

Health in Iowa

Annual Report

From the
Behavioral Risk Factor Surveillance System

Iowa 2011



Iowa Department of Public Health

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SPECIAL NOTICE

Be sure to read the section “A Change in How Data are Weighted” in the Methodology chapter for special information about changes to the BRFSS data that affect the ability to determine trends and baselines.

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1. INTRODUCTION

History

In 1984, the Centers for Disease Control and Prevention (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. 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 CDC with further financial support from public and private sources.

The BRFSS is designed to collect information on the health conditions, health-related 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 2011. Some of the health-related issues discussed are: general health status, health care access, hypertension, tobacco use, alcohol consumption, body weight, physical activity, diet, diabetes, respiratory conditions, immunizations, 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 CDC developed the BRFSS 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. Changes in them were discussed and determinations were made to include them at the annual national 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 calendar year by the CDC and by each participating state. In 2011, some optional modules were included for only a part of the year. The H1N1 epidemic prompted the inclusion of influenza like illness (ILI) modules from January through March. In addition, state added questions to evaluate the media campaign “The flu ends with U” to encourage influenza vaccination were also included during this time period. The questionnaire that appears in appendix 3 will not show the modules included for only part of the year. Furthermore, the responses from these questions will not be discussed in this report.

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, annual 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 age 18 years and older 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 landline 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 landline 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.

Increasingly many people, including the young, unmarried, ethnic minorities, and renters are opting not to use traditional landline telephone service in favor of cell phones.^{2,3} Therefore, 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. 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. One thousand two hundred nineteen interviews were conducted with this cell phone sample by our data collection contractor. However, there were occasions when cell phone interviews were done involving people living in other states. The number of cell phone interviews in our sample is, therefore, larger than the number called by our contractor.

Approximately equal numbers of interviews per month were conducted from January through December in 2011 for a total sample size of 7,354. Since optional modules and state added questions were not included in the cell phone stratum, only 6,011 respondents were asked those questions. Interviews were conducted in both English and Spanish. There were 91 Spanish interviews. In spite of only one sixth of the sample being done with cell phones, 35 of the 91 Spanish interviews were done on cell phones. Interviewers made multiple attempts to reach a number to complete an interview before replacing that number.

One person 18 years or older residing in the home was randomly selected to answer the survey. If the person selected was not available, an appointment was made to complete the interview at another date and time. If the person was not available during the interview period, or if the person refused to participate, no other member of that household was interviewed. Attempts were made to convert initial refusals into participants.

The Interview Process

The interviews were conducted daytime, evenings, and weekends with appointments made as needed to schedule or complete interviews. The average time to complete a landline interview 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 38.9 percent for landline and 24 percent for cell phones. Although the response rates seem rather low and have been declining in recent years, they are better than most states produce. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures. This means that results from questions later in the questionnaire are determined from a somewhat smaller sample than earlier questions. Even when not restricted to some sub-sample such as a particular age group. See Appendix 3 for the questions and their order.

A Computer Aided Telephone Interviewing (CATI) system was used. The CATI system not only assists interviewers in presenting the questionnaire and recording the responses, it also helps keep track of appointments and call-back 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.

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

Unless everyone in the state was asked questions about his or her health, there would be no way to know exactly what these answers would be. When analyzing BRFSS data, conclusions are to

be drawn about the entire adult population of the state of Iowa based on only a sample of randomly chosen people. The true prevalence in the population can only be estimated. 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 true state prevalence values may differ by some amount, but a range of “true” state values can be determined with a high degree of confidence from the prevalence in the sample.

Most 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 answered “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.

A Change in How Data are Weighted

Generally, the best guess for how many Iowan adults would answer a question a certain way would be the same as how many adults in the sample answer that way. This is true, however, only if everyone in the state had an equal chance of being in the sample. This is not the case. 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. Furthermore, certain demographic groups may be over or under-represented in the sample based on their ease of being reached and willingness to respond. For instance, about half the adult Iowa population is male, but typically only about 40 percent of the sample interviewed is male. To solve these problems the data in the

sample is weighted to the state population. That means several of the above factors are used to give each interview a weight that represents a certain distinct number of people in the state population.

In 2011, BRFSS has changed the method used to weight its data. Two reasons for this are the inclusion of cell phones and the increase in computer power.

A landline telephone is seen as a household appliance, while a cell phone is more frequently seen as an individual possession. This means the old weighting method will not work for cell phones. Adults per household and phone numbers per household become irrelevant for cell phones.

The increase in computer power allows a larger number of factors to be considered in the weighting process. Formerly, only age and gender combined were considered as demographic factors in Iowa. In the new method these will be considered separately plus the addition of race/ethnicity, marital status, education level, home ownership, geographic region, and cell vs. landline telephone.

The values estimated for the Iowa population may differ for the different weighting methods. The new method frequently will produce less healthy more risky values. This is partly because of the inclusion of cell phones, but the weighting method itself is predominantly responsible. The old weighting method did not adjust such important factors as educational level that are known to be strongly related to health.

Unfortunately, the change in weighting method is going to disrupt trend information for the data. The estimate for the state value can be a few percentage points different depending on which method is used. This will vary by topic. Trend information will not be given in this report. Information should be as sound as ever for comparing demographic groups or for comparing states and regions. It should also be possible to establish solid trend information going forward.

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3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 7,354 respondents to the BRFSS for the year 2011 included 3,009 males and 4,345 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) annual household income.

Table 3.1: Distribution of Iowa Survey Respondents by Age and Gender for Year 2011

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	188	6.2	220	5.1	408	5.6
25-34	365	12.1	377	8.7	742	10.1
35-44	401	13.3	505	11.6	906	12.3
45-54	567	18.8	697	16.0	1,264	17.2
55-64	620	20.6	857	19.7	1,477	20.1
65-74	462	15.4	744	17.1	1,206	16.4
75+	381	12.7	888	20.4	1,269	17.2
Unknown	25	0.8	57	1.3	82	1.1
Total	3,009	40.9	4,345	59.1	7,354	100.0

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2011

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	6,800	92.5
Black Non-Hispanic	124	1.7
Other Non-Hispanic¹	155	2.1
Hispanic	217	3.0
Unknown/Refused	58	0.8
Total	7,354	100.0

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2011

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	498	6.8
High School Grad or GED	2,555	34.7
Some College or Technical School	2,129	29.0
College Graduate	2,155	29.3
Unknown/Refused	17	0.2
Total	7,354	100.0

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

Table 3.4: Distribution of Iowa Survey Respondents by Annual Household Income for Year 2011

Household Income	# of Total Respondents	% of Total Respondents
<\$15,000	605	8.2
\$15,000-\$24,999	1,066	14.5
\$25,000- 34,999	756	10.3
\$35,000-\$49,999	1,030	14.0
\$50,000-\$74,999	1,061	14.5
>=\$75,000	1,721	23.4
Unknown/Refused	1,115	15.2
Total	7,354	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.²

The Centers for Disease Control and Prevention (CDC) has defined health-related quality of life (HRQOL) as “an individual’s or group’s perceived physical and mental health over time”¹. Physicians have often used HRQOL to measure the effects of chronic illness in their patients to understand better how an illness interferes with a person's day-to-day life. Similarly, public health professionals use health-related quality of life to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. Tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health.¹

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

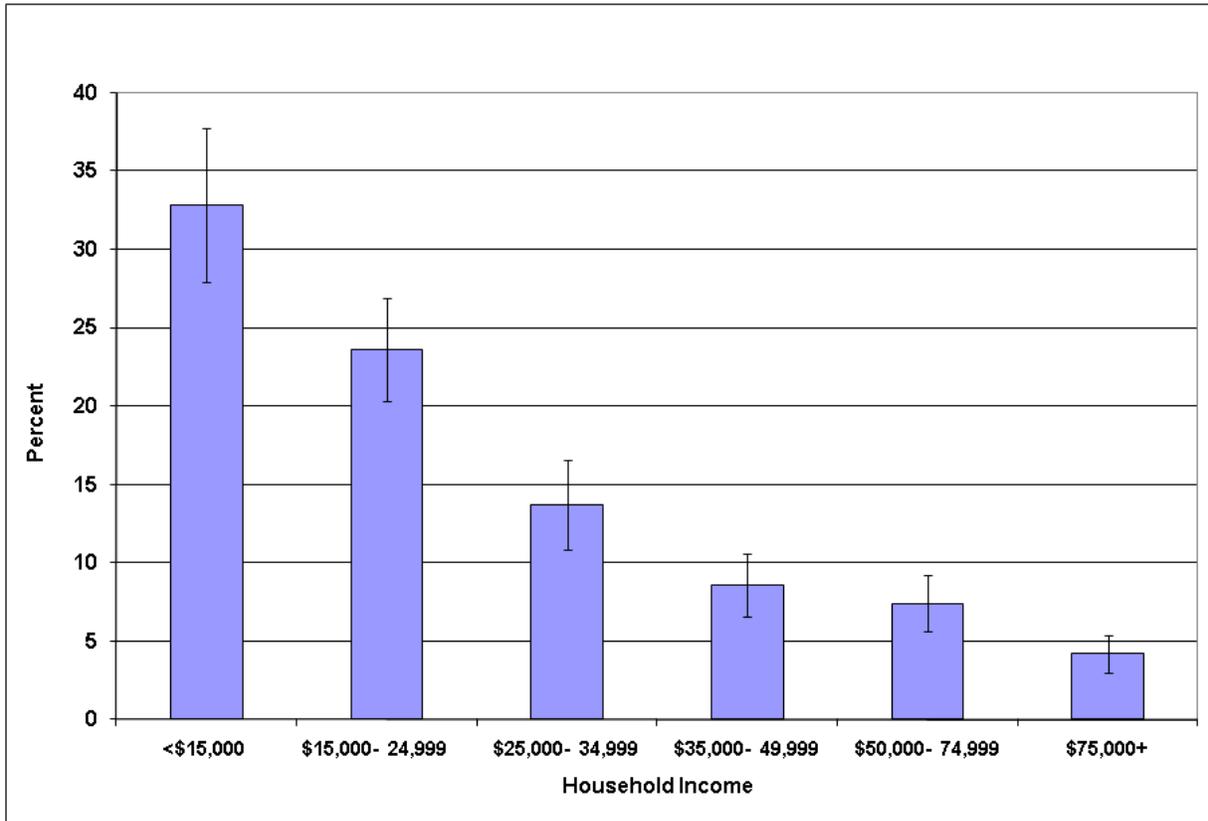
General Health Status Results

In 2011, when asked how their health was in general, 18.4 percent of respondents reported that it was excellent. Another 36.7 percent said it was very good. While 31.9 percent reported good health, 13 percent rated their health as fair or poor. Nothing can be said about trends over years due to the introduction of the new weighting methodology into BRFSS this year.

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 4.1 percent of those with incomes of \$75,000 or over reported fair or poor health, 33.2 percent of those with incomes below \$15,000 did so (see figure 4.1). Other respondents who were more likely to report having fair or poor health were those with less than a high school education, Hispanics, and those 75 years old and older. Those with a college education, those with household incomes \$50,000 or higher, and those age 18 to 34 years all reported less than eight percent 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, 69.2 percent of respondents reported none of the days and 9 percent reported 14 days or more.

Figure 4.1: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2011



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.

Once again, household income had the greatest impact. People with household incomes less than \$15,000 reported 22.3 percent having 14 or more bad physical health days, while people with household incomes of \$75,000 or more had only 4.2 percent.

When responding to the question of how many days during the past 30 days their mental health was not good, 69.4 percent of the respondents indicated none of the days and 9.2 percent 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).

Men, White/Non-Hispanics, older people, those with high education, and those with high income had a lower prevalence of FMD. Once again annual household income made the most difference. An annual household income of \$15,000 or less had the most people with FMD (26.3%), while only 3.9 percent of those with \$75,000 or more had FMD.

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2011

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	13.0	(12-14)
SEX		
Male	13.3	(11.9-14.7)
Female	12.7	(11.5-13.9)
RACE/ETHNICITY		
White/Non-Hisp.	12.2	(11.2-13.2)
Black/Non-Hisp	19.5	(11.1-27.9)
Other/Non-Hisp	14.5	(7.8-21.2)
Hispanic	26.1	(18.8-33.4)
AGE		
18-24	6.0	(3.6-8.4)
25-34	6.8	(4.6-9)
35-44	9.5	(7.3-11.7)
45-54	12.3	(10.1-14.5)
55-64	17.3	(14.9-19.7)
65-74	18.9	(16.1-21.7)
75+	26.2	(23.3-29.1)
EDUCATION		
Less Than H.S.	28.4	(23.7-33.1)
H.S. or G.E.D.	15.7	(14.1-17.3)
Some Post-H.S.	10.5	(9.1-11.9)
College Graduate	5.7	(4.7-6.7)
HOUSEHOLD INCOME		
<\$15,000	33.2	(28.5-37.9)
\$15,000- 24,999	23.7	(20.6-26.8)
\$25,000- 34,999	13.6	(10.9-16.3)
\$35,000- 49,999	8.7	(6.7-10.7)
\$50,000- 74,999	7.4	(5.6-9.2)
\$75,000+	4.1	(3.1-5.1)

When asked how many days poor physical or mental health kept them from performing their usual activities, 63.4 percent of those with some days of either bad physical or mental health said none. On the other hand, 11.5 percent said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income.

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and District of Columbia ranged from 12 percent to 25.1 percent. The median value was 16.9 percent. Iowa ranked quite well with only 13 percent rating their health as fair or poor. Only two states had a lower percent of residents reporting fair or poor health.

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Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2011

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	9.0	(8.3-9.8)	9.2	(8.3-10.1)
SEX				
Male	8.5	(7.4-9.6)	7.8	(6.5-9.1)
Female	9.6	(8.5-10.6)	10.6	(9.3-11.8)
RACE/ETHNICITY				
White/Non-Hisp.	9.0	(8.2-9.8)	8.8	(7.9-9.7)
Black/Non-Hisp	7.8	(2.5-13.1)	12.3	(4.5-20.1)
Other/Non-Hisp	13.2	(6.6-19.9)	14.1	(6.6-21.6)
Hispanic	7.2	(3.1-11.4)	14.3	(8.2-20.4)
AGE GROUP				
18-24	2.1	(0.5-3.7)	13.6	(9.9-17.4)
25-34	4.4	(2.7-6)	11.5	(8.7-14.3)
35-44	6.4	(4.5-8.2)	9.4	(7.1-11.7)
45-54	10.4	(8.4-12.5)	9.0	(7.1-11)
55-64	13.6	(11.6-15.7)	8.6	(6.8-10.3)
65-74	13.4	(10.9-16)	5.3	(3.5-7)
75+	16.4	(13.8-18.9)	4.2	(2.8-5.5)
EDUCATION				
Less than H.S.	13.7	(10-17.4)	17.0	(12.2-21.7)
H.S. or G.E.D.	11.0	(9.5-12.5)	9.7	(8.1-11.3)
Some Post-H.S.	7.7	(6.4-8.9)	9.3	(7.7-10.8)
College Graduate	5.5	(4.4-6.6)	5.0	(3.9-6.1)
HOUSEHOLD INCOME				
Less than \$15,000	22.3	(17.9-26.7)	26.3	(21.1-31.5)
\$15,000- 24,999	14.7	(12-17.4)	15.2	(12.2-18.3)
\$25,000- 34,999	8.3	(6-10.5)	9.0	(6.3-11.6)
\$35,000- 49,999	6.6	(4.9-8.4)	8.2	(6-10.4)
\$50,000- 74,999	6.0	(4.4-7.6)	5.2	(3.6-6.8)
\$75,000+	4.2	(3-5.5)	3.9	(2.6-5.2)

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 important to obtain. The landscape of health-care coverage is rapidly changing with the implementation of the Affordable Care Act. It will be necessary to evaluate the effects of vast changes in the health-care delivery system over the next few years.

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 those living on fixed incomes. Both access and affordability of health care are important areas to monitor.

Insurance Coverage and Access to Health Care Results

In 2011, 11.6 percent of the survey respondents reported they had no health insurance. No trend information is available due to the changes in BRFSS methodology in 2011. Coverage measures were among the most affected by these changes.

Table 5.1 shows that more males lacked health insurance than females. Furthermore, younger people, less educated people, people with lower incomes, and racial and ethnic minorities were more likely to lack any health-care coverage. Hispanic or other non-White respondents had the highest percentage of individuals without health-care coverage (33.4%). Almost everyone age 65 years and older had health-care coverage due to Medicare. In fact, if only those age 18 to 64 years old are considered, 14.2 percent are without coverage.

Two other demographic variables that had a major impact on health-care coverage were employment status and marital status. Unemployed respondents had 22.2 percent reporting they were not covered by health insurance. Only 2.2 percent 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 percent of married respondents were without coverage, while 18 percent of unmarried respondents were without it.

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 10.3 percent 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 (2.5%) was for people age 65 years and older. This was followed closely by people with annual household income of \$75,000 or more. The highest percentage (22.5%) was for people earning an annual household income less than \$15,000. This was closely followed by non-white or Hispanic respondents.

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 75 percent 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 (54.6%), while those age 65 years old and older were most likely (85.6%).

When asked how long it had been since their last regular check up, 69 percent said less than one year. On the other end, 1.3 percent said they had never had a checkup. People who were female or older were more likely to have a checkup in the past year. Respondents who were 65 years old or older were most likely to have a checkup (85.5%), while those from age 25 to 34 were least likely (53.6%).

Comparison with Other States

In the 50 states and District of Columbia, the percent of non-elderly people without health insurance ranged from 7.8 percent to 34.7 percent. The lowest was from Massachusetts, which was the first state to pass major health reform legislation. Six states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 14.2 percent of its non-elderly respondents reporting not having any insurance. The median for states and territories was 21.3 percent.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* and *Healthy Iowans* goals for health insurance coverage are to see all people be covered by some form of health insurance. In Iowa, 88.3 percent of all adults and only 85.8 percent of non-elderly adults have coverage. This is far short of the goal.

Having one specific source of primary care also missed the mark. *Healthy People 2020* has separate goals for people age 18 to 64 and people 65 and over. The goal for 18 to 64 is 89.2 percent, while the goal for age 65 and over is 100 percent. The results for Iowa were 72.4 percent and 85.6 percent respectively.

Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2011

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	11.6	(10.6-12.6)	10.3	(9.3-11.3)	75.0	(73.6-76.4)	69.0	(67.6-70.4)
SEX								
Male	14.4	(12.6-16.2)	9.4	(8-10.8)	66.9	(64.7-69.1)	60.5	(58.3-62.7)
Female	8.8	(7.6-10)	11.1	(9.7-12.5)	82.7	(81.1-84.3)	77.0	(75.2-78.8)
RACE/ETHNICITY								
Non-Hispanic White	9.5	(8.5-10.5)	9.2	(8.2-10.2)	77.0	(75.6-78.4)	69.7	(68.3-71.1)
Non-White or Hisp.	33.4	(28-38.8)	21.7	(17-26.4)	54.6	(49.1-60.2)	60.3	(54.8-65.9)
AGE								
18-24	16.5	(12.4-20.6)	12.1	(8.6-15.6)	62.8	(57.5-68.1)	60.4	(55.1-65.7)
25-34	19.9	(16.4-23.4)	15.1	(12.2-18)	61.3	(57.4-65.2)	53.6	(49.5-57.7)
35-44	15.1	(12-18.2)	14.8	(11.9-17.7)	72.9	(69.4-76.4)	62.5	(58.8-66.2)
45-54	11.0	(9-13)	11.1	(8.9-13.3)	79.0	(76.3-81.7)	69.9	(67-72.8)
55-64	9.6	(7.6-11.6)	8.2	(6.4-10)	83.5	(81.3-85.7)	75.8	(73.3-78.3)
65+	0.9	(0.3-1.5)	2.5	(1.7-3.3)	85.6	(83.8-87.4)	85.5	(83.9-87.1)
EDUCATION								
Less than H.S.	27.3	(22-32.6)	16.3	(12-20.6)	64.9	(59.4-70.4)	61.4	(55.7-67.1)
H.S. or G.E.D.	13.0	(11.2-14.8)	10.6	(9-12.2)	74.9	(72.5-77.3)	70.4	(68-72.8)
Some Post-H.S.	10.7	(8.9-12.5)	12.0	(10.2-13.8)	76.0	(73.6-78.4)	68.6	(66.1-71.1)
College Graduate	3.7	(2.7-4.7)	4.6	(3.4-5.8)	77.9	(75.7-80.1)	70.6	(68.2-73)
HOUSEHOLD INCOME								
Less than \$15,000	22.5	(17.8-27.2)	22.5	(18-27)	63.6	(58.3-68.9)	64.2	(58.9-69.5)
\$15,000- 24,999	26.7	(23-30.4)	20.4	(17.1-23.7)	68.7	(65-72.4)	66.3	(62.4-70.2)
\$25,000- 34,999	19.1	(14.8-23.4)	18.4	(14.3-22.5)	68.4	(63.7-73.1)	65.4	(60.7-70.1)
\$35,000- 49,999	10.4	(7.7-13.1)	8.5	(6.3-10.7)	78.4	(75.3-81.5)	66.4	(62.7-70.1)
\$50,000- 74,999	4.2	(2.4-6)	4.8	(3-6.6)	79.2	(76.1-82.3)	70.5	(67-74)
\$75,000+	2.3	(1.3-3.3)	3.0	(1.8-4.2)	81.2	(78.8-83.6)	71.4	(68.7-74.1)

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6. CARDIOVASCULAR DISEASES

Background

“Cardiovascular diseases” (CVD) refer in principle to any or all of the many disorders that can affect the circulatory system. CVD most often means coronary heart disease, heart failure, and stroke, taken together, which are the circulatory system disorders of greatest public health concern in the United States today. “Heart disease” most often 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).

Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death in the United States, accounting for nearly a third 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. Each year, fifteen to 30 per cent of stroke survivors are permanently disabled. More than seven million hospitalizations each year are because of cardiovascular diseases.³

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 was estimated to be \$444 billion in 2010, including health care expenditures and lost productivity from death and disability.¹

In Iowa, heart disease is the number one cause and stroke is the fourth leading cause of death. Even so, deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 344.6 in 1990 to 224.9 in 2010. The rate of deaths from stroke has gone from 73.4 in 1990 to 50.2 in 2010.² These decreases are mostly a result of emergency response, medicines, surgical procedures and improved systems of care after an acute event.

At the same time mortality has declined, the BRFSS is documenting noteworthy increases in many risk factors that lead to heart disease and stroke. 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 2011, 3.9 percent of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction; 3.8 percent had been told they had coronary heart disease or angina, and 2.4 percent 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 7.5 percent of Iowans reported being told they had any of the three conditions.

Table 6.1 shows the distribution of these conditions by demographic groups. To get at all heart disease conditions, myocardial infarction and 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, and non-Hispanics, Age is the variable with the most impact on having had these conditions. Less than two percent of those under age 45 reported a heart condition, while 20.5 percent of those 75 years or older reported a heart condition and 26.8 percent reported any of the three cardiovascular conditions. There was no sex difference 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.

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Table 6.1: Prevalence among Iowans of Heart Attack, Heart Disease, and Stroke, 2011

DEMOGRAPHIC GROUPS	Had any Heart Disease (MI or CHD)		Had Stroke		Had Any Cardiovascular Disease	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.0	(5.4-6.5)	2.4	(2-2.8)	7.5	(6.9-8.1)
SEX						
Male	7.1	(6.1-8.1)	2.3	(1.7-2.9)	8.6	(7.5-9.6)
Female	4.8	(4.2-5.5)	2.5	(2.1-2.9)	6.5	(5.7-7.2)
RACE/ETHNICITY						
White/Non-Hisp.	6.0	(5.4-6.6)	2.4	(2.1-2.8)	7.6	(6.9-8.3)
Black/Non-Hisp.	4.3	(1.2-7.5)	1.8	(0-3.9)	4.8	(1.5-8)
Other/Non-Hisp.	5.8	(1.6-9.9)	4.4	(0.5-8.2)	7.7	(2.8-12.6)
Hispanic	4.2	(1.1-7.2)	0.6	(0-1.3)	4.4	(1.3-7.5)
AGE						
18-24	0.4	(0-1)	0.5	(0-1.5)	0.9	(0-2)
25-34	1.4	(0.4-2.4)	0.0	(0-0)	1.4	(0.4-2.4)
35-44	1.5	(0.4-2.5)	0.6	(0-1.2)	2.0	(0.9-3.2)
45-54	3.8	(2.6-5)	1.7	(0.7-2.7)	4.9	(3.5-6.4)
55-64	9.2	(7.5-10.9)	3.2	(2.2-4.2)	10.7	(8.9-12.5)
65-74	12.6	(10.3-14.9)	4.5	(3.2-5.9)	15.5	(13-18)
75+	20.5	(17.8-23.2)	10.1	(8.2-12)	26.8	(23.9-29.7)
EDUCATION						
Less Than H.S.	10.4	(7.6-13.2)	3.8	(2-5.6)	12.8	(9.6-16)
H.S. or G.E.D.	6.9	(5.9-7.9)	2.9	(2.3-3.5)	8.7	(7.5-9.8)
Some Post-H.S.	5.2	(4.3-6.2)	2.3	(1.7-2.9)	6.8	(5.7-7.8)
College Graduate	3.6	(2.8-4.3)	1.3	(0.9-1.7)	4.4	(3.5-5.3)
HOUSEHOLD INCOME						
Less than \$15,000	10.8	(7.9-13.7)	4.8	(4.8-6.6)	13.0	(9.9-16.1)
\$15,000- 24,999	9.8	(7.8-11.7)	3.8	(3.8-5.2)	11.7	(9.4-13.9)
\$25,000- 34,999	8.1	(5.7-10.4)	2.8	(2.8-4)	9.7	(7.2-12.1)
\$35,000- 49,999	5.2	(3.8-6.5)	2.2	(2.2-3.2)	6.8	(5.2-8.4)
\$50,000- 74,999	3.5	(2.5-4.6)	1.5	(1.5-2.3)	4.8	(3.5-6.1)
\$75,000+	3.0	(2.2-3.8)	0.6	(0.6-1)	3.4	(2.5-4.2)

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. High blood pressure (HBP) is a serious condition that can lead to coronary heart disease, heart failure, stroke, kidney failure, and other health problems.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 or higher systolic or 90 or higher diastolic mm Hg is considered high blood pressure. Those with systolic blood pressure of 120-139 mm Hg 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 or chronic kidney disease.³

High blood pressure, which often has no symptoms, 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 percent decrease in the prevalence of hypertension, a 6 percent decrease in coronary artery disease, and a 15 percent reduction in stroke.¹

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

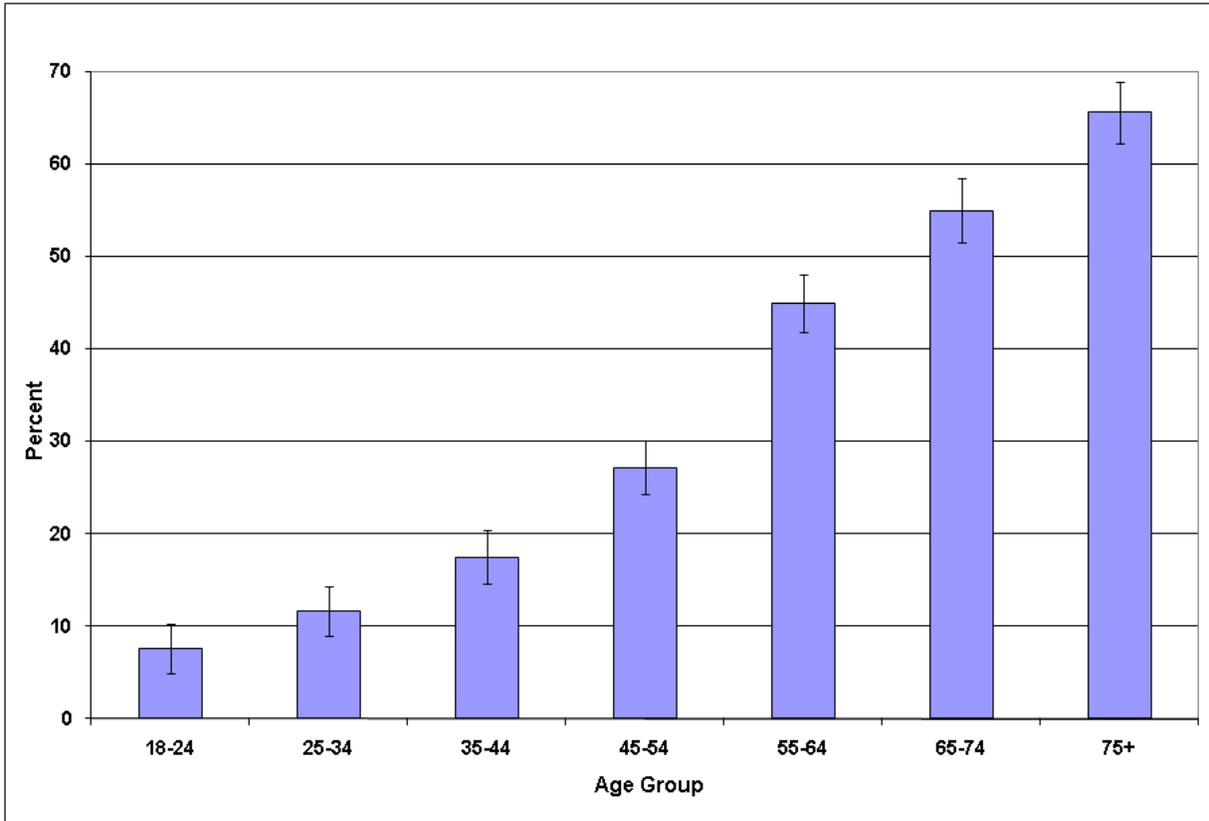
Hypertension Awareness Results

In 2011, 29.9 percent of all respondents reported ever being told they had high blood pressure. An additional 0.9 percent reported being told they had borderline or pre-hypertension. Nothing can be said about trends over years due to the introduction of the new weighting methodology into BRFSS this year,

Age had the greatest impact on the percentage of respondents reporting high blood pressure. The highest percentage was 65.4 percent among respondents age 75 years and older, while the lowest was among those age 18 to 24 (7.5%) (see figure 7.1).

The prevalence of reporting a high blood pressure diagnosis 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 (see table 7.1).

Figure 7.1: Iowans Ever Told Blood Pressure is High by Age, 2011



Of those reporting high blood pressure, 77 percent reported taking medication for their condition. Like high blood pressure itself, this percentage increases steadily with age reaching a high of 94.8 percent for those 75 years old and over. Unlike high blood pressure itself, more females with high blood pressure took blood pressure medicine than males (83.2% versus 70.7%), while education and income showed no systematic relation to use of blood pressure medication.

Comparison with Other States

Among all the states and the District of Columbia prevalence of reported hypertension ranged from 22.9 percent to 40.1 percent. The median value was 30.8 percent. Iowa's prevalence of 29.9 percent was better than the median.

Health Objectives for Iowa and the Nation

According to *Healthy People 2020*, the objective for high blood pressure is that only 26.9 percent of the adult population should report having high blood pressure. This is less than what is currently the case in Iowa (29.9%). Another *Healthy People 2020* goal is for 77.4 percent of people with high blood pressure to be taking medication to lower it. The *Healthy Iowans* goal for this is a rate of 75 percent. Iowa's figure was 77 percent. This is better than the *Healthy Iowans* goal and about equal to the *Healthy People 2020* goal.

Table 7.1: Percentage of Iowans Told Blood Pressure Is High, 2011

DEMOGRAPHIC GROUPS	%	C.I. (95%)
TOTAL	29.9	(28.7-31.1)
SEX		
Male	30.2	(28.2-32.2)
Female	29.5	(27.9-31.1)
RACE/ETHNICITY		
Non-Hispanic White	30.3	(29.1-31.5)
Non-White or Hisp.	24.9	(20.3-29.5)
AGE		
18-24	7.5	(4.8-10.2)
25-34	11.7	(9.2-14.2)
35-44	17.8	(14.9-20.7)
45-54	27.1	(24.4-29.8)
55-64	45.0	(42.1-47.9)
65-74	55.2	(51.8-58.5)
75+	65.4	(62.3-68.6)
EDUCATION		
Less than H.S.	35.2	(30.1-40.3)
H.S. or G.E.D.	35.5	(33.3-37.7)
Some Post-H.S.	27.0	(24.8-29.2)
College Graduate	23.3	(21.3-25.3)
HOUSEHOLD INCOME		
Less than \$15,000	35.0	(30.3-39.7)
\$15,000- 24,999	38.0	(34.3-41.7)
\$25,000- 34,999	31.8	(27.9-35.7)
\$35,000- 49,999	32.2	(28.9-35.5)
\$50,000- 74,999	27.8	(24.9-30.7)
\$75,000	21.6	(19.4-23.8)

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8. CHOLESTEROL ARENESS

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 waxy, fat-like substance that's found in all cells of the body. In your blood cholesterol travels in small packages called lipoproteins. 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 low-density lipoproteins (LDL) (the so-called bad cholesterol) increases the risk; the cholesterol carried by high-density lipoproteins (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 LDL¹

Table 8.1: Blood Cholesterol in Iowans, 2011

Demographic Groups	Had Blood Cholesterol Checked in Past Five Years		Ever Been Told Blood Cholesterol High	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	73.7	(72.3-75.1)	38.1	(36.7-39.5)
SEX				
Male	69.5	(67.3-71.7)	39.2	(36.8-41.6)
Female	77.6	(75.6-79.6)	37.1	(35.3-38.9)
RACE/ETHNICITY				
White/Non-Hisp.	75.7	(74.1-77.3)	38.3	(36.7-39.9)
Non-White or Hisp.	52.3	(46.6-57.9)	31.9	(25.5-38.3)
AGE				
18-24	28.0	(22.9-33.1)	8.8	(2.3-15.3)
25-34	55.1	(51-59.2)	16.7	(13-20.4)
35-44	72.1	(68.4-75.8)	26.2	(22.5-29.9)
45-54	86.1	(83.7-88.5)	37.1	(33.8-40.4)
55-64	88.5	(86.3-90.7)	48.5	(45.4-51.6)
65-74	94.5	(92.9-96.1)	54.2	(50.8-57.6)
75+	93.8	(92.3-95.4)	55.1	(51.6-58.5)
EDUCATION				
Less than H.S.	56.6	(50.5-62.7)	45.6	(39.1-52.1)
H.S. or G.E.D.	74.8	(72.4-77.2)	41.0	(38.5-43.5)
Some Post-H.S.	72.0	(69.3-74.7)	36.9	(34.2-39.6)
College Graduate	81.8	(79.6-84)	33.3	(30.9-35.7)
HOUSEHOLD INCOME				
Less than \$15,000	62.2	(56.7-67.7)	49.5	(43.4-55.6)
\$15,000- 24,999	68.7	(64.6-72.8)	40.9	(36.8-45)
\$25,000- 34,999	69.4	(64.7-74.1)	43.7	(38.8-48.6)
\$35,000- 49,999	75.2	(71.5-78.9)	35.3	(31.6-39)
\$50,000- 74,999	79.0	(75.7-82.3)	35.9	(32.4-39.4)
\$75,000+	82.1	(79.6-84.6)	34.3	(31.6-37)

Cholesterol Awareness Results

In 2011, the percentage of Iowans reporting ever having their blood cholesterol checked was 78.2 percent. When asked whether they had their blood cholesterol checked by a health professional during the past five years, 73.7 percent 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, 38.1% reported that they had ever been told by a doctor or other health professional that their blood cholesterol was high. Nothing can be

said about trends over years due to the introduction of the new weighting methodology into BRFSS this year,.

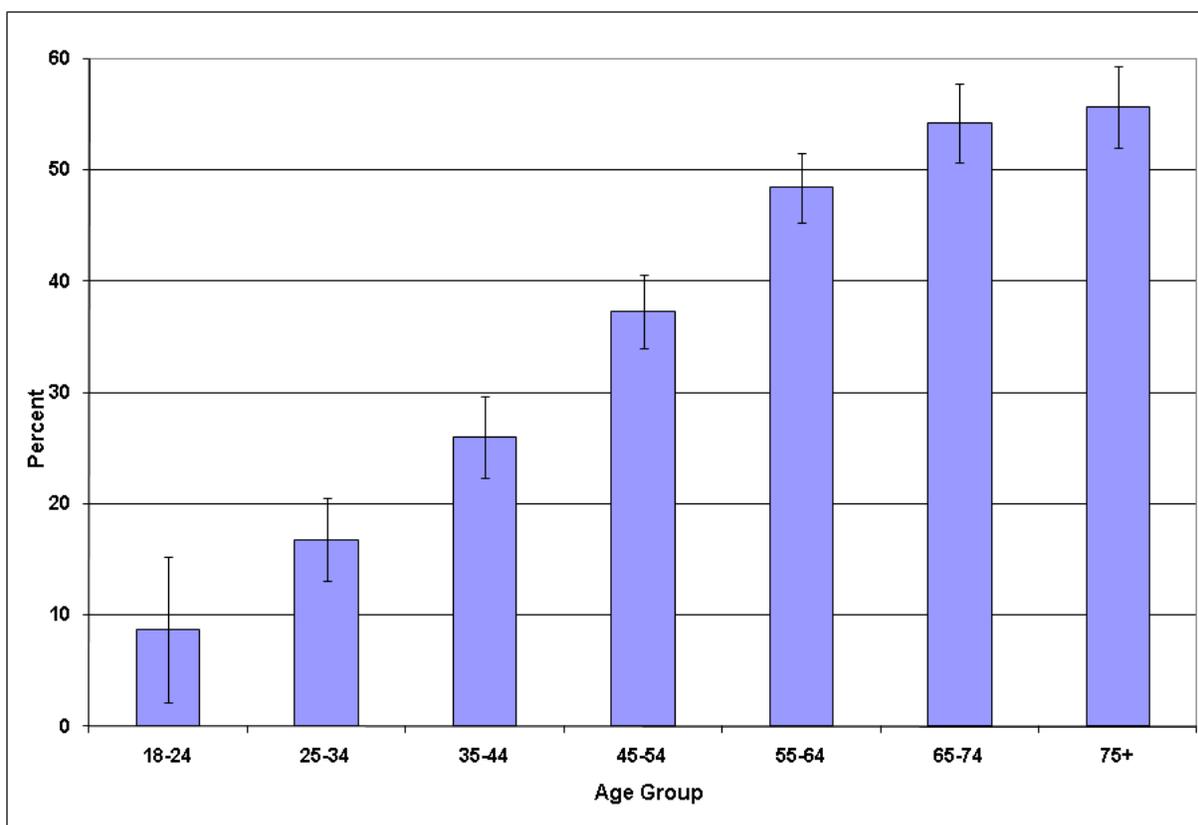
Age made a considerable difference in reporting high cholesterol with the 75+ year old age group reporting more than six times greater prevalence of high cholesterol than the 18 to 24 year-olds (55.1% vs. 8.8%) (see figure 8.1). People with higher education and income were somewhat less likely to report 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 the District of Columbia ranged from 66.3 percent to 83.7 percent. Iowa's value of 73.7 percent was below the median of 75.5 percent.

In terms of those tested being told their cholesterol was high, the range was from 33.5 percent to 42.3 percent. Iowa's value of 38.1 percent was very close to the median of 38.4 percent.

Figure 8.1: Tested Iowans Ever Told Their Cholesterol Was High by Age, 2011



Health Objectives for the Nation

Based on the national health objectives for the year 2020, 82.1 percent of adults should have their blood cholesterol checked within the past five years. In 2011, only 73.7 percent of Iowans

age 18 and older have had their blood cholesterol checked within the past five years. High cholesterol should be experienced by only 13.5 percent of all people over age 20 according to the HP 2020 goals. The level in Iowa was more than double that amount at 30.8 percent.

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9. 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 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.¹

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.

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.²

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m²)]. Estimations of the prevalence of overweight 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.

The medical care costs of obesity in the United States are staggering. In 2008 dollars, these costs totaled about \$147 billion.² There are other costs as well that are harder to pin down. For instance, obese people miss more work. Because people are fatter, airlines spend more on jet fuel, and the obese themselves spend more on gas.³ 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 are likely to grow significantly because of the large number of people in this population and its high rate of obesity. It is estimated that Iowa could save 5.7 billion dollars by 2030 if BMI were lowered by just five percent.⁴

Overweight & Obesity Results

The BRFSS data show that in 2011 35.8 percent of non-pregnant adult Iowans are overweight and 29 percent are obese, based on BMI. The combined percentage of individuals who are overweight or obese is 64.8 percent.

Demographic factors behave somewhat differently for overweight and obesity. The self-reported weights show many more males than females are overweight and obese. Prevalence of overweight and obesity increase with age until late middle age after which a decline is seen in obesity. More males are not more obese than females at all age groups. In fact, more females are obese than males until age 45 years. At that point obesity no longer increases with age for females, while it increases for males until age 55 years. Obesity prevalence shows a very sharp decrease for both sexes in the 75 year old and over age group (see figure 9.1). There is a much stronger sex difference for overweight than for obesity. More men are overweight than women at all age groups and there is no decline at the oldest age group.

The effects of income are different for overweight and obesity. The percentage of overweight tends to be lower at lower incomes but remain level at incomes higher than \$25,000. On the other hand, obesity tends to be lower at both high and low income extremes (see table 9.1 and figure 9.2).

