

# Health in Iowa

## Annual Report

From the  
**Behavioral Risk Factor Surveillance System**

### Iowa 2014



**Iowa Department of Public Health**

Terry Branstad, Governor  
Kim Reynolds, Lt. Governor  
Gerd W. Clabaugh MPA, Director

Completed in cooperation with the Centers for  
Disease Control and Prevention (CDC),  
Population Health Surveillance Branch (PHSB)



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

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For additional information, contact  
Donald Shepherd , PhD  
(515) 281-7132  
donald.shepherd@idph.iowa.gov

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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, and a few American territories.

## **Nature of the Survey**

The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey. It is financially and technically supported by CDC with further financial support from public and private sources.

The BRFSS is designed to collect information from residents age 18 and over living in private residences or college housing on health conditions, health-related behaviors, attitudes, and awareness. 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 2014. Some of the health-related issues discussed are: general health status, health care access, cancer screening, tobacco use, alcohol consumption, body weight, physical activity, oral health, 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, tobacco cessation and counter-marketing campaigns, campaigns encouraging flu vaccination, and campaigns to increase health screenings and checkups.

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

## **2. Methodology**

### **Questionnaire Design**

The BRFSS questionnaire is updated each calendar year by the CDC and by each participating state. The questionnaire consists of three sections: 1) the core questions required of all states participating in BRFSS; 2) a set of standardized modules developed by the CDC which states may opt to include in their survey; and 3) state-added questions which are designed and administered by individual states to address locally identified health problems. Core and optional module questions were previously tested. Changes in them were discussed and determinations were made whether 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 emerging survey plan was reviewed by the Iowa BRFSS Advisory Committee.

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**

Two sampling frames are used in the BRFSS. One is for landline telephones, while the other is for cell phones. Only adults age 18 years and older were interviewed in both samples. People residing in group homes or institutions were not sampled.

In the landline sample, one person residing in a household was interviewed. 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 landline 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. A seventh stratum was drawn from census tracts throughout the state containing a relatively high

percentage of African American or Hispanic residents in an effort to better represent minority groups in Iowa.

Increasingly, many people, including the young, single, ethnic minorities, and renters are opting not to use traditional landline telephone service in favor of cell phones.<sup>1,2</sup> Therefore, another sampling frame was added, devoted to households having cell phones. Iowans were interviewed on whichever phone type they were reached. The number of cell phone interviews was set large enough that 25 percent of the sample should be users of cell phones only. The cell phone sample was also geographically stratified into the six regions. The oversample stratum was not done since there is not enough power to determine specific geography for cell phones. Since the cell phone is more an individual appliance than a household appliance, the household selection was not done. College housing was included in the cell phone sample. These respondents were also asked 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. 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. Cell phone interviews from other states only contained responses to the core questions since there was no way to know which modules we were using or our state-added questions.

Approximately equal numbers of interviews per month were conducted from January through December in 2014 for a total sample size of 8,130. Of these, 5,068 were landline and 3,062 were cell phone. Interviews were conducted in both English and Spanish.

Interviewers made multiple attempts to reach a number to complete an interview before replacing that number. If the person selected to take the survey 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 person was interviewed at that number. Attempts were made to convert initial refusals into participants.

### **The Interview Process**

The interviews were conducted daytime, evenings, and weekends with appointments as needed to schedule or complete interviews. The average time to complete an interview was 26.9 minutes for landline and 23.3 minutes for cell phone. The response rate, defined as completed interviews plus partial completes divided by all eligible households called, was 56 percent for landline and 54 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.

Not all interviews were fully completed. A partial-complete is an interview that was terminated before it was completed, 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.)

\*Cell phone statistics are only for those done by our contractor. Some cell phone interviews of Iowa residents are done by other states.



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.

### **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.

One main limitation to telephone surveys is that all Iowans are not reachable by telephone. 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 have uninterrupted telephone service 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.

Furthermore, 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. People's memories may also fail or play tricks on them. The potential for bias must always be kept in mind when interpreting self-reported data.

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

### **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 state values that are probably true 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. When the CIs of two or more groups do not overlap, their population values can be considered truly or significantly different.

An important factor in determining how well we can judge the response of all Iowans from the survey sample is the number of responses to the questions. The smaller the number of responses, the poorer is our ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there are a smaller number of interviews in each particular group than in the whole survey. Furthermore, many questions are only answered depending on the answer to previous questions. For instance, a person would only be asked at what age they were diagnosed with diabetes if they answer “yes” to whether they have ever been told they had diabetes. These smaller numbers decrease the ability to determine statistically significant differences. Some data may not be reported as significant solely due to small sample sizes. In general, data in which the number of responses is less than 50 or the variability is too large (coefficient of variability greater than 30%) 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.

### **Weighting of the Data**

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 factors are used to give each interview a weight that represents a certain number of people in the state population.

A landline telephone is seen as a household appliance, while a cell phone is more frequently seen as an individual possession. This means adults per household and phone numbers per household become irrelevant for cell phones. These two factors are not used in determining weights for cell phone interviews.

A large number of factors are considered in the weighting process. Age, gender, race/ethnicity, marital status, education level, home ownership, geographic region, and cell vs. landline telephone are all considered. Preliminary weights from the ratio of sampled phone numbers to all numbers are adjusted recursively by these factors until a stable weight is produced.

Unfortunately, this weighting method has only been in place since 2011. This has disrupted trend information for the data. Trend information in this report will only be determined from 2011 forward. Even comparisons of data from 2011 may be unsound for optional module and state-added questions since 2012 is the first year cell phone interviews have been conducted for these.

The 2013 BRFSS used a split sample technique. In this technique there are two versions of the questionnaire. An optional module or state-added questions may only be presented to half of the total sample of respondents. This is done to be able to ask a larger number of questions without unduly lengthening the interview. When this is done, data from these questions must be weighted with a weight specific to that questionnaire version to represent the entire state population.

## **References**

1. AAPOR Cell Phone Task Force. New Considerations for Survey Researchers When Planning and Conducting RDD Telephone Surveys in the U.S. with Respondents Reached via Cell Phone Numbers. 2010.
2. Blumberg SJ and Luke JV. Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July–December 2013, 2014.

### 3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 8,130 respondents to the BRFSS for the year 2014 included 3,397 males and 4,733 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 2014**

Age	Male		Female		Total	
	#	%	#	%	#	%
<b>18-24</b>	225	2.8	167	2.0	392	4.8
<b>25-34</b>	305	3.8	382	4.7	687	8.4
<b>35-44</b>	386	4.8	523	6.4	909	11.2
<b>45-54</b>	576	7.1	744	9.4	1,320	16.2
<b>55-64</b>	788	9.7	1,015	12.4	1,800	22.1
<b>65-74</b>	651	8.0	908	11.2	1,559	19.2
<b>75+</b>	447	5.5	943	11.6	1,390	17.1
<b>Unknown</b>	19	0.2	54	0.7	73	0.9
<b>Total</b>	3,397	41.8	4,733	58.2	8,130	100.0

In 2013 race and ethnicity were broken down into much finer categories than in the past. However, the numbers for these in Iowa are so small that we are continuing to display the same categories used in the past.

**Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2014**

Race/Ethnicity	# of Total Respondents	% of Total Respondents
<b>White Non-Hispanic</b>	7,558	93.0
<b>Black Non-Hispanic</b>	115	1.4
<b>Other Non-Hispanic<sup>1</sup></b>	171	2.1
<b>Hispanic</b>	223	2.7
<b>Unknown/Refused</b>	63	0.8
<b>Total</b>	8,130	100.0

**Table 3.3: Distribution of Iowa Survey Respondents by Level of Education for Year 2014**

Level of Education	# of Total Respondents	% of Total Respondents
<b>Less than High School</b>	488	6.0
<b>High School Grad or GED</b>	2,751	33.9
<b>Some College or Technical School</b>	2,313	28.5
<b>College Graduate</b>	2,545	31.4
<b>Unknown/Refused</b>	18	0.2
<b>Total</b>	8,115	100.0

<sup>1</sup> 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 2014**

<b>Household Income</b>	<b># of Total Respondents</b>	<b>% of Total Respondents<sup>2</sup></b>
<b>&lt;\$15,000</b>	559	6.9
<b>\$15,000-\$24,999</b>	1,086	13.4
<b>\$25,000- 34,999</b>	872	10.8
<b>\$35,000-\$49,999</b>	1,174	14.5
<b>\$50,000-\$74,999</b>	1,191	14.7
<b>&gt;=\$75,000</b>	2,048	25.3
<b>Unknown/Refused</b>	1,151	14.2
<b>Total</b>	8,081	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.<sup>2</sup> The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.<sup>2</sup>

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.”<sup>1</sup> 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.<sup>1</sup>

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 2014, when asked how their health was in general, 18.5 percent of Iowans reported that it was excellent. Another 36.8 percent said it was very good. While 31.2 percent reported good health, 13.6 percent rated their health as fair or poor. This is somewhat better than the figure from 2013 when 14.4 percent rated their health as fair or poor.

Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). While only 5.6 percent of those with incomes of \$75,000 or over reported fair or poor health, 33.5 percent of those with less than a high school education did so. Other respondents who were more likely to report having fair or poor health were those from households earning less than \$15,000 per year, African Americans, 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 ten percent with fair or poor health.

**Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2014**

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
<b>TOTAL</b>	13.6	(12.6-14.6)
<b>SEX</b>		
Male	13.7	(12.3-15.1)
Female	13.5	(12.1-14.9)
<b>RACE/ETHNICITY</b>		
Non-Hispanic White	13.0	(12-14)
Black Non-Hispanic	24.8	(15-34.6)
Other Non-Hispanic	14.4	(8.5-20.3)
Hispanic	18.9	(12.4-25.4)
<b>AGE</b>		
18-24	5.5	(3-8)
25-34	6.8	(4.6-9)
35-44	11.2	(8.7-13.7)
45-54	15.5	(13.1-17.9)
55-64	18.5	(16.3-20.7)
65-74	17.6	(15.3-19.9)
75+	23.6	(20.8-26.3)
<b>EDUCATION</b>		
Less Than H.S.	33.5	(28-39)
H.S. or G.E.D.	16.0	(14.4-17.6)
Some Post-H.S.	10.7	(9.3-12.1)
College Graduate	6.4	(5.4-7.4)
<b>HOUSEHOLD INCOME</b>		
<\$15,000	30.4	(25.7-35.1)
\$15,000- 24,999	23.3	(20-26.6)
\$25,000- 34,999	14.7	(11.8-17.6)
\$35,000- 49,999	11.7	(9.3-14.1)
\$50,000- 74,999	7.1	(5.3-8.9)
\$75,000+	5.6	(4.4-6.8)

low prevalence was also seen among respondents with household incomes of \$35,000 per year and higher and for college graduates.

When asked how many days poor physical or mental health kept them from performing their usual activities, 63.1 percent of those with some days of either poor physical or mental health said none. On the other hand, 11.9 percent said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income.

In answer to the question about how many days during the past 30 days was their physical health not good, 67.4 percent of respondents reported none of the days and 10.1 percent reported 14 days or more.

As shown in Table 4.2, there were more people reporting 14 or more poor physical health days with older age, lower education, and lower income. In addition, more females and African Americans also reported 14 or more poor physical health days.

Household income had the greatest impact. People with household incomes less than \$15,000 reported 26.2 percent having 14 or more poor physical health days, while people with household incomes of \$75,000 or more had only 4.7 percent.

When responding to the question of how many days during the past 30 days their mental health was not good, 68.0 percent of Iowans indicated none of the days and 8.9 percent reported 14 or more days. Table 4.2 shows the pattern for poor mental health days. Fourteen or more days in the past 30 of poor mental health is referred to as frequent mental distress (FMD).

Men, older people, those with high education, and those with high income had a lower prevalence of FMD. Prevalence for African Americans was higher. An annual household income of \$15,000 or less had the most people with FMD (25.9%). Those who were age 75 and older had the lowest prevalence of FMD (4.8%). A

**Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2014**

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	10.1	(9.2-10.9)	8.9	(8-9.9)
<b>SEX</b>				
<b>Male</b>	8.6	(7.4-9.7)	7.0	(5.9-8.2)
<b>Female</b>	11.5	(10.3-12.8)	10.8	(9.4-12.2)
<b>RACE/ETHNICITY</b>				
<b>White/Non-Hisp.</b>	9.7	(8.9-10.6)	8.6	(7.7-9.5)
<b>Black/Non-Hisp</b>	16.6	(7.8-25.4)	18.0	(7.4-28.5)
<b>Other/Non-Hisp</b>	10.0	(4.8-15.1)	12.7	(5.9-19.5)
<b>Hispanic</b>	12.4	(6.6-18.1)	8.1	(3.5-12.7)
<b>AGE GROUP</b>				
<b>18-24</b>	5.7	(3-8.4)	12.9	(8.9-16.9)
<b>25-34</b>	5.1	(3.1-7.1)	9.8	(7.2-12.4)
<b>35-44</b>	8.7	(6.4-11)	9.7	(7.4-12)
<b>45-54</b>	11.9	(9.7-14.1)	9.2	(7.2-11.2)
<b>55-64</b>	12.4	(10.6-14.2)	8.3	(6.8-9.8)
<b>65-74</b>	11.9	(9.9-13.9)	6.2	(4.7-7.6)
<b>75+</b>	17.4	(14.9-20)	4.8	(3.4-6.2)
<b>EDUCATION</b>				
<b>Less than H.S.</b>	21.0	(16-26)	17.1	(11.9-22.2)
<b>H.S. or G.E.D.</b>	11.0	(9.6-12.4)	9.2	(7.8-10.7)
<b>Some Post-H.S.</b>	9.1	(7.7-10.5)	8.7	(7.1-10.2)
<b>College Grad.</b>	6.0	(5-7)	5.6	(4.5-6.8)
<b>HOUSEHOLD INCOME</b>				
<b>&lt; \$15,000</b>	26.2	(21.4-31)	25.9	(20.9-30.8)
<b>\$15,000- 24,999</b>	15.6	(12.6-18.6)	13.0	(10.1-16)
<b>\$25,000- 34,999</b>	10.7	(8.1-13.2)	7.4	(4.9-9.9)
<b>\$35,000- 49,999</b>	8.1	(6.1-10.1)	5.6	(4-7.2)
<b>\$50,000- 74,999</b>	5.5	(4.1-6.9)	5.1	(3.5-6.7)
<b>\$75,000+</b>	4.7	(3.6-5.8)	5.1	(3.7-6.4)

**Comparison with Other States**

The percentage of people rating their health as fair or poor throughout the states and District of Columbia ranged from 11.7 percent to 25.8 percent. The median value was 16.8 percent. Iowa ranked in the top ten best states with only 13.6 percent rating their health as fair or poor.



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## **5. INSURANCE COVERAGE AND ACCESS TO HEALTH CARE**

### Background

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

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.<sup>2</sup>

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 is critical to evaluate the effects of these vast changes in the health care delivery system.

Health care costs have increased. 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.

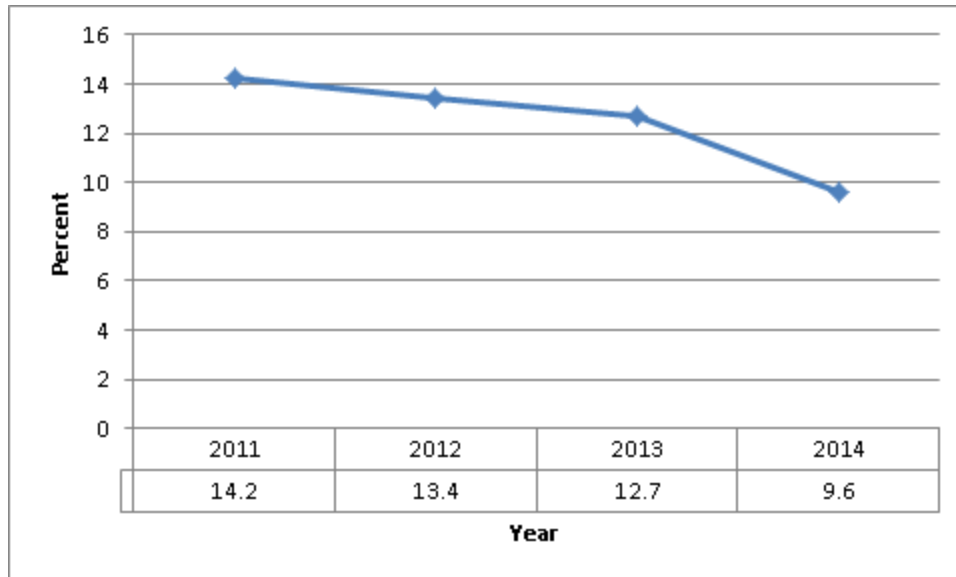
### **Insurance Coverage and Access to Health Care Results**

The percent of people without health insurance coverage has plummeted due to the Affordable Care Act having taken effect. In 2014, 7.7 percent of all adult Iowans reported they had no health insurance. In 2013 the figure was 10.4 percent. For Iowans between age 18 and 64 years old, the figure has dropped to 9.6 percent from 12.7 percent the previous year (see figure 5.1). Almost everyone 65 years and older is covered by Medicare.

Table 5.1 shows that for people between ages 18 and 64 years more males, younger people, less educated people, people with lower incomes, and racial and ethnic minorities were more likely to lack any health care coverage. People with less than a high school education had the highest percentage of individuals without health care coverage (27.3%). However, more than a fifth of those who were racial and ethnic minorities and people with annual household incomes between \$15,000 and \$25,000 also had no coverage. People with household incomes less than \$15,000 per year and those who were age 18 to 24 years showed substantial improvement in level of coverage from the previous year (improved by 12.2 and 6.1 percentage points respectively).

Two other demographic variables that had an impact on health care coverage were employment status and marital status. Unemployed respondents had 12.7 percent reporting they were not covered by health insurance, while 9.3 percent of employed or self-employed were not covered.

**Figure 5.1: No Health Insurance Coverage Trend 2011 – 2014  
Iowans Age 18-64**



People who were married were much more likely to have health care coverage than those who were not. Only 6.2 percent of married respondents were without coverage, while 13.8 percent of unmarried respondents were without it.

For those who did have health care coverage, 6.2 percent said they had been without it at some point in the past year. For those who did not have health care coverage most (34.3%) said they had been without it for more than three years.

Nearly half of those with health care coverage said their primary source was through an employer or union (56.7%). Another 13.2 percent mentioned a plan purchased on their own through the marketplace.

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 8.8 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 youngest age and lowest income group departed from these trends having a lower percentage who could not afford cost than the next higher group (see table 5.1). The lowest percentage (1.8%) was for people with annual household incomes of \$75,000 or more. The highest percentage (21.6%) was for people from households earning \$15,000 to \$25,000 per year.

In addition, 6.3 percent said there was a time in the past year that they had not taken their prescribed medications because of cost. This rate was more than double for people from households earning less than \$15,000 per year or people with less than a high school education (15.6% and 13.5% respectively). Furthermore, 19.6 percent of all respondents said they had medical bills that were being paid off over time.

Since it is important that care be coordinated, people were asked if they had one person they thought of as their personal doctor or health care provider. A positive reply was given by 73.1 percent. 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 (55.1%), while those age 65 years old and older were most likely (85.8%).

When asked how long it had been since their last regular checkup, 71 percent said less than one year. On the other end, 1.2 percent said they had never had a checkup. People who were female, older, or had a higher household income were more likely to have a checkup in the past year. People who were 65 years old or older were most likely to have a checkup (86.9%), while those from age 25 to 34 years were least likely (56.9%). On the average, people said they had been to a doctor a mean of 4.8 but a median of only 2.2 times in the past 12 months. Responses ranged up to 76 which was as high as they could report.

Most Iowans asked (70%) said they were very satisfied with the health care they received. Only 2.7 percent were not at all satisfied.

### **Comparison with Other States**

In the 50 states and District of Columbia, the percent of non-elderly people without health insurance ranged from 5.4 percent to 29.2 percent. The lowest was from Massachusetts, which was the first state to pass major health reform legislation. Only three states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 9.6 percent of its non-elderly respondents reporting not having any insurance. The median for states and the District of Columbia was 15.3 percent. This shows a major drop in the uninsured across the entire country.

### **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, only 90.4 percent of non-elderly adults have coverage. For all adults the figure was 92.3 percent. This is short of both goals.

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 69.9 percent and 85.8 percent respectively. The *Healthy Iowans* goal for all adults was 82.5 percent. The obtained prevalence of 73.1 percent also falls short.

### **References**

1. National Center for Health Statistics. *Health, United States, 2010: With Special Feature on Death and Dying*, Hyattsville, Maryland: 2011.

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

**Table 5.1**  
**Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2014**

DEMOGRAPHIC GROUPS	No Health Insurance Coverage Age 18-64		A 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%)
<b>TOTAL</b>	8.8	(7.8-9.8)	8.8	(7.8-9.8)	73.1	(71.7-74.5)	71.0	(69.6-72.4)
<b>SEX</b>								
<b>Male</b>	7.8	(6.6-9)	7.8	(6.6-9)	65.1	(62.9-67.3)	64.5	(62.3-66.7)
<b>Female</b>	9.7	(8.5-10.9)	9.7	(8.5-10.9)	80.8	(79-82.6)	77.3	(75.5-79.1)
<b>RACE/ETHNICITY</b>								
<b>Non-Hispanic White</b>	7.7	(6.9-8.5)	7.7	(6.9-8.5)	75.2	(73.6-76.8)	71.2	(69.6-72.8)
<b>Non-White or Hisp.</b>	17.5	(13.1-21.8)	17.5	(13.1-21.8)	55.1	(49.3-60.9)	69.9	(64.4-75.3)
<b>AGE</b>								
<b>18-24</b>	9.9	(6.6-13.2)	9.9	(6.6-13.2)	56.1	(50.6-61.6)	61.4	(56.1-66.7)
<b>25-34</b>	13.8	(10.7-16.9)	13.8	(10.7-16.9)	58.5	(54.2-62.8)	56.9	(52.6-61.2)
<b>35-44</b>	11.5	(9-14)	11.5	(9-14)	74.0	(70.7-77.3)	64.5	(60.8-68.2)
<b>45-54</b>	10.7	(8.7-12.7)	10.7	(8.7-12.7)	75.8	(73.1-78.5)	70.0	(67.1-72.9)
<b>55-64</b>	6.2	(4.8-7.6)	6.2	(4.8-7.6)	81.1	(78.9-83.3)	78.9	(76.7-81.1)
<b>65+</b>			2.8	(2-3.6)	85.8	(84.2-87.4)	86.9	(85.3-88.5)
<b>EDUCATION</b>								
<b>Less than H.S.</b>	17.8	(13.1-22.5)	17.8	(13.1-22.5)	58.9	(53-64.8)	70.9	(65.2-76.6)
<b>H.S. or G.E.D.</b>	8.9	(7.3-10.5)	8.9	(7.3-10.5)	71.7	(69.3-74.1)	70.3	(67.9-72.7)
<b>Some Post-H.S.</b>	8.8	(7.2-10.4)	8.8	(7.2-10.4)	76.4	(74-78.8)	71.5	(69-74)
<b>College Graduate</b>	4.8	(3.6-6)	4.8	(3.6-6)	76.0	(73.8-78.2)	71.3	(68.9-73.7)
<b>HOUSEHOLD INCOME</b>								
<b>Less than \$15,000</b>	21.5	(16.8-26.2)	18.0	(13.9-22.1)	64.8	(59.3-70.3)	62.4	(56.9-67.9)
<b>\$15,000- 24,999</b>	22.2	(18.5-25.9)	21.6	(17.9-25.3)	63.3	(59-67.6)	66.8	(62.5-71.1)
<b>\$25,000- 34,999</b>	14.2	(10.7-17.7)	11.6	(8.5-14.7)	72.6	(68.5-76.7)	69.3	(65-73.6)
<b>\$35,000- 49,999</b>	8.8	(6.4-11.2)	8.6	(6.4-10.8)	73.8	(70.1-77.5)	70.9	(67.4-74.4)
<b>\$50,000- 74,999</b>	3.1	(1.7-4.5)	3.9	(2.5-5.3)	75.7	(72.6-78.8)	70.2	(66.7-73.7)
<b>\$75,000+</b>	1.7	(0.9-2.5)	1.8	(1-2.6)	80.7	(78.5-82.9)	75.7	(73.3-78.1)

## **6. 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.<sup>1</sup> 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. The Iowa Department of Public Health is actively working to increase the physical activity levels of Iowans. A lifestyle change may be as simple as taking the stairs instead of the elevator. Interventions to increase physical activity include:

- 1) Creating a culture where physical activity is the easy choice.
- 2) Creating the commitment of Iowans to walk and bike for transportation.
- 3) Creating policies that enable Iowans to be physically active.
- 4) Increasing the number of complete streets. (A complete street is a street that has been designed with all users in mind drivers, cyclists, and pedestrians.)
- 5) Developing recreational trails.
- 6) Enhancing worksite wellness programs.
- 7) Continuing to promote physical activity and the built environment by the Iowa Department of Public Health and other organizations.

