5.2-7.4)
College Graduate	4.0	(3.1-4.9)	1.5	(0.9-2.1)	5.2	(4.2-6.2)
HOUSEHOLD INCOME						
Less than $15,000	12.9	(9.5-16.3)	6.7	(4.0-9.4)	16.7	(12.7-20.8)
$15,000- 24,999	11.1	(8.7-13.5)	4.8	(3.0-6.6)	13.3	(10.7-15.9)
$25,000- 34,999	9.2	(7-11.5)	4.6	(2.8-6.4)	12.4	(9.7-15.1)
$35,000- 49,999	6.5	(4.9-8.1)	2.4	(1.2-3.6)	8.4	(6.5-10.3)
$50,000- 74,999	4.1	(2.7-5.5)	1.2	(0.6-1.8)	5.0	(3.5-6.5)
$75,000+	2.1	(1.5-2.8)	0.8	(0.4-1.2)	2.8	(2.1-3.5)

Table 6.2 shows that knowledge of heart attack symptoms was better in women than men. It was also better with increasing education and income. It was at its best in middle age. Whites were more knowledgeable of all symptoms than minorities. The group with the highest percent knowledgeable of heart attack symptoms was those with household incomes of $75,000 or more (22.6%), while people with less than a high school education and people age 18 to 24 years were both the lowest (6.1%).

Table 6.2: Percent of Iowans Knowledgeable of Symptoms of Heart Attack and Stroke and What Action to Take, 2009

DEMOGRAPHIC GROUPS	Know all six symptoms of Heart Attack		Know all six symptoms of Stroke		Know to call 911	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	16.7	15.0-18.4	25.4	23.3-27.6	87.7	86.1-89.2
SEX						
Male	14.4	11.8-17.0	25.4	21.9-28.9	86.2	83.6-88.9
Female	18.8	16.6-21.1	25.4	22.9-28.0	89.0	87.3-90.8
RACE/ETHNICITY						
White/Non-Hisp	17.1	15.3-18.9	26.3	24.0-28.5	87.7	86.1-89.3
Non-White or Hisp.	10.7	4.2-17.3	14.6	6.9-22.3	87.3	79.7-94.9
AGE						
18-24	6.1	0.9-11.2	14.8	6.4-22.3	91.1	84.9-97.3
25-34	13.9	9.3-18.5	28.2	21.9-34.5	89.0	84.6-93.4
35-44	21.6	17.0-26.1	30.0	24.8-35.2	88.0	84.0-91.9
45-54	22.0	17.7-26.4	33.4	28.6-38.2	86.2	82.8-89.6
55-64	18.1	14.6-21.5	26.5	22.5-30.5	87.8	84.8-90.9
65-75	17.0	12.9-21.1	21.9	17.5-26.3	87.5	83.9-91.1
75+	11.3	8.4-14.2	10.8	7.7-13.9	84.6	81.0-88.2
EDUCATION						
Less Than H.S.	6.1	0.6-11.6	9.8	3.3-16.3	81.4	72.6-90.2
H.S. or G.E.D.	12.6	9.9-15.3	17.4	13.9-20.8	88.5	85.9-91.1
Some Post-H.S.	17.8	14.6-20.9	26.6	22.6-30.6	85.4	82.3-88.6
College Graduate	22.1	18.7-25.6	36.0	31.9-40.0	90.0	87.7-92.4
HOUSEHOLD INCOME						
Less than $15,000	9.0	4.2-13.9	14.2	8.3-20.1	85.3	79.4-91.2
$15,000- 24,999	9.8	6.3-13.3	15.3	10.4-20.3	88.6	84.6-92.6
$25,000- 34,999	17.5	11.9-23.2	24.9	17.1-32.7	88.7	84.7-92.7
$35,000- 49,999	15.7	11.5-19.9	25.3	20.0-30.6	83.4	78.2-88.6
$50,000- 74,999	21.0	16.7-25.3	29.9	24.6-35.2	87.4	83.5-91.4
$75,000+	22.6	18.7-26.5	33.7	29.3-38.1	90.0	87.3-92.6

Considering stroke symptoms: 93.3% knew that sudden confusion or trouble speaking was a symptom; 94.8% knew that sudden numbness of face, arm, or leg, especially on one side was a symptom; 74.5% knew that sudden trouble seeing in one or both eyes was a symptom; only 41.3% knew that chest pain or discomfort was not a symptom; 89.5% knew that sudden trouble walking, dizziness, or loss of balance was a symptom; and only 64.4% knew that severe head ache with no known cause was a symptom of a stroke. Only 25.4% correctly knew all six symptoms of a stroke.

Knowledge of stroke symptoms was better in more educated and higher income people. It was higher in the middle age groups than either extreme. It was lower for racial and ethnic minorities. The group with the highest percent knowledgeable of stroke symptoms was those

with a college education (36%), while those with less than a high school education were the lowest (9.8%). It is unfortunate that the second lowest percentage was in the people age 75 years and older (10.8%) who are the mostly likely to have a stroke.

When asked the first thing they would do if they thought someone was having a heart attack or stroke, 87.7% said to call 9-1-1. The demographic differences were not as pronounced as with knowledge of symptoms. Women, younger age groups, most educated, and those with the highest income were more likely to know to call 9-1-1. The lowest percent was among people with less than a high school education (81.4%), while the highest percent was among people age 18 to 24 years (91.1%) (see table 6.2).

Taking aspirin is a simple thing people can do to prevent heart attack and stroke. When asked if they take aspirin every day, 26.7% said they did. The majority of these were 45 years old or older. Only 8% of those who did not take aspirin reported any sort of health problem that would make taking aspirin unsafe for them.

References

1. American Heart Association. Heart Disease and Stroke Statistics – 2010 Update At-A-Glance. 2010.
2. Iowa Department of Public Health. *2008 Vital Statistics of Iowa*. 2010.

7. HYPERTENSION AWARENESS

Background

Blood pressure is the force of blood against the walls of arteries. If this pressure rises and stays high over time, it can damage the body in many ways.[3]

Blood pressure is typically recorded as two numbers — the systolic pressure (as the heart beats) over the diastolic pressure (as the heart relaxes between beats). A consistent blood pressure reading of 140 mm Hg systolic or 90 diastolic mm Hg or higher is considered high blood pressure. Those with systolic blood pressure of 120-139 mm Hg and/or diastolic blood pressure of 80-89 mm Hg are now classified as pre-hypertensive, requiring health-promoting lifestyle modifications to prevent cardiovascular disease. There is also an exception to the definition of high blood pressure. A blood pressure of 130/80 or higher is considered high blood pressure in persons with diabetes and chronic kidney disease.[3]

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

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

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

People who have HBP can take steps to control it and reduce their risks for related health problems. Key steps include following a healthy lifestyle, taking medication, and following the treatment plan that your doctor prescribes.[3]

Hypertension Awareness Results

In 2009, 28% of all respondents reported ever being told they had high blood pressure. This is an increase from the 26.8% reported in 2007. This is the highest prevalence of diagnosed high blood pressure that has ever been reported in this survey (see figure 7.1).

Age had the greatest impact on the percentage of respondents reporting high blood pressure. The highest percentage was 60.5% among respondents age 75 years and older, while the lowest was among those age 18 to 24 (7.7%) (see Figure 7.2).

Figure 7.1: Percentage of Iowans Ever Told Blood Pressure is High by Year, 2000-2009

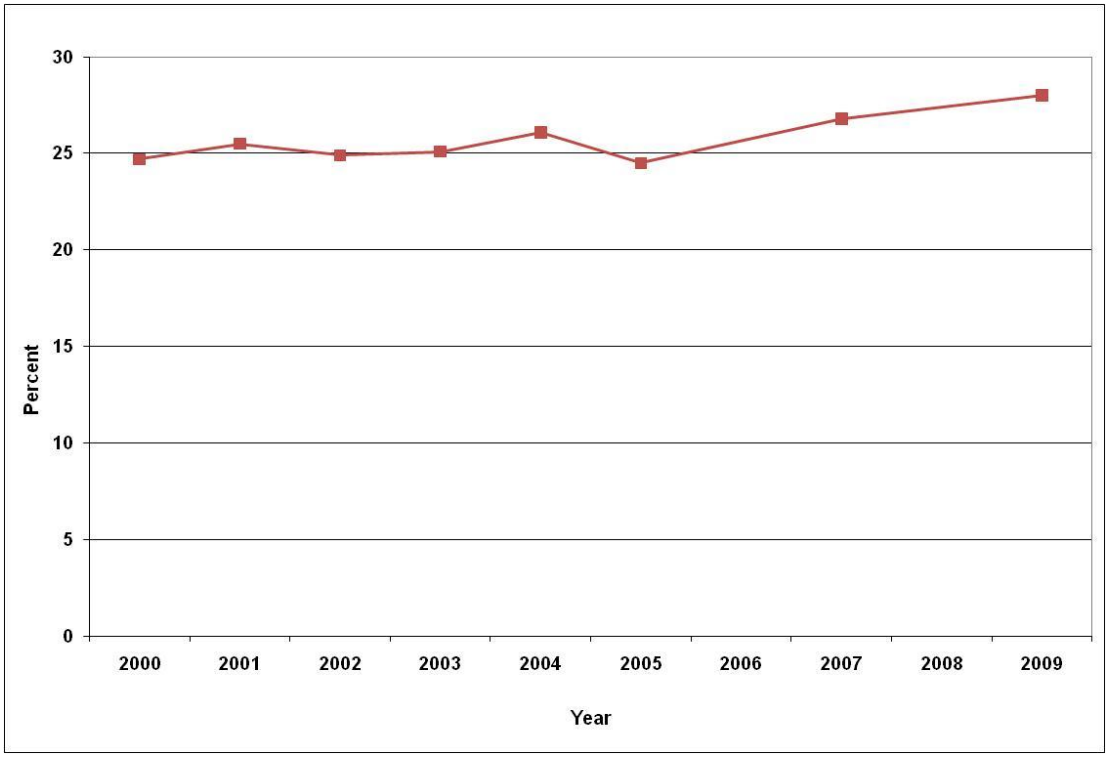


Figure 7.2: Iowans Ever Told Blood Pressure is High by Age, 2009

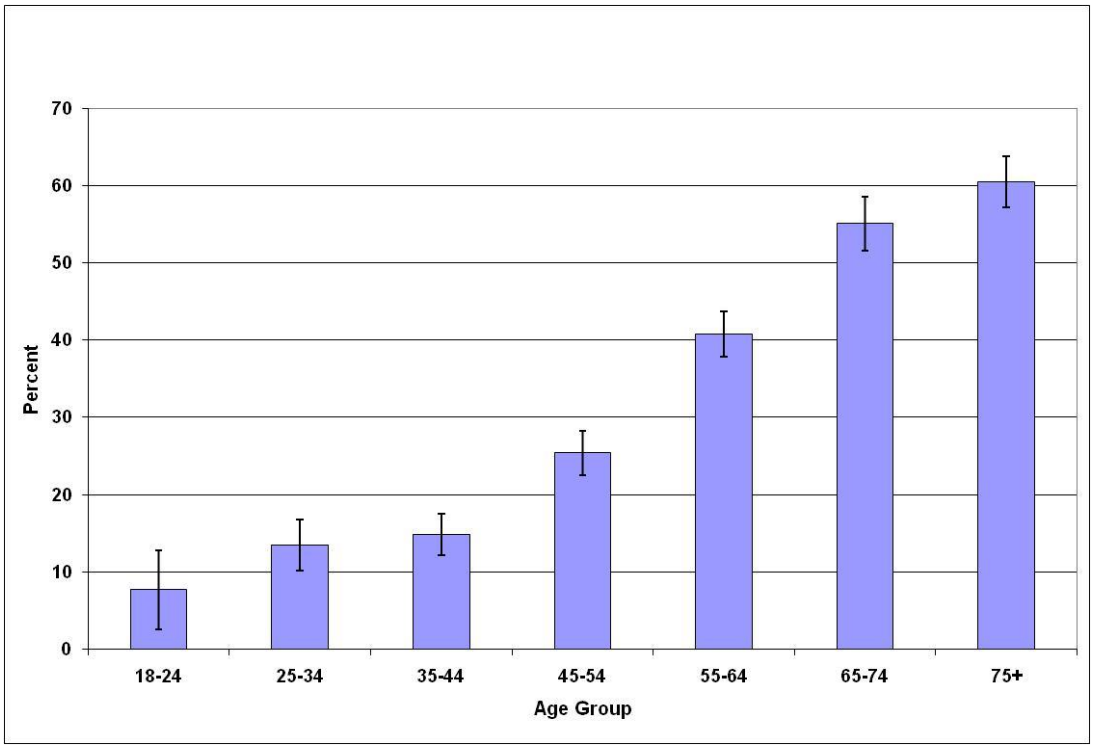


Table 7.1: Percentage of Iowans Told Blood Pressure Is High, 2009

DEMOGRAPHIC GROUPS	%	C.I. (95%)
TOTAL	28.0	(26.6-29.4)
SEX		
Male	28.8	(26.4-31.2)
Female	27.2	(25.4-29)
RACE/ETHNICITY		
Non-Hispanic White	28.4	(27-29.8)
Non-White or Hisp.	22.1	(16.6-27.6)
AGE		
18-24	7.7	(2.6-12.8)
25-34	13.5	(10.2-16.8)
35-44	14.8	(12.1-17.5)
45-54	25.4	(22.5-28.3)
55-64	40.8	(37.9-43.7)
65-74	55.1	(51.6-58.6)
75+	60.5	(57.2-63.8)
EDUCATION		
Less than H.S.	30.5	(24.6-36.4)
H.S. or G.E.D.	32.9	(30.2-35.6)
Some Post-H.S.	26.3	(23.8-28.8)
College Graduate	23.3	(20.9-25.7)
HOUSEHOLD INCOME		
Less than $15,000	37.7	(31.2-44.2)
$15,000- 24,999	37.4	(33.1-41.7)
$25,000- 34,999	37.4	(32.5-42.3)
$35,000- 49,999	29.4	(25.5-33.3)
$50,000- 74,999	24.8	(21.5-28.1)
$75,000	20.2	(17.7-22.7)

The prevalence of high blood pressure also increased with lower levels of education and household income. Non-White or Hispanics reported a low percentage of being told they had high blood pressure. More men reported being told they had high blood pressure than women. (see table 7.1).

Of those reporting high blood pressure, 80.6% reported taking medication for their condition. Like high blood pressure itself, this percentage increases steadily with age reaching a high of 93.7% for those 75 years old and over. More females with high blood pressure took blood pressure medicine than males (86.6% versus 74.7%). Those with lower education tended to be more likely to use blood pressure medication.

Respondents with high blood pressure were asked about things they were doing to control it.

The results were that 66.4% said they were changing their eating habits, 69.1% were cutting down on salt, 70.9% were reducing alcohol consumption, and 70.1% were exercising,

As far as advice from a health professional to do these things 54.6% were advised to change eating habits, 58.1% were advised to cut down on salt, 22% were advised to reduce alcohol consumption, 73% were advised to exercise, and 85.7% were advised to take medication. Except for exercise, and medication more people actually engaged in these activities than were advised to do so.

Comparison with Other States

Among the states and territories prevalence of reported hypertension ranged from **2**1.6% to 37.6%. The median value was 28.7%. Iowa's prevalence of 28% was slightly better than the median. Both Iowa and the nation showed an increase in reported hypertension in 2009.

Year 2010 Health Objectives for Iowa and the Nation

According to Healthy People 2010, the objective for high blood pressure is that only 16% of the adult population should report having high blood pressure. This is considerably less than what is currently the case in Iowa. The Healthy Iowans 2010 goal is even stricter at 14.9%. The prevalence of high blood pressure is moving in the opposite direction from the 2010 goals.

References

1. Cook NR, Cohen J, Herbert PR, Taylor JO, and Hennekens CH. Implications of small reductions in diastolic blood pressure for primary prevention. *Archives of Internal Medicine.* Vol 155, No 7; April 19, 1995.
2. National Heart, Lung, and Blood Institute (NHLBI). *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*, National Institutes of Health. 2003.
3. National Heart, Lung, and Blood Institute (NHLBI). Diseases and Conditions Index. available at http://www.nhlbi.nih.gov/health/dci/Diseases/Hbp/HBP_WhatIs.html, 2008.

8. CHOLESTEROL AWARENESS

Background

High blood cholesterol is one of the major risk factors for heart disease. The higher your blood cholesterol level, the greater is your risk for developing heart disease or having a heart attack.

Cholesterol is a fat-like substance in your blood. When there is too much cholesterol, it builds up in the walls of your arteries. Over time, this buildup causes "hardening of the arteries" so that arteries become narrowed and blood flow to the heart is slowed down or blocked. The blood carries oxygen to the heart, and if enough blood and oxygen cannot reach your heart, you may suffer chest pain. If the blood supply to a portion of the heart is completely cut off by a blockage, the result is a heart attack.[1]

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

Lowering Cholesterol is important for everyone--younger, middle age, and older adults; women and men; and people with or without heart disease. Everyone age 20 and older should have their cholesterol measured at least once every 5 years.

High cholesterol means a total cholesterol level greater than or equal to ($\geq$) 200 milligrams per deciliter (mg/dl). Not all cholesterol increases the risk of heart disease. The cholesterol carried by LDL (the so-called bad cholesterol) increases the risk; the cholesterol carried by HDL (the so-called good cholesterol) lowers the risk and is beneficial. A level less than 40 mg/dL of HDL is low and is considered a major risk factor because it increases your risk for developing heart disease. HDL levels of 60 mg/dL or more help to lower your risk for heart disease. Cholesterol standards are more stringent for those people at high risk of heart attack due to other factors such as diabetes or coronary heart disease.[1]

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

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

Blood Cholesterol Awareness Results

In 2009, the percentage of Iowans reporting ever having their blood cholesterol checked was 79.3%. When asked whether they had their blood cholesterol checked by a health professional

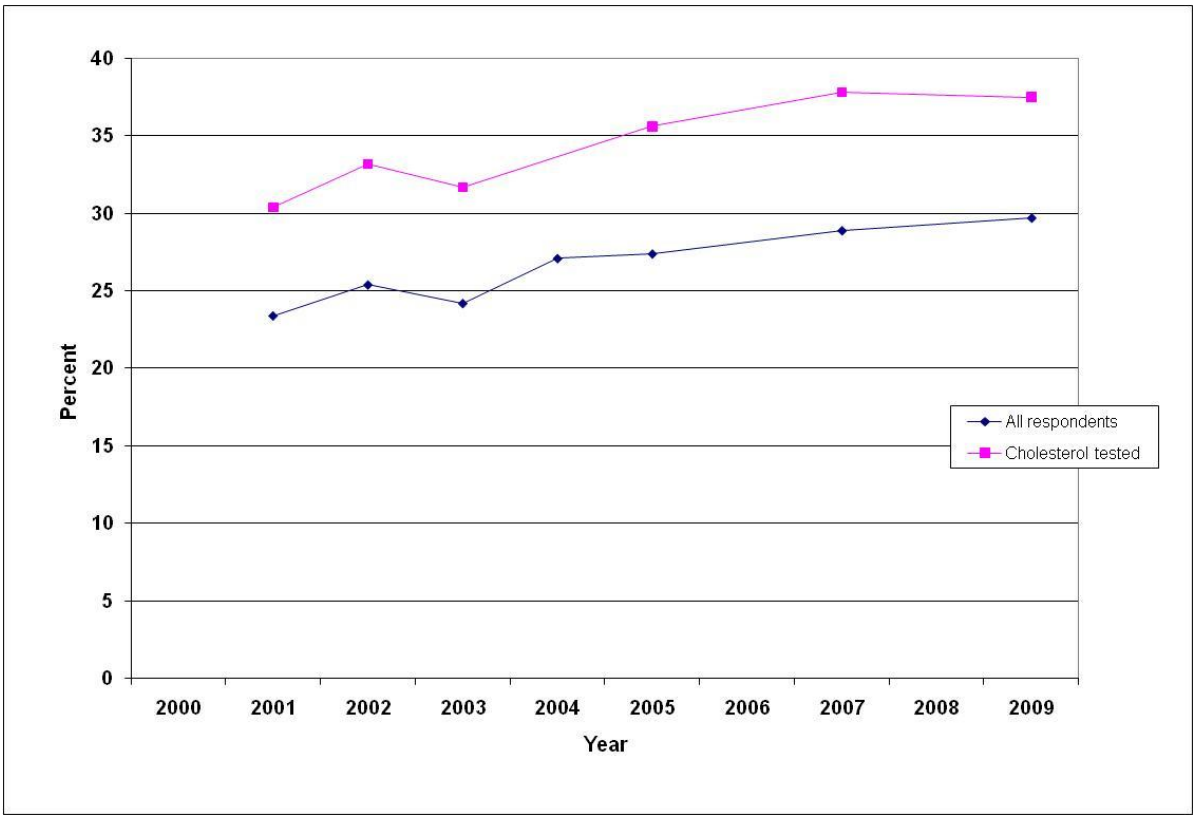
Table 8.1: Blood Cholesterol in Iowans, 2009

Demographic Groups	Had Blood Cholesterol Checked in Past Five Years		Ever Been Told Blood Cholesterol High	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	75.5	(73.7-77.3)	37.5	(35.9-39.1)
SEX				
Male	74.4	(71.7-77.1)	39.5	(36.8-42.2)
Female	76.5	(74.1-78.9)	35.7	(33.7-37.7)
RACE/ETHNICITY				
White/Non-Hisp.	76.6	(74.8-78.4)	38.0	(36.3-39.7)
Non-White or Hisp.	57.6	(49-66.1)	29.1	(21.4-36.8)
AGE				
18-24	33.5	(25.3-41.7)	7.9	(0.2-15.5)
25-34	60.7	(56-65.4)	21.8	(16.6-26.9)
35-44	72.7	(69.2-76.2)	30.4	(26.3-34.4)
45-54	85.8	(83.4-88.2)	35.0	(31.7-38.2)
55-64	91.0	(89.2-92.8)	50.2	(47.1-53.4)
65-74	94.6	(92.9-96.2)	53.7	(50.1-57.3)
75+	92.9	(91.1-94.6)	48.3	(44.8-51.8)
EDUCATION				
Less than H.S.	56.2	(48.4-64)	37.4	(30.1-44.7)
H.S. or G.E.D.	73.3	(70-76.6)	41.6	(38.7-44.5)
Some Post-H.S.	74.8	(71.3-78.3)	35.8	(32.9-38.7)
College Graduate	83.2	(80.8-85.6)	35.0	(32.3-37.7)
HOUSEHOLD INCOME				
Less than $15,000	70.1	(62.7-77.5)	40.1	(32.8-47.4)
$15,000- 24,999	70.9	(65.8-76)	41.7	(36.8-46.6)
$25,000- 34,999	74.3	(69.2-79.4)	39.0	(33.7-44.3)
$35,000- 49,999	76.6	(72.1-81.1)	38.4	(34.5-42.3)
$50,000- 74,999	79.2	(75.5-82.9)	37.3	(33.4-41.2)
$75,000+	81.3	(78.2-84.4)	33.4	(30.5-36.3)

during the past five years, 75.5% of respondents reported having it. Women, respondents in older age groups, people with more education and higher household income were more likely to report having a blood cholesterol test within the last five years. Hispanics and non-White races were less likely to have a cholesterol test in the past five years (see table 8.1).