Figure 9.1: Obesity by Age and Sex, 2011

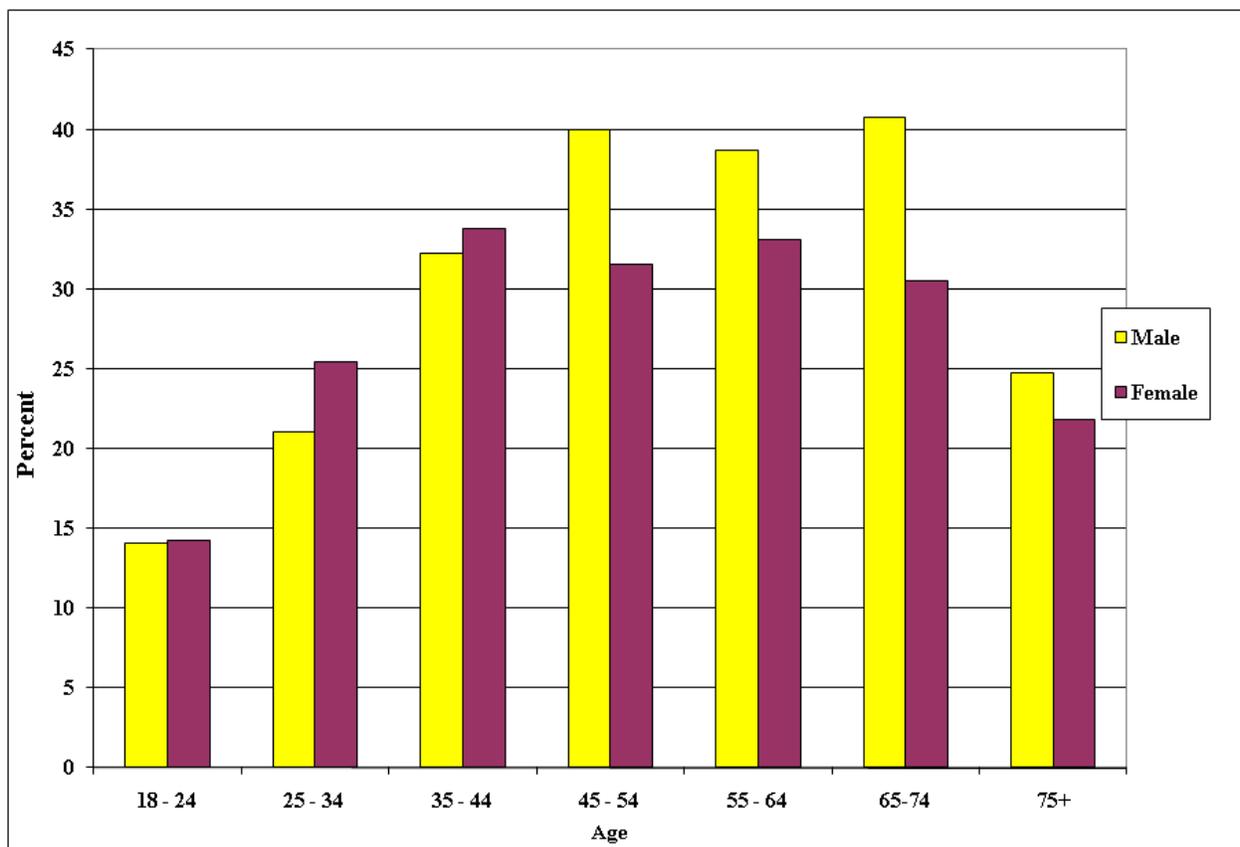


Table 9.1: Overweight and Obese Iowans Based on BMI, 2011

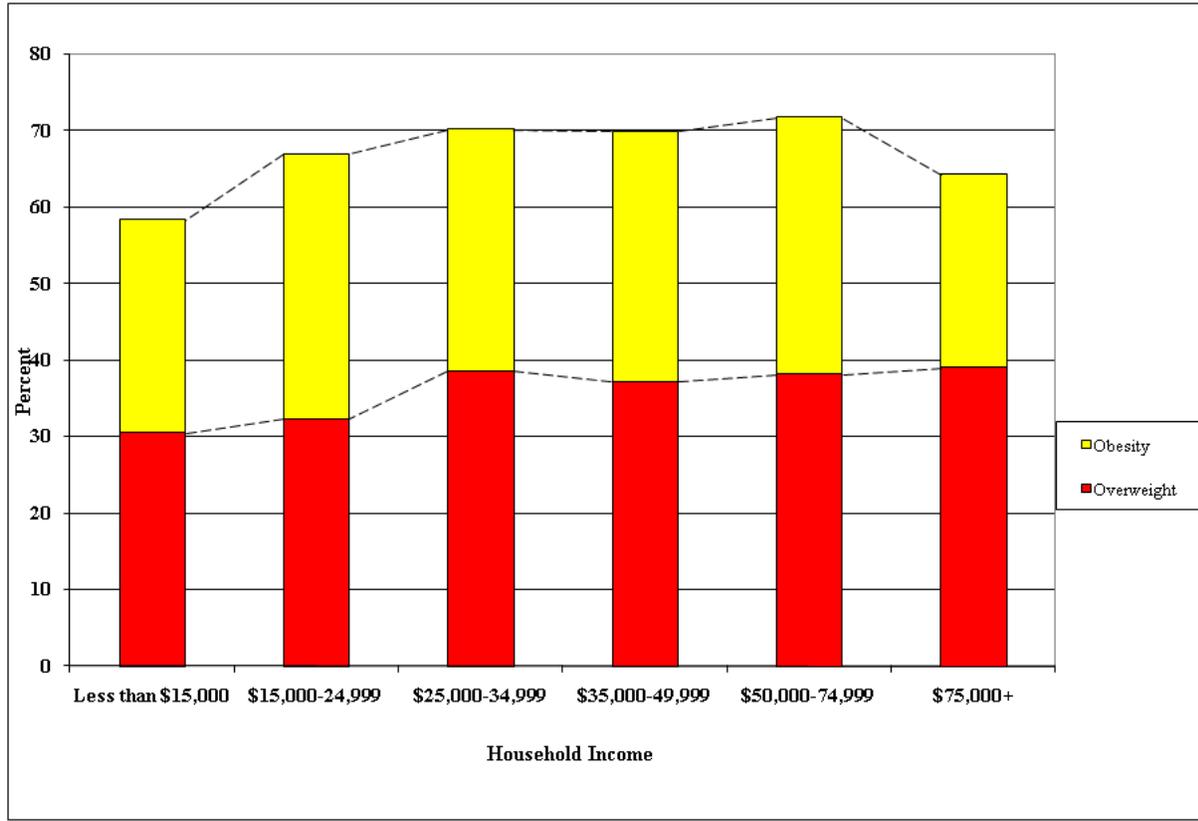
DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	35.8	(34.4-37.2)	29.0	(27.6-30.4)	64.8	(63.4-66.2)
SEX						
Male	40.9	(38.7-43.1)	30.4	(28.4-32.4)	71.3	(69.1-73.5)
Female	30.6	(28.8-32.4)	27.4	(25.6-29.2)	58.0	(56-60)
RACE/ETHNICITY						
White/non-Hisp.	36.0	(34.4-37.6)	29.2	(27.8-30.6)	65.1	(63.5-66.7)
Non-White or Hisp.	33.9	(28.4-39.4)	27.2	(22.2-32.2)	61.1	(55.3-67)
AGE GROUP						
18 - 24	25.6	(20.5-30.7)	14.4	(10.5-18.3)	40.0	(34.3-45.7)
25 - 34	35.7	(31.8-39.6)	22.8	(19.3-26.3)	58.5	(54.4-62.6)
35 - 44	36.7	(33-40.4)	32.9	(29.2-36.6)	69.6	(66.1-73.1)
45 - 54	36.7	(33.6-39.8)	35.6	(32.5-38.7)	72.3	(69.4-75.2)
55 - 64	39.1	(36-42.2)	35.9	(33-38.8)	75.1	(72.6-77.6)
65-74	36.9	(33.6-40.2)	35.5	(32.2-38.8)	72.4	(69.3-75.4)
75+	40.2	(36.8-43.5)	22.7	(19.8-25.6)	62.9	(59.6-66.1)
EDUCATION						
Less than H.S.	33.7	(28.2-39.2)	28.2	(23.1-33.3)	61.9	(56-67.8)
H.S. or G.E.D.	35.4	(33-37.8)	33.0	(30.6-35.4)	68.4	(66-70.8)
Some Post-H.S.	35.7	(33-38.4)	29.0	(26.6-31.4)	64.7	(62-67.4)
College Graduate	37.5	(35-40)	23.2	(21-25.4)	60.7	(58.2-63.2)
HOUSEHOLD INCOME						
Less than \$15,000	29.7	(24.8-34.6)	28.3	(23.6-33)	58.0	(52.7-63.3)
\$15,000- 24,999	32.2	(28.5-35.9)	33.8	(30.1-37.5)	66.0	(62.1-69.9)
\$25,000- 34,999	38.2	(33.5-42.9)	32.1	(27.8-36.4)	70.3	(66-74.6)
\$35,000- 49,999	37.1	(33.4-40.8)	32.7	(29-36.4)	69.9	(66.2-73.6)
\$50,000- 74,999	38.4	(34.9-41.9)	33.3	(30-36.6)	71.7	(68.4-75)
\$75,000+	38.9	(36-41.8)	25.0	(22.5-27.5)	63.9	(61.2-66.6)

The demographic group with the highest prevalence of people over their healthy weight (combined overweight and obesity) is people aged 55 to 64 years with 75.1 percent. The group with the lowest prevalence over their healthy weight is those 18 to 24 years old (40%).

Comparison with Other States

Iowa's figure of 29 percent obese in 2011 was well above the median of 27.8 percent. The range of prevalence among the 50 states and District of Columbia for obesity was from a low of 20.7 percent to a high of 34.9 percent.

Figure 9.2: Overweight and Obesity by Income, Iowa 2011



Health Objectives for Iowa and the Nation

The *Healthy People 2020* objectives for the nation to be achieved on weight call for increasing the prevalence of healthy weight (neither overweight nor obese) to 33.9 percent among adults age 20 years and older. Iowa does not quite make this target having 32.2 percent at healthy weight. The *Healthy People 2020* goal for obesity is 30.6 percent. Iowa has a prevalence of 29.8 percent for those over age 20. This is actually under the HP 2020 target. The *Healthy Iowans* goal for obesity is 27 percent. Iowa's figure of 29 percent for all adults fails to achieve this goal.

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10. 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. 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 older have been diagnosed with Type 1 or Type 2 diabetes.

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 of another \$58 billion resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality. People with diagnosed diabetes, on average, have medical costs that are approximately 2.3 times higher than the costs 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 2011, 8.2 percent of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. No trend can be determined due to the changes in weighting methodology.

Table 10.1 shows that the rate of diabetes is much higher when respondents are older, lower in education, and have a lower household income. The demographic group with the highest percentage of diagnosed diabetics is people age 75 years and older (18.3%), while the group with the lowest percentage is people age 18 to 24 years (0.3%) (see table 10.1).

When asked if they had a test for diabetes in the past three years, 54 percent said they had.

Table 10.1: Iowans Ever Told They Had Diabetes, 2011

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	8.2	(7.6-8.8)
SEX		
Male	8.4	(7.4-9.4)
Female	8.0	(7.2-8.8)
RACE/ETHNICITY		
White/Non-Hisp.	8.2	(7.4-9)
Black/Non-Hisp.	8.2	(3.3-13.1)
Other/Non-Hisp.	8.9	(4.3-13.6)
Hispanic	6.2	(2.5-9.9)
AGE GROUP		
18-24	0.3	(0-0.7)
25-34	0.7	(0.1-1.3)
35-44	3.1	(1.9-4.3)
45-54	8.2	(6.4-10)
55-64	15.2	(13-17.4)
65-74	18.1	(15.6-20.6)
75+	18.3	(15.6-21.1)
EDUCATION		
Less than H.S.	10.6	(7.9-13.3)
H.S. or G.E.D.	10.4	(9-11.8)
Some Post-H.S.	6.8	(5.8-7.8)
College Graduate	5.9	(4.9-6.9)
HOUSEHOLD INCOME		
Less than \$15,000	14.2	(11.1-17.3)
\$15,000- 24,999	11.1	(9.1-13.1)
\$25,000- 34,999	9.7	(7.5-11.9)
\$35,000- 49,999	7.4	(5.6-9.2)
\$50,000- 74,999	8.2	(6.4-10)
\$75,000+	4.3	(3.3-5.3)

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 2011, 5.4 percent 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 (40.2%). The age group in which the least reported being first diagnosed was less than age 16 years (2.1%).

Of those ever told by a physician that they have diabetes, 27.9 percent reported currently taking insulin.

When asked how many times they had seen a health professional for their diabetes in the last year, the most common answer was four (31.4%), while 8 percent 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 61.9 percent checked their blood sugar at least once a day themselves or with the help of a friend or family member. About 8.4 percent reported never testing their blood sugar. Around 90.8

percent had it checked at least once within the past year by a health professional through a glycosylated hemoglobin test, frequently referred to as an A1C. Around 5.3 percent reported not having had the A1C test. Another 3.9 percent 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, 66.4 percent of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 13 percent said they never checked them. Around 77.2 percent 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 76.3 percent reported within the last year, while 2.1 percent reported never having such an examination. Among Iowans with diabetes, 19.3 percent 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 63.2 percent of those with diabetes in 2011 reported having taken a class on how to manage it.

Comparison with Other States

The median prevalence of diagnosed diabetes for the 50 states and District of Columbia was 9.5 percent in 2011. Prevalence ranged from 6.7 percent to 12.4 percent. The figure for Iowa was well below the median at 8.2 percent. Only seven states had a lower prevalence of diagnosed diabetes.

Health Objectives for Iowa and the Nation

Healthy People 2020 and *Healthy Iowans* had objectives for the management of diabetes. In HP 2020 of all people with diabetes 58.7 percent should receive annual dilated eye exams. For *Healthy Iowans* the goal was 85 percent. The figure obtained in 2011 was 76.3 percent. This is much better than the *Healthy People 2020* goal, but misses the *Healthy Iowans* goal.

Of all people with diabetes 71.1 percent should receive a glycosylated hemoglobin test at least twice a year according to *Healthy People 2020*. The figure was 75.6 percent at least twice a year. This meets the *Healthy People 2020* goal.

Healthy People 2020 also has the goal to increase the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily to 70.4 percent. In 2011, only 61.9 percent of Iowan diabetics said they do this. This is short of the goal.

A final *Healthy People 2020* goal in this area is to increase the proportion of persons with diagnosed diabetes who receive formal diabetes education to 62.5 percent. Iowa's current figure of 63.2 percent exceeds this goal.

References

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11. RESPIRATORY DISEASES

Background

Few things are as immediately important to life as the ability to breathe. Several respiratory diseases exist that can make breathing difficult. A few common ones are asthma and chronic obstructive pulmonary disease (COPD).

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 24 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. People who suffer from asthma are encouraged to develop an asthma management plan.

Poor asthma control continues to be associated with increased emergency department visits, hospitalizations, and medical costs. The estimated total cost of asthma to society, including medical expenses (\$50.1 billion per year), loss of productivity resulting from missed school or work days (\$3.8 billion per year), and premature death (\$2.1 billion per year) was \$56 billion (2009 dollars) in 2007; a \$3 billion (5.7%) increase from 2002. Medical expenses associated with asthma were \$3,259 per person per year during 2002--2007.²

Chronic Obstructive Pulmonary Disease (COPD) includes both chronic bronchitis and emphysema. It is one of the most common lung diseases. Chronic bronchitis is defined by a long-term cough with mucus, while emphysema is defined by destruction of the lungs over time. Most people with COPD have a combination of both conditions.⁴

Smoking is the leading cause of COPD. The more a person smokes, the more likely that person will develop COPD. Another cause is exposure to secondhand smoke or air pollution.

There is no cure for COPD. However, there are many things you can do to relieve symptoms and keep the disease from getting worse. Persons with COPD must stop smoking. This is the best way to slow the lung damage. Medications may also be used to treat COPD symptoms. Oxygen therapy at home may be needed if a person has a low level of oxygen in his/her blood.

Respiratory Diseases Results

In 2011, 11.8 percent of respondents reported ever being diagnosed by a physician with asthma. Out of all respondents in Iowa, 8.3 percent currently had asthma, and 3.3 percent formerly had asthma.*

Table 11.1: Iowans Currently and Formerly Having Asthma, 2011

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	8.3	(7.5-9.1)	3.3	(2.7-3.9)
SEX				
Male	6.5	(5.3-7.7)	3.7	(2.7-4.7)
Female	10.0	(8.8-11.2)	2.8	(2-3.6)
RACE/ETHNICITY				
White/non-Hispanic	8.2	(7.2-9.2)	3.3	(2.7-3.9)
Black/non-Hispanic	16.5	(8.3-24.7)	2.7	(0-6.4)
Other/non-Hispanic	14.7	(7.6-21.8)	2.9	(0-7.1)
Hispanic	2.5	(0.1-4.9)	4.3	(1.8-6.8)
AGE				
18-24	9.2	(6.1-12.3)	8.1	(4.8-11.4)
25-34	7.4	(5-9.8)	5.0	(3.2-6.8)
35-44	11.4	(8.7-14.1)	2.2	(1.2-3.2)
45-54	7.6	(5.8-9.4)	1.8	(1-2.6)
55-64	7.8	(6.2-9.4)	2.3	(1.5-3.1)
65-74	7.9	(6-9.7)	2.1	(1.2-2.9)
75+	5.8	(4.2-7.4)	1.5	(0.6-2.3)
EDUCATION				
Less than H.S.	11.4	(7.9-14.9)	1.7	(0.5-2.9)
H.S. or G.E.D.	8.0	(6.6-9.4)	3.2	(2-4.4)
Some Post-H.S.	9.3	(7.5-11.1)	4.2	(3-5.4)
College Graduate	5.8	(4.6-7)	2.7	(1.9-3.5)
HOUSEHOLD INCOME				
Less than \$15,000	17.1	(13-21.2)	3.8	(1.8-5.8)
\$15,000- 24,999	9.2	(7-11.4)	5.0	(3-7)
\$25,000- 34,999	9.3	(5.8-12.8)	2.8	(1.4-4.2)
\$35,000- 49,999	7.7	(5.7-9.7)	1.8	(0.8-2.8)
\$50,000- 74,999	6.1	(4.3-7.9)	2.7	(1.1-4.3)
\$75,000+	5.3	(4.1-6.5)	2.9	(1.7-4.1)

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

In Iowa, more women currently have asthma than do men. Racial and ethnic differences seemed to be the most powerful factor determining asthma prevalence. African Americans had a much higher rate of current asthma (16.5%), while Hispanics had the lowest rate (2.5%). These were both significantly different from White/non-Hispanics despite the wide confidence intervals found with racial and ethnic minorities. Lower household income and education level were **also** associated with higher rates of current asthma. In fact, the highest current asthma **prevalence** was among those **with annual household incomes less than \$15,000 (17.1%)** (see table 11.1).

Even though an adult is interviewed in the BRFSS survey, two questions about asthma are asked for a randomly determined child in the household. Reports indicated that 8.4 percent of the

children had ever been told they had asthma and that 5.8 percent of all children still have asthma. Contrary to the situation for adults, a larger percent of boys were reported to currently have asthma than girls (7.6 vs. 3.8 percent).

Starting in 2006 the BRFSS has collected a considerable amount of information from the people who reported they or their children had ever had asthma in a special call-back survey. Most of the data from that survey is not included in this report, but will be presented separately. From the 2010 call-back survey, however, it was found that adults with asthma having asthma-related emergency or urgent care visits was only 4.2 percent needing such visits.

When asked if they had been told they had COPD, 5.1 percent said they had. This was more common among women, older people, people with less education, and people with lower household income. Blacks and Hispanics were less likely to report COPD, but other non-Hispanic respondents were higher (see Table 11.2). The highest prevalence of having COPD was found among those with annual household incomes less than \$15,000 (12.7%). The condition was least prevalent in those respondents age 25 to 34 years (1.1%).

Comparison with Other States

While Iowa reported 8.3 percent of the entire adult population currently suffering.