Encouraging people to have a less sedentary lifestyle by engaging in regular physical activity continues to be a significant step toward a healthier Iowa.

### **Exercise and Physical Activity Results**

In 2014, 77.4 percent of Iowans reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. This is about the same as the 76.9 percent found in 2013.

A larger proportion of younger people reported engaging in leisure physical activity than older people. The percentage of people who exercised also increased with education and household income. This percentage was higher for White non-Hispanics than for other racial or ethnic groups and for men. The lowest percentage of all examined demographic variables was for those age 75 years and older (60.5%), while the highest was for those age 18 to 24 years (90%).

### **Comparison with Other States**

Values for the measure of not engaging in leisure time physical activity in the 50 states and the District of Columbia ranged from a low of 16.4 percent to a high of 31.6 percent. Iowa ranked right at the median on not engaging in leisure time physical activity at 22.6 percent.

**Table 6.1: Physical Activity in Iowans, 2014**

Demographic Groups	Any Leisure Physical Exercise in Last Month	
	%	C.I. (95%)
<b>TOTAL</b>	77.4	(76.2-78.6)
<b>SEX</b>		
Male	78.8	(77.2-80.4)
Female	75.9	(74.3-77.5)
<b>RACE/ETHNICITY</b>		
White/Non-Hisp.	78.0	(76.8-79.2)
Non-White or Hisp.	72.4	(67.3-77.4)
<b>AGE</b>		
18-24	90.0	(86.7-93.3)
25-34	84.0	(80.9-87.1)
35-44	81.7	(78.6-84.8)
45-54	72.8	(69.9-75.7)
55-64	73.9	(71.5-76.3)
65-74	73.4	(70.8-76)
75+	60.5	(57.4-63.6)
<b>EDUCATION</b>		
Less than H.S.	62.5	(57-68)
H.S. or G.E.D.	70.7	(68.5-72.9)
Some Post-H.S.	80.4	(78.4-82.4)
College Graduate	88.3	(86.9-89.7)
<b>HOUSEHOLD INCOME</b>		
Less than \$15,000	70.2	(65.3-75.1)
\$15,000- 24,999	71.3	(67.6-75)
\$25,000- 34,999	71.3	(67.4-75.2)
\$35,000- 49,999	76.0	(72.9-79.1)
\$50,000- 74,999	78.4	(75.7-81.1)
\$75,000+	87.3	(85.5-89.1)

**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 22.6 percent is much better than this target.

**References**

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



## **7. 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 all leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis.<sup>5</sup> 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.<sup>1</sup>

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.<sup>2</sup>

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m<sup>2</sup>)]. 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, states, and years are likely to be valid. Furthermore, this is the only measure of overweight and obesity available on the state level.

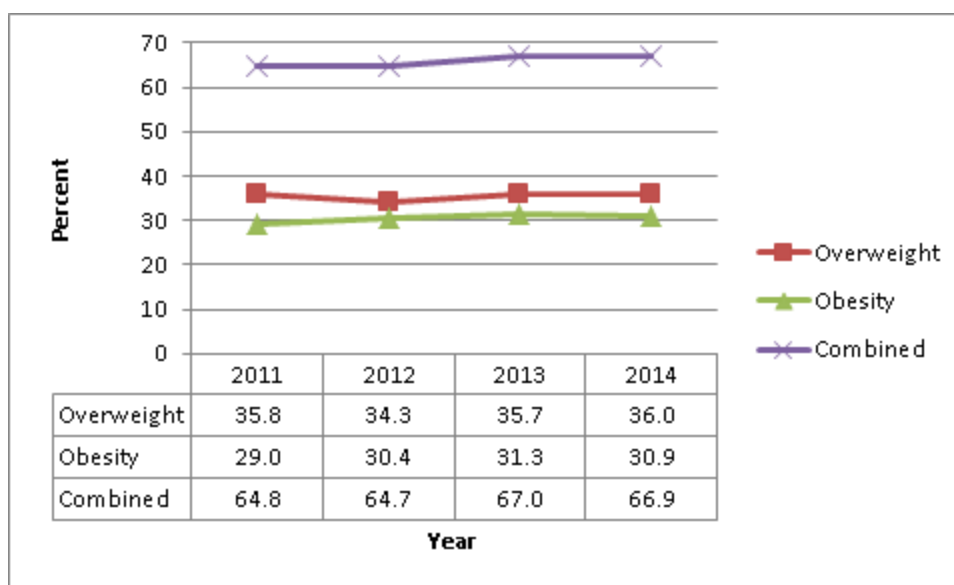
A new analysis prepared for The Fiscal Times by Scott Kahan, director of the National Center for Weight & Wellness at George Washington University, pegs the total cost of obesity – including direct medical and non-medical services, decreased worker productivity, disability and premature death – at \$305.1 billion annually.<sup>3</sup> There are other costs as well that are more difficult to estimate. For instance, because people are fatter, airlines spend more on jet fuel, and the obese themselves spend more on gas.<sup>2</sup> The obesity epidemic is a big contributor to the skyrocketing health care costs in the United States. Because of the large number of people in the Baby Boomer generation and its high rate of obesity, as this population ages, obesity-related costs to Medicare are likely to grow significantly.<sup>4</sup> It is estimated that Iowa could save 5.7 billion dollars by 2030 if the average BMI were lowered by just five percent.

## Overweight & Obesity Results

The BRFSS data show that in 2014, 36 percent of non-pregnant adult Iowans were overweight and 30.9 percent were obese, based on BMI. The combined percentage of individuals who were overweight or obese was 66.9 percent. This combined prevalence is nearly identical to that in 2013 when 35.7 percent of non-pregnant adult Iowans were overweight and 31.3 percent were obese. This is a rest from the increasing rates seen over the past years (see Figure 7.1).

Demographic factors behave somewhat differently for overweight and obesity. The self-reported weights show more males than females are overweight and obese. Prevalence of overweight and obesity increase with age until middle age. A decline is seen in obesity for people age 75 and older. Although more males are overweight than females in all age groups, this is not true for obesity. Females actually show a higher prevalence of obesity than males between ages 25 and 44. Obesity prevalence shows a very sharp decrease for both sexes in the 75 years of age and older group (see Figure/e 7.2).

**Figure 7.1: Overweight and Obesity by Year, 2011-2014**

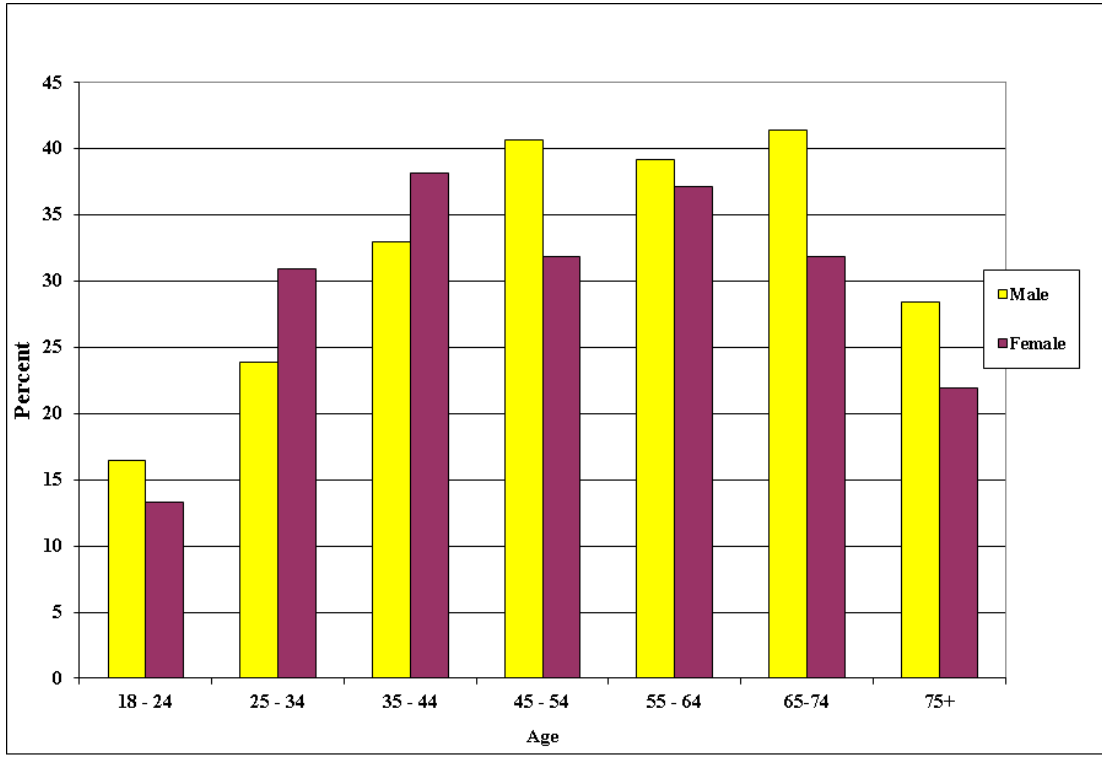


The effects of education and income are different for overweight and obesity as well. Overweight prevalence is lower for those who do not have a high school education, while obesity prevalence declines with increasing education levels. Likewise, the percentage overweight tends to be lower at lower incomes but increase very gradually at incomes higher than \$25,000. On the other hand, obesity is higher when income is lower (see table 7.1 and figure 7.3).

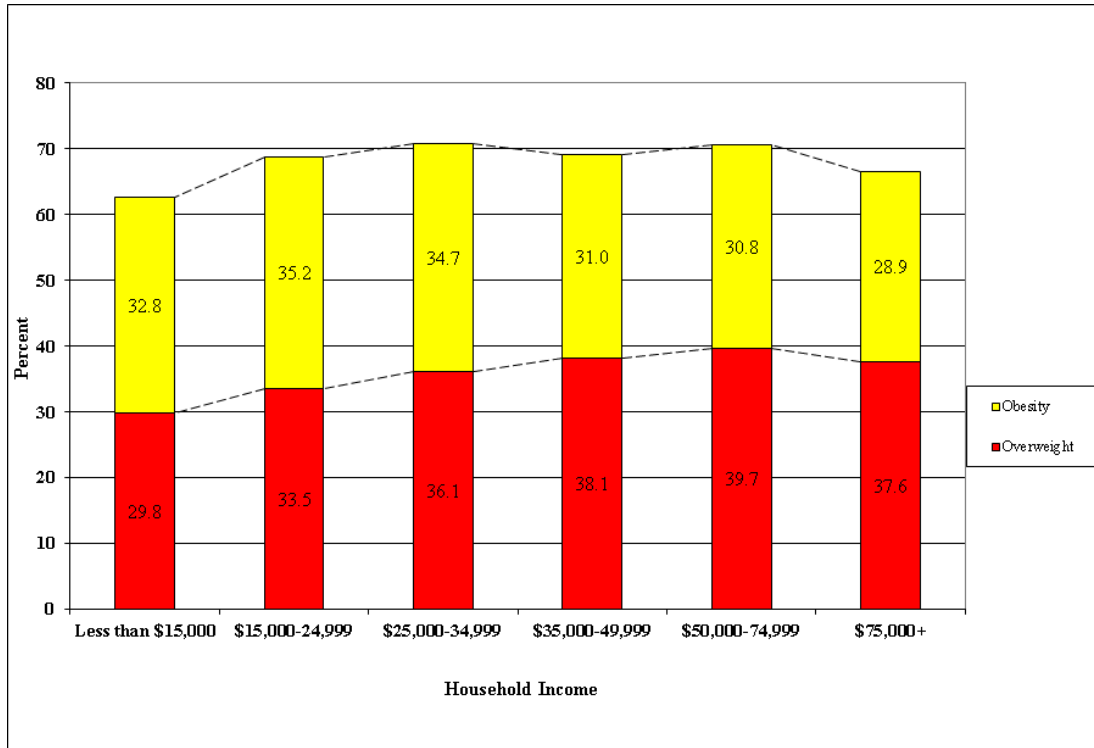
## Comparison with Other States

Iowa's figure of 30.9 percent obese in 2014 was well above the U.S. median of 29.6 percent. The range of prevalence among the 50 states and District of Columbia for obesity was from a

**Figure 7.2: Obesity by Age and Sex, 2014**



**Figure 7.3: Overweight and Obesity by Income, Iowa 2014**



**Table 7.1: Overweight and Obese Iowans Based on BMI, 2014**

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	36.0	(34.6-37.4)	30.9	(29.5-32.3)	66.9	(65.5-68.3)
<b>SEX</b>						
<b>Male</b>	41.5	(39.3-43.7)	32.0	(30-34)	73.5	(71.5-75.5)
<b>Female</b>	30.3	(28.5-32.1)	29.8	(28-31.6)	60.1	(58.1-62.1)
<b>RACE/ETHNICITY</b>						
<b>White/non-Hisp.</b>	36.3	(34.9-37.7)	31.4	(30-32.8)	67.7	(66.3-69.1)
<b>Non-White or Hisp.</b>	33.9	(28.4-39.4)	25.3	(20.3-30.2)	59.2	(53-65.4)
<b>AGE GROUP</b>						
<b>18 - 24</b>	27.2	(22.1-32.3)	15.0	(11.1-18.9)	42.2	(36.7-47.7)
<b>25 - 34</b>	36.0	(31.7-40.3)	27.1	(23.2-31)	63.0	(58.7-67.3)
<b>35 - 44</b>	35.2	(31.5-38.9)	35.5	(31.8-39.2)	70.7	(67.2-74.2)
<b>45 - 54</b>	38.7	(35.6-41.8)	36.5	(33.4-39.6)	75.1	(72.4-77.8)
<b>55 - 64</b>	38.4	(35.7-41.1)	38.2	(35.5-40.9)	76.7	(74.3-79.1)
<b>65-74</b>	38.2	(35.3-41.1)	36.7	(33.7-39.6)	74.9	(72.3-77.4)
<b>75+</b>	38.1	(34.9-41.3)	24.5	(21.7-27.3)	62.6	(59.5-65.7)
<b>EDUCATION</b>						
<b>Less than H.S.</b>	32.0	(26.3-37.7)	37.4	(31.3-43.5)	69.4	(63.5-75.3)
<b>H.S. or G.E.D.</b>	37.3	(34.9-39.7)	32.5	(30.3-34.7)	69.8	(67.4-72.2)
<b>Some Post-H.S.</b>	35.3	(32.8-37.8)	31.9	(29.5-34.3)	67.2	(64.7-69.7)
<b>College Graduate</b>	36.7	(34.3-39.1)	25.0	(22.8-27.2)	61.7	(59.3-64.1)
<b>HOUSEHOLD INCOME</b>						
<b>Less than \$15,000</b>	29.8	(24.3-35.3)	32.8	(27.5-38.1)	62.6	(56.7-68.5)
<b>\$15,000- 24,999</b>	33.5	(29.6-37.4)	35.2	(31.1-39.3)	68.7	(64.6-72.8)
<b>\$25,000- 34,999</b>	36.1	(31.8-40.4)	34.7	(30.6-38.8)	70.7	(66.6-74.8)
<b>\$35,000- 49,999</b>	38.1	(34.4-41.8)	31.0	(27.7-34.3)	69.2	(65.5-72.9)
<b>\$50,000- 74,999</b>	39.7	(36.2-43.2)	30.8	(27.5-34.1)	70.5	(67.2-73.8)
<b>\$75,000+</b>	37.6	(34.9-40.3)	28.9	(26.5-31.3)	66.6	(64.1-69.1)

low of 21.7 percent to a high of 35.5 percent. For obesity and overweight combined, Iowa had a prevalence of 66.9 percent compared to a U.S. median of 64.9 percent.

**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 is well below this target having 30.1 percent at healthy weight. The *Healthy People 2020* goal for obesity is 30.6 percent. Iowa has a prevalence of 32 percent for those over age 20. This does not reach the HP 2020 target. The *Healthy Iowans* goal for obesity is 27 percent. Iowa’s figure of 30.9 percent for all adults fails to achieve this goal.

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4. The Trust for America's Health (TFAH) and the Robert Wood Johnson Foundation (RWJF), **F as in Fat: How Obesity Threatens America's Future**, 2013. Available at <http://healthyamericans.org/report/108/>.
5. U. S. Department of Health and Human Services. **The Surgeon General's call to action to prevent and decrease overweight and obesity**, Rockville, MD.: Public Health Service, Office of the Surgeon General; 2001.

## **8. 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.<sup>1</sup> Diabetes can be associated with serious complications and premature death.

Diabetes rates in the United States are approaching epidemic proportions. From 1980 through 2011, the number of U.S. adults aged 18 years or older with diagnosed diabetes has more than tripled (from 5.5 million to 19.6 million). 29.1 million people or 9.3% of the U.S. population have diabetes. There are now 21.0 million people diagnosed with diabetes and an estimated 8.1 million people undiagnosed (27.8% of people with diabetes are undiagnosed).<sup>3</sup> Diabetes may affect persons of all ages, although prevalence increases with age. There are also several people with elevated blood glucose that are not yet considered to have diabetes, but are said to have pre-diabetes. This condition often develops into full diabetes.

Skyrocketing costs accompany this epidemic with an estimated total annual cost (direct and indirect) in 2012 of \$245 billion. This figure represents a 41 percent increase over a five year period. This includes direct medical costs of 176 billion and indirect costs resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality of another \$69 billion. People with diagnosed diabetes, on average, have medical expenditures that are approximately 2.3 times higher than the expenditures would be in the absence of diabetes. Approximately one in five health care dollars is attributed to diabetes.<sup>2</sup>

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 include diet modification, weight loss and moderate-intensity physical activity (such as walking for 2 and one half 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 patients are 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.<sup>1</sup>

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 2014, 9.5 percent of adult Iowans had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This is about the same as in 2013 when 9.3 percent of Iowans had ever been told that they have diabetes. The prevalence of diabetes has held constant for the past three years (see Figure 8.1).

Table 8.1 shows that the rate of diabetes is much higher when respondents are older, lower in education, and have a lower household income. It is also higher among males and differs widely among racial and ethnic groups. The demographic group with the highest percentage of diagnosed diabetics is people age 65 to 74 years (22.2%), while the group with the lowest percentage is people age 18 to 24 years (0.2%) (see table 8.1).

**Table 8.1: Iowans Ever Told They Had Diabetes, 2014**

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	9.5	(8.7-10.3)
<b>SEX</b>		
Male	10.1	(8.9-11.3)
Female	8.8	(7.8-9.8)
<b>RACE/ETHNICITY</b>		
White/Non-Hispanic	9.4	(8.6-10.2)
Black/Non-Hispanic	15.0	(7.6-22.4)
Other/Non-Hispanic	14.6	(8.5-20.6)
Hispanic	3.6	(1.2-6)
<b>AGE GROUP</b>		
18-24	0.2	(0-0.6)
25-34	1.6	(0.4-2.8)
35-44	5.9	(3.9-7.9)
45-54	8.1	(6.3-9.9)
55-64	15.1	(13.1-17.1)
65-74	22.2	(19.7-24.7)
75+	19.0	(16.5-21.6)
<b>EDUCATION</b>		
Less than H.S.	13.3	(10-16.6)
H.S. or G.E.D.	11.0	(9.8-12.2)
Some Post-H.S.	8.9	(7.7-10.1)
College Graduate	6.7	(5.7-7.7)
<b>HOUSEHOLD INCOME</b>		
Less than \$15,000	13.2	(10.1-16.3)
\$15,000- 24,999	13.7	(11.2-16.2)
\$25,000- 34,999	11.2	(8.8-13.6)
\$35,000- 49,999	10.0	(8-12)
\$50,000- 74,999	7.7	(6.1-9.3)
\$75,000+	6.0	(4.8-7.2)

When asked if they had a test for diabetes in the past three years, 56 percent said they had.

More attention has been given lately to pre- or borderline diabetes. People who catch their diabetes before it is fully developed stand a good chance of avoiding it altogether by making lifestyle changes. In 2014, 7.8 percent of non-diabetic Iowans were told they had pre-diabetes.

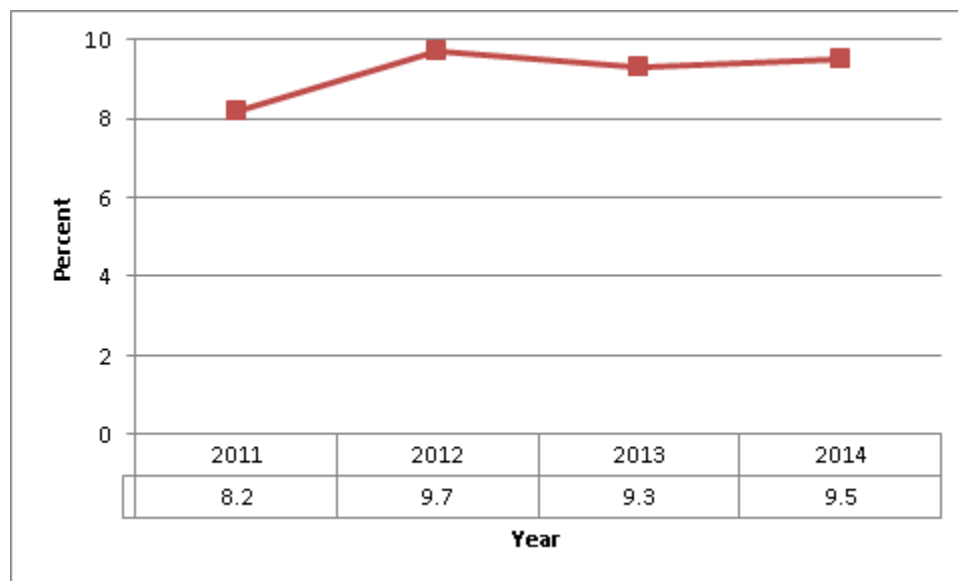
Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (40.4%). The age group in which the least reported being first diagnosed was less than age 16 years (4.2%).

Of those ever told by a physician that they have diabetes, 33 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 (27.5%), while 10.1 percent said never.

People told by a physician they had diabetes were asked how many times they had their blood sugar checked in the past 12 months. About 56.9 percent checked their

**Figure 8.1: Percent of Iowans with Diagnosed Diabetes per Year, 2011-2014**



blood sugar one to five times a day themselves or with the help of a friend or family member. About 12.4 percent reported never testing their blood sugar. Around 93.9 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 5.2 percent reported not having had the A1C test. Another 0.9 percent reported they had never heard of such a test. Roughly equal numbers of diabetics had this test done one to four times a year. 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, 60.5 percent of those who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 13.9 percent said they never checked them. Around 80.7 percent of those 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. Iowans who reported ever having diabetes were asked when they had their last eye exam where their pupils were dilated. About 74.1 percent reported within the last 12 months, while 2.9 percent reported never having such an examination. Among Iowans with diabetes, 18.1 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 64.5 percent of those with diabetes in 2014 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 10 percent in 2014. Prevalence ranged from 7.1 percent to 14.1 percent. The figure for Iowa was somewhat better than the median at 9.5 percent.

## **Health Objectives for Iowa and the Nation**

*Healthy People 2020* has a goal of 58.7 percent of people with diabetes having a dilated eye exam. *Healthy Iowans* has a goal of 85 percent. Iowa's figure of 74.1 percent is better than the national goal but less than the Iowa goal.

*Healthy People 2020* also has the goal for the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year to be 71.1 percent. Iowa surpasses this goal with 80.7 percent.

The *Healthy People 2020* goal for the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily is 70.4 percent. Iowa falls short of this goal with 60.3 percent.

Iowa has met the *Healthy People 2020* goal for the proportion of persons with diagnosed diabetes who receive formal diabetes education. The goal calls for 62.5 percent to have such education, while Iowa's prevalence is 64.5 percent.