Of the respondents who had their cholesterol tested, 37.5% reported that they had ever been told by a doctor or other health professional that their blood cholesterol was high. This is a small decrease from the 37.8% found in 2007. The long-term trend in high cholesterol shown in figure 8.1 has been steadily upward for the past several years. Also shown on Figure 8.1 is the

Figure 8.1: Trend in Reporting High Cholesterol in Adult Iowans, 2000-2009



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

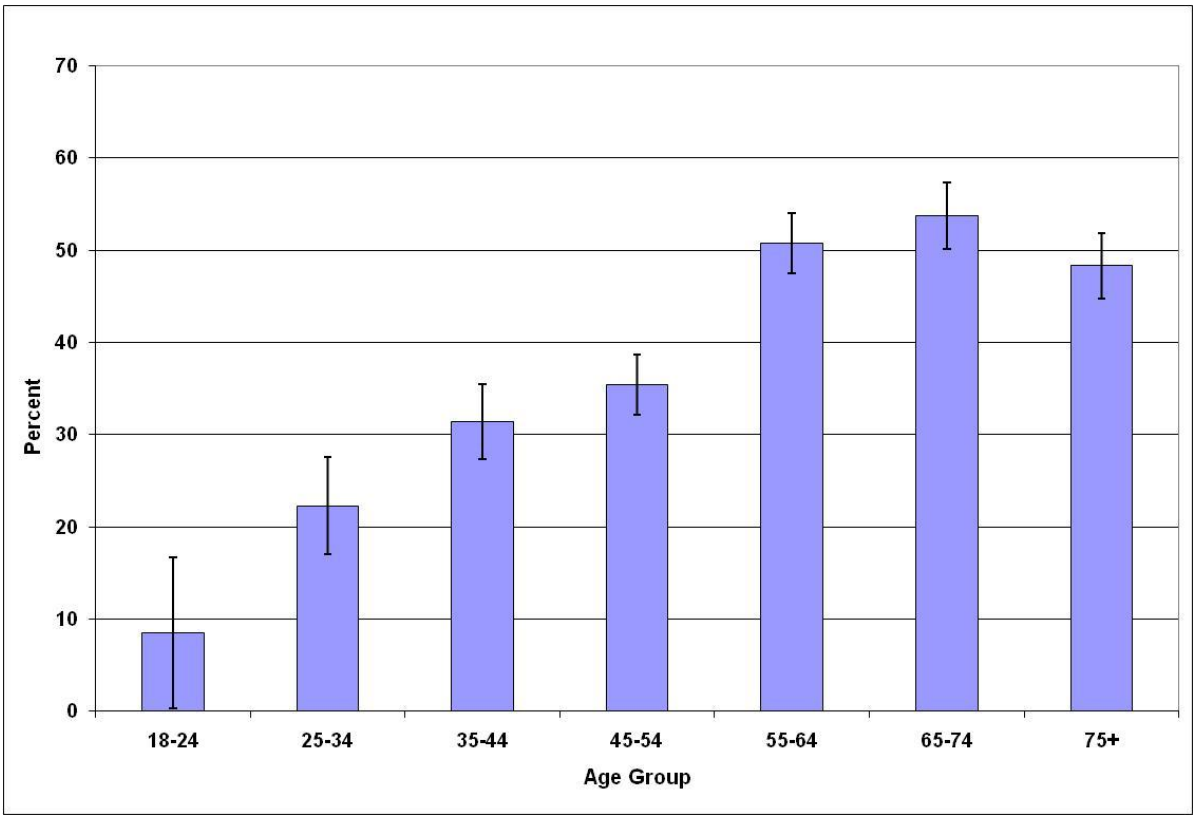
Age made a considerable difference in reporting high cholesterol with the 65 to 74 year old age group reporting nearly seven times greater prevalence of high cholesterol than the 18 to 24 year-olds. However, the relationship did not hold for the oldest age groups (see figure 8.2). The highest income people were somewhat less likely to report high cholesterol as were non-Whites or Hispanics (see table 8.1).

Comparison with Other States

The percentage of people having their cholesterol checked within the past five years among all the states and territories ranged from 67.6% to 85.3%. Iowa's value of 75.5% was below the median of 76.9%. It appears that more people in both Iowa and the nation as a whole are having their cholesterol checked.

In terms of those tested being told their cholesterol was high, the range was from 24.4% to 41.8%. The lowest was a territory and an outlier. The second lowest was 32.4%. Iowa's value of 37.5% was very close to the median of 37.4%.

Figure 8.2: Tested Iowans Ever Told Their Cholesterol Was High by Age, 2009



Year 2010 Health Objectives for the Nation

Based on the national health objectives for the year 2010, 80% of adults should have their blood cholesterol checked within the past five years. In 2009, only 79.3% of Iowans age 18 and older have had their blood cholesterol checked at least once in their lifetime, and only 75.5% had their blood cholesterol checked within the past five years. While more Iowans are getting their cholesterol checked, more are finding out that it is high.

References

1. National Heart, Lung, and Blood Institute (NHLBI). High Blood Cholesterol: What You Need to Know. 2005. available at http://www.nhlbi.nih.gov/health/public/heart/chol/wyntk.htm.

9. EXERCISE AND PHYSICAL ACTIVITY

Background

A lifestyle lacking in regular physical activity has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, and other debilitating conditions.[1] 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.

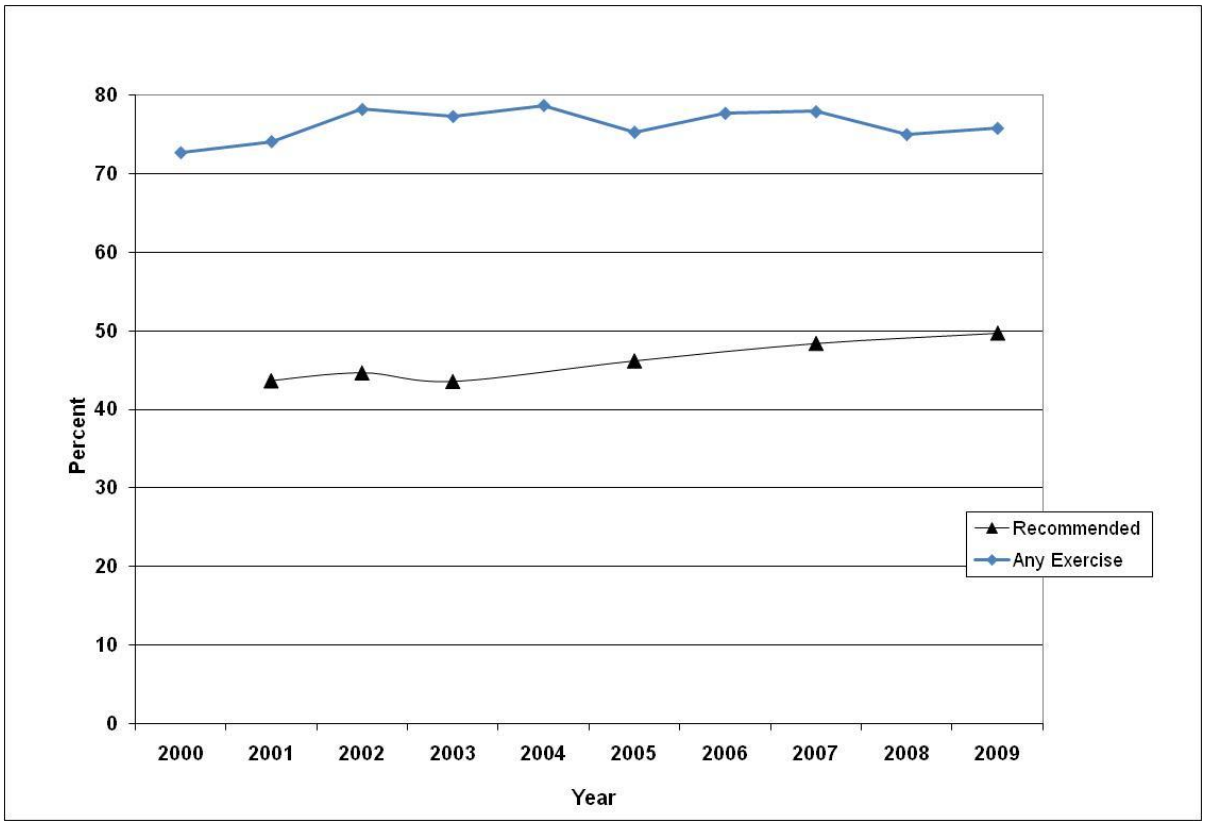
Exercise & Physical Activity Results

In 2009, 75.8% 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 little higher than the 75% found in 2008 (see figure 9.1).

A larger proportion of younger respondents reported engaging in leisure physical activity than older respondents. The percentage of respondents who exercised also increased with education and household income. This percentage was higher for White non-Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for those age 75 years and older (59.5%), while the highest was for those with an annual household income of $75,000 or more (87.2%) (see table 9.1).

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

Figure 9.1: Trend in Physical Activity in Iowa by Year



The percentage of respondents who met the recommended level of physical activity in 2009 was 49.7%. At the other end, 10.1% of respondents reported engaging in no physical activity at all.

The percentage of respondents reporting they had engaged in the recommended amount of physical activity was slightly higher for males than for females. In addition, physical activity decreased with age. A larger percentage of those who had a higher household income and more education engaged in the recommended amount of physical activity. The lowest percent for all demographic groups considered was for those age 75 and over (33.1%), while the highest percent was for those age 18 to 24 years (64.9%) (see table 9.1).

Much of the reason for lack of physical activity is that people today spend a great deal of time in front of a computer or television screen. Two questions were asked to assess this amount of time. One asked about screen time during the week, while the other asked about screen time on the week end.

It was found that on the week end 41.1% spent five hours or more in front of a TV or computer screen. During the week, 53.5% spent between one to three hours in this activity.

Comparison with Other States

Values for the measure of not engaging in leisure time physical activity ranged from a low of 15.8% 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 almost at the median on not engaging in leisure time physical activity. Iowa was at the median for the nation reporting not engaging in any leisure activity at 24%,

Table 9.1: Physical Activity in Iowans, 2009

Demographic Groups	Any Leisure Physical Exercise in Last Month		Recommended Level of Physical Activity	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	75.8	(74.4-77.2)	49.7	(47.9-51.5)
SEX				
Male	75.2	(72.8-77.6)	51.5	(48.8-54.2)
Female	76.5	(74.7-78.3)	47.9	(45.5-50.3)
RACE/ETHNICITY				
White/Non-Hisp.	76.8	(75.4-78.2)	50.6	(48.8-52.4)
Non-White or Hisp.	63.1	(55.5-70.7)	37.0	27.5-55.4
AGE				
18-24	80.8	(74.1-87.5)	64.9	(56.7-73.1)
25-34	82.8	(79.3-86.3)	59.6	(54.9-64.3)
35-44	79.8	(76.7-82.9)	46.2	(42.3-50.1)
45-54	79.0	(76.5-81.5)	50.9	(47.6-54.2)
55-64	69.7	(67-72.4)	43.2	(40.1-46.3)
65-74	70.2	(67-73.4)	42.2	(38.5-45.8)
75+	59.5	(56.1-62.8)	33.1	(29.7-36.5)
EDUCATION				
Less than H.S.	62.0	(55.1-68.9)	44.0	(36-52)
H.S. or G.E.D.	68.5	(65.8-71.2)	46.7	(43.4-50)
Some Post-H.S.	78.3	(75.8-80.8)	50.9	(47.6-54.2)
College Graduate	85.1	(83.1-87.1)	53.0	(50.1-55.9)
HOUSEHOLD INCOME				
Less than $15,000	62.9	(56-69.8)	41.8	(33.6-50)
$15,000- 24,999	65.1	(60.8-69.4)	44.1	(38.8-49.4)
$25,000- 34,999	69.2	(64.5-73.9)	45.9	(40.4-51.4)
$35,000- 49,999	74.3	(70.8-77.8)	47.8	(43.5-52.1)
$50,000- 74,999	80.5	(77.4-83.6)	51.2	(47.1-55.3)
$75,000+	87.2	(85.2-89.2)	55.0	(51.7-58.3)

Year 2010 Health Objectives for Iowa and the Nation

The national target for objective 22.1, reducing the proportion of adults who engage in no leisure-time physical activity, is 20 percent.[2] Iowa's level of 24.2% is higher than this target.

The national targets for objective 22.2 and 22.3, to increase the proportion of adults engaging in regular moderate or regular vigorous physical activity, are both 30%. Iowa respondents report 49.7% regular moderate physical activity, but only 26.9% regular vigorous physical activity. Iowa is well above the target for moderate, but below the target for vigorous physical activity. Healthy Iowans 2010 had a goal that the BRFSS should be able to measure the prevalence of attaining the recommended level of moderate physical activity. This ability has existed for the past few years, although only in odd numbered years.

References

1. National Center for Health Statistics. *Health, United States. 2007.* With Chartbook on Trends in the Health of Americans, Hyattsville, Maryland: 2008.
2. 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.

10. DIET AND NUTRITION

Background

Eating a diet high in fruits and vegetables as part of an overall healthful diet can help lower chronic disease risk and aid in weight management. Fruits and vegetables contain essential vitamins, mineral, fiber, and other bioactive compounds; a diet high in these foods is associated with lower risk for numerous chronic diseases, including certain cancers and cardiovascular diseases.[1-2]

Fruits and non-starchy vegetables are generally low energy-dense foods and may have a role in preventing weight gain that could lead to obesity – a risk factor in some cancers. Evidence that vegetables and fruits protect against some cancers is supported by evidence on foods containing various micronutrients, found especially in vegetables, fruits, and pulses (legumes), and nuts and seeds, as well as in cereals, roots, tubers, and other plant foods. [3]

Increased consumption of fruits and vegetables by individuals is a practical and important means for optimizing nutrition to reduce disease risk and maximize good health. The most recent *Dietary Guidelines for Americans (2010)* recommends **at least 2 cups of fruits and 2 ½ cups of vegetables each day** for adults.[4] **Include a variety of vegetables from the groups that include dark green,** orange, legumes, starchy vegetables, and other vegetables.

The *Dietary Guidelines* also recommends consuming a variety of foods, rich in nutrients, in all food groups. People should limit their intake of saturated fats and trans fats (usually found in hydrogenated fats and oils), cholesterol, added sugars, salt, and alcoholic beverages. The concern is that high-calorie, nutrient-poor sugary foods and beverages are replacing more nutritious foods, and adding to the overweight issue.[4]

Diet and Nutrition Results

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

The percentage of Iowans who eat five or more servings of fruits and vegetables per day was 18.5% in 2009. This is lower than the 19.9% found in 2007. No consistent trend in fruit and vegetable consumption is evident at this time (see figure 10.1).

Table 10.1 shows that significantly more females ate five or more servings of fruits and vegetables per day than males. Also, older Iowans were more likely to report meeting the five-a-day standard than younger Iowans. This was also true for those with a college education. The demographic group most likely to eat five or more fruit and vegetable portions a day was those 75 years old or older (29%), while those least likely were those with household incomes between $35,000 and $50,000 (13%).

The survey asked three other questions concerning dietary habits. When asked how often do you drink a glass or can of soda such as Coke or other sweetened drinks, the median response was

Table 10.1:
Iowans Eating 5 or More Portions of Fruits & Vegetables per Day, 2009

Demographic Groups	%	C.I. (95%)
TOTAL	18.5	(17.1-19.9)
GENDER		
Male	13.3	(11.5-15.1)
Female	23.5	(21.5-25.5)
RACE/ETHNICITY		
White/Non-Hisp.	18.4	(17-19.8)
Non-White or Hisp.	18.4	(12.7-24.2)
AGE		
18 - 24	13.8	(7.9-19.7)
25 - 34	15.7	(12.4-19)
35 - 44	17.5	(14.6-20.4)
45 - 54	18.2	(15.7-20.7)
55 - 64	18.9	(16.5-21.3)
65-74	19.9	(17.1-22.7)
75+	29.0	(25.9-32.1)
EDUCATION		
Less than H.S.	14.4	(8.9-19.9)
H.S. or G.E.D.	15.0	(12.6-17.4)
Some Post-H.S.	16.8	(14.6-19)
College Graduate	24.9	(22.5-27.3)
HOUSEHOLD INCOME		
Less than $15,000	15.0	(10.3-19.7)
$15,000- 24,999	18.9	(15.2-22.6)
$25,000- 34,999	20.7	(16.6-24.8)
$35,000- 49,999	13.0	(10.6-15.4)
$50,000- 74,999	17.8	(14.9-20.7)
$75,000+	20.9	(18.4-23.4)

one per week. The mean, however, was 4.3 times per week. This indicates that, although nearly half the respondents drank soda less than once a week, a few drank it many times. Around 2.5% said they drank sweetened soda three times a day.

When asked how often they used low fat dairy products, 69% said once a day. However, the second most frequent answer (13.1%) was less than once a week.

When asked how often they used whole grain products, 61.3% said once a day. Although not as high as for low fat dairy, 8.1% still said they used whole grains less than once a week.