Table 11.2
Iowans who have been told they have COPD

DEMOGRAPHIC GROUPS	COPD	
	%	C.I. (95%)
TOTAL	5.1	(4.5-5.7)
SEX		
Male	4.6	(3.8-5.4)
Female	5.6	(4.8-6.4)
RACE/ETHNICITY		
White/Non-Hispanic	5.1	(4.5-5.7)
Black/Non-Hispanic	2.8	(0-5.9)
Other/Non-Hispanic	10.2	(3.7-16.7)
Hispanic	1.9	(0-3.9)
AGE		
18-24	2.5	(0.7-4.3)
25-34	1.1	(0.3-1.9)
35-44	3.1	(1.5-4.7)
45-54	5.6	(4-7.2)
55-64	7.1	(5.5-8.7)
65-74	11.5	(9.1-13.8)
75+	7.6	(6-9.3)
EDUCATION		
Less than H.S.	10.1	(7-13.2)
H.S. or G.E.D.	6.2	(5-7.4)
Some Post-H.S.	4.0	(3-5)
College Graduate	2.6	(1.8-3.4)
HOUSEHOLD INCOME		
Less than \$15,000	12.7	(9.4-16)
\$15,000- 24,999	8.9	(6.9-10.9)
\$25,000- 34,999	5.7	(3.7-7.7)
\$35,000- 49,999	4.7	(3.1-6.3)
\$50,000- 74,999	2.8	(1.8-3.8)
\$75,000+	2.4	(1.4-3.4)

from asthma, the median for the nation was 9.1 percent. Prevalence ranged from a low of 6.4 percent to a high of 12.1 percent

References

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12. CANCER SCREENING AND SURVIVORSHIP

Background

Cancer occurs when a group of cells grows out of control. Cancer is a very common disease and the second most common cause of death in the United States. Cancer may arise almost anywhere in the body, though some locations are more common than others. Skin cancer is a very common form of cancer. Other common types are lung, breast, prostate, and colon cancer.

Early detection of cancer is key to surviving the disease, and regular screening is key to detecting the disease early. Not all types of cancer lend themselves to screening tests, but for those that do, screening saves lives. There may be no detectable symptoms apart from screening until the disease is quite advanced.

Colorectal cancer is one type that greatly benefits from screening. Colorectal cancer usually develops from abnormal growths known as precancerous polyps in the colon and rectum. In the early stages there are often no symptoms. Screening tests can detect polyps so they can be removed before they turn into cancer.³

An estimated 141,210 new cases of colon and rectal cancer existed in the United States in 2011.² There were estimated to be 49,380 deaths.² Incidence and mortality rates have been decreasing for most of the last two decades. The decline has been steeper in the most recent time period, partly due to an increase in screening, which can result in the detection and removal of colorectal polyps before they progress to cancer.⁴

The U.S. Preventive Services Task Force recommends that men and women who are not at special risk begin regular screening for colorectal cancer at age 50.¹ If everybody aged 50 to 75 had regular screening tests, as many as 60 percent of deaths from colorectal cancer could be prevented.

For the past 40 years we have been fighting “a war on cancer”. While cancer is still a very common disease, more people are surviving cancer. Overall, the American Cancer Society predicted 1,596,670 new cancer cases in the United States and 571,950 deaths in 2011. However, death rates for all cancer types fell by 1.9 percent a year from 2001 to 2007 in men and by 1.5 percent a year in women from 2002 through 2007.⁵ Steady overall declines in cancer death rates have meant about 898,000 who would have died prematurely from cancer in the past 17 years did not.

These cancer survivors have unique needs and concerns as they move forward with their lives. There is the fear that their cancer may return. There are side effects of the cancer treatments. The cancer may still be present but being held in check for the moment. The survivor may have been or may still be experiencing great pain from either the cancer or the treatments for it.

It is worthwhile, then, to try to look at the condition of cancer survivors in Iowa, as more than half of them are living more than five years after their diagnosis.

Cancer Screening and Survivorship Results

In 2011, 5.8 percent of Iowans had ever been told they had skin cancer, while 6.2 percent reported having been told they had some other type of cancer.

Skin cancer behaves somewhat differently from other types of cancers, which themselves may vary in prevalence and prognosis according to type. Most cancers, however, are more common with age. Skin cancer is more common among white non-Hispanics. It is somewhat less common among respondents with high household incomes. Other cancers, on the other hand, were more common among females and people with lower income and less education. The highest prevalence of ever having cancer was for people age 75 and over. In this age group the prevalence was 21.3 percent for skin cancer and 17.9 percent for other cancers. Both Hispanics and Blacks as well as those age 18 to 24 years had a skin cancer prevalence less than half a percent, while for other cancers only people age 18 to 24 years had the lowest prevalence (0.9%) (see table 12.1).

Since 2004, a number of questions have been included in the survey concerning colorectal cancer screening. A few findings from these are given here. Questions on other forms of screening may be found in reports for data from even years.

Respondents 50 years old and older reported that a health care professional talked to him or her about colorectal cancer screening in 76.1 percent of the cases. When the health care professional talked about screening, 92.4 percent recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 83.4 percent then had the test.

Out of all respondents 50 years old and older, 61.6 percent reported seeing articles or advertising in the past six months about colorectal cancer screening. Television was the main medium of exposure to this advertising (72.9%). Over half of the respondents (53.5%) considered that they had a low risk of colorectal cancer. Only 4.9 percent considered it was high. When asked why they did not have the recommended test or why they did not plan to be tested, one of the most common answers was not having any symptoms (30.5%). Colorectal cancer does not necessarily have symptoms.

As for cancer survivors: the age at which a survivor had been told they had cancer was quite variable ranging from 4 to 96 years. The median age when a cancer survivor had been told they had cancer was 55 years. Over one fourth (25.8%) of cancer diagnoses had been between ages 60 and 70 years.

Of all the Iowa cancer survivors 7.6 percent were currently receiving treatment. Of all cancer survivors, 27.9 percent had received a summary of cancer treatments received. A set of instructions for follow-up was received by 66.4 percent of survivors. For about 70.1 percent these instructions were written or printed.

Health insurance was reported to have paid for all or part of cancer treatments for 98.6 percent of cancer survivors. Having health or life insurance denied because of cancer was reported by 6.4 percent of cancer survivors.

Table 12.1 Prevalence of Iowans reporting ever having Cancer, 2011

DEMOGRAPHIC GROUPS	Ever Had Skin Cancer		Ever Had Other Cancer	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	5.8	(5.2-6.4)	6.2	(5.6-6.8)
SEX				
Male	5.8	(5-6.6)	4.8	(4-5.6)
Female	5.8	(5-6.6)	7.6	(6.6-8.6)
RACE/ETHNICITY				
White/Non-Hisp.	6.3	(5.7-6.9)	6.5	(5.9-7.1)
Black/Non-Hisp.	0.4	(0-1.2)	3.8	(0.3-7.3)
Other/Non-Hisp.	1.4	(0-3)	3.0	(0.2-5.8)
Hispanic	0.2	(0-0.6)	2.8	(0.8-4.8)
AGE				
18-24	0.3	(0-0.9)	0.9	(0.1-1.7)
25-34	1.3	(0.3-2.3)	2.2	(1-3.4)
35-44	2.5	(1.3-3.7)	2.4	(1.2-3.6)
45-54	3.6	(2.4-4.8)	4.8	(3.4-6.2)
55-64	6.7	(5.3-8.1)	8.1	(6.5-9.7)
65-74	13.6	(11.2-15.9)	13.8	(11.6-16.1)
75+	21.3	(18.6-24.1)	17.9	(15.3-20.4)
EDUCATION				
Less Than H.S.	6.6	(4.2-9)	6.9	(4.5-9.3)
H.S. or G.E.D.	6.0	(5-7)	7.8	(6.6-9)
Some Post-H.S.	5.5	(4.5-6.5)	5.6	(4.6-6.6)
College Graduate	5.6	(4.6-6.6)	4.5	(3.5-5.5)
HOUSEHOLD INCOME				
Less than \$15,000	5.4	(3.2-7.6)	9.1	(6.6-11.6)
\$15,000- 24,999	6.8	(5.2-8.4)	9.6	(7.6-11.6)
\$25,000- 34,999	5.7	(4.1-7.3)	6.4	(4.6-8.2)
\$35,000- 49,999	7.1	(5.3-8.9)	5.9	(4.5-7.3)
\$50,000- 74,999	4.3	(2.9-5.7)	5.5	(3.9-7.1)
\$75,000+	4.7	(3.7-5.7)	3.6	(2.6-4.6)

Only 4.5 percent of cancer survivors reported having participated in a clinical trial for treatment of their cancer.

Physical pain from cancer or treatment was reported for 6.3 percent of cancer survivors. The majority of these (75%) reported their pain was under control.

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13. OTHER CHRONIC CONDITIONS

Background

The Behavior Risk Factor Surveillance System asks people if they have a number of chronic health conditions. Several of these are covered in other chapters of this report such as cardiovascular disease, asthma, cancer, arthritis, and diabetes. This chapter looks at the remaining conditions about which information is collected. Although these conditions are important, the amount of information on each condition does not warrant a separate chapter.

Other Chronic Conditions Results

In 2011, 15.2 percent of adults reported that they had ever been told they had a depressive disorder. The prevalence of depression was greater among women and lower income individuals and less among the elderly. The highest prevalence was among those with annual household incomes less than \$15,000 (29.6%). The lowest prevalence was among those age 75 years or more (8.3%) (see table 13.1).

In 2011, 1.5 percent of adults reported they had ever been told they had kidney disease. The highest percentage of kidney disease was among African Americans (5.4%). The lowest was among those between age 35 and 44 years (0.2%). This was closely followed by those between age 18 and 24 years (see table 13.1).

In 2011, 18.5 percent of adults reported they had ever been told they had visual impairment in one or both eyes. Visual impairment was more prevalent among women, the elderly, people with less education, and people with lower income. The highest prevalence was among those age 75 and older (42.9%). The lowest was among those age 35 to 44 years old (9.7%) (see table 13.1).

Health Objectives for the Nation

Healthy People 2020 has a goal of 6.1 percent of people experiencing a major depression episode. The 2011 Iowa BRFSS shows 15.2 percent of adult Iowans reporting ever having a depressive episode. Although it is not certain if all these would have been considered major depression, Iowa very likely exceeds the goal.

Healthy People 2020 has a goal of 13.6 percent reporting chronic kidney disease. Iowa's level of 1.5 percent is far lower than this goal.

Table 13.1
Prevalence of Other Chronic Conditions in Iowa, 2011

DEMOGRAPHIC GROUPS	Depressive Disorder		Kidney Disease		Visual Impairment	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	15.2	(14.2-16.2)	1.5	(1.1-1.9)	18.5	(17.3-19.7)
SEX						
Male	9.9	(8.5-11.3)	1.6	(1-2.2)	16.8	(15.2-18.4)
Female	20.2	(18.6-21.8)	1.3	(0.9-1.7)	20.2	(18.6-21.8)
RACE/ETHNICITY						
White/Non-Hispanic	15.2	(14-16.4)	1.4	(1.2-1.6)	18.8	(17.6-20)
Black/Non-Hispanic.	12.8	(5.6-19.9)	5.4	(0.3-10.5)	15.4	(8.3-22.5)
Other/Non-Hispanic	14.3	(7.9-20.7)	0.6	(0-1.4)	20.7	(12.5-29)
Hispanic	16.2	(10.5-21.9)	1.8	(0-4.3)	12.4	(7.3-17.5)
AGE GROUP						
18-24	15.6	(11.7-19.5)	0.3	(0-0.9)	15.2	(11.1-19.3)
25-34	19.7	(16.4-23)	0.7	(0.1-1.3)	10.1	(7.7-12.5)
35-44	15.9	(13.2-18.6)	0.2	(0-0.4)	9.7	(7.5-11.9)
45-54	14.7	(12.5-16.9)	0.9	(0.3-1.5)	18.6	(16.1-21.1)
55-64	16.5	(14.3-18.7)	2.9	(1.7-4.1)	19.0	(16.6-21.4)
65-74	12.2	(10-14.3)	2.7	(1.7-3.7)	25.9	(23-28.8)
75+	8.3	(6.5-10.1)	4.0	(2.7-5.3)	42.9	(39.6-46.3)
EDUCATION						
Less than H.S.	19.2	(14.7-23.7)	2.7	(1.1-4.3)	23.6	(18.9-28.3)
H.S. or G.E.D.	14.3	(12.5-16.1)	1.6	(1-2.2)	20.4	(18.4-22.4)
Some Post-H.S.	16.6	(14.6-18.6)	1.0	(0.6-1.4)	17.5	(15.5-19.5)
College Graduate	12.5	(10.7-14.3)	1.4	(1-1.8)	14.9	(13.1-16.7)
HOUSEHOLD INCOME						
Less than \$15,000	29.6	(24.7-34.5)	3.9	(2.1-5.7)	24.4	(20.1-28.7)
\$15,000- 24,999	18.7	(15.6-21.8)	2.1	(1.3-2.9)	26.2	(22.9-29.5)
\$25,000- 34,999	18.5	(14.8-22.2)	0.8	(0.2-1.4)	19.5	(16.2-22.8)
\$35,000- 49,999	17.3	(14.4-20.2)	0.8	(0.4-1.2)	18.8	(16.1-21.5)
\$50,000- 74,999	11.8	(9.6-14)	1.3	(0.5-2.1)	13.4	(10.9-15.9)
\$75,000+	8.7	(6.9-10.5)	0.8	(0.4-1.2)	13.0	(11-15)

14. 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.² 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 and its partners, is actively working to increase the physical activity levels of Iowans.¹ 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
- 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 2011, 74.1 percent of respondents reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. 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 also higher for White non-Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for those having less than a high school education (62.6%), while the highest was for those with a college degree (84.4%) (see table 14.1).

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 aerobic physical activity may be either regular moderate physical activity or regular vigorous physical activity. The recommended level of regular moderate physical activity is defined as moderate activity for 150 or more minutes per week. Recommended regular vigorous physical activity counts double the time of regular moderate activity.

The BRFSS determines the level of physical activity by asking about two activities the person engages in for the most amount of time. These activities are determined as moderate or vigorous based on a complex formula involving several factors. Then the time to which the person

**Table 14.1:
Percentage Participating in Leisure
Exercise in Past Month in Iowa, 2011**

Demographic Groups	Any Leisure Physical Exercise in Past Month	
	%	C.I. (95%)
TOTAL	74.1	(72.7-75.5)
SEX		
Male	73.2	(71.2-75.2)
Female	75.0	(73.2-76.8)
RACE/ETHNICITY		
White/Non-Hisp.	74.7	(73.3-76.1)
Non-White or Hisp.	68.9	(63.7-74.1)
AGE		
18-24	81.8	(77.3-86.3)
25-34	77.9	(74.4-81.4)
35-44	76.3	(73-79.6)
45-54	73.8	(70.9-76.7)
55-64	71.2	(68.5-73.9)
65-74	70.3	(67-73.5)
75+	62.9	(59.5-66.2)
EDUCATION		
Less than H.S.	62.6	(57.1-68.1)
H.S. or G.E.D.	68.1	(65.7-70.5)
Some Post-H.S.	76.5	(74.1-78.9)
College Graduate	84.4	(82.6-86.2)
HOUSEHOLD INCOME		
Less than \$15,000	66.0	(61.1-70.9)
\$15,000- 24,999	67.2	(63.7-70.7)
\$25,000- 34,999	70.3	(66-74.6)
\$35,000- 49,999	72.4	(68.9-75.9)
\$50,000- 74,999	77.7	(74.8-80.6)
\$75,000+	83.3	(81.1-85.5)

for the older people. The strengthening recommendation was met by a higher percentage of men, Non-White or Hispanics, younger people, people with more education, and people with higher incomes. The highest percentage was found among those age 18 to 24 years (45.6%). The lowest percentage was found among age 75 years and older (16.8%).

The percent of people meeting both types of physical activity was slightly higher for males than for females. In addition, it decreased with age. A larger percentage of those who had more education engaged in the recommended amounts of both types of physical activity. Only the highest household income level showed an increase in meeting the recommended physical activity levels for both aerobic and strengthening activity (see table 14.2).

devotes to each of these activities is determined.

There is also a question asked about activities designed for strengthening the muscles. The recommendation is that people engage in muscle strengthening activity at least twice a week.

The percentage of respondents who met the recommended level of aerobic physical activity in 2011 was 47.6 percent. The percentage of respondents who met the recommended level of strengthening activity was 27.5 percent. Both recommendations were met by 17.2 percent.

The relation of meeting the recommendations for aerobic and strengthening activity differed among the demographic groups. The percentage of respondents reporting they had engaged in the recommended amount of aerobic activity was higher for people with higher income and higher education. It was a little higher with older age and for White non-Hispanics. The group with the highest percentage meeting the aerobic recommendation was those with household incomes greater than \$75,000 per year (57.7%). The lowest percentage was among those who had less than a high school education (36.1%). The somewhat surprising relation of age to meeting the aerobic recommendation may be due to activities that are considered moderate for younger people being considered vigorous

Table 14.2: Percent of Iowans Receiving Recommended Levels of Physical Activity, 2011

Demographic Groups	Recommended Level of Physical Activity					
	Aerobic		Strengthening		Both Aerobic & Strength	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	47.6	(46-49.2)	27.5	(26.1-28.9)	17.2	(16-18.4)
SEX						
Male	47.5	(45.1-49.9)	31.1	(28.9-33.3)	19.2	(17.2-21.2)
Female	47.7	(45.7-49.7)	24.1	(22.3-25.9)	15.4	(14-16.8)
RACE/ETHNICITY						
White/Non-Hisp.	48.0	(46.4-49.6)	27.0	(25.6-28.4)	17.1	(15.9-18.3)
Non-White or Hisp.	44.4	(38.6-50.2)	31.5	(26.1-36.8)	19.6	(15-24.3)
AGE						
18-24	47.3	(41.6-53)	45.6	(39.9-51.3)	26.3	(21.2-31.4)
25-34	44.7	(40.6-48.8)	29.2	(25.5-32.9)	15.7	(12.8-18.6)
35-44	46.9	(43-50.8)	32.7	(29.2-36.2)	21.5	(18.4-24.6)
45-54	48.8	(45.5-52.1)	24.1	(21.4-26.8)	16.5	(14.1-18.9)
55-64	47.4	(44.5-50.3)	21.0	(18.6-23.4)	13.9	(11.9-15.9)
65-74	50.6	(47.2-54.1)	19.3	(16.6-22)	12.9	(10.7-15.1)
75+	49.8	(46.2-53.3)	16.8	(14.2-19.4)	11.9	(9.6-14.2)
EDUCATION						
Less than H.S.	36.1	(30.4-41.8)	25.5	(20.2-30.8)	13.2	(9.1-17.3)
H.S. or G.E.D.	44.2	(41.7-46.7)	23.0	(20.6-25.4)	13.7	(11.7-15.7)
Some Post-H.S.	48.0	(45.3-50.7)	27.6	(25.1-30.1)	16.6	(14.4-18.8)
College Graduate	57.0	(54.5-59.5)	34.6	(32.2-37)	25.0	(22.8-27.2)
HOUSEHOLD INCOME						
Less than \$15,000	44.2	(38.7-49.7)	24.8	(19.9-29.7)	15.2	(11.1-19.3)
\$15,000- 24,999	43.5	(39.4-47.6)	23.3	(19.6-27)	15.2	(11.9-18.5)
\$25,000- 34,999	45.0	(40.3-49.7)	22.3	(18.4-26.2)	11.5	(8.4-14.6)
\$35,000- 49,999	46.3	(42.4-50.2)	26.0	(22.5-29.5)	14.3	(11.8-16.8)
\$50,000- 74,999	46.7	(43-50.4)	25.2	(22.1-28.3)	16.8	(14.1-19.5)
\$75,000+	57.7	(54.8-60.6)	35.6	(32.7-38.5)	25.1	(22.4-27.8)

Comparison with Other States

Values for the prevalence of not engaging in leisure time physical activity ranged from a low of 16.5 percent to a high of 36 percent. Iowa ranked almost at the median on not engaging in leisure time physical activity. Iowa was at 25.9 percent, while the median for the nation was at 26.2 percent.

Iowa did not fare as well on meeting the recommended levels of physical activity. Aerobic physical activity recommendations were met by 39 percent to 61.8 percent of people in the 50

states and District of Columbia. The median was 51.7 percent, while Iowa had only 47.6 percent.

The strengthening recommendation was met by 20.2 percent to 36.1 percent of state residents. The median was 29.6 percent, while Iowa had only 27.5 percent.

Health Objectives for Iowa and the Nation

The national target for reducing the proportion of adults who engage in no leisure-time physical activity, is 32.6 percent. Iowa's level of 25.9 percent is better than this target.

The national target to increase the proportion of adults engaging in the recommended amount of regular moderate or regular vigorous aerobic physical activity is 47.9 percent. Iowa respondents report 47.6 percent achieving this recommendation either by itself or along with the strengthening criterion. Iowa is almost at the target for recommended aerobic activity.

The national target for meeting the recommended strengthening goal of two or more times per week is 24.1 percent. Iowa respondents report 27.9 percent achieving this recommendation either by itself or along with the aerobic criterion. Iowa is better than the target for recommended strengthening activity.

The *Healthy Iowans* goal is that 55 percent of adult Iowans should attain the recommended level of aerobic physical activity. Iowa's level of 47.6 percent falls short of this.