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## **9. 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.<sup>3</sup>

This chronic disease affects more than 25 million Americans of all ages.<sup>3</sup> 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.<sup>2</sup> More than 200,000 Iowans now have asthma of which 148,000 are adults.<sup>1</sup>

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.<sup>3</sup>

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.<sup>2</sup>

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.<sup>4</sup>

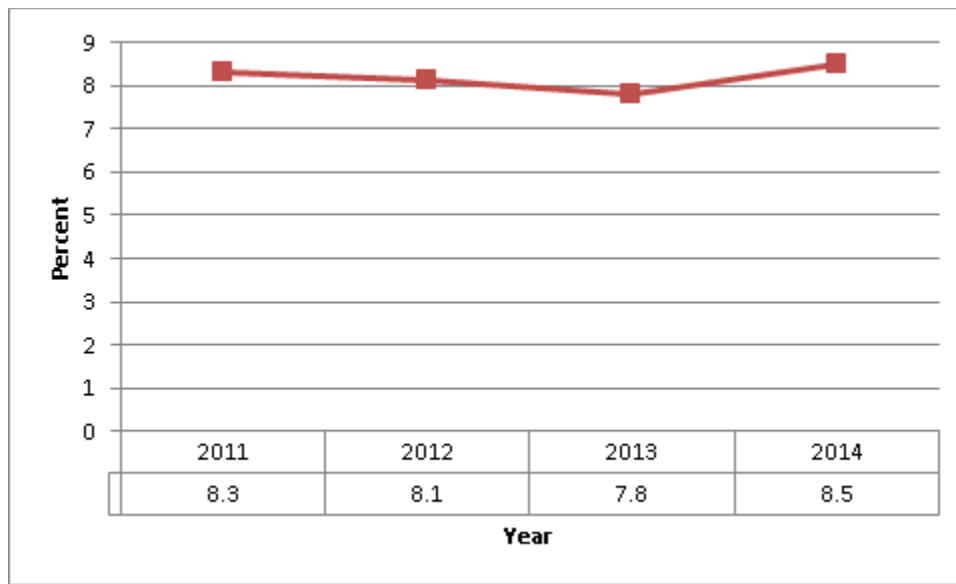
Smoking is the leading cause of COPD. The more a person smokes, the more likely that person will develop COPD. Another cause is exposure to secondhand smoke or air pollution.

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 their blood.

### **Respiratory Diseases Results**

In 2014, 13.2 percent of Iowans reported ever being diagnosed by a physician with asthma. Out of all adult Iowans, 8.5 percent currently had asthma, and 4.3 percent formerly had asthma.\* This is worse than in 2013 when 12.2 percent of Iowans reported ever having and 7.8 percent reported currently having asthma, though the current asthma figure is about the same as in 2011 or 2012 (see Figure 9.1).

**Figure 9.1: Current Asthma in Iowa by Year—2011-2014**



In Iowa, more women, African Americans, people with lower education level, or lower household income, and young adults currently have asthma. The highest current asthma prevalence was among African Americans (19.2%), though the confidence interval was quite wide. The lowest prevalence was among Hispanics (4.2%) (see table 9.1).

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 callback survey. Most of the data from that survey is not included in this report, but may be presented separately. From the 2013 callback survey, however, it was found that 5.4 percent of adults with asthma had asthma-related emergency or urgent care visits. This is an improvement from the 2012 figure of 11.5 percent.

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

**Table 9.1: Iowans Currently and Formerly Having Asthma, 2014**

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	8.5	(7.7-9.3)	4.3	(3.7-4.9)
<b>SEX</b>				
<b>Male</b>	6.9	(5.7-8.1)	5.1	(3.9-6.3)
<b>Female</b>	10.0	(8.6-11.4)	3.5	(2.7-4.3)
<b>RACE/ETHNICITY</b>				
<b>White Non -Hispanic</b>	8.3	(7.3-9.3)	3.8	(3.2-4.4)
<b>Black Non-Hispanic</b>	19.2	(9.6-28.8)	10.1	(2.3-17.9)
<b>Other Non-Hispanic</b>	10.0	(4.1-15.8)	11.1	(4.1-18)
<b>Hispanic</b>	4.8	(1.3-8.3)	4.8	(0-9.7)
<b>AGE</b>				
<b>18-24</b>	9.8	(6.5-13.1)	7.8	(4.7-10.9)
<b>25-34</b>	11.6	(8.7-14.5)	5.2	(3.2-7.2)
<b>35-44</b>	6.2	(4.4-8)	4.3	(2.5-6.1)
<b>45-54</b>	8.7	(6.7-10.7)	3.9	(2.7-5.1)
<b>55-64</b>	8.9	(7.3-10.5)	3.2	(2.2-4.2)
<b>65-74</b>	5.5	(4.2-6.9)	2.9	(1.9-4)
<b>75+</b>	7.7	(6-9.5)	2.5	(1.4-3.6)
<b>EDUCATION</b>				
<b>Less than H.S.</b>	13.7	(9.6-17.8)	4.6	(1.5-7.7)
<b>H.S. or G.E.D.</b>	7.8	(6.4-9.2)	3.6	(2.6-4.6)
<b>Some Post-H.S.</b>	9.0	(7.4-10.6)	5.4	(4-6.8)
<b>College Graduate</b>	6.5	(5.3-7.7)	3.7	(2.9-4.5)
<b>HOUSEHOLD INCOME</b>				
<b>Less than \$15,000</b>	17.6	(13.1-22.1)	4.7	(2.3-7.1)
<b>\$15,000- 24,999</b>	9.3	(6.6-12)	4.0	(1.8-6.2)
<b>\$25,000- 34,999</b>	11.2	(8.3-14.1)	4.5	(2.3-6.7)
<b>\$35,000- 49,999</b>	6.1	(4.3-7.9)	3.2	(1.8-4.6)
<b>\$50,000- 74,999</b>	6.6	(4.8-8.4)	5.1	(3.3-6.9)
<b>\$75,000+</b>	6.8	(5.4-8.2)	4.5	(3.3-5.7)

When asked if they had been told they had COPD, 5.7 percent said they had. This is slightly lower than 2013 when the figure was 6.2 percent. COPD was more common among women, older people, people with less education, and people with lower household income. Prevalence among Blacks and other non-Hispanic respondents was higher, but Hispanics were less likely to report COPD (see Table 9.2). The highest prevalence of having COPD was found among those with annual household incomes less than \$15,000 (14.7%). People age 18 to 24 years had the lowest prevalence of COPD (1.7%).

**Table 9.2**  
**Iowans who have been told they have**  
**COPD, 2014**

DEMOGRAPHIC GROUPS	COPD	
	%	C.I. (95%)
<b>TOTAL</b>	5.7	(5.1-6.3)
<b>SEX</b>		
Male	5.3	(4.5-6.1)
Female	6.1	(5.3-6.9)
<b>RACE/ETHNICITY</b>		
White/Non-Hispanic	5.7	(5.1-6.3)
Black/Non-Hispanic	7.2	(1.5-12.9)
Other/Non-Hispanic	7.5	(3.5-11.6)
Hispanic	2.3	(0-4.8)
<b>AGE</b>		
18-24	1.7	(0.5-2.9)
25-34	2.1	(0.9-3.3)
35-44	3.2	(1.8-4.6)
45-54	6.2	(4.6-7.8)
55-64	7.7	(6.1-9.3)
65-74	10.1	(8.3-12)
75+	12.0	(9.9-14.1)
<b>EDUCATION</b>		
Less than H.S.	10.2	(7.3-13.1)
H.S. or G.E.D.	6.6	(5.6-7.6)
Some Post-H.S.	5.9	(4.7-7.1)
College Graduate	2.2	(1.6-2.8)
<b>HOUSEHOLD INCOME</b>		
Less than \$15,000	14.7	(11.2-18.2)
\$15,000- 24,999	10.1	(7.9-12.3)
\$25,000- 34,999	8.1	(5.9-10.3)
\$35,000- 49,999	3.5	(2.3-4.7)
\$50,000- 74,999	3.8	(2.6-5)
\$75,000+	2.0	(1.2-2.8)

**Comparison with Other States**

While Iowa reported 8.5 percent of the entire adult population currently suffering from asthma, the median for the nation was 8.9 percent. The range was from 6.6 percent to 12 percent.

Although still better than the median, Iowa's relative standing among states in current asthma has fallen since 2013.

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## **10. 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. Although deaths from these diseases has fallen in the past few years, Heart disease and stroke are still leading causes of death in the United States, accounting for nearly a third of all annual deaths.<sup>1</sup>

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. For example, suffering a stroke may lead to paralysis, speech difficulties, and emotional problems. Following a heart attack, individuals frequently suffer fatigue and depression, and they may find it more difficult to engage in physical activities. More than seven million hospitalizations each year are because of cardiovascular diseases.<sup>2</sup>

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<sup>1</sup>—and these costs are rising. On a personal level, families who experience heart disease or stroke not only have to deal with medical bills but also lost wages and the real potential of a decreased standard of living.<sup>1</sup>

In Iowa, heart disease is the number one cause and stroke is the fourth leading cause of death. Even so, the death rate from these causes has steadily declined. The rate per 100,000 population has gone from 344.9 in 1991 to 223.8 in 2013 for heart disease. The rate of deaths from stroke has gone from 74.7 in 1991 to 45.0 in 2013.<sup>3</sup> 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.<sup>1</sup>

### **Cardiovascular Diseases Results**

In 2014, 4.4 percent of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction; 4.1 percent had been told they had coronary heart disease or angina, and 2.7 percent had been told they had a stroke. Although these values may seem small, they represent around 90,000 Iowans with a heart attack or heart disease and 60,000 with a stroke. About 8.2 percent of Iowans reported being told they had any of the three conditions.

Table 10.1 shows the distribution of these conditions by demographic groups. Myocardial infarction and coronary heart disease/angina are combined when looking at the influence of various demographic factors.

More people experienced heart-related conditions if they were men, older people, people with lower education, people with lower household incomes, or 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 21.5 percent of those 75 years or older reported a heart condition and 26.9 percent reported any of the three cardiovascular conditions. The pattern was much the same for those who said they had a stroke with respect to age, education, and income. There was no sex difference for reported strokes, however, and African Americans had a greater prevalence than other racial/ethnic groups..

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 10.1**  
**Prevalence among Iowans of Heart Attack, Heart Disease, and Stroke, 2014**

DEMOGRAPHIC GROUPS	Had any Heart Disease (MI or CHD)		Had Stroke		Had Any Cardiovascular Disease	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	6.5	(5.9-7.1)	2.7	(2.3-3.1)	8.2	(7.5-8.8)
<b>SEX</b>						
<b>Male</b>	8.5	(7.5-9.4)	2.8	(2.2-3.4)	10.0	(8.9-11.1)
<b>Female</b>	4.6	(3.9-5.2)	2.6	(2.2-3)	6.4	(5.7-7.1)
<b>RACE/ETHNICITY</b>						
<b>White/Non-Hisp.</b>	6.7	(6.1-7.3)	2.6	(2.2-3)	8.4	(7.7-9)
<b>Black/Non-Hisp.</b>	7.9	(1.3-14.5)	7.6	(1.2-14.1)	13.4	(5.3-21.6)
<b>Other/Non-Hisp.</b>	4.6	(1.5-7.7)	1.7	(0.3-3.1)	5.6	(2.3-8.8)
<b>Hispanic</b>	2.4	(0-4.8)	2.2	(0-4.6)	3.6	(0.7-6.5)
<b>AGE</b>						
<b>18-24</b>	0.5	(0-1.2)	0.3	(0-0.9)	0.5	(0-1.2)
<b>25-34</b>	1.0	(0.1-2)	1.1	(0.1-2.1)	1.9	(0.6-3.1)
<b>35-44</b>	1.7	(0.7-2.7)	1.1	(0.1-2.1)	2.5	(1.2-3.7)
<b>45-54</b>	5.1	(3.5-6.7)	1.9	(0.9-2.9)	6.3	(4.6-8)
<b>55-64</b>	8.1	(6.5-9.6)	3.4	(2.2-4.6)	10.0	(8.3-11.7)
<b>65-74</b>	14.8	(12.6-16.9)	4.7	(3.5-5.9)	18.2	(15.9-20.5)
<b>75+</b>	21.5	(18.9-24.1)	9.0	(7.1-10.8)	26.9	(24.1-29.7)
<b>EDUCATION</b>						
<b>Less Than H.S.</b>	12.5	(9.1-15.8)	7.3	(4.6-10)	16.0	(12.3-19.7)
<b>H.S. or G.E.D.</b>	7.7	(6.6-8.8)	2.7	(2.1-3.3)	9.5	(8.3-10.7)
<b>Some Post-H.S.</b>	5.5	(4.6-6.4)	2.2	(1.6-2.8)	7.1	(6-8.1)
<b>College Graduate</b>	3.9	(3.2-4.6)	1.6	(1.2-2)	5.0	(4.2-5.8)
<b>HOUSEHOLD INCOME</b>						
<b>Less than \$15,000</b>	10.0	(7-13)	4.4	(2.2-6.6)	12.1	(8.9-15.4)
<b>\$15,000- 24,999</b>	9.1	(7.2-11)	5.4	(3.8-7)	12.5	(10.3-14.7)
<b>\$25,000- 34,999</b>	8.8	(6.7-10.8)	3.5	(1.9-5.1)	11.2	(8.8-13.6)
<b>\$35,000- 49,999</b>	7.6	(5.8-9.4)	3.5	(2.1-4.9)	9.4	(7.4-11.3)
<b>\$50,000- 74,999</b>	4.8	(3.6-6.1)	1.2	(0.6-1.8)	5.8	(4.5-7.1)
<b>\$75,000+</b>	3.5	(2.6-4.4)	0.7	(0.3-1.1)	4.1	(3.1-5)



# 11. 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 480,000 deaths each year, or one in every five deaths.<sup>1</sup>

The estimated economic costs attributable to smoking and exposure to tobacco smoke continue to increase and now approach \$300 billion annually, with direct medical costs of at least \$130 billion and productivity losses of more than \$150 billion a year.<sup>2</sup>

Tobacco use is known to cause heart disease, stroke, peripheral vascular disease, and respiratory diseases such as COPD and asthma attacks, 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.<sup>1</sup>

Consequences of smoking during pregnancy include spontaneous abortions, low birth weight babies, and sudden infant death syndrome (SIDS).<sup>1</sup>

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.<sup>3</sup>

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. There is also support for smoking cessation through such efforts as Quitline Iowa which has offered free nicotine replacement therapy (NRT).

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, 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 it also was quite beneficial at reducing exposure to secondhand smoke.

These legal changes have spurred a host of new smokeless tobacco products such as electronic or e-cigarettes and smokeless tobacco in novel forms. The impact of these is just beginning to be studied.

## **Tobacco Use Results**

Current smoking was defined as smoking at least 100 cigarettes in a lifetime and smoking every day or some days during the past 30 days. Of all adult Iowans in 2014, 18.5 percent reported being a current smoker. This is a decrease from the 19.5 percent found in 2013.

The proportion of current smokers was higher for males than for females and for racial/ethnic minorities. Smoking generally declined with increasing age, education, and income, although it was lower among 18 to 24 year olds. Respondents with household incomes less than \$15,000 reported the highest proportion of current smokers (33.6%). Only 4.9 percent of respondents age 75 years and older were current smokers (see table 11.1).

**Table 11.1: Percentage of Current and Former Smokers in Iowa, 2014**

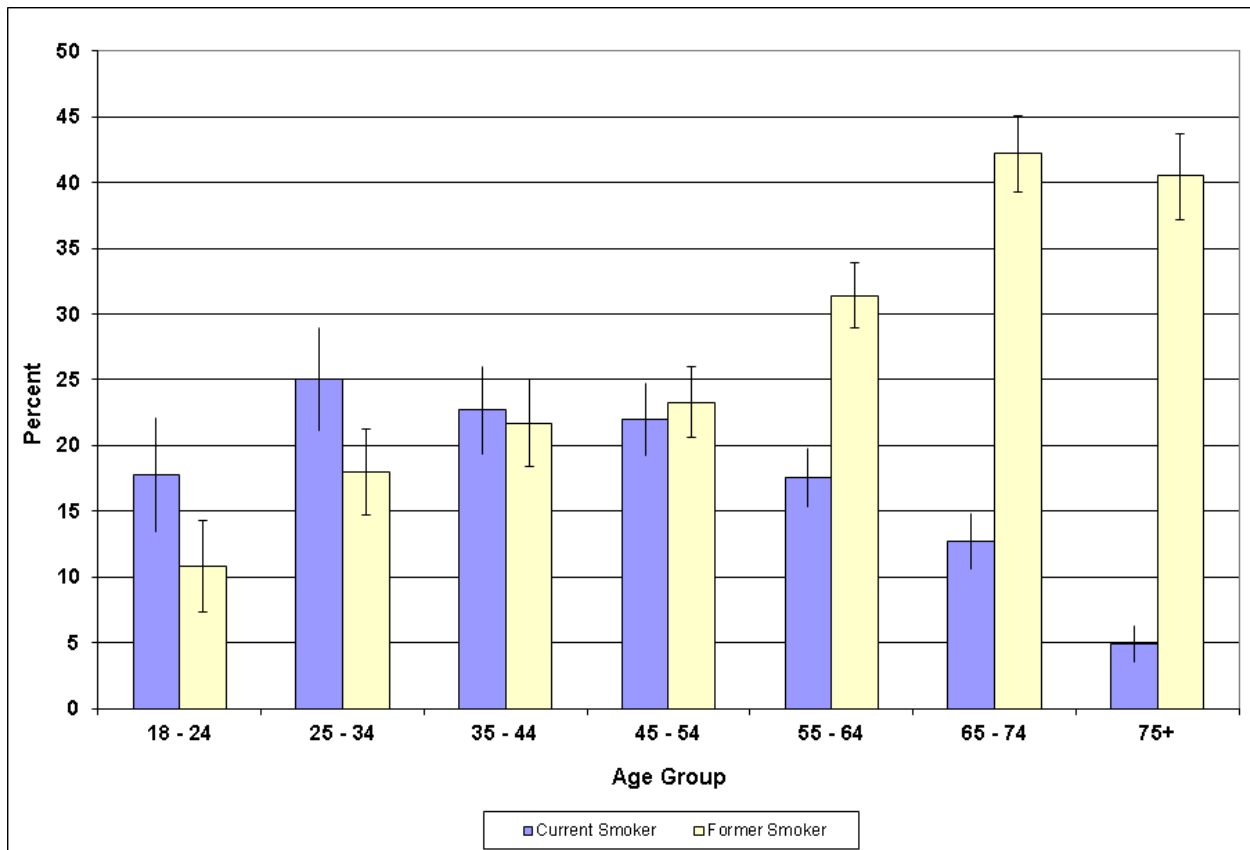
<b>DEMOGRAPHIC GROUPS</b>	<b>Current Smoker</b>		<b>Former Smoker</b>	
	<b>%</b>	<b>C.I. (95%)</b>	<b>%</b>	<b>C.I. (95%)</b>
<b>TOTAL</b>	18.5	(17.3-19.7)	25.7	(24.5-26.9)
<b>SEX</b>				
<b>Male</b>	19.9	(18.1-21.7)	30.6	(28.6-32.6)
<b>Female</b>	17.2	(15.6-18.8)	21.0	(19.4-22.6)
<b>RACE/ETHNICITY</b>				
<b>White/Non-Hisp.</b>	18.1	(16.9-19.3)	26.6	(25.4-27.8)
<b>Non-White or Hisp.</b>	22.4	(17.4-27.3)	16.1	(11.8-20.3)
<b>AGE</b>				
<b>18-24</b>	17.8	(13.5-22.1)	10.8	(7.3-14.3)
<b>25-34</b>	25.0	(21.1-28.9)	18.0	(14.7-21.3)
<b>35-44</b>	22.7	(19.4-26)	21.7	(18.4-25)
<b>45-54</b>	22.0	(19.3-24.7)	23.3	(20.6-26)
<b>55-64</b>	17.6	(15.4-19.8)	31.4	(28.9-33.9)
<b>65-74</b>	12.7	(10.6-14.8)	42.2	(39.3-45.1)
<b>75+</b>	4.9	(3.5-6.3)	40.5	(37.2-43.7)
<b>EDUCATION</b>				
<b>Less Than H.S.</b>	29.7	(24-35.4)	24.8	(19.7-29.9)
<b>H.S. or G.E.D.</b>	22.4	(20.2-24.6)	30.0	(27.8-32.2)
<b>Some Post-H.S.</b>	19.2	(17-21.4)	25.4	(23.2-27.6)
<b>College Graduate</b>	7.7	(6.3-9.1)	20.7	(18.7-22.7)
<b>HOUSEHOLD INCOME</b>				
<b>Less than \$15,000</b>	33.6	(27.9-39.3)	20.7	(16.2-25.2)
<b>\$15,000- 24,999</b>	30.1	(26-34.2)	25.6	(21.9-29.3)
<b>\$25,000- 34,999</b>	21.3	(17.6-25)	27.5	(23.8-31.2)
<b>\$35,000- 49,999</b>	17.2	(14.5-19.9)	30.2	(26.9-33.5)
<b>\$50,000- 74,999</b>	16.7	(14-19.4)	28.9	(25.8-32)
<b>\$75,000+</b>	10.1	(8.3-11.9)	23.6	(21.4-25.8)

About 25.7 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 smokers. The 18 to 24 year age group had only 10.5 percent former smokers, while the 65 to 74 year age group had 42.2 percent (see table 11.1 and figure 11.1). 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 (56.2%) said ten or more years.

When asked about attempts to quit smoking, 55.2 percent of current Iowa smokers reported they quit smoking for a day or more during the past year. Women and younger smokers were more likely to try to quit. 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 4.9 percent said they used one of these every day or some days.

**Figure 11.1: Percentage of Current and Former Smokers by Age, 2014**



Of smokers who had seen a doctor in the past year, 57.8 percent of them reported that the doctor had advised them to quit smoking. Of those with doctors advising them to quit, 58.7 percent had suggested some form of assistance. The most common form of assistance was medical resources (34.2%).

Among all Iowans, 45.4 percent had heard of Quitline Iowa. Of former smokers or current smokers making a quit attempt in the past year, 9.7 percent said they used a quitline.

When people were asked if they ever use smokeless tobacco or e-cigarettes instead of smoking cigarettes, 2.9 percent said they used smokeless tobacco, and 5.7 percent said they used e-cigarettes. One percent said they used both. For those who said they had used e-cigarettes for such a purpose, 13.6 percent said they used them every day and 52 percent said only some days, while 34.5 percent no longer used them.

### **Comparison with Other States**

In all the states and District of Columbia, smoking prevalence ranged from a low of 9.6 percent to a high of 26.7 percent. Iowa's current smoking prevalence of 18.5 percent was very slightly above the median of 18.1 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 18.5 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 5.1 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 55.2 percent, the rate 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; 5.3 percent of former smokers said they had not smoked regularly for six months to a year, while the goal was eight percent.

### **References**

1. Centers for Disease Control and Prevention. Smoking & Tobacco Use: *Health Effects of Cigarette Smoking*, Atlanta: Office on Smoking and Health, 2014. Available at [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/health\\_effects/effects\\_cig\\_smoking/index.htm](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/index.htm).
2. U. S. Department of Health and Human Services. The Health Consequences of Smoking: — 50 Years of Progress: A Report of the Surgeon General. Atlanta, GA., 2014. Available at <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/index.html>.

3. U. S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: a report of the Surgeon General. Atlanta, GA., June, 2006.

## **12. ALCOHOL CONSUMPTION**

### **Background**

Consumption of alcohol is a very widespread practice in our society. However, a large number of people get into serious trouble because of their consumption of alcohol. Alcohol consumed on an occasional basis will pose little risk to most people and may even promote health. Even at this level, factors such as family history, health condition, and use of medications can 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).<sup>1</sup>

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 third leading lifestyle-related cause of death for people in the United States each year.<sup>1</sup> Excessive drinking cost the US \$223.5 billion in 2006.<sup>1</sup>

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.<sup>1</sup>

Binge drinking is a serious problem. It has been a particularly serious problem on college campuses. Students who binge drink are more likely to damage property, have trouble with authorities, miss classes, have hangovers, and experience injuries than those who do not.

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

Several groups and techniques exist to help people control their problem drinking.<sup>2</sup> Although it can be difficult, it is possible to solve a drinking problem before it causes serious damage.