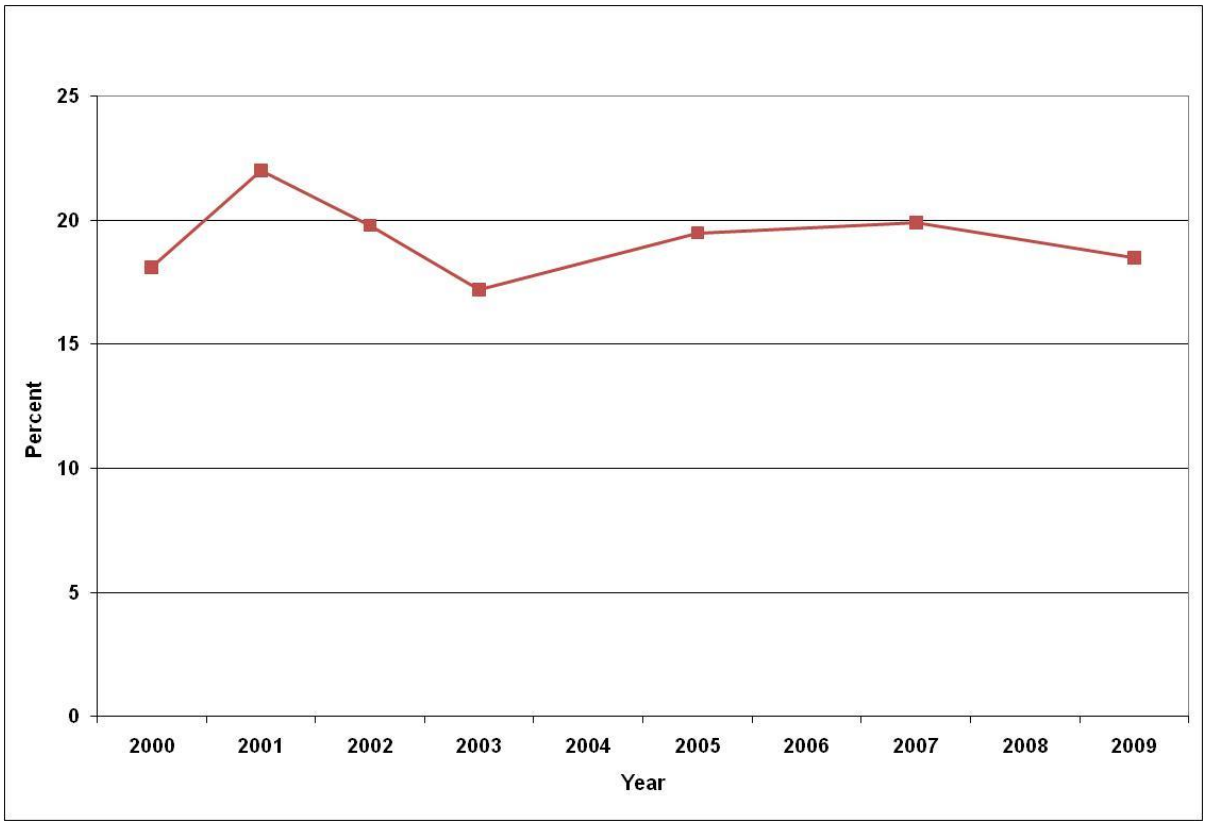
Comparison with Other States

Consumption of five or more servings of fruit or vegetables per day in the states and territories ranged from a low of 14.6% to a high of 31.6%. Iowa's level of 18.5% is well below the median of 23.5%. Both the nation and Iowa have decreased the percentage of their population meeting the recommended level of fruit and vegetable consumption since 2007. Iowa is exceeded by only seven states or territories in lack of eating sufficient fruit and vegetables. .

Year 2010 Health Objectives for Iowa and the Nation

According to the national health objectives for the year 2010, 75% of people over two years old need to consume two helpings of fruit daily and 50% need to consume three helpings of vegetables daily.[3] The Healthy Iowans 2010 goal was simpler at 50% of adults eating five helpings a day of fruit or vegetables. The percentage of adult Iowans consuming five or more helpings of fruits or vegetables daily is far below any of these goals at only 18.5%.

Figure 10.1: Trend for Adequate Fruit & Vegetable Consumption in Iowa, 2000-2009



References

1. Blanck HM, Gillespie C, Kimmons JE, Seymour JD, Serdula MK. Trends in Fruit and Vegetable Consumption Among U.S. Men and Women. 1994-2005. Prev Chronic Dis 2008:5(2). http://www.cdc.gov/pcd/issues/2008/apr/07_0049.htm.

2. Van Duyn MA, Pivonka E. Overview of the Health Benefits of Fruit and Vegetable Consumption for the Dietetics Professional: Selected literature. *Journal of the American Dietetic Association*, 100; 2000. 1511-1521.

3. World Cancer Research Fund, American Institute for Cancer Research. *Food, Nutrition and the Prevention of Cancer: A Global Perspective*. Washington, DC: American Institute for Cancer Research; 1997.

4. U. S. Department of Health and Human Services and U.S. Department of Agriculture. *Dietary Guidelines for Americans, 2010.* 2010.

11. OVERWEIGHT AND OBESITY

Background

Overweight and obesity are probably the most serious health problems in America today. Obesity is a condition linked to risk factors for heart disease, cancer, and stroke, which are the first, second and third leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis.[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.[1] These estimates are a few years old and, 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 involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits. The increase in the prevalence of being overweight is a result of a shift in energy balance in which energy taken in from food is greater than energy used in physical activity.[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]

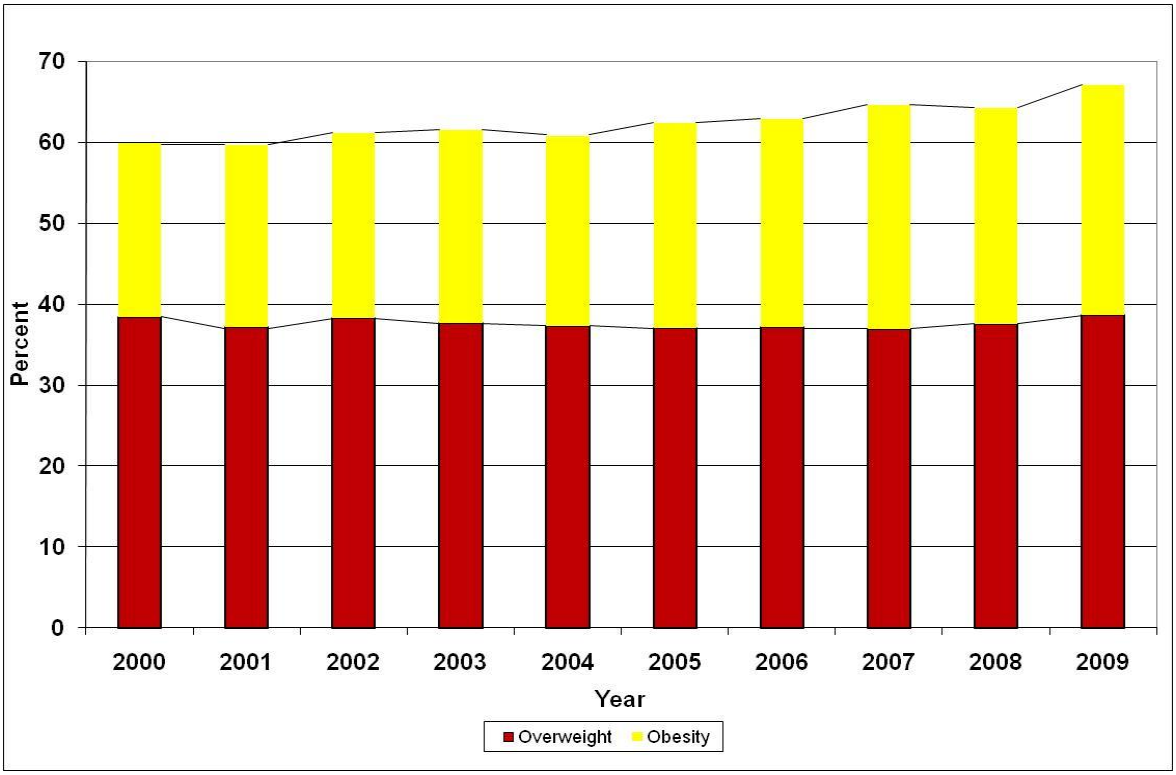
Exact measurements of body fat require sophisticated equipment. To eliminate this problem obesity is often estimated from weight standards that are adjusted for body frame. Carefully measured weight and height remain the most easily performed and useful means to determine nutritional status and to predict 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 2009 38.7% of Iowans are overweight and 28.5% are obese, based on BMI. The combined percentage of individuals who are overweight or obese is 67.2%. The percent overweight and obese are both higher than in 2008. This marks the highest level of overweight and obesity yet seen in this survey (see figure 11.1).

Figure 11.1: Overweight/Obese Iowans by Year Based on Body Mass Index (BMI), 2000 - 2009



Demographic factors behave somewhat differently for overweight and obesity. They also interact with each other sometimes. 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. Reduced obesity is mainly responsible for this decline. Males are not more obese than females at the youngest age groups. There is really no difference between the sexes in the 18 to 34 year old age groups. Obesity shows a very sharp decrease for both sexes in the 75 year old and over age groups (see figure 11.2). There is a much stronger sex difference for overweight than for obesity. More men are overweight than women and there is no decline at the oldest age group.

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 11.1 and figure 11.3).

Table 11.1: Overweight and Obese Iowans Based on BMI, 2009

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	38.7	(36.9-40.5)	28.5	(26.9-30.1)	67.2	(65.4-69)
SEX						
Male	46.6	(43.9-49.3)	30.6	(28.2-33)	77.2	(74.8-79.6)
Female	30.7	(28.7-32.7)	26.3	(24.3-28.3)	57.0	(54.6-59.4)
RACE/ETHNICITY						
White/non-Hisp.	38.7	(36.9-40.5)	28.5	(26.9-30.1)	67.2	(65.4-69)
Non-White or Hisp.	40.3	(32.1-48.5)	27.5	(19.7-35.2)	67.8	(59.5-76)
AGE GROUP						
18 - 24	29.5	(21.5-37.5)	18.7	(11.6-25.8)	48.2	(39.4-57)
25 - 34	40.2	(35.3-45.1)	28.6	(24.1-33.1)	68.8	(64.5-73.1)
35 - 44	35.7	(32-39.4)	33.6	(29.9-37.3)	69.3	(65.8-72.8)
45 - 54	42.9	(39.6-46.2)	29.1	(26.2-32)	72.0	(69.1-74.9)
55 - 64	41.4	(38.3-44.5)	33.7	(30.8-36.6)	75.1	(72.6-77.6)
65-74	40.3	(36.8-43.9)	32.1	(28.8-35.5)	72.5	(69.4-75.6)
75+	40.2	(36.8-43.5)	20.3	(17.5-23.1)	60.4	(57.1-63.8)
EDUCATION						
Less than H.S.	38.1	(30.5-45.7)	26.7	19.3-28.6	64.8	(57.2-72.4)
H.S. or G.E.D.	37.8	(34.9-40.7)	31.7	24.2-28.9	69.5	(66.4-72.6)
Some Post-H.S.	40.6	(37.3-43.9)	29.4	21.8-26.9	70.0	(66.7-73.3)
College Graduate	38.1	(35.2-41)	24.4	16.6-21.4	62.5	(59.8-65.2)
HOUSEHOLD INCOME						
Less than $15,000	29.6	(23.5-35.7)	38.9	23.5-33.0	68.5	(60.9-76.1)
$15,000- 24,999	36.5	(31.8-41.2)	31.5	21.6-28.9	67.9	(63-72.8)
$25,000- 34,999	35.0	(30.1-39.9)	34.9	21.5-28.7	69.9	(65-74.8)
$35,000- 49,999	41.4	(37.1-45.7)	31.2	22.8-29.3	72.6	(68.7-76.5)
$50,000- 74,999	42.3	(38.2-46.4)	29.6	21.0-27.8	71.9	(68.4-75.4)
$75,000+	40.5	(37.2-43.8)	24.8	16.2-22.0	65.3	(62.2-68.4)

The demographic group with the highest prevalence of people over their healthy weight (combined overweight and obesity) is males with 77.2%. The group with the lowest prevalence over their healthy weight is those 18 to 24 years old (48.2%).

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

The range in weight change from a year ago was from a loss of 127 pounds to a gain of 108 pounds. Only 47.9% of people with a change in weight had lost. Of respondents with a change in weight 39.3% said it was intentional. Of those who lost weight, 66.2% said it was intentional. Looked at another way, 80.8% of those whose weight change was intentional lost weight.

Figure 11.2: Obesity by Age and Sex, 2009

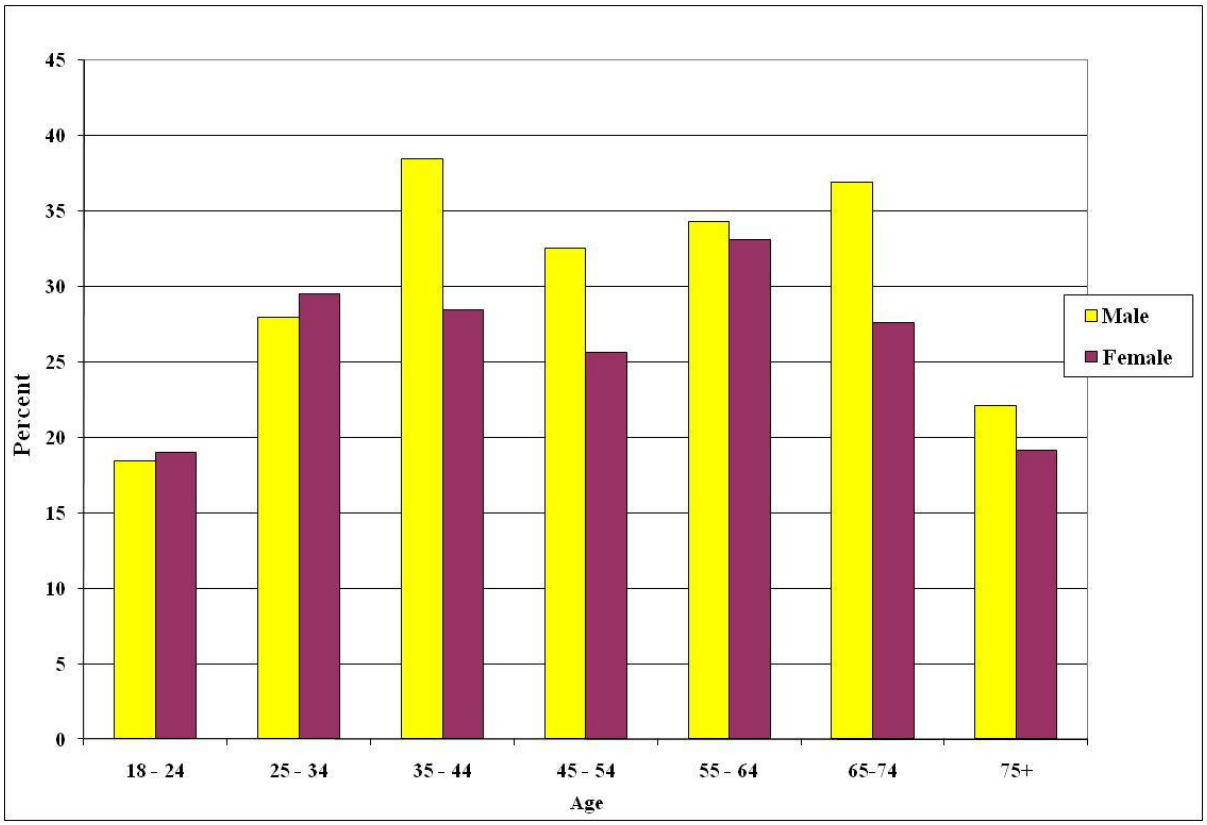
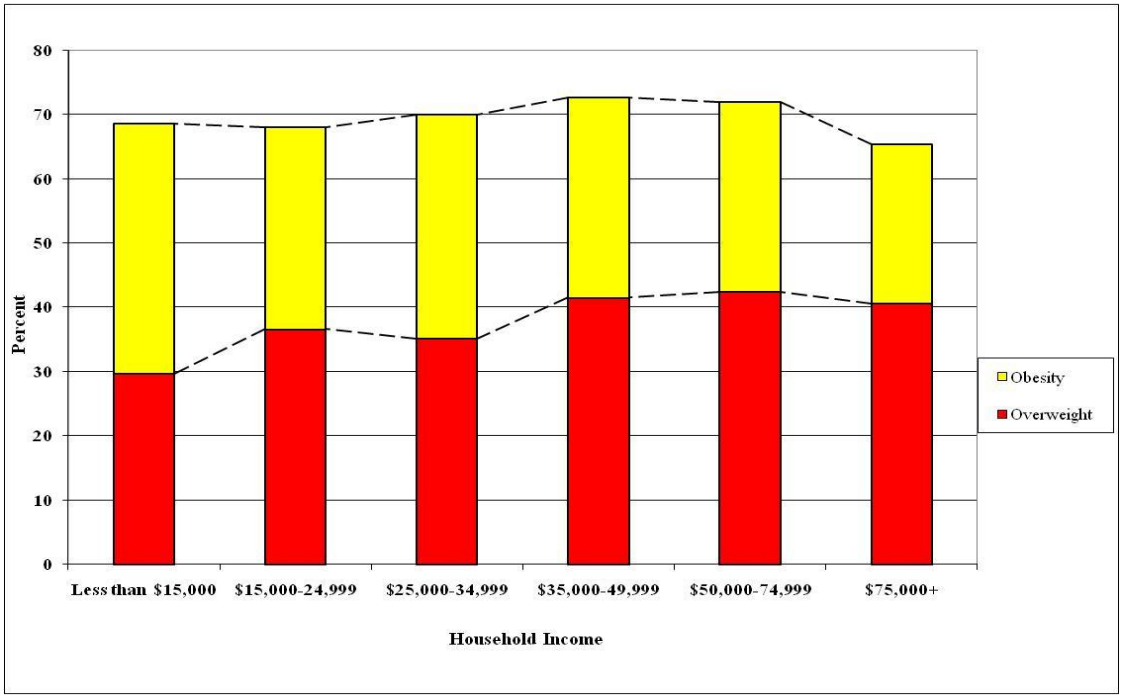


Figure 11.3: Overweight and Obesity by Income, Iowa 2009



Comparison with Other States

Iowa's figure of 28.5% obese in 2009 was well above the median of 27.2%. The range of prevalence among the states and territories for obesity was from a low of 19% to a high of 35.4%. The prevalence of being obese increased slightly from 2008 in the nation but increased substantially 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 29.7% for those over age 20. The *Healthy Iowans 2010* goals for overweight and obesity are to halt the increasing prevalence. This goal has not been accomplished.

References

1. Finkelstein EA, Fiebelkorn IC, Wang G. State-level estimates of annual medical expenditures attributable to obesity. *Obesity Research,* Vol 12(1); 2004. 18–24.
2. Herper M, What Fat Costs America. Forbes, http://www.forbes.com, Nov., 2007.
3. National Heart, Lung, and Blood Institute (NHLBI). *Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults,* National Institute of Health Publication Number 00-4084; October 2000.
4. The Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF), F as in Fat: How Obesity Policies Are Failing in America, 2009.
5. U. S. Department of Health and Human Services. The Surgeon General's call to action to prevent and decrease overweight and obesity, Rockville, MD.: Public Health Service, Office of the Surgeon General; 2001.

12. 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. The percentage of adults with diabetes (including both diagnosed and undiagnosed) incr**eased from 1988–1994** (8%) to 2003–2006 (10%). Diabetes may affect persons of all ages, although prevalence increases with age. It is estimated that almost 200,000 persons 20 years of age and younger have been diagnosed with Type 1 or Type 2 diabetes. In 2003–2006, 2.5% of persons 20–39 years of age had diagnosed or undiagnosed diabetes, compared with 22.9% of adults 60 years and over.[3] In 1988–1994, 10% of adults 45 years of age and over had been diagnosed by their physician with diabetes. By 2003–2006, this had grown to 13%.

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. People with diagnosed diabetes, on average, have medical expenditures that are approximately 2.3 times higher than the expenditures would be in the absence of diabetes. Approximately $1 in $10 health care dollars is attributed to diabetes.[2]

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).

