Iowa Department of Public Health

Health in Iowa Annual Report

From the Iowa 2015 Behavioral Risk Factor Survey

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Governor: Terry E. Branstad
Lieutenant Governor: Kim Reynolds
IDPH Director: Gerd W. Clabaugh, MPA.

Report Contact Information:
Donald Shepherd, PhD., Iowa BRFSS Coordinator
donald.shepherd@idph.iowa.gov
(515) 281-7132
http://www.idph.iowa.gov/brfss

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Executive Summary

The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey conducted in partnership with the State of Iowa and the Centers for Disease Control and Prevention (CDC). In 2015, BRFSS collected 6,227 telephone interviews from residents, age 18 and older, living in private residences or college housing regarding health conditions, health-related behaviors, attitudes, and awareness of major contributors to illness, disability, and premature death. BRFSS also monitors the prevalence of these indicators over time statewide. Health-related issues analyzed include general health status, health care access, hypertension, cholesterol, tobacco use, alcohol consumption, body weight, physical activity, nutrition, diabetes, respiratory conditions, immunizations, and HIV/AIDS. Comparisons are made to other states and to *Healthy People 2020* and *Healthy Iowans* goals.

Significant findings for 2015 include:

- The percentage of people without healthcare coverage continues to drop.
- The percentage of Iowans reporting high cholesterol is significantly down.
- The percentage of Iowans reporting current asthma is the lowest in five years.
- Only five states have a lower rate of current asthma.
- Although the percentage of Iowans above a healthy weight was steady, the percentage of obese Iowans was the highest in five years.
- Although Iowa still ranks in the top five states for binge drinking, the percentage of Iowans binge drinking was the lowest in five years.
- The rate of heavy drinking was the lowest in five years.
- Only five states had fewer people eating vegetables one or more times per day.
- The percentage of Iowans age 65 and older who received a flu vaccination ranked third among states and was the highest in five years.
- The percentage of Iowans who received a pneumonia vaccination was the highest in five years.
- Although Iowa ranks in the bottom five states, the percentage of Iowans having an HIV test was the highest in the last five years.

Glossary

95 percent confidence interval: a range of values in which there is a 95 percent chance of the true value falling.
Aerobic: physical activity that increases oxygen consumption.
Anxiety: excessive worry about everyday events.
Asthma: a chronic inflammatory disease of the lungs in which the airways become blocked or narrowed, causing breathing difficulty.
Binge Drinking: drinking too much at one time; five drinks for men or four drinks for women.
Blood pressure: the force of blood against the walls of arteries.
Cancer: a group of cells that grows out of control and has the ability to invade normal tissue.
Cholesterol: a waxy, fat-like substance that is found in all cells of the body.
Coefficient of Variability: a standardized measure of dispersion defined as the ratio of the standard deviation to the mean.
Colonoscopy**:** a test that uses a hollow, lighted tube to inspect the interior walls of the rectum and the entire colon.
Dementia: increasing inability to remember and concentrate.
Depression: a state of low mood and an aversion to activity.
Diabetes Mellitus: a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both.
Diastolic Pressure: the bottom number in blood pressure recorded as the heart relaxes between beats.
Disability: an umbrella term for impairments, activity limitations, and participation restrictions.
Frequent Mental Distress: having 14 or more of the last 30 days in which mental health was not good.
Health-Related Quality of Life: an individual's or group's perceived physical and mental health over time.
Influenza or 'flu': a contagious respiratory illness caused by viruses that infect the nose, throat, and lungs.
Impairment: any loss or abnormality of psychological, physiological, or anatomical structure or function.
Partial Complete: an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures.
Pneumonia: a lung disease caused by bacteria, viruses, and other infectious agents such as fungi.
Population: the complete set of objects of interest; for instance, all adult Iowans would be a 'population'.
Precancerous Polyps: abnormal growths in the colon and rectum that can develop into colorectal cancer.
Prevalence: the degree to which a characteristic or condition exists.
Sample: a set of observations used to represent a larger set of things.
Sampling Frame: a list of all those within a population who can be sampled
Serious Mental Illness: a condition defined by scoring 13 to 24 on a six-question scale called the Kessler (K-6) scale.
Standard Deviation: a measure of the variability of observations around their mean.
Stratum: a set of things into which a larger set can be divided based on some common characteristic.
Systolic Pressure: the top number in blood pressure recorded as the heart beats.

List of Acronyms

AIDS……Acquired Immunodeficiency Syndrome
ATDs……Assistive Technology Devices
BMI……Body Mass Index
BRFSS……Behavioral Risk Factor Surveillance System
CATI…… Computer-Aided Telephone Interviewing
CDC……Centers for Disease Control and Prevention
CHD……Coronary Heart Disease
CI……Confidence Interval
COPD…… Chronic Obstructive Pulmonary Disease
CVD……Cardiovascular Disease
DSS……Disproportionate Stratified Sampling
FMD……Frequent Mental Distress
FOBT…… Fecal Occult Blood Test
HBP ……High Blood Pressure
HDL……good cholesterol carried by High-Density Lipoproteins
HIV……Human Immunodeficiency Virus
HRQOL. ……Health-Related Quality Of Life
IDPH …… Iowa Department of Public Health
K-6……Kessler Mental Illness Scale
LDL……bad cholesterol carried by Low-Density Lipoproteins
MI……Myocardial Infarction
NRT…… Nicotine Replacement Therapy
SHS…… Secondhand Smoke
SIDS ……Sudden Infant Death Syndrome
SMI……Serious Mental Illness
TLC…… ……..Therapeutic Lifestyle Changes

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 BRFSS is an ongoing telephone survey. It is financially and technically supported by the CDC, with further financial support from public and private sources.

The BRFSS is designed to collect information from residents, age 18 and over, living in private residences or college housing regarding health conditions, health-related behaviors, attitudes, and awareness of health-related issues. The BRFSS 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 data collected during calendar year 2015. Health-related issues analyzed include general health status, health care access, hypertension, cholesterol, tobacco use, alcohol consumption, body weight, physical activity, nutrition, 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 geared to reduce 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 include 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 IDPH, guided by the state coordinator, met to discuss which optional modules and state-added questions to include in the coming year.

Participation by Iowans in the BRFSS survey is random, anonymous, voluntary, and confidential. Survey participants are requested to provide such demographic information as age, sex, race, marital and employment status, annual household income, educational level, and location of residence by county and zip code. Information that could possibly be used to identify the respondent, such as location, is suppressed in public use data.

Sampling Process

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

In the landline sample, one person residing in a household is interviewed. Households are 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 is designed to produce a random sample of Iowa telephone numbers, including unlisted numbers and new subscribers.

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 is sampled at a different rate. The listed residential numbers are sampled at the highest rate. Some numbers are 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.

Many people, including the young, single, ethnic minorities, and renters, are increasingly opting not to use traditional landline telephone service in favor of cell phones (AAPOR Cell Phone Task Force 2010; Blumberg & Luke 2016). 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 more than 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 it is not possible to determine such specific geography for cell phones. Since the cell phone is more an individual appliance than a household appliance, the selection of one person per household was not done. College housing was included in the cell phone sample. These respondents were also asked some extra 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; therefore, the number of cell phone interviews in our sample is larger than the number called by our data collection contractor. Cell phone interviews from other states only contained responses to the core questions, since there was no way for them 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 2015 for a total sample size of 6,227. Of these, 3,510 were landline and 2,717 were cell phone. Interviews were conducted in English and Spanish. Anyone who could not communicate in either of those languages was not interviewed.

Interviewers made up to 15 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 2015 BRFSS used a split sample technique. In this technique, there are two versions of the questionnaire. An optional module or a module of 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 in order to represent the entire state population.

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 28.4 minutes for landline and 25.1 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 55 percent for cell phones*. Although the response rates seem rather low and have been declining in recent years, they are better than in most states.

Not all interviews were fully completed. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures. This means that results from questions later in the questionnaire are determined from a somewhat smaller sample than earlier questions, even when not restricted to some sub-sample, such as a particular age group. (See Appendix 3 for the questions and their order.)

*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 a 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. A person'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 Iowa adult population 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 population 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 percent chance of the true Iowa value falling. This range is referred to as a 95 percent 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 the ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, educational level, and especially race/ethnicity 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, people would only be asked at what age they were diagnosed with diabetes if they answered 'yes' to whether they have ever been told they had diabetes. These smaller numbers decrease the ability to determine statistically significant differences. Some data may not be reported as significant solely due to small sample sizes. In general, data in which the number of responses is less than 50 or the 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 for 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. This means several factors are used to give each interview a weight that represents a certain distinct 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.

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 2015*. U.S. Department of Health and Human Services. 2016.

3. Demographics

The 6,227 respondents to the BRFSS for the year 2015 included 2,704 males and 3,523 females age 18 years and older. The following tables present the unweighted 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, 2015

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	175	2.8	130	2.1	305	4.9
25-34	224	3.6	270	4.3	494	7.9
35-44	302	4.8	348	5.6	650	10.4
45-54	459	7.4	526	8.4	985	15.8
55-64	641	10.3	798	12.8	1,439	23.1
65-74	505	8.1	714	11.5	1,219	19.6
75+	369	5.9	693	11.1	1,062	17.0
Unknown	29	0.5	44	0.7	73	1.1
Total	2,704	43.4	3,523	55.6	6,227	100.0

Since 2013, race and ethnicity were broken down into much finer categories than in previous years, 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, 2015

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	5,788	93.0
Black Non-Hispanic	122	2.0
Other Non-Hispanic[1]	112	1.8
Hispanic	151	2.4
Unknown/Refused	54	0.9
Total	6,227	100.0

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

Table 3.3: Distribution of Iowa Survey Respondents by Level of Education, 2015

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	345	5.5
High School Grad or GED	2,113	33.9
Some College or Technical School	1,825	29.3
College Graduate	1,918	30.8
Unknown/Refused	26	0.4
Total	6,227	100.0

Table 3.4: Distribution of Iowa Survey Respondents by Annual Household Income, 2015

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	408	6.6
$15,000-$24,999	765	12.4
$25,000- 34,999	579	9.4
$35,000-$49,999	842	13.6
$50,000-$74,999	918	14.9
>=$75,000	1,592	25.8
Unknown/Refused	1,065	17.3
Total	6,227	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 confirm the risk of mortality is two to six times greater for those individuals who had reported earlier their health was 'bad or poor', compared to those who had reported their health as 'excellent' (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006). The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.

The CDC has defined health-related quality of life (HRQOL) as 'an individual's or group's perceived physical and mental health over time' (CDC, 2012). Physicians have often used HRQOL to measure the effects of chronic illness in their patients to better understand how an illness interferes with a person's day-to-day life. Similarly, public health professionals use HRQOL to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. Tracking HRQOL in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health.

Self-ratings of health or HRQOL 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 not measured by standard morbidity and mortality measures.

General Health Status Results

In 2015, when asked how their health was in general, 17.4 percent of respondents reported that it was 'excellent'. Another 37 percent said it was 'very good'. Further, 32.6 percent reported 'good' health and 13 percent rated their health as 'fair or poor'. This is somewhat better than data from 2014, when 13.6 percent rated their health as 'fair or poor'. There has been a decreasing trend of reported 'fair or poor' health for the past two years (see figure 4.1).

Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Only 3.4 percent of those age 18 to 24 years reported 'fair or poor' health. Thirty-seven percent of those with less than a high school education reported 'fair or poor' health. Other respondents more likely to report having fair or poor health were those from households earning less than $15,000 per year, Hispanics, and those 75 years old and older. Fewer than 10 percent of those with a college education, household incomes $50,000 or higher, and aged 18 to 34 years reported fair or poor health.

In answer to the question about how many days during the past 30 days was their physical health not good, 68.2 percent of respondents reported none of the days and 9.8 percent reported 14 days or more. As shown in table 4.2, those with older age, lower education, and lower income were more likely to report 14 or more 'poor' physical health days. Likewise, females were more likely to report 14 or more poor physical health days.

Of those with household incomes less than $15,000, 22.2 percent reported having 14 or more poor physical health days; those with less than a high school education showed an almost identical prevalence (22.1%). Iowans with household incomes of $75,000 or more and college graduates were much less likely (4.7%) to report 14 or more poor physical health days.

When responding to the question of how many days during the past 30 days their mental health was poor, 68.7 percent of the respondents indicated 'none' of the days and 9.5 percent reported '14 or more days'. Table 4.2 shows the pattern for poor mental health days. Reporting 14 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. Those with an annual household income of $15,000 or less had the highest prevalence of FMD (22.8%). Those who were age 75 and older had the lowest prevalence of FMD (3.7%).

When asked how many days poor physical or mental health kept them from performing their usual activities, 65.1 percent said 'none' and 12.6 percent said '14 days or more'. Individuals with higher age, lower income, less education and females were more likely to report poor physical or mental health interfered with their usual activities.

Figure 4.1: Percentage of Self-Reported Fair or Poor General Health Status by Year

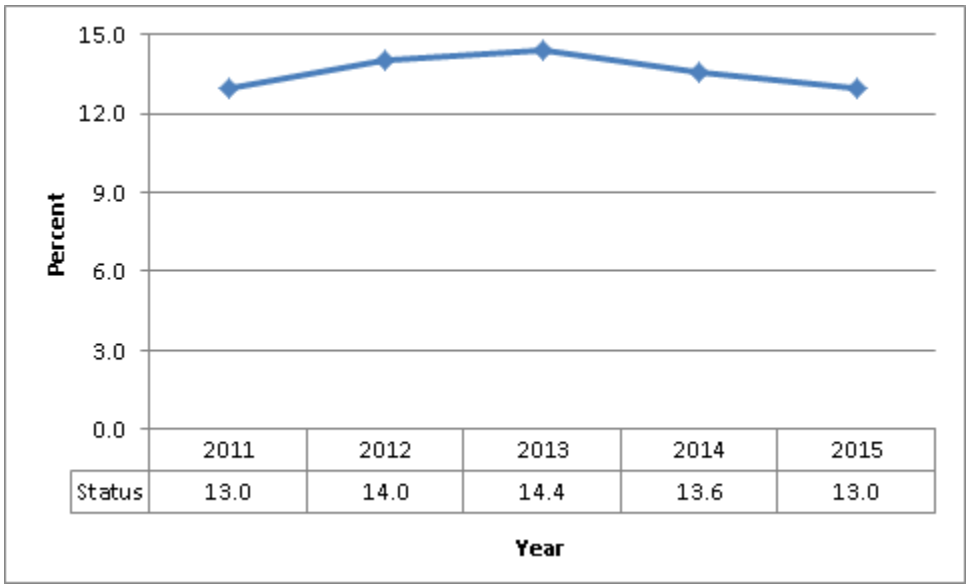


Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2015

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	13.0	(12.0-14.0)
SEX		
Male	13.1	(11.5-14.7)
Female	13.0	(11.6-14.4)
RACE/ETHNICITY		
Non-Hispanic White	11.7	(10.7-12.7)
Black Non-Hispanic	19.6	(9.6-29.6)
Other Non-Hispanic	13.4	(5.6-21.2)
Hispanic	29.8	(20.4-39.2)
AGE		
18-24	3.4	(1.2-5.6)
25-34	7.0	(4.3-9.7)
35-44	10.6	(7.7-13.5)
45-54	16.2	(13.3-19.1)
55-64	17.5	(15.0-20.0)
65-74	17.7	(14.9-20.4)
75+	22.2	(19.0-25.5)
EDUCATION		
Less Than H.S.	37.0	(30.5-43.5)
H.S. or G.E.D.	14.7	(12.9-16.5)
Some Post-H.S.	10.6	(9-12.2)
College Graduate	4.9	(3.9-5.9)
HOUSEHOLD INCOME		
<$15,000	33.7	(27.2-40.2)
$15,000- 24,999	25.5	(21.4-29.6)
$25,000- 34,999	18.1	(14-22.2)
$35,000- 49,999	12.1	(9.4-14.8)
$50,000- 74,999	7.8	(5.6-10.0)
$75,000+	3.9	(2.7-5.1)

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in Past 30 Days, 2015

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	9.8	(8.8-10.7)	9.5	(8.5-10.5)
SEX				
Male	8.2	(7.0-9.4)	7.8	(6.3-9.2)
Female	11.3	(9.9-12.7)	11.2	(9.7-12.7)
RACE/ETHNICITY				
White/Non-Hisp.	9.5	(8.4-10.6)	9.6	(8.5-10.7)
Black/Non-Hisp	8.0	(0.7-15.3)	8.9	(1.9-16.0)
Other/Non-Hisp	14.8	(7.3-22.3)	13.5	(6.4-20.5)
Hispanic	11.4	(5.0-17.8)	5.6	(1.4-9.9)
AGE GROUP				
18-24	3.3	(0.9-5.7)	13.1	(8.9-17.3)
25-34	3.0	(1.4-4.7)	11.8	(8.5-15.0)
35-44	8.4	(5.6-11.2)	12.6	(9.6-15.5)
45-54	11.5	(9.1-13.9)	10.7	(8.4-13.1)
55-64	14.9	(12.6-17.3)	6.9	(5.4-8.4)
65-74	14.7	(12.2-17.2)	5.4	(4.0-6.9)
75+	14.5	(11.9-17.1)	3.7	(2.0.4-5)
EDUCATION				
Less than H.S.	22.1	(17.3-26.8)	16.2	(11.1-21.3)
H.S. or G.E.D.	10.2	(8.7-11.7)	8.9	(7.2-10.5)
Some Post-H.S.	9.7	(8.2-11.3)	10.2	(8.3-12.1)
College Grad.	4.7	(3.7-5.7)	6.7	(5.2-8.2)
HOUSEHOLD INCOME				
< $15,000	22.2	(16.8-27.5)	22.8	(17.2-28.4)
$15,000- 24,999	18.4	(14.4-22.3)	17.2	(13.2-21.1)
$25,000- 34,999	10.8	(7.9-13.8)	9.0	(5.9-12.1)
$35,000- 49,999	9.3	(7-11.7)	7.8	(5.3-10.3)
$50,000- 74,999	7.5	(5.5-9.6)	7.9	(5.4-10.3)
$75,000+	4.7	(3.5-5.9)	5.5	(3.0-7.9)

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and District of Columbia ranged from 12 percent to 25.9 percent. The median value was 16.4 percent. Iowa ranked in the top ten best states, with only 13 percent rating their health as fair or poor.

References

1. Centers for Disease Control and Prevention. Health Related Quality of Life (HRQOL). 2012. Available at www.cdc.gov/hrqol/.

2. DeSalvo K. B., Bloser N., Reynolds K., He J., and Muntner P. Mortality prediction with a single general self-rated health question: A meta-analysis. Journal of General Internal Medicine, New York: Springer, Vol. 21, Number 3. March, 2006, 267-275.