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15. 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 bio-active compounds; a diet high in these foods is associated with lower risk for numerous chronic diseases, including certain cancers and cardiovascular diseases.^{1,3}

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 micro-nutrients, found especially in vegetables, fruits, and pulses (legumes), and nuts and seeds, as well as in cereals, roots, tubers, and other plant foods.⁴

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.² These should include a variety of dark green and orange vegetables, 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.²

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 indices are computed showing the total average consumption per day of fruit and vegetables. The questions involved juice, fruit, beans, dark green vegetables, orange-colored vegetables, and other vegetables. Many instructions and examples are given concerning what should count in each category. Unlike the other BRFSS measures, the change from past years is not merely due to the change in weighting methodology. It is also affected by the change in the types of foods asked about and the addition of more instructions and examples.

Looking at fruit consumption, 40.6 percent of adult Iowans reported consuming fruit one to two times per day. An additional 13.2 percent consumed them two to three times per day. For vegetables, 43.6 percent of adult Iowans reported consuming them one to two times per day, while 17.5 percent consumed them two to three times per day.

By adding the average times per day each was consumed we get the total times per day fruit and vegetables were consumed. The percentage of Iowans who eat five or more servings of fruits and vegetables per day was 13.5 percent in 2011.

Table 15.1 shows that significantly more females ate fruits and vegetables five or more times 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 higher education. Differences in race and ethnicity were also quite evident. The demographic group most likely to eat fruit and vegetables five or more times a day was Hispanics (19.7%), while those least likely were males (9%).

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

Demographic Groups	%	C.I. (95%)
TOTAL	13.5	(12.5-14.5)
GENDER		
Male	9.0	(7.8-10.2)
Female	17.8	(16.2-19.3)
RACE/ETHNICITY		
White/Non-Hisp.	13.2	(12.2-14.2)
Black/Non-Hisp.	9.6	(2.5-16.7)
Other/Non-Hisp.	17.5	(10.2-24.9)
Hispanic	19.7	(13.4-26.1)
AGE		
18 - 24	11.4	(7.5-15.3)
25 - 34	12.3	(9.7-14.9)
35 - 44	13.7	(11.2-16.3)
45 - 54	12.4	(10.3-14.4)
55 - 64	14.6	(12.6-16.7)
65-74	12.8	(10.7-14.8)
75+	19.5	(16.8-22.2)
EDUCATION		
Less than H.S.	10.4	(7.4-13.4)
H.S. or G.E.D.	9.7	(8.3-11.2)
Some Post-H.S.	14.3	(12.4-16.3)
College Graduate	18.9	(17-20.9)
HOUSEHOLD INCOME		
Less than \$15,000	10.7	(7.3-14.2)
\$15,000- 24,999	13.0	(10.5-15.6)
\$25,000- 34,999	11.6	(8.6-14.6)
\$35,000- 49,999	14.5	(11.8-17.1)
\$50,000- 74,999	11.9	(9.7-14.1)
\$75,000+	15.8	(13.8-17.8)

The survey asked three other questions concerning dietary habits. When asked "How often do you drink soda or pop containing sugar", the median response was 0.5 times per week. The mean, however, was 3.6 times per week. This indicates that, although nearly half the respondents drank soda less than once a week, a few drank it many times. Actually, 41.7 percent said they did not drink it at all. Around 4.8 percent said they drank sweetened soda three or more times a day.

When asked "How often do you drink sweetened fruit drinks", 53.1 percent said they did not drink them at all. On the other hand, 3.8 percent drank sweetened fruit drink once a day or more.

When asked if calorie information availability in restaurants was helpful in ordering, 18.6 percent said it was always helpful. However, 44.6 percent said it never was helpful. Another 2.1 percent said they never noticed such information.

Comparison with Other States

Consumption of five or more servings of fruit or vegetables per day in the 50 states and District of Columbia ranged from a low of 7.9 percent to a high of 25.5 percent. Iowa's level of 13.5 percent is well below the median of 16.6 percent.

Health Objectives for Iowa

Healthy Iowans has the objective of 20 percent of Iowans eating five or more fruit and vegetables per day. The figure obtained from Iowa BRFSS of 13.5 percent falls far short of this goal.

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16. TOBACCO USE

Background

Tobacco use remains the leading preventable cause of premature 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. Cigarette smoking costs the nation more than \$96 billion per year in direct medical expenses as well as more than \$97 billion annually in lost productivity.¹ Secondhand smoke costs more than \$10 billion (i.e., health care expenditures, morbidity, and mortality).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, bladder, 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.

Many steps are being taken to prevent use of tobacco. Some of these include reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction (cessation), and working toward changing social norms and environments that support tobacco use. The last component involves counter-advertising and promotion, product regulation, and economic incentives against tobacco.

The legal environment 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. Nationally, in 2009 the Food and Drug Administration (FDA) was given authority to regulate tobacco products.

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 2011, 20.4 percent reported being a current smoker. Unfortunately, trend information is not available due to

the change in weighting methodology. The large jump in prevalence from previous years is due to this change involving the inclusion of exclusive cell phone users

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 less than \$15,000 reported the highest proportion of current smokers (38.6%). Only 3.9 percent of respondents age 75 years and older were current smokers (see table 16.1).

Nearly 25 percent 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

Table 16.1: Percentage of Current and Former Smokers in Iowa, 2011

DEMOGRAPHIC GROUPS	Current Smoker		Former Smoker	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	20.4	(19.2-21.6)	25.0	(23.8-26.2)
SEX				
Male	22.2	(20.2-24.2)	29.4	(27.4-31.4)
Female	18.6	(17-20.2)	20.9	(19.5-22.3)
RACE/ETHNICITY				
White/Non-Hisp.	19.9	(18.5-21.3)	26.0	(24.8-27.2)
Non-White or Hisp	26.6	(21.5-31.7)	14.3	(10.5-18.1)
AGE				
18-24	27.1	(22.4-31.8)	5.5	(3.3-7.7)
25-34	27.2	(23.5-30.9)	18	(14.9-21.1)
35-44	24.1	(20.6-27.6)	21.5	(18.4-24.6)
45-54	22.4	(19.7-25.1)	23.4	(20.7-26.1)
55-64	18.0	(15.6-20.4)	35.3	(32.4-38.2)
65-74	10.2	(7.9-12.5)	45.7	(42.3-49)
75+	3.9	(2.5-5.4)	35.7	(32.5-38.9)
EDUCATION				
Less Than H.S.	34.3	(28.6-40)	23.7	(19.2-28.2)
H.S. or G.E.D.	23.8	(21.6-26)	27.7	(25.5-29.9)
Some Post-H.S.	20.5	(18.3-22.7)	25.8	(23.6-28)
College Graduate	8.7	(7.3-10.1)	20.6	(18.6-22.6)
HOUSEHOLD INCOME				
Less than \$15,000	38.6	(33.3-43.9)	20.3	(16.2-24.4)
\$15,000- 24,999	27.4	(23.9-30.9)	26.7	(23.4-30)
\$25,000- 34,999	25.7	(21.4-30)	26.9	(23-30.8)
\$35,000- 49,999	23.4	(19.9-26.9)	27.9	(24.6-31.2)
\$50,000- 74,999	15.8	(13.1-18.5)	29.2	(25.9-32.5)
\$75,000+	9.5	(7.7-11.3)	24.5	(22.1-26.9)

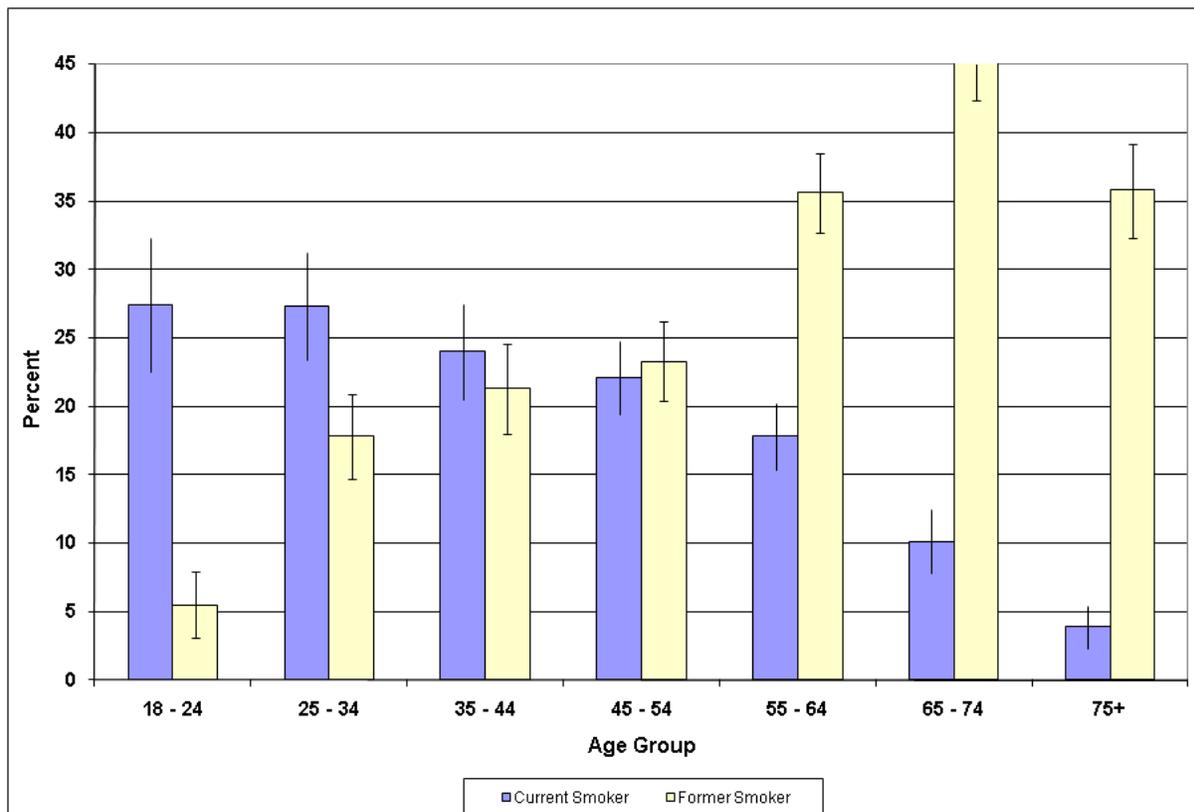
smokers. The 18 to 24 year age group had only 5.5 percent former smokers, while the 65 to 74 year age group had 45.7 percent (see figure 16.1). White non-Hispanics had a higher prevalence of former smokers than minority racial or ethnic groups. When former smokers were asked how long it had been since they last smoked cigarettes regularly, the majority (58.8%) said ten or more years.

When asked about attempts to quit smoking, 54.8 percent of Iowa's current smokers **reported** they quit smoking for a day or more during the past year. Women were 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. As the number of current smokers declines, this inability to show differences will become even more pronounced.

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 4.2 percent 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 3.4 percent said this was the case. When

Figure 16.1: Percentage of Current and Former Smokers by Age, 2011



asked the reason for this, most chose more than one of the five listed options. All options were chosen by more than half of the respondents. The most frequently given reason, however, was the ban on smoking in public places (97%).

Of smokers who had seen a doctor in the past year, 64.7 percent of them reported that the doctor had advised them to quit smoking. Of those doctors advising to quit, 61.1 percent had offered some form of assistance.

Most Iowans (82.6%) said they had rules against smoking anywhere in their home. However, 7.8 percent said they allowed smoking anywhere in the house, and 1.9 percent had no rules concerning smoking in the house. The majority of respondents (73.5%) had rules against smoking in their motor vehicle. Another 8.3 percent allowed smoking anywhere in motor vehicles, while 1.8 percent had no rules on the matter.

Comparison with Other States

In all the states and District of Columbia, smoking prevalence ranged from a low of 11.8 percent to a high of 29 percent. Iowa's current smoking prevalence of 20.4 percent was below the median of 21.2 percent for all states.

Health Objectives for Iowa and the Nation

The goal for *Healthy People 2020* is to reduce the percentage of smokers to 12 percent, while the goal for *Healthy Iowans* is 15 percent. The prevalence of those reporting currently smoking is 20.4 percent in Iowa which is well above both goals.

The *Healthy People 2020* goal for use of smokeless tobacco is only 0.3 percent. Iowa's prevalence of such use is 4.2 percent. There is a need for improvement in this area.

Iowa fell far short of the *Healthy People 2020* goal of 80 percent of current smokers attempt to quit in the past year. At 54.8 percent the rate still falls more than 20 percentage points short of the goal.

Iowa also missed the *Healthy People 2020* goal for recent smoking cessation success by adult smokers. 4.3 percent of former smokers said they had not smoked regularly for six months to a year, while the goal was eight percent.

The *Healthy Iowans* goal was 87 percent for people having rules against smoking in their home. Only 82.6 percent said they had such rules.

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17. ALCOHOL CONSUMPTION

Background

Consumption of alcohol is a very widespread practice in our society. However, a large number of people face 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 mean a person should not drink at all. 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. In fact, excessive alcohol use is the 3rd leading lifestyle-related cause of death for people in the United States each year.⁴

Chronic alcohol use affects every organ and system of the body. It 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.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 male 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 2011, 60.6 percent of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 36.3 percent had only one drink. The median was two drinks. About 15.9 percent reported drinking five or more drinks per day on the average.

In our analysis, chronic heavy drinking was defined to be an average of greater than two drinks per day for men and one drink per day for women. According to this definition, 8.1 percent of all respondents were heavy drinkers.

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 10.8 percent of men were considered to be heavy drinkers, while only 5.5 percent of

Table 17.1
Heavy Drinking Among Iowans, 2011

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	8.1	(7.1-9.1)
SEX		
Male	10.8	(9.2-12.4)
Female	5.5	(4.5-6.5)
RACE/ETHNICITY		
White/Non-Hisp.	8.4	(7.4-9.4)
Black/Non-Hisp.	7.9	(1.4-14.4)
Other/Non-Hisp.	2.0	(0-4.3)
Hispanic	7.0	(2.1-11.9)
AGE		
18-24	14.4	(10.3-18.5)
25-34	11.1	(8.4-13.8)
35-44	7.4	(5.2-9.6)
45-54	8.1	(6.3-9.9)
55-64	6.4	(4.6-8.2)
65-74	4.5	(3-5.9)
75+	2.0	(1-3.1)
EDUCATION		
Less than H.S.	7.1	(4-10.2)
H.S. or G.E.D.	9.0	(7.2-10.8)
Some Post-H.S.	8.9	(7.1-10.7)
College Graduate	5.9	(4.7-7.1)
HOUSEHOLD INCOME		
Less than \$15,000	6.4	(3.7-9.1)
\$15,000- 24,999	8.9	(6.2-11.6)
\$25,000- 34,999	8.3	(5.6-11)
\$35,000- 49,999	8.5	(6.1-10.9)
\$50,000- 74,999	8.4	(5.9-10.9)
\$75,000+	9.9	(7.9-11.9)

Table 17.2
Binge Drinking Among Iowans, 2011

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	23.1	(21.7-24.5)
SEX		
Male	30.8	(28.6-33)
Female	15.8	(14.2-17.4)
RACE/ETHNICITY		
White/Non-Hisp.	23.5	(22.1-24.9)
Hispanic or other	20.1	(15.4-24.8)
AGE		
18-24	38.8	(33.3-44.3)
25-34	39.5	(35.4-43.6)
35-44	26.0	(22.7-29.3)
45-54	23.5	(20.6-26.4)
55-64	13.8	(11.4-16.2)
65-74	6.3	(4.6-8)
75+	1.7	(0.7-2.7)
EDUCATION		
Less than H.S.	14.9	(10.6-19.2)
H.S. or G.E.D.	22.8	(20.4-25.2)
Some Post-H.S.	26.3	(23.8-28.8)
College Graduate	22.5	(20.1-24.9)
HOUSEHOLD INCOME		
Less than \$15,000	22.5	(17.6-27.4)
\$15,000- 24,999	21.1	(17.4-24.8)
\$25,000- 34,999	22.4	(18.3-26.5)
\$35,000- 49,999	21.6	(18.3-24.9)
\$50,000- 74,999	27.0	(23.5-30.5)
\$75,000+	27.6	(24.9-30.3)

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 in all groups studied was among the 18 to 24 year age group (14.4%). Only two percent of those respondents age 75 and over and other non-Hispanics reported heavy drinking (see table 17.1). There were more heavy drinkers among men than women at all ages (see figure 17.1).

Binge drinking is defined as a man drinking more than five drinks or a woman drinking more than four drinks on one occasion. Among all adult Iowans, 23.1 percent reported at least one binge episode in the last 30 days.

Even with the lessened requirement on females, nearly twice as many males binge drink than females (30.8 percent versus 15.8 percent). In addition, the likelihood of binge drinking decreases with age from 38.8 percent for 18 to 24 year olds to only 1.7 percent 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 17.2). Men are more likely to women to binge drink at all age levels (see figure 17.2).

Comparison with Other States

The prevalence of people reporting heavy drinking in the 50 states and District of Columbia ranges from 3.4 percent to 9.8 percent. Iowa's figure of 8.1 percent is high. The median for the states is 6.6 percent. Only four states report a higher percentage of heavy drinkers than Iowa.

For binge drinking, prevalence ranges from a low of 10 percent to a high of 25 percent with a median of 18.3 percent. Iowa's figure of 23.1 percent is well above the median. There are only three states with a higher prevalence of reported binge drinking. Seven out of eight of the states reporting the highest prevalence of binge drinking are in the upper Midwest.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* goal for the nation for binge drinking is 24.3 percent. This modest goal is met in Iowa with 23.1 percent. The *Healthy Iowans* goal for binge drinking is 16 percent. Iowa exceeded this goal.

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Figure 17.1: Heavy Drinking in Iowa by Age and Sex, 2011

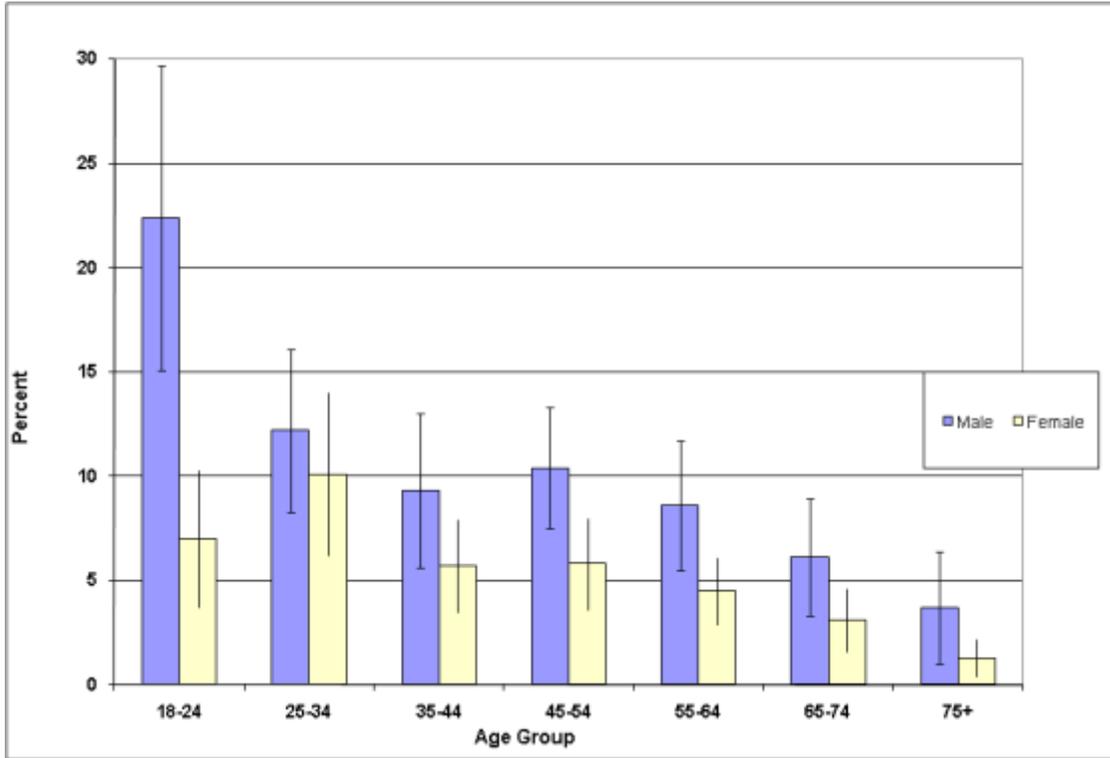
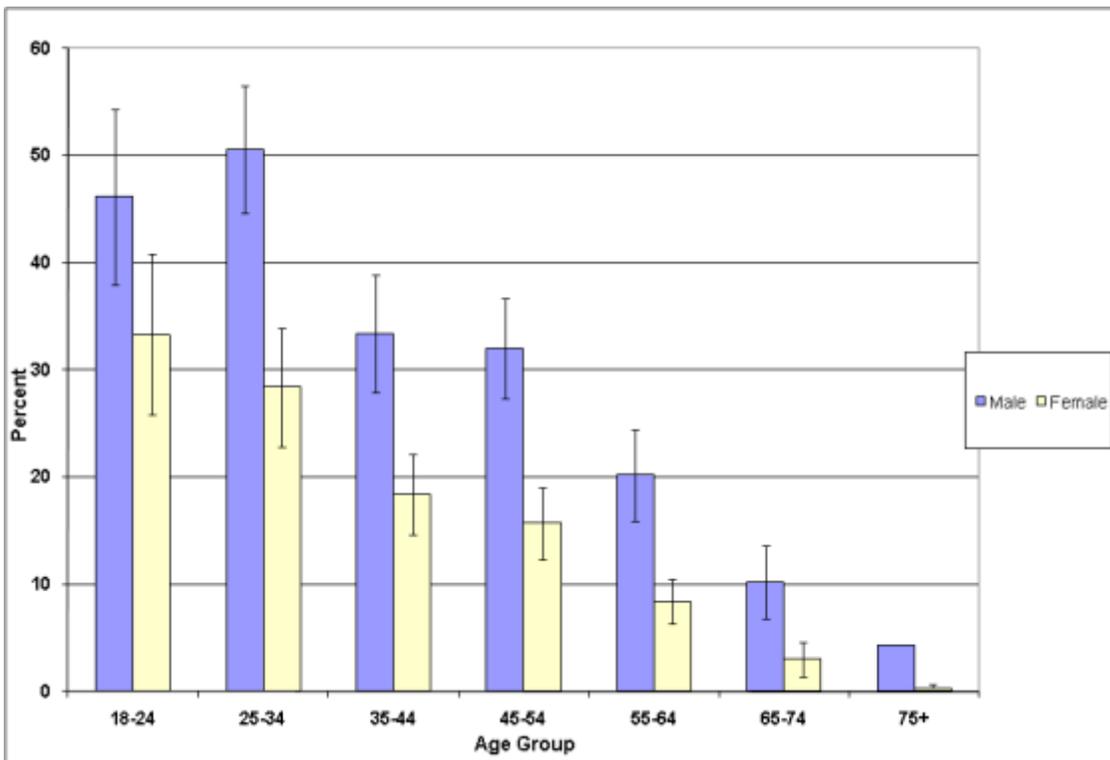


Figure 17.2: Binge Drinking in Iowa by Age and Sex, 2011



18. DISABILITY AND ARTHRITIS

Disability

Background

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

The latest U.S. 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.