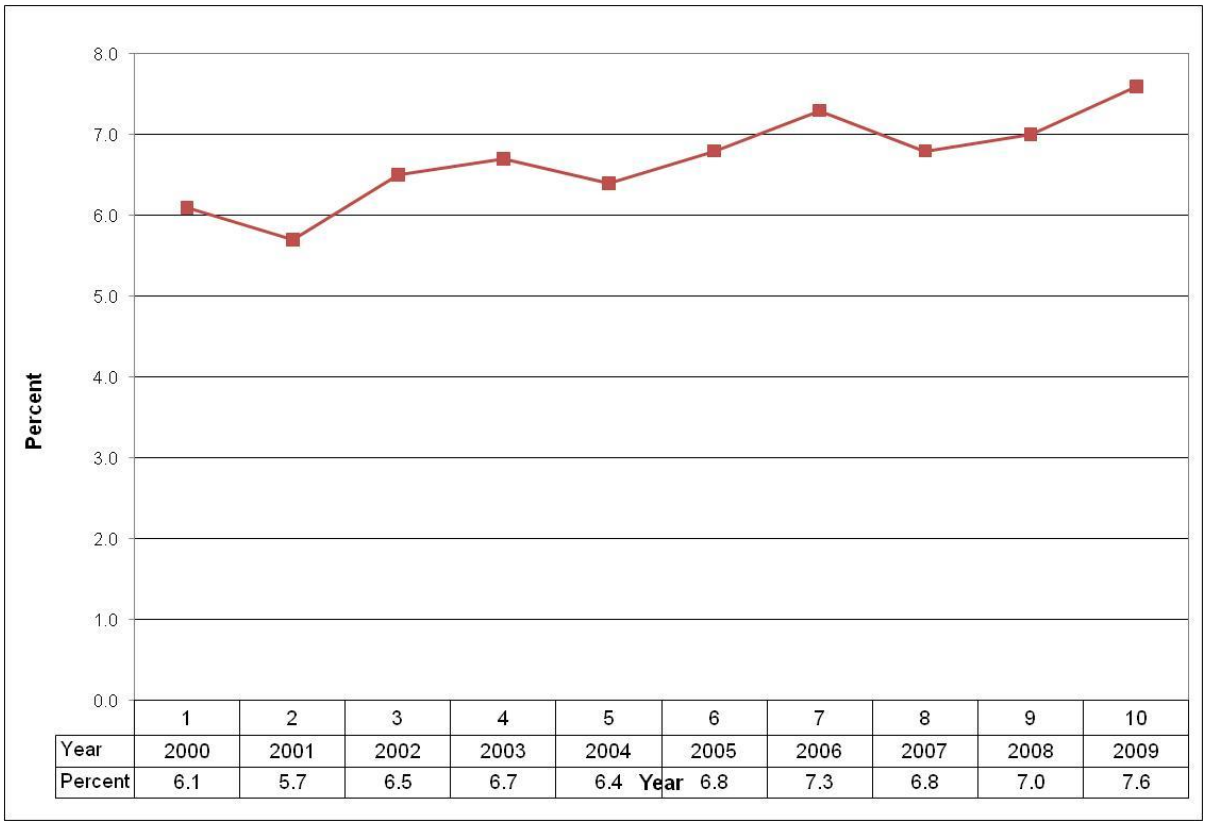
The complications of diabetes are many and severe. They can include heart disease, stroke, **high** blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, biochemical imbalances such as ketoacidosis and diabetic 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.[1]

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

Diabetes Results

In 2009, 7.6% of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is higher than the 7% found in 2008. It is the highest prevalence figure yet to be found in this survey (see figure 12.1).

Figure 12.1: Percentage of Iowans Who Have Ever Been Told They Have Diabetes by Year, 2000-2009



	1	2	3	4	5	6	7	8	9	10
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Percent	6.1	5.7	6.5	6.7	6.4	6.8	7.3	6.8	7.0	7.6

Table 12.1 shows that the rate of diabetes is much higher when respondents are older, lower in education, and have a lower household income. It is higher in African Americans and the other racial minority groups. The demographic group with the highest percentage of diagnosed diabetics is people age 75 years and older (18.5%), while the group with the lowest percentage is people age 25 to 34 years (1.4%).

When asked if they had a test for diabetes in the past three years, 54.1% 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 2009, 5% 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 (39.5%). The age group in which the least reported being first diagnosed was less than age 16 years (3.7%).

Of those ever told by a physician that they have diabetes, 31.7% reported currently taking insulin.

Table 12.1: Iowans Ever Been Told They Had Diabetes, 2009

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	7.6	(6.8-8.4)
SEX		
Male	8.1	(6.9-9.3)
Female	7.2	(6.2-8.2)
RACE/ETHNICITY		
White/Non-Hisp.	7.4	(6.6-8.2)
Black/Non-Hisp.	13.8	(5.8-21.8)
Other/Non-Hisp.	12.3	(5.4-19.2)
Hispanic	7.2	(1.9-12.5)
AGE GROUP		
18-24	1.6	(0-3.4)
25-34	1.4	(0.2-2.6)
35-44	4.0	(2.4-5.6)
45-54	6.0	(4.4-7.6)
55-64	12.4	(10.4-14.4)
65-74	17.2	(14.6-19.8)
75+	18.5	(15.8-21.1)
EDUCATION		
Less than H.S.	10.1	(7.4-12.8)
H.S. or G.E.D.	8.7	(7.3-10.1)
Some Post-H.S.	7.9	(6.5-9.3)
College Graduate	5.4	(4.4-6.4)
HOUSEHOLDINCOME		
Less than $15,000	10.9	(8-13.8)
$15,000- 24,999	13.5	(10.6-16.4)
$25,000- 34,999	10.6	(7.9-13.3)
$35,000- 49,999	8.1	(6.3-9.9)
$50,000- 74,999	5.6	(4-7.2)
$75,000+	4.4	(3.2-5.6)

When asked how many times they had seen a health professional for their diabetes in the last year, the most common answer was four (26.1%), while 10.8% 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 64.7% checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 7.2% reported never testing their blood sugar. Around 87.2% had it checked at least once within the past year by a health professional through a glycosylated hemoglobin test, frequently referred to as an A1C. Around 6.1% reported not having had the A1C test. Another 6.7% 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, 66.6% of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 11.4% said they never checked them. Around 75.6% 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 81.8% reported within the last year, while 1.2% reported never having such an examination. Among Iowans with diabetes, 18.1% 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 63.1% of those with diabetes in 2009 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 8.4% in 2009. Prevalence ranged from 5.8% to 12.9%. The figure for Iowa was below the median at 7.6%. While the nation did not see much increase in the rate of diabetes this year, Iowa did.

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 2009 no higher than 7.5%. Iowa is currently at 7.6% which is very slightly above 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 81.8%. Of all people with diabetes 75% should receive at least an annual foot exam from a health professional. The figure obtained was 75.6%. Of all people with diabetes 95% should receive a glycosylated hemoglobin test at least annually. The figure was only 87.2%. Nearly seven percent reported having not even heard of the test. Of these three diabetes management objectives only the A1C goal was not met.

References

1. American Diabetes Association. Diabetes Basics. http://www.diabetes.org. 2010.
2. American Diabetes Association. The Cost of Diabetes. http://www.diabetes.org/advocate/resources/cost-of-diabetes.html. 2010.
3. National Center for Health Statistics. *Health, United States. 2009. with Chartbook on Trends in the Health of Americans*, Hyattsville, Maryland: 2010.

13. ASTHMA

Background

Asthma is a chronic, inflammatory disease of the lungs in which the airways become blocked or narrowed causing breathing difficulty. It is characterized by recurrent wheezing, breathlessness, coughing, and chest tightness.[3]

This chronic disease affects nearly 23 million Americans of all ages.[2] Asthma is the most common chronic disease of childhood. About seven 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]

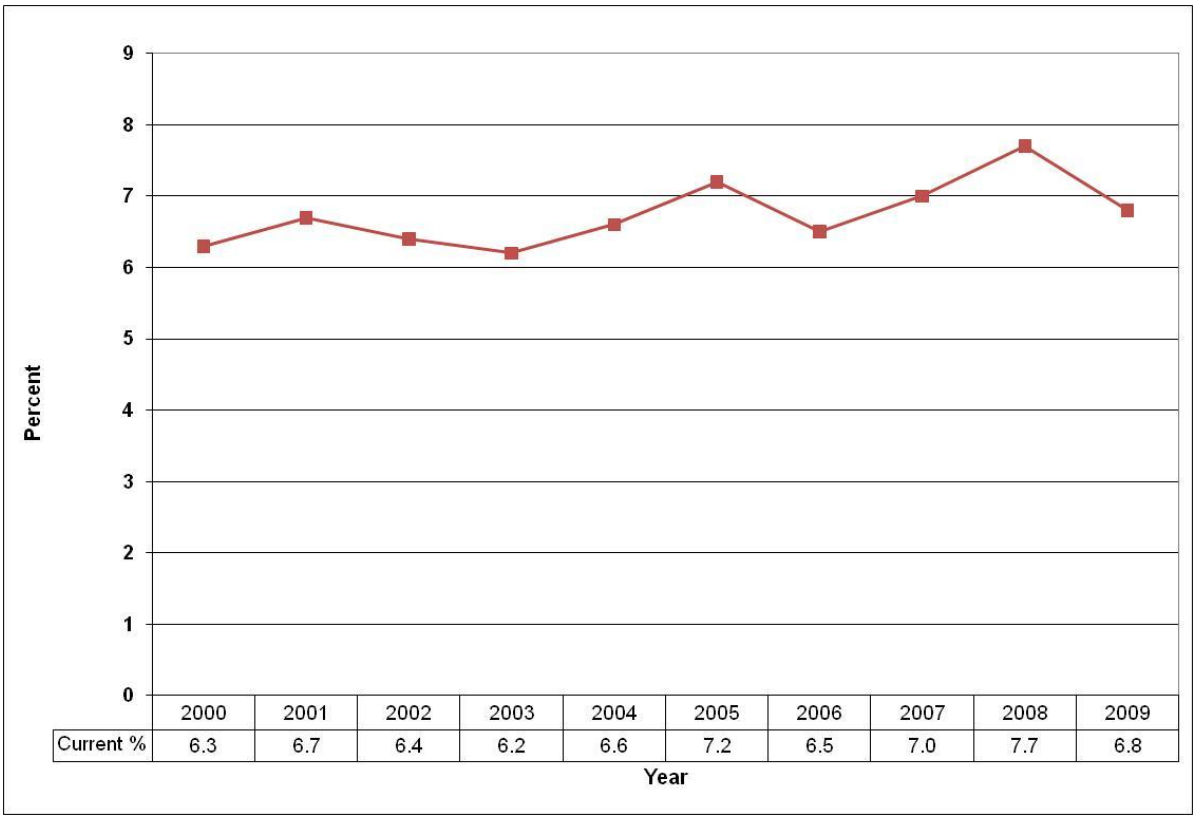
Asthma Results

In 2009, 10.5% of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 6.8% currently had asthma, and 3.5% formerly had asthma.[*] The percentage of Iowa adults with either lifetime or current asthma is down from 2008. In that year the percent of current asthma was 7.7%. (see figure 13.1).

In Iowa, more women currently have asthma than do men. People with more education had a lower rate of current asthma, as did racial and ethnic minorities as a group. African Americans actually had a much higher rate of current asthma, but their numbers were not reliable enough to display separately. 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 $15,000 (13.1%). The lowest percentage

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

Figure 13.1: Current Asthma in Iowa by Year, 2000 - 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Current %	6.3	6.7	6.4	6.2	6.6	7.2	6.5	7.0	7.7	6.8

of current asthma was seen in people with ages between 18 and 24 years (3.9%) (see table 13.1).

Even though an adult is interviewed in the BRFSS survey, two questions about asthma are asked for a randomly determined child in the household. It was reported that 6.7% of the children had ever been told they had asthma and that 4.7% of all children still have asthma. This is a major decrease from the figures for 2008 when 9.2% had ever been told they had asthma and 6.6% still had it. Contrary to the situation for adults, a larger percent of boys were reported to currently have asthma than 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 2008 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 3.8% needing such visits.

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

Table 13.1: Iowans Currently and Formerly Having Asthma, 2009

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	**6.8**	(6-7.6)	3.5	(2.7-4.3)
SEX				
Male	5.7	(4.3-7.1)	3.8	(2.2-5.4)
Female	7.9	(6.7-9.1)	3.3	(2.3-4.3)
RACE/ETHNICITY				
Non-Hispanic White	6.9	(6.1-7.7)	3.6	(2.6-4.6)
Non-White or Hispanic	5.5	(2.5-8.4)	3.4	(1-5.7)
AGE				
18-24	3.9	(1-6.8)	9.4	(3.9-14.9)
25-34	9.5	(7-12)	4.1	(2.3-5.9)
35-44	6.6	(4.6-8.6)	2.0	(1-3)
45-54	6.4	(4.4-8.4)	3.3	(2.1-4.5)
55-64	6.0	(4.6-7.4)	2.4	(1.4-3.4)
65-74	8.2	(6.3-10.1)	1.9	(1-2.9)
75+	6.8	(5.2-8.4)	1.3	(0.5-2.1)
EDUCATION				
Less than H.S.	7.2	(3.9-10.5)	4.1	(0.4-7.8)
H.S. or G.E.D.	6.9	(5.3-8.5)	3.0	(1.2-4.8)
Some Post-H.S.	6.8	(5.4-8.2)	3.5	(1.9-5.1)
College Graduate	6.5	(4.9-8.1)	4.1	(2.7-5.5)
HOUSEHOLD INCOME				
Less than $15,000	13.1	(8.8-17.4)	1.6	(0.4-2.8)
$15,000- 24,999	10.6	(7.7-13.5)	4.0	(1.6-6.4)
$25,000- 34,999	8.6	(5.9-11.3)	3.4	(0.3-6.5)
$35,000- 49,999	6.4	(4.4-8.4)	4.2	(1.3-7.1)
$50,000- 74,999	4.8	(3.4-6.2)	1.8	(0.8-2.8)
$75,000+	5.0	(3.4-6.6)	4.5	(2.7-6.3)

Some other respiratory questions were asked in the survey. When asked if they had been told they had emphysema or COPD, 3.4% said they had. When asked if they had ever been told they had chronic bronchitis, the percentage was 4.4%. These two are often considered to be in the same category of COPD.

Comparison with Other States

In 2009 only five states and territories had a lower prevalence of current asthma than Iowa. While Iowa reported 6.8% of the entire adult population currently suffering from asthma, the median for the nation was 8.8%. Prevalence ranged from a low of 4.4% to a high of 11.1%. The two 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.

References

1. Muldoon, J, Asthma in Iowa Burden report: Surveillance sub-Reports. Iowa Department of Public Health. Available at http://www.idph.state.ia.us/hpcdp/asthma.asp. 2009.
2. National Center for Health Statistics, Centers for Disease Control and Prevention. Fastats Asthma. Available at http://www.cdc.gov/nchs/fastats/asthma.htm, 2009.
3. National Heart Lung and Blood Institute ((NHLBI), What is Asthma, http://www.nhlbi.nih.gov/health/dci/Asthma_Whatis.html, 2008.

14. TOBACCO USE

Background

Tobacco use remains the leading preventable cause of death in the United States. An estimated 46 million American adults currently smoke cigarettes and annually cigarette smoking causes more than 443,000 deaths each year, or one in every five deaths.[1] For every person who dies from tobacco use, another 20 suffer with at least one serious tobacco-related illness. In 2004, this addiction cost the nation more than $96 billion per year in direct medical expenses as well as more than $97 billion annually in lost productivity.[1]

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.

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, as well as tobacco excise taxes, is allocated to reducing tobacco use. Currently, funding for tobacco prevention and control programs in Iowa is only 21% of the Centers for Disease Control and Prevention recommended funding level.[1]

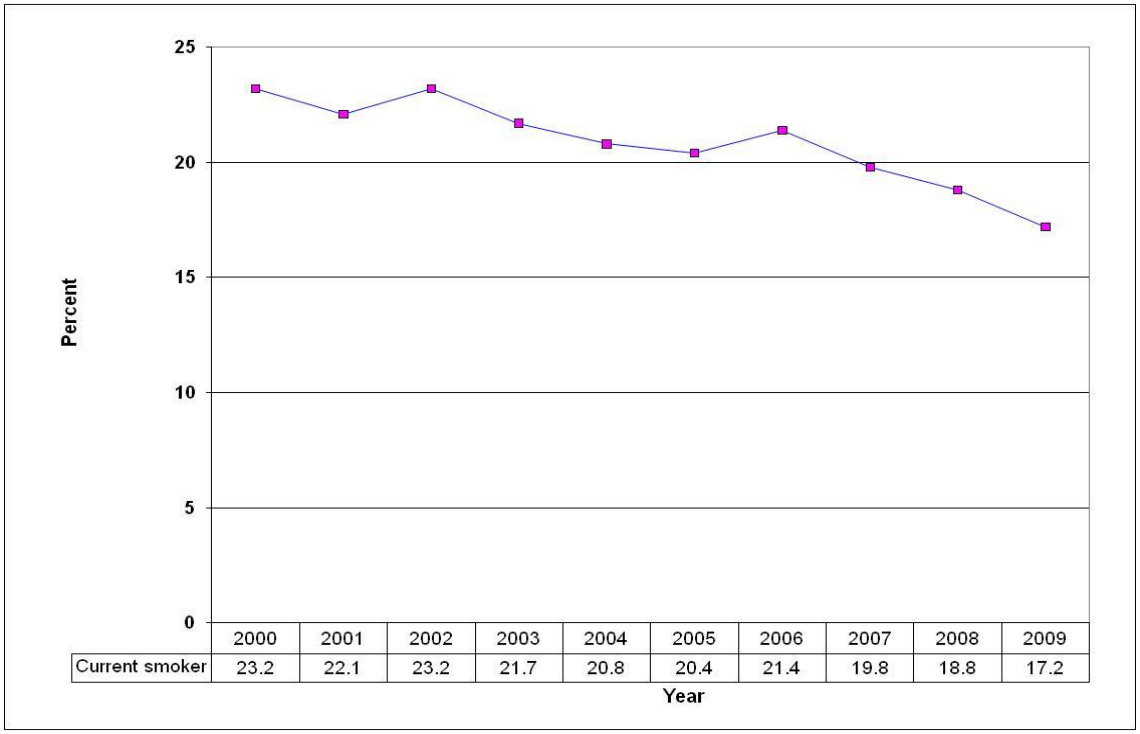
The key settlement program components include reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction, and working toward changing social norms and environments that support tobacco use. The last 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 of 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 2009, 17.2% reported being a current smoker. This was a decrease from the 18.8% found in 2008 and is the lowest prevalence ever reported in this survey (see Figure 14.1).

Figure 14.1: Trend in Percentage of Current Smokers in Iowa, 2000-2009



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 household incomes between $15,000 and $25,000 reported the highest proportion of current smokers (27.3%). Only 3.5% of respondents age 75 years and older were current smokers (see table 14.1).

Nearly 24.2% 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 5.3% former smokers, while the 65 to 74 year age group had 42.2% (see figure 14.2). White non-Hispanics had a higher prevalence of former smokers than minority racial or ethnic groups. When former smokers were asked how long it had been since they last smoked cigarettes regularly, the majority (57.3%) said ten or more years.