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 (National Center for Health Statistics, 2011).

Those who lack health insurance may find it impossible to obtain adequate health care; this includes preventive care, management of chronic disorders such as diabetes or hypertension, emergency treatment, and expensive surgery and hospital stays. A lack of access to health care allows small, easily treatable conditions to become major health problems for many individuals (Hadley, 2007).

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 in particular sectors, such as pharmaceuticals. Such increases hit individuals without health insurance and those living on fixed incomes harder. Both access to and affordability of health care are important areas to monitor.

Insurance Coverage and Access to Health Care Results

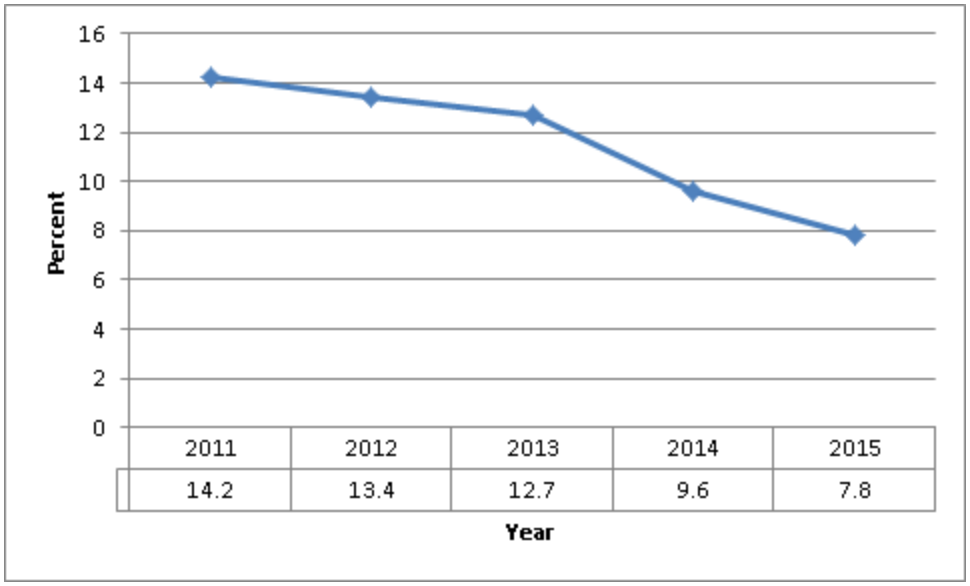
The percent of people without health insurance coverage has plummeted due to the Affordable Care Act. In 2015, 6.3 percent of adult Iowans reported they had no health insurance. In 2014, the figure was 7.7 percent. For Iowans between age 18 and 64 years, the figure has dropped to 7.8 percent from 9.6 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 were most likely to have no health insurance coverage (26.1%); however, more than one-fifth of racial and ethnic minorities also had no coverage.

Two other demographic variables that had an impact on health insurance coverage were employment status and marital status. Regarding employment status, 11.5 percent of unemployed respondents reported no health insurance coverage; 7.1 percent of employed or self-employed respondents had no coverage. In regards to marriage, only 5.7 percent of married respondents had no health insurance coverage, while 10.5 percent of unmarried respondents were without it.

Nearly half of those with health insurance coverage said their primary source was through an employer or union (54.2%). A plan ‘purchased on your own through the marketplace’ was mentioned by 9.9 percent of respondents.

Figure 5.1: No Health Insurance Coverage Trend, 2011–2015
Iowans Age 18-64



Comparison with Other States

In the 50 states and District of Columbia, the percent of non-elderly people without health insurance ranged from 6 percent to 27.5 percent. The state with lowest percentage of those without health insurance was Massachusetts, which was the first state to pass major health reform legislation. Only four states had an equal or lower percentage of residents without health insurance than Iowa. In Iowa, 7.8 percent of non-elderly respondents reported not having any insurance. The median for states and the District of Columbia was 13 percent.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* and *Healthy Iowans* goals for health insurance coverage are to see all people covered by some form of health insurance. In Iowa, 92.2 percent of non-elderly adults have coverage. For all Iowa adults, the figure is 93.7 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 years and over. The goal for one specific source of primary care for adults ages 18 to 64 is 89.2 percent, while the goal for age 65 and over is 100 percent. The results for Iowa were 71.9 percent and 85.6 percent, respectively. The *Healthy Iowans* goal for all adults is 82.5 percent. The obtained prevalence of 73.1 percent also falls short of this goal.

Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2015

DEMOGRAPHIC GROUPS	No Health Insurance Coverage Age 18-64		Time Couldn't Afford Help		Have One Person as Health Provider		Had Checkup in Past Year	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	7.8	(6.6-9.0)	7.2	(6.2-8.2)	74.8	(73.2-76.4)	70.8	(69.2-72.4)
SEX								
Male	9.6	(7.6-11.6)	6.3	(5.1-7.5)	67.1	(64.6-69.6)	65.2	(62.8-67.6)
Female	6.0	(4.6-7.4)	8.1	(6.7-9.5)	82.3	(80.5-84.1)	76.2	(74.0-78.4)
RACE/ETHNICITY								
Non-Hispanic White	5.7	(4.7-6.7)	6.3	(5.5-7.1)	76.9	(75.3-78.5)	70.7	(69.1-72.3)
Non-White or Hispanic	22.0	(16.3-27.7)	13.9	(9.3-18.4)	57.5	(51.0-64.0)	70.9	(64.7-77.0)
AGE								
18-24	6.9	(3.6-10.2)	5.7	(3.0-8.4)	66.4	(60.5-72.3)	61.7	(55.4-68.0)
25-34	10.1	(7.2-13)	9.6	(6.7-12.5)	60.6	(55.7-65.5)	56.3	(51.2-61.4)
35-44	9.3	(6.6-12)	9.6	(6.9-12.3)	72.5	(68.4-76.6)	64.4	(59.9-68.9)
45-54	7.8	(5.4-10.2)	9.7	(7.3-12.1)	76.7	(73.4-80.0)	70.2	(66.7-73.7)
55-64	5.0	(3.4-6.6)	5.9	(4.3-7.5)	81.8	(79.3-84.3)	78.1	(75.6-80.6)
65+	1.0	(0.4-1.6)	3.8	(2.6-5.0)	85.6	(83.6-87.6)	86.6	(84.8-88.4)
EDUCATION								
Less than H.S.	26.1	(18.5-33.7)	16.4	(11.3-21.5)	67.3	(60.4-74.2)	72.0	(65.3-78.7)
H.S. or G.E.D.	9.7	(7.5-11.9)	7.0	(5.4-8.6)	73.7	(71.0-76.4)	72.2	(69.5-74.9)
Some Post-H.S.	5.7	(4.1-7.3)	7.1	(5.5-8.7)	77.1	(74.6-79.6)	71.2	(68.3-74.1)
College Graduate	2.7	(1.7-3.7)	4.1	(2.9-5.3)	75.7	(73.0-78.4)	67.8	(64.9-70.7)
HOUSEHOLD INCOME								
Less than $15,000	16.6	(10.1-23.1)	13.9	(9.0-18.8)	66.0	(58.6-73.4)	78.2	(71.9-84.5)
$15,000- 24,999	17.3	(12.0-22.6)	16.4	(12.5-20.3)	73.2	(68.5-77.9)	72.5	(67.6-77.4)
$25,000- 34,999	14.9	(9.4-20.4)	9.1	(6.0-12.2)	71.3	(66.0-76.6)	67.0	(61.3-72.7)
$35,000- 49,999	6.8	(4.1-9.5)	6.2	(4.0-8.4)	73.6	(69.3-77.9)	71.2	(66.9-75.5)
$50,000- 74,999	5.0	(2.8-7.2)	4.9	(2.9-6.9)	78.9	(75.4-82.4)	66.4	(62.1-70.7)
$75,000+	1.1	(0.5-1.7)	2.4	(1.4-3.4)	78.8	(76.1-81.5)	70.0	(67.1-72.9)

References

1. 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.

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

6. Hypertension Awareness

Background

Blood pressure is the force of blood against the walls of arteries. If this pressure rises and stays elevated over time, it can damage the body in many ways. High blood pressure is a serious condition that can lead to coronary heart disease, heart failure, stroke, kidney failure, and other health problems (National Heart, Lung, and Blood Institute, 2015).

Blood pressure is typically recorded as two numbers: the systolic pressure (as the heart beats) over the diastolic pressure (as the heart relaxes between beats). A consistent blood pressure reading of 140 millimeters of mercury (mmHg) or higher systolic, or 90 mmHg or higher diastolic, is considered high blood pressure. Those with systolic blood pressure of 120-139 mmHg or diastolic blood pressure of 80-89 mmHg are now classified as pre-hypertensive, requiring health-promoting lifestyle modifications to prevent cardiovascular disease. A lower blood pressure is recommended in persons with diabetes or chronic kidney disease (National Heart, Lung, and Blood Institute, 2015).

High blood pressure, which often has no symptoms, is a major risk factor for heart disease and stroke. Epidemiological data suggest that lowering the average systolic blood pressure among Americans by 5 mmHg, would result in a 14 percent drop in deaths from stroke, a 9 percent drop in heart disease deaths, and a 7 percent drop in overall mortality. A reduction as small as 2 mmHg in the average American's systolic blood pressure could save more than 70,000 lives per year (National Heart, Lung, and Blood Institute, 2003).

People who have high blood pressure can take steps to control it and reduce their risks for related health problems. The population-based lifestyle intervention recommendations are weight loss, dietary sodium restrictions, increased physical activity, moderation in alcohol consumption, and a heart-healthy diet rich in fiber, with increased potassium from fruits and vegetables, and low in saturated and total fat (National Heart, Lung, and Blood Institute, 2003). Other key steps include taking medication, and following the treatment plan that a doctor prescribes.

Hypertension Awareness Results

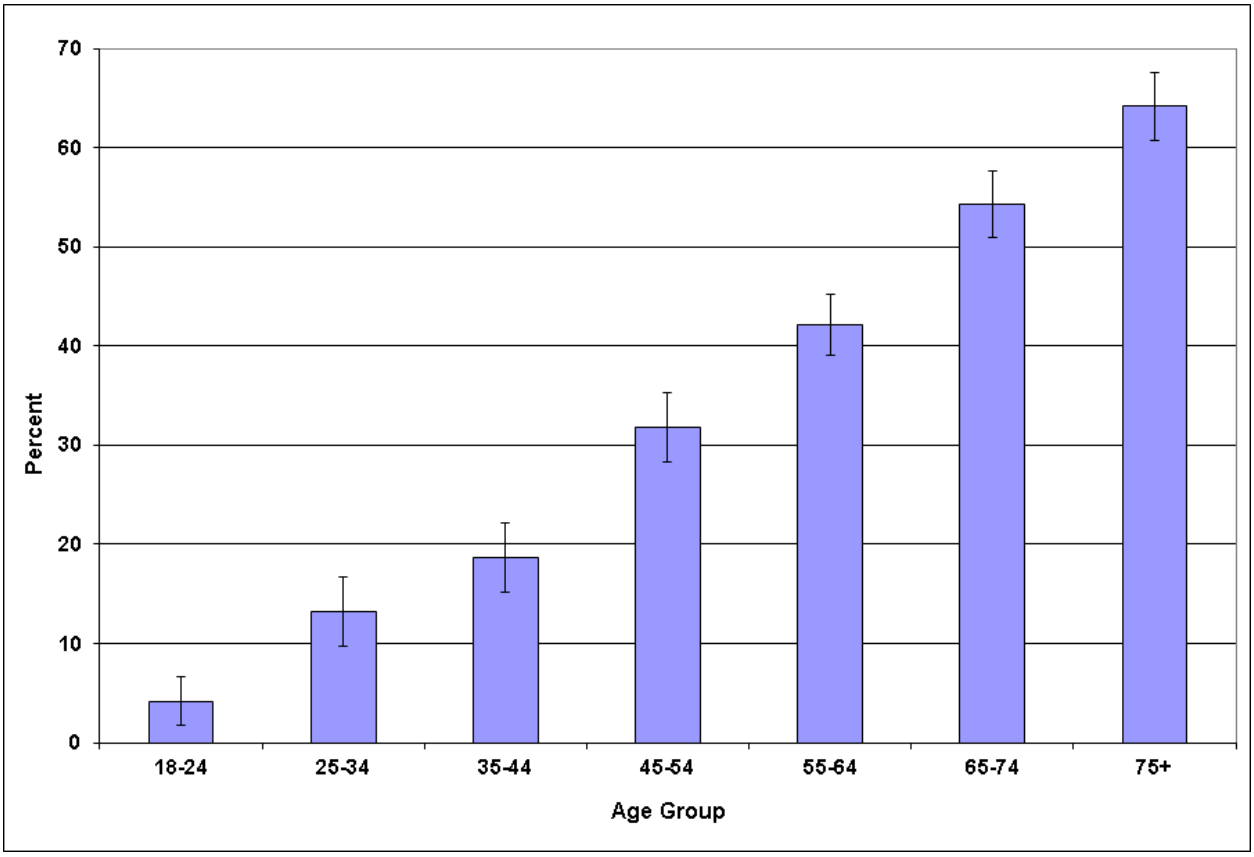
In 2015, 30.6 percent of adult Iowans reported ever being told they had high blood pressure. An additional 1.1 percent reported being told they had borderline or pre-hypertension. This hypertension figure is slightly less than the 31.4 percent reporting high blood pressure in 2013.

The prevalence of reporting a high blood pressure diagnosis was greater for males and those with lower levels of education. A lower percentage of non-White or Hispanics reported being told they had high blood pressure (see table 6.1).

Age had the greatest impact on the percentage of respondents reporting high blood pressure. The highest percentage was 64.2 percent among respondents age 75 years and older, while the lowest was among those age 18 to 24 (4.2%) (see figure 6.1).

Of those reporting high blood pressure, 78.5 percent reported taking medication for their condition. Like high blood pressure itself, this percentage increases steadily with age, reaching a high of 94.3 percent for those 75 years and over. More females with high blood pressure took blood pressure medicine than males (82 percent versus 75.4%), while education and income showed no systematic relation to use of blood pressure medication.

Figure 6.1: Iowans Ever Told Blood Pressure is High by Age, 2015



Comparison with Other States

Among all states and the District of Columbia, prevalence of reported hypertension ranged from 24.6 percent to 42.7 percent. The Iowa prevalence of 30.6 percent was slightly better than the median of 30.9 percent.

Health Objectives for Iowa and the Nation

According to *Healthy People 2020*, the objective for high blood pressure is that only 26.9 percent of the adult population should report having high blood pressure. This is lower than what is currently the case in Iowa (30.6%). Another *Healthy People 2020* goal is for 77.4 percent of people with high blood pressure to be taking medication to lower it; the *Healthy Iowans* goal is a rate of 75 percent. Iowa's figure of 78.5 percent exceeds both the *Healthy People 2020* goal and the *Healthy Iowans* goal.

References

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2. National Heart, Lung, and Blood Institute (NHLBI). What is High Blood Pressure? 2015. Available at www.nhlbi.nih.gov/health/dci/Diseases/Hbp/HBP_WhatIs.html

Table 6.1: Percentage of Iowans Told Blood Pressure Is High, 2015

DEMOGRAPHIC GROUPS	%	C.I. (95%)
TOTAL	30.6	(29.2-32.0)
SEX		
Male	32.4	(30.2-34.6)
Female	28.8	(27.0-30.6)
RACE/ETHNICITY		
White/Non-Hisp.	31.3	(29.9-32.7)
Black/Non-Hisp	26.3	(15.7-36.9)
Other/Non-Hispanic	19.9	(10.5-29.3)
Hispanic	22.5	(14.1-30.9)
AGE		
18-24	4.2	(1.8-6.6)
25-34	13.2	(9.7-16.7)
35-44	18.7	(15.2-22.2)
45-54	31.8	(28.3-35.3)
55-64	42.2	(39.1-45.3)
65-74	54.3	(50.9-57.7)
75+	64.2	(60.7-67.7)
EDUCATION		
Less than H.S.	39.2	(32.5-45.9)
H.S. or G.E.D.	34.0	(31.5-36.5)
Some Post-H.S.	30.2	(27.7-32.7)
College Graduate	23.2	(21.0-25.4)
HOUSEHOLD INCOME		
Less than $15,000	36.1	(29.8-42.4)
$15,000- 24,999	37.9	(33.4-42.4)
$25,000- 34,999	40.1	(34.8-45.4)
$35,000- 49,999	32.6	(28.7-36.5)
$50,000- 74,999	26.8	(23.5-30.1)
$75,000	24.8	(22.3-27.3)

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7. Cholesterol Awareness

Background

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

Cholesterol is a waxy, fat-like substance that is found in all cells of the body and travels in small packages called lipoproteins. When there is too much cholesterol, it builds up in the artery walls. Over time, this buildup causes 'hardening of the arteries', a condition in which the arteries become narrowed and blood flow to the heart is slowed or blocked. The blood carries oxygen to the heart; if enough blood and oxygen cannot reach the heart, an individual may suffer chest pain. If the blood supply to a portion of the heart is completely cut off by a blockage, the result is a heart attack (National Heart, Lung, and Blood Institute, 2015).

High blood cholesterol itself does not cause symptoms, so many people are unaware their cholesterol level is too high. If cholesterol numbers are too high, there is a risk for developing heart disease. Reducing the numbers reduces the chance of a heart attack or dying of heart disease.

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

High cholesterol means a total cholesterol level greater than or equal to ($\geq$) 200 milligrams per deciliter (mg/dl). Not all cholesterol increases the risk of heart disease. The cholesterol carried by low-density lipoproteins (LDL) (so-called 'bad' cholesterol) increases the risk; the cholesterol carried by high-density lipoproteins (HDL) (so-called 'good' cholesterol) lowers the risk and is beneficial. A level less than 40 mg/dL of HDL is low and is considered a major risk factor because it increases the risk for developing heart disease. HDL levels of 60 mg/dL or more help to lower the risk for heart disease. Cholesterol standards are more stringent for those people at high risk of heart attack due to other factors such as diabetes or coronary heart disease (National Heart, Lung, and Blood Institute, 2015).

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

- Therapeutic Lifestyle Changes (TLC) – which includes a cholesterol-lowering diet (called the TLC diet), physical activity, and weight management. TLC is for anyone whose LDL is above the goal.
- Medication - if cholesterol-lowering medicines are needed, they are used together with TLC treatment to help lower LDL.

Cholesterol Awareness Results

In 2015, the percentage of Iowans reporting ever having their blood cholesterol checked was 79.7 percent. When asked whether they had their blood cholesterol checked by a health professional during the past five years, 75.7 percent of respondents reported having it checked. Women, respondents in older age groups, people with more education, and those with higher household income were more likely to report having a blood cholesterol test within the last five years. Hispanics or non-White races were less likely to have a cholesterol test in the past five years (see table 7.1).