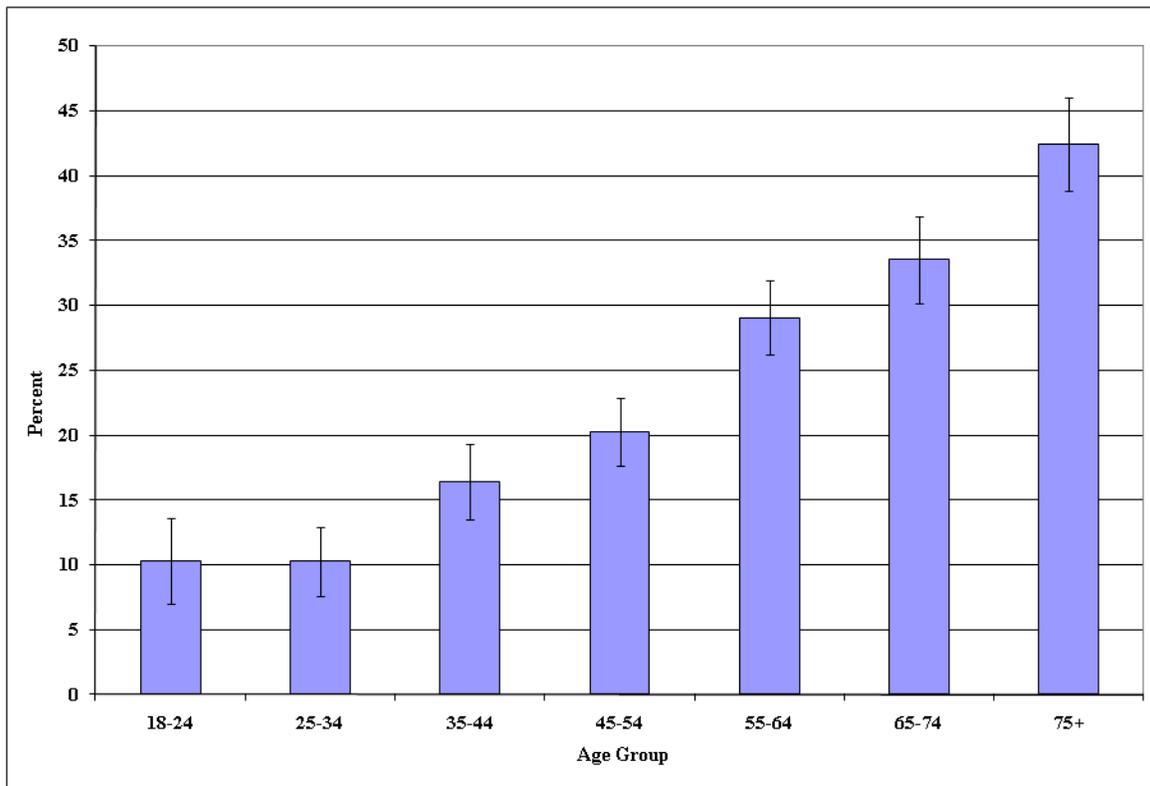
Many disabled Americans use Assistive Technology Devices (ATDs) to accommodate mobility impairments and other sensory and mental impairments. These can allow a person with a disability to work and otherwise live an independent life.

Disability Results

In 2011, 20.2 percent of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. When asked whether they had a health problem requiring the use of special equipment, 6.3 percent of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2011, 21.7 percent, of respondents were considered to have a disability.

As shown in Table 18.1, females, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Of the five demographic variables analyzed, people age 18 to 24 years reported the lowest percentage (10%) with those 25 to 34 years old only slightly higher. Those with household incomes less than \$15,000 reported the highest percentage of disability (48.4%). Many disabled people are unable to work due to their disability. The second highest reporting group was those age 75 and over (43%). This group is the most rapidly growing group in the population.

Figure 18.1: Percent of Iowans with a Disability by Age, 2011



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. Each year, arthritis results in 992,100 hospitalizations and 44 million outpatient visits.¹ 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 by 2030.¹

Self-management education interventions such as the Arthritis Self-Management Program can teach people how to manage arthritis and lessen its effects. It is important that people with arthritis keep physically active. It is possible to live well with arthritis.

Arthritis Results

In 2011, a doctor had told 24.4% 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 Hispanics reported having arthritis than other race/ethnic groups. The

Table 18.1
Percent Reporting Being Disabled,
2011

Demographic Groups	Disabled	
	%	C.I. (95%)
TOTAL	21.7	(20.5-22.8)
SEX		
Male	20.0	(18.3-21.7)
Female	23.2	(21.7-24.8)
RACE/ETHNICITY		
White/Non-Hisp.	21.5	(20.4-22.7)
Non-white or Hisp.	22.9	(18.1-27.6)
AGE		
18-24	10.0	(6.8-13.3)
25-34	10.3	(7.6-12.9)
35-44	16.6	(13.8-19.5)
45-54	20.5	(17.9-23.2)
55-64	29.3	(26.5-32)
65-74	33.7	(30.5-37)
75+	43.0	(39.6-46.4)
EDUCATION		
Less than H.S.	31.7	(26.9-36.5)
H.S. or G.E.D.	23.1	(21.2-25.1)
Some Post-H.S.	20.5	(18.5-22.5)
College Grad.	16.9	(15.2-18.7)
HOUSEHOLD INCOME		
<\$15,000	48.4	(42.9-53.9)
\$15,000- 24,999	30.6	(27.1-34.1)
\$25,000- 34,999	22.4	(19-25.8)
\$35,000- 49,999	18.6	(15.8-21.5)
\$50,000- 74,999	15.7	(13.3-18.1)
\$75,000+	12.7	(10.9-14.6)

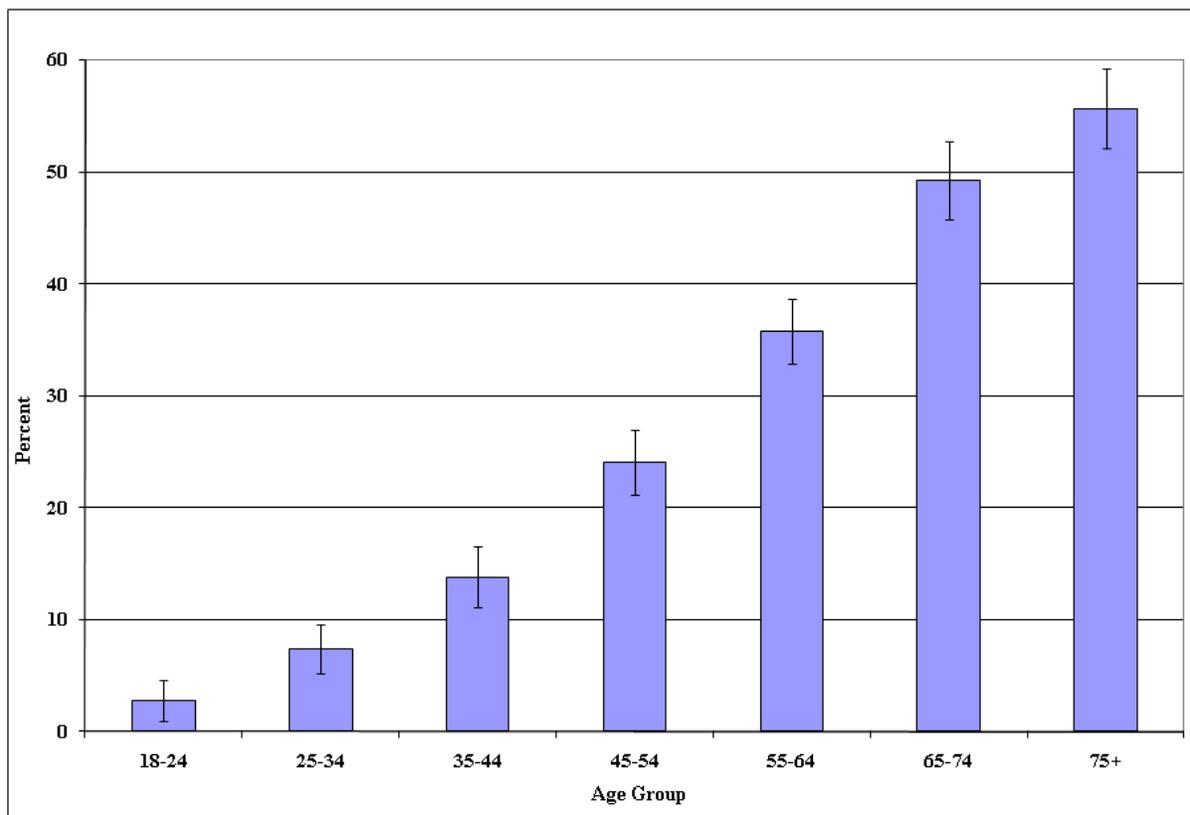
Table 18.2
Percent Having Been Told by a Doctor They
Had Some Form of Arthritis, 2011

DEMOGRAPHIC GROUPS	Told by doctor you have Arthritis	
	%	C.I. (95%)
TOTAL	24.4	(23.2-25.6)
SEX		
Male	20.3	(18.7-21.9)
Female	28.2	(26.6-29.8)
RACE/ETHNICITY		
White/Non-Hispanic	25.0	(23.8-26.2)
Black/non-Hispanic	22.1	(12.9-31.3)
Other/ non-Hispanic	25.9	(17.7-34.1)
Hispanic	7.0	(3.7-10.3)
AGE		
18-24	2.6	(0.8-4.4)
25-34	7.6	(5.2-10)
35-44	14.0	(11.3-16.7)
45-54	24.0	(21.3-26.7)
55-64	35.6	(32.9-38.3)
65-74	48.9	(45.5-52.2)
75+	55.5	(52.1-58.8)
EDUCATION		
Less Than H.S.	33.8	(28.7-38.9)
H.S. or G.E.D.	29.0	(27-31)
Some Post-H.S.	22.5	(20.5-24.5)
College Graduate	16.0	(14.4-17.6)
HOUSEHOLD INCOME		
<\$15,000	39.0	(33.9-44.1)
\$15,000- 24,999	32.2	(28.7-35.7)
\$25,000- 34,999	27.8	(24.1-31.5)
\$35,000- 49,999	22.3	(19.6-25)
\$50,000- 74,999	19.6	(17.1-22.1)
\$75,000+	16.9	(14.9-18.9)

demographic group reporting the highest prevalence of arthritis was people age 75 years and older (55.5%). The group with the lowest prevalence was people age 18 to 24 years old (2.6%) (see table 18.2).

Of people who had been told they had arthritis, 43.6 percent 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, 27 percent 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, 15.2% 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 (17.1%) was 5. These limitations were worse for people with less education or household income.

Figure 18.2: Percent of Iowans with Arthritis by Age, 2011



Comparison with Other States

The percent of people in the 50 states and District of Columbia reporting being disabled ranged from 20.6 percent to 33 percent with a median of 25.8 percent. There were only four states with a lower rate of disability than Iowa at 21.7 percent.

For diagnosed arthritis the range was from 18.2 percent to 35.9 percent. The median of all states was 24.4 percent. Iowa was right at the median. This figure is not too bad considering the high numbers of elderly in Iowa and that the state prevalences are not adjusted to control for differences in age.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* goal for people with arthritis who are limited in their activities is 35.5 percent. For *Healthy Iowans* it is 38 percent. In Iowa, the percent of those with doctor diagnosed arthritis who report being limited is 43.6 percent. This is higher than both Iowa and national goals. *Healthy People 2020* also had the goal of 29.8 percent of people whose work was limited due to arthritis. Only 27 percent of Iowans reported this, so that this goal was achieved. Another national goal was for arthritis sufferers to rate their mean joint pain as 5 on a 10- point scale. The mean rating for Iowans was 4.2 which also was better than the goal.

References

1. Centers for Disease Control and Prevention. Arthritis, Meeting the Challenge of Living Well at a Glance 2012. 2012. Available at <http://www.cdc.gov/nccdphp/publications/AAG/arthritis.htm>.
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19. IMMUNIZATION

Background

Influenza is a potentially life-threatening, contagious disease that is caused by a family of viruses that infect the nose, throat, and lungs. 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 seventh leading cause for people over age 65. Influenza and pneumonia together resulted in more than 50,000 deaths in 2009 in the U.S.⁶ and 557 in Iowa in 2010.⁵

Influenza can vary greatly from year to year in the severity of its impact. For instance, the usual seasonal influenza primarily was a problem for the elderly, while the recent H1N1 pandemic focused more on younger people. 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 percent and 92 percent 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

The Recommendation for annual vaccination against seasonal influenza includes almost everyone in the United States population from six months old and older. . Influenza activity and the Iowa media vaccination campaign “The Flu Ends with U” were monitored by the BRFSS in the first months of 2011, but will not be discussed here.

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,
- Diabetes or other chronic metabolic disorders,
- Severe anemia, or
- Chronic kidney disease,
- 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. Pneumonia is frequently a complication of influenza and is responsible for the vast majority of deaths from the two. In 2009, 1.1 million people in the U.S. were hospitalized with pneumonia and more than 50,000 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, people with respiratory problems such as asthma or COPD, and those with compromised immunity.

Immunization Results

In 2011, 70.2 percent of Iowans age 65 and over reported having a flu shot in the past 12 months. Among all adults, 46.9 percent 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 income, and non-Hispanic Whites were more likely to have a flu immunization. The lowest percentage was found among people between age 18 and 24 years (33%), while the highest was for those age 75 and older (74.4%) (see table 19.1).

In 2011, 70.9 percent of Iowans age 65 and over reported ever having a pneumonia vaccination. Among all adults, 30.6 percent had ever received a pneumonia vaccination. Older people, females, people with less education, and people with lower household incomes, 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 (13.8%), while those 75 years old and older were highest by far (79.2%). The relationship with age was not perfectly linear since the youngest people were somewhat more likely to have had a pneumonia shot than those a few years older (see Table 19.1). Pneumonia vaccination did not really increase with increasing age until age 55. Since it is only recommended for those age 65 years and older except under special conditions, this is not surprising.

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, 68.5 percent had a flu vaccination and 63 percent had a pneumonia vaccination.

Of all those ever told they had asthma, 48.7 percent had their flu vaccination, while 43.9 percent had a pneumonia vaccination.

Table 19.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2011

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	46.8	(45.2-48.4)	30.6	(29.2-32)
SEX				
Male	39.3	(37.1-41.5)	29.0	(26.8-31.2)
Female	54.0	(52-56)	32.1	(30.3-33.9)
RACE/ETHNICITY				
White/Non-Hispanic	47.6	(46-49.2)	31.0	(29.6-32.4)
Non-White or Hisp.	39.5	(33.8-45.1)	24.5	(19.5-29.5)
AGE GROUP				
18-24	31.9	(26.6-37.2)	23.9	(18.4-29.4)
25-34	34.0	(30.1-37.9)	15.4	(12.1-18.7)
35-44	38.1	(34.4-41.8)	14.0	(11.3-16.7)
45-54	42.4	(39.1-45.7)	16.8	(14.3-19.3)
55-64	57.3	(54.2-60.4)	29.4	(26.5-32.3)
65-74	66.2	(62.7-69.7)	62.8	(59.4-66.3)
75+	74.6	(71.2-77.9)	79.8	(76.8-82.8)
EDUCATION				
Less than H.S.	36.3	(30.6-42)	35.5	(29.8-41.2)
H.S. or G.E.D.	45.1	(42.6-47.6)	34.2	(31.8-36.6)
Some Post-H.S.	46.0	(43.3-48.7)	28.4	(26-30.8)
College Graduate	55.1	(52.6-57.6)	26.3	(23.9-28.7)
HOUSEHOLD INCOME				
Less than \$15,000	40.5	(35-46)	43.3	(37.4-49.2)
\$15,000- 24,999	46.2	(42.1-50.3)	39.5	(35.4-43.6)
\$25,000- 34,999	44.6	(39.9-49.3)	33.8	(29.3-38.3)
\$35,000- 49,999	45.4	(41.5-49.3)	28.6	(25.1-32.1)
\$50,000- 74,999	48.8	(45.1-52.5)	25.8	(22.5-29.1)
\$75,000+	49.3	(46.4-52.2)	20.0	(17.6-22.4)

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 the District of Columbia was 61.3 percent in 2011. The range was from 51.8 percent to 70.2 percent. Iowa had the highest value in the nation for people 65 years and over having a flu shot in the past year.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 70 percent. The range was from 62.5 percent to 76 percent. Iowa's value of 70.9 percent is above the median.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* and *Healthy Iowans*, goals for having a flu shot in the past 12 months and ever having a pneumonia vaccination for people age 65 and over are both 90%. Although much higher than the nation as a whole, Iowa's 2011 figures of 70.2 percent for having a flu shot and 70.9 percent for ever having a pneumonia vaccination have a long way to go to meet these targets. The *Healthy People 2020* goal for flu immunization of people age 18 to 64 is 80 percent. Iowa misses this by an even greater amount having an immunization prevalence of only 41.2 percent. The *Healthy People 2020* goal for ever having a pneumonia vaccination for people age 18 to 64 is 60 percent. Iowa's pneumonia vaccination rate also is greatly lower than this with only 19.7 percent.

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20. HIV/AIDS

Background

HIV stands for human immunodeficiency virus. This is the virus that causes acquired immunodeficiency syndrome (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 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 30 years.³ The most recent estimates suggest that 33.3 million persons were living with HIV infection worldwide at the end of 2009. In the United States, CDC estimates that 1,178,350 persons were living with HIV at the end of 2008, with 594,496 having died from AIDS. Over one fifth of these people living with HIV do not know that they are infected.¹ Not knowing puts them and others at risk.

From 2007 through 2010, the estimated numbers of annual diagnoses of HIV infection in the 46 states with confidential name-based HIV infection reporting remained stable. In 2010, the estimated rate of diagnoses of HIV infection in the 46 states was 16.1 per 100,000 population.¹

Groups with the largest exposure include “men who have sex with men”, injection drug users, African Americans, and Hispanics. 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 and Hispanics 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 60 percent of HIV diagnoses and persons living with HIV/AIDS.⁵

HIV/AIDS prevalence continues to increase in Iowa. There were 1,828 persons living with HIV/AIDS who were diagnosed in Iowa on December 31, 2010, up from 1,733 a year earlier.⁵

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.⁶ 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.⁶

CDC recommends routine HIV testing in health care settings. People need to get tested so they can get treated and not infect others. Being tested will save their lives and the lives of other people.⁴ Treatment for HIV is better than ever before.