When asked about attempts to quit smoking, 53.2% 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

Table 14.1: Percentage of Current and Former Smokers in Iowa, 2009

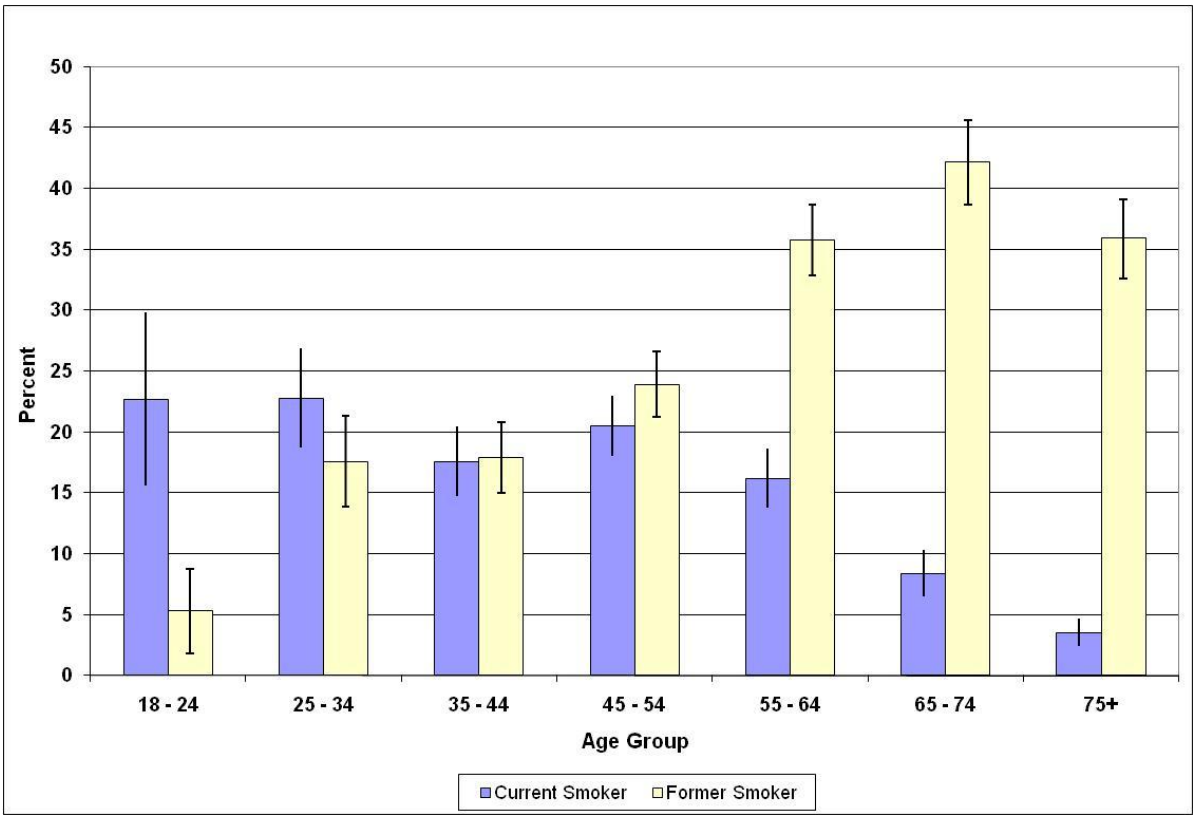
DEMOGRAPHIC GROUPS	Current Smoker		Former Smoker	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	17.2	(15.8-18.6)	24.2	(22.8-25.6)
SEX				
Male	19.6	(17.2-22)	27.4	(25.2-29.6)
Female	14.8	(13.2-16.4)	21.1	(19.5-22.7)
RACE/ETHNICITY				
White/Non-Hisp.	17.0	(15.6-18.4)	24.5	(23.1-25.9)
Non-White or Hisp.	19.9	(13.9-26)	15.7	(10.1-21.4)
AGE				
18-24	22.7	(15.6-29.8)	5.3	(1.8-8.8)
25-34	22.8	(18.7-26.9)	17.6	(13.9-21.3)
35-44	17.6	(14.7-20.5)	17.9	(15-20.8)
45-54	20.5	(18-23)	23.9	(21.2-26.6)
55-64	16.2	(13.8-18.6)	35.8	(32.9-38.7)
65-74	8.4	(6.5-10.3)	42.2	(38.7-45.6)
75+	3.5	(2.4-4.7)	35.9	(32.6-39.1)
EDUCATION				
Less than H.S.	25.4	(18.5-32.3)	21.9	(16.6-27.2)
H.S. or G.E.D.	21.5	(18.8-24.2)	27.7	(25.2-30.2)
Some Post-H.S.	17.7	(15.3-20.1)	24.9	(22.5-27.3)
College Graduate	9.7	(7.7-11.7)	20.0	(18-22)
HOUSEHOLD INCOME				
Less than $15,000	26.2	(19.9-32.5)	28.0	(20.9-35.1)
$15,000-24,999	27.3	(22.6-32)	24.9	(21.4-28.4)
$25,000-34,999	25.5	(20-31)	25.5	(21.4-29.6)
$35,000-49,999	19.3	(15.8-22.8)	26.5	(23.2-29.8)
$50,000-74,999	15.2	(12.1-18.3)	26.7	(23.4-30)
$75,000+	10.3	(8.1-12.5)	21.5	(19.1-23.9)

trying to quit during the past year. Individuals 18 to 34 years old reported trying to quit most often (58.4%) compared to 42.5% of persons age 65 years and older 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.

In order to look at the use of other tobacco products besides cigarettes, all respondents were asked if they currently use chewing tobacco, snuff, or snus. Only 8.8% said they used one of these everyday or some days. All current and former cigarette smokers were asked if they were smoking fewer cigarettes but using more smokeless tobacco over the past year. Only 6.6% said this was the case. When asked the reason for this, most chose more than one, but the public

Figure 14.2: Percentage of Current and Former Smokers by Age, 2009



smoking ban was chosen by the highest percent (83%) of those reducing use of cigarettes.

A question was asked about policies concerning exposure to secondhand smoke. Most Iowans (81%) said they had rules against smoking anywhere in their home. However, 13.1% said they allowed smoking anywhere in the house or had no rules concerning smoking in the house

Table 14.2: Percentage of Current Smokers in Iowa Trying to Quit, 2009

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)

If respondents were employed, they were asked in a typical week at work, how many hours they were in a room or car with smoke from someone else's cigarettes, cigars, or pipe. The vast majority (86.6%) said zero hours. One hour was mentioned by 7.7%. However the maximum response was 70 hours.

Smoking is a habit often begun in the teen years. Respondents with children were asked if they thought a randomly chosen child over age 10 years in their household had ever smoked cigarettes. Only 4.3% thought they had.

Comparison with Other States

In all the states and territories, smoking prevalence ranged from a low of 6.4% to a high of 25.6%. The lowest state had a prevalence of 9.8%. Iowa's current smoking prevalence of 17.2% was slightly below the median of 17.9% 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 2009 to 17.2%. For ages 18 to 24 years, it is 22.7%. For household incomes less than $25,000, it is 32%. This does not achieve the national overall goal or the state goal for income. It does achieve the overall state goal and 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 53.2% the rate still falls almost 20 percentage points short of the goal.

The *Healthy Iowans 2010* goal was 69% for people having rules against smoking in their home. This goal was surpassed with 81% saying they had such rules. This figure even further surpasses the goal than it had in previous years.

References

1. Centers for Disease Control and Prevention. *Tobacco Control State Highlights, 2010.* Atlanta: Office on Smoking and Health, 2010.
2. U. S. Department of Health and Human Services. The Health Consequences of Smoking: A Report of the Surgeon General. Atlanta, GA.: 2004. Available at http://www.surgeongeneral.gov/.
3. U. S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: a report of the Surgeon General. Atlanta, GA.: June, 2006.
4. Iowa Department of Public Health. *Healthy Iowans 2010. Mid-Course revision*, Des Moines, Iowa: July 2005.

15. ALCOHOL CONSUMPTION

Background

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

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). [1]

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).[2] In fact, excessive alcohol use is the 3rd leading lifestyle-related cause of death for people in the United States each year.[1]

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]

Annual health care expenditures for alcohol-related problems amount to $22.5 billion. The total cost of alcohol problems is $175.9 billion a year (compared to $114.2 billion for other drug problems and $137 billion for smoking). In comparison to moderate and non-drinkers, individuals with a history of heavy drinking have higher health care costs. Untreated alcohol problems waste an estimated $184.6 billion dollars per year in health care, business and criminal justice costs. Health care costs related to alcohol abuse are not limited to the user. Children of alcoholics who are admitted to the hospital average 62 percent more hospital days and 29 percent longer stays. [2]

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.

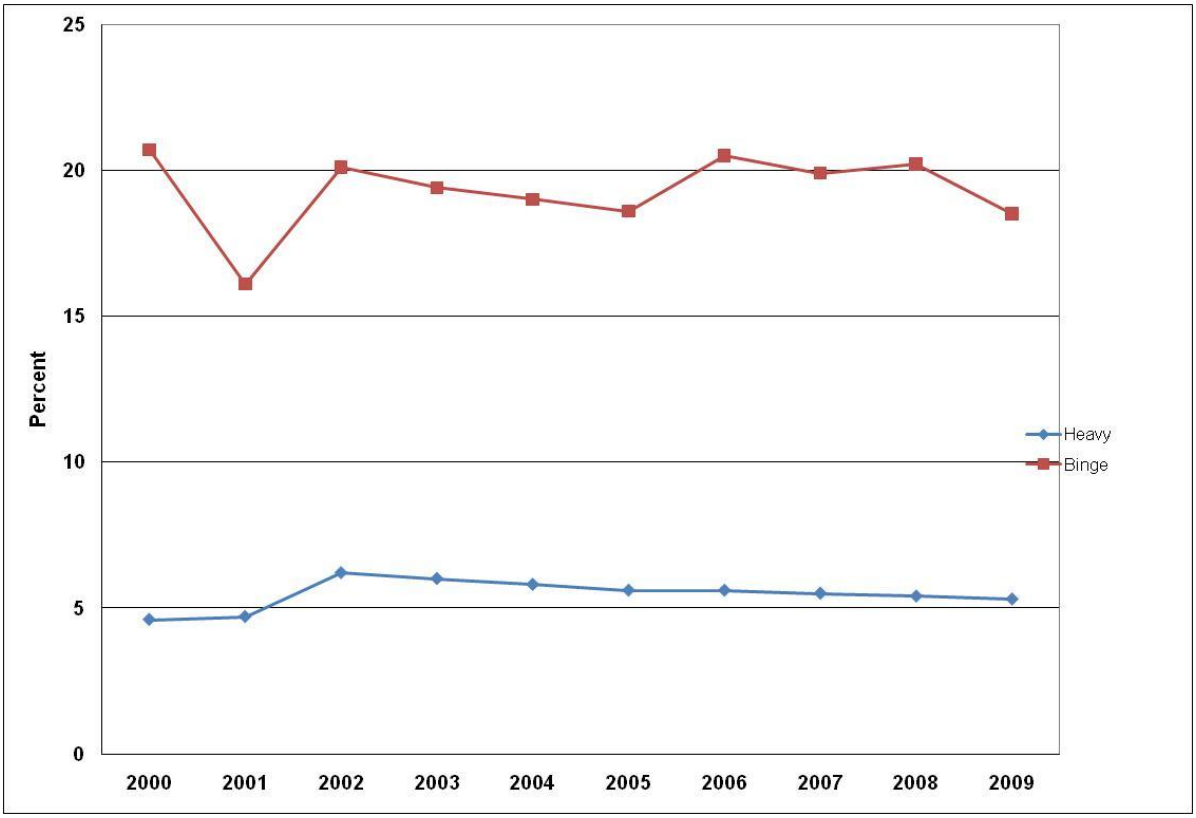
Among men, research indicates that greater alcohol use is related to greater sexual aggression. Binge drinkers appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge.[1]

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 2009, 57.4% of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 37.2% had only one drink. The median was two drinks. About 12% reported drinking five or more drinks per day on the average.

Figure 15.1: Trend of Binge and Chronic Heavy Drinking in Iowa, 2000-2009



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, 5.3% of all respondents were heavy drinkers. This is essentially the same prevalence found in 2007 and 2008. 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 15.1).

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 6.7% of men were considered to be heavy drinkers, while only 4.1% 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 with household incomes between $35,000 and $50,000 (7.6%). Only 1.3% of African American respondents reported heavy drinking (see table 15.1). There were more heavy drinkers among men than women at all ages.

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

Table 12.1
Heavy Drinking Among Iowans, 2008

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	5.3	(4.5-6.1)
SEX		
Male	6.7	(5.3-8.1)
Female	4.1	(3.1-5.1)
RACE/ETHNICITY		
White/Non-Hisp.	5.5	(4.7-6.3)
Black/Non-Hisp.	1.3	(0-3.2)
Other/Non-Hisp.	5.8	(0-12.4)
Hispanic	3.2	(0-8.6)
AGE		
18-24	6.0	(2.1-9.9)
25-34	6.8	(4.3-9.3)
35-44	7.0	(5-9)
45-54	6.0	(4.4-7.6)
55-64	4.9	(3.5-6.3)
65-74	2.3	(1.3-3.3)
75+	1.7	(0.8-2.6)
EDUCATION		
Less than H.S.	2.0	(0-4)
H.S. or G.E.D.	7.3	(5.5-9.1)
Some Post-H.S.	5.9	(4.3-7.5)
College Graduate	3.5	(2.5-4.5)
HOUSEHOLD INCOME		
Less than $15,000	4.4	(0-9.3)
$15,000- 24,999	6.3	(3.6-9)
$25,000- 34,999	4.8	(2.4-7.2)
$35,000- 49,999	7.6	(4.9-10.3)
$50,000- 74,999	5.3	(3.5-7.1)
$75,000+	5.2	(3.8-6.6)

Table 12.2
Binge Drinking Among Iowans, 2008

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	18.5	(16.9-20.1)
SEX		
Male	25.4	(22.9-27.9)
Female	12.0	(10.4-13.6)
RACE/ETHNICITY		
White/Non-Hisp.	18.9	(17.3-20.5)
Hispanic or other	14.1	(8.1-20.1)
AGE		
18-24	27.6	(19.8-35.4)
25-34	29.3	(24.8-33.8)
35-44	25.2	(21.9-28.5)
45-54	19.4	(16.9-21.9)
55-64	11.1	(9.1-13.1)
65-74	4.5	(3-6)
75+	1.3	(0.5-2.1)
EDUCATION		
Less than H.S.	9.9	(5.4-14.4)
H.S. or G.E.D.	18.9	(16-21.8)
Some Post-H.S.	21.0	(18.1-23.9)
College Graduate	17.8	(15.4-20.2)
HOUSEHOLD INCOME		
Less than $15,000	19.7	(11.5-27.9)
$15,000- 24,999	15.8	(11.7-19.9)
$25,000- 34,999	13.9	(9.2-18.6)
$35,000- 49,999	19.3	(15.6-23)
$50,000- 74,999	18.9	(15.6-22.2)
$75,000+	22.7	(19.8-25.6)

Iowans, 18.5% reported at least one binge episode in the last 30 days. This is a decrease from the 20.2% reported in 2008.

Even with the lessened requirement on females from the new definition, many more males binge than females (25.4% versus 12%). In addition, the likelihood of bingeing decreases with age from 29.3% for 25 to 34 years old to only 1.3% 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 15.2).

Comparison with Other States

The percentage of people reporting heavy drinking in Iowa is slightly above the median for the states and territories. Iowa's figure is 5.3% compared to the median of 5.2%. The percentage ranges from 1.9% to 8.2%.

For binge drinking, however, Iowa's figure of 18.5% is exceeded by only eight states. The range is from a low of 6.8% to a high of 23.9% with a median of 15.5%. The reduction in binge drinking in Iowa was not reflected in the nation as a whole, although the Midwest region did seem to experience a general decline.

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.

References

1. Centers for Disease Control and Prevention, Alcohol and Public Health, 2008. Available at http://www.cdc.gov/alcohol/index.htm.
2. Marin Institute, Alcohol Policy: Health Care Costs of Alcohol. 2006. Available at http://www.marininstitute.org/alcohol_policy/health_care_costs.htm.
3. National Institute on Alcohol Abuse and Alcoholism, Rethinking Drinking – Interactive website and Booklet, 2009. Available at http://rethinkingdrinking.niaaa.nih.gov

16. PROBLEM GAMBLING

Background

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

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

Current Iowa Gambling Treatment Program services include:

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

The Iowa Gambling Treatment Fund receives 0.5 percent of the gross lottery revenue and the adjusted gross receipts from the licensed casinos. 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

In 2009, 33.3% of all respondents reported they had gambled in the last 12 months. This is lower than the 35.8% figure found in 2008. 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 (39.1% vs. 27.8%). Also significantly fewer minority race or ethnic groups reported gambling than did non-Hispanic Whites (23.1% vs. 34%). There was a higher prevalence of gambling among people with higher household incomes. Otherwise, gambling tended to be less prevalent for people with

Table 16.1: Percentage of Iowans Who Report They Have Gambled in the Past 12 Months, 2009

DEMOGRAPHIC GROUPS	Gambled	
	%	C.I. (95%)
TOTAL	33.3	(31-35.5)
SEX		
Male	39.1	(35.4-42.8)
Female	27.8	(25.2-30.3)
RACE/ETHNICITY		
Non-Hispanic White	34.0	(31.7-36.4)
Non-White or Hisp.	23.1	(14.9-31.4)
AGE		
18-24	18.7	(8.5-28.8)
25-34	29.2	(23-35.4)
35-44	37.7	(32.3-43.1)
45-54	37.7	(33.2-42.1)
55-64	39.4	(34.9-43.9)
65-74	38.6	(33.5-43.7)
75+	24.0	(19.8-28.2)
EDUCATION		
Less than H.S.	13.9	(8.4-19.4)
H.S. or G.E.D.	36.3	(32.2-40.5)
Some Post-H.S.	33.9	(29.8-37.9)
College Graduate	33.7	(29.8-37.7)
HOUSEHOLD INCOME		
Less than $15,000	15.4	(10-20.9)
$15,000- 24,999	23.7	(18.3-29.1)
$25,000- 34,999	33.3	(26.7-39.8)
$35,000- 49,999	38.5	(32.6-44.3)
$50,000- 74,999	33.4	(28.2-38.7)
$75,000+	41.3	(36.8-45.8)

either extreme of age or only a high school education (see table 16.1). 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 2009, only 1.5% 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 2009, Iowa respondents reported levels slightly better than the financial problem goal and equal to the personal problem goal.

17. DISABILITY AND ARTHRITIS

Disability

Background

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

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.[3]

The latest Census estimates for 2006 found that 38.4 million people 16 years old and older in the United States and 361,000 in Iowa had a disability that prevented or limited their ability in some way.[3]

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

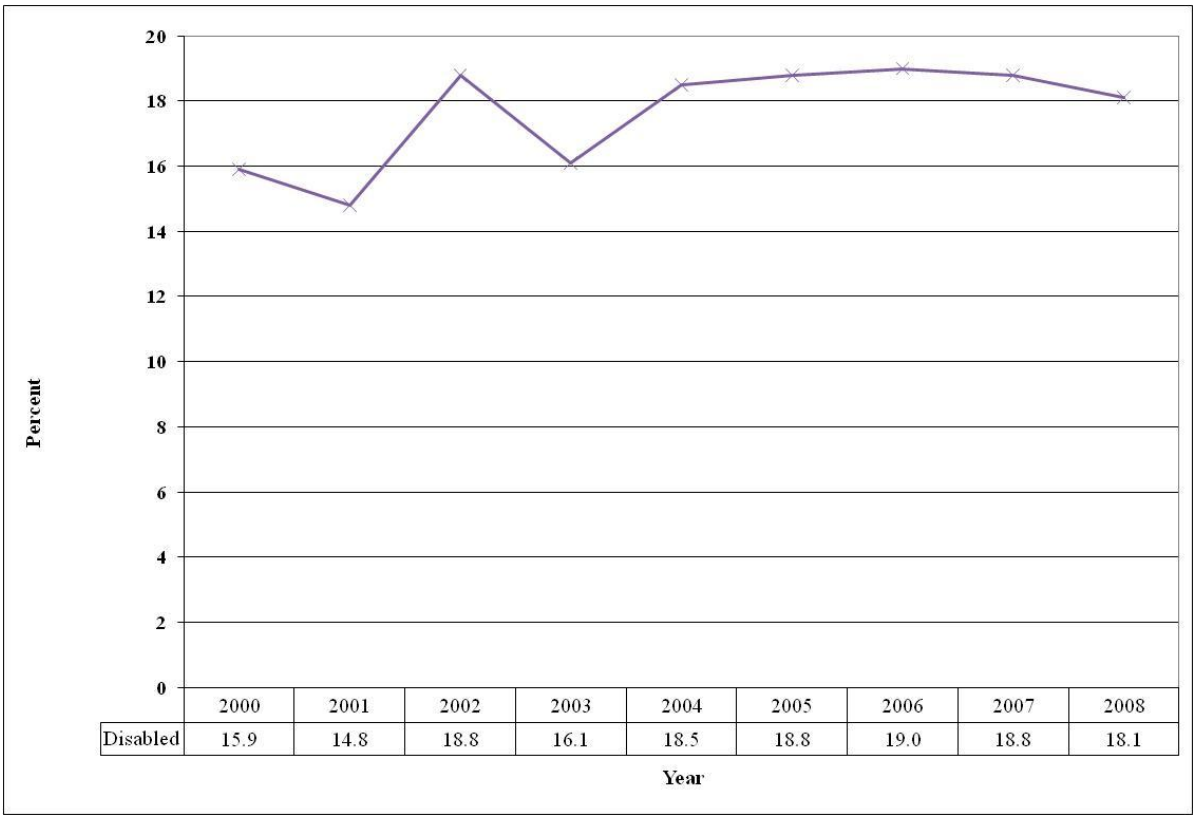
In 2009, 16.4% of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. This is down from the 17% reported in 2008.