### **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 2014, 58.7 percent of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 36.1 percent had an average of only one drink. The median was two drinks. About 12.8 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, 6.3 percent of

**Table 12.1**  
**Heavy Drinking Among Iowans, 2014**

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
<b>TOTAL</b>	6.3	(5.5-7.1)
<b>SEX</b>		
<b>Male</b>	7.7	(6.5-8.9)
<b>Female</b>	5.0	(4-6)
<b>RACE/ETHNICITY</b>		
<b>White/Non-Hisp.</b>	6.5	(5.7-7.3)
<b>Black/Non-Hisp.</b>	6.4	(0-14)
<b>Other/Non-Hisp.</b>	7.1	(1.4-12.8)
<b>Hispanic</b>	4.0	(0.9-7.1)
<b>AGE</b>		
<b>18-24</b>	10.2	(6.7-13.7)
<b>25-34</b>	5.3	(3.3-7.3)
<b>35-44</b>	7.2	(5.2-9.2)
<b>45-54</b>	6.6	(5-8.2)
<b>55-64</b>	6.4	(5-7.8)
<b>65-74</b>	4.9	(3.5-6.3)
<b>75+</b>	2.7	(1.4-4)
<b>EDUCATION</b>		
<b>Less than H.S.</b>	4.7	(2-7.4)
<b>H.S. or G.E.D.</b>	6.1	(4.7-7.5)
<b>Some Post-H.S.</b>	7.2	(5.6-8.8)
<b>College Graduate</b>	6.1	(4.7-7.5)
<b>HOUSEHOLD INCOME</b>		
<b>Less than \$15,000</b>	7.1	(3.8-10.4)
<b>\$15,000- 24,999</b>	6.4	(4-8.8)
<b>\$25,000- 34,999</b>	4.2	(2.4-6)
<b>\$35,000- 49,999</b>	5.7	(4.1-7.3)
<b>\$50,000- 74,999</b>	7.7	(5.7-9.7)
<b>\$75,000+</b>	7.3	(5.5-9.1)

**Table 12.2**  
**Binge Drinking Among Iowans, 2014**

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
<b>TOTAL</b>	21.4	(20-22.8)
<b>SEX</b>		
<b>Male</b>	27.9	(25.7-30.1)
<b>Female</b>	15.1	(13.5-16.7)
<b>RACE/ETHNICITY</b>		
<b>White/Non-Hisp.</b>	21.7	(20.3-23.1)
<b>Non-Hisp. or Other</b>	18.5	(13.7-23.3)
<b>AGE</b>		
<b>18-24</b>	37.2	(31.9-42.5)
<b>25-34</b>	32.9	(28.8-37)
<b>35-44</b>	27.1	(23.6-30.6)
<b>45-54</b>	20.1	(17.6-22.6)
<b>55-64</b>	14.3	(12.3-16.3)
<b>65-74</b>	7.4	(5.8-9)
<b>75+</b>	2.5	(1.3-3.8)
<b>EDUCATION</b>		
<b>Less than H.S.</b>	11.7	(7.6-15.8)
<b>H.S. or G.E.D.</b>	21.6	(19.4-23.8)
<b>Some Post-H.S.</b>	23.7	(21.2-26.2)
<b>College Graduate</b>	21.3	(19.1-23.5)
<b>HOUSEHOLD INCOME</b>		
<b>Less than \$15,000</b>	24.3	(18.8-29.8)
<b>\$15,000- 24,999</b>	17.8	(13.9-21.7)
<b>\$25,000- 34,999</b>	17.9	(14.2-21.6)
<b>\$35,000- 49,999</b>	21.9	(18.6-25.2)
<b>\$50,000- 74,999</b>	24.7	(21.4-28)
<b>\$75,000+</b>	25.4	(22.9-27.9)

all Iowans were heavy drinkers. This is about the same as in 2013 when 6.5 percent were heavy drinkers.

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 7.7 percent of men were considered to be heavy drinkers, while only 5 percent of women were considered to be heavy drinkers. Age, race/ethnicity, education and household income were also associated with the prevalence of heavy drinking. Only 2.7 percent of those age 75 and over reported heavy drinking, while 10.2 percent of those age 18 to 24 years old were heavy drinkers (see table 12.1). There were more heavy drinkers among men than women at all ages except the youngest (see figure 12.1). With respect to race/ethnicity, Hispanics reported a

lower prevalence of heavy drinkers than the others. There was also a lower prevalence of heavy drinkers among those with less than a high school education. There was a somewhat lower prevalence of heavy drinking among people with mid-level household incomes.

Binge drinking may be defined as a man drinking more than five drinks or a woman drinking more than four drinks on one occasion. Among all adult Iowans, 21.4 percent reported at least one binge episode in the last 30 days. This is almost the same as in 2013 when it was 21.7 percent.

Even with the lessened requirement on females, many more males binge than females (27.9% versus 15.1%). Non-Hispanic Whites reported a higher prevalence of binge drinking. The relation between age, income, and education with binge drinking was very similar to that for heavy drinking. The likelihood of bingeing decreases with age from 37.2 percent for 18 to 24 year olds to only 2.5 percent for those 75 years old and older. Men are more likely than women to binge drink at all age levels, although they are almost equally likely in the 18 to 24 year-old group (see figure 12.2). Unlike most risky behaviors, respondents with higher education and those with a higher household income were somewhat more likely to binge drink (see table 12.2).

### **Comparison with Other States**

The prevalence of people reporting heavy drinking in the 50 states and District of Columbia ranges from 3.3 percent to 9.1 percent. Iowa's figure of 6.3 percent is above the median for the states of 5.9 percent.

For binge drinking, states range from a low of 9.6 percent to a high of 24.9 percent with a median of 16 percent. Iowa's figure of 21.4 percent is well above the median. There are only three states with a higher prevalence of reported binge drinking. Four out of five of the highest states for binge drinking are in the upper Midwest.

### **Health Objectives for Iowa and the Nation**

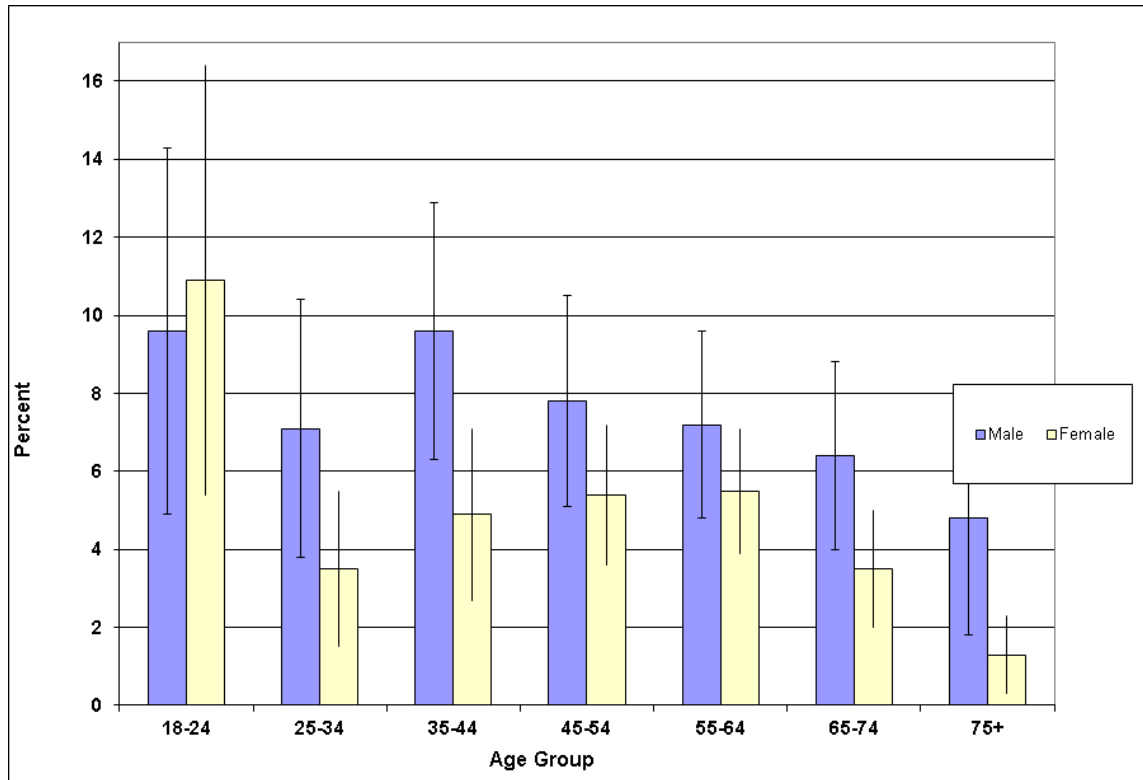
The *Healthy People 2020* goal for the nation for binge drinking is 24.3 percent. This modest goal is met in Iowa with 21.4 percent. The *Healthy Iowans* goal for binge drinking is 16 percent. Iowa's prevalence was above this goal.

### **References**

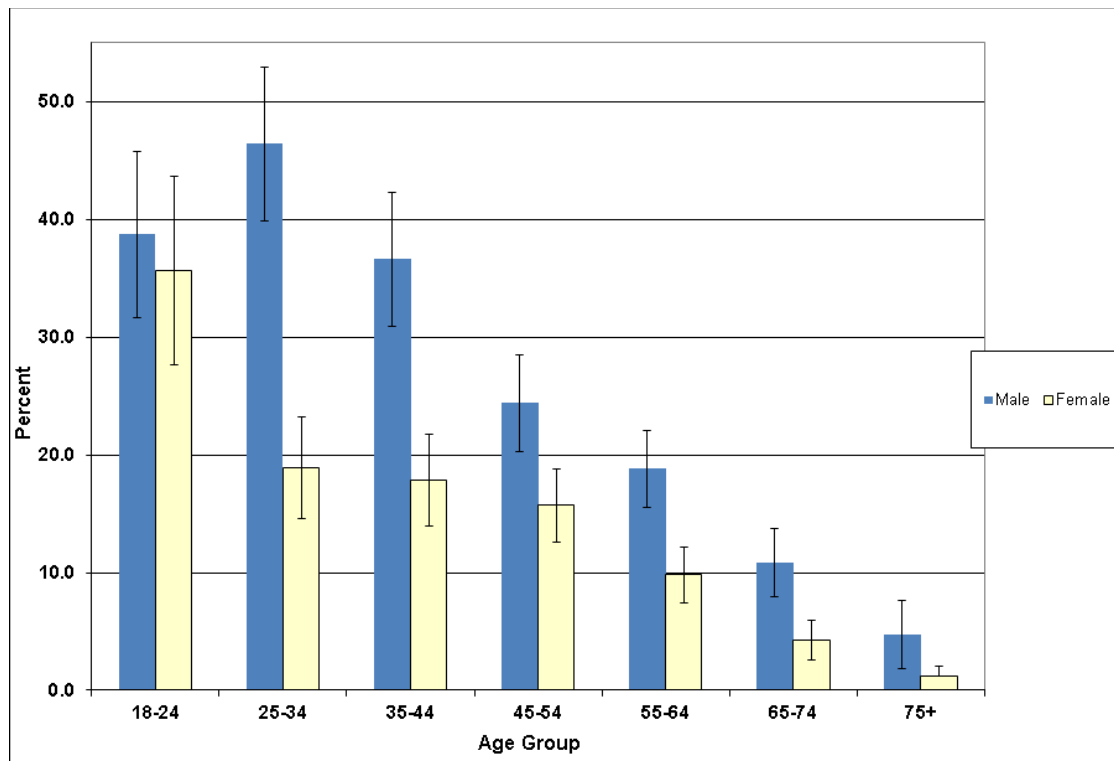
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**Figure 12.1: Heavy Drinking in Iowa by Age and Sex, 2014**



**Figure 12.2: Binge Drinking in Iowa by Age and Sex, 2014**



## 13. CANCER AND SURVIVORSHIP

### **Background**

Cancer is a very common condition and the second most common cause of death in The United States. Cancer occurs when a group of cells grows out of control and has the ability to invade normal tissue.<sup>1</sup> 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.

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 In 2015, there will be an estimated 1,658,370 new cancer cases diagnosed and 589,430 cancer deaths in the US.<sup>2</sup> 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.<sup>3</sup> Steady overall declines in cancer death rates have meant about 898,000 who would have died prematurely from cancer in the past 17 years lived.

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 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 Prevalence and Survivorship Results**

In 2014, 5.9 percent of Iowans had ever been told they had skin cancer, while 6.8 percent reported having been told they had some other type of cancer. This is a slight decline from 2013 when 6.1 percent of Iowans had ever been told they had skin cancer, while 7.1 percent reported having been told they had some other type of cancer.

Skin cancer behaves somewhat differently from other types of cancers, which 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 the least education and household incomes. Other cancers, on the other hand, were more common among females and lower income and education. The highest prevalence of ever having cancer was for people age 75 and over. In this age group the prevalence was 21.4 percent for skin cancer and 22.3 percent for other cancers. All racial and ethnic minorities as well as those age 18 to 44 years had a skin cancer prevalence of less than two percent, while for other cancers only people age 18 to 34 years had as low a prevalence (see table 13.1).

As for cancer survivors: the age at which a survivor had been told they had cancer was quite variable ranging from 5 to 94 years. The median age when a cancer survivor had been told they had cancer was 55 years. Over one third (35.6%) of cancer diagnoses had been between ages 51 and 65 years.

**Table 13.1**  
**Prevalence of Iowans reporting ever having Cancer, 2014**

DEMOGRAPHIC GROUPS	Ever Had Skin Cancer		Ever Had Other Cancer	
	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	5.9	(5.3-6.5)	6.8	(6.2-7.4)
<b>SEX</b>				
<b>Male</b>	6.1	(5.3-6.9)	5.4	(4.6-6.2)
<b>Female</b>	5.7	(5.1-6.3)	8.1	(7.1-9.1)
<b>RACE/ETHNICITY</b>				
<b>White/Non-Hisp.</b>	6.5	(5.9-7.1)	7.2	(6.6-7.8)
<b>Black/Non-Hisp.</b>	0.2	(0-0.6)	3.4	(0-7.3)
<b>Other/Non-Hisp.</b>	1.8	(0-3.8)	2.1	(0-4.2)
<b>Hispanic</b>	0.2	(0-0.4)	3.1	(0.4-5.8)
<b>AGE</b>				
<b>18-24</b>	0.4	(0-1)	0.0	(0-0)
<b>25-34</b>	0.4	(0-1)	1.9	(0.5-3.3)
<b>35-44</b>	1.9	(0.9-2.9)	2.8	(1.6-4)
<b>45-54</b>	3.6	(2.4-4.8)	5.4	(4-6.8)
<b>55-64</b>	7.6	(6.2-9)	8.5	(6.9-10.1)
<b>65-74</b>	13.0	(11.2-14.9)	13.2	(11.3-15.2)
<b>75+</b>	21.4	(18.8-23.9)	22.3	(19.6-25)
<b>EDUCATION</b>				
<b>Less Than H.S.</b>	4.1	(2.5-5.7)	6.5	(4.1-8.9)
<b>H.S. or G.E.D.</b>	6.6	(5.6-7.6)	7.5	(6.5-8.5)
<b>Some Post-H.S.</b>	5.7	(4.7-6.7)	6.9	(5.7-8.1)
<b>College Graduate</b>	6.0	(5.2-6.8)	5.8	(4.8-6.8)
<b>HOUSEHOLD INCOME</b>				
<b>Less than \$15,000</b>	2.8	(1.6-4)	8.0	(5.5-10.5)
<b>\$15,000- 24,999</b>	5.3	(3.9-6.7)	8.1	(6.1-10.1)
<b>\$25,000- 34,999</b>	6.3	(4.5-8.1)	8.8	(6.6-11)
<b>\$35,000- 49,999</b>	7.6	(6-9.2)	8.4	(6.6-10.2)
<b>\$50,000- 74,999</b>	5.6	(4.4-6.8)	5.4	(4-6.8)
<b>\$75,000+</b>	5.3	(4.3-6.3)	4.4	(3.6-5.2)

Of all the Iowa cancer survivors 5.8 percent were currently receiving treatment.

Of all cancer survivors, 40.8 percent had received a summary of cancer treatments received. A set of instructions for follow-up was received by 73.8 percent of survivors. For about 74.8 percent these instructions were written or printed.

Health insurance was reported to have paid for all or part of cancer treatments for 96.6 percent of cancer survivors. Having health or life insurance denied because of cancer was reported by 6.7 percent of cancer survivors.

Only 5.3 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 7.7 percent of cancer survivors. The majority of these (88.2%) reported their pain was under control.

Material on certain cancer screening tests can be found in the immediately following chapters.

### **References**

1. American Cancer Society. What is Cancer?, 2015, Available at <http://www.cancer.org/cancer/cancerbasics/what-is-cancer>.
2. American Cancer Society. Cancer Facts & Figures 2015, 2015, Available at <http://www.cancer.org/research/cancerfactsstatistics/cancerfactsfigures2015/index>
3. Reuters. Cancer Death Rates Continue Drop: Report, 6/19/2011.

## **14. BREAST & CERVICAL CANCER SCREENING**

### **Breast Cancer Screening**

#### **Background**

Breast cancer is a malignant (cancerous) tumor that starts from cells of the breast. The disease occurs mostly in women, but men can get breast cancer as well.<sup>1</sup>

Other than skin cancer, breast cancer is the most common cancer among women. After lung cancer, it is the second leading cause of cancer death in women. About 231,840 women in the United States are predicted to be found to have invasive breast cancer in 2015. About 40,290 women will die from the disease this year. Breast cancer death rates have been going down. This is probably the result of finding the cancer earlier and improved treatment. Currently, there are more than 2.9 million women living in the U.S. who have been treated for breast cancer.<sup>1</sup> In Iowa, 377 women died from breast cancer in 2013.<sup>3</sup>

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

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

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

Lately, there has been some disagreement about mammography recommendations. Two agencies making recommendations are the American Cancer Society and the Preventive Services Task Force. Despite differences on exactly when to start and how often mammography screening should occur, the following is generally the case:

- Older women, age 40 or 50 years and older, should be screened every one to two years with mammography.
- Women at higher than average risk of breast cancer should seek expert medical advice about whether they should begin screening before age 40 and the frequency of screening.<sup>4</sup>

- Women at higher than average risk of breast cancer should also be screened with magnetic resonance imagery (MRI).

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

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

### **Breast Cancer Screening Results**

In 2014, 88.8 percent of Iowa women reported ever having a CBE by a physician. The percentage increased with education and household income and was lower for racial and ethnic minorities. It was more prevalent for women in the middle age groups than for those both younger and older. (see table 14.1).

**Table 14.1: Breast Examination Measures for Iowa Women, 2014**

DEMOGRAPHIC GROUPS	Ever had a Mammogram		Had Mammogram in Last 2 Years		Ever had Clinical Breast Exam	
	Age 40 and over					
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL FEMALES</b>	93.6	(92.6-94.7)	76.0	(74.2-77.8)	88.8	(87.2-90.4)
<b>Race/Ethnicity</b>						
<b>White Non-Hispanic</b>	93.9	(92.9-94.8)	76.1	(74.3-77.9)	90.7	(89.2-92.1)
<b>Non-White or Hisp.</b>	91.0	(84.1-98)	76.2	(65.7-86.7)	72.1	(63.7-80.5)
<b>AGE</b>						
<b>18 - 39</b>					79.7	(75.6-83.8)
<b>40 - 49</b>	85.3	(81.7-88.8)	68.0	(63.6-72.3)	97.0	(95.5-98.6)
<b>50 - 59</b>	95.5	(94.1-96.8)	79.4	(76.2-82.7)	94.7	(92.7-96.8)
<b>60 - 69</b>	96.9	(95.5-98.4)	82.5	(79.6-85.4)	95.7	(94-97.5)
<b>70 &amp; up</b>	96.5	(95.4-97.6)	73.6	(70.5-76.7)	88.4	(86.2-90.6)
<b>EDUCATION</b>						
<b>Less than H.S.</b>	92.0	(88-96)	60.5	(51.5-69.5)	71.5	(62.7-80.3)
<b>H.S. or G.E.D.</b>	93.5	(91.9-95.2)	74.8	(72.1-77.5)	87.2	(84.5-89.9)
<b>Some Post-H.S.</b>	93.9	(92-95.9)	77.3	(74.2-80.4)	89.9	(87.4-92.4)
<b>College Graduate</b>	94.3	(92.4-96.2)	81.2	(78.5-83.9)	95.7	(94.1-97.3)
<b>HOUSEHOLD INCOME</b>						
<b>Less than \$15,000</b>	85.3	(79.9-90.6)	61.1	(53.8-68.4)	79.5	(72.8-86.2)
<b>\$15,000- 24,999</b>	92.2	(89.2-95.2)	63.4	(57.9-68.9)	84.0	(79.3-88.7)
<b>\$25,000- 34,999</b>	92.7	(88.8-96.7)	74.6	(69.1-80.1)	91.9	(88.6-95.2)
<b>\$35,000- 49,999</b>	94.8	(92.1-97.6)	75.3	(70.6-80)	93.3	(90.2-96.4)
<b>\$50,000- 74,999</b>	95.6	(93.7-97.5)	80.9	(76.8-85)	94.6	(92.1-97.1)
<b>\$75,000+</b>	94.1	(91.8-96.3)	84.1	(81-87.2)	93.6	(90.7-96.5)

When asked if they had ever had a mammogram, 93.6 percent of all female Iowans ages 40 and older reported having one. Women in their 40s were less likely to have a mammogram than older ones. Also, women with higher education and income were more likely to have a mammogram (see table 14.1).

When asked if they had a mammogram in the past two years, 76 percent of all Iowa women over age 40 said they had. For women older than age 50, the figure was 78.4 percent. Older women (until age 70), the women with a higher education level and those with a higher household income tended to have higher percentages of having a mammogram in the past two years (see table 14.1).

### **Comparison with Other States**

In all states and the District of Columbia, the percent of women age 40 and older who have had a mammogram in the past two years ranged from 62.5 percent to 82.1 percent. Iowa's figure of 76 percent is better than the median of 73 percent.

### **Health Objectives for Iowa and the Nation**

The national health objectives for *Healthy People 2020* include an increase to at least 81.1 percent of women age 40 and older who have had a mammogram within the preceding two years. Iowa falls short of this goal with 76 percent. The *Healthy Iowans* goal is 88 percent for women 50 years and older. Iowa falls short here as well with 78.4 percent.

## **Cervical Cancer Screening**

### **Background**

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

Approximately 12,900 new cases of invasive cervical cancer and 4,100 cervical cancer-related deaths were projected to occur in 2015 in the United States.<sup>2</sup> Overall rates of U.S. women diagnosed with invasive cervical cancer have declined greatly in the last few decades.

Although there are several risk factors for cervical cancer, the most important risk factor is infection with the human papilloma virus (HPV). This virus is often, though not always, transmitted sexually. A vaccine now exists for HPV. Not all women infected with HPV get cervical cancer. Some other risk factors that may play a role are smoking, HIV infection, chlamydia infection, and obesity.<sup>2</sup>

The principal screening test for cervical cancer is the Papanicolaou (Pap) test. This test allows the cellular changes in the cervix to be detected when they are precancerous or at an early stage.

Early detection through Pap tests can dramatically lower the incidence of invasive disease and can nearly eliminate deaths from cervical cancer.

The American Cancer Society recommends Pap tests begin no later than age 21 years. The test should be done every three years until age 30. It could be done every three years after that or every five years when combined with an HPV test. If the woman is at high risk, the test needs to be done more frequently. Women are at high risk of cervical cancer if, among other things, they have a weak immune system from HIV infection, organ transplant, long-term steroid use, or because they were exposed to the drug DES when their mothers were pregnant with them.

Pap tests are not necessary for women who have had a total hysterectomy that was not due to cancer or are over age 65 and not high risk.<sup>2</sup> However, women who have been vaccinated against HPV should still follow these guidelines.

### **Cervical Cancer Screening Results**

When asked if they ever had a Pap test, 91.9 percent of Iowa females who had not had a hysterectomy reported having it. The proportion of women who ever had a Pap test increased with the level of education and household income. It was higher in the middle age groups than at either extreme. It was lower in racial and ethnic minorities. (see table 14.2).

In 2014, 75.8 percent of Iowa females reported that they had their last Pap test within the last three years. This is a decline from 78 percent in 2012. The percentage having a Pap test within three years increased with education and income. Women age 75 years and older had the lowest percentage (35.7%), while women age 25 to 34 had the highest percentage (91.5%) (see table 14.2).

### **Comparison with Other States**

In all states and the District of Columbia the percent of adult women who have had a pap test in the past three years ranged from 67.3 percent to 80.3 percent. The median was 75.2 percent. Iowa's figure of 75.8 percent is somewhat better than the median for the nation. Pap test prevalence declined nationwide from 2012.

### **Health Objectives for Iowa and the Nation**

For *Healthy People 2020* the goal for the proportion of women over the age of 18 who have had a Pap test in the last three years is 93 percent. For *Healthy Iowans*, the goal for those over age 21 years is 92 percent. The figures for 2014, 75.8 percent over 18 and 79.3 percent over 21 years, fall short of both of these goals.