HIV/AIDS Results

In 2011 26.5 percent of all adult respondents reported ever being tested for HIV, not including as part of a blood donation. It is not possible to determine a trend with this figure not only because of the change in weighting methodology but also because people over age 65 years are included for the first time this year. If people over age 65 years are not included the prevalence of HIV testing is 31.6 percent.

Females, non-White or Hispanic race/ethnicity, younger people except those under 25 years, 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 (46.8%). The smallest proportion

Table 20.1: Percentage of Iowans Tested for HIV/AIDS, 2011

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	26.5	(25.1-27.8)
SEX		
Male	24.0	(22-26)
Female	28.9	(27-30.8)
RACE/ETHNICITY		
Non-Hispanic White	24.8	(23.4-26.2)
Non-White or Hisp.	44.1	(38.3-49.9)
AGE		
18-24	26.8	(21.9-31.7)
25-34	46.8	(42.7-50.9)
35-44	43.6	(39.7-47.5)
45-54	25.8	(22.9-28.7)
55-64	14.6	(12.4-16.8)
65-74	7.5	(5.7-9.3)
75+	3.0	(1.8-4.1)
EDUCATION		
Less than H.S.	27.4	(21.9-33)
H.S. or G.E.D.	20.9	(18.7-23.2)
Some Post-H.S.	29.8	(27.3-32.4)
College Graduate	29.3	(26.9-31.7)
HOUSEHOLD INCOME		
<\$15,000	39.3	(33.6-44.9)
\$15,000- 24,999	29.9	(26-33.7)
\$25,000- 34,999	23.8	(19.6-28.1)
\$35,000- 49,999	26.2	(22.4-29.9)
\$50,000- 74,999	26.9	(23.5-30.3)
\$75,000+	27.0	(24.5-29.6)

reporting ever being tested was three percent of those age 75 years and older (see table 20.1). This is the first year people age 65 years and older have even been asked this question.

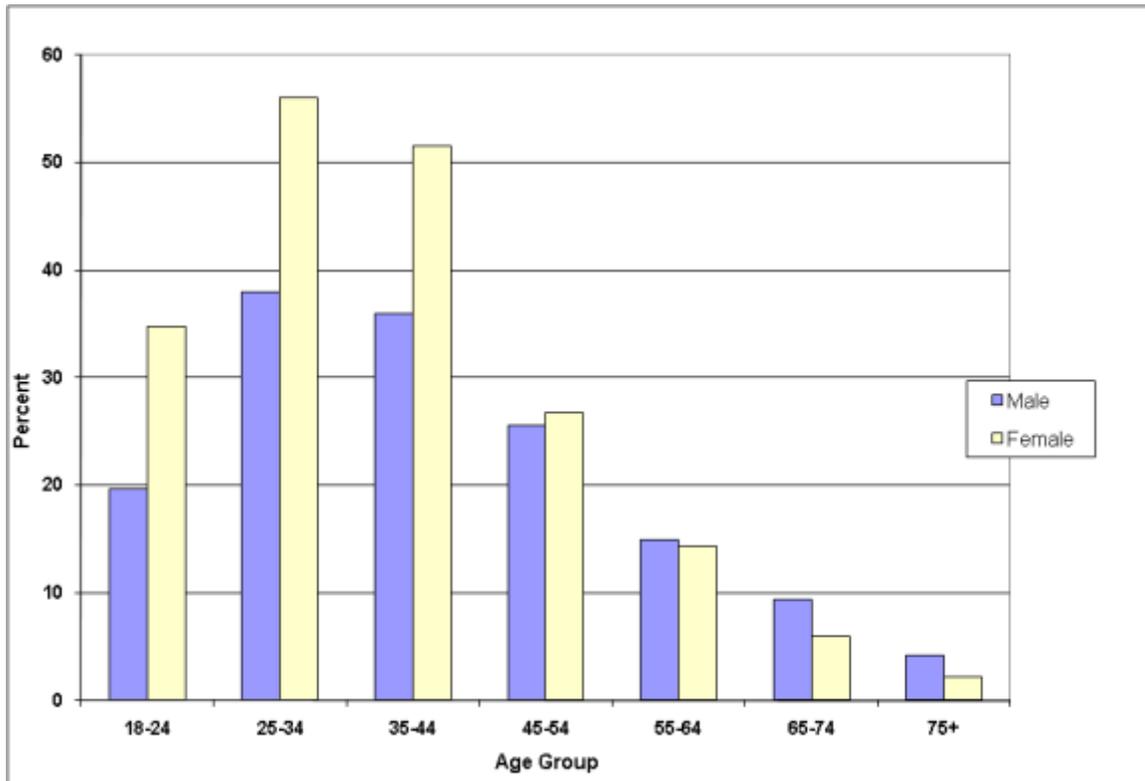
There is an interesting interaction between sex and age. Figure 20.1 shows that in people younger than age 45 years, many more women have been tested, while there is little difference in the older age groups.

Finally, respondents 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 2.6 percent said that at least one of these statements applied to them. These respondents would have a very high risk of contracting HIV.

Comparison with Other States

The percentage of people who had a test for HIV ranged from 24.5 percent to 67.9 percent. The median percentage of people tested was 34.5 percent. There were only four states with a lower percentage than Iowa being tested at 26.5 percent. Five out of six of the lowest tested states were in the upper Midwest.

Figure 20.1: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2011



Health Objectives for the Nation

Healthy People 2020 has the goal of 16.9 percent of adults age 18 to 44 being tested for HIV in the past 12 months. Iowa had a level of 9.9 percent. This is much below this goal.

References

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APPENDIX 1

Year 2020 Health Objectives for the Nation: State Summary of BRFSS¹ Data for 2011

STATE: Iowa

Healthy People 2020 ² Objective ³	Yr 2020 Target	State, 2011
Health Insurance (Objective #AHS-1.1) Ages >18	100%	88.3%
Specific Source of Ongoing Primary Care (Objective #AHS-5.3) Ages >18 & < 65	89.4%	72.4%
Specific Source of Ongoing Primary Care (Objective #AHS-5.4) Age > 65	100%	85.6%
Mean Level of Joint Pain Due to Arthritis (Objective #AOCBC-1) Adults with Doctor-Diagnosed Arthritis, Ages > 18	5.0	4.2
Limitation in Activities Due to Arthritis (Objective #AOCBC-2) Adults with Doctor-Diagnosed Arthritis, Ages > 18	35.5%	43.6%
Limitation in Ability to Work for Pay Due to Arthritis (Objective AOCBC-6.2) Adults with Doctor-Diagnosed Arthritis, Ages 18-64	29.8%	27%
Chronic Kidney Disease (Objective #CKD-1)	13.6%	1.5%
Increase the proportion of adults with diabetes who have an annual dilated eye examination (Objective #D-10)	58.7%	76.3%
Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year (Objective #D-11)	71.1%	75.6%
Increase the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily (Objective #D-13)	70.4%	61.9%
Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education (Objective #D-14)	62.5%	63.2%
Reduce the proportion of adults with hypertension (Objective #HDS-5.1)	26.9%	29.9%
Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years (Objective #HDS-6)	82.1%	73.7%
High Cholesterol Levels (Objective #HDS-7) Ages > 20	13.5%	30.8%
Increase the proportion of adults with hypertension who are taking the prescribed medications to lower their blood pressure (Objective #HDS-11)	77.4%	77%

Healthy People 2020 ² Objective ³	Yr 2020 Target	State, 2011
Tested for HIV in Past 12 Months (Objective #HIV-14.1) Ages 18-44	16.9%	16.9% 9.9%
Seasonal Influenza Immunization, Within Past Year (Objective #IID-12.5) Ages 18 – 64 non-institutionalized	80%	41.2%
Influenza Immunization, Within Past Year (Objective #IID-12.7) Ages >65 non-institutionalized	90%	70.2%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #IID-13.2) Ages 18 – 64 non-institutionalized	60%	19.2%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #IID-13.1) Ages >65 non-institutionalized	90%	70.9%
Safety Belt Use (Objective #IVP-15) Ages >18	92.4%	95.9%
Major Depressive Episodes (Objective #MHMD-4.2) Ages >18	6.1%	15.2%
Increase the proportion of adults who are at a healthy weight (Objective #NWS-8) Age >20	33.9%	32.2%
Reduce Obesity, BMI \geq 30 (Objective NWS-9) Ages >20	30.6%	29.8%
No Leisure Time Physical Activity (Objective #PA-1) Ages >18	32.6%	25.9%
Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination (Objective #PA-2.1) Ages >18	47.9%	47.6%
Muscle-Strengthening Activities on 2 or More Days of the Week (Objective #PA-2.3) Ages >18	24.1%	27.5%
Binge Drinking, During the Past Month (Objective #SA-14.3) Ages >18	24.3%	23.4%
Cigarette Smoking (Objective #TU-1.1) Ages >18	12%	20.3%
Smokeless Tobacco Use (Objective #TU-1.2) Ages >18	0.3%	4.2%
Increase smoking cessation attempts by adult smokers (Objective #TU-4.1) Ages >18	80%	55%
Increase recent smoking cessation success by adult smokers 6 Mo. to 1 Yr. (Objective #TU-4.1) Ages >18	8%	4.3%

¹ Behavioral Risk Factor Surveillance System

² Public Health Service. Healthy People 2020: National Health Promotion and Disease Prevention Objectives--full report with commentary. Washington, DC: U.S. Department of Health and Human Services, 2010.

³ In some cases, BRFSS definitions of objectives differ slightly from those in Healthy People 2020. See Healthy People 2020 for the exact definition of the objective.

APPENDIX 2

Health Objectives for Iowa: State Summary of BRFSS¹ Data for 2011

Healthy Iowans ² Objective ³	Yr 2016 Target	Iowa, 2011
An increase in the proportion of people with health insurance Ages 18 – 64	100%	85.6%
An increase in the proportion of people who have one person as a health provider	87%	75%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	70.2%
Pneumonia Vaccination, Ever Had Ages >= 65	90%	70.9%
A reduction in adult binge drinking	16%	23.4%
A reduction in adult tobacco use (Cigarette Smoking)	15%	20.4%
An increase in the proportion of homes that have rules against smoking	87%	82.6%
A decrease in the number of persons with doctor-diagnosed arthritis who experience limitations in activity due to arthritis and other joint symptoms	38%	43.6%
People with diabetes receiving annual dilated eye exams	85%	76.3%
An increase in the proportion of persons with high blood pressure who are taking their medication	75%	77%
An increase in the percentage of persons who eat five or more servings of fruits and vegetables each day	20%	13.5%
An increase in the proportion of adults who get the recommended levels of physical activity	55%	47.6%
A reduction in the proportion of adults who are obese	27%	29%
An increase in seatbelt usage to reduce injuries and deaths from motor vehicle crashes	96%	95.9%

¹Behavioral Risk Factor Surveillance System

²Iowa Department of Public Health. Healthy Iowans: Iowa's Health Improvement Plan 2012-2016.

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

APPENDIX 3

Iowa 2011 Behavioral Risk Factor Surveillance System Questionnaire

Section 1: Health Status

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

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

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

2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

___ Number of days
8 8 None

2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?

___ Number of days
8 8 None **If Q2.1 also "None", skip to next module**

If Q2.1 and Q2.2=88 (None), go to next section.

2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

___ Number of days
8 8 None

Section 3: Health Care Access

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

- 1 Yes
- 2 No

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

If "No," ask: "Is there more than one, or is there no person who you think of as your personal doctor or health care provider?"

- 1 Yes, only one
- 2 More than one
- 3 No

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

- 1 Yes
- 2 No

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

- 1 Within past yr (any time 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: Hypertension Awareness

4.1. Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?

Read only if necessary:

By "other health professional" we mean a nurse practitioner, a physician's assistant, or some other licensed health professional.

- 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

4.2. Are you currently taking medicine for your high blood pressure?

- 1 Yes
- 2 No

Section 5: Cholesterol Awareness

5.1. 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**

5.2. 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

5.3. Have you ever been told by a doctor, nurse or other health professional that your blood cholesterol is high?

- 1 Yes
- 2 No

Section 6: Chronic Health Conditions

Now I would like to ask you some questions about general health conditions. 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."

6.1. (Ever told) you had a heart attack, also called a myocardial infarction?

- 1 Yes
- 2 No

6.2. (Ever told) you had angina or coronary heart disease?

- 1 Yes
- 2 No

6.3: (Ever told) you had a stroke?

- 1 Yes
- 2 No

6.4. Have you ever been told by a doctor, nurse or other health professional that you had asthma?

- 1 Yes
- 2 No ⇒ **Go to Q6.6**

6.5: Do you still have asthma?

- 1 Yes
- 2 No

6.6. (Ever told) you had skin cancer?

- 1 Yes
- 2 No

6.7. (ever told) you had any other types of cancer?

- 1 Yes
- 2 No

6.8. (Ever told) you have (COPD) chronic obstructive pulmonary disease, emphysema or chronic bronchitis?

- 1 Yes
- 2 No

6.9. Ever told) you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?

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)

- 1 Yes
- 2 No

6.10. (Ever told) you have a depressive disorder (including depression, major depression, dysthymia, or minor depression)?

- 1 Yes
- 2 No

6.11. (Ever told) you have kidney disease? Do NOT include kidney stones, bladder infection or incontinence.

INTERVIEWER NOTE: Incontinence is not being able to control urine flow.

- 1 Yes
- 2 No

6.12. (Ever told) you have vision or eye problems?

- 1 Yes
- 2 No

6.13. 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 Q6.13 (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 Q6.13 = 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 Q6.13 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 (any time 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: **Tobacco Use**

7.1: Have you smoked at least 100 cigarettes in your entire life?

5 packs = 100 cigarettes

- 1 Yes
- 2 No ⇒ **Go to Q7.5**

7.2: Do you now smoke cigarettes every day, some days, or not at all?

- 1 Every day
- 2 Some days
- 3 Not at all ⇒ **Go to Q7.4**

7.3: During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?

- 1 Yes **Go to Q7.5**
- 2 No **Go to Q7.5**

7.4: 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

7.5: 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. Snus (rhymes with 'goose')

- 1 Every day
- 2 Some days
- 3 Not at all

Section 8: Demographics

8.1: What is your age?

__ __ Code age in years

8.2: Are you Hispanic or Latino?

- 1 Yes
- 2 No

8.3: 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 Q8.3, continue. Otherwise, go to Q8.5

8.4: 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]

8.5 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

8.6: Are you:

- 1 Married
- 2 Divorced
- 3 Widowed
- 4 Separated
- 5 Never married or
- 6 A member of an unmarried couple

8.7: How many children less than 18 years of age live in your household?

Number of children

8 8 None

8.8: 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)

8.9: 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

8.10: 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

8.11: 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 Q8.11 = 7777 (Don't know/Not sure) or 9999 (Refused), skip Q8.13 and Q8.14).

8.12: 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

8.13: What county do you live in?

__ __ __ County name

8.14: What is your ZIP Code where you live?

__ - __ __ __ ZIP Code

8.15: 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 8.17**

- 8.16: How many of these are residential numbers?
 ___ Residential telephone numbers [6=6 or more]
- 8.17: Do you have a cell phone for personal use? Please include cell phones used for both **business and personal use**.
 1 Yes ⇒ **Go to 8.19**
 2 No
- 8.18. Do you share a cell phone for personal use (at least one-third of the time) with other adults?
 1 Yes
 2 No
- 8.19. Do you usually share this cell phone (at least one-third of the time) with any other adults?
 1 Yes
 2 No
- 8.20 Thinking about all the phone calls that you receive on your landline and cell phone, what percent, between 0 and 100, are received on your cell phone?
 ___ Enter percent (1 to 100)
 8 8 8 Zero
- 8.21. Do you own or rent your home?
 1 Own
 2 Rent
 3 Other arrangement
- 8.22: 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**
- 8.23: To your knowledge, are you now pregnant?
 1 Yes
 2 No

Section 9: Fruits and Vegetables

These next questions are about the fruits and vegetables you ate or drank during the past 30 days. Please think about all forms of fruits and vegetables including cooked or raw, fresh, frozen or canned. Please think about all meals, snacks, and food consumed at home and away from home.

I will be asking how often you ate or drank each one: for example, once a day, twice a week, three times a month, and so forth.

INTERVIEWER NOTE: If respondent responds less than once per month, put "0" times per month. If respondent gives a number without a time frame, ask: "Was that per day, week, or month?"

- 9.1 During the past month, how many times per day, week, or month did you drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.
 1 ___ Per day
 2 ___ Per week
 3 ___ Per month
 5 5 5 Never

INTERVIEWER NOTE: Do not include fruit drinks with added sugar or other added sweeteners like Kool-aid, Hi-C, lemonade, cranberry cocktail, Tampico, Sunny Delight, Snapple, Fruitopia, Gatorade, Power-Ade, or yogurt drinks.

Do not include fruit juice drinks that provide 100% daily vitamin C but include added sugar.

Do not include vegetable juices such as tomato and V8 if respondent provides but include in "other vegetables" question 9.6.

DO include 100% pure juices including orange, mango, papaya, pineapple, apple, grape (white or red), or grapefruit. Only count cranberry juice if the R perception is that it is 100% juice with no sugar or artificial sweetener added. 100% juice blends such as orange-pineapple, orange-tangerine, cranberry-grape are also acceptable as are fruit-vegetable 100% blends. 100% pure juice from concentrate (i.e., reconstituted) is counted.

- 9.2. During the past month, not counting juice, how many times per day, week, or month did you eat fruit? Count fresh, frozen, or canned fruit
 1 ___ Per day
 2 ___ Per week
 3 ___ Per month
 5 5 5 Never

Read only if necessary: "Your best guess is fine. Include apples, bananas, applesauce, oranges, grape fruit, fruit salad, watermelon, cantaloupe or musk melon, papaya, lychees, star fruit, pomegranates, mangos, grapes, and berries such as blueberries and strawberries."

INTERVIEWER NOTE: Do not count fruit jam, jelly, or fruit preserves.

Do not include dried fruit in ready-to-eat cereals.

Do include dried raisins, cran-raisins if respondent tells you - but due to their small serving size they are not included in the prompt.

Do include cut up fresh, frozen, or canned fruit added to yogurt, cereal, jello, and other meal items.

Include culturally and geographically appropriate fruits that are not mentioned (e.g. genip, soursop, sugar apple, figs, tamarind, bread fruit, sea grapes, carambola, longans, lychees, akee, rambutan, etc.).

- 9.3. During the past month, how many times per day, week, or month did you eat cooked or canned beans, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu or lentils. Do NOT include long green beans.
 1 ___ Per day
 2 ___ Per week
 3 ___ Per month
 5 5 5 Never

Read only if necessary: "Include round or oval beans or peas such as navy, pinto, split peas, cow peas, hummus, lentils, soy beans and tofu. Do NOT include long green beans such as string beans, broad or winged beans, or pole beans."

Interviewer NOTE: Include soybeans also called edamame, tofu (bean curd made from soybeans), kidney, pinto, hummus, lentils, black, black-eyed peas, cow peas, lima beans and white beans.

Include bean burgers including garden burgers and veggie burgers.

Include falafel and tempeh.

- 9.4 During the past month, how many times per day, week, or month did you eat dark green vegetables for example broccoli or dark leafy greens including romaine, chard, collard greens or spinach?
 1 ___ Per day
 2 ___ Per week
 3 ___ Per month
 5 5 5 Never

INTERVIEWER NOTE: Each time a vegetable is eaten it counts as one time.

INTERVIEWER NOTE: Include all raw leafy green salads including spinach, mesclun, romaine lettuce, bok choy, dark green leafy lettuce, dandelions, komatsuna, watercress, and arugula.

Do not include iceberg (head) lettuce if specifically told type of lettuce. Include all cooked greens including kale, collard greens, choys, turnip greens, mustard greens.

- 9.5. During the past month, how many times per day, week, or month did you eat orange-colored vegetables such as sweet potatoes, pumpkin, winter squash, or carrots?
- 1 __ Per day
 2 __ Per week
 3 __ Per month
 5 5 5 Never

Read only if needed: “Winter squash have hard, thick skins and deep yellow to orange flesh. They include acorn, buttercup, and spaghetti squash.”

FOR INTERVIEWER: Include all forms of carrots including long or baby-cut.

Include carrot-slaw (e.g. shredded carrots with or without other vegetables or fruit).

Include all forms of sweet potatoes including baked, mashed, casserole, pie, or sweet potatoes fries.