When asked whether they had a health problem requiring the use of special equipment, 6.5% of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. This is up from 6.2% in 2008.

Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2009, 18.1% of respondents were considered to have a disability. This is a decrease from the 18.8% in 2008. The trend in people reporting disability has been stable for the past few years showing a very slight decrease (see figure 17.1).

As shown in Table 17.1, females, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Non-Whites and Hispanics reported a lower percentage of disability than White non-Hispanics. Of the five demographic variables analyzed, people age 18 to 24 years reported the lowest percentage (8.8%). Those with household incomes less than $15,000 reported the highest percentage of disability 43.3%.

Figure 17.1: Disability Trend by Year, 2001 – 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008
Disabled	15.9	14.8	18.8	16.1	18.5	18.8	19.0	18.8	18.1

The second highest reporting group was those age 75 and over (38.3%). This group is the most rapidly growing group in the population.

Arthritis

Background

Arthritis is the name given to a group of over 100 different rheumatic diseases and conditions that result in pain and reduction of functionality in and around the joints. The most common are osteoarthritis, rheumatoid arthritis, lupus, fibromyalgia, and gout.[1] Arthritis may be caused by a wearing down of cartilage, a change in bone composition, or inflammation in the joints.

Arthritis is the leading cause of disability in the United States.[1] It is surpassed only by heart disease as a cause of work disability. It also limits everyday activities and adversely affects the physical and mental health of those who are affected by it. Arthritis may affect people of all ages, but it is particularly common in the elderly. Due to the aging of the population, it is predicted that the number of Americans with doctor diagnosed arthritis will reach 67 million people by the year 2030. [1]

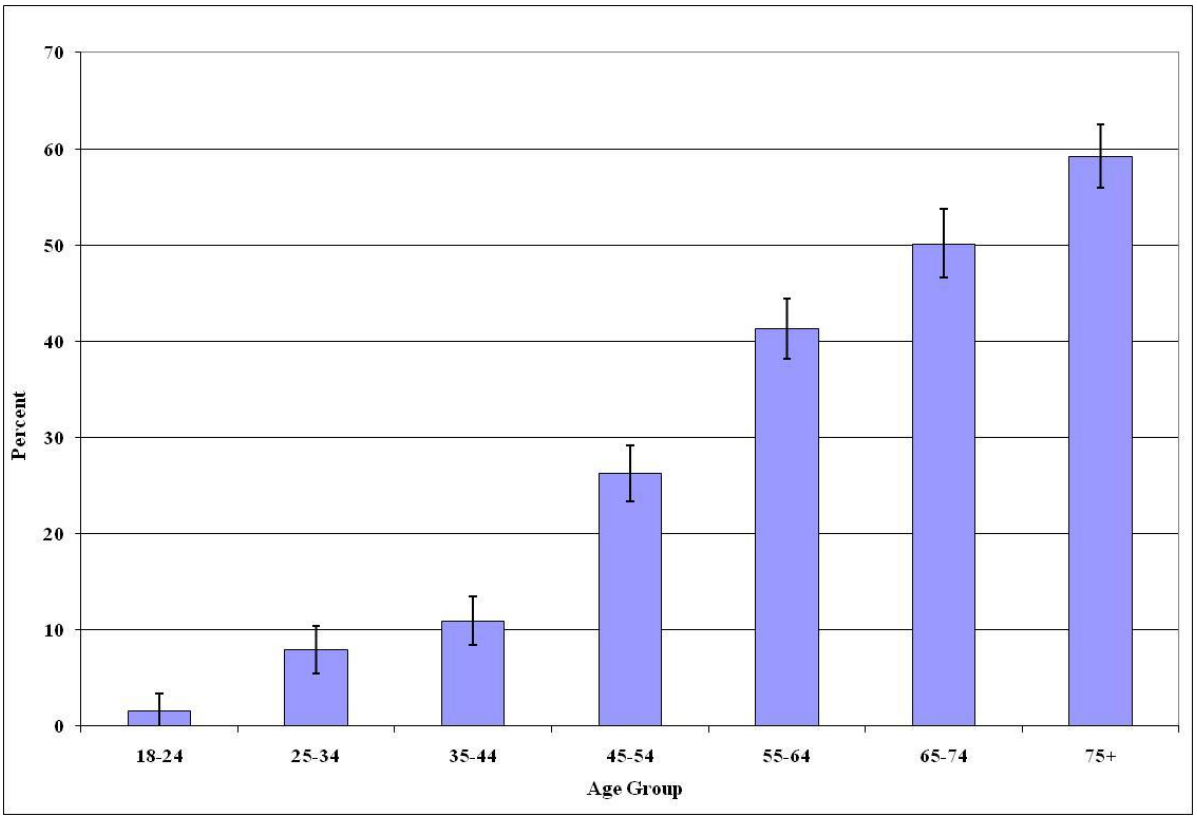
Table 17.1
Percent Reporting Being Disabled, 2009

Demographic Groups	Limitation	
	%	C.I. (95%)
TOTAL	18.1	(16.9-19.3)
SEX		
Male	16.3	(14.6-18.1)
Female	19.8	(18.2-21.4)
RACE/ETHNICITY		
White/Non-Hisp.	18.3	(17.1-19.6)
Non-white or Hisp.	14.7	(10.3-19.1)
AGE		
18-24	8.8	(4.5-13.2)
25-34	9.2	(6.4-11.9)
35-44	11.7	(9.2-14.2)
45-54	18.2	(15.5-20.9)
55-64	25.0	(22.3-27.6)
65-74	25.3	(22.3-28.2)
75+	38.3	(35.1-41.6)
EDUCATION		
Less than H.S.	22.3	(17.5-27.1)
H.S. or G.E.D.	19.3	(17.2-21.4)
Some Post-H.S.	18.7	(16.4-21)
College Grad.	15.2	(13.2-17.1)
HOUSEHOLD INCOME		
<$15,000	43.3	(36-50.5)
$15,000- 24,999	28.7	(24.7-32.7)
$25,000- 34,999	23.5	(19.6-27.4)
$35,000- 49,999	16.7	(13.9-19.5)
$50,000- 74,999	13.5	(10.8-16.1)
$75,000+	10.0	(8.1-11.9)

Table 17.2
Percent Having Been Told by a Doctor They Had Some Form of Arthritis, 2007

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

Figure 17.2: Percent of Iowans with Arthritis by Age, 2009



Arthritis Results

In 2009, a doctor had told 25.3% of Iowans that they had some form of arthritis. . More women than men reported having arthritis. The prevalence decreased with greater education and income. Far fewer non-Whites or Hispanics reported having arthritis than White non-Hispanics (see table 17.2). Age was the strongest demographic factor in determining having arthritis, however. Over half (59.2%) of people age 75 and over had been told they had arthritis, while only 1.5% of those age 18 to 24 years had been told this (see figure 17.2).

Of people who had been told they had arthritis, 42.3% said they were limited in some way in their activities by arthritis or joint symptoms. When asked if arthritis or joint symptoms now affect whether they work, the type of work they do, or the amount of work they do, 26.5% said it did. When asked during the past 30 days, to what extent their arthritis or joint symptoms interfered with their normal social activities, such as going shopping, to the movies, or to religious or social gatherings, 14.8% said a lot. When asked to rate their joint pain on a ten point scale with zero being none and 10 being very severe. There was a wide range of ratings. The median was 4; while the most frequent rating (18.5%) was 5. All these limitations were worse for people with less education or household income.

Comparison with Other States

The percent of people reporting being disabled ranged from 11.2% to 28.6% with a median of 20.2%. There were only seven states and territories with a lower rate of disability than Iowa at 18.1%. The prevalence of disability showed some decline in Iowa, while remaining quite stable nationally.

For diagnosed arthritis the range was from 10.7% to 35.6%. The lowest three were all territories. The lowest state prevalence was 20.3%. The median of all states and territories was 25.9%. Iowa was a little below the median at 25.3% with arthritis. Both Iowa and the nation have a somewhat lower prevalence than was seen in 2007. This is not too bad of figure considering the high numbers of elderly in Iowa and that the state prevalences are not adjusted to control for differences in age.

Year 2010 Health Objectives for the Nation

The Healthy People 2010 goal for people who are limited in their activities by arthritis is 21%. In Iowa, the percent of those with doctor diagnosed arthritis who report being limited is 42.3%. This is much higher than the HP 2010 goal.

References

1. Centers for Disease Control and Prevention. Arthritis, Meeting the Challenge: At A Glance 2010. 2010. available at http://www.cdc.gov/nccdphp/publications/AAG/arthritis.htm.
2. International Classification of Impairments, Disabilities, and Handicaps (ICIDH), Geneva, Switzerland: World Health Organization. 1980.
3. U. S. Bureau of the Census. 2006 American Community Survey. 2007.

18. VISUAL IMPAIRMENT AND ACCESS TO EYE CARE

Background

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

Visual impairment can involve a large range of ability. Someone can be totally unable to see anything or they may have light perception. To be legally blind someone must have a visual acuity of 20/200 or less in the better eye after correction or a visual angle of less than 20 degrees in diameter. Someone may be considered visually impaired if they have a corrected acuity of 20/40 or less in the best eye. Some visual impairment may only apply at particular distances such as near-sightedness or far-sightedness.[3]

The United States spends more than $50 billion a year on vision problems. There are estimated to be over one million blind people over 40 years old and 3.6 million visually impaired people according to the definitions above—and the prevalence and the costs to care for these conditions are rising fast.[3] As the population ages, the number of people at risk for age-related eye diseases increase. Within the next three decades the number of Americans with age-related eye disease and resulting vision impairment is projected to double.[1]

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

- Cataracts,
- Glaucoma,
- Macular degeneration and
- Diabetic retinopathy.[2]

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

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

Visual Impairment and Access to Eye Care Results

The BRFSS survey asked respondents 40 years old and older 9 questions about their vision and eye care.

Most respondents reported no difficulty seeing. No difficulty identifying a friend from across the street was reported by 85.4%. A lower percentage of 67.8% reported no difficulty reading print such as the newspaper.

Around 67.8% of Iowans reported having their eyes examined by an eye doctor or professional within the past year. On the other hand, 18.3% of Iowans reported not visiting an eye care specialist in the past two years. This includes 1.4% who said they had never had their eyes examined. When asked the main reason for not having an eye examination in the past year, most (61.6%) reported no reason to go, i.e. no symptom or problem.

When asked how long it had been since they had a dilated eye exam, 58.1% of respondents reported it was within one year, while 6.8% had never had such a visit. This question was asked separately for diabetics. For people with diabetes in the same 40 years and over age range, 81.9% had a dilated eye exam in the past year, while 54.9% of those not having diabetes had such an exam.

Table 18.1: Prevalence of Conditions Affecting Vision in Iowa, 2009

DEMOGRAPHIC GROUPS	**Have Cataracts**		**Have Glaucoma**		Have Macular Degeneration	
	%	**C.I. (95%)**	**%**	**C.I. (95%)**	**%**	**C.I. (95%)**
TOTAL	13.6	(12.4-14.8)	4.2	(3.6-4.8)	4.3	(3.7-4.9)
SEX						
Male	11.6	(9.8-13.4)	3.3	(2.5-4.1)	4.3	(3.3-5.3)
Female	15.6	(14.2-17)	5.1	(4.3-5.9)	4.4	(3.6-5.2)
RACE/ETHNICITY						
White/Non-Hisp.	13.7	(12.5-14.9)	4.3	(3.7-4.9)	4.3	(3.7-4.9)
Non-White or Hisp.	11.3	(6.1-16.5)	4.1	(1.1-7.1)	4.5	(0.2-8.8)
AGE						
40-49	1.9	(0.1-3.8)	0.9	(0.2-1.5)	0.8	(0.2-1.5)
50-64	8.4	(7.1-9.7)	2.7	(1.9-3.4)	1.8	(1.1-2.6)
65-74	32.7	(29.3-36.1)	6.6	(4.9-8.3)	5.7	(3.9-7.5)
75+	29.3	(26.1-32.5)	12.0	(9.7-14.2)	15.7	(13.2-18.1)
EDUCATION						
Less Than H.S.	17.1	(12.4-21.8)	7.0	(4.1-9.9)	9.4	(5.5-13.3)
H.S. or G.E.D.	15.6	(13.8-17.4)	5.7	(4.5-6.9)	5	(3.8-6.2)
Some Post-H.S.	11.8	(10-13.6)	3.9	(2.9-4.9)	4.1	(2.9-5.3)
College Graduate	12.3	(9.9-14.7)	2.2	(1.4-3)	2.9	(1.9-3.9)
HOUSEHOLD INCOME						
Less than $15,000	17.5	(13.2-21.8)	9.2	(6.1-12.3)	6.7	(4-9.4)
$15,000- 24,999	20.2	(16.7-23.7)	8.1	(5.7-10.5)	7.4	(5.2-9.6)
$25,000- 34,999	16.9	(13.4-20.4)	6.4	(4.2-8.6)	5.7	(3.3-8.1)
$35,000- 49,999	14.1	(11.6-16.6)	2.7	(1.3-4.1)	3.9	(2.5-5.3)
$50,000- 74,999	9.7	(7.5-11.9)	3.1	(1.9-4.3)	2.2	(1.2-3.2)
$75,000+	7.9	(5.7-10.1)	2.0	(1.2-2.8)	1.9	(0.9-2.9)

A little more than half of respondents, 54%, reported having health insurance that covered vision care. Household income had the most effect on having this insurance. People in households which earned $75,000 or more had the highest percent with insurance covering vision (66.8%), while those earning $15,000 to $25,000 had the lowest (43.8%).

The prevalence of three common conditions affecting vision was determined. When asked if they had cateracts, 13.6% said they did. Another 11.1% said they had them but had them removed. Glaucoma was reported by 4.2% of respondents. Age related macular degeneration was reported by 4.3% of respondents.

Table 18.1 shows that prevalence of these conditions varies with the demographics of the respondent. In all cases the condition was more prevalent as age increased, as education decreased, and as income decreased. Cataracts and macular degeneration, but not glaucoma, were more common among White non-Hispanics than Hispanic or other race respondents. Cateracts and glaucoma, but not macular degeneration were more common in women than men.

For information on diabetic retinopathy, see the diabetes chapter.

References

1. Murphy, J. The High Cost of Poor Vision. Review of Optometry, 2008. available at http://www.chronicdisease.org/i4a/pages/index.cfm?pageid=3321.
2. The Eye Diseases Prevalence Research Group. Visual Impairment and Access to Eye Care. Archives of Ophthalmology, Vol. 122, No. 4; April, 2004. 477-485.
3. Prevent Blindness America. Vision Problems in the U.S: Prevalence of Adult Vision Impairment and Age-Related Eye Disease in America, update to the 4th edition. 2008.

19. 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 2008.[6]

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] Recommendations for annual vaccination against seasonal influenza include almost everyone in the united states population from six months old and older.

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 usually caused by bacteria, viruses, and other infectious agents such as fungi. 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.

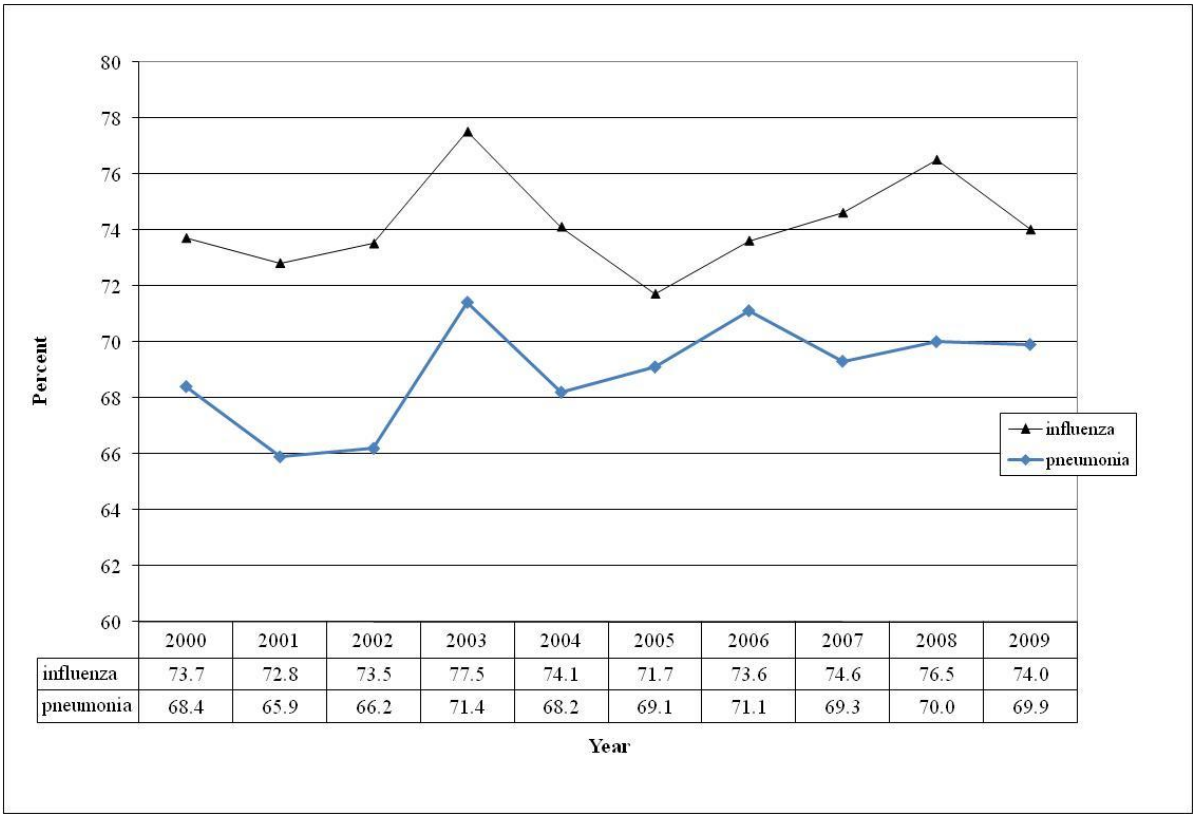
In 2006, 1.2 million people in the U.S. were hospitalized with pneumonia and 55,477 people died from the disease.[2]

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] 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 2009, 74% of Iowans age 65 and over reported having a flu shot in the past 12 months. This is lower than the 76.5% found in 2008. This reverses the upward trend that has been seen for the past four years (see figure 19.1). .

Figure 19.1: Immunizations in Iowans Age 65 and Over, 2000 – 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
influenza	73.7	72.8	73.5	77.5	74.1	71.7	73.6	74.6	76.5	74.0
pneumonia	68.4	65.9	66.2	71.4	68.2	69.1	71.1	69.3	70.0	69.9

Among all adults, 47% 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, people with more education, 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 (31%), while the highest was for those age 75 and older (77.7%) (see table 19.1).

In 2009, 69.9% of Iowans age 65 and over reported ever having a pneumonia vaccination. This is about the same as the 70% found in 2008 (see figure 19.1).

Among all adults, 26.5% 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 (8.2%), while those 75 years old and older were highest by far (76.7%) (see table 19.1). Pneumonia vaccination did not really increase with increasing age until age 45.

Table 19.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2009

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	47.0	(45.2-48.7)	26.5	(24.9-28.1)
SEX				
Male	42.0	(39.4-44.6)	24.4	(22-26.8)
Female	51.7	(49.4-53.9)	28.4	(26.6-30.2)
RACE/ETHNICITY				
White/Non-Hispanic	47.8	(46-49.5)	26.9	(25.4-28.4)
Non-White or Hisp.	35.4	(27.9-42.9)	20.3	(13.9-26.7)
AGE GROUP				
18-24	31.0	(22.9-39)	21.4	(13.2-29.6)
25-34	38.3	(33.8-42.9)	9.7	(6.6-12.8)
35-44	39.3	(35.6-43)	8.2	(6-10.4)
45-54	38.3	(35.1-41.4)	13.9	(11.4-16.4)
55-64	54.6	(51.4-57.7)	25.5	(22.8-28.2)
65-74	69.6	(66.4-72.8)	62.6	(59.2-66.1)
75+	77.7	(74.9-80.6)	76.7	(73.8-79.7)
EDUCATION				
Less than H.S.	39.6	(32.5-46.7)	31.8	(25.1-38.5)
H.S. or G.E.D.	45.9	(42.8-49)	33.9	(31-36.8)
Some Post-H.S.	43.4	(40.2-46.5)	22.7	(20.2-25.2)
College Graduate	53.5	(50.6-56.3)	20.6	(18.4-22.8)
HOUSEHOLD INCOME				
Less than $15,000	40.7	(33.7-47.7)	37.3	(30.8-43.8)
$15,000- 24,999	44.9	(40.2-49.6)	41.5	(36.8-46.2)
$25,000- 34,999	49.5	(44.2-54.7)	37.1	(32-42.2)
$35,000- 49,999	45.5	(41.3-49.7)	29.0	(24.9-33.1)
$50,000- 74,999	47.5	(41.5-53.5)	18.7	(16-21.4)
$75,000+	48.0	(44.7-51.3)	14.0	(11.6-16.4)

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, 69.4% had a flu vaccination and 62.1% had a pneumonia vaccination.