### **References**

1. American Cancer Society. Breast Cancer Overview, Atlanta, Georgia: American Cancer Society, 2014. Available at: <http://www.cancer.org/cancer/breastcancer/overviewguide/index>.



2. American Cancer Society. Cervical Cancer Overview. Atlanta, Georgia: American Cancer Society, 2014. Available at:  
<http://www.cancer.org/acs/groups/cid/documents/webcontent/003042-pdf.pdf>.
3. Iowa Department of Public Health. *2013 Vital Statistics of Iowa*. 2014.
4. National Cancer Institute, *Fact Sheet: Mammogram*. 2014. Available at:  
<http://www.cancer.gov/cancertopics/factsheet/detection/mammograms>.

**Table 14.2: Proportion of Iowa Women Having Pap Test, 2014**

DEMOGRAPHIC GROUPS	Ever had a Pap test		Had Pap test in last 3 years	
	%	C.I. (95%)	%	C.I. (95%)
<b>FEMALES</b>	91.9	(90.3-93.5)	75.8	(73.6-78)
<b>Race/Ethnicity</b>				
<b>Non-Hispanic White</b>	93.1	(91.7-94.5)	76.2	(74-78.4)
<b>Non-White or Hispanic</b>	81.0	(73.1-88.8)	73.4	(64.4-82.3)
<b>AGE</b>				
<b>18-24</b>	53.4	(44.8-62)	53.0	(44.4-61.6)
<b>25-34</b>	97.6	(95.8-99.4)	91.5	(88.2-94.8)
<b>35-44</b>	98.6	(97-100)	88.1	(84.4-91.8)
<b>45-54</b>	99.2	(98.6-99.8)	85.7	(82.2-89.2)
<b>55-64</b>	98.1	(96.7-99.5)	81.9	(78.4-85.4)
<b>65-74</b>	97.9	(96.7-99.1)	65.9	(61-70.7)
<b>75+</b>	92.8	(90.8-94.9)	35.7	(30.3-41.1)
<b>EDUCATION</b>				
<b>Less than H.S.</b>	84.5	(76.5-92.5)	Unreliable	
<b>H.S. or G.E.D.</b>	91.9	(89.4-94.4)	69.3	(65.4-73.2)
<b>Some Post-H.S.</b>	89.9	(87.2-92.6)	73.8	(69.9-77.7)
<b>College Graduate</b>	97.8	(96.6-99)	88.5	(86.3-90.7)
<b>HOUSEHOLD INCOME</b>				
<b>Less than \$15,000</b>	79.8	(72.4-87.2)	57.9	(48.9-66.9)
<b>\$15,000- 24,999</b>	93.3	(90.2-96.4)	66.1	(59.6-72.6)
<b>\$25,000- 34,999</b>	95.6	(92.9-98.3)	73.3	(67.4-79.2)
<b>\$35,000- 49,999</b>	96.2	(93.7-98.7)	79.3	(74.6-84)
<b>\$50,000- 74,999</b>	96.0	(93.6-98.4)	85.5	(81.6-89.4)
<b>\$75,000+</b>	93.3	(90.4-96.2)	85.7	(82-89.4)

## 15. COLORECTAL CANCER SCREENING

### Background

Colorectal cancer is the second leading cause of cancer-related deaths in both the United States and Iowa. Colorectal cancer occurs in the colon or rectum. It may also be referred to as colon cancer. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.<sup>1</sup>

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. Some screening tests can detect polyps so they can be removed before they turn into cancer.<sup>2</sup>

An estimated 93,090 new cases of colon and 39,610 new cases of rectal cancer are expected to exist in the United States in 2015.<sup>1</sup> There are estimated to be 49,700 deaths from this disease.<sup>1</sup> 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.<sup>3</sup>

Although the exact causes of colorectal cancer are unknown, risk factors include:

- **Age** – Approximately 93 percent of colorectal cancer cases occur in people age 50 and older, and the risk of developing the disease increases with age.
- **Family History** – Those who have family members diagnosed with colorectal cancer or precancerous polyps are at high risk for the disease.
- **Personal History** – Persons who have inflammatory bowel diseases are at increased risk.

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

The U.S. Preventive Services Task Force recommends that men and women who are not at a high risk begin regular screening for colorectal cancer at age 50.<sup>4</sup> If everyone ages 50 to 75 had regular screening, as many as 60 percent of deaths from colorectal cancer could be prevented. Recommended options include the following:

- **Fecal Occult Blood Test (FOBT) including Fecal Immunochemical Test (FIT):** Are tests that detect hidden blood in a stool sample. If results are normal, repeat the tests annually.
- **Flexible Sigmoidoscopy:** Uses a hollow, lighted tube to visually inspect the wall of the rectum and the lower third of the colon. If results are normal, repeat flexible sigmoidoscopy every five years.
- **Colonoscopy:** Is a test that uses a hollow, lighted tube to inspect the interior walls of the rectum and the entire colon. If it is normal, the test should be repeated every 10 years.
- **Double-Contrast Barium Enema:** Is a series of x-rays of the colon and rectum. If it is normal, the test should be repeated every five years.
- **Virtual Colonoscopy:** Is a three dimensional x-ray of the colon.<sup>1</sup>

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

### **Colorectal Cancer Screening Results**

In 2014, 36 percent of Iowans 50 years old or older reported ever using a home blood-stool testing kit (FOBT). Of those who had ever had the test, 31.8 percent had it within the past two years.

In 2014, 71.1 percent of Iowans 50 years old or older reported ever having a sigmoidoscopy or colonoscopy screening test. This is an increase from 69.3 percent found in 2012. People with more education, a higher annual household income and who were female were more likely to have the test.

Having a colonoscopy was far more common than having a sigmoidoscopy (97 percent compared to only 3 percent for sigmoidoscopy). Nearly everyone who had one of these tests had a colonoscopy.

**Table 15.1: Prevalence of Colorectal Cancer screening in Iowans Meeting Recommendations, 2014**

DEMOGRAPHIC GROUPS	Met Screening Criteria from any Method	
	%	C.I. (95%)
<b>TOTAL</b>	68.0	(66.2-69.8)
<b>SEX</b>		
<b>Male</b>	66.5	(63.7-69.2)
<b>Female</b>	69.5	(67.1-71.8)
<b>EDUCATION</b>		
<b>Less than H.S.</b>	43.1	(34.3-51.8)
<b>H.S. or G.E.D.</b>	64.6	(61.6-67.6)
<b>Some Post-H.S.</b>	72.1	(69.1-75.2)
<b>College Graduate</b>	75.5	(72.6-78.3)
<b>HOUSEHOLD INCOME</b>		
<b>Less than \$15,000</b>	49.7	(41.5-57.9)
<b>\$15,000- 24,999</b>	60.5	(54.8-66.2)
<b>\$25,000- 34,999</b>	64.5	(58.9-70.1)
<b>\$35,000- 49,999</b>	67.6	(63.1-72.2)
<b>\$50,000- 74,999</b>	69.1	(65-73.3)
<b>\$75,000+</b>	75.1	(72-78.2)

To determine the percentage of Iowans being adequately screened, the percent of respondents who had either screening method within the proper time interval was calculated for individuals with normal screening results. The proper time interval for the blood stool test is within a year from the last test, while the proper time interval for a sigmoidoscopy is five years from the previous test. The proper interval for a colonoscopy is ten years from the last screening or as recommended by a health care provider if test results were negative. The result was that 68 percent of Iowans 50 to 75 years old had, at least, one of the colorectal screening methods within the prescribed time period. People with less than a high school education had the lowest percentage (43.1%), while college graduates had the highest (75.5%) (see table 15.1).

Since 2004, a number of additional questions have been included in the survey concerning colorectal cancer screening. A few findings from these are given here.

Iowans 50 years old and older reported that 59.8 percent of them had been talked to by a health care professional about colorectal cancer screening. When the health care professional talked about screening, 90.4 percent recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 82.1 percent then had the test.

Out of all Iowans 50 years old and older, 58.1 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 (77.5%).

### **Comparison with Other States**

The proportion of people age 50 and older in all states and the District of Columbia who have ever had a sigmoidoscopy or colonoscopy ranges from 60.3 percent to 77.6 percent. Iowa's prevalence of 69.3 percent is better than the median of 67.3 percent.

### **Health Objectives for the Nation**

The *Healthy People 2020* goal is for 70 percent of people age 50 to 75 to be screened according to the latest guidelines. Iowa's figure of 66.4 percent does not quite reach the goal.

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2. Centers for Disease Control and Prevention. Colorectal Cancer: Screening Saves Lives, 2014. Available at [http://www.cdc.gov/cancer/colorectal/basic\\_info/index.htm](http://www.cdc.gov/cancer/colorectal/basic_info/index.htm)
3. Centers for Disease Control and Prevention. Vital Signs: Colorectal Cancer Screening, Incidence, and Mortality -- United States, 2002—2010, 2011.
4. Agency for Healthcare Research and Quality, The Guide to Clinical Preventive Services 2010 – 2011: Recommendations of the U.S. Preventive Services Task Force, 2010.

## **16. DISABILITY**

### **Background**

The World Health Organization's *International Classification of Functioning, Disability and Health (ICF)* defines disability as an umbrella term for impairments, activity limitations and participation restrictions. Disability is the interaction between individuals with a health condition (e.g., cerebral palsy, Down's syndrome and depression) and personal and environmental factors (e.g., negative attitudes, inaccessible transportation and public buildings, and limited social supports). Impairment is defined as "any loss or abnormality of psychological, physiological, or anatomical structure or function".<sup>3</sup>

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 available Census estimates for 2013 found that over 39 million people in the United States (more than 12%) had a disability that prevented or limited their ability in some way.<sup>2</sup>

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.

Disability may not only be considered a health condition. It may also be seen as a demographic condition that affects health. This source of health disparities may arise due to difficulties with health access faced by people with disabilities deriving from physical, financial, or social sources. Special considerations need to be made for people with disabilities to participate in the health care system on an equal basis with the non-disabled.<sup>1</sup> Having a disability does not necessarily need to be a barrier to good general health in unrelated areas.

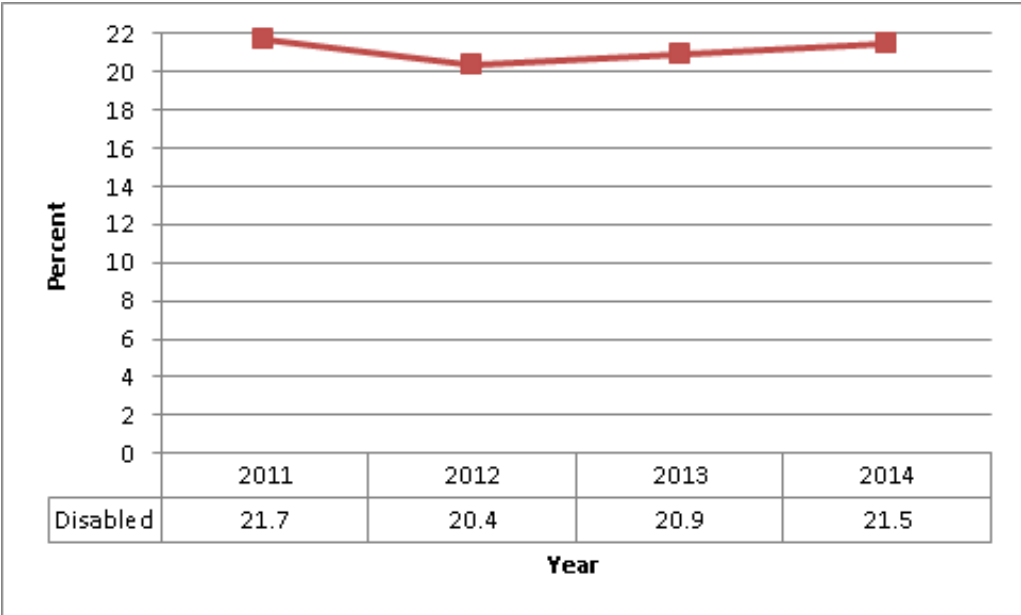
Many Americans with disabilities use Assistive Technology Devices (ATDs) to accommodate mobility impairments and other sensory and mental impairments. These can allow a person with a disability to work and otherwise live an independent life.

### **Disability Results**

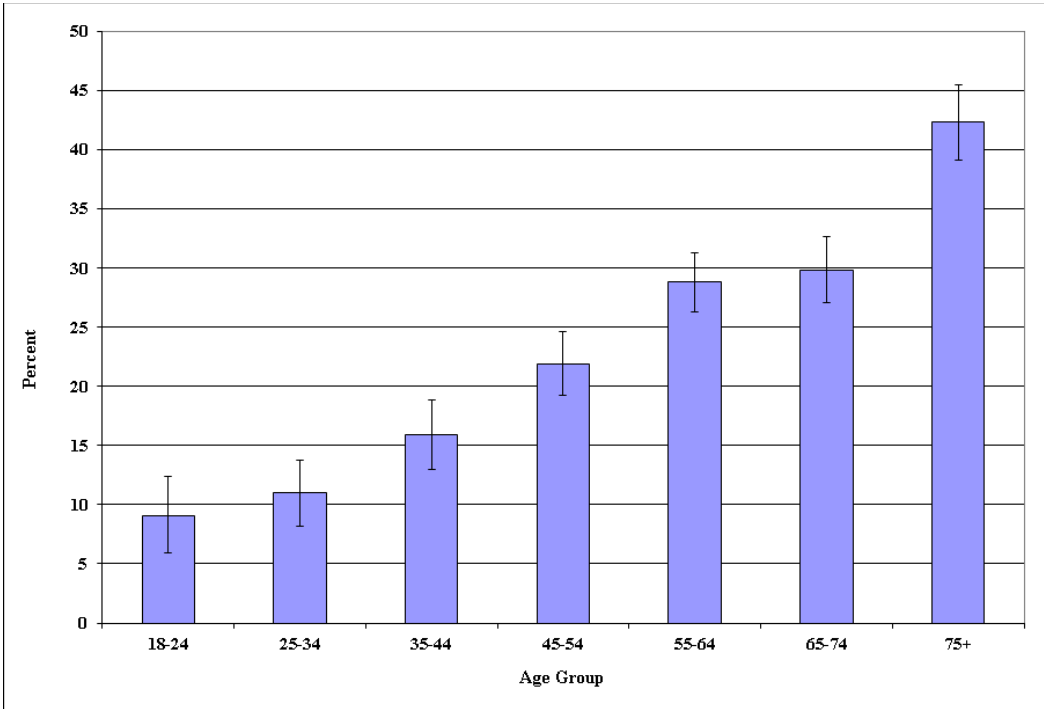
In 2014, 19.3 percent of adult Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. When asked whether they had a health problem requiring the use of special equipment, 7.8 percent of adult Iowans said they needed such items as a cane, a wheelchair, 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 2014, 21.5 percent of adult Iowans were considered to have a disability. This is a slight increase from the 20.9 percent in 2013 but it is about the same as in 2011 (see figure 16.1).

**Figure 16.1: Percent of Iowans with a Disability by Year, 2011-2014**



**Figure 16.2: Percent of Iowans with a Disability by Age, 2014**



As shown in Table 16.1, older people, females, 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 (9.1%). Those age 75 years and older reported the highest percentage of disability (42.3%). This group is the most rapidly growing group in the population. The second highest reporting group included those with an annual household income less than \$15,000 (40.4%). Many people with disabilities are unable to work due to their disability.

Arthritis is the most widespread disability reported in the BRFSS. In 2014, 25.9 percent of adult Iowans reported having been diagnosed with arthritis. Since this is higher than the percent reporting a disability, not all people diagnosed with arthritis find it to be a limitation.

The demographic pattern of diagnosed arthritis is very similar to disability in general. The prevalence increases with age, decreases with education and household income, and is lower for males and racial and ethnic minorities. Age had the greatest impact (see table 16.2 and figure 16.3). The lowest prevalence is seen among people who were age 18 to 24 years (4.8%), while the highest was among those 75 and older (57.9%).

**Table 16.1: Percent Reporting Having A Disability, 2014**

Demographic Groups	Disability	
	%	C.I. (95%)
<b>TOTAL</b>	21.5	(20.4-22.6)
<b>SEX</b>		
Male	20.2	(18.6-21.9)
Female	22.7	(21.1-24.2)
<b>RACE/ETHNICITY</b>		
White/Non-Hisp.	21.6	(20.8-22.5)
Non-White or Hisp.	19.3	(14.7-23.8)
<b>AGE</b>		
18-24	9.1	(5.9-12.4)
25-34	11.0	(8.2-13.8)
35-44	15.9	(13-18.8)
45-54	21.9	(19.2-24.6)
55-64	28.8	(26.3-31.3)
65-74	29.8	(27.1-32.6)
75+	42.3	(39.1-45.5)
<b>EDUCATION</b>		
Less than H.S.	32.3	(26.8-37.9)
H.S. or G.E.D.	22.6	(20.7-24.5)
Some Post-H.S.	21.3	(19.4-23.3)
College Grad.	15.9	(14.3-17.5)
<b>HOUSEHOLD INCOME</b>		
<\$15,000	40.4	(36.9-44)
\$15,000- 24,999	33.8	(29.9-37.7)
\$25,000- 34,999	25.5	(21.8-29.1)
\$35,000- 49,999	18.0	(15.5-20.6)
\$50,000- 74,999	14.9	(12.7-17.1)
\$75,000+	12.6	(10.9-14.2)

Several more questions involving specific functional disability have been added to the survey.

In 2014, 2.9 percent of Iowans said they were blind. Several other questions related to vision and eye health were asked, but will not be discussed in this report.

When asked if they had serious difficulty concentrating, remembering, or making decisions, 8.3 percent said that they did.

When asked if they had difficulty doing errands alone such as visiting a doctor's office or shopping because of a physical, mental, or emotional condition, 5.1 percent said that they did.

**Table 16.2: Percent Reporting Diagnosed Arthritis, 2014**

Demographic Groups	Arthritis	
	%	C.I. (95%)
<b>TOTAL</b>	25.9	(24.7-27.1)
<b>SEX</b>		
Male	21.3	(19.7-22.9)
Female	30.5	(28.9-32.1)
<b>RACE/ETHNICITY</b>		
White/Non-Hisp.	26.9	(25.7-28.1)
Black/Non-Hisp.	25.8	(16.2-35.4)
Other/Non-Hisp.	17.1	(13.2-20.9)
Hispanic	10.4	(5.7-15.1)
<b>AGE</b>		
18-24	4.8	(2.3-7.3)
25-34	7.6	(5.2-10)
35-44	14.5	(11.8-17.2)
45-54	23.7	(21-26.4)
55-64	38.6	(35.9-41.3)
65-74	50.0	(47.1-53)
75+	57.9	(54.7-61)
<b>EDUCATION</b>		
Less than H.S.	28.8	(23.9-33.7)
H.S. or G.E.D.	30.8	(28.8-32.8)
Some Post-H.S.	26.6	(24.4-28.8)
College Grad.	17.2	(15.6-18.8)
<b>HOUSEHOLD INCOME</b>		
<\$15,000	29.0	(24.5-33.5)
\$15,000- 24,999	34.5	(30.8-38.2)
\$25,000- 34,999	31.1	(27.4-34.8)
\$35,000- 49,999	29.9	(26.8-33)
\$50,000- 74,999	23.0	(20.3-25.7)
\$75,000+	16.8	(15-18.6)

When asked if they had difficulty dressing or bathing, 2.8 percent said they did.

When asked if they had serious difficulty walking or climbing stairs, 12 percent said they did.

### Comparison with Other States

The percent of people reporting a disability in the U.S. ranged from 17 percent to 30.5 percent. Iowa's figure of 20.4 percent was below the median of 21.9 percent. This position is quite good considering Iowa's large elderly population and that the comparisons were not adjusted for differences in age.

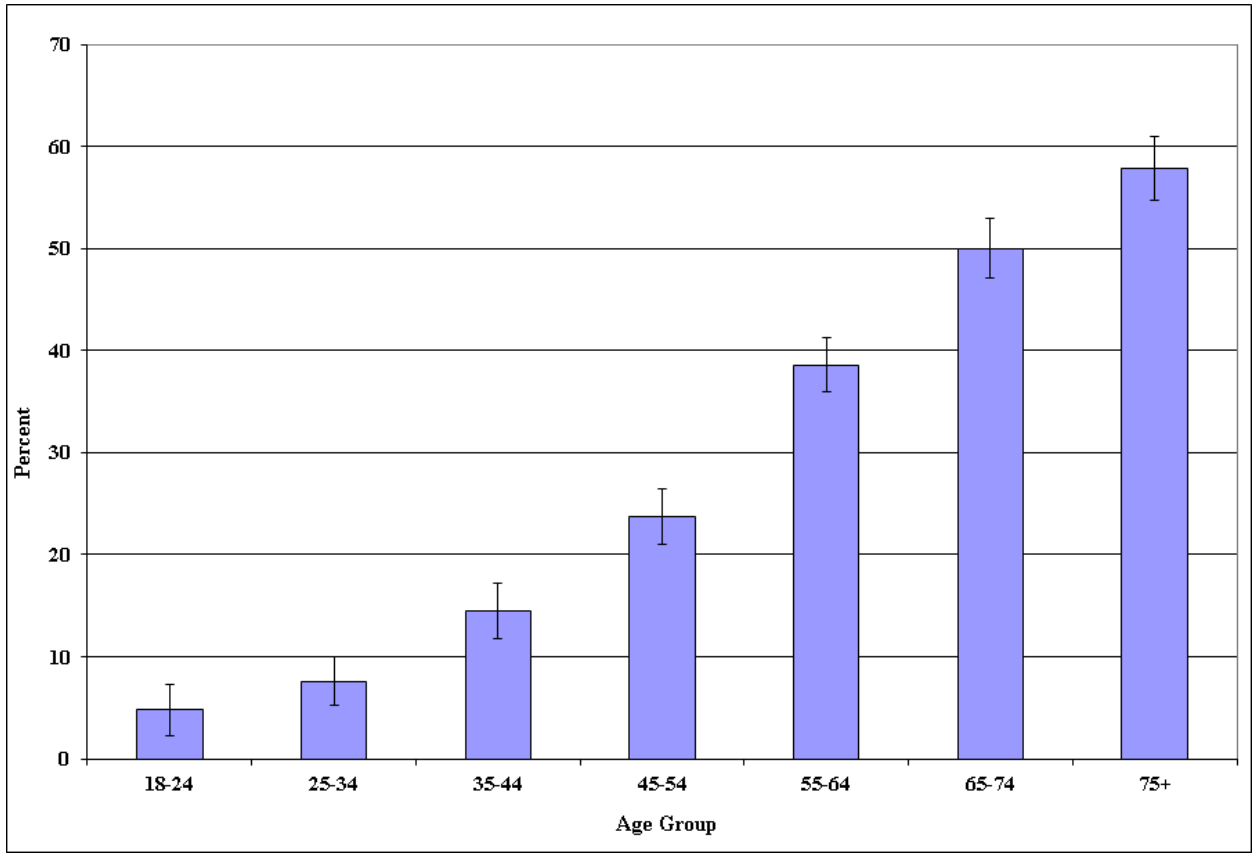
In terms of arthritis, the range among the states was from a prevalence of 18.2 percent to 36.4 percent. Iowa's level of 25.9 percent was just above the median at 25.7 percent.

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**Figure 16.3: Percent of Iowans with Diagnosed Arthritis by Age, 2014**



## **17. INJURY CONTROL**

### **Background**

The 2014 BRFSS examines three areas related to injury control. These are falls, seatbelt use, and drinking and driving.

### **Falls**

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

In 2013, the direct medical costs of falls, adjusted for inflation, were \$34 billion.<sup>4</sup> The financial toll for older adult falls is expected to increase as the population ages, and may reach \$54.9 billion by 2020 (adjusted to 2007 dollars).<sup>3</sup> This projection includes indirect costs such as the costs of disabilities resulting from falls.

Elderly persons who survive a fall experience significant morbidity. Hospital stays are almost twice as long in elderly patients who are hospitalized after a fall than in elderly patients who are admitted for another reason. People age 75 and older who fall are four to five times more likely than those age 65 to 74 to be admitted to a long-term care facility for a year or longer.

Compared with elderly persons who do not fall, those who fall experience greater functional decline in activities of daily living (ADLs) and in physical and social activities, and they are at greater risk for subsequent institutionalization.<sup>4</sup> Some of this is due to a fear of falling again.

The death rates from falls among older men and women have risen sharply over the past decade. In 2013, about 25,500 older adults died from unintentional fall injuries.<sup>4</sup> In Iowa in 2013, the number of fatal falls was 487 with 386 being among those 75 years of age or older.<sup>6</sup> The number of people age 65 years and older is projected to double in the next 50 years. For people age 85 years and older, relative growth rates are even faster.