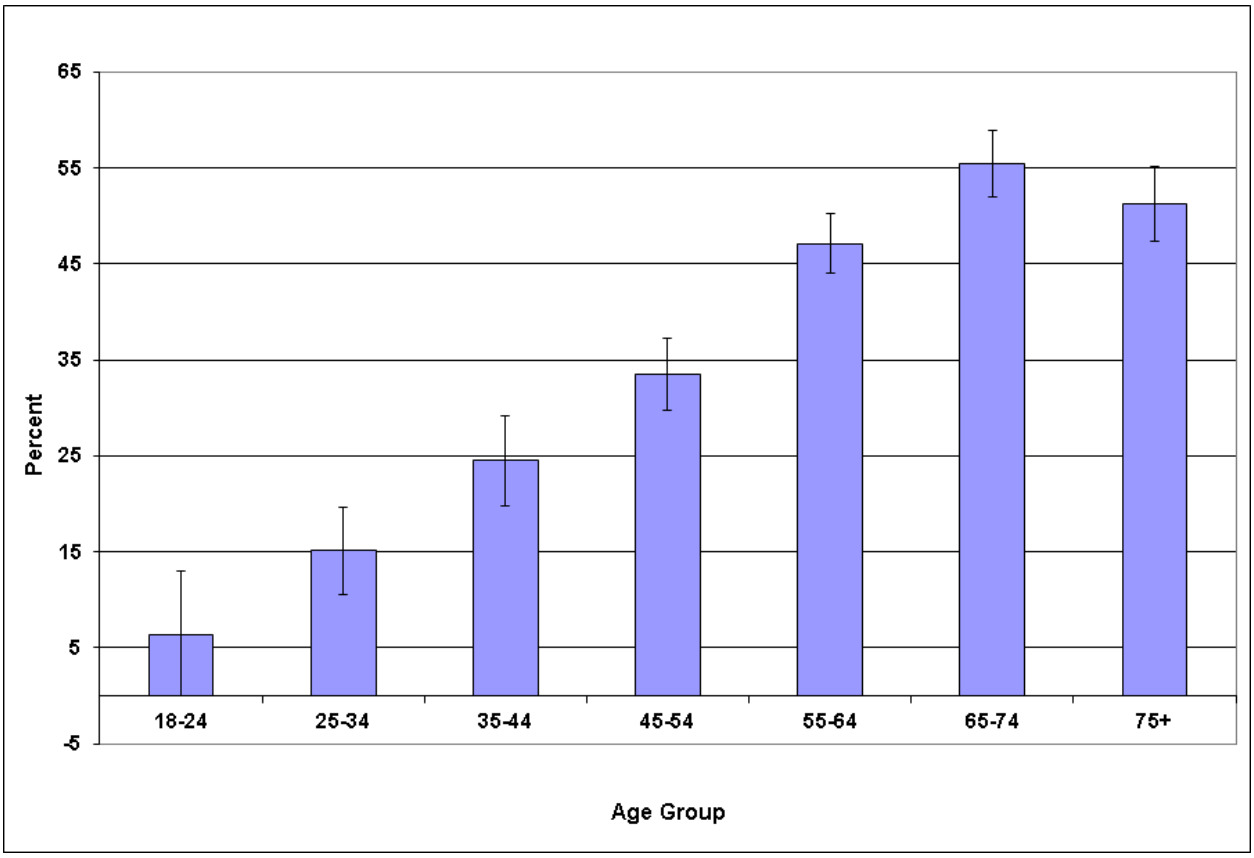
Of the respondents who had their cholesterol tested, 36.1 percent reported they had ever been told by a doctor or other health professional that their blood cholesterol was high. This figure is significantly lower than the 41.1 percent found in 2013.

Age made a considerable difference in reporting of high cholesterol. Among 18 to 24-year-olds, only 6.3 percent reported high cholesterol, while 55.4 percent of those ages 65 to 74 reported high cholesterol (see figure 7.1). People with higher education and income were somewhat less likely to report high cholesterol.

Table 7.1: Blood Cholesterol in Iowans, 2015

Demographic Groups	Had Blood Cholesterol Checked in Past Five Years		Ever Been Told Blood Cholesterol High	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	75.7	(74.1-77.3)	36.1	(34.5-37.7)
SEX				
Male	73.4	(71.0-75.8)	36.6	(34.1-39.1)
Female	77.9	(75.5-80.3)	35.7	(33.5-37.9)
RACE/ETHNICITY				
White/Non-Hispanic	77.3	(75.5-79.1)	36.4	(34.8-38.0)
Non-White or Hispanic	61.6	(54.9-68.3)	33.5	(26.2-40.7)
AGE				
18-24	32.6	(26.3-38.9)	6.3	(0.0-13.0)
25-34	62.1	(57-67.2)	15.1	(10.6-19.6)
35-44	70.6	(66.3-74.9)	24.5	(19.8-29.2)
45-54	85.3	(82.4-88.2)	33.5	(29.8-37.2)
55-64	90.6	(88.6-92.6)	47.1	(44.0-50.2)
65-74	95.3	(93.7-96.8)	55.4	(52.0-58.9)
75+	95.5	(94.0-96.9)	51.2	(47.3-55.1)
EDUCATION				
Less than H.S.	71.8	(65.1-78.5)	47.7	(39.7-55.7)
H.S. or G.E.D.	72.1	(69.0-75.2)	38.9	(36.2-41.6)
Some Post-H.S.	76.2	(73.3-79.1)	34.4	(31.7-37.1)
College Graduate	80.8	(78.1-83.5)	31.7	(29.2-34.2)
HOUSEHOLD INCOME				
Less than $15,000	69.8	(62.2-77.4)	41.4	(34.0-48.8)
$15,000- 24,999	69.8	(64.5-75.1)	37.8	(32.7-42.9)
$25,000- 34,999	73.3	(67.8-78.8)	39.1	(33.4-44.8)
$35,000- 49,999	74.9	(70.4-79.4)	36.7	(32.4-41.0)
$50,000- 74,999	77.2	(73.1-81.3)	37.4	(33.3-41.5)
$75,000+	84.8	(82.3-87.3)	31.4	(28.7-34.1)

Figure 7.1: Iowans Ever Told Their Cholesterol Was High by Age, 2015



Comparison with Other States

The percentage of people having their cholesterol checked within the past five years among all the states and the District of Columbia ranged from 68.3 percent to 84 percent. Iowa's value of 75.7 percent was below the median of 77.7 percent.

Of those tested, the range for those who were told their cholesterol was high was 31.3 percent to 42 percent. Iowa's value of 36.1 percent was slightly lower than the median of 36.3 percent. Iowa improved greatly in this area relative to the nation as a whole, which saw some improvement.

Health Objectives for the Nation

Based on the national health objectives for the year 2020, 82.1 percent of adults should have had their blood cholesterol checked within the past five years. In 2015, only 75.7 percent of Iowans aged 18 and older had their blood cholesterol checked within the past five years. According to the HP 2020 goals, high cholesterol should be reported by only 13.5 percent of all people over age 20. The level in Iowa was more than double that, at 36.8 percent.

References

1. National Heart, Lung, and Blood Institute (NHLBI). What Is Cholesterol?. 2015. Available at **www.nhlbi.nih.gov/health/health-topics/topics/hbc/**.

8. Cardiovascular Diseases

Background

Cardiovascular disease (CVD) refers in principle to any or all of the many disorders that can affect the circulatory system. CVD most often means heart disease, heart failure, or stroke. Taken together, these are the circulatory system disorders of greatest public health concern in the United States today. Heart disease includes coronary heart disease (CHD) or heart attack, also known as myocardial infarction (MI). Stroke refers to a sudden impairment of brain function, sometimes termed 'brain attack', which results from interruption of blood circulation to a 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 the death rate 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 (Centers for Disease Control and Prevention, 2013).

Deaths are only part of the picture. More than 80 million Americans currently live with a cardiovascular disease. Coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly one million Americans. Each year, 15 to 30 percent of stroke survivors are permanently disabled. 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 disease (Go et al, 2013).

The economic impact of cardiovascular disease on our nation's health care system continues to grow as the population ages. About one in six health care dollars is devoted to cardiovascular disease. Heart disease and stroke cost the nation an estimated $316.6 billion in health care costs and lost productivity in 2011 and these costs are rising (Centers for Disease Control and Prevention, 2013). On a personal level, families who experience heart disease or stroke not only deal with medical bills, but also lost wages and the real potential of a decreased standard of living.

In Iowa, heart disease is the number one cause and stroke is the sixth leading cause of death. Even so, the death rate from these causes has steadily declined. The rate for heart disease per 100,000 population has gone from 363.9 in 1994 to 209.5 in 2014. The rate of deaths from stroke has gone from 82.9 in 1994 to 45.3 in 2014 (Iowa Department of Public Health, 2016). 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 public bicycle trails.

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 social and environmental conditions. Dietary patterns result from the influences of food production policies, marketing practices, product availability, cost, convenience, knowledge, personal choices, and preferences that are often based on early-life habits.

Cardiovascular Diseases Results

In 2015, 4.3 percent of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction; 3.8 percent had been told they had coronary heart disease or angina, and 2.3 percent had been told they had a stroke. Although these values may seem small, they represent approximately 90,000 Iowans with a heart attack or heart disease and 60,000 with a stroke. About 7.5 percent of Iowans reported being told they had any of the three conditions. This is a decrease from the 8.2 percent reported in 2014.

Table 8.1 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.

Those more likely to experience heart-related conditions include men, older people, people with lower education, or people with lower household incomes. Minority race/ethnic groups reported them less often. Age is the variable with the most impact on heart-related conditions. Less than two percent of those under age 45 reported a heart condition, while 18 percent of those 75 years or older reported a heart condition and 22.7 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 gender difference for reported strokes.

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

Table 8.1: Prevalence among Iowans of Heart Attack, Heart Disease, and Stroke, 2015

DEMOGRAPHIC GROUPS	Had any Heart Disease (MI or CHD)		Had Stroke		Had Any Cardio-vascular Disease	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.0	(5.4-6.6)	2.3	(1.9-2.7)	7.5	(6.8-8.2)
SEX						
Male	7.7	(6.6-8.7)	2.2	(1.6-2.8)	8.9	(7.8-10.1)
Female	4.4	(3.7-5.1)	2.4	(1.8-3.0)	6.1	(5.3-7.0)
RACE/ETHNICITY						
White/Non-Hisp.	6.2	(5.5-6.8)	2.4	(2.0-2.8)	7.7	(7.0-8.4)
Black/Non-Hisp.	2.6	(0.4-4.9)	3.5	(0.4-6.7)	6.0	(2.2-9.9)
Other/Non-Hisp.	2.9	(0.2-5.6)	1.1	(0.0-2.9)	4.0	(0.8-7.2)
Hispanic	2.6	(0.0-5.3)	0.8	(0.0-1.8)	2.6	(0.0-5.3)
AGE						
18-24	0.0	(0-0)	0.1	(0.0-0.3)	0.1	(0.0-0.3)
25-34	0.3	(0.0-0.9)	0.3	(0.0-0.7)	0.6	(0.0-1.3)
35-44	1.9	(0.5-3.3)	0.6	(0.0-1.2)	2.5	(1.0-4.0)
45-54	3.4	(2.1-4.7)	2.0	(1.0-3.0)	5.1	(3.6-6.7)
55-64	9.7	(7.7-11.6)	2.7	(1.7-3.7)	10.9	(8.9-12.9)
65-74	14.3	(11.8-16.9)	4.8	(3.1-6.4)	17.8	(14.9-20.6)
75+	18.0	(15.3-20.8)	8.3	(6.3-10.3)	22.7	(19.7-25.8)
EDUCATION						
Less Than H.S.	11.2	(7.6-14.8)	4.4	(2.2-6.6)	13.3	(9.4-17.2)
H.S. or G.E.D.	6.7	(5.7-7.8)	3.0	(2.2-3.8)	8.6	(7.3-9.8)
Some Post-H.S.	5.7	(4.6-6.7)	1.7	(1.1-2.3)	7.0	(5.8-8.1)
College Graduate	3.4	(2.6-4.1)	1.4	(0.8-2.0)	4.4	(3.6-5.3)
HOUSEHOLD INCOME						
Less than $15,000	10.5	(7.0-13.9)	5.4	(2.9-7.9)	13.6	(9.7-17.5)
$15,000- 24,999	9.5	(7.2-11.8)	4.1	(2.7-5.5)	11.8	(9.3-14.4)
$25,000- 34,999	7.2	(4.8-9.6)	2.3	(0.9-3.7)	9.0	(6.3-11.7)
$35,000- 49,999	7.6	(5.7-9.4)	2.8	(1.6-4.0)	9.0	(7.0-11.1)
$50,000- 74,999	5.2	(3.7-6.7)	1.2	(0.4-2.0)	6.1	(4.4-7.7)
$75,000+	2.7	(1.9-3.5)	0.7	(0.3-1.1)	3.3	(2.4-4.2)

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9. Overweight and Obesity

Background

Overweight and obesity are considered by many to be the most serious health problems in America today. Obesity is a condition linked to risk factors for leading causes of death, including heart disease, cancer, and stroke. It is associated with type 2 diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis (U. S. Department of Health and Human Services, 2001). Obesity has been increasing so rapidly, 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 (Centers for Disease Control and Prevention, 2015).

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. Consequently, 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 (Centers for Disease Control and Prevention, 2015).

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m^2)]. Estimations of the prevalence of overweight and obesity in this report are based on BMI determined from self-reported weight and height. In adults, overweight is considered to be a BMI value greater than or equal to 25 and less than 30. Obesity is considered to be a BMI greater than or equal to 30. This self-report method is likely to result in an underestimation of the actual extent of obesity; however, comparisons among demographic groups, states, and years are likely to be valid. Furthermore, this is the only measure of overweight and obesity available on the state level.

Obesity and its associated health problems have a large economic impact on the United States. Medical costs associated with overweight and obesity may involve direct and indirect costs. Direct medical costs may include preventive, diagnostic, and treatment services related to obesity. Indirect costs relate to morbidity and mortality, including productivity. In 2008 dollars, direct medical costs were estimated to be $147 billion. The annual nationwide productive costs of obesity range between $3.38 billion and $6.38 billion. Because of the large number of people in the Baby Boomer generation and its high rate of obesity, obesity-related costs to Medicare are likely to grow significantly as this population ages. In 2007-2008, 5.7 million men and 16.5 million women who were eligible for military service exceeded the Army's enlistment standards for weight and body fat. There are other costs that are more difficult to estimate. For instance, because people are heavier, airlines spend more on jet fuel; the obese themselves spend more on gas (Herper, 2009). It is estimated that Iowa could save 5.7 billion dollars by 2030 if BMI were lowered by just five percent (The Trust for America's Health, 2013).

Overweight & Obesity Results

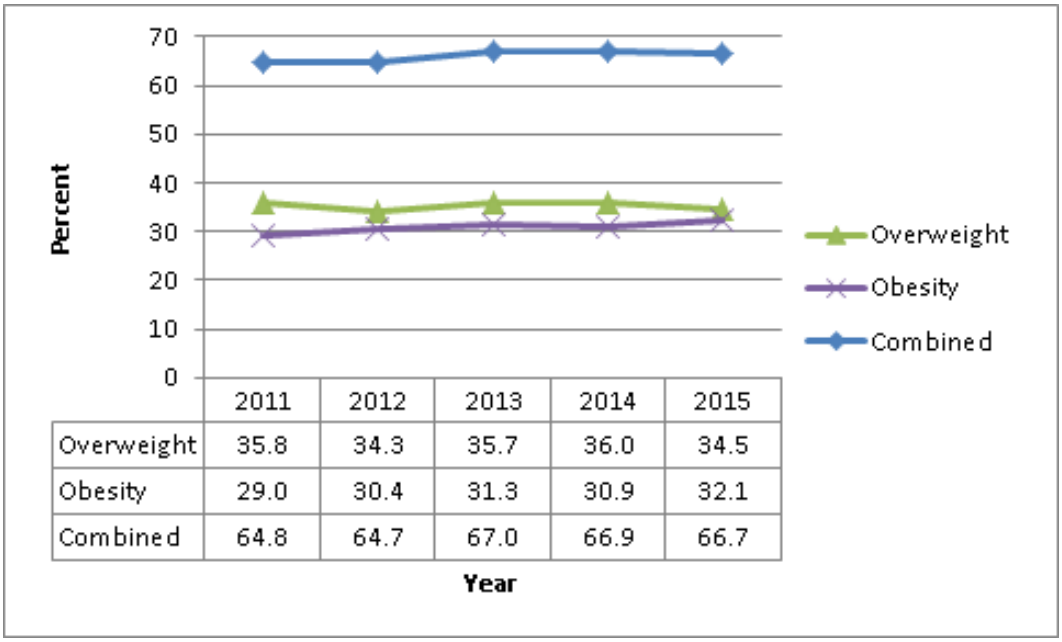
The BRFSS data show that in 2015, 34.5 percent of non-pregnant adult Iowans were overweight and 32.1 percent were obese, based on BMI. The combined percentage of individuals who were overweight or obese was 66.7 percent. This combined prevalence is nearly identical to that in 2014; however, the rate of obesity has increased, while the rate of those overweight has decreased. In 2014, 36 percent of non-pregnant adult Iowans were overweight and 30.9 percent were obese (see figure 9.1). The level of obesity was the highest it has been in the last five years.