Of all those ever told they had asthma, 57.3% had their flu vaccination, while 40.5% had a pneumonia vaccination.

Although not asked for the entire year, questions were asked about influenza vaccination in children for a randomly chosen child in the household. A child between the ages of six months and 18 years was reported to have had a flu shot in the past year for 38.5% of respondents with children in the household.

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 69.8% in 2009. The range was from 76.8% to 26.8%. The lowest threevalues were from territories and were extreme. The lowest state prevalence was 62.1%. Iowa's value of 74% 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 four states with a higher prevalence of influenza vaccination. In spite of the decline in Iowa's prevalence of people in this age group receiving flu shots, its relative standing in the nation is unchanged.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 68.1%. The range was from 73.9% to 19.1%. However, the three territories again were extremely low. After removing the three territories, the low end becomes 59.9%. Iowa's value of 69.9% is above the median. In this case the prevalence for Iowa was unchanged, while the nation seems to have increased in pneumonia vaccination.

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 2009 figures of 74% for having a flu shot and 69.9% for ever having a pneumonia vaccination have a long way to go to meet these targets.

References

1. Centers for Disease Control and Prevention. Seasonal Influenza – Key Facts About Influenza (Flu) & Flu Vaccine. Available at http://www.cdc.gov/flu/keyfacts.htm#whatis, 2010.
2. Centers for Disease Control and Prevention. Pneumonia Can Be Prevented – Vaccines Can Help. Available at http://www.cdc.gov/Features/Pneumonia/. 2010.
3. Centers for Disease Control and Prevention. ACIP Provisional Recommendations for Use of Pneumococcal Vaccines, 2008. Available at http://www.cdc.gov/vaccines/recs/provisional/downloads/pneumo-oct-2008-508.pdf.
4. Centers for Disease Control and Prevention. Prevention and control of Seasonal influenza with Vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report.* Vol 58, No. RR-8; 2009. 1-52.

5. Xu J, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final Data for 2007. *National Vital Statistics Reports*, Division of Vital Statistics, National Center for Health Statistics. Vol 58(19); 2010.

6. Iowa Department of Public Health. *2008 Vital Statistics of Iowa*. 2010.

20. 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.[2]

The HIV epidemic has now been with us for more than twenty-five years.[3] 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.

From 2005 through 2008, the estimated numbers of annual diagnoses of HIV infection in the 37 states with confidential name-based HIV infection reporting increased 8%. However, the estimated rates of annual diagnoses of HIV infection during this period remained stable. In 2008, the estimated rate of diagnoses of HIV infection in the 37 states was 19.4 per 100,000 population.[1]

Groups with the largest exposure include "men who have sex with men", injection drug users, African Americans, and Hispanics. Many of the new diagnoses are occurring among, 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.

African Americans, Hispanics, and foreign-born blacks continue to be over-represented among persons with HIV diagnoses when compared to the sizes of their populations in Iowa. However, it is important to keep in mind that non-Hispanic whites account for over 70% of HIV diagnoses and persons living with HIV/AIDS.[4]

HIV/AIDS prevalence continues to increase in Iowa. There were 1,748 persons living with HIV/AIDS in Iowa on December 31, 2009, up from 1,616 a year earlier.[4]

In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown considerably. Modern HIV treatment offers 24 extra years of life – at $2,100 per month.[5] The cost of drugs is nearly three-fourths of the lifetime expense. The cost of treatment started at a late stage averages $4,700 per month. That's because hospital costs rise to almost half the lifetime expense. Estimated future costs will be $12.1 billion per year. Drugs will make up 70 percent of the cost.[5]

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.

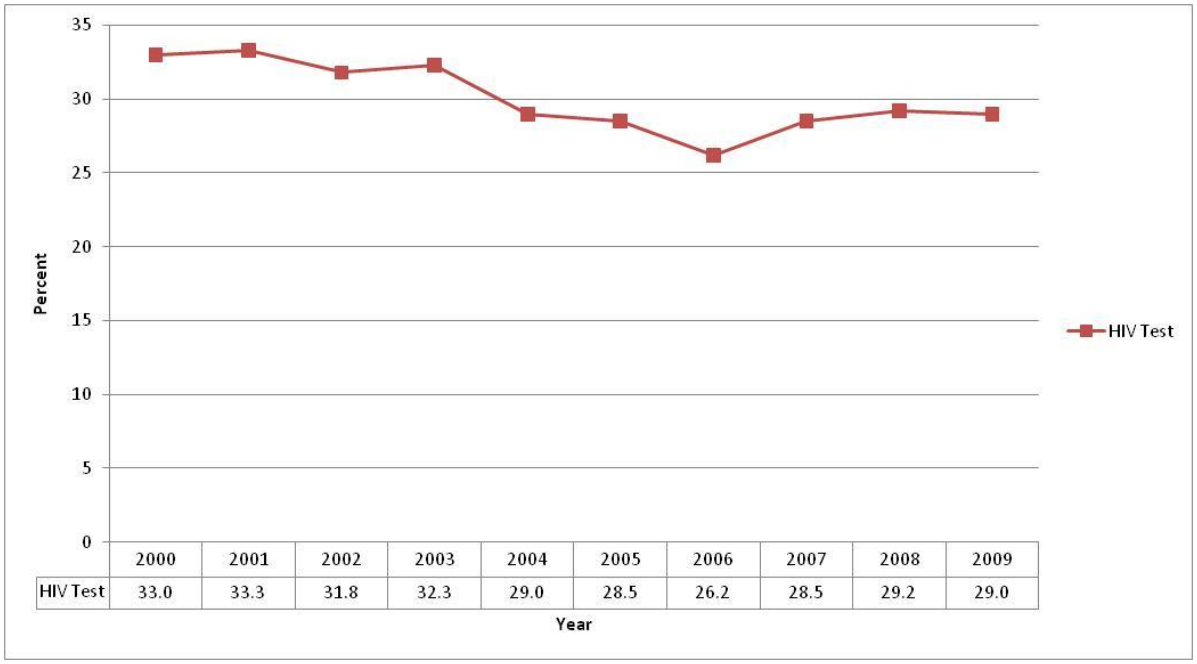
HIV/AIDS Results

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

In 2009 29% of respondents reported ever being tested for HIV, not including as part of a blood donation. This is about the same as the 2008 finding of 29.2%. The trend which was downward for several years appears to have leveled out more recently (see figure 20.1).

Females, non-White or Hispanic race/ethnicity, younger people except those under 25 years, people with a higher education, and people of lower household income were more likely to be tested. The largest proportion of respondents tested was among those age 25 to 34 years (45.9%). The smallest proportion reporting ever being tested was 15.4% of those between ages 55 to 64 years old (see table 20.1).

Figure 20.1: Percentage of Iowans Reporting Ever Being Tested for HIV 2000-2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
HIV Test	33.0	33.3	31.8	32.3	29.0	28.5	26.2	28.5	29.2	29.0

There is an interesting interaction between sex and age, however. Figure 20.2 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

Table 20.1: Percentage of Iowans Tested for HIV/AIDS, 2009

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	29.0	(27-31)
SEX		
Male	25.5	(22.8-28.2)
Female	32.6	(29.9-35.3)
RACE/ETHNICITY		
Non-Hispanic White	28.0	(26-30)
Non-White or Hispanic	41.6	(32.7-50.5)
AGE		
18-24	23.0	(15.7-30.3)
25-34	45.9	(41.2-50.6)
35-44	36.9	(33.2-40.6)
45-54	22.0	(19.1-24.9)
55-64	15.4	(13-17.8)
EDUCATION		
Less than H.S.	26.7	(17.7-35.7)
H.S. or G.E.D.	24.5	(20.8-28.2)
Some Post-H.S.	30.0	(26.7-33.3)
College Graduate	32.5	(29.4-35.6)
HOUSEHOLD INCOME		
$15,000- 24,999	38.3	(31.4-45.2)
$25,000- 34,999	34.9	(27.3-42.5)
$35,000- 49,999	25.0	(20.5-29.5)
$50,000- 74,999	26.0	(22.1-29.9)
$75,000+	28.0	(24.9-31.1)

places were hospital or clinic (44.8%), and private doctor (or HMO office (34.5%). 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, 23.2% said it was.

Finally, respondents to the HIV section were read a set of high risk sexual and drug use practices and asked if any of them applied to them. They did not have to say which ones. A total of 2.9% said that at least one of these statements applied to them. This would put them of very high risk of contracting HIV.

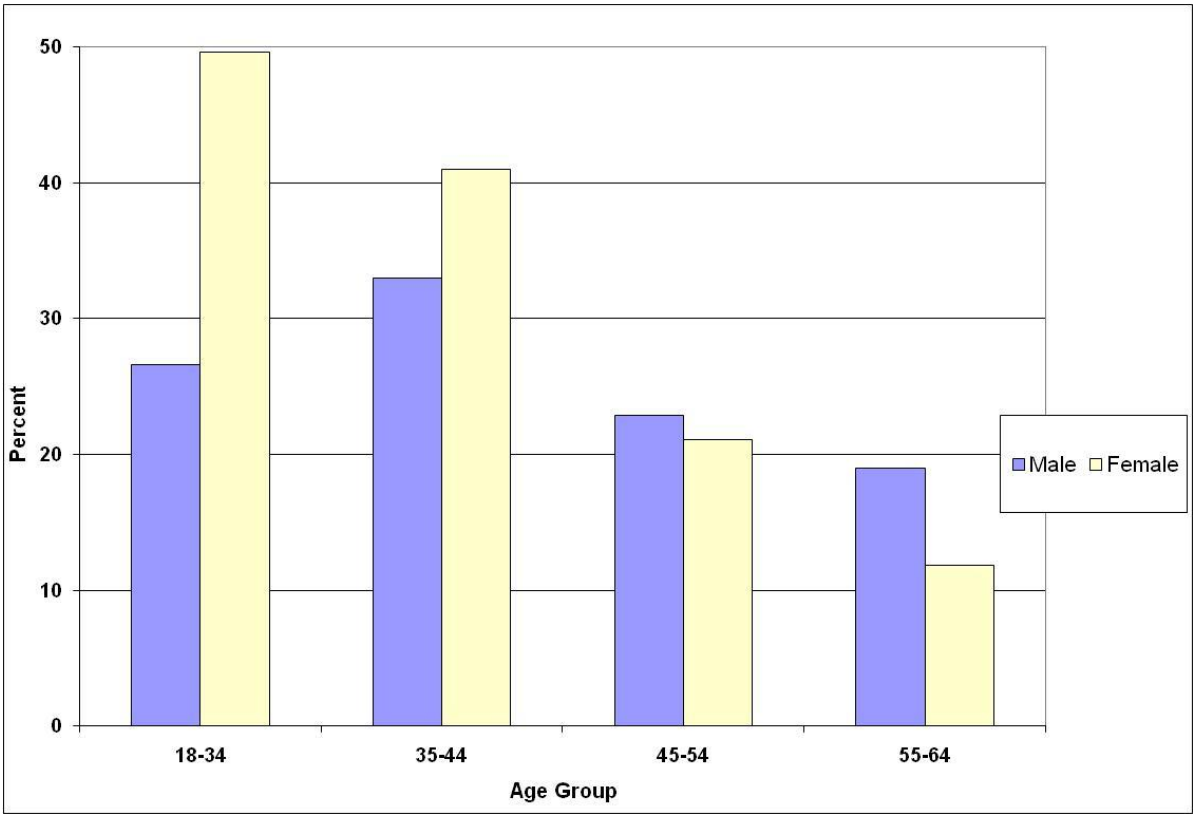
Comparison with Other States

The percentage of people age 18 through 64 who had a test for HIV ranged from 26.5% to 74.5%. The median percentage of people tested was 39%. There were only three states with a lower percentage being tested than Iowa at 29%. Four out of five of the lowest tested states were in the upper Midwest. The nation as a whole seems to have experienced a small increase in people being tested this year, while Iowa remained unchanged.

References

1. Centers for Disease Control and Prevention. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Diagnoses of HIV infection and AIDS in the United States and Dependent Areas, 2008. HIV Surveillance Report, Vol. 20, June, 2010.

Figure 20.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2009



2. Centers for Disease Control and Prevention. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. HIV/AIDS Basic Information. Divisions of HIV/AIDS Prevention, 2010. Available at http://www.cdc.gov/hiv/topics/basic/index.htm.
3. Centers for Disease Control and Prevention. Twenty-Five Years of HIV/AIDS --- United States, 1981—2006. *Morbidity And Mortality Weekly Report*, Vol 55, No 21; 585-589, 2006.
4. Iowa Department of Public Health. State of Iowa HIV and AIDS End-of-Year Surveillance Report January 1, 2009 through December 31, 2009, 2010.
5. Schackman, B. *Medical Care*, November 2006; Vol. 44: pp 990-997.

APPENDIX 1

Year 2010 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2009

STATE: Iowa

Healthy People 20102 Objective[3]	Yr 2010 Target	State, 2009
Health Insurance (Objective #1.1) Ages >18	100%	90.1%
Specific Source of Ongoing Primary Care (Objective #1.4c) Ages >18	96%	79.9%
Limitation in Activities Due to Arthritis (Objective #2.2) Adults with Chronic Joint Symptoms, Ages >18	21%	42.3%
Cholesterol Screening, Within Past Five Years (Objective #12.15) Ages >18	80%	75.5%
Influenza Immunization, Within Past Year (Objective #14.29a) Ages >65	90%	74.0%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #14.29b) Ages >65	90%	69.9%
Obese, BMI > 30 (Objective #19.2) Ages >20	15%	29.7%
Reduce proportion of adults with high blood pressure	16%	28.0%
No Leisure Time Physical Activity (Objective # 22.1) Ages >18	20%	24.2%
Regular, Moderate Physical Activity, 5 or more Days/Week for 30 or more Minutes or vigorous physical activity 20 minutes or more per day, three or more days per week (Objective #22.2) Ages >18	30%	49.7%
Regular, Vigorous Physical Activity, 3 or more Days/Week for 20 or more Minutes (Objective #22.3) Ages >18	30%	26.9%
Binge Drinking, During the Past Month **(Objective #26.11c)** Ages >18	6%	18.5%

[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 2009

Healthy Iowans 2010[2] Objective[3]	Yr 2010 Target	Iowa, 2008
Health Insurance (Objective #1-1) Ages 18 – 64	100%	88.1%
Diabetes Prevalence (Objective #3-1)	7.5%	7.6%
People with diabetes receiving annual dilated eye exams (Objective #3.3.2)	80%	81.8%
People with diabetes receiving at least annual foot exams (Objective #3.3.2)	75%	75.6%
People with diabetes that have a glycosylated hemoglobin measurement at least once a year Objective #3.3.2)	95%	87.2%
Achieve identification and control of high blood pressure (Objective 9.3)	14.9%	**28.0%**
Reduce adult population with high blood cholesterol (Objective 9.4)	28.5%	**37.5%**
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	**74.0%**
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #10-2) Ages >= 65	90%	**69.9%**
Prevent a further rise in the percent of Iowans who are overweight (Objective 13.3)	38.3%	38.7%
Prevent a further rise in the percent of Iowans who are obese (Objective 13.3)	22.9%	28.5%
Meet the minimum daily average goal of at least five fruits and vegetables (Objective 13-5)	50%	18.5%
Meet the minimum recommendation of at least 30 minutes of moderate physical activity 5 days a week (Objective 16-9)	---	38.8%
Adults with asthma having asthma-related emergency or urgent care visits (Objective 18-1) Ages >= 18	12.6%	3.0%[4]
Do not increase percent of gamblers where gambling led to financial problems (Objective 20-7)	1.6%	1.5%
Do not increase percent of gamblers where gambling led to personal problems (Objective 20-7)	1.7%	1.7%
Not allowing smoking anywhere in the home (Objective 21.6)	69%	81.0%
Cigarette Smoking (Objective 21.7) Ages > 18	18%	17.2%
Cigarette Smoking (Objective 21.7) Ages 18-24	28%	22.7%
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%	53.2%

[1]Behavioral Risk Factor Surveillance System

[2]Iowa Department of Public Health. Healthy Iowans 2010 Mid-Course Revision, 2005.

[3]In some cases, BRFSS definitions of objectives differ slightly from those in Healthy Iowans2010. See Healthy Iowans2010 for the exact definition of the objective.

[4]This data is from followup survey and is one year behind the rest of the data.

APPENDIX 2

Iowa 2009 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

3.2. 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: Hypertension Awareness
7.1. Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?
1 Yes
2 Yes, but female told only during pregnancy ⇨**Go to next section**
3 No ⇨**Go to next section**
4 Told borderline high or pre-hypertensive ⇨Go to next section

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

Section 8: Cholesterol Awareness
8.1. Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked?
1 Yes
2 No ⇨**Go to next section**

8.2. About how long has it been since you last had your blood cholesterol checked?
1 Within the past year (anytime less than 12 months ago)
2 Within the past 2 years (1 year but less than 2 years ago)
3 Within the past 5 years (2 years but less than 5 years ago)
4 5 or more years ago

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

Section 9: 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"**:
9.1: (Ever told) you had a heart attack, also called a myocardial infarction?
1 Yes
2 No

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

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

Section 10: 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 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

CATI note: If Q11.2 = 3 (Not at all); continue. Otherwise, go to Q11.5.

11.4: How long has it been since you last smoked cigarettes regularly?
0 1 Within the past month (less than 1 month ago)
0 2 Within the past 3 months (1 month but less than 3 months ago)
0 3 Within the past 6 months (3 months but less than 6 months ago)
0 4 Within the past year (6 months but less than 1 year ago)
0 5 Within the past 5 years (1 year but less than 5 years ago)
0 6 Within the past 10 years (5 years but less than 10 years ago)
0 7 10 years or more
0 8 Never smoked regularly

11.5: Do you currently use chewing tobacco or snuff, or snus every day, some days, or not at all?
NOTE: Snus (Swedish for snuff) is a moist smokeless tobacco, usually sold in small pouches that are placed under the lip against the gum.
1 Every day
2 Some days
3 Not at all

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, now on active duty
2 Yes, on active duty during the last 12 months, but not now
3 Yes, on active duty in the past, but not during the last 12 months
4 No, training for Reserves or National Guard only
5 No, never served in the military

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? Do not include cell phones or numbers that are only used by a computer or fax machine.
1 Yes
2 No ⇨ **Go to Q12.19**

12.18: How many of these 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 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: Caregiver Status
People may provide regular care or assistance to a friend or family member who has a health problem, long-term illness, or disability.
13.1: During the past month, did you provide any such care or assistance to a friend or family member?
1 Yes
2 No

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

14.2: Do you now have any health problem that requires you to use special equipment, such as a cane, a wheelchair, a special bed, or a special telephone?
Include occasional use or use in certain circumstances
1 Yes
2 No

Section 15: **Alcohol Consumption**
15.1: 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**

15.2: 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**

15.3: 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

15.4: 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

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

Section 16: Immunization
16.1: 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

16.2: During what month and year did you receive your most recent flu shot?
_ _ / _ _ _ _ Month / Year

16.3: 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

16.4: During what month and year did you receive your most recent flu vaccine that was sprayed in your nose?
_ _ / _ _ _ _ Month / Year

16.5: 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 17: Arthritis Burden
Next I will ask you about arthritis.
17.1: Have you EVER been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?
1 Yes
2 No **[Go to Q18.1]**

INTERVIEWER NOTE: Arthritis diagnoses include:
- **rheumatism, polymyalgia rheumatica**
- **osteoarthritis (not osteoporosis)**
- **tendonitis, bursitis, bunion, tennis elbow**
- **carpal tunnel syndrome, tarsal tunnel syndrome**
- **joint infection, Reiter's syndrome**
- **ankylosing spondylitis; spondylosis**
- **rotator cuff syndrome**
- **connective tissue disease, scleroderma, polymyositis, Raynaud's syndrome**
- **vasculitis (giant cell arteritis, Henoch-Schonlein purpura, Wegener's granulomatosis, polyarteritis nodosa)**

Arthritis can cause symptoms like pain, aching, or stiffness in or around the joint.
17.2: Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?
1 Yes
2 No
INTERVIEWER INSTRUCTION: If a question arises about medications or treatment, then the interviewer should say: "Please answer the question based on your current experience, regardless of whether you are taking any medication or treatment."