One of the strongest predictors of a fall is having sustained a previous fall.<sup>2</sup> A fall is often a marker of increasing fragility, functional decline, or neurological impairment, and may indicate the need for a secondary prevention strategy (e.g., hip protectors to prevent hip fractures.)

### **Falls Results**

According to the BRFSS, a fall occurs when a person unintentionally comes to rest on the ground or another lower level. Respondents age 45 years and older were asked how many times they had experienced a fall in the last 12 months. In this group, 30.3 percent said they had fallen at least once. Some, three percent, reported they had fallen five or more times. Of those who had fallen, 34 percent said that, at least, one fall had injured them. Some, 2.4 percent, had been injured five or more times. In this instance, injury was defined as limiting activity for, at least, a day or causing them to see a doctor.

**Table 17.1**  
**Prevalence of Falls in Iowa, 2014**

DEMOGRAPHIC GROUPS	Any Falls in Last 12 Months	
	%	C.I. (95%)
<b>TOTAL</b>	30.3	(28.9-31.7)
<b>SEX</b>		
Male	29.8	(27.6-32)
Female	30.8	(29-32.7)
<b>RACE/ETHNICITY</b>		
White/Non-Hisp.	30.3	(28.9-31.8)
Non-White or Hisp.	28.7	(20.7-36.8)
<b>AGE</b>		
45-54	27.2	(24.3-30.1)
55-64	32.5	(29.9-35.1)
65-74	30.0	(27.3-32.8)
75+	33.3	(30.2-36.4)
<b>EDUCATION</b>		
Less than H.S.	31.6	(25.4-37.9)
H.S. or G.E.D.	31.6	(29.3-34)
Some Post-H.S.	29.9	(27.3-32.5)
College Graduate	28.4	(26-30.8)
<b>HOUSEHOLD INCOME</b>		
Less than \$15,000	42.7	(36.1-49.3)
\$15,000- 24,999	37.5	(33.3-41.8)
\$25,000- 34,999	33.1	(28.6-37.6)
\$35,000- 49,999	28.2	(24.7-31.6)
\$50,000- 74,999	29.1	(25.6-32.6)
\$75,000+	25.7	(23.1-28.3)

More people who had a lower level of education or a lower household income reported falls. Age had little impact until age 75. People age 75 and older reported more falls. The group reporting the highest prevalence of falls included those with an annual household income less than \$15,000 (42.7%), while the group with the lowest prevalence included those with annual household incomes of \$75,000 and above (25.7%) (see table 17.1).

### **Seatbelt Use**

In addition to being the leading cause of death among U.S. residents aged 5-34 years, motor vehicle-occupant injuries account for approximately 15% of all nonfatal injuries treated in U.S. emergency departments. In 2013, there were 30,057 passenger vehicles involved in fatal crashes. More than 22,300 passenger vehicle occupants lost their lives in traffic crashes in 2013. There were 1,591,000 crashes involving injuries with 2,099,000 occupants injured.<sup>10</sup> In 2012, an estimated 2,519,471 ED visits resulted from nonfatal crash injuries, with an estimated lifetime medical cost of \$18.4 billion (2012 U.S. dollars). Approximately 7.5% of these visits resulted in hospitalizations that required an estimated 1,057,465 hospital days in 2012.<sup>1</sup>

Seatbelts save lives. Seat belts, which reduce the risk for fatal injuries from motor vehicle crashes by approximately 45 percent and serious injuries by approximately 50 percent, are the most effective intervention for protecting motor vehicle occupants.<sup>5</sup>

Failure to wear a seat belt contributes to more fatalities than any other single traffic safety-related behavior; 63% of people killed in accidents are not wearing seat belts. Unbelted occupants were five times more likely to die when involved in a crash than belted occupants. Wearing a seat belt is still the single most effective thing we can do to save lives and reduce injuries on America's roadways. The National Highway Traffic Safety Administration (NHTSA) estimates that in 2013, the use of seat belts in passenger vehicles saved 12,584 lives (occupants 5 and older).<sup>8</sup>

Apart from this, seatbelt use would lead to a substantial saving in hospital costs and disability, particularly from head trauma.

### **Seatbelt Use Results**

In 2014, when asked how often they wore a seatbelt when driving or riding in a car, 94.7 percent said always or nearly always. This figure is so near the maximum that it was difficult to see any differences between demographic groups. However, it appeared that wearing seatbelts was more common among females than males (97.2% vs. 92.2%). It also seemed to be less prevalent among younger people and those with less education (see table 17.2).

### **Drinking and Driving**

An automobile crash is considered to be alcohol-related when the driver is reported to have a blood alcohol level of .08 grams per deciliter or higher. Considering that blood alcohol level may not be reported for every crash and that any amount of alcohol causes some amount of impairment, figures for its impact are conservative.

About three in every ten American auto crash deaths involve alcohol. On average, someone is killed by a drunk driver every 52 minutes. In 2013, an estimated 10,076 people died in alcohol-related driving crashes—a decline of over 50 percent since records started being kept in 1982.<sup>9</sup> About one-third of these deaths involved someone other than the driver.

Alcohol-related crashes in the United States cost the public an estimated \$49.8 billion in 2010. Even more was paid in terms of loss of quality of life. People, other than the drinking driver, paid \$71.6 billion of the alcohol-related crash bill, which is 63 percent of the total cost of these crashes.<sup>7</sup>

### **Drinking and Driving Results**

In 2014, 4.8 percent of Iowans reported that within the past 30 days they had driven when they had too much to drink at least once. More men than women had reported doing this (6.9% vs. 2.4%). A larger percentage of younger people and people from households with a higher annual income also reported driving under the influence. The range was 7.3 percent for other non-Hispanic race/ethnicity to two percent for those from households with an annual income of \$15,000 or less. (see table 17.2).

### **Comparison with Other States**

In all states and the District of Columbia, the range of people reporting at least one fall in the last year ranged from 19.1 percent to 35 percent with a median of 27.8 percent. At 30.3 percent, Iowa was worse than the median.

In terms of seatbelt use, the percent reporting their use always or nearly always ranged from 82.1 percent to 97.5 percent with a median of 93.7 percent. Iowa was better than the median with 94.7 percent.

Drinking and driving at least once in the past month ranged from only 1.4 percent to 5.6 percent. The median was 3.3 percent. With 4.8 percent, Iowa was well above the median. In fact, there was only one state with a higher prevalence of people admitting to driving under the influence of alcohol. This finding is surprising considering Iowa is one of the lower states in alcohol-related traffic deaths.

**Table 17.2: Prevalence of Risks for Motor Vehicle Related Injury in Iowans, 2014**

DEMOGRAPHIC GROUPS	Always or Nearly Always Wear Seatbelts		Drink and Drive	
	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	94.7	(93.9-95.5)	4.8	(3.9-5.8)
<b>SEX</b>				
<b>Male</b>	92.2	(91-93.4)	6.9	(5.4-8.4)
<b>Female</b>	97.2	(96.4-98)	2.4	(1.4-3.3)
<b>RACE/ETHNICITY</b>				
<b>White/Non-Hisp.</b>	94.7	(93.9-95.5)	4.9	(3.9-5.9)
<b>Black/Non-Hisp.</b>	94.0	(88.7-99.3)	2.8	(0-8.1)
<b>Other/Non-Hisp.</b>	94.1	(89.8-98.4)	7.3	(0-15.1)
<b>Hispanic</b>	96.0	(92.3-99.7)	2.2	(0-6.6)
<b>AGE</b>				
<b>18-24</b>	93.3	(90.6-96)	6.6	(2.6-10.5)
<b>25-34</b>	94.0	(91.8-96.2)	5.0	(2.5-7.5)
<b>35-44</b>	93.1	(90.7-95.5)	5.9	(3.7-8)
<b>45-54</b>	94.7	(93.1-96.3)	4.6	(2.7-6.4)
<b>55-64</b>	96.4	(95.4-97.4)	4.9	(3.3-6.5)
<b>65-74</b>	96.2	(95-97.4)	2.5	(1-4.1)
<b>75+</b>	95.6	(94.2-97.1)	2.2	(0.3-4.2)
<b>EDUCATION</b>				
<b>Less than H.S.</b>	89.6	(85.5-93.7)	5.4	(0-11)
<b>H.S. or G.E.D.</b>	93.9	(92.7-95.1)	4.2	(2.6-5.7)
<b>Some Post-H.S.</b>	95.0	(93.8-96.2)	5.1	(3.4-6.8)
<b>College Graduate</b>	97.5	(96.7-98.3)	5.0	(3.5-6.5)
<b>HOUSEHOLD INCOME</b>				
<b>Less than \$15,000</b>	93.3	(90.4-96.2)	2.0	(0-4.6)
<b>\$15,000- 24,999</b>	93.3	(90.9-95.7)	3.6	(1.1-6.1)
<b>\$25,000- 34,999</b>	96.2	(94.6-97.8)	3.0	(1.1-5)
<b>\$35,000- 49,999</b>	92.6	(90.4-94.8)	4.6	(2.6-6.7)
<b>\$50,000- 74,999</b>	92.9	(90.7-95.1)	5.9	(3.6-8.2)
<b>\$75,000+</b>	96.8	(95.8-97.8)	6.8	(4.7-8.8)

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## **18. IMMUNIZATION**

### **Background**

Influenza, or the flu, is a contagious respiratory illness caused by viruses that infect the nose, throat, and lungs. It can cause mild to severe illness, and at times can lead to death. The best way to prevent the flu is by getting a flu vaccination each year.<sup>2</sup>

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 53,826 deaths in 2011 in the U.S.<sup>4</sup> and 746 in Iowa in 2013.<sup>5</sup>

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 through several methods, but the most common is a shot in the arm. The best time to receive the influenza vaccine is soon after the vaccine becomes available in the fall of each year.<sup>3</sup> The recommendation for annual vaccination against seasonal influenza includes almost everyone in the United States population from six months old and older.

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

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

Some of the symptoms associated with influenza are fever, chills, coughing, weakness, muscle aches and pains, sore throat, or head ache.<sup>2</sup>

Pneumonia is a lung disease 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. Each year, over one million people in the U.S. are hospitalized with pneumonia and more than 50,000 people die from the disease.<sup>1</sup>

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.<sup>6</sup> A second vaccine is now also recommended to follow the first for added protection. People at higher risk should receive the pneumonia vaccine at age 18 and older. People at high risk include smokers, people with respiratory problems such as asthma or COPD, and those with compromised immunity.

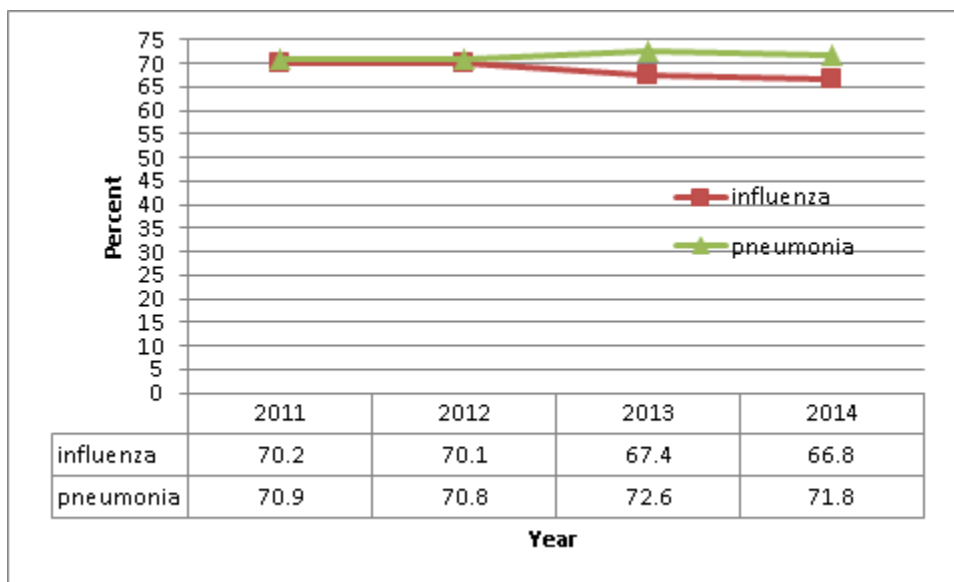
### **Immunization Results**

In 2014, 66.8 percent of Iowans age 65 and over reported having a flu shot in the past 12 months. This is slightly lower than the 67.4 percent reported in 2013 (see figure 18.1). Among all adults, 44.9 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, people with higher household incomes, 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 (30.4%), while the highest was for those age 75 and older (72%) (see table 18.1).

In 2014, 71.8 percent of Iowans age 65 and over reported ever having a pneumonia vaccination. This is also slightly lower than the figure found in 2013 (72.6%) (see figure 18.1).

Among all adults, 31.8 percent had ever received a pneumonia vaccination. Older people, females, Non-Hispanic Whites, people with lower education, and people with lower income, were more likely to have pneumonia vaccinations. The relation with education and income is the opposite of most health risk measures. 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%), while those 75 years old and older were highest by far (78.8%). The relationship with age was not perfectly linear since the

**Figure 18.1: Flu and Pneumonia Immunizations by year, 2011-2014**  
Age >= 65





youngest people were somewhat more likely to have had a pneumonia shot than those a few years older (see Table 18.1). Pneumonia vaccination did not really increase with increasing age until age 55. It dramatically increased after age 65. 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 several chronic conditions that could increase the risk from flu or pneumonia 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, asthma, COPD, or kidney disease; 54.2 percent had a flu vaccination and 49 percent had a pneumonia vaccination. This compares with 42.2 percent and 26.6 percent respectively for those who did not have any of these conditions.

**Table 18.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2013**

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
<b>TOTAL</b>	44.9	(43.5-46.3)	31.8	(30.4-33.2)
<b>SEX</b>				
Male	37.8	(35.8-39.8)	30.5	(28.5-32.5)
Female	51.8	(49.8-53.8)	32.9	(31.1-34.7)
<b>RACE/ETHNICITY</b>				
White/Non-Hispanic	45.9	(44.4-47.4)	32.7	(31.3-34.1)
Non-White or Hisp.	35.1	(29.5-40.6)	22.4	(17.4-27.5)
<b>AGE GROUP</b>				
18-24	30.4	(25.1-35.7)	25.7	(20.2-31.2)
25-34	34.4	(30.3-38.5)	15.4	(11.9-18.9)
35-44	35.1	(31.6-38.6)	13.0	(10.3-15.7)
45-54	39.1	(36-42.2)	16.3	(13.8-18.8)
55-64	53.6	(50.9-56.3)	28.2	(25.7-30.7)
65-74	62.3	(59.4-65.2)	65.7	(62.8-68.7)
75+	72.0	(69.1-74.9)	78.8	(76.1-81.5)
<b>EDUCATION</b>				
Less than H.S.	38.9	(32.8-45)	34.2	(28.5-39.9)
H.S. or G.E.D.	41.7	(39.3-44.1)	34.7	(32.3-37.1)
Some Post-H.S.	44.0	(41.5-46.5)	31.5	(29.1-33.9)
College Graduate	53.2	(50.8-55.6)	27.3	(25.1-29.5)
<b>HOUSEHOLD INCOME</b>				
Less than \$15,000	34.9	(29.4-40.4)	38.7	(32.8-44.6)
\$15,000- 24,999	42.5	(38.4-46.6)	39.0	(34.9-43.1)
\$25,000- 34,999	40.8	(36.7-44.9)	36.9	(32.8-41)
\$35,000- 49,999	47.1	(43.4-50.8)	31.7	(28.4-35)
\$50,000- 74,999	45.1	(41.6-48.6)	27.3	(24.2-30.4)
\$75,000+	48.2	(45.5-50.9)	22.7	(20.3-25.1)

## **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 60.8 percent in 2014. The range was from 51.6 percent to 70.6 percent. The prevalence in Iowa was higher than the median at 66.8 percent and places Iowa among the top 10 states for this age group.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 70.3 percent. The range was from 60.5 percent to 76.2 percent. Iowa's value of 71.8 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 2014 figures of 66.8 percent for having a flu shot and 71.8 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 44.9 percent. The *Healthy People 2020* goal for ever having a pneumonia vaccination for people age 18 to 64 is 60 percent. Iowa also is much lower than this with only 31.8 percent.

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## **19. 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.<sup>2</sup>

The HIV epidemic has now been with us for more than 30 years.<sup>4</sup> The most recent estimates from the World Health Organization (WHO) suggest that 34 million persons were living with HIV infection worldwide at the end of 2011. About 1.2 million people in the United States were living with HIV at the end of 2012. Of those people, about 12.8% do not know they are infected.<sup>1</sup> Not knowing puts them and others at risk.

The estimated numbers of annual diagnoses of HIV infection in the United States remained reasonably stable at around 50,000 per year. In 2011, the estimated rate of diagnoses of HIV infection in the United States was 15.8 per 100,000 population.<sup>1</sup>

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.<sup>6</sup>

HIV/AIDS prevalence continues to increase in Iowa. There were 2,169 persons diagnosed with HIV/AIDS who were living in Iowa on December 31, 2014, up from 2,100 a year earlier.<sup>6</sup>

In light of recent advances in HIV diagnostics and therapeutics, the lifetime costs of health care associated with HIV have grown considerably. Currently, the lifetime treatment cost of an HIV infection is estimated at \$379,668 (in 2010 dollars).<sup>3</sup>

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.<sup>5</sup> Treatment for HIV is better than ever before.

## HIV/AIDS Results

In 2014, 24.7 percent of all adult Iowans reported ever being tested for HIV, not including part of a blood donation. This is down from 2013 when 26.4 percent said they had been tested (see figure 19.1). Females, non-White or Hispanic race/ethnicity, younger people except those under 25 years, and those with low household incomes were more likely to be tested. The largest proportion of respondents tested was among those age 35 to 44 years (40.2%), although those age 25 to 34 years and non-White or Hispanics were also quite high. The smallest proportion reporting ever being tested was those age 75 years and older (5.3%) (see table 19.1).

**Table 19.1: Percentage of Iowans Tested for HIV/AIDS, 2014**

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
<b>TOTAL</b>	24.7	(23.3-26.1)
<b>SEX</b>		
Male	23.3	(21.3-25.3)
Female	26.1	(24.1-28.1)
<b>RACE/ETHNICITY</b>		
Non-Hispanic White	22.9	(21.5-24.3)
Non-White or Hisp.	39.5	(33.6-45.3)
<b>AGE</b>		
18-24	22.7	(18-27.4)
25-34	40.1	(35.8-44.4)
35-44	40.2	(36.3-44.1)
45-54	27.8	(24.9-30.7)
55-64	16.5	(14.3-18.7)
65-74	9.1	(7.2-11)
75+	5.3	(3.6-7)
<b>EDUCATION</b>		
Less than H.S.	27.3	(21.2-33.4)
H.S. or G.E.D.	21.4	(19-23.8)
Some Post-H.S.	26.4	(24-28.8)
College Graduate	25.8	(23.4-28.2)
<b>HOUSEHOLD INCOME</b>		
<\$15,000	32.3	(26.6-38)
\$15,000- 24,999	29.6	(25.1-34.1)
\$25,000- 34,999	23.3	(19.2-27.4)
\$35,000- 49,999	21.6	(18.3-24.9)
\$50,000- 74,999	23.6	(20.3-26.9)
\$75,000+	24.4	(22-26.8)

There is an interesting interaction between sex and age. Figure 19.2 shows that in younger people, many more women have been tested, while men are more likely to be tested in the older age groups.

Finally, when asked where they had received their last HIV test, most (44.8%) said private doctor or HMO.

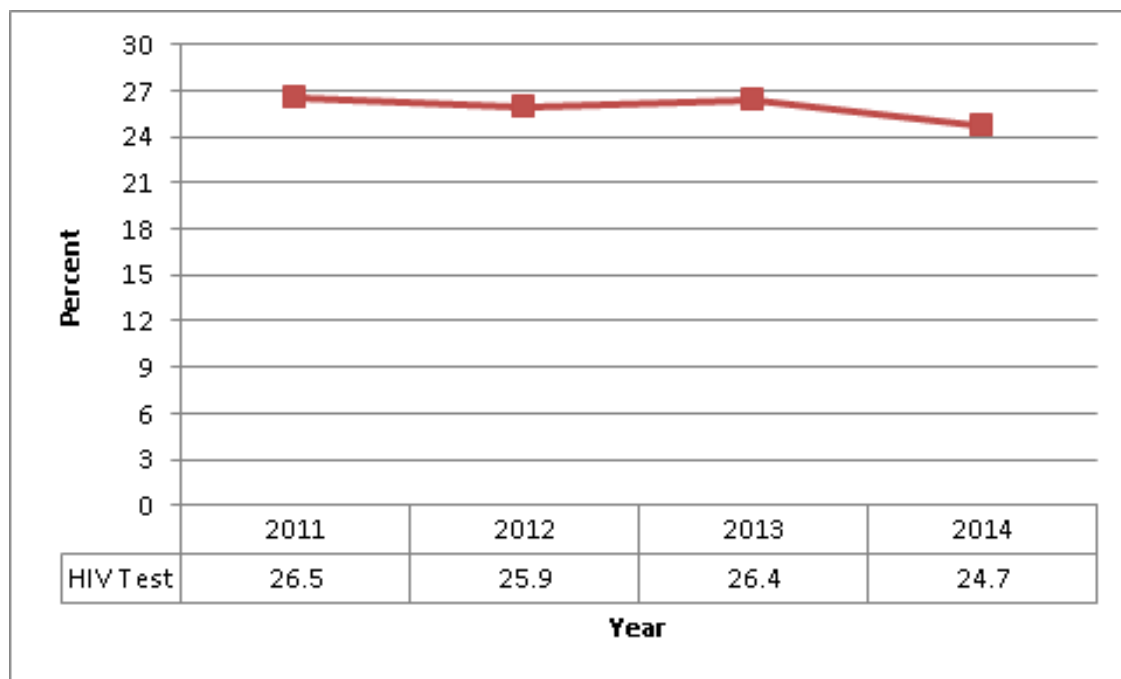
### Comparison with Other States

The percentage of people who had a test for HIV ranged from 21.6 percent to 69.3 percent. The median percentage of people tested was 34.1 percent. There were only two states with a lower percentage than Iowa's figure of 24.7 percent. The prevalence of HIV testing declined somewhat in the nation as a whole from 2013 to 2014.

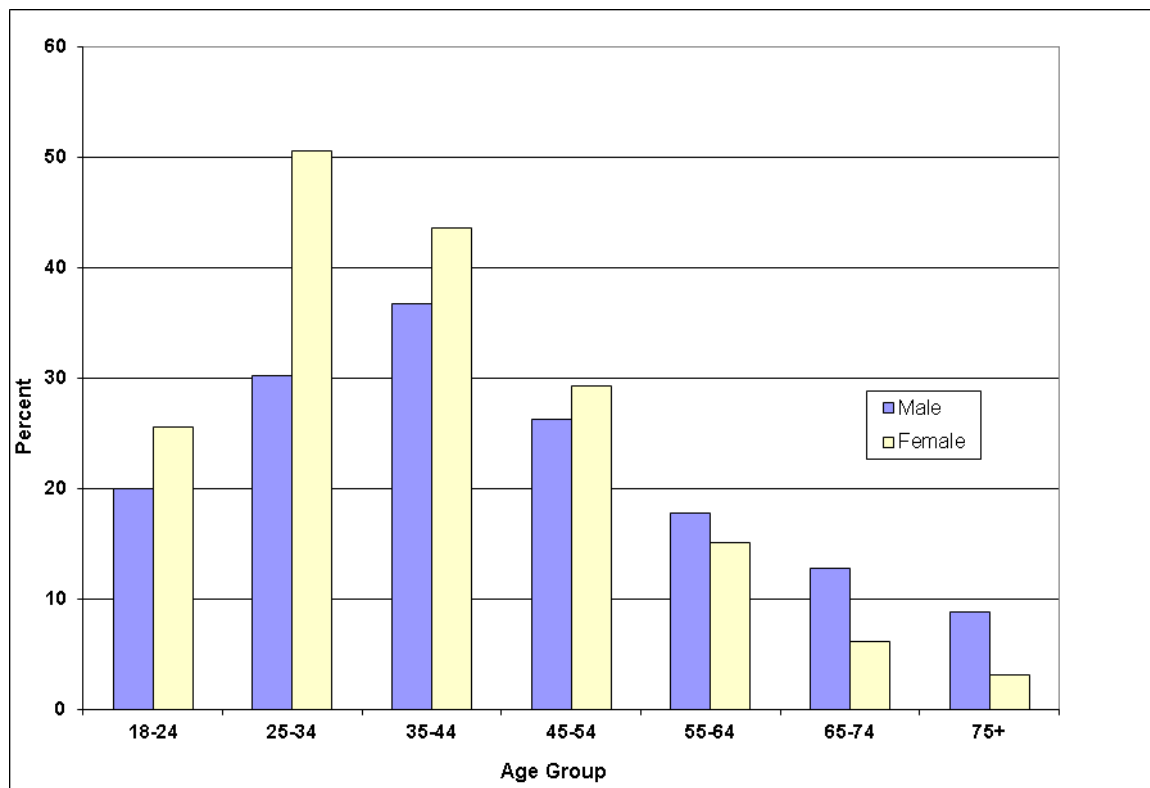
### Health Objectives for the Nation

*Healthy People 2020* has the goal of 16.9 percent of people age 15 to 44 being tested for HIV in the past 12 months. Iowa had a level of 9.8 percent for respondents age 18 to 44 tested within this time period. This is much below the goal.