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 increases with age until middle-age. A large decline is seen in obesity for people age 75 and

Table 9.1: Overweight and Obese Iowans Based on BMI, 2015

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	34.5	(32.9-36.1)	32.1	(30.5-33.7)	66.7	(64.9-68.5)
SEX						
Male	38.9	(36.5-41.3)	34.8	(32.4-37.2)	73.7	(71.3-76.1)
Female	29.8	(27.6-32.0)	29.3	(27.1-31.5)	59.0	(56.5-61.5)
RACE/ETHNICITY						
White/non-Hisp.	34.4	(32.6-36.2)	32.5	(30.7-34.3)	66.9	(65.1-68.7)
Non-White or Hisp.	34.4	(27.4-41.3)	29.7	(23.3-36.2)	64.1	(57.1-71.1)
AGE GROUP						
18 - 24	29.5	(23.4-35.6)	17.8	(12.7-22.9)	47.3	(40.6-54.0)
25 - 34	29.4	(24.5-34.3)	32.2	(27.1-37.3)	61.7	(56.4-67.0)
35 - 44	33.4	(28.9-37.9)	37.8	(33.3-42.3)	71.3	(67.0-75.6)
45 - 54	34.0	(30.3-37.7)	36.5	(32.8-40.2)	70.5	(67.0-74.0)
55 - 64	39.9	(36.8-43.0)	35.4	(32.3-38.5)	75.3	(72.6-78.0)
65-74	37.8	(34.4-41.2)	36.7	(33.1-40.2)	74.4	(71.3-77.6)
75+	39.1	(35.2-42.9)	24.8	(21.4-28.2)	63.9	(60.1-67.7)
EDUCATION						
Less than H.S.	36.3	(29.2-43.4)	33.4	(26.5-40.3)	69.7	(62.6-76.8)
H.S. or G.E.D.	34.0	(31.3-36.7)	34.5	(31.6-37.4)	68.4	(65.5-71.3)
Some Post-H.S.	33.1	(30.2-36.0)	33.5	(30.6-36.4)	66.6	(63.5-69.7)
College Graduate	36.7	(33.8-39.6)	26.6	(24.1-29.1)	63.3	(60.4-66.2)
HOUSEHOLD INCOME						
Less than $15,000	29.7	(23.0-36.4)	32.1	(25.4-38.8)	61.8	(54.4-69.2)
$15,000- 24,999	32.6	(27.7-37.5)	35.1	(30.2-40.0)	67.7	(62.8-72.6)
$25,000- 34,999	30.1	(25.0-35.2)	38.7	(33.2-44.2)	68.8	(63.3-74.3)
$35,000- 49,999	34.1	(29.8-38.4)	33.9	(29.6-38.2)	68.0	(63.5-72.5)
$50,000- 74,999	34.9	(30.8-39.0)	38.0	(33.9-42.1)	72.8	(68.9-76.7)
$75,000+	38.2	(35.1-41.3)	28.0	(25.1-30.9)	66.1	(63.0-69.2)

Figure 9.1: Overweight and Obesity by Year, 2011-2015



	2011	2012	2013	2014	2015
Overweight	35.8	34.3	35.7	36.0	34.5
Obesity	29.0	30.4	31.3	30.9	32.1
Combined	64.8	64.7	67.0	66.9	66.7

older. Females show a higher prevalence of obesity than males between ages 25 and 34, while males are more likely than females to be obese above the age of 35.

Overweight prevalence is lowest for high school graduates and people with some college, while obesity prevalence is lowest for college graduates. Likewise, the percentage overweight tends to be lower at lower incomes. Conversely, obesity is higher at moderate income and decreases significantly for people in households earning more than $75,000 per year (see table 9.1 and figure 9.3).

Comparison with Other States

Iowa's obesity figure of 32.1 percent in 2015 was well above the U.S. median of 29.8 percent. The range of prevalence among the 50 states and District of Columbia for obesity was 20.2 percent to 36.2 percent. For obesity and overweight combined, Iowa had a prevalence of 66.7 percent, compared to a U.S. median of 65.5 percent.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* national weight objective calls 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, with 31.1 percent at healthy weight. The *Healthy People 2020* goal for obesity is 30.6 percent. Iowa has a prevalence of 33 percent for those over age 20, falling short of the HP 2020 target. The *Healthy Iowans* goal for obesity is 27 percent. Iowa's figure of 32.1 percent for all adults fails to achieve this goal and is moving in the wrong direction.

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Figure 9.2: Obesity by Age and Sex, 2015

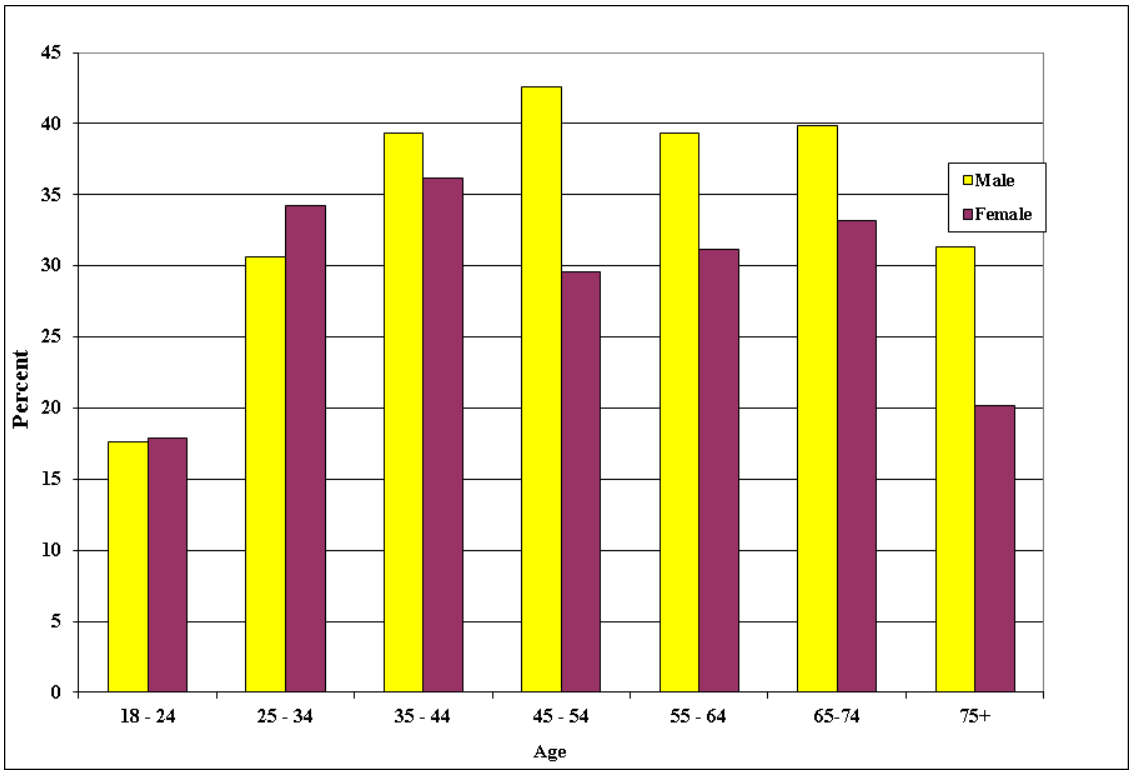
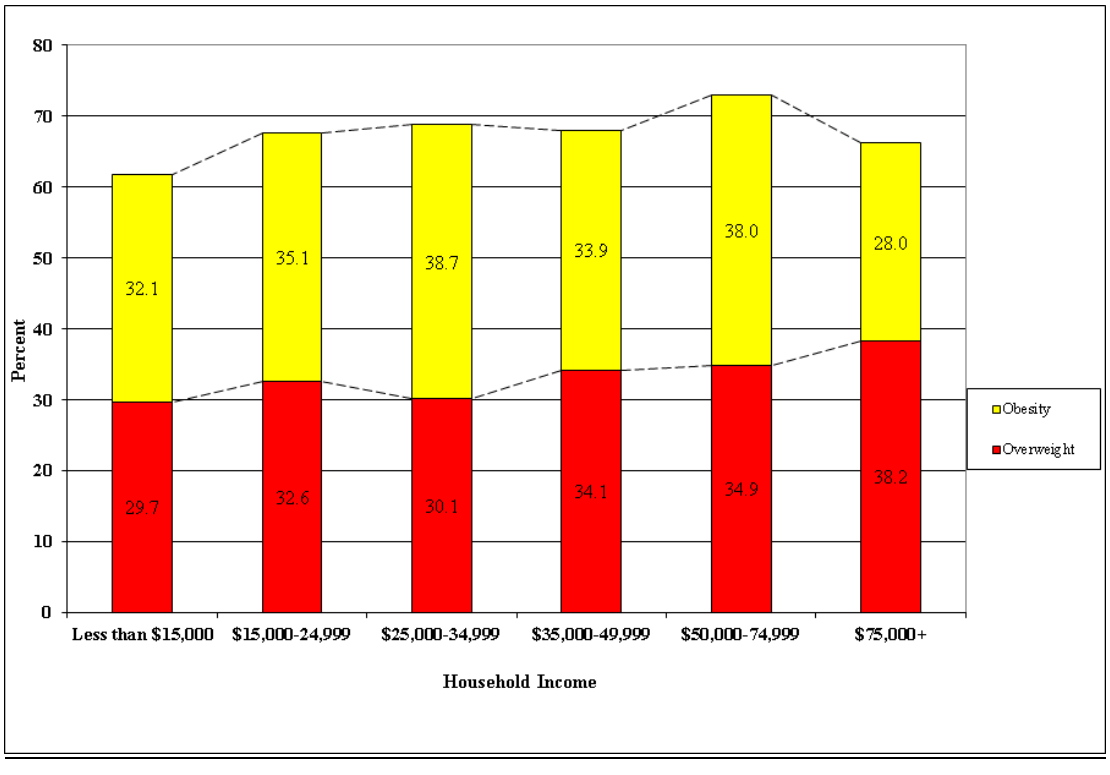


Figure 9.3: Overweight and Obesity by Income, Iowa 2015



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10. Diabetes

Background

Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both. The most common type is type 2 diabetes, in which the body does not use insulin properly, a condition known as insulin resistance (American Diabetes Association, 2015).

The rate of new cases of diagnosed diabetes in the United States has begun to fall, but the numbers are still very high (Centers for Disease Control and Prevention, 2016). 29.1 million people or 9.3 percent of the U.S. population have diabetes; in addition, 27.8 percent of people with diabetes are undiagnosed (Centers for Disease Control and Prevention, 2014). Diabetes may affect persons of all ages, although prevalence increases with age. There are also several people with elevated blood glucose who 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. On average, people with diagnosed diabetes 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 can be attributed to diabetes (American Diabetes Association, 2013).

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 two and one-half hours each week).

The complications of diabetes are many and severe. Diabetes is the seventh leading cause of death in the United States and this may be an underestimation, since conditions caused by diabetes are sometimes the underlying cause of death. These conditions can include heart disease, stroke, high blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, and lower resistance to other diseases. 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 (Centers for Disease Control and Prevention, 2014).

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

Diabetes Results

In 2015, 8.8 percent of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This is less than the figure in 2014, when 9.5 percent of Iowans had ever been told that they have diabetes. The prevalence of diabetes appears to have begun to decline (see figure 10.1).

Table 10.1 shows 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 (20.8%), while the group with the lowest percentage is people age 18 to 24 years (0.3%) (see table 10.1).

Table 10.1: Iowans Ever Told They Had Diabetes, 2015

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	8.8	(8.0-9.6)
SEX		
Male	9.7	(8.5-10.9)
Female	7.9	(6.9-8.9)
RACE/ETHNICITY		
White/Non-Hisp.	8.7	(7.9-9.5)
Black/Non-Hisp.	7.4	(3.1-11.7)
Other/Non-Hisp.	3.0	(0.1-5.9)
Hispanic	11.3	(4.6-18.0)
AGE GROUP		
18-24	0.3	(0.0-0.7)
25-34	1.3	(0.1-2.5)
35-44	3.5	(1.7-5.3)
45-54	7.6	(5.6-9.6)
55-64	15.3	(12.9-17.7)
65-74	20.8	(17.9-23.7)
75+	17.0	(14.2-19.8)
EDUCATION		
Less than H.S.	14.7	(10.2-19.2)
H.S. or G.E.D.	10.3	(8.9-11.7)
Some Post-H.S.	8.4	(7.0-9.8)
College Graduate	5.0	(4.0-6.0)
HOUSEHOLD INCOME		
Less than $15,000	16.8	(12.3-21.3)
$15,000- 24,999	12.5	(10.0-15.0)
$25,000- 34,999	10.9	(8.0-13.8)
$35,000- 49,999	11.1	(8.7-13.5)
$50,000- 74,999	5.3	(3.9-6.7)
$75,000+	4.6	(3.6-5.6)

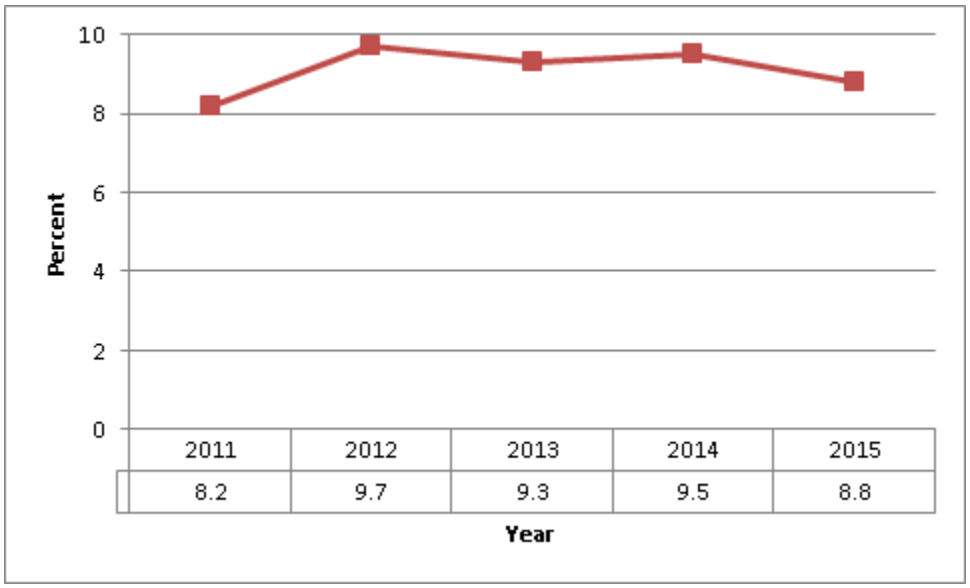
Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (44.4%). The age group in which the least reported being first diagnosed was less than age 16 years (2.3%).

Of those ever told by a physician that they have diabetes, 36 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 (28.9%), while 9.1 percent said never.

Respondents told by a physician they had diabetes were asked how many times they had their blood sugar checked in the past 12 months. About 61.6 percent checked their blood sugar one to five times a day themselves or with the help of a friend or family member. About 12 percent reported never testing their blood sugar. Around 96 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 3.4 percent reported not having had the A1C test. Another 0.6 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.

Figure 10.1: Percent of Iowans with Diagnosed Diabetes per Year, 2011-2015



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, 60.4 percent of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 13.9 percent said they never checked them. Around 83.7 percent of respondents with feet reported they had their feet checked by a health professional at least once within the past 12 months.

Because persons with diabetes are at high risk of eye complications leading to blindness, regular eye examinations, including pupil dilation, are important. Respondents who reported ever having diabetes were asked when they had their last eye exam in which their pupils were dilated. About 71.1 percent reported within the last 12 months, while 4 percent reported never having such an examination. Among Iowans with diabetes, 19.6 percent had been told it had affected their eyes.

Learning how to manage diabetes is very important to keep it from leading to deteriorating health. Only 62.8 percent of those with diabetes in 2015 reported having taken a class on how to manage it.

Comparison with Other States

The median prevalence of diagnosed diabetes for the 50 states and District of Columbia was 9.9 percent in 2015. Prevalence ranged from 6.8 percent to 14.7 percent. The figure for Iowa was somewhat better than the median at 8.8 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 in the last 12 months. *Healthy Iowans* has a goal of 85 percent. Iowa's figure of 71.1 percent is better than the national goal, but less than the Iowa goal.

Healthy People 2020 also has the goal of 71.1 percent of adults with diabetes to have a glycosylated hemoglobin measurement at least twice a year. Iowa surpasses this goal with 78.9 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 63.9 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 62.8 percent.

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11. Respiratory Diseases

Background

The ability to breathe is critical to life. Several respiratory diseases exist that can make breathing difficult, including 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 (National Heart Lung and Blood Institute, 2014).

This chronic disease affects more than 25 million Americans of all ages. 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 (Centers for Disease Control and Prevention, 2011).

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 listed environmental risk factors (National Heart Lung and Blood Institute, 2014).

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 from 2002 to 2007 **(**Centers for Disease Control and Prevention**,** 2011).

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 (MedlinePlus, 2016).

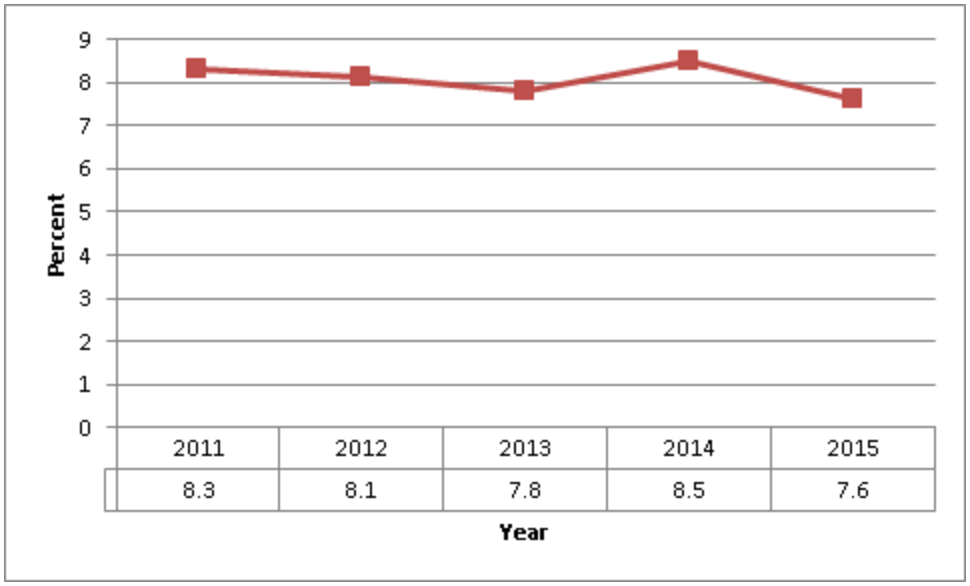
Smoking is the leading cause of COPD. The more a person smokes, the more likely that person will develop COPD. Another cause is exposure to secondhand smoke or air pollution.

There is no cure for COPD; however, there are many ways to relieve symptoms and keep the disease from getting worse. Persons with COPD must stop smoking. This is the best way to slow 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 2015, 12.2 percent of Iowans reported ever being diagnosed by a physician with asthma. Out of all adult Iowans, 7.6 percent currently have asthma and 4.4 percent formerly had asthma.* This is better than 2014, when 13.2 percent of Iowans reported ever having and 8.5 percent reported currently having asthma. The current asthma figure is the lowest it has been in the past five years, though nearly identical to the prevalence found in 2013 (see figure 11.1).

Figure 11.1: Current Asthma in Iowa by Year—2011-2015



In Iowa, women and the very poor are more likely to currently have asthma. Hispanics, the elderly, and people earning over $75,000 per year are less likely to currently have asthma. The highest current asthma prevalence was among people earning less than $15,000 per year (14.4%). The lowest prevalence was among Hispanics (3%) (see table 11.1).