INTERVIEWER NOTE: Q17.3 should be asked of all respondents regardless of employment status.
17.3: In this next question, we are referring to work for pay. Do arthritis or joint symptoms now affect whether you work, the type of work you do, or the amount of work you do?
1 Yes
2 No
INTERVIEWER INSTRUCTION: If respondent gives an answer to each issue (whether works, type work, or amount of work), then if any issue is "yes" mark the overall response as "yes." If a question arises about medications or treatment, then the interviewer should say: "Please answer the question based on your current experience, regardless of whether you are taking any medication or treatment."

17.4: During the past 30 days, to what extent has your arthritis or joint symptoms interfered with your normal social activities, such as going shopping, to the movies, or to religious or social gatherings?
Please read [1-3]:
1 A lot
2 A little
3 Not at all
INTERVIEWER INSTRUCTION: If a question arises about medications or treatment, then the interviewer should say: "Please answer the question based on your current experience, regardless of whether you are taking any medication or treatment."

17.5: Please think about the past 30 days, keeping in mind all of your joint pain or aching and whether or not you have taken medication. During the past 30 days, how bad was your joint pain on average? Please answer on a scale of 0 to 10 where 0 is no pain or aching and 10 is pain or aching as bad as it can be.
_ _ Enter number [00-10]Section 18: Fruits and Vegetables

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

18.2: Not counting juice, how often do you eat fruit?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
4 _ _ Per year
5 5 5 Never

18.3: How often do you eat green salad?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
4 _ _ Per year
5 5 5 Never

18.4 How often do you eat potatoes not including French fries, fried potatoes, or potato chips?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
4 _ _ Per year
5 5 5 Never

18.5: How often do you eat carrots?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
4 _ _ Per year
5 5 5 Never

18.6: Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat? (Example: A serving of vegetables at both lunch and dinner would be two servings.)
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
4 _ _ Per year
5 5 5 Never

Section 19: Physical Activity
CATI note: If Core Q12.9 = 1 (employed for wages) or 2 (self-employed) then continue. Otherwise, Go to Q19.2.
19.1. When you are at work, which of the following best describes what you do? Would you say:
If respondent has multiple jobs, include all jobs
1. Mostly sitting or standing
2. Mostly walking or
3. Mostly heavy labor or physically demanding work

We are interested in two types of physical activity: vigorous and moderate. Vigorous activities cause large increases in breathing or heart rate while moderate activities cause small increases in breathing or heart rate.
19.2. Now, thinking about the moderate physical activities you do **[fill in (when you are not working) if "employed" or "self-employed"]** in a usual week, do you do moderate activities for at least 10 minutes at a time, such as brisk walking, bicycling, vacuuming, gardening, or anything else that causes small increases in breathing or heart rate?
1. Yes
2. No ⇨ **Go to Q19.5**

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

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

19.5. Now thinking about the vigorous physical activities you do **[fill in (when you are not working) if "employed" or "self-employed"]** in a usual week, do you do vigorous activities for at least 10 minutes at a time, such as running, aerobics, heavy yard work, or anything else that causes large increases in breathing or heart rate?
1. Yes
2. No ⇨ **Go to next section**

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

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

Section 20: 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.

20.1: 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 Q20.5**

20.2: Not including blood donations, in what month and year was your last HIV test?
Note: If response is before January 1985, code "Don't know".
CATI INSTRUCTION: If the respondent remembers the year but cannot remember the month, code the first two digits 77 and the last four digits for the year.
__ __/__ __ __ __ Code month and year

20.3: 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 Q20.4 only if Q20.2 is within the last 12 months. Otherwise, go to Q20.5.
20.4: Was it a rapid test where you could get your results within a couple of hours
1 Yes
2 No

20.5: 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 21: Emotional Support & Life Satisfaction
The next two questions are about emotional support and your satisfaction with life.
21.1: 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

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

Section 22: Cancer Survivors
Now I am going to ask you about cancer.
22.1: Have you EVER been told by a doctor, nurse, or other health professional that y ou had cancer?
Read only if necessary: By "other health professional" we mean a nurse practitioner, a physician's assistant, social worker, or some other licensed professional.
1 Yes
2 No **[Go to Module 4]**

22.2: How many different types of cancer have you had?
1 Only one
2 Two
3 Three or more

22.3: At what age were you told that you had cancer?
_ _ Code age in years [97 = 97 and older]
CATI note: If Q22.2 = 2 (Two) or 3 (Three or more), ask: "At what age was your first diagnosis of cancer?"

INTERVIEWER NOTE: This question refers to the first time they were told about their first cancer.
22.4: What type of cancer was it?
If Q22.2 = 2 (Two) or 3 (Three or more), ask: "With your most recent diagnoses of cancer, what type of cancer was it?"
INTERVIEWER NOTE: Please read list only if respondent needs prompting for cancer type (i.e., name of cancer) [1-28]:
Breast
0 1 Breast cancer
Female reproductive (Gynecologic)
0 2 Cervical cancer (cancer of the cervix)
0 3 Endometrial cancer (cancer of the uterus)
0 4 Ovarian cancer (cancer of the ovary)
Head/Neck
0 5 Head and neck cancer
0 6Oral cancer
0 7 Pharyngeal (throat) cancer
0 8 Thyroid
Gastrointestinal
0 9 Colon (intestine) cancer
1 0 Esophageal (esophagus)
1 1 Liver cancer
1 2 Pancreatic (pancreas) cancer
1 3 Rectal (rectum) cancer
1 4 Stomach
Leukemia/Lymphoma (lymph nodes and bone marrow)
1 5 Hodgkin's Lymphoma (Hodgkin's disease)
1 6 Leukemia (blood) cancer
1 7 Non-Hodgkin's Lymphoma
Male reproductive
1 8 Prostate cancer
1 9 Testicular cancer
Skin
2 0 Melanoma
2 1 Other skin cancer
Thoracic
2 2 Heart
2 3 Lung
Urinary cancer:
2 4 Bladder cancer
2 5 Renal (kidney) cancer
Others
2 6 Bone
2 7 Brain
2 8 Neuroblastoma
2 9 Other

Module 4: Visual Impairment and Access to Eye CareIf respondent is less than 40 years of age, go to next module.
I would like to ask you questions about how much difficulty, if any, you have doing certain activities. If you usually wear glasses or contact lenses, please rate your ability to do them while wearing glasses or contact lenses.
1. How much difficulty, if any, do you have in recognizing a friend across the street? Would you say:
1 No difficulty
2 A little difficulty
3 Moderate difficulty
4 Extreme difficulty
5 Unable to do because of eyesight
6 Unable to do for other reasons
8 Not applicable (Blind) ⇨ **Go to next module**

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

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

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

Note: Skip Q5, if any response to Module 3 (Diabetes) Q10.
5. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.
1 Within the past month (anytime less than 1 month ago)
2 Within the past year (1 month but less than 12 months ago)
3 Within the past 2 years (more than 1 year but less than 2 years ago)
4 2 or more years ago
5 Never
8 Not applicable (Blind) ⇨ **Go to next module**

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

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

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

Age-related Macular Degeneration (AMD) is a disease that blurs the sharp, central vision you need for "straight-ahead" activities such as reading, sewing, and driving. AMD affects the macula, the part of the eye that allows you to see fine detail
NOTE: Age-related Macular Degeneration (Age-related Mak·yuh·luh *r* Di·jen·uh·rey·shuh *n*)
9. Have you EVER been told by an eye doctor or other health care professional that you had Age-related macular degeneration
1 Yes
2 No
8 Not applicable (Blind) ⇨ **Go to next module**

Module 6: Cardiovascular Health
I would like to ask you a few more questions about your cardiovascular or heart health.
CATI note: If Core Q9.1 = 1 (Yes), ask Q1. If Core Q9.1 = 2, 7, or 9, skip Q1.
1. Following your heart attack, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."
1 Yes
2 No

CATI note: If Core Q9.3 = 1 (Yes), ask Q2. If Core Q9.3 = 2, 7, or 9 (No, Don't know, or Refused), skip Q2.
2. Following your stroke, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."
1 Yes
2 No

[Question 3 is asked of all respondents.]
3. Do you take aspirin daily or every other day?
1 Yes **[Go to next module]**
2 No

4. Do you have a health problem or condition that makes taking aspirin unsafe for you?
If "Yes", ask *"Is this a stomach condition*?" Code upset stomach as stomach problems.
1 Yes, not stomach related
2 Yes, stomach problems
3 No

Module 7: Actions to Control High Blood Pressure
CATI note: If Core Q7.1 = 1 (Yes); continue. Otherwise, go to next module.
Are you now doing any of the following to help lower or control your high blood pressure?
1. (Are you) changing your eating habits (to help lower or control your high blood pressure)?
1 Yes
2 No

2. (Are you) cutting down on salt (to help lower or control your high blood pressure)?
1 Yes
2 No
3 Do not use salt

3. (Are you) reducing alcohol use (to help lower or control your high blood pressure)?
1 Yes
2 No
3 Do not drink

4. (Are you) exercising (to help lower or control your high blood pressure)?
1 Yes
2 No

Has a doctor or other health professional ever advised you to do any of the following to help lower or control your high blood pressure?
5. (Ever advised you to) change your eating habits (to help lower or control your high blood pressure)?
1 Yes
2 No

6. (Ever advised you to) cut down on salt (to help lower or control your high blood pressure)?
1 Yes
2 No
3 Do not use salt

7. (Ever advised you to) reduce alcohol use (to help lower or control your high blood pressure)?
1 Yes
2 No
3 Do not drink

8. (Ever advised you to) exercise (to help lower or control your high blood pressure)?
1 Yes
2 No

9. (Ever advised you to) take medication (to help lower or control your high blood pressure)?
1 Yes
2 No

10. Were you told on **two or more different visits** to a doctor or other health professional that you had high blood pressure?
If "Yes" and respondent is *female*, ask: "*Was this only when you were pregnant*?"
1 Yes
2 Yes, but female told only during pregnancy
3 No
4 Told borderline or pre-hypertensive

Module 8: Heart Attack & Stroke
Now I would like to ask you about your knowledge of the signs and symptoms of a heart attack and stroke. Which of the following do you think is a symptom of a heart attack? For each, tell me "Yes", "No", or you're "Not sure":
1. (Do you think) pain or discomfort in the jaw, neck, or back (are symptoms of a heart attack)?
1 Yes
2 No
7 Don't know / Not sure

2. (Do you think) feeling weak, lightheaded, or faint (are symptoms of a heart attack)?
1 Yes
2 No
7 Don't know / Not sure

3. (Do you think) chest pain or discomfort (are symptoms of a heart attack?)
1 Yes
2 No
7 Don't know / Not sure

4. (Do you think) sudden trouble seeing in one or both eyes (is a symptom of a heart attack)?
1 Yes
2 No
7 Don't know / Not sure

5. (Do you think) pain or discomfort in the arms or shoulder (are symptoms of a heart attack)?
1 Yes
2 No
7 Don't know / Not sure

6. (Do you think) shortness of breath (is a symptom of a heart attack)?
1 Yes
2 No
7 Don't know / Not sure

Which of the following do you think is a symptom of a stroke? For each, tell me "Yes", "No", or you're "Not sure":
7. (Do you think) sudden confusion or trouble speaking (are symptoms of a stroke)?
1 Yes
2 No
7 Don't know / Not sure

8. (Do you think) sudden numbness or weakness of face, arm, leg, especially on one side, (are symptoms of a stroke)?
1 Yes
2 No
7 Don't know / Not sure

9. (Do you think) sudden trouble seeing in one or both eyes (is a symptom of a stroke)?
1 Yes
2 No
7 Don't know / Not sure

10. (Do you think) sudden chest pain or discomfort (are symptoms of a stroke)?
1 Yes
2 No
7 Don't know / Not sure

11. (Do you think) sudden trouble walking, dizziness, or loss of balance (are symptoms of a stroke)?
1 Yes
2 No
7 Don't know / Not sure

12. (Do you think) severe headache with no known cause (is a symptom of a stroke)?
1 Yes
2 No
7 Don't know / Not sure

13. If you thought someone was having a heart attack or stroke, what is the first thing you would do?
1 Take them to the hospital
2 Tell them to call their doctor
3 Call 911
4 Call their spouse or a family member or
5 Do something else

State Added Nutrition & Physical Activity
1. How often do you drink a glass or can of soda such as coke or other sweetened drinks such as fruit punch or sports drinks? Do not count diet drinks.
Interviewer note: This also includes any drinks with added sugar, such as Sunny Delight, Tampico, Hawaiian Punch, sugar cane juice, cranberry cocktail, Hi-C, Snapple, Gatorade and energy drinks
1 _ _ times per day
2 _ _ times per week
3 _ _ times per month
4 _ _ times per year
5 5 5 Never

2. How often do you use low-fat or fat-free dairy products such as milk, yogurt, or cheese?
1. Less than 1/week
2. Once a week
3. 2-3 times a week
4. 4-6 times a week
5. Once a day

3. How often do you use whole-grain products such as whole-wheat bread or pasta, oatmeal, or bran cereal?
1. Less than 1/week
2. Once a week
3. 2-3 times a week
4. 4-6 times a week
5. Once a day

4. On a typical WEEKEND, how many hours do you usually spend watching television or videos? Do not count video or computer games.
1 Less than 1 hour
2 1 hour to less than 2 hours
3 2 hours to less than 3 hours
4 3 hours to less than 4 hours
5 4 hours to less than 5 hours
6 5 hours or more
8 None

5. On a typical WEEKDAY, how many hours do you usually spend watching television or videos? Do not count video or computer games.
1 Less than 1 hour
2 1 hour to less than 2 hours
3 2 hours to less than 3 hours
4 3 hours to less than 4 hours
5 4 hours to less than 5 hours
6 5 hours or more
8 None

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, tests] 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]
11 Magazine
12 Doctor's Office
13 Television
14 Radio
15 Health Newsletter
16 Billboards
17 Bus signs
18 Other

Sttate Added Colorectal Cancer Knowledge
[ASK IF AGE > 49]
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 SACCSQ3 = 1 OR 2, SKIP TO SACCRQ1]
SACCPQ3**.** If you have not been screened for colorectal cancer, what has kept you from being screened?
11 no symptoms
12 no family history of colorectal or colon cancer
13 Cost/Not covered by insurance
14 Don't know where to get the exam
15 I am nervous about the procedure
16 OTHER Specify_____
88 I have been screened

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

Module 15: Tetanus Diphtheria (Adults)
Next, I will ask you about the tetanus diphtheria vaccination.
1. Have you received a tetanus shot in the past 10 years?
1 Yes
2 No **[Go to Module 17]**

2. Was your most recent tetanus shot given in 2005 or later?
1 Yes
2 No **[Go to Module 17]**

3. There are currently two types of tetanus shots available for adults. One contains the tetanus diphtheria vaccine. The other type contains tetanus diphtheria and pertussis or whooping cough vaccine. Did your doctor say your recent tetanus shot included the pertussis or whooping cough vaccine?
1 Yes (included pertussis)
2 No (did not include pertussis)

Module 17: Shingles
CATI note: If respondent is ≤ 49 years of age, go to next module.
The next question is about the Shingles vaccine.
1. Shingles is caused by the chicken pox virus. It is an outbreak of rash or blisters on the skin that may be associated with severe pain. A vaccine for shingles has been available since May 2006; it is called Zostavax®, the zoster vaccine, or the shingles vaccine. Have you had this vaccine?
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 Smoking
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

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.
SASSQ2**.** 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

Module 25: 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; INTERVIEWER: "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; INTERVIEWER: "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.
INTERVIEWER: "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 one or more 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 one 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
1 Yes
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 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 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

APPENDIX 3

Differences due to Inclusion of Cell Phone Only Respondents

In 2009 cell phone numbers were called to collect BRFSS interviews. Respondents using cell phones were only interviewed if they did not have a landline telephone. Otherwise, they had a chance of being in the landline sample. These respondents were only asked the core questions in the survey along with some procedural questions to shorten the interview time. 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 landline sample to the combined landline plus cell phone only sample. In the future the two groups are likely to be combined in reporting from the outset.

The weighting method for cell phone and landline combined data will use a raking procedure. This is more sophisticated and includes more factors than the weighting used for landline alone data. In addition to age, gender and race, the new weighting technique uses education level and marital status in weighting interview data. This procedure will be used for all data in future years. Differences observed may be due to both the inclusion of cell phone data and the different weighting method. Cell phones can not be weighted in the same way as landline phone data since a cell phone is not a household appliance as a landline phone generally is. This comparison will give an idea of the direction and difference in results to expect from including a cell phone only sample in survey responses.

Table 1: Comparison of selected BRFSS measures for landline with landline and cell phone only combined interviews For Iowa BRFSS, 2009

Measure	**Landline only**	Cell Phone and landline	Difference
Health Status fair or poor	11.4%	13.0%	1.6%
Have no health care coverage age 18 – 64	11.9%	16.0%	4.1%
Do you have one person you think of as your personal doctor or health care provider?	79.9%	74.4%	-5.5%
Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?	7.9%	11.2%	3.3%
Had checkup in past 5 years	90.1%	87.4%	-2.7%
Exercise other than job in past 30 days	75.8%	74.6%	-1.2%
Told by doctor you have diabetes	7.6%	8.9%	1.3%
Ever told you had a heart attack	4.2%	4.3%	0.1%
Ever told you had a stroke	2.4%	2.8%	0.4%
Have you ever been told that you had asthma?	10.5%	11.3%	0.8%
Do you currently have asthma?	6.8%	7.3%	0.5%
Do you have a disability	18.1%	19.8%	1.7%
Current smoker	17.2%	21.3%	4.1%
Stopped smoking a day or too to try to quit	53.2%	52.6%	-0.6%
Overweight (BMI between 25 and 30)	38.7%	38.6%	-0.1%
Obesity (BMI >= 30)	28.5%	28.3%	-0.2%

Measure	**Landline** % only	**Cell Phone and landline**	Difference
Arthritis	25.3%	25.5%	0.2%
Binge drink	18.5%	20.5%	2.0%
Heavy drinking	5.3%	6.4%	1.1%
Had influenza vaccination in past 12 months – Age >= 65	74.0%	72.1%	-1.9%
Ever had pneumonia vaccination – Age >= 65	69.9%	68.8%	-1.1%
Ever told you had high blood pressure	28.0%	29.5%	1.5%
Ever told you had high cholesterol	37.5%	38.1%	0.6%
Ate 5 or more servings per day of Fruit & vegetables	18.5%	17.0%	-1.5%
Engaged in adequate physical activity	49.7%	49.3%	-0.4%
Have you ever been tested for HIV?	29.0%	30.8%	1.8%
Always or usually get the social and emotional support you need?	82.9%	80.3%	-2.6%
Satisfied with life	96.3%	95.6%	-0.7%

The results show quite a large difference on many measures when cell phone only households are included with the landline sample. Much of this difference is due to the different weighting methods, rather than the inclusion of cell phone only households. Only 301 cell phone interviews were conducted.

Differences in many demographic measures were seen between the cell phone only and landline interviews. Many of the risk measure differences can be attributed to these different demographics. Table 2 shows actual differences in the number of interviews for landline vs. cell phone only samples to give an idea for the influence of such demographic variables on the outcome.

Table 2: Demographic Differences between landline and cell phone only samples in the Iowa BRFSS, 2009

	Landline only		Landline + Cell Phone only		Cell Phone only	
Measure	Number	Percent	Number	Percent	Number	Percent
Age 18 – 24	172	2.9%	231	3.7%	49	16.3%
Age 65+	1,986	33.3%	1,994	32.0%	8	2.7%
Hispanic	124	2.1%	136	2.2%	12	4.0%
Education level – High School grad or better	5,612	93.5%	5,870	93.3%	258	85.7%
Employed	3,366	56.6%	3,575	56.8%	209	69.4%
Marital Status – Married	3,729	62.1%	3,847	61.2%	118	39.2%
Sex = Male	2,346	38.9%	2,497	39.6%	151	50.2%
Household Income < $25,000	1,272	24.5%	1,351	24.8%	79	26.2%