**Figure 19.1: Iowans having HIV test by year—2011-2014**



**Figure 19.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2013**



## **References**

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6. Iowa Department of Public Health. State of Iowa HIV and AIDS End-of-Year Surveillance Report 2014, 2015.

## 20. ORAL HEALTH

### **Background**

Good overall health requires good oral health. Oral health complications not only reflect general health conditions, but also exacerbate them. Oral diseases are linked to poor pregnancy outcomes, cardiovascular disease, diabetes, and respiratory disease. Poor oral health results in chronic and acute pain, loss of days from work and school, and inappropriate use of emergency rooms. Untreated oral diseases and conditions can impact the ability to eat and drink, swallow, maintain proper nutrition, smile, and communicate.<sup>2</sup>

There are threats to oral health across the lifespan. Nearly one-third of all adults in the United States have untreated tooth decay. One in seven adults aged 35 to 44 years has gum disease. In addition, nearly a quarter of all adults have experienced some facial pain in the past six months. Oral cancers are most common in older adults, particularly those over 55 years who smoke and are heavy drinkers.<sup>1</sup>

The baby boomer generation will be the first where the majority will maintain their natural teeth over their entire lifetime, having benefited from water fluoridation and fluoride toothpastes. Over the past 10 years, the number of adults missing all their natural teeth has declined from 31 percent to 25 percent for those aged 60 years and older, and from 9 percent to 5 percent for those adults between 40 and 59 years. However, 5 percent means a surprising 1 out of 20 middle-aged adults are missing all their teeth.<sup>1</sup>

Toothaches are the most common pain of the mouth or face reported by adults. This pain can interfere with vital functions such as eating, swallowing, and talking. Almost 1 of every 4 adults reported some form of facial pain in the past 6 months.<sup>1</sup>

Most adults show signs of gum disease. Severe gum disease affects about 14 percent of adults aged 45 to 54 years. This increases to one in every four adults aged 65 years and older. Signs and symptoms of soft tissue diseases such as cold sores are common in adults and affect about 19 percent of those aged 25 to 44 years.<sup>1</sup>

Profound disparities remain that affect those without the resources to achieve good oral care or the knowledge of its importance. Over 40 percent of poor adults (20 years and older) have at least one untreated decayed tooth compared to 16 percent of non-poor adults. This fact inspired the first Surgeon General's Report on Oral Health, which identified a "silent epidemic" of dental and oral diseases and called for a national effort to improve Americans' oral health.<sup>3</sup>

Many studies document that those in poverty, racial minorities, and those in rural areas have less access to dental care. For example, poor children are more likely to have unmet dental need than children from families with higher incomes. Non-Hispanic Black and Hispanic children and adults are less likely to have seen a dentist in the past 6 months than non-Hispanic Whites. The most common barriers to good oral health are a lack of dental insurance or the inability to pay for care and problems of access involving transportation and travel, as well as the need to take time off work for appointments.<sup>3</sup>

Increasing access to preventive care is an important way to improve oral health for all populations, but in particular for the vulnerable and underserved. Many oral diseases can be prevented through a combination of behavior changes (e.g., home care and hygiene, proper food choices, tobacco cessation) and system changes (e.g., community water fluoridation, oral health promotion and awareness, increasing accessibility to care, and increasing the dental safety net).

## **Oral Health Results**

**Table 20.1**  
**Percentage of Iowans Having Dental**  
**Visits within the Past 12 Months, 2014**

<b>DEMOGRAPHIC GROUPS</b>	<b>Last Dental Visit Within 12 Months</b>	
	<b>%</b>	<b>C.I. (95%)</b>
<b>TOTAL</b>	69.4	(68-70.8)
<b>SEX</b>		
<b>Male</b>	65.2	(63.2-67.2)
<b>Female</b>	73.5	(71.7-75.3)
<b>RACE/ETHNICITY</b>		
<b>White/Non-Hisp.</b>	70.7	(69.3-72.1)
<b>Non-White or Hisp.</b>	59.2	(53.6-64.8)
<b>AGE</b>		
<b>18-24</b>	71.1	(66.2-76)
<b>25-34</b>	62.9	(58.8-67)
<b>35-44</b>	69.6	(65.9-73.3)
<b>45-54</b>	69.5	(66.6-72.4)
<b>55-64</b>	72.9	(70.4-75.4)
<b>65-74</b>	71.7	(69-74.4)
<b>75+</b>	68.1	(65.1-71.2)
<b>EDUCATION</b>		
<b>Less than H.S.</b>	51.2	(45.3-57.1)
<b>H.S. or G.E.D.</b>	64.7	(62.3-67.1)
<b>Some Post-H.S.</b>	70.1	(67.7-72.5)
<b>College Graduate</b>	82.6	(80.6-84.6)
<b>HOUSEHOLD INCOME</b>		
<b>Less than \$15,000</b>	53.0	(47.3-58.7)
<b>\$15,000- 24,999</b>	53.7	(49.4-58)
<b>\$25,000- 34,999</b>	60.5	(56.2-64.8)
<b>\$35,000- 49,999</b>	67.5	(64-71)
<b>\$50,000- 74,999</b>	75.6	(72.5-78.7)
<b>\$75,000+</b>	83.4	(81.2-85.6)

In 2014, 69.4 percent of Iowans reported visiting a dentist, dental hygienist, or dental clinic within the past year. Females were more likely than males to report a dental visit during the past 12 months. Both higher education and greater income were related to the likelihood of having a dental visit. White non-Hispanics were more likely to have a dental visit than other race and ethnic groups. Iowans with a household income of \$75,000 or more had the highest proportion reporting recent dental visits (83.4%). At the other extreme, 51.2 percent of those with less than a high school education reported visiting a dentist in the past 12 months (see table 20.1).

A majority of adult respondents (59.6%) had no permanent teeth removed due to tooth decay or gum disease. On the other hand, 5.1 percent had all their permanent teeth removed. The percentage of those with all permanent teeth removed rose with increasing age, lower income, and lower education. It was highest for those 65 years old and older (15%).



## **Health Objectives for Iowa and the Nation**

*Healthy People 2020* had a goal of 31.2 percent of Americans age 45 to 64 years having no teeth extracted. Iowa far surpassed this goal with 51.4 percent having no extractions in this age group.

In *Healthy People 2020*, the goal was only 21.6 percent of people age 65 to 74 years having all permanent teeth extracted. Iowa surpassed this goal having only 13 percent with all permanent teeth extracted.

## **References**

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## **21. MENTAL HEALTH**

### **Background**

Mental Health is a general term referring not only to the absence of mental disorder, but also to the ability of a person to successfully handle the daily challenges and social interactions of life.<sup>1</sup> Health is not merely physical health, but also mental health; these two are not independent of each other. Poor physical health can lead to poor mental health, and poor mental health can lead to poor physical health.

One of every five adults, or about 40 million Americans, experiences some type of mental disorder every year. Over 19 million suffer from anxiety disorder, the most common mental illness. More than 18 million people experience a depressive disorder each year.<sup>1</sup> Although depressive disorders are somewhat less common than anxiety disorders, they are often more serious. Almost six percent of the population meets the criteria for serious mental illness.<sup>2</sup>

The economic costs of mental illness are difficult to pin down. One estimate gives a direct cost of \$57.5 billion in 2006 for mental health care in the U.S.<sup>2</sup> Unlike other chronic diseases, much of the economic burden of mental illness is not the cost of care, but the loss of income due to unemployment, expenses for social supports, and a range of indirect costs due to a chronic disability that begins early in life.

Mental health and mental disorders also have a significant impact on the total health care system. Up to half of all visits to primary care physicians are due to conditions caused by or made worse by mental or emotional problems. People with depression are more than four times as likely to have a heart attack as those without such a history. Roughly 37% of alcohol abusers and 53% of drug abusers also have at least one serious mental illness.<sup>1</sup>

### **Mental Health Results**

Most of the data in this chapter will come from a module to evaluate mental illness. For other information related to mental health, see Chapter 4 on general health status and health-related quality of life. The 2014 survey also included a module on adverse childhood experience. The data from this module is expected to be related to mental health. Data from this module will be presented elsewhere.

When asked about various chronic conditions in 2014, 18.7 percent of adults reported that they had ever been told they had a depressive disorder. This is slightly lower than in 2013 when it was 19.2 percent. The prevalence of depression was greater among women, people with less education, and lower income individuals and was less among the elderly. The highest prevalence was among those with annual household incomes less than \$15,000 (37.2%). The lowest prevalence was among those age 75 years or more (10.3%) (see table 20.1).

The BRFSS mental illness module contains six questions. Results from these make up a single measure of mental illness called the K-6 scale. The questions in the K-6 scale all ask how often the respondent has felt a certain way. These are coded into numbers from zero to four and summed to obtain the K-6 score. The value of these scores which can range from zero to 24 can

**Table 21.1**  
**Prevalence of Reported Depression in**  
**Iowa, 2014**

DEMOGRAPHIC GROUPS	Depressive Disorder	
	%	C.I. (95%)
<b>TOTAL</b>	18.7	17.5-19.9
<b>SEX</b>		
Male	13.3	11.7-14.9
Female	23.9	22.1-25.7
<b>RACE/ETHNICITY</b>		
White/Non-Hisp.	18.8	17.6-20.0
Black/Non-Hisp.	20.3	10.7-29.9
Other/Non-Hisp.	17.2	10.0-28.5
Hispanic	15.1	8.4-21.8
<b>AGE</b>		
18-24	18.6	14.3-22.9
25-34	20.0	16.5-23.5
35-44	20.6	17.5-23.7
45-54	21.3	18.6-24.0
55-64	20.1	17.9-22.3
65-74	16.7	14.4-18.9
75+	10.3	8.5-12.1
<b>EDUCATION</b>		
Less than H.S.	27.3	21.8-32.8
H.S. or G.E.D.	17.8	15.8-19.8
Some Post-H.S.	19.1	17.1-21.1
College Graduate	15.9	14.1-17.7
<b>HOUSEHOLD INCOME</b>		
Less than \$15,000	37.2	31.9-42.5
\$15,000-24,999	27.6	23.5-31.7
\$25,000-34,999	19.4	15.9-22.9
\$35,000-49,999	16.4	13.9-18.9
\$50,000-74,999	13.6	11.2-16.0
\$75,000+	12.6	10.8-14.4

**Table 21.2**  
**Serious Mental Illness in Iowans as**  
**Measured by the K-6 Scale, 2014**

DEMOGRAPHIC GROUPS	Serious Mental Illness – K-6	
	%	C.I. (95%)
<b>TOTAL</b>	3.2	(2.4-4.1)
<b>SEX</b>		
Male	2.6	(1.4-3.8)
Female	3.9	(2.7-5.1)
<b>RACE/ETHNICITY</b>		
White/Non-Hispanic	2.8	(2.1-3.6)
Non-White or Hisp.	7.3	(2.2-12.5)
<b>AGE GROUP</b>		
18-24	4.4	(1.4-7.5)
25-34	3.8	(1.1-6.5)
35-44	3.5	(1.4-5.7)
45-54	4.2	(1.7-6.6)
55-64	2.9	(1.6-4.2)
65-74	2.2	(0.8-3.5)
75+	0.5	(0.0-1.2)
<b>EDUCATION</b>		
Less than H.S.	9.5	(3.3-15.7)
H.S. or G.E.D.	3.7	(2.4-5.0)
Some Post-H.S.	2.7	(1.4-3.9)
College Graduate	1.3	(0.4-2.2)
<b>HOUSEHOLD INCOME</b>		
Less than \$15,000	12.4	(8.5-16.2)
\$15,000- 24,999	7.9	(3.8-11.9)
\$25,000- 34,999	1.2	(0.2-2.2)
\$35,000- 49,999	0.4	(0.0-0.9)
\$50,000- 74,999	1.2	(0.2-2.2)
\$75,000+	1.1	(0.3-1.9)

be divided up to indicate levels of mental illness. A score of greater than 12 indicates serious mental illness (SNI).<sup>1</sup>

According to the K-6, 3.2% of adult Iowans are experiencing serious mental illness. SMI was more frequent among those with lower income, lower education, racial and ethnic minorities, women, and younger people (see table 21.2). Those with less than \$15,000 annual household income had the greatest percent reporting SMI (12.4%).

## **Health Objectives for the Nation**

*Healthy People 2020* has a goal of 6.1 percent of people experiencing a major depression episode. The 2014 Iowa BRFSS shows 18.7 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.

## **References**

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## Appendix 1

### Year 2020 Health Objectives for the Nation: State Summary of BRFSS<sup>1</sup> Data for 2014 Iowa

Healthy People 2020 <sup>2</sup> Objective <sup>3</sup>	Yr 2020 Target	State 2014
<b>Health Insurance (Objective #AHS-1.1)</b> Ages ≥18	100%	92.3%
<b>Specific Source of Ongoing Primary Care (Objective #AHS-5.3)</b> Ages ≥18 & < 65	89.4%	69.9%
<b>Specific Source of Ongoing Primary Care (Objective #AHS-5.4)</b> Ages ≥65	100%	85.8%
<b>Pap Test, Within Past Three Years (Objective #C-15)</b> Women, Ages ≥18	93%	75.8%
<b>Colorectal cancer screening according to latest guidelines (Objective #C-16)</b> Ages 50 - 75	70.5%	68.0%
<b>Mammogram, Within Past Two Years (Objective #C-17)</b> Women, Ages ≥40	81.1%	76.0%
<b>Increase the proportion of adolescents and adults who have been tested for HIV in the past 12 months (Objective #HIV-14.1)</b> Ages 18 – 44	16.9%	9.8%
<b>Influenza Immunization, Within Past Year (Objective #IID-12.5)</b> Ages 18 - 64	80%	39.0%
<b>Influenza Immunization, Within Past Year (Objective #IID-12.7)</b> Ages ≥65	90%	66.8%
<b>Pneumococcal Pneumonia Vaccination, Ever Had (Objective #IID-13.1)</b> Ages ≥65	90%	71.8%
<b>Increase the proportion of adults who are at a healthy weight (Objective #NWS-8)</b> Ages ≥20	33.9%	30.1%
<b>Obese, BMI ≥ 30 (Objective NWS-9)</b> Ages ≥20	30.6%	32.0%
<b>Any Permanent Teeth Extracted Due to Caries or Periodontal Disease (Objective #OH-4.1)</b> Ages 45-64	68.8%	48.6%
<b>Extraction of All Natural Teeth (Objective #OH-4.2)</b> Ages 65-74	21.6%	13.0%
<b>No Leisure Time Physical Activity (Objective #PA-1)</b> Ages ≥18	32.6%	22.6%
<b>Binge Drinking, During the Past Month (Objective #SA-14.3)</b> Ages ≥18	24.3%	21.4%
<b>Cigarette Smoking (Objective #TU-1.1)</b> Ages ≥18	12%	18.5%

<b>Healthy People 2020<sup>2</sup> Objective<sup>3</sup></b>	<b>Yr 2020 Target</b>	<b>State 2014</b>
<b>Smokeless Tobacco Use (Objective #TU-1.2)</b> Ages $\geq$ 18	0.3%	5.1%
<b>Increase smoking cessation attempts by adult smoker (Objective #TU-4.1)</b> Ages $\geq$ 18	80%	55.2%
<b>Increase recent smoking cessation success by adult smokers 6 Mo. To 1 Yr. (Objective #TU-4.1)</b> Ages $\geq$ 18	8%	5.3%
<b>Increase the proportion of adults with diabetes who have an annual dilated eye examination (Objective #D-10)</b>	58.7%	74.1%
<b>Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year (Objective #D-11)</b>	71.1%	80.7%
<b>Increase the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily (Objective #D-13)</b>	70.4%	60.3%
<b>Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education (Objective #D-14)</b>	62.5%	64.5%

<sup>1</sup> Behavioral Risk Factor Surveillance System

<sup>2</sup> 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.

<sup>3</sup> 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 BRFSS<sup>1</sup> Data for 2014

Healthy Iowans <sup>2</sup> Objective <sup>3</sup>	Yr 2016 Target	Iowa, 2014
<b>An increase in the proportion of people with health insurance</b> Ages 18 – 64	100%	90.4%
<b>An increase in the proportion of people who have one person as a health provider.</b>	82.5%	73.1%
<b>Influenza Immunization, Within Past Year (Objective #10-2)</b> Ages >= 65	90%	66.8%
<b>Pneumonia Vaccination, Ever Had</b> Ages >= 65	90%	71.8%
<b>A reduction in adult binge drinking</b>	16%	21.4%
<b>A reduction in adult tobacco use (Cigarette Smoking)</b>	17%	18.5%
<b>People with diabetes receiving annual dilated eye exams</b>	85%	74.1%
<b>Mammogram screening in past 2 years</b> Women Ages >= 50	88%	78.4%
<b>Colorectal cancer screening</b> Ages >= 50	70%	68.0%
<b>Pap test in past 3 years</b> Women Ages >= 21 years	92%	79.3%
<b>A reduction in the proportion of adults who are obese</b>	27%	30.9%
<b>An increase in seatbelt usage to reduce injuries and deaths from motor vehicle crashes.</b>	96%	94.6%

<sup>1</sup>Behavioral Risk Factor Surveillance System

<sup>2</sup>Iowa Department of Public Health, *Healthy Iowans: Iowa's Health Improvement Plan 2012-2016, 2015 Progress Report*.

<sup>3</sup>In 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 2014 BRFSS 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 [If PPHF state go to Module 4, Question 1, else continue]  
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

### CATI Note: If PPHF State go to Module 4, Question 3, else continue

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

**CATI Note: If PPHF State and Q3.1 = 1 go to Module 4, Question 4a or if PPHF State and Q3.1 = 2, 7, or 9 go to Module 4, Question 4b, or if not a PPHF State go to next section.**

### Section 4: Exercise

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

- 1 Yes  
2 No

### Section 5: Inadequate Sleep

I would like to ask you about your sleep pattern.

5.1: On average, how many hours of sleep do you get in a 24-hour period?

**INTERVIEWER NOTE: Enter hours of sleep in whole numbers, rounding 30 minutes (1/2 hour) or more up to the next whole hour and dropping 29 or fewer minutes.**

\_\_ Number of hours [01-24]

### 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: (Ever told) you had asthma?

- 1 Yes  
2 No ⇒ Go to Q5.6

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 Chronic Obstructive Pulmonary Disease or COPD, emphysema or chronic bronchitis?

- 1 Yes  
2 No



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

- 1 Yes
- 2 No

**INTERVIEWER NOTE:** Arthritis diagnoses include:

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

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 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

**CATI NOTE: If Q6.12 = 1 (Yes), go to next question. If any other response to Q6.12, go to Pre-Diabetes Optional Module (if used). Otherwise, go to next section.**

6.13: How old were you when you were told you have diabetes?  
\_\_\_Code age in years [97 = 97 and older]

**CATI NOTE: Go to Diabetes Optional Module (if used). Otherwise, go to next section.**

#### Module 1: Pre-Diabetes

**NOTE: Only asked of those not responding "Yes" (code=1) to Core Q6.12 (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 Q6.12 = 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?

If "Yes" and respondent is female, ask: "Was this only when you were pregnant?"

- 1. Yes
- 2. Yes, during pregnancy
- 3. No

#### Module 2: Diabetes

**To be asked following core Q6.13 if response to Q6.12 is "yes"**

1. Are you now taking insulin?

- 1 Yes
- 2 No

2. 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

3. 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

4. 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

5. 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 Q3 = 555 (No feet), go to Q7.**

6. 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

7. 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

8. Has a doctor ever told you that diabetes has affected your eyes or that you had retinopathy?

- 1 Yes
- 2 No

9. Have you ever taken a course or class in how to manage your diabetes yourself?

- 1 Yes
- 2 No

**Section 7: Oral Health**

7.1: How long has it been since you last visited a dentist or a dental clinic? Include visits to dental specialists, such as orthodontists.

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

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

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

- 1 1 to 5
- 1 6 or more but not all
- 2 All
- 8 None

**Section 8: Demographics**

8.1: What is your age?  
\_\_ \_\_ Code age in years

8.2: Are you Hispanic Latino/a, or Spanish origin?

**If yes, ask: Are you...**

**Interviewer Note: One or more categories may be selected.**

- 1 Mexican, Mexican American, Chicano/a
- 2 Puerto Rican
- 3 Cuban
- 4 Another Hispanic, Latino/a, or Spanish origin
- 5 No, not of Hispanic, Latino/a, or Spanish origin

8.3: Which one or more of the following would you say is your race?

**Interviewer Note: Select all that apply.**

**Interviewer Note: If 40 (Asian) or 50 (Pacific Islander) is selected read and code subcategories underneath major heading.**

- 10 White
- 20 Black or African American
- 30 American Indian, Alaska Native
- 40 Asian
  - 41 Asian Indian
  - 42 Chinese
  - 43 Filipino
  - 44 Japanese
  - 45 Korean
  - 46 Vietnamese
  - 47 Other Asian
- 50 Pacific Islander
  - 51 Native Hawaiian
  - 52 Guamanian or Chamorro
  - 53 Samoan
  - 54 Other Pacific Islander
- 60 Other [specify]
- 88 No additional choices

**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?

**Interviewer Note: If 40 (Asian) or 50 (Pacific Islander) is selected read and code subcategory underneath major heading.**

- 10 White
- 20 Black or African American
- 30 American Indian, Alaska Native

40 Asian

- 41 Asian Indian
- 42 Chinese
- 43 Filipino
- 44 Japanese
- 45 Korean
- 46 Vietnamese
- 47 Other Asian

50 Pacific Islander

- 51 Native Hawaiian
- 52 Guamanian or Chamorro
- 53 Samoan
- 54 Other Pacific Islander

60 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
- 2 No

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

**Module 14: Industry and Occupation**

**If Core Q8.9 = 1 or 4 (Employed for wages or out of work for less than 1 year) or 2 (Self-employed), continue else go to next module.**

Now I am going to ask you about your work.

**If Core Q8.9 = 1 (Employed for wages) or 2 (Self-employed) ask,**

1. What kind of work do you do? (for example, registered nurse, janitor, cashier, auto mechanic)

**INTERVIEWER NOTE: If respondent is unclear, ask "What is your job title?"**

**INTERVIEWER NOTE: If respondent has more than one job then ask, "What is your main job?"**

[Record answer] \_\_\_\_\_

Or

If Core Q8.9 = 4 (Out of work for less than 1 year) ask,  
What kind of work did you do? (for example, registered nurse,  
janitor, cashier, auto mechanic)?

INTERVIEWER NOTE: If respondent is unclear, ask "What  
was your job title?"

INTERVIEWER NOTE: If respondent had more than one job  
then ask, "What was your main job?"

[Record answer] \_\_\_\_\_

If Core Q8.9 = 1 (Employed for wages) or 2 (Self-employed)  
ask,

2. What kind of business or industry do you work in? (for example,  
hospital, elementary school, clothing manufacturing,  
restaurant)

[Record answer] \_\_\_\_\_

Or

If Core Q8.9 = 4 (Out of work for less than 1 year) ask,  
What kind of business or industry did you work in? (for example,  
hospital, elementary school, clothing manufacturing,  
restaurant)

[Record answer] \_\_\_\_\_

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

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 Q8.17

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
- 2 No

8.19: Have you used the internet in the past 30 days?

- 1 Yes
- 2 No

8.20: Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other arrangement

INTERVIEWER NOTE: "Other arrangement" may include  
group home, staying with friends or family without paying  
rent.

Note: Home is defined as the place where you live most of the  
time/the majority of the year.

INTERVIEWER NOTE: We ask this question in order to  
compare health indicators among people with different  
housing situations.