Starting in 2006, a special callback survey enabled the BRFSS to collect a considerable amount of information from the people who reported they or their children had ever had asthma. Most of the data from that survey is not included in this report, but may be presented separately. However, the 2014 callback survey found 6.5 percent of adults with asthma had asthma-related emergency or urgent care visits. This is worse than the 2013 figure of 5.4 percent.

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

Table 11.1: Iowans Currently and Formerly Having Asthma, 2015

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	7.6	(6.8-8.4)	4.4	(3.6-5.2)
SEX				
Male	5.6	(4.4-6.8)	4.9	(3.7-6.1)
Female	9.5	(8.1-10.9)	4.0	(3.0-5.0)
RACE/ETHNICITY				
White/non-Hispanic	7.6	(6.6-8.6)	4.2	(3.4-5)
Black Non-Hispanic	8.3	(3.0-13.6)	9.9	(1.9-17.9)
Other Non-Hispanic	12.6	(4.4-20.8)	2.7	(0-17.4)
Hispanic	3.0	(0.0-6.9)	4.7	(0.2-9.2)
AGE				
18-24	8.8	(5.3-12.3)	5.7	(3.0-8.4)
25-34	6.7	(4.2-9.2)	8.6	(5.7-11.5)
35-44	7.8	(5.4-10.2)	3.0	(1.4-4.6)
45-54	8.8	(6.6-11.0)	3.6	(2.0-5.2)
55-64	7.7	(6.1-9.3)	3.0	(2.0-4.0)
65-74	6.9	(5.2-8.7)	3.3	(2.1-4.6)
75+	5.9	(4.2-7.6)	3.0	(1.7-4.3)
EDUCATION				
Less than H.S.	8.7	(5.2-12.2)	6.8	(3.1-10.5)
H.S. or G.E.D.	6.9	(5.3-8.5)	4.0	(2.8-5.2)
Some Post-H.S.	8.4	(6.8-10.0)	4.5	(3.1-5.9)
College Graduate	7.0	(5.6-8.4)	4.1	(2.9-5.3)
HOUSEHOLD INCOME				
Less than $15,000	14.4	(10.1-18.7)	3.6	(0.7-6.5)
$15,000- 24,999	8.7	(6.2-11.2)	6.2	(3.5-8.9)
$25,000- 34,999	5.5	(3.1-7.9)	2.4	(0.2-4.6)
$35,000- 49,999	9.7	(6.8-12.6)	3.2	(1.6-4.8)
$50,000- 74,999	7.3	(5.1-9.5)	4.8	(2.6-7.0)
$75,000+	4.9	(3.7-6.1)	5.0	(3.4-6.6)

When asked if they had been told they had COPD, 5.7 percent said they had been told. This is the same as 2014. COPD was more common among older people, people with less education, and people with lower household income. Blacks and Hispanics were less likely to report COPD (see table 11.2). The highest prevalence of having COPD was found among those with annual household incomes less than $15,000 (16.6%). African-Americans reported the lowest prevalence of COPD (1.1%).

Comparison with Other States

Iowa reported 7.6 percent of the entire adult population currently suffering from asthma; the median for the nation was 9.2 percent. The range was 7.2 percent to 11.9 percent. There were only five states with a lower rate of reported current asthma than Iowa. Although better than the median, Iowa's relative standing among states in current asthma prevalence has fallen since 2013.

Table 11.2 Iowans Who Have Been Told They Have COPD, 2015

DEMOGRAPHIC GROUPS	COPD	
	%	C.I. (95%)
TOTAL	5.7	(4.9-6.5)
SEX		
Male	5.3	(4.3-6.3)
Female	6.1	(5.1-7.1)
RACE/ETHNICITY		
White/Non-Hispanic	5.9	(5.1-6.7)
Black/Non-Hispanic	1.1	(0.0-2.3)
Other/Non-Hispanic	5.6	(1.1-10.1)
Hispanic	1.8	(0.0-4.0)
AGE		
18-24	2.1	(0.1-4.1)
25-34	1.9	(0.5-3.3)
35-44	3.1	(1.5-4.7)
45-54	5.8	(4.0-7.6)
55-64	7.3	(5.5-9.1)
65-74	11.5	(9.2-13.9)
75+	11.8	(9.3-14.3)
EDUCATION		
Less than H.S.	11.7	(8.0-15.4)
H.S. or G.E.D.	6.7	(5.5-7.9)
Some Post-H.S.	5.9	(4.7-7.1)
College Graduate	1.8	(1.2-2.4)
HOUSEHOLD INCOME		
Less than $15,000	16.6	(12.3-20.9)
$15,000- 24,999	10.1	(7.6-12.6)
$25,000- 34,999	9.4	(6.5-12.3)
$35,000- 49,999	5.7	(3.9-7.5)
$50,000- 74,999	2.6	(1.2-4.0)
$75,000+	1.9	(1.1-2.7)

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12. Cancer and Cancer Screening

Background

Cancer is a class of disorders of cells. It 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 (American Cancer Society, 2016. 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, this country has been fighting 'a war on cancer' and has recently embarked on what is being called a 'Cancer Moonshot'. While cancer is still a very common disease, more people are surviving cancer. The American Cancer Society predicted there would be an estimated 1,658,370 new cancer cases diagnosed in 2015 and 589,430 cancer deaths (American Cancer Society, 2015). 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 (Reuters, 2011). Steady overall declines in cancer death rates have meant that about 898,000 individuals who would have died prematurely from cancer in the past 17 years have survived.

A number of BRFSS questions on various types of cancer screening are asked in even-numbered years; however, some questions on colorectal cancer screening are asked every year.

Colorectal cancer, also referred to as colon 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. The colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus (American Cancer Society, 2014).

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 (Centers for Disease Control and Prevention, 2016).

An estimated 93,090 new cases of colon cancer and 39,610 new cases of rectal cancer were expected nationally in 2015. There are an estimated 49,700 deaths from this disease (American Cancer Society, 2014). As with most types of cancer, incidence and mortality rates of colorectal cancer have been decreasing for most of the last two decades. The decline has been steeper recently, partly due to an increase in screening, which can result in the detection and removal of colorectal polyps before they progress to cancer (Centers for Disease Control and Prevention, 2011).

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 pre-cancerous 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 (Agency for Healthcare Research and Quality, 2010). 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) - Tests that detect hidden blood in a stool sample. If results are normal, repeat the tests annually.
- Flexible Sigmoidoscopy – A test which 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 - 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 - A series of x-rays of the colon and rectum. If it is normal, the test should be repeated every five years.
- Virtual Colonoscopy – A three dimensional x-ray of the colon.

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

Cancer and Cancer Screening Prevalence Results

In 2015, 6.4 percent of Iowans had ever been told they had skin cancer, while 7 percent reported having been told they had some other type of cancer. This is a small increase from 2014, when 5.9 percent of Iowans had ever been told they had skin cancer and 6.8 percent reported having been told they had some other type of cancer.

Skin cancer behaves somewhat differently from other types of cancers, which themselves may vary in prevalence and prognosis according to type. Most cancers become more common with age. Skin cancer is more common among white non-Hispanics. Other cancers were more common among females and those with lower income and less education. The highest prevalence of ever having cancer was for people age 75 and over. In this age group, the prevalence was 23.4 percent for skin cancer and 22 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. For other cancers, only non-Hispanics of other race and people age 18 to 44 years had as low prevalence (see table 12.1).

In 2015, 36.8 percent of Iowans 50 years or older reported ever using a home blood-stool testing kit (FOBT). Of those who had ever used the test, 32.7 percent had done so within the past two years.

In 2015, 72.5 percent of Iowans 50 years or older reported ever having a sigmoidoscopy or colonoscopy screening test. This is an increase from 71.1 percent in 2014.

Of respondents 50 years and older, 57.1 percent reported they had been talked to by a health care professional about colorectal cancer screening. When the health care professional talked about screening, 84.9 percent recommended having a sigmoidoscopy or colonoscopy. More than one test was recommended to 9.2 percent, with sigmoidoscopy/colonoscopy often being one of these. Of the respondents who had a test recommended, 78.9 percent then had the test.

Table 12.1: Prevalence of Iowans Reporting Ever Having Cancer, 2015

DEMOGRAPHIC	Ever Had Skin Cancer		Ever Had Other Cancer	
GROUPS	**%**	**C.I. (95%)**	**%**	**C.I. (95%)**
TOTAL	6.4	(5.8-7.0)	7.0	(6.4-7.6)
SEX				
Male	6.5	(5.5-7.5)	5.4	(4.4-6.4)
Female	6.3	(5.5-7.1)	8.5	(7.5-9.5)
RACE/ETHNICITY				
White/Non-Hisp.	7.1	(6.4-7.8)	7.3	(6.5-8.1)
Black/Non-Hisp.	0.0	(0.0-0.0)	6.6	(0.1-13.1)
Other/Non-Hisp.	2.0	(0.0-4.9)	1.6	(0.0-4.1)
Hispanic	0.5	(0.0-1.1)	3.2	(0-.06.5)
AGE				
18-24	0.1	(0.0-0.4)	0.3	(0.0-0.7)
25-34	0.9	(0.0-2.1)	1.3	(0.1-2.5)
35-44	0.7	(0.1-1.3)	1.9	(0.7-3.1)
45-54	4.6	(3.2-6.0)	5.4	(3.6-7.2)
55-64	7.9	(6.3-9.4)	7.7	(6.1-9.3)
65-74	15.1	(12.6-17.6)	17.6	(15.0-20.2)
75+	23.4	(20.3-26.6)	22.0	(18.7-25.2)
EDUCATION				
Less Than H.S.	6.5	(3.8-9.2)	11.5	(7.4-15.6)
H.S. or G.E.D.	6.8	(5.6-8.0)	8.1	(6.9-9.3)
Some Post-H.S.	5.5	(4.5-6.5)	6.1	(5.1-7.1)
College Graduate	7.1	(5.9-8.3)	5.0	(4.0-6.0)
HOUSEHOLD INCOME				
Less than $15,000	6.7	(4.2-9.2)	11.5	(7.8-15.2)
$15,000- 24,999	6.7	(4.9-8.5)	10.2	(7.7-12.7)
$25,000- 34,999	6.2	(4.2-8.2)	7.8	(5.6-10.0)
$35,000- 49,999	7.6	(5.6-9.6)	7.5	(5.5-9.5)
$50,000- 74,999	5.5	(4.1-6.9)	4.6	(3.0-6.2)
$75,000+	6.6	(5.4-7.8)	4.6	(3.6-5.6)

Health Objectives for the Nation

The *Healthy People 2020* goal is for 70.5 percent of people age 50 to 75 to be screened according to the latest guidelines. Iowa's figure of 70 percent just misses the goal.

References

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13. Exercise and Physical Activity

Background

A lifestyle lacking in regular physical activity has been associated with an increased risk for cardiovascular illness, cancer, osteoporosis, diabetes, falls, and other debilitating conditions (Centers for Disease Control and Prevention, 2015). Despite its risks, a large proportion of people remain inactive.

Any physical activity is better than none and the more the better. According to the *2008 physical activity guidelines for Americans (U.S. Department of Health and Human Services, 2008*), adults should engage in 150 minutes per week of moderate aerobic physical activity, 75 minutes per week of vigorous aerobic physical activity, or some combination. Additionally, adults should engage in physical activity designed to strengthen their muscles.

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. 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 cars, cyclists and pedestrians.)
5) Developing recreational trails.
6) Continuous promotion of physical activity.
7) Enhancing worksite wellness.
8) 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.

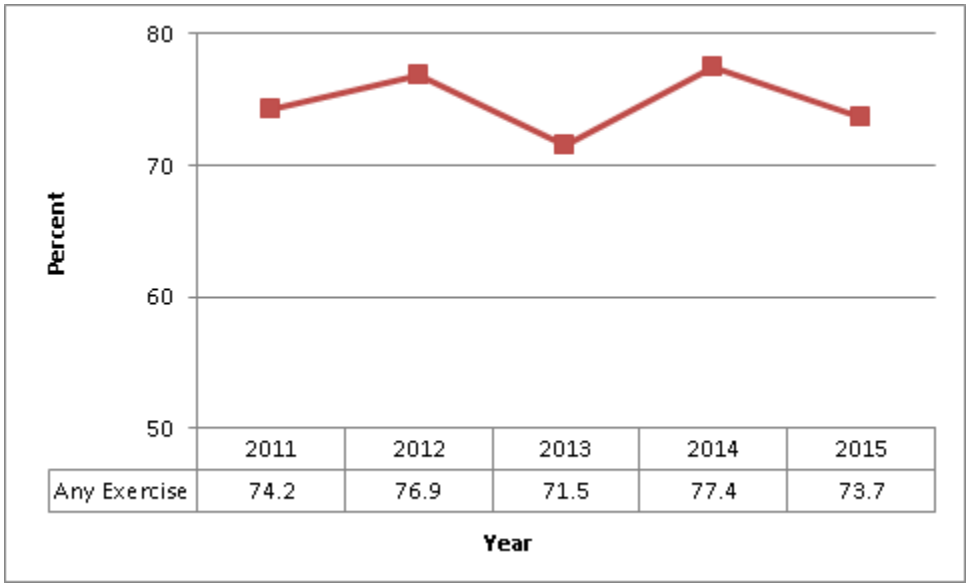
Exercise and Physical Activity Results

In 2015, 73.7 percent of respondents reported they had engaged in some sort of physical activity for exercise during the past month, other than their regular job. This is significantly worse than the 77.4 percent found in 2014, but is better than the level found in 2013 (see figure 13.1).

A larger proportion of younger respondents reported engaging in leisure physical activity than older respondents. The percentage of respondents who exercised also increased with education and household income. This percentage was also a little higher for White non-Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for those having less than a high school education (57.7%), while the highest was for those with a college degree and for those age 18 to 24 years (85.6%) (see table 13.1).

The BRFSS determines the level of aerobic physical activity by asking about two activities the person engages in for the most amount of time. These activities are determined as moderate or vigorous based on a complex formula involving several factors which include both characteristics of the activity and of the person, considering expected maximum oxygen usage. For each activity, the frequency of times

Figure 13.1: Percentage of Iowans
Engaging in Leisure-Time Physical Activity in the Past 30 Days by Year, 2011-2015



	2011	2012	2013	2014	2015
Any Exercise	74.2	76.9	71.5	77.4	73.7

engaged in at least ten minutes per week and the total duration of these times is determined. There is also a question asked about activities designed for strengthening the muscles. The recommendation is that people engage in muscle-strengthening activity at least twice a week.

The percentage of respondents who met the recommended level of aerobic physical activity in 2015 was 48.8 percent. The percentage of respondents who met the recommended level of strengthening activity was 29.8 percent. The recommendations for both aerobic and strengthening activities were met by 19.4 percent.

Meeting the recommendations for aerobic and strengthening activity differed among the demographic groups. The percentage of respondents reporting they had engaged in the recommended amount of aerobic activity was higher for people with higher income and higher education. The group with the highest percentage meeting the aerobic recommendation was college graduates (58.3%). The lowest percentage was among those who had less than a high school education (38.9%).

The strengthening recommendation was met by a higher percentage of younger people, people with more education, and people with the highest incomes. The highest percentage was found among those age 18 to 24 years (47.6%). The lowest percentage was found among Iowans age 75 years and older (16.7%).

The percent of people meeting both types of physical activity decreased with age. A larger percentage of those who had more education engaged in the recommended amounts of both types of physical activity. Only the highest household income level showed an increase in meeting the recommended physical activity levels for both aerobic and strengthening activity (see table 13.2).

Since the neighborhood environment can have much influence on a person's level of physical activity, a module was asked about the neighborhood environment; 76.2 percent of Iowans rated their neighborhood as a very pleasant place to walk. Sidewalks were said to be present for 68.7 percent of

Table 13.1:
Percentage Participating in Leisure Exercise in the Past Month in Iowa, 2015

Demographic Groups	Any Leisure Physical Exercise in Past Month	
	%	C.I. (95%)
TOTAL	73.7	(72.1-75.3)
SEX		
Male	72.9	(70.7-75.1)
Female	74.4	(72.4-76.4)
RACE/ETHNICITY		
White/Non-Hisp.	74.3	(72.7-75.9)
Non-White or Hisp.	68.4	(61.9-74.9)
AGE		
18-24	85.6	(81.1-90.1)
25-34	78.3	(73.8-82.8)
35-44	71.8	(67.3-76.3)
45-54	72.3	(68.8-75.8)
55-64	69.4	(66.5-72.3)
65-74	73.3	(70.2-76.4)
75+	63.0	(59.2-66.8)
EDUCATION		
Less than H.S.	57.7	(50.3-65.1)
H.S. or G.E.D.	67.1	(64.4-69.8)
Some Post-H.S.	75.1	(72.6-77.6)
College Graduate	85.6	(83.4-87.8)
HOUSEHOLD INCOME		
Less than $15,000	58.7	(51.6-65.8)
$15,000- 24,999	63.9	(59.0-68.8)
$25,000- 34,999	65.3	(59.8-70.8)
$35,000- 49,999	70.1	(66.0-74.2)
$50,000- 74,999	79.0	(75.5-82.5)
$75,000+	83.7	(81.3-86.1)

respondents. Only 26.8 percent of respondents used schools for public recreational activity; 61.5 percent of Iowans said they used walking trails or parks in their community.

Comparison with Other States

Values for the prevalence of not engaging in leisure time physical activity ranged from a low of 17.9 percent to a high of 36.8 percent. Iowa ranked slightly worse than the median for not engaging in leisure time physical activity. Iowa was at 26.3 percent, while the median for the nation was at 26.2 percent.

Table 13.2: Percent of Iowans Receiving Recommended Levels of Physical Activity, 2015

Demographic Groups	Recommended Level of Physical Activity					
	Aerobic		Strengthening		Both Aerobic & Strength	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	48.8	(47.0-50.6)	29.8	(28.2-31.4)	19.4	(18.0-20.8)
SEX						
Male	48.0	(45.5-50.5)	31.4	(28.9-33.9)	19.4	(17.2-21.6)
Female	49.5	(47.1-51.9)	28.3	(26.1-30.5)	19.4	(17.4-21.4)
RACE/ETHNICITY						
White/Non-Hisp.	49.5	(47.7-51.3)	29.9	(28.1-31.7)	19.5	(17.9-21.1)
Non-White or Hisp	42.4	(35.3-49.6)	29.0	(22.6-35.4)	18.6	(13.1-24.0)
AGE						
18-24	52.6	(45.9-59.3)	47.6	(40.9-54.3)	29.0	(22.9-35.1)
25-34	48.6	(43.3-53.9)	35.3	(30.2-40.4)	20.9	(16.6-25.2)
35-44	44.2	(39.5-48.9)	31.3	(26.8-35.8)	19.9	(16.0-23.8)
45-54	46.8	(42.9-50.7)	26.9	(23.4-30.4)	19.0	(15.9-22.1)
55-64	48.9	(45.8-52.0)	23.9	(21.2-26.6)	16.6	(14.2-19.0)
65-74	54.2	(50.6-57.7)	23.8	(20.8-26.7)	17.4	(14.8-19.9)
75+	48.4	(44.4-52.5)	16.7	(13.9-19.5)	11.1	(8.7-13.5)
EDUCATION						
Less than H.S.	38.9	(31.3-46.5)	24.9	(14.7-25.3)	14.1	(7.8-20.4)
H.S. or G.E.D.	43.3	(40.2-46.4)	22.4	(18.8-23.2)	13.9	(11.7-16.1)
Some Post-H.S.	49.2	(46.1-52.3)	32.1	(27.6-32.6)	20.6	(18.1-23.1)
College Graduate	58.3	(55.4-61.2)	37.6	(31.5-36.3)	26.3	(23.6-29.0)
HOUSEHOLD INCOME						
Less than $15,000	37.2	(29.9-44.5)	25.7	(19.2-32.2)	14.1	(9.0-19.2)
$15,000- 24,999	42.9	(37.6-48.2)	24.8	(20.1-29.5)	16.0	(11.9-20.1)
$25,000- 34,999	44.6	(38.7-50.5)	22.0	(16.7-27.3)	13.6	(9.3-17.9)
$35,000- 49,999	42.6	(38.1-47.1)	27.9	(23.2-32.6)	15.4	(11.9-18.9)
$50,000- 74,999	50.4	(46.1-54.7)	27.9	(24.0-31.8)	17.2	(14.1-20.3)
$75,000+	57.2	(54.1-60.3)	38.7	(35.6-41.8)	27.6	(24.7-30.5)

Iowa also did not fare well compared to the nation as a whole in regards to meeting the recommended levels of physical activity. Aerobic physical activity recommendations were met by 38 percent to 60.6 percent of people in the 50 states and District of Columbia. The median was 51.3 percent; Iowa had 48.8 percent. The strengthening recommendation was met by 20.9 percent to 35.4 percent of state residents. The national median was 30.2 percent; Iowa had 29.8 percent.

Health Objectives for Iowa and the Nation

The national target for reducing the proportion of adults who engage in no leisure-time physical activity, is 32.6 percent. Iowa's level of 26.3 percent is better than this target.

The national target to increase the proportion of adults engaging in the recommended amount of regular moderate or regular vigorous aerobic physical activity is 47.9 percent. Iowa respondents report

48.8 percent achieving this recommendation either by itself or along with the strengthening criterion. This meets the target for recommended aerobic activity.

The *Healthy Iowans* goal is that 53 percent of adult Iowans should attain the recommended level of aerobic physical activity. Iowa's level of 48.8 percent falls short of this.

The national target for meeting the recommended strengthening goal of two or more times per week is 24.1 percent. Iowa respondents report 29.8 percent achieving the strengthening recommendation either by itself or along with the aerobic criterion. Iowa is above the target for recommended strengthening activity.

References

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14. Diet and Nutrition

Background

Proper nutrition is critical to living a healthy life. Eating a diet high in fruits and vegetables as part of an overall healthful diet can help lower chronic disease risk and aid in weight management. Fruits and vegetables contain essential vitamins, minerals, fiber, and other bioactive compounds; a diet high in these foods is associated with lower risk for numerous chronic diseases, including certain cancers diabetes, and cardiovascular diseases (Blanck, Gillespie, Kimmons, Seymour, Serdula, 2008).

Increased consumption of fruits and vegetables by individuals is a practical and important means for optimizing nutrition to reduce disease risk and maximize good health. The most recent *Dietary Guidelines for Americans (2015)* recommends eating a variety of fruits and vegetables each day, including a variety of vegetables from the groups that include dark green, orange, legumes, starchy vegetables, and other vegetables (U. S. Department of Health and Human Services and U.S. Department of Agriculture, 2015).

The *Dietary Guidelines* also recommend consuming a variety of foods rich in nutrients in all food groups. People should limit their intake of saturated fats and trans-fats, added sugars, salt, and refined or processed foods. The concern is that high-calorie, nutrient-poor sugary foods and beverages are replacing more nutritious foods and adding to the overweight problem.

Diet and Nutrition Results

The BRFSS includes a series of six questions about how often the respondents eat various fruits or vegetables. From the answers to these questions, indices are computed showing the total average consumption per day of fruits and vegetables. The questions involved juice, fruit, beans, dark green vegetables, orange-colored vegetables, and other vegetables. Many instructions and examples are given concerning what should count in each category.

Based on response for fruit consumption, 41.7 percent of adult Iowans reported consuming fruits less than one time per day. For vegetables, 26.9 percent of adult Iowans reported consuming them less than one time per day (see Table 14.1).

Women, older people, and people with more education were all more likely to eat fruits. These three groups and people with higher incomes were more likely to eat vegetables per day. The most likely group to eat some fruits per day were those age 75 years and older (26.3 percent ate less than once). Those most likely to eat some vegetables per day were college graduates (17.9 percent ate less than once). The lowest consumption patterns were found among people with less than a high school education, where 53.3 percent ate fruit less than once per day and 36.3 percent ate vegetables less than once per day.

Several other questions concerned dietary habits. When asked ‘How often do you drink soda or pop containing sugar?’, the median response was 0.4 times per week. The mean, however, was 3.4 times per week. This indicates that, although more than half the respondents drank soda less than once a week, a few drank it many times. In fact, 39.4 percent said they did not drink it at all. Around 4.6 percent said they drank sweetened soda three or more times a day.

Table 14.1
Iowans Eating Fruits and Vegetables Less Than Once per Day, 2015

Demographic	<1 per day Fruit		<1 per day Vegetables	
Groups	**%**	**C.I. (95%)**	**%**	**C.I. (95%)**
TOTAL	41.7	(40.0-43.5)	26.8	(25.4-28.2)
GENDER				
Male	48.3	(45.7-50.9)	31.5	(29.0-33.9)
Female	35.5	(33.2-37.8)	22.6	(20.5-24.7)
RACE/ETHNICITY				
White/Non-Hisp.	42.0	(40.2-43.8)	27.0	(25.4-28.7)
Non-White or Hispanic	39.2	(32.4-46.1)	25.4	(19.3-31.6)
AGE				
18 - 24	44.8	(38.1-51.4)	34.7	(28.3-41.1)
25 - 34	42.9	(37.6-48.2)	27.9	(23.1-32.7)
35 - 44	49.0	(44.2-53.7)	25.1	(20.9-29.2)
45 - 54	46.0	(42.1-49.8)	27.6	(24.1-31.1)
55 - 64	39.4	(36.2-42.5)	23.4	(20.6-26.2)
65-74	37.4	(33.9-40.8)	22.7	(19.7-25.7)
75+	26.3	(22.4-30.1)	27.9	(24.1-31.8)
EDUCATION				
Less than H.S.	53.3	(45.7-60.9)	36.3	(28.8-43.8)
H.S. or G.E.D.	44.5	(41.5-47.5)	32.0	(29.1-34.9)
Some Post-H.S.	41.4	(38.4-44.5)	26.6	(23.8-29.5)
College Graduate	34.9	(32.1-37.8)	17.9	(15.5-20.2)
HOUSEHOLD INCOME				
Less than $14,000	50.7	(43.3-58.0)	31.8	(24.8-38.7)
$14,000- 24,999	45.9	(40.5-51.2)	32.7	(27.6-37.7)
$25,000- 34,999	37.4	(31.8-43.0)	25.1	(20.1-30.1)
$35,000- 49,999	44.3	(39.6-48.9)	31.2	(26.8-35.7)
$50,000- 74,999	42.4	(38.1-46.6)	24.8	(21.2-28.5)
$75,000+	39.8	(36.6-43.0)	21.2	(18.4-24.0)

Fewer people said they frequently drank sweetened fruit drinks. When asked ‘How often do you drink sweetened fruit drinks?’, 60.5 percent said they did not drink them at all. Only 0.6 percent said they drank them three or more times a day. The mean consumption rate was only once a week and the median was zero.

When asked how often they used low-fat or fat-free dairy products such as milk, yogurt, or cheese, 47.7 percent of respondents said once a day, but 23.2 percent said less than once a week. This is lower than 2014, when 51.3 percent said once a day and 21.9 percent said less than once a week.

When asked how often they use whole-grain products such as whole-wheat bread or pasta, oatmeal, or bran cereal, 41 percent of respondents said once a day, but 14.1 percent said less than once a week. This is also lower than 2014, when 44.8 percent said once a day and 13.8 percent said less than once a week.

Concerning sodium or salt, 48.5 percent of respondents said they were currently watching their salt intake. In addition, 18.6 percent said a doctor had advised them to watch their salt intake.

Comparison with Other States

The consumption of fruits and vegetables per day in the 50 states and District of Columbia ranged from a low of 48.8 percent of fruits at least one time per day and 68.8 percent of vegetables at least one time per day to a high of 67.6 percent of fruits and 83.5 percent of vegetables. Iowa's level of 58.3 percent for fruits and 73.1 percent for vegetables is below the median for fruits and far below the median for vegetables. The medians were 60.3 and 77.9 percent respectively. Only five states had fewer people consuming vegetables one or more times a day than Iowa.

Health Objectives for Iowa

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

References

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15. 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 cigarette smoking causes more than 480,000 deaths, or one in every five deaths, annually (Centers for Disease Control and Prevention, 2016).

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 (U. S. Department of Health and Human Services, 2014).

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 (Centers for Disease Control and Prevention, 2016).

Consequences of smoking during pregnancy include spontaneous abortions, low birthweight babies, and sudden infant death syndrome (SIDS).

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 (U. S. Department of Health and Human Services, 2006).

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

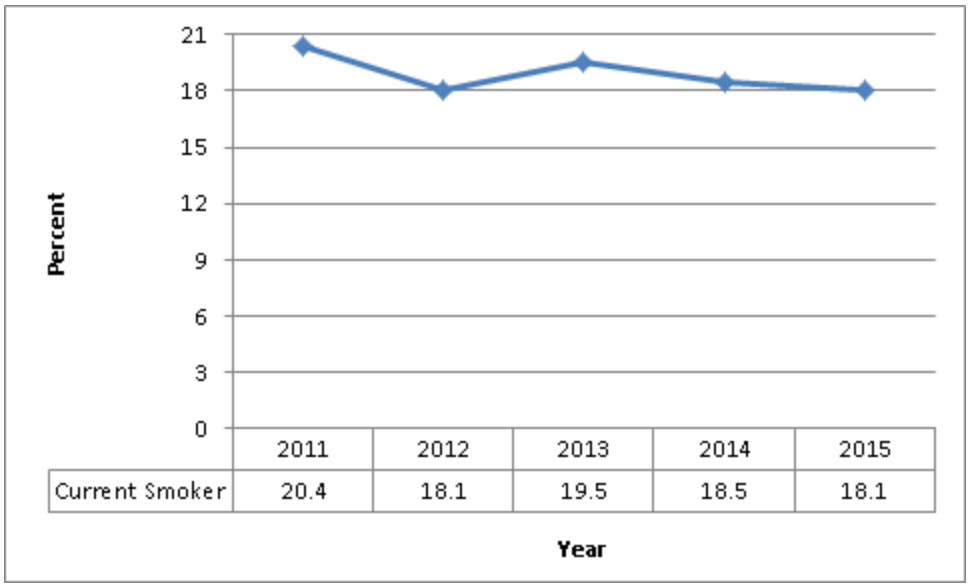
Tobacco Use Results

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 respondents surveyed in 2015, 18.1 percent reported being a current smoker. This is a small decrease from the 18.5 percent found in 2014.

Smoking declined with increasing age after age 45, with higher education, and with higher income. Respondents with household incomes less than $15,000 reported the highest proportion of current smokers (32.1%). Only 4.6 percent of respondents age 75 years and older were current smokers (see table 15.1).

About 25.6 percent of respondents were former smokers. This means they had smoked at least 100 cigarettes in their lifetime, but did not smoke now. While more males than females were former smokers, the age trend for former smokers was the opposite of that for current smokers. The 18 to 24 year age group had only 7.8 percent former smokers, while the 65 to 74 year age group had 40.7 percent (see table 15.1 and figure 15.1). 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 (57.3%) said 10 or more years.

Figure 15.1: Current Smoking in Iowa by Year: 2011-2015



When asked about attempts to quit smoking, 56.4 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 4.5 percent said they used these every day or some days.

E-cigarettes had been used by 18 percent of Iowans, with 11.7 percent of those now using e-cigarettes every day or some days. Of all Iowans, 13.7 percent had tried smoking a hookah. Other tobacco products used every day or some days by Iowans were cigars (1.5%) and a pipe (0.4%).

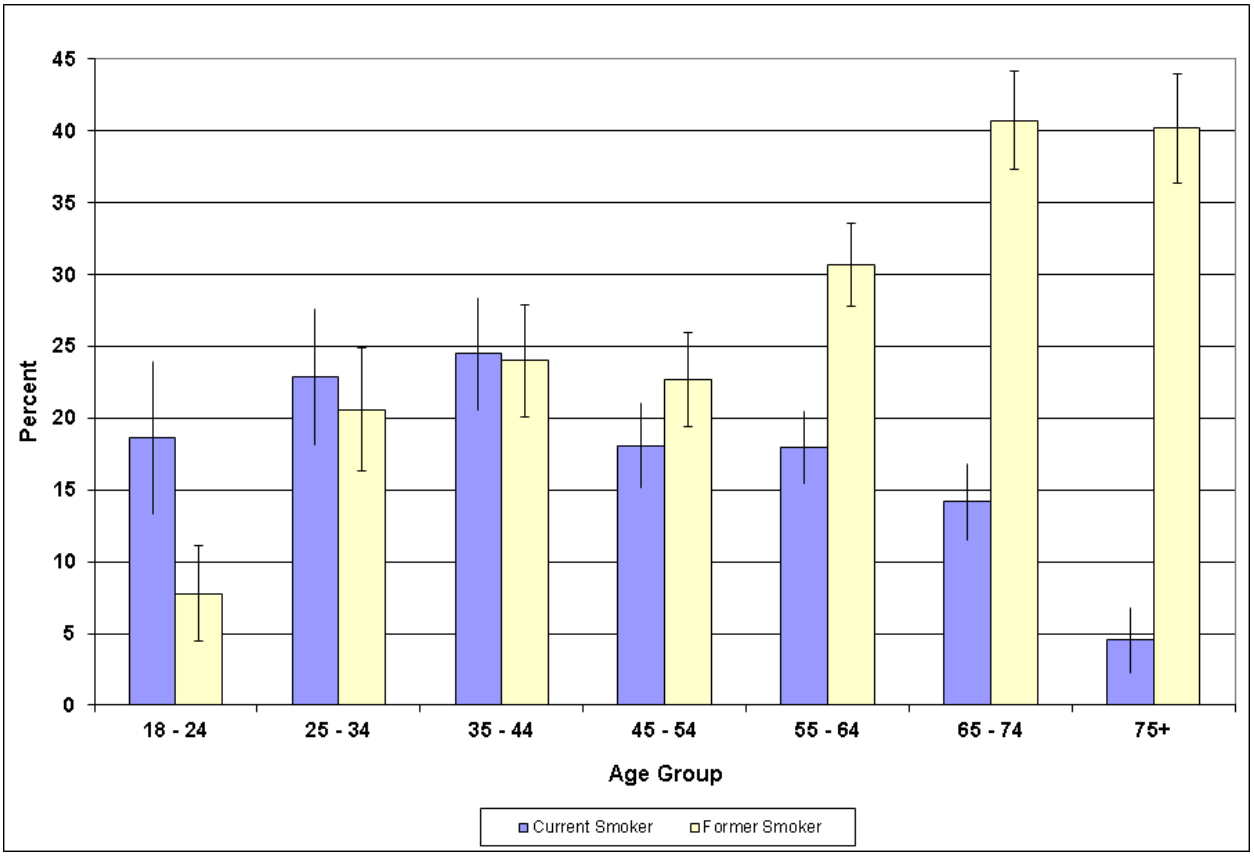
Of smokers who had seen a doctor in the past year, 62.2 percent of them reported the doctor had advised them to quit smoking. Of those with doctors advising smokers to quit, the most common forms of assistance were medical resources (20.7%) or a quit line (20.6%).

Among all Iowans, 45.1 percent had heard of Quitline Iowa. Of former smokers or current smokers making a quit attempt in the past year, 8.6 percent said they called a quit line.

Table 15.1: Percentage of Current and Former Smokers in Iowa, 2015

DEMOGRAPHIC	Current Smoker		Former Smoker	
GROUPS	**%**	**C.I. (95%)**	**%**	**C.I. (95%)**
TOTAL	18.1	(16.7-19.5)	25.6	(24.2-27.0)
SEX				
Male	19.5	(17.3-21.7)	29.7	(27.5-31.9)
Female	16.7	(14.7-18.7)	21.7	(19.9-23.5)
RACE/ETHNICITY				
White/Non-Hisp.	17.8	(16.4-19.2)	26.2	(24.8-27.6)
Non-White or Hisp.	21.1	(15.4-26.8)	18.7	(13.8-23.7)
AGE				
18-24	18.6	(13.3-23.9)	7.8	(4.5-11.1)
25-34	22.9	(18.2-27.6)	20.6	(16.3-24.9)
35-44	24.5	(20.6-28.4)	24.0	(20.1-27.9)
45-54	18.1	(15.2-21.0)	22.7	(19.4-26.0)
55-64	18.0	(15.5-20.5)	30.7	(27.8-33.6)
65-74	14.2	(11.5-16.8)	40.7	(37.3-44.2)
75+	4.6	(2.3-6.8)	40.2	(36.4-44.0)
EDUCATION				
Less Than H.S.	30.4	(23.9-36.9)	26.8	(20.9-32.7)
H.S. or G.E.D.	21.8	(19.3-24.3)	27.3	(24.9-29.7)
Some Post-H.S.	19.7	(17.2-22.2)	26.9	(24.4-29.4)
College Graduate	6.3	(4.9-7.7)	21.3	(18.9-23.7)
HOUSEHOLD INCOME				
Less than $15,000	32.1	(25.4-38.8)	22.7	(17.0-28.4)
$15,000- 24,999	25.4	(20.7-30.1)	25.3	(21.4-29.2)
$25,000- 34,999	24.2	(19.1-29.3)	26.2	(21.5-30.9)
$35,000- 49,999	21.6	(17.5-25.7)	25.7	(22.0-29.4)
$50,000- 74,999	17.6	(14.1-21.1)	24.7	(21.2-28.2)
$75,000+	8.6	(6.8-10.4)	27.9	(25.2-30.6)

Figure 15.2: Percentage of Current and Former Smokers by Age, 2015



Comparison with Other States

In all the states and the District of Columbia, smoking prevalence ranged from a low of 9.1 percent to a high of 26 percent. Iowa's current smoking prevalence of 18.1 percent was above the median of 17.5 percent for all states. Both Iowa and the nation as a whole showed a small decline in smoking prevalence from the previous year.

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 18.1 percent in Iowa, which is well above both goals.

The *Healthy People 2020* goal for use of smokeless tobacco is only 0.3 percent. Iowa's prevalence of such use is 4.5 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 56.4 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; 4.8 percent of former smokers said they had not smoked regularly for six months to a year, while the goal was 8 percent.

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16. 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) (Centers for Disease Control and Prevention, 2016).

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. Excessive drinking cost the U.S. $249 billion in 2010 (Centers for Disease Control and Prevention, 2016).

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 (Centers for Disease Control and Prevention, 2016).

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 (National Institute on Alcohol Abuse and Alcoholism, 2016).

Several groups and techniques exist to help people control their problem drinking. 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 2015, 57.9 percent of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 35.6 percent had an average of only one drink. The median was two drinks. About 11.4 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 14 drinks per week for men and seven drinks per week for women. According to this definition, 5.9 percent of all respondents were heavy drinkers. This is a little less than in 2014 when 6.3 percent were heavy drinkers, and the lowest it has been in the past five years (see figure 16.1).

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 7.1 percent of men were considered to be heavy drinkers, while only 4.8 percent of women were considered to be heavy drinkers. People over age 75, African-Americans, and Hispanics reported a lower prevalence of heavy drinking. People with household incomes over $50,000 per year were associated with a higher prevalence of heavy drinking. No African-Americans reported heavy drinking in 2015, while 7.6 percent of Iowans with household incomes greater than $75,000 per year were heavy drinkers (see Table 16.1).

The definition of binge drinking is when a man drinks more than five drinks or a woman drinks more than four drinks on one occasion. Among all adult Iowans, 19.8 percent reported at least one binge episode in the last 30 days. This is lower than in 2014 when it was 21.4 percent and is the lowest figure seen in the past five years (see figure 16.1).

Even with the lessened requirement on females, twice as many males binge than females (26.6 percent versus 13.3%). Men binged more than women at all ages (see figure 16.2). Age made the most difference, with people of younger age bingeing more. The likelihood of bingeing decreases with age from 34.2 percent for 25 to 34-year-olds to only 2.4 percent for those 75 years old and older. Unlike most risky behaviors, people with more education and higher income were more likely to engage in binge drinking (see table 16.2).

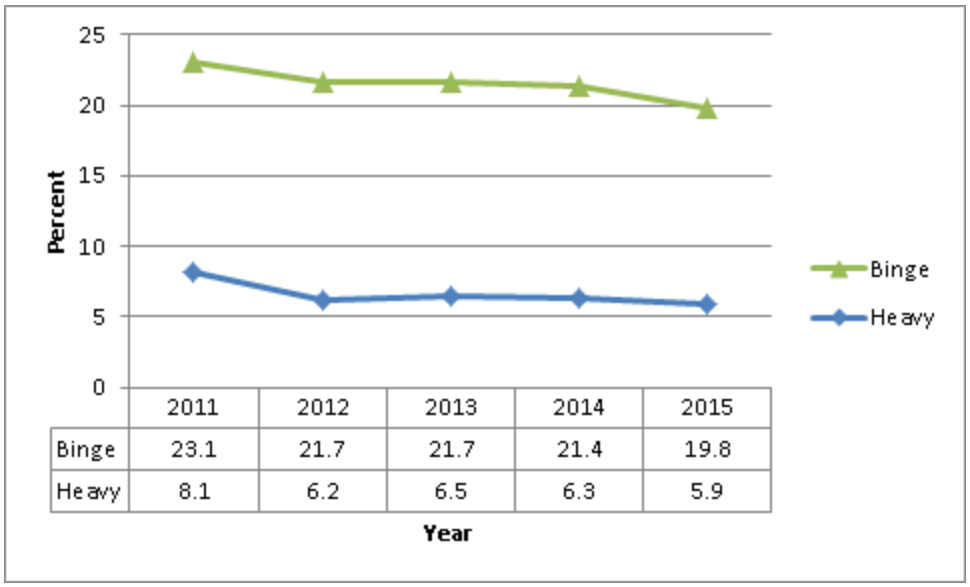
Table 16.1
Heavy Drinking Among Iowans, 2015

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	5.9	(5.1-6.7)
SEX		
Male	7.1	(5.7-8.5)
Female	4.8	(3.8-5.8)
RACE/ETHNICITY		
White/Non-Hisp.	6.2	(5.4-7.0)
Black/Non-Hisp.	0.0	(0-0)
Other/Non-Hisp.	6.1	(0.0-12.8)
Hispanic	0.3	(0.0-0.8)
AGE		
18-24	6.0	(3.3-8.7)
25-34	5.9	(3.4-8.4)
35-44	6.4	(4.0-8.8)
45-54	7.1	(5.1-9.1)
55-64	5.8	(4.2-7.4)
65-74	5.3	(3.8-6.9)
75+	3.8	(2.1-5.5)
EDUCATION		
Less than H.S.	4.3	(1.6-7.0)
H.S. or G.E.D.	5.7	(4.3-7.1)
Some Post-H.S.	6.6	(5.0-8.2)
College Graduate	5.7	(4.3-7.1)
HOUSEHOLD INCOME		
Less than $15,000	6.2	(2.7-9.7)
$15,000- 24,999	4.7	(2.5-6.9)
$25,000- 34,999	6.3	(3.2-9.4)
$35,000- 49,999	5.1	(3.1-7.1)
$50,000- 74,999	7.4	(5.0-9.8)
$75,000+	7.6	(6.0-9.2)

Table 16.2
Binge Drinking Among Iowans, 2015

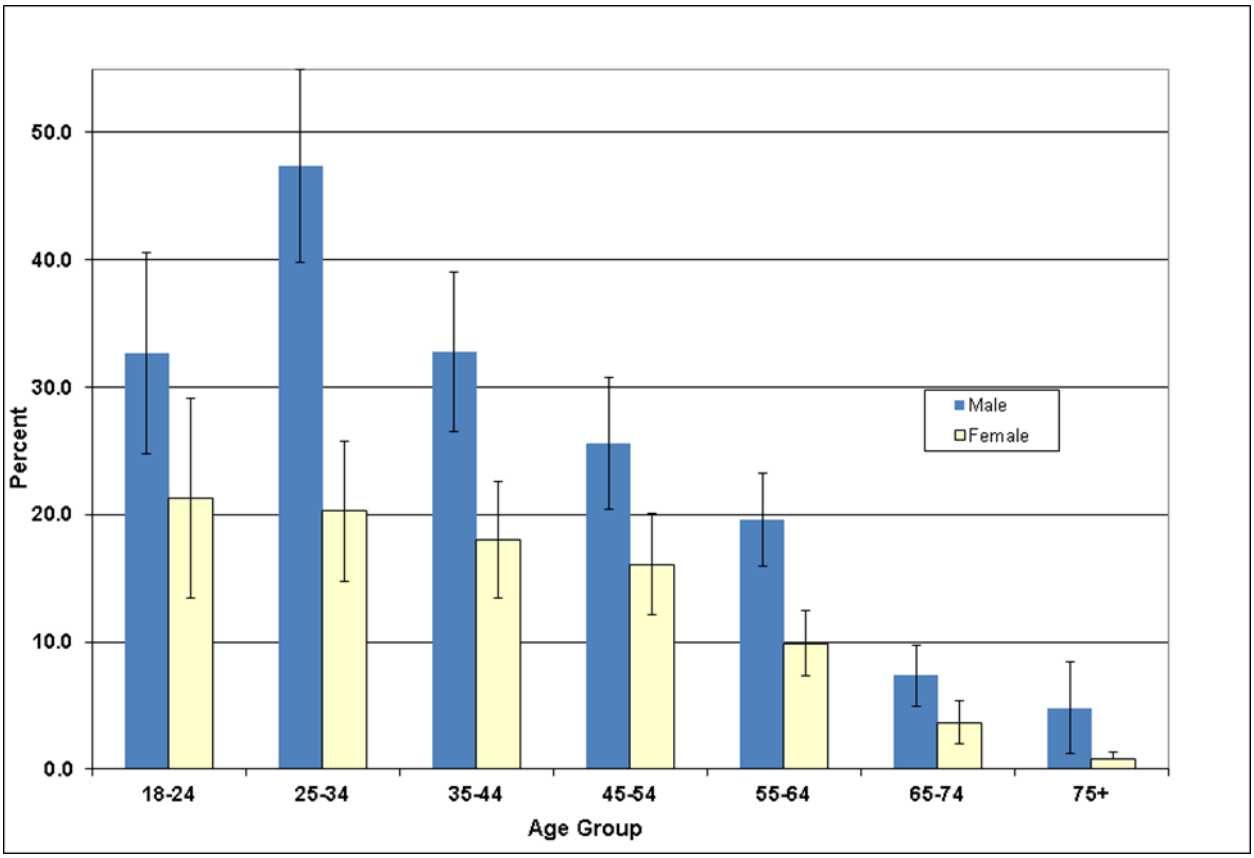
DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	19.8	(18.4-21.2)
SEX		
Male	26.6	(24.2-29.0)
Female	13.3	(11.5-15.1)
RACE/ETHNICITY		
White/Non-Hisp.	20.3	(18.7-21.9)
Black/Non-Hisp.	14.6	(4.8-24.4)
Other/Non-Hisp.	16.1	(6.3-25.8)
Hispanic	14.3	(6.6-22.0)
AGE		
18-24	27.1	(21.4-32.8)
25-34	34.2	(29.1-39.3)
35-44	25.6	(21.5-29.7)
45-54	20.8	(17.7-23.9)
55-64	14.7	(12.5-16.9)
65-74	5.5	(4.0-7.1)
75+	2.4	(0.9-3.9)
EDUCATION		
Less than H.S.	12.3	(7.2-17.4)
H.S. or G.E.D.	16.5	(14.1-18.9)
Some Post-H.S.	22.6	(19.9-25.3)
College Graduate	22.9	(20.2-25.6)
HOUSEHOLD INCOME		
Less than $15,000	17.0	(10.9-23.1)
$15,000- 24,999	12.7	(9.2-16.2)
$25,000- 34,999	18.6	(13.5-23.7)
$35,000- 49,999	18.2	(14.5-21.9)
$50,000- 74,999	24.4	(20.5-28.3)
$75,000+	27.5	(24.6-30.4)

Figure 16.1: Binge and Heavy Drinkers by Year, 2011-2015



	2011	2012	2013	2014	2015
Binge	23.1	21.7	21.7	21.4	19.8
Heavy	8.1	6.2	6.5	6.3	5.9

Figure 16.2: Binge Drinking in Iowa by Age and Sex, 2015



Comparison with Other States

The prevalence of people reporting heavy drinking in the 50 states and the District of Columbia ranged from 3.5 percent to 9.1 percent. Iowa's figure of 5.9 percent is exactly at the median.

For binge drinking, the range is from a low of 10.3 percent to a high of 27.2 percent with a median of 16.3 percent. Iowa's figure of 19.8 percent is well above the median. There are only five states with a higher prevalence of reported binge drinking than Iowa.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* goal for the nation for binge drinking is 24.3 percent. Iowa meets this goal with 19.8 percent. The *Healthy Iowans* goal for binge drinking is 16 percent. Iowa's prevalence was above this goal.

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17. Disability and Arthritis

Disability

Background

The World Health Organization's *International Classification of Impairments, Disability and Handicaps (ICIDH)* (World Health Organization, 1980) 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.'

Chronic physical, mental, and emotional conditions can limit the ability of adults to carry out important activities such as working and everyday household chores. With advancing age, an increasing percentage of adults experience limitation of activity (Centers for Disease Control and Prevention, 2016).

The latest available Census estimates for 2011 found nearly 57 million people in the United States (nearly 20%) had a disability that prevented or limited their ability in some way (U. S. Bureau of the Census, 2013).

Disability may not only be considered a health condition; it also may 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 (World Health Organization, 2015). Having a disability does not necessarily need to be a barrier to good general health in unrelated areas.

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

Disability Results

In 2015, 18.4 percent of Iowans responded 'yes' to being limited in any way in activities due to an impairment or a health problem. When asked whether they had a health problem requiring the use of special equipment, 7.2 percent of adult Iowans said they needed items such 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 2015, 20.6 percent of respondents were considered to have a disability. This compares to 21.5 percent in 2014 (see figure 17.1).

As shown in table 17.1, older people, people with less education, and people with lower household incomes reported higher percentages of disability. Hispanics showed a lower level of disability. Of the five demographic variables analyzed, Hispanics reported the lowest percentage of disability (8.3%). Those with household incomes less than $15,000 reported the highest percentage of disability (43.5%). Many disabled people are unable to work due to their disability. The second highest reporting group was

Figure 17.1: People with Disability in Iowa, 2011-2015

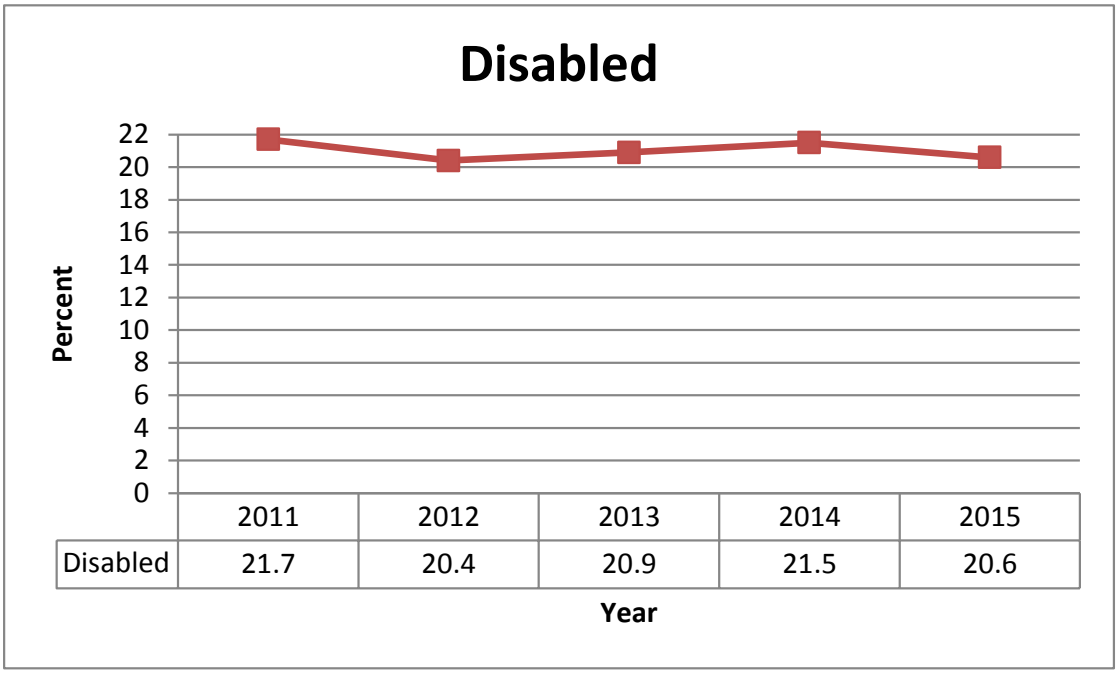


Figure 17.2: Percent of Iowans with a Disability by Age, 2015

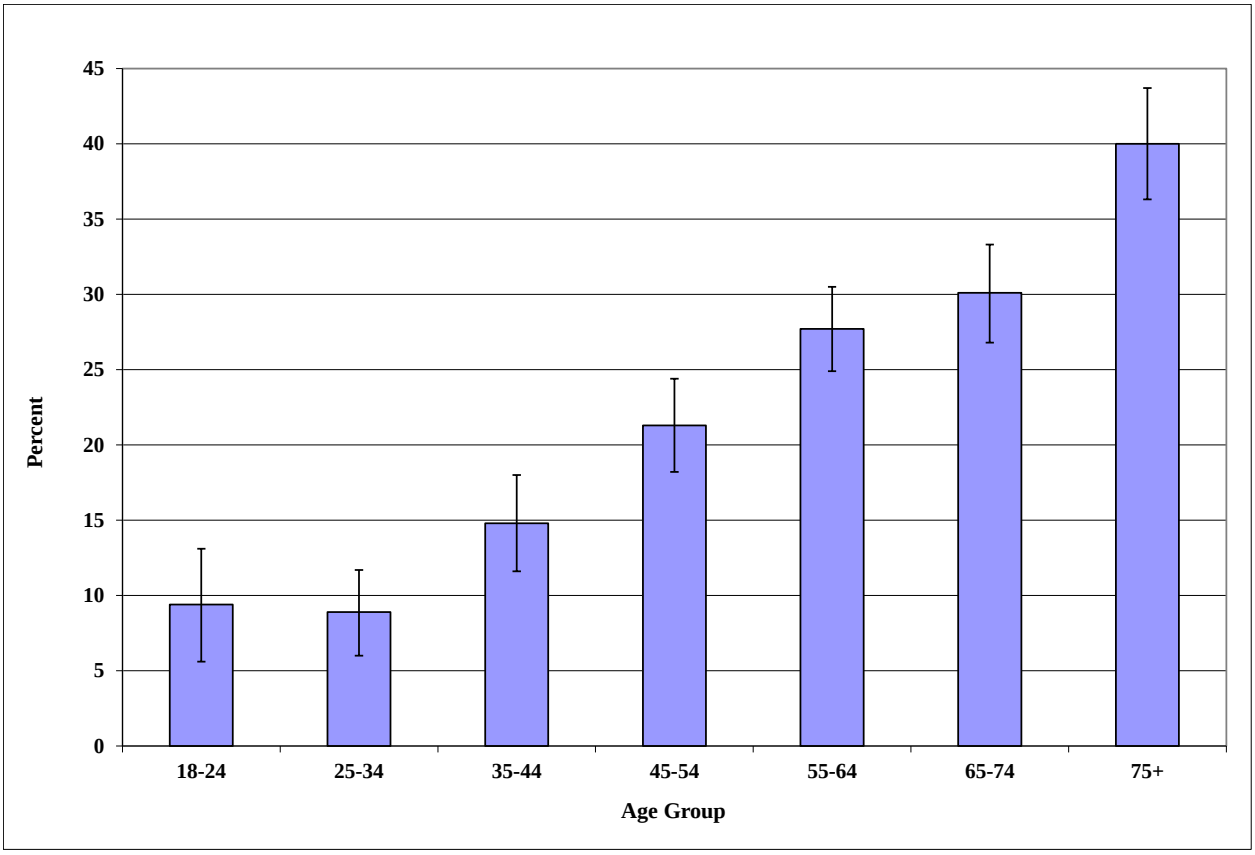


Table 17.1
Percent Reporting Being Disabled, 2015

Demographic Groups	Disabled	
	%	C.I. (95%)
TOTAL	20.6	(19.3-21.8)
SEX		
Male	19.9	(18.1-21.8)
Female	21.2	(19.4-22.9)
RACE/ETHNICITY		
White/Non-Hisp.	21.1	(19.8-22.4)
Black/Non-Hisp	16.2	(7.3-25.1)
Other/Non-Hisp.	24.2	(15.0-33.4)
Hispanic	8.3	(3.5-13.0)
AGE		
18-24	9.4	(5.6-13.1)
25-34	8.9	(6.0-11.7)
35-44	14.8	(11.6-18.0)
45-54	21.3	(18.2-24.4)
55-64	27.7	(24.9-30.5)
65-74	30.1	(26.8-33.3)
75+	40.0	(36.3-43.7)
EDUCATION		
Less than H.S.	32.7	(26.4-38.9)
H.S. or G.E.D.	21.9	(19.7-24.0)
Some Post-H.S.	20.1	(18.0-22.3)
College Grad.	14.8	(12.9-16.6)
HOUSEHOLD INCOME		
<$15,000	43.5	(36.5-50.5)
$15,000- 24,999	30.6	(26.4-34.9)
$25,000- 34,999	24.6	(20.1-29.0)
$35,000- 49,999	20.6	(17.1-24.0)
$50,000- 74,999	15.6	(12.9-18.4)
$75,000+	12.1	(10.3-13.9)

those age 75 years and over (40%). This group is the most rapidly growing group in the population. This prevalence is much higher than in those aged 65 to 74 years (see figure 17.2).

Several more specific disability questions have been added to the survey. In 2015, 2.6 percent of Iowans said they were blind. When asked if they had serious difficulty concentrating, remembering, or making decisions, 8.3 percent said that they did. When asked if they had serious difficulty walking or climbing stairs, 11.4 percent said they did. When asked if they had difficulty dressing or bathing, 2.7 percent said 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, 5.3 percent said that they did.

The addition of these five functional disability questions means that disability could be calculated using their responses rather than to the two questions used in past years. Using this method, the disability rate for 2015 is 18.8 percent. With the addition of a sixth question on deafness in next year's survey, the disability rate calculated through this method should be reasonably comparable overall to the classic method of determination.

Arthritis

Background

Arthritis is the leading cause of disability in the United States. Arthritis is the name given to a group of more than 100 different rheumatic diseases and conditions that result in pain and reduction of functionality in and around the joints. The most common are osteoarthritis, rheumatoid arthritis, lupus, fibromyalgia, and gout (Centers for Disease Control and Prevention, 2015). Arthritis may be caused by a wearing down of cartilage, a change in bone composition, or inflammation in the joints.

Arthritis limits everyday activities and adversely affects the physical and mental health of those who are affected by it. Arthritis may affect people of all ages, but it is particularly common in the elderly. Due to the aging of the population, it is predicted the number of Americans with doctor-diagnosed arthritis will reach 67 million by 2030 (Centers for Disease Control and Prevention, 2015).

Research has shown people with arthritis are less likely to be physically active than people without arthritis. Furthermore, arthritis is much more common among people who have other chronic conditions.

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

Arthritis Results

In 2015, a doctor had told 25.9 percent of Iowans they had some form of arthritis. This is exactly the same as 2014. Since the percent reporting arthritis is higher than the percent reporting disability, not all people diagnosed with arthritis find it to be a limitation.

More women than men reported having arthritis. The prevalence decreased with greater education and income. Fewer Hispanics or people of other race/non-Hispanics reported having arthritis than White non-Hispanics. Age had the strongest association. The demographic group reporting the highest prevalence of arthritis was people age 75 years and older (56.7%). The group with the lowest prevalence was people aged 18 to 24 years (1.4%) (see table 17.2 and figure 17.3).

Of people who had been told they had arthritis, 40.8 percent said they were limited in some way in their activities by arthritis or joint symptoms. When asked if arthritis or joint symptoms now affect whether they work, the type of work they do, or the amount of work they do, 28.1 percent said it did. When asked during the past 30 days to what extent their arthritis or joint symptoms interfered with their normal social activities, such as going shopping, to the movies, or to religious or social gatherings, 14.9 percent said ‘a lot’. When asked to rate their joint pain on a 10-point scale with zero being none and 10 being very severe, there was a wide range of ratings. The median was 4, with over half the respondents reporting values between 2 and 5. The highest value of 10 was reported by 3.6 percent of those with arthritis.

T

able 17.2

Percent Having Been Told by a Doctor They Had Some Form of Arthritis, 2015

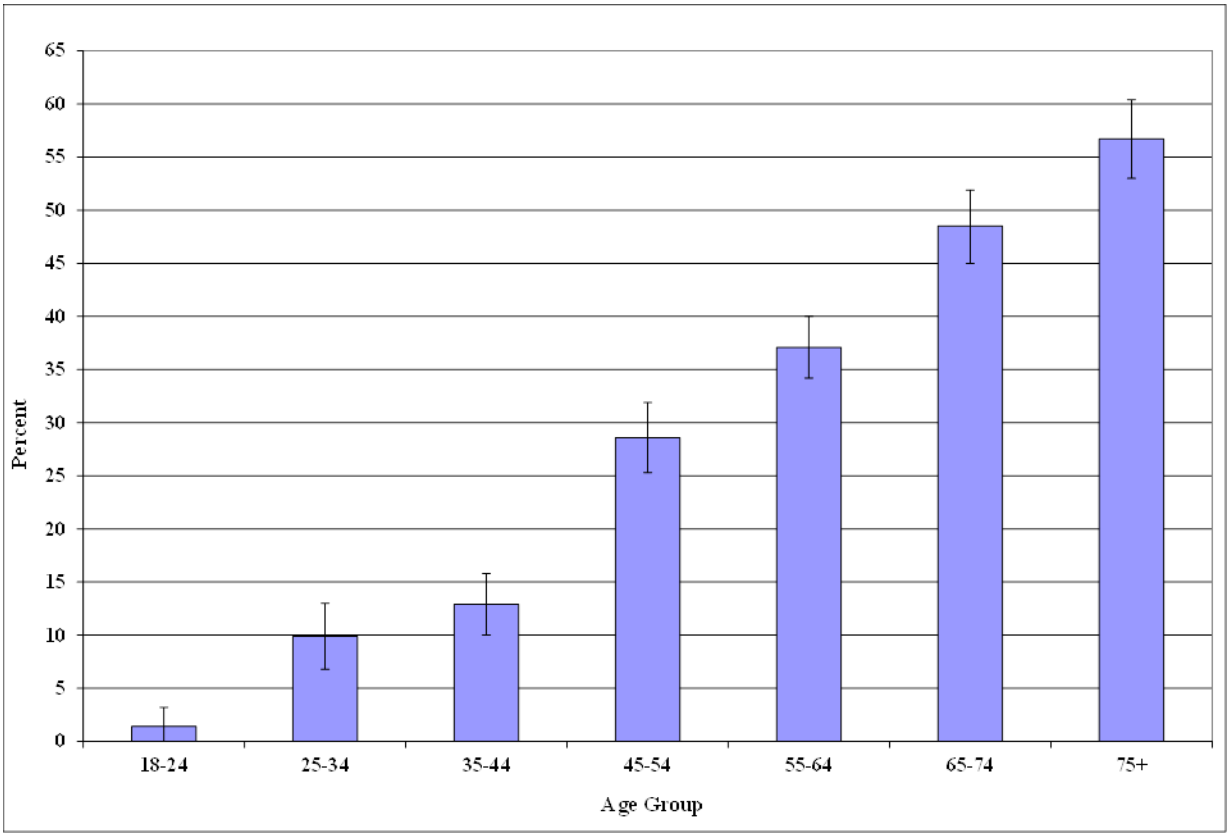
DEMOGRAPHIC GROUPS	Told by doctor you have Arthritis	
	%	C.I. (95%)
TOTAL	25.9	(24.5-27.3)
SEX		
Male	22.3	(20.5-24.1)
Female	29.3	(27.5-31.1)
RACE/ETHNICITY		
White/Non-Hispanic	27.0	(25.6-28.4)
Black/non-Hispanic	18.6	(9.0-28.2)
Other/ non-Hispanic	11.3	(4.6-18.0)
Hispanic	12.8	(6.7-18.9)
AGE		
18-24	1.4	(0.0-3.2)
25-34	9.9	(6.8-13.0)
35-44	12.9	(10.0-15.8)
45-54	28.6	(25.3-31.9)
55-64	37.1	(34.2-40.0)
65-74	48.5	(45.0-51.9)
75+	56.7	(53.0-60.4)
EDUCATION		
Less Than H.S.	33.2	(27.1-39.3)
H.S. or G.E.D.	29.4	(27.0-31.8)
Some Post-H.S.	25.6	(23.2-28.0)
College Graduate	18.5	(16.5-20.5)
HOUSEHOLD INCOME		
<$15,000	35.4	(29.1-41.7)
$15,000- 24,999	36.2	(31.7-40.7)
$25,000- 34,999	29.3	(24.8-33.8)
$35,000- 49,999	26.0	(22.5-29.5)
$50,000- 74,999	23.2	(20.1-26.3)
$75,000+	19.8	(17.4-22.2)

Comparison with Other States

The percent of people in the 50 states and District of Columbia reporting being disabled ranged from 17.6 percent to 31.1 percent, with a median of 22.4 percent. Iowa's rate of disability at 20.5 percent was much better than the nation as a whole, despite our large elderly population.

For diagnosed arthritis, the range was 18.5 percent to 38 percent. The median of all states was 25.3 percent. Iowa was slightly worse than the median at 25.9 percent.

Figure 17.3: Percent of Iowans with Arthritis by Age, 2015



Health Objectives for Iowa and the Nation

The Healthy People 2020 goal for people with arthritis who are limited in their activities is 35.5 percent. For Healthy Iowans, it is 38 percent. In Iowa, the percent of those with doctor-diagnosed arthritis who report being limited is 40.8 percent. This is higher than both Iowa and national goals.

Healthy People 2020 also had the goal of 29.8 percent of people whose work was limited due to arthritis. Only 28.1 percent of Iowans reported work limitation, which is better than the goal. Another national goal was for arthritis sufferers to rate their mean joint pain as 5 on a 10-point scale. The mean rating for Iowans was 4.3 which was better than the goal.

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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 (Centers for Disease Control and Prevention, 2016).

Influenza can vary greatly from year to year in the severity of its impact. For instance, the usual seasonal influenza is a problem primarily 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 and older who contract influenza are much more likely to have serious complications, which can affect their health and independence.

Influenza can be prevented with the influenza vaccine. This vaccine is produced each year to match the influenza viruses 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 received by 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. The recommendation for annual vaccination against seasonal influenza includes almost everyone in the United States population from 6 months and older (Grohskopf et al, 2015).

Influenza is a very serious illness for anyone at high risk. 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 headache (Centers for Disease Control and Prevention, 2016).

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 diseases. Each year, more than one million people in the U.S. are hospitalized with pneumonia and more than 50,000 people die from the disease (Centers for Disease Control and Prevention, 2015). 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. (Haron, 2014) and 575 in Iowa in 2014 (Iowa Department of Public Health, 2015).

The Advisory Committee on Immunization Practices (ACIP) recommends that persons aged 65 years or older receive at least one lifetime dose of pneumococcal vaccine (Tomczyk et al., 2014). A second vaccine also is now 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

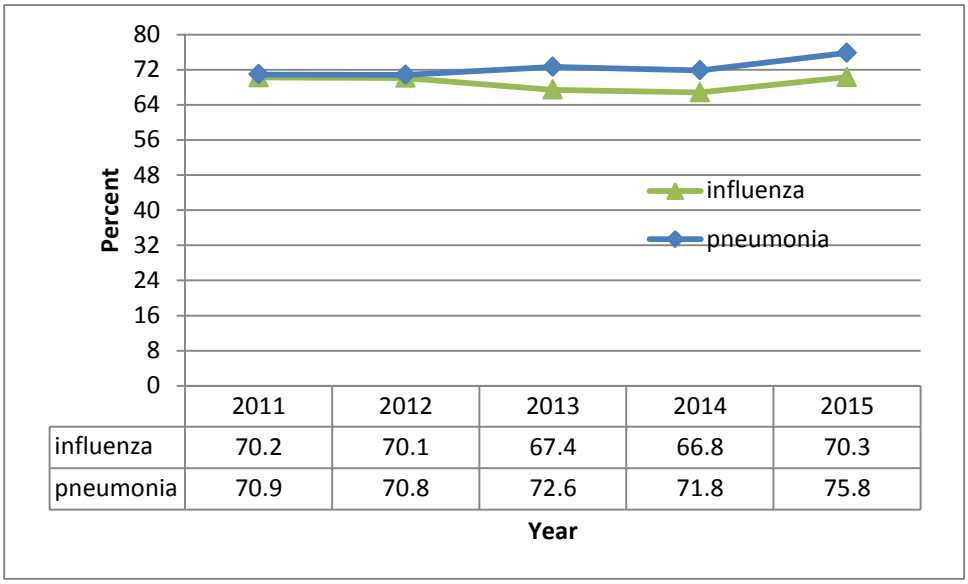
In 2015, 70.3 percent of Iowans age 65 and over reported having a flu shot in the past 12 months. This is higher than the 66.8 percent reported in 2014 and is the highest level reported in the past five years (see figure 18.1).

Among all adults, 49.7 percent had a flu immunization in the past 12 months. This was either in the form of a flu shot or a FluMist™ nasal spray. Females, older people, people with more education, and people with higher household incomes were more likely to have a flu immunization. The lowest percentage was found among people between age 18 and 24 years (35.6%), while the highest was for those age 75 and older (74.7%) (see table 18.1).

In 2015, 75.8 percent of Iowans age 65 and over reported ever having a pneumonia vaccination. This is also higher than the figure found in 2014 (71.8%) and is also the highest level seen in the past five years (see figure 18.1).

Among all adults, 36.6 percent had ever received a pneumonia vaccination. Older people, 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 (14.9%), while those 75 years and older were highest by far (83.2%). The relationship with age was not perfectly linear, since the youngest people were somewhat more likely to have had a pneumonia shot than those a few years older (see Table 18.1). Pneumonia vaccination did not really increase with

Figure 18.1: Flu and Pneumonia Immunizations by Year, 2011-2015
Age >= 65



	2011	2012	2013	2014	2015
influenza	70.2	70.1	67.4	66.8	70.3
pneumonia	70.9	70.8	72.6	71.8	75.8

Table 18.1: Percentage of influenza and Pneumonia Immunizations in Adult Iowans, 2015

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	49.7	(47.9-51.5)	36.6	(34.8-38.4)
SEX				
Male	43.7	(41.2-46.2)	37.2	(34.7-39.7)
Female	55.4	(53.0-57.8)	36.1	(33.9-38.3)
RACE/ETHNICITY				
White/Non-Hispanic	50.2	(48.4-52.0)	37.4	(35.6-39.2)
Non-White or Hispanic	45.6	(38.5-52.8)	28.4	(21.6-35.2)
AGE GROUP				
18-24	35.6	(29.1-42.1)	33.4	(25.8-41.0)
25-34	40.4	(35.1-45.7)	23.7	(18.4-29.0)
35-44	41.1	(36.4-45.8)	14.9	(11.2-18.6)
45-54	44.5	(40.6-48.4)	19.3	(16.0-22.6)
55-64	56.5	(53.4-59.6)	31.8	(28.7-34.9)
65-74	66.7	(63.3-70.0)	69.5	(66.3-72.8)
75+	74.7	(71.3-78.1)	83.2	(80.0-86.4)
EDUCATION				
Less than H.S.	44.4	(36.8-52.0)	39.5	(31.9-47.1)
H.S. or G.E.D.	46.9	(44.0-49.8)	39.7	(36.8-42.6)
Some Post-H.S.	49.6	(46.5-52.7)	36.8	(33.7-39.9)
College Graduate	55.4	(52.5-58.3)	31.3	(28.6-34.0)
HOUSEHOLD INCOME				
Less than $15,000	42.1	(35.0-49.2)	46.9	(39.3-54.5)
$15,000- 24,999	47.3	(42.0-52.6)	50.3	(44.8-55.8)
$25,000- 34,999	46.8	(41.1-52.5)	38.6	(32.9-44.3)
$35,000- 49,999	45.4	(40.7-50.1)	37.3	(32.6-42.0)
$50,000- 74,999	51.2	(46.9-55.5)	28.5	(24.6-32.4)
$75,000+	54.9	(51.6-58.2)	28.0	(25.1-30.9)

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 any of these conditions. Of all respondents ever told they had diabetes, asthma, COPD, or kidney disease; 58.5 percent had a flu vaccination and 55.6 percent had a pneumonia vaccination. This compares with 47.5 percent and 31.5 percent, respectively, for those who did not have any of these conditions.

The median percentage of the population age 65 years and older who ever had a pneumonia vaccination was 72.7 percent. The range was from 63.4 percent to 78.7 percent. Iowa's value of 75.8 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 percent. Although much higher than the nation as a whole, Iowa's 2015 figures of 70.3 percent for having a flu shot and 75.8 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 margin, having an immunization prevalence of only 44.2 percent. The *Healthy People 2020* goal for ever having a pneumonia vaccination for high-risk people age 18 to 64 is 60 percent. Iowa also is greatly lower than this goal with only 42.8 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 (Centers for Disease Control and Prevention, 2016a).

The HIV epidemic has now been with us for more than 30 years (Centers for Disease Control and Prevention, 2011a). At the end of 2014, 36.9 million persons were living with HIV infection worldwide. About 1.2 million people in the United States were living with HIV at the end of 2012 (Centers for Disease Control and Prevention, 2016b). Of those people, about one in eight does not know they are infected. Not knowing puts these individuals and others at risk.

In 2014, an estimated 44,073 people were diagnosed with HIV infection in the United States. The number of new HIV diagnoses fell 19 percent from 2005 to 2014. Because HIV testing has remained stable or increased in recent years, this decrease in diagnoses suggests a true decline in new infections. The decrease may be due to targeted HIV prevention efforts; however, progress has been uneven and diagnoses have increased among a few groups (Centers for Disease Control and Prevention, 2016b).

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 size of their populations in Iowa; however, it is important to keep in mind that non-Hispanic whites account for