Include all hard-winter squash varieties including acorn, autumn cup, banana, butternut, buttercup, delicate, hubbard, kabocha (Also known as an Ebisu, Delica, Hoka, Hokkaido, or Japanese Pumpkin; blue kuri), and spaghetti squash. Include all forms including soup.

Include pumpkin, including pumpkin soup and pie. Do not include pumpkin bars, cake, bread or other grain-based desert-type food containing pumpkin (i.e. similar to banana bars, zucchini bars we do not include).

- 9.6. Not counting what you just told me about, during the past month, about how many times per day, week, or month did you eat OTHER vegetables? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes.
- 1 __ Per day
 2 __ Per week
 3 __ Per month
 5 5 5 Never

Read only if needed: “Do not count vegetables you have already counted and do not include fried potatoes.”

INTERVIEWER NOTE: Include corn, peas, tomatoes, okra, beets, cauliflower, bean sprouts, avocado, cucumber, onions, peppers (red, green, yellow, orange); all cabbage including American-style cole-slaw; mushrooms, snow peas, snap peas, broad beans, string, wax-, or pole-beans.

Include any form of the vegetable (raw, cooked, canned, or frozen).

Do not include products consumed usually as condiments including ketchup, catsup, salsa, chutney, relish.

Do include tomato juice if respondent did not count in fruit juice.

Include culturally and geographically appropriate vegetables that are not mentioned (e.g. daikon, jicama, oriental cucumber, etc.).

Do not include rice or other grains.

Section 10: Exercise (Physical Activity)

The next few questions are about exercise, recreation, or physical activities other than your regular job duties.

INTERVIEWER INSTRUCTION: If respondent does not have a “regular job duty” or is retired, they may count the physical activity or exercise they spend the most time doing in a regular month.

- 10.1: 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

- 10.2. What type of physical activity or exercise did you spend the most time doing during the past month?

__ (Specify) [See Coding List A]

INTERVIEWER INSTRUCTION: If the respondent’s activity is not included in the Coding List A, choose the option listed as “Other “.

INTERVIEWER NOTE: Housework may be included as a physical activity or exercise spent and can be coded as “Other”.

- 10.3. How many times per week or per month did you take part in this activity during the past month?
- 1 __ Times per week
 2 __ Times per month

- 10.4. And when you took part in this activity, for how many minutes or hours did you usually keep at it?
- _: __ Hours and minutes

- 10.5. What other type of physical activity gave you the next most exercise during the past month?
- __ (Specify) [See Coding List A]
- INTERVIEWER INSTRUCTION: If the respondent’s activity is not included in the Coding List A, choose the option listed as “Other”.**
- INTERVIEWER NOTE: Housework may be included as a physical activity or exercise spent and can be coded as “Other”.**

- 10.6. How many times per week or per month did you take part in this activity during the past month?
- 1 __ Times per week
 2 __ Times per month

- 10.7. And when you took part in this activity, for how many minutes or hours did you usually keep at it?
- _: __ Hours and minutes

- 10.8. During the past month, how many times per week or per month did you do physical activities or exercises to STRENGTHEN your muscles? Do NOT count aerobic activities like walking, running, or bicycling. Count activities using your own body weight like yoga, sit-ups or push-ups and those using weight machines, free weights, or elastic bands.
- 1 __ Times per week
 2 __ Times per month
 8 8 8 Never

Section 11: Disability

The following questions are about health problems or impairments you may have.

- 11.1: Are you limited in any way in any activities because of physical, mental, or emotional problems?
- 1 Yes
 2 No

- 11.2: 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 12: Arthritis Burden

If Q6.9 = 1 (yes) then continue, else go to next section.

Next I will ask you about arthritis.

Arthritis can cause symptoms like pain, aching, or stiffness in or around a joint.

- 12.1. 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: Q12.2 should be asked of all respondents regardless of employment status.

- 12.2: 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.”

- 12.3: 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?
- 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.”

- 12.4: 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 13: Seatbelt Use

- 13.1. How often do you use seatbelts when you drive or ride in a car? Would you say—
- 1 Always
2 Nearly always
3 Sometimes
4 Seldom
5 Never
8 Never drive or ride in a car

Section 14: Immunization

- 14.1: Now I will ask you questions about seasonal flu vaccine. There are two ways to get the seasonal flu vaccine, one is a shot in the arm and the other is a spray, mist, or drop in the nose called FluMist™. During the past 12 months, have you had either a seasonal flu shot or a seasonal flu vaccine that was sprayed in your nose?
- 1 Yes
2 No ⇒ **Go To 14.4**
- 14.2: During what month and year did you receive your most recent flu shot injected into your arm or flu vaccine that was sprayed in your nose?
- __ _ / __ _ _ _ _ Month / Year

- 14.3: At what kind of place did you get your last flu shot/vaccine?
- 0 1 A doctor’s office or health maintenance organization (HMO)
0 2 A health department
0 3 Another type of clinic or health center (Example: a community health center)
0 4 A senior, recreation, or community center
0 5 A store (Examples: supermarket, drug store)
0 6 A hospital (Example: inpatient)
0 7 An emergency room
0 8 Workplace
0 9 Some other kind of place
1 0 RECEIVED VACCINATION/CANADA/MEXICO (VOLUNTEERED–DON’T TREAD)
1 1 A school

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

Section 15: Alcohol Consumption

- 15.1: 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**

- 15.2: 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

- 15.3: 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

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

Section 16: HIV/AIDS

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.

- 16.1: 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 Q16.3**

- 16.2: 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

- 16.3. 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

Module 4: Sugar Sweetened Beverages and Menu Labeling

1. About how often do you drink regular soda or pop that contains **sugar**?

Do not include diet soda or diet pop.

- 1 __ Times per day
- 2 __ Times per week
- 3 __ Times per month
- 8 8 8 Never

2. About how often do you drink sweetened fruit drinks, such as Kool-aid, cranberry, and lemonade? Include fruit drinks you made at home and added sugar to.

- 1 __ Times per day
- 2 __ Times per week
- 3 __ Times per month
- 8 8 8 Never

3. The next question is about eating out at fast food and chain restaurants. When calorie information is available in the restaurant, how often does this information help you decide what to order?

- 0 1 Always
- 0 2 Most of the time
- 0 3 About half the time
- 0 4 Sometimes
- 0 5 Never
- 0 6 Never noticed or never looked for calorie information
- 0 8 Usually cannot find calorie information
- 5 5 Do not eat at fast food or chain restaurants

Module 22: Chronic Obstructive Pulmonary Disease (COPD)

CATI NOTE: If core Q6.8 = 1 (Yes) then continue, else go to next module.

Earlier you said that you had been diagnosed with chronic obstructive pulmonary disease (COPD).

1. Have you ever been given a breathing test to diagnose your COPD, chronic bronchitis, or emphysema?

- 1 Yes
- 2 No

2. Would you say that shortness of breath affects the quality of your life?

- 1 Yes
- 2 No

3. Other than a routine visit, have you had to see a doctor in the past 12 months for symptoms related to shortness of breath, bronchitis, or other COPD, or emphysema flare?

- 1 Yes
- 2 No

4. Did you have to visit an emergency room or be admitted to the hospital in the past 12 months because of your COPD, chronic bronchitis, or emphysema?

- 1 Yes
- 2 No

5. How many different medications do you currently take each day to help with your COPD, chronic bronchitis, or emphysema?

__ Number (00-76)

State Added Smoking

If core question 7.1 is 'yes' continue, else skip to next module

1. 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 Next Module

3 No, haven't smoked cigarettes in the past year

⇒ Go to Next Module

2. 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

The next two questions are about smoking rules for your household.

1. Not counting decks, porches, or garages, inside your home, is smoking...?

INTERVIEWER NOTE: The order of the response categories for this question is being randomly reversed.

- 1 Always Allowed
- 2 Allowed only at **some** times or in **some** places
- 3 Never allowed
- 6 Family does not have a smoking policy

2. Not counting motorcycles, in the vehicles that you or family members who live with you own or lease, is smoking...

INTERVIEWER NOTE: The order of the response categories for this question is being randomly reversed.

- 1 Always allowed in all vehicles
- 2 Sometimes allowed in at least one vehicle
- 3 Never allowed in any vehicle
- 6 Family does not have a vehicle smoking policy
- 8 Respondent's family does not own or lease a vehicle

CATI note: If

State Added Provider Advise on Tobacco Use

Ask only if Q7.2 = 1 or 2 OR Q7.5 = 1 or 2, otherwise skip to Module 27

1. In the past 12 months, have you seen a doctor, dentist, nurse, or other health professional?

- 1 Yes
- 2 No ⇒ Go to Module 27

2. In the past 12 months, did any doctor, dentist, nurse, or other health professional advise you to quit smoking cigarettes or using any other tobacco products?

- 1 Yes
- 2 No ⇒ Go to Module 27

3. The last time a health professional advised you to quit using tobacco, did they also offer any assistance, information, or additional advice to help you quit?

- 1 Yes
- 2 No

Module 27: Cognitive Impairment

The next few questions ask about difficulties in thinking or remembering that can make a big difference in everyday activities. This does not refer to occasionally forgetting your keys or the name of someone you recently met. This refers to things like confusion or memory loss that are happening more often or getting worse. We want to know how these difficulties impact you or someone in your household.

1. During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?

- 1 Yes
- 2 No

CATI NOTE: If Q1 = 1 and Q2 > 6, go to Q4.

CATI note: If 1 adult in household and Q1 = 1 (Yes), go to Q4; otherwise, go to next module.

CATI note: If number of adults > 1, go to Q2.

2. [If Q1 = 1]; Not including yourself, how many adults 18 or older in your household experienced confusion or memory loss that is happening more often or is getting worse during the past 12 months?

_____ Number of people [6 = 6 or more]

8 NONE

CATI note: If number of adults > 1 and Q2 < 7; continue. Otherwise, go to next module.

CATI note: If Q2 < 7; go to Q3. Otherwise, go to next module.

3. Of these people, please select the person who had the most recent birthday. How old is this person?

- 0 1 Age 18-29
- 0 2 Age 30-39
- 0 3 Age 40-49
- 0 4 Age 50-59
- 0 5 Age 60-69
- 0 6 Age 70-79
- 0 7 Age 80-89
- 0 8 Age 90 +

CATI note: If Q1 ≠ 1 (Yes); read: "For the next set of questions we will refer to the person you identified as 'this person'."

INTERVIEWER NOTE: Repeat definition only as needed: "For these questions, please think about confusion or memory loss that is happening more often or getting worse."

4. During the past 12 months, how often [If Q1 = 1 (Yes): insert "have you;" otherwise, insert "has this person"] given up household activities or chores [If Q1 = 1 (Yes): insert "you;" otherwise, insert "they"] used to do, because of confusion or memory loss that is happening more often or is getting worse?

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 **Never**

5. As a result of [If Q1 = 1 (Yes): insert "your;" otherwise, insert "this person's"] confusion or memory loss, in which of the following four areas [If Q1 = 1 (Yes): insert "do you;" otherwise, insert "does this person"] need the MOST assistance?

- 1 Safety [read only if necessary: such as forgetting to turn off the stove or falling]
- 2 Transportation [read only if necessary: such as getting to doctor's appointments]
- 3 Household activities [read only if necessary: such as managing money or housekeeping]
- 4 Personal care [read only if necessary: such as eating or bathing]
- 5 Needs assistance, but not in those areas
- 6 Doesn't need assistance in any area

6. During the past 12 months, how often has confusion or memory loss interfered with [If Q1 = 1 (Yes): insert "your;" otherwise, insert "this person's"] ability to work, volunteer, or engage in social activities?

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 Never

7. During the past 30 days, how often [If Q1 = 1 (Yes): insert "has;" otherwise, insert "have you,"] a family member or friend provided any care or assistance for [If Q1 = 1 (Yes): insert "you;" otherwise, insert "this person"] because of confusion or memory loss?

- 1 Always
- 2 Usually
- 3 Sometimes
- 4 Rarely
- 5 Never

8. Has anyone discussed with a health care professional, increases in [If Q1 = 1 (Yes): insert "your;" otherwise, insert "this person's"] confusion or memory loss?

- 1 Yes
- 2 No ⇒ **Go to next module**

9. [If Q1 = 1 (Yes): insert "Have you;" otherwise, insert "Has this person"] received treatment such as therapy or medications for confusion or memory loss?

- 1 Yes
- 2 No

10. Has a health care professional ever said that [If Q1 = 1 (Yes): insert "you have;" otherwise, insert "this person has"]'s disease or some other form of dementia?

- 1 Yes, Alzheimer's Disease
- 2 Yes, some other form of dementia but not Alzheimer's disease
- 3 No diagnosis has been given

State Added Healthy Neighborhood

The next few questions are about activities you may be involved in where you live.

1. Do you use walking trails, parks, playgrounds, or sports fields in your community for physical activity?

- 1 Yes
- 2 No
- 3 My community does not have these facilities

2. Do you use any public recreation centers in your community for physical activity?

- 1 Yes
- 2 No
- 3 My community does not have any public recreation facilities

3. Do you use schools that are open in your community for public recreation activities?

- 1 Yes
- 2 No
- 3 Schools in my community are not open for the public to use

4. A neighborhood is defined as an area within one-half mile or a ten minute walk from your home. Overall, how would you rate your neighborhood as a place to walk?

Would you say...

- 1 Very pleasant
- 2 Somewhat pleasant
- 3 Not very pleasant
- 4 Not at all pleasant

5. In your neighborhood, how many of the streets have sidewalks? Would you say...

- 1 All,
- 2 Most,
- 3 Some, or
- 4 None? ⇒ **Go to next module]**

6. Of those sidewalks, how many are in good enough condition for walking, jogging, pushing a stroller, using a wheelchair or other activities? Would you say...

- 1 All,
- 2 Most,
- 3 Some, or
- 4 None?

State Added Food Insecurity

1. Please tell me if the following two statements are true for your household. The food that we bought in the last 30 days just didn't last, and we didn't have money to get more. Would you say that statement was often, sometimes, or never true for your household?

- 1 often true
- 2 sometimes true
- 3 never true

2. We couldn't afford to eat balanced meals. Was that often, sometimes, or never true for your household in the last 30 days?

- 1 often true
- 2 sometimes true
- 3 never true

3. In the last 30 days, did you or other members in your household ever cut the size of your meals because there wasn't enough money for food?
- 1 Yes
2 No
4. In the last 30 days, did you or other members in your household ever skip meals because there wasn't enough money for food?
- 1 Yes
2 No
5. In the last 30 days, did you ever eat less than you felt you should because there wasn't enough money for food?
- 1 Yes
2 No
6. In the last 30 days, were you ever hungry but didn't eat because there wasn't enough money for food?
- 1 Yes
2 No

State Added Cancer Survivorship

CATI note: If Core Q6.6 = 1 (Yes) or Core Q6.7 = 1 (Yes), continue, otherwise go to next module.

Previously you said that you had been told by your doctor that you had cancer. I will now ask you about your experiences with cancer.

1. How many different types of cancer have you had?

- 1 Only one
2 Two
1 Three or more

2. At what age were you told that you had cancer?

_ _ Code age in years [97 = 97 and older]

CATI note: If Q1 = 2 (Two) or 3 (Three or more), ask: "At what age were you first diagnosed with cancer?"

INTERVIEWER NOTE: This question refers to the first time they were told about their first cancer.

3. What type of cancer was it?

If Q1 = 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 6 Oral 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

4. Are you currently receiving treatment for cancer? By treatment, we mean surgery, radiation therapy, chemotherapy, or chemotherapy pills.

- 1 Yes ⇒ Go to next module
2 No

5. What type of doctor provides the majority of your health care?

INTERVIEWER NOTE: If the respondent requests clarification of this question, say: "We want to know which type of doctor you see most often for illness or regular health care (Examples: annual exams and/or physicals, treatment of colds, etc.)."

- 0 1 Cancer Surgeon
0 2 Family Practitioner
0 3 General Surgeon
0 4 Gynecologic Oncologist
0 5 Internist
0 6 Plastic Surgeon, Reconstructive Surgeon
0 7 Medical Oncologist
0 8 Radiation Oncologist
0 9 Urologist
1 0 Other

6. Did any doctor, nurse, or other health professional EVER give you a written summary of all the cancer treatments that you received?

- 1 Yes
2 No

7. Have you EVER received instructions from a doctor, nurse, or other health professional about *where* you should return or *who* you should see for routine cancer check-ups after completing your treatment for cancer?

- 1 Yes
2 No ⇒ Go to Q10

8. Were these instructions written down or printed on paper for you?

- 1 Yes
2 No

9. With your most recent diagnosis of cancer, did you have health insurance that paid for all or part of your cancer treatment?

- 1 Yes
2 No

INTERVIEWER NOTE: "Health insurance" also includes Medicare, Medicaid, or other types of state health programs.

10. Were you EVER denied health insurance or life insurance coverage because of your cancer?

- 1 Yes
2 No

11. Did you participate in a clinical trial as part of your cancer treatment?

- 1 Yes
2 No

12. Do you currently have physical pain caused by your cancer or cancer treatment?

- 1 Yes
2 No ⇒ Go to next module

13. Is your pain currently under control?

- 1 Yes
- 2 No

State Added Colorectal Cancer Screening

[ASK IF AGE > 49]

1. Next, I would like to ask you some questions about colorectal cancer screening. Has a health care provider ever talked to you about being tested for colorectal or colon cancer?

- 1 Yes
- 2 No ⇒ **Go to Next Module**

2. 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 Next Module**

3. Did you have the test [if Q2 = 4, tests] your health care provider recommended?

- 1 Yes ⇒ **Go to Next Module**
- 2 No

4. 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]

1. In the past 6 months, have you seen any articles or advertising about colorectal cancer screening?

- 1 Yes
- 2 No ⇒ **Go to Next Module**

2. 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 Newspaper
- 19 Other

State Added Colorectal Cancer Knowledge

[ASK IF AGE > 49]

1. Next, I'm going to read you several statements about colorectal cancer. After I read each one, please tell me how much you agree or disagree.

A person's age is considered a risk factor for developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

- 1 Strongly agree,
- 2 Somewhat agree,
- 3 Neither agree nor disagree,

- 4 Somewhat disagree, or
- 5 Strongly disagree?

2. A person's race or ethnicity is considered a risk factor for developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

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

3. A person's gender is considered a risk factor for developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

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

4. Colorectal cancer in a blood relative is considered a risk factor for developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

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

5. A person's use of tobacco is considered a risk factor for developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

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

6. A person's diet and level of physical activity are considered risk factors in developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

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

7. A person's weight is considered a risk factor in developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

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

8. A person's alcohol intake is considered a risk factor in developing colorectal cancer. Do you AGREE or DISAGREE? Slightly or strongly?

- 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]

1. 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?

2. 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 Next Module

[IF SACCSQ3 = 1 OR 2, SKIP TO Next Module]

3. 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 Doctor didn't recommend it.
- 17 OTHER
- 88 I have been screened

INTERVIEWER NOTE: If respondent reports "other reason," ask respondent to "please specify" and ensure that their response does not fit into another category. If response does fit into another category, please mark appropriately.

State Added Colorectal Cancer Risk

[Ask MODULE ONLY if Age > 49]

1. 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?

2. 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 32: Random Child Selection

CATI note: If Core Q8.7 = 88, (no children under age 18 in the household, or refused), go to next module.

If Core Q8.7 = 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 Q8.7 is > 1 and Core Q8.7 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 33: Childhood Asthma Prevalence

CATI Note: If response to core Q8.7 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

Module 34: Childhood Immunization

CATI note: If Core Q8.7 = 88, (No children under age 18 in the household, or Refused), go to next module.

CATI note: If selected child's age is ≥ 6 months, continue. Otherwise, go to next module.

1. Now I will ask you questions about seasonal flu. There are two types of seasonal flu vaccinations. One is a shot and the other is a spray in the nose. During the past 12 months, has [Fill: he/she] had a seasonal flu vaccination?

- 1 Yes
- 2 No ⇒ Go to next module

2. The flu vaccination may have been either the flu shot or the flu spray. The flu spray is the flu vaccination that is sprayed in the nose.

During what month and year did [Fill: he/she] receive [Fill: his/her] most recent seasonal flu vaccination?

__ / ____ Month / Year

3. At what kind of place did [he/she] get [his/her] last seasonal flu vaccine?
- 0 1 A doctor's office or health maintenance organization (HMO)
 - 0 2 A health department
 - 0 3 Another type of clinic or health center (Example: a community health center)
 - 0 4 A senior, recreation, or community center
 - 0 5 A store (Examples: supermarket, drug store)
 - 0 6 A hospital (Example: inpatient)
 - 0 7 An emergency room
 - 0 8 Workplace
 - 0 9 Some other kind of place
 - 1 0 Received vaccination in Canada/Mexico (Volunteered – Do not read)
 - 1 1 A school

State Added Gambling

1. 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