8.21: Indicate sex of respondent. Ask only if necessary.

- 1 Male ⇒ Go to Q8.23.
- 2 Female If respondent 45 years old or older, go to Q8.23.

8.22: To your knowledge, are you now pregnant?

- 1 Yes
- 2 No

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

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

- 1 Yes
- 2 No

8.24: 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

8.25: Are you blind or do you have serious difficulty seeing, even  
when wearing glasses? (182)

- 1 Yes
- 2 No

8.26: Because of a physical, mental, or emotional condition, do  
you have serious difficulty concentrating, remembering, or  
making decisions?

- 1 Yes
- 2 No

8.27: Do you have serious difficulty walking or climbing stairs?

- 1 Yes
- 2 No

8.28: Do you have difficulty dressing or bathing?

- 1 Yes
- 2 No

8.29: Because of a physical, mental, or emotional condition, do  
you have difficulty doing errands alone such as visiting a  
doctor's office or shopping?

- 1 Yes
- 2 No

### Section 9: Tobacco Use

9.1: Have you smoked at least 100 cigarettes in your entire life?  
5 packs = 100 cigarettes

- 1 Yes
- 2 No ⇒ Go to Q9.5

9.2: 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 Q9.4**

9.3: 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 Q9.5**
- 2 No ⇒ **Go to Q9.5**

9.4: 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

9.5: 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 10: Alcohol Consumption

10.1: During the past 30 days, how many days per week or per month did you have at least 1 drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?

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

10.2: 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

10.3: 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

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

\_\_ Number

#### Section 11: Immunization

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™.

11.1: 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 Q11.3**

#### READ IF NECESSARY:

A new flu shot came out in 2011 that injects vaccine into the skin with a very small needle. It is called Fluzone Intradermal vaccine. This is also considered a flu shot.

11.2: 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

#### Module 8: Influenza

**CATI Note: If Q11.1 = 1 (Yes) then continue, else go to next section.**

- 1. 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 in Canada/Mexico (Volunteered –)
  - 1 1 A school

11.3: A pneumonia shot or pneumococcal vaccine is usually given only once or twice in a person’s lifetime and is different from the flu shot. Have you ever had a pneumonia shot?

- 1 Yes
- 2 No

**CATI NOTE: If respondent is ≤ 49 years of age, go to next section.**

The next question is about the Shingles vaccine.

11.4 Have you ever had the shingles or zoster vaccine?

- 1 Yes
- 2 No

**INTERVIEWER NOTE (Read if necessary): Shingles is caused by the chicken pox virus. It is an outbreak of rash or blisters on the skin that may be associated with severe pain. A vaccine for shingles has been available since May 2006; it is called Zostavax®, the zoster vaccine, or the shingles vaccine.**

#### Section 12: Falls

**If respondent is 45 years or older continue, otherwise go to next section.**

The next questions ask about recent falls. By a fall, we mean when a person unintentionally comes to rest on the ground or another lower level.

12.1: In the past 12 months, how many times have you fallen?

- \_\_ Number of times [76 = 76 or more]
- 8 8 None [Go to next section]

12.2: [Fill in “Did this fall (from Q12.1) cause an injury?”]. If **only one fall from Q12.1 and response is “Yes” (caused an injury); code 01. If response is “No”, code 88.**

How many of these falls caused an injury? By an injury, we mean the fall caused you to limit your regular activities for at least a day or to go see a doctor.

- \_\_ Number of falls [76 = 76 or more]
- 8 8 None

**Section 13: Seatbelt Use**

13.1: How often do you use seat belts when you drive or ride in a car? Would you say...

- 1 Always
- 2 Nearly always
- 3 Sometimes
- 4 Seldom
- 5 Never
- 8 Never drive or ride in a car

**Section 14: Drinking and driving**

**CATI note: If Q13.1 = 8 (Never drive or ride in a car), go to Section 15, otherwise continue.**

**CATI note: If Q10.1 = 888 (No drinks in the past 30 days); go to next section.**

The next question is about drinking and driving.

14.1: During the past 30 days, how many times have you driven when you've had perhaps too much to drink?

- Number of times
- 8 8 None

**Section 15: Breast /Cervical Cancer Screening**

**CATI Note: If respondent is male, go to the next section.**

The next questions are about breast and cervical cancer.

15.1: A mammogram is an x-ray of each breast to look for breast cancer. Have you ever had a mammogram?

- 1 Yes
- 2 No **Go to Q15.3**

15.2: How long has it been since you had your last mammogram?

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

15.3: A clinical breast exam is when a doctor, nurse or other health professional feels the breast for lumps. Have you ever had a clinical breast exam?

- 1 Yes
- 2 No **Go to Q15.5**

15.4: How long has it been since your last breast exam?

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

15.5: A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

- 1 Yes
- 2 No **Go to Q15.7**

15.6: How long has it been since you had your last Pap test?

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

**CATI NOTE: If response to core Q8.22 = 1 (is pregnant) then go to next section.**

15.7: Have you had a hysterectomy?

A hysterectomy is an operation to remove the uterus (womb)

- 1 Yes
- 2 No

**Section 16: Prostate Cancer Screening**

**CATI Note: If respondent is  $\leq 39$  years of age, or is female, go to next section.**

Now, I will ask you some questions about prostate cancer screening.

16.1: A Prostate-Specific Antigen test, also called a PSA test, is a blood test used to check men for prostate cancer. Has a doctor, nurse, or other health professional EVER talked with you about the advantages of the PSA test?

- 1 Yes
- 2 No

16.2: Has a doctor, nurse, or other health professional EVER talked with you about the disadvantages of the PSA test?

- 1 Yes
- 2 No

16.3: Has a doctor, nurse, or other health professional EVER recommended that you have a PSA test?

- 1 Yes
- 2 No

16.4: Have you ever had a PSA test?

- 1 Yes
- 2 No [Go to next section]

16.5: How long has it been since you had your last PSA test?

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

16.6: What was the MAIN reason you had this PSA test – was it?

- 1 Part of a routine exam
- 2 Because of a prostate problem
- 3 Because of a family history of prostate cancer
- 4 Because you were told you had prostate cancer
- 5 Some other reason

**Section 17: Colorectal Cancer Screening**

**CATI Note: If respondent is  $\leq 49$  years of age, go to next section**

17.1: A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood.

Have you ever had this test using a home kit?

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

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

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

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

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

17.4: For a SIGMOIDOSCOPY, a flexible tube is inserted into the rectum to look for problems. A COLONOSCOPY is similar, but uses a longer tube, and you are usually given medication through a needle in your arm to make you sleepy and told to have someone else drive you home after the test. Was your MOST RECENT exam a sigmoidoscopy or a colonoscopy?

- 1 Sigmoidoscopy
- 2 Colonoscopy

17.5: How long has it been since you had your last sigmoidoscopy or colonoscopy?

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

#### Section 18: 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.

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

Include tests using fluid from your mouth.

- 1 Yes
- 2 No ⇒ Go to Q18.3

18.2: Not including blood donations, in what month and year was your last HIV test?

**Note: If response is before January 1985, code "Don't know".**  
**CATI INSTRUCTION: If the respondent remembers the year but cannot remember the month, code the first two digits 77 and the last four digits for the year.**

\_\_ / \_\_ \_\_ \_\_ \_\_ Code month and year

18.3: Where did you have your last HIV test — at a private doctor or HMO office, at a counseling and testing site, in the emergency room, as an inpatient in a hospital, at a clinic, in a jail or prison, at a drug treatment facility, at home, or somewhere else?

- 0 1 Private doctor or HMO office
- 0 2 Counseling and testing site
- 0 9 Emergency room
- 0 3 Hospital inpatient
- 0 4 Clinic
- 0 5 Jail or prison (or other correctional facility)
- 0 6 Drug treatment facility
- 0 7 At home
- 0 8 Somewhere else

#### Module 4: Health Care Access

1. Do you have Medicare?

- 1 Yes
- 2 No

**Note: Medicare is a coverage plan for people age 65 or over and for certain disabled people.**

2. Are you CURRENTLY covered by any of the following types of health insurance or health coverage plans?

(Select all that apply)

- 01 Your employer
- 02 Someone else's employer
- 03 A plan that you or someone else buys on your own
- 04 Medicaid or Medical Assistance [or substitute state program name]
- 05 The military, CHAMPUS, or the VA [or CHAMP-VA]

06 The Indian Health Service [or the Alaska Native Health Service]

07 Some other source

88 None

**INTERVIEWER NOTE: If the respondent indicates that they purchased health insurance through the Health Insurance Marketplace (name of state Marketplace), ask if it was a private health insurance plan purchased on their own or by a family member (private) or if they received Medicaid (state plan)? If purchased on their own (or by a family member), select 02, if Medicaid select 04.**

**CATI Note: If PPHF State go to core 3.2**

3. Other than cost, there are many other reasons people delay getting needed medical care.

Have you delayed getting needed medical care for any of the following reasons in the past 12 months? Select the most important reason.

- 1 You couldn't get through on the telephone.
- 2 You couldn't get an appointment soon enough.
- 3 Once you got there, you had to wait too long to see the doctor.
- 4 The (clinic/doctor's) office wasn't open when you got there.
- 5 You didn't have transportation.
- 6 Other \_\_\_\_\_ specify
- 8 No, I did not delay getting medical care/did not need medical care

**CATI Note: If PPHF State, go to core 3.4**

**CATI Note: If Q3.1 = 1 (Yes) continue, else go to Q4b**

4a. In the PAST 12 MONTHS was there any time when you did NOT have ANY health insurance or coverage?

- 1 Yes [Go to Q5]
- 2 No [Go to Q5]

**CATI Note: If Q3.1 = 2, 7, or 9 continue, else go to next question (Q5)**

4b. About how long has it been since you last had health care coverage?

- 1 6 months or less
- 2 More than 6 months, but not more than 1 year ago
- 3 More than 1 year, but not more than 3 years ago
- 4 More than 3 years
- 5 Never

5. How many times have you been to a doctor, nurse, or other health professional in the past 12 months?

- \_\_ Number of times
- 8 8 None

6. Was there a time in the past 12 months when you did not take your medication as prescribed because of cost? Do not include over-the-counter (OTC) medication. (343)

- 1 Yes
- 2 No
- 3 No medication was prescribed.

7. In general, how satisfied are you with the health care you received? Would you say—

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Not at all satisfied
- 8 Not applicable

8. Do you currently have any medical bills that are being paid off over time?

**INTERVIEWER NOTE: This could include medical bills being paid off with a credit card, through personal loans, or bill paying arrangements with hospitals or other providers. The bills can be from earlier years as well as this year.**

- 1 Yes
- 2 No

**CATI Note: If PPHF state, Go to core section 4.**

#### Module 12: Cancer Survivorship

**CATI note: If Core Q6.6 or Q6.7 = 1 (Yes) or Q16.6 = 4 (Because you were told you had prostate cancer), continue, otherwise go to next module.**

You've told us that you have had cancer. I would like to ask you a few more questions about your 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.**

**CATI note: If Core Q6.6 = 1 (Yes) and Q1 = 1 (Only one): ask Was it "Melanoma" or "other skin cancer"? then code 21 if "Melanoma" or 22 if "other skin cancer"**

**CATI note: If Core Q16.6 = 4 (Because you were told you had Prostate Cancer) and Q1 = 1 (Only one) then code 19.**

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) [1-30]:**

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
- 0 9 Larynx

Gastrointestinal

- 1 0 Colon (intestine) cancer
- 1 1 Esophageal (esophagus)
- 1 2 Liver cancer
- 1 3 Pancreatic (pancreas) cancer
- 1 4 Rectal (rectum) cancer
- 1 5 Stomach

Leukemia/Lymphoma (lymph nodes and bone marrow)

- 1 6 Hodgkin's Lymphoma (Hodgkin's disease)
- 1 7 Leukemia (blood) cancer
- 1 8 Non-Hodgkin's Lymphoma

Male reproductive

- 1 9 Prostate cancer
- 2 0 Testicular cancer

Skin

- 2 1 Melanoma
- 2 2 Other skin cancer

Thoracic

- 2 3 Heart
- 2 4 Lung

Urinary cancer:

- 2 5 Bladder cancer
- 2 6 Renal (kidney) cancer
- Others
- 2 7 Bone
- 2 8 Brain
- 2 9 Neuroblastoma
- 3 0 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 I've completed treatment
- 3 No, I've refused treatment [**Go to next module**]
- 4 No, I haven't started treatment

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 General Practitioner, 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?

**Read only if necessary: "By 'other healthcare professional', we mean a nurse practitioner, a physician's assistant, social worker, or some other licensed professional"**

- 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, with medication (or treatment)  
2 Yes, without medication (or treatment)  
3 No, with medication (or treatment)  
4 No, without medication (or treatment)

#### **Module 16: Sexual Orientation and Gender Identity**

The next two questions are about sexual orientation and gender identity.

**INTERVIEWER NOTE: We ask this question in order to better understand the health and health care needs of people with different sexual orientations.**

**INTERVIEWER NOTE: Please say the number before the text response. Respondent can answer with either the number or the text/word.**

1. Do you consider yourself to be one, Straight; two, Lesbian or gay; three, Bisexual?
- 1 - Straight  
2 - Lesbian or gay  
3 - Bisexual  
4 Other

2. Do you consider yourself to be transgender?

If yes, ask “Do you consider yourself to be one, male-to-female; two, female-to-male; or three, gender non-conforming?”

- 1 Yes, Transgender, male-to-female  
2 Yes, Transgender, female-to-male  
3 Yes, Transgender, gender non-conforming  
4 No

**INTERVIEWER NOTE: If asked about definition of transgender:**

Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female or lives as a woman would be transgendered. Some transgender people change their physical appearance so that it matches their internal gender identity. Some transgender people take hormones and some have surgery. A transgender person may be of any sexual orientation – straight, gay, lesbian, or bisexual.

**INTERVIEWER NOTE: If asked about definition of gender non-conforming:**

Some people think of themselves as gender non-conforming when they do not identify only as a man or only as a woman.

#### **State Added Visual Impairment and Eye Care**

**CATI note: If respondent is less than 40 years of age or 8.25 = Yes, go to next module.**

Now I would like to ask you questions about your vision. These questions are for all respondents regardless of whether or not you wear glasses or contact lenses. If you wear glasses or contact lenses, answer questions as if you are wearing them.

1. How much difficulty, if any, do you have in recognizing a friend across the street? Would you say...
- 1 No difficulty  
2 A little difficulty  
3 Moderate difficulty  
4 Extreme difficulty  
5 Unable to do because of eyesight  
6 Unable to do for other reasons

2. How much difficulty, if any, do you have reading print in newspapers, magazines, recipes, menus, or numbers on the telephone? Would you say...

- 1 No difficulty  
2 A little difficulty  
3 Moderate difficulty  
4 Extreme difficulty  
5 Unable to do because of eyesight  
6 Unable to do for other reasons

3. When was the last time you had your eyes examined by any doctor or eye care professional?

- 1 Within the past month (anytime less than 1 month ago)  
[Go to Q5]  
2 Within the past year (1 month but less than 12 months ago)  
[Go to Q5]  
3 Within the past 2 years (1 year but less than 2 years ago)  
4 2 or more years ago  
5 Never

4. What is the main reason you have not visited an eye care professional in the past 12 months?

- 0 1 Cost/insurance  
0 2 Do not have/know an eye doctor  
0 3 Cannot get to the office/clinic (too far away, no transportation)  
0 4 Could not get an appointment  
0 5 No reason to go (no problem)  
0 6 Have not thought of it  
0 7 Other

**CATI note: Skip Q5, if any response to Module 2 (Diabetes) Q7.**

5. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.

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

6. Do you have any kind of health insurance coverage for eye care?

- 1 Yes  
2 No

7. Have you been told by an eye doctor or other health care professional that you NOW have cataracts?

- 1 Yes  
2 Yes, but had them removed  
3 No

8. Have you EVER been told by an eye doctor or other health care professional that you had glaucoma?

- 1 Yes  
2 No

Age-related Macular Degeneration (AMD) is a disease that affects the macula, the part of the eye that allows you to see fine detail.

**NOTE: Age-related Macular Degeneration (Age-related Mak-yuh-luh r Di-jen-uh-rey-shuh n)**

9. Have you EVER been told by an eye doctor or other health care professional that you had age-related macular degeneration?

- 1 Yes  
2 No



### State Added Neighborhood Physical Activity

1. 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
2. Does your neighborhood have any sidewalks?
  - 1 Yes
  - 2 No
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. 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

### State Added Nutrition

Now I would like to ask you some questions about sugary beverages.

**Interviewer note: Please remind respondents to include regular soda that they mixed with alcohol.**

1. During the past 30 days, how often did you drink regular soda or pop that contains sugar? Do not include diet soda or diet pop.

You can answer times per day, week, or month: for example,

- 1 \_\_ Times per day
- 2 \_\_ Times per week
- 3 \_\_ Times per month
- 8 8 8 None

2. During the past 30 days, how often did you drink sweetened fruit drinks (such as Kool-aid, cranberry juice cocktail, and lemonade), Include fruit drinks you made at home and added sugar to.

**INTERVIEWER NOTE: Fruit drinks are sweetened beverages that often contain some fruit juice or flavoring. Do not include 100% fruit juice, sweet tea, coffee drinks, sports drinks, or energy drinks.**

You can answer times per day, week, or month: for example, twice a day, once a week, and so forth.

- 1 \_\_ Times per day
- 2 \_\_ Times per week
- 3 \_\_ Times per month
- 8 8 8 None

3. How often do you use low-fat or fat-free dairy products such as milk, yogurt, or cheese?

- 1 Less than 1/week
- 2 Once a week
- 3 2-3 times a week
- 4 4-6 times a week
- 5 Once a day

4. How often do you use whole-grain products such as whole-wheat bread or pasta, oatmeal, or bran cereal?

- 1 Less than 1/week
- 2 Once a week
- 3 2-3 times a week
- 4 4-6 times a week
- 5 Once a day

### State Added Colorectal Cancer Screening

**[ASK IF AGE > 49]**

1. Next, I would like to ask you some additional 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 Q4**

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

- 1 Yes
- 2 No

### State Added Colorectal Cancer Advertising

**[ASK MODULE ONLY IF AGE > 49]**

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

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

2. Where did you see this 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 Tobacco Use

1. In your community, is the use of tobacco socially acceptable?

- 1 Yes
- 2 No

2. In a typical week how many hours are you exposed to smoke from someone else's cigarettes, cigars or pipe?

\_\_\_ \_\_\_ Number of hours per week [1-70]

- 01 = One hour or less
- 70 = Seventy hours or more
- 88 = None

3. Do you ever use smokeless tobacco or e-cigarettes instead of smoking cigarettes?

**Note: e-cigarettes are also called electronic, or vapor cigarettes [IF YES, PROBE FOR WHICH]**

- 1 Yes, smokeless **[SKIP TO Q5]**

- 2 Yes, e-cigarettes

- 3 Yes both smokeless and e-cigarettes

- 4 No **[SKIP TO Q5]**

4. Do you currently use e-cigarettes every day, some days, or not at all?

- 1 Everyday
- 2 Some Days
- 3 Not at all

5. Have you ever heard of Quitline Iowa?

- 1 Yes
- 2 No

**[ASK IF Q9.3 = 1 or Q9.4 between 01 - 04]**

6. The last time you tried to quit using tobacco did you call a telephone quit line to help you to quit?

- 1 Yes
- 2 No

**[ASK IF M4.5 < 77 or Q7.1 = 1 AND Q9.2 < 3 or Q9.5 < 3), ELSE SKIP to NEXT Module]**

7. 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 **[Skip to next module]**

8. What, if any, methods, resources, or medications did your provider advise you to try?

**[SELECT ALL THAT APPLY]**

- 1 Medication
- 2 Nicotine replacement therapy
- 3 Cold turkey
- 4 Other tobacco products
- 5 Other method
- 6 Did not suggest a method

#### **State Added Mental Illness**

Now, I am going to ask you some questions about how you have been feeling lately.

1. About how often during the past 30 days did you feel nervous — would you say all of the time, most of the time, some of the time, a little of the time, or none of the time?

- 1 All
- 2 Most
- 3 Some
- 4 A little
- 5 None

2. During the past 30 days, about how often did you feel hopeless — all of the time, most of the time, some of the time, a little of the time, or none of the time?

- 1 All
- 2 Most
- 3 Some
- 4 A little
- 5 None

3. During the past 30 days, about how often did you feel restless or fidgety? [If necessary: all, most, some, a little, or none of the time?]

- 1 All
- 2 Most
- 3 Some
- 4 A little
- 5 None

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

- 1 All
- 2 Most
- 3 Some
- 4 A little
- 5 None

5. During the past 30 days, about how often did you feel that everything was an effort?

**Note: If respondent ask what does “everything was an effort” means; say, “Whatever it means to you”**

[If necessary: all, most, some, a little, or none of the time?]

- 1 All
- 2 Most
- 3 Some
- 4 A little
- 5 None

6. During the past 30 days, about how often did you feel worthless?

[If necessary: all, most, some, a little, or none of the time?]

- 1 All
- 2 Most
- 3 Some
- 4 A little
- 5 None

#### **State Added Physical and Emotional Neglect**

I'd like to ask you some questions about events that happened during your childhood. This information will allow us to better understand problems that may occur early in life, and may help others in the future. This is a sensitive topic and some people may feel uncomfortable with these questions. At the end of this section, I will give you a phone number for an organization that can provide information and referral for these issues. Please keep in mind that you can ask me to skip any question you do not want to answer.

All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18 years of age, how true were each of the following statements:

1. You knew there was someone to take care of you and protect you. Was this never true, rarely true, often true, or very often true?

- 1 never true,
- 2 rarely true,
- 3 often true, or
- 4 very often true?

2. Your parents were too drunk or high to take care of the family. Was this never true, rarely true, often true, or very often true?

- 1 never true,
- 2 rarely true,
- 3 often true, or
- 4 very often true?

3. There was someone in your family who helped you feel important or special. Was this never true, rarely true, often true, or very often true?

- 1 never true,
- 2 rarely true,
- 3 often true, or
- 4 very often true?

4. You felt loved? Was this never true, rarely true, often true, or very often true?

- 1 never true,
- 2 rarely true,
- 3 often true, or
- 4 very often true?

5. There was someone to take you to the doctor if you needed it. Was this never true, rarely true, often true, or very often true?

- 1 never true,
- 2 rarely true,
- 3 often true, or
- 4 very often true?

6. Your family was a source of strength and support.  
Was this never true, rarely true, often true, or very often true?
- 1 never true,
  - 2 rarely true,
  - 3 often true, or
  - 4 very often true?

**State Added Adverse Childhood Experience**

I'd like to ask you some questions about events that happened during your childhood. This information will allow us to better understand problems that may occur early in life, and may help others in the future. This is a sensitive topic and some people may feel uncomfortable with these questions. At the end of this section, I will give you a phone number for an organization that can provide information and referral for these issues. Please keep in mind that you can ask me to skip any question you do not want to answer.

All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18 years of age—

1. Did you ever live with anyone who was depressed, mentally ill, or suicidal?
  - 1 Yes
  - 2 No
2. Did you live with anyone who was a problem drinker or alcoholic?
  - 1 Yes
  - 2 No
3. Did you live with anyone who used illegal street drugs or who abused prescription medications?
  - 1 Yes
  - 2 No
4. Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?
  - 1 Yes
  - 2 No
5. Were your parents separated or divorced?
  - 1 Yes
  - 2 No
  - 8 Parents not married
6. How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?
  - 1 Never
  - 2 Once
  - 3 More than once
7. Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking. Would you say---
  - 1 Never
  - 2 Once
  - 3 More than once
8. How often did a parent or adult in your home ever swear at you, insult you, or put you down?
  - 1 Never
  - 2 Once
  - 3 More than once
9. How often did anyone at least 5 years older than you or an adult ever touch you sexually?
  - 1 Never
  - 2 Once
  - 3 More than once

10. How often did anyone at least 5 years older than you or an adult, try to make you touch them sexually?
  - 1 Never
  - 2 Once
  - 3 More than once

11. How often did anyone at least 5 years older than you or an adult, force you to have sex?
  - 1 Never
  - 2 Once
  - 3 More than once

**State Added Gambling**

1. Have you gambled or bet for money or possessions in the past 12 months?
  - 1 Yes
  - 2 No      **[SKIP TO ASTHMA CALLBACK]**
2. Have you ever felt the need to bet or gamble more and more money?
  - 1 Yes
  - 2 No
3. Have you ever had to lie to people important to you about how much you gambled or bet?
  - 1 Yes
  - 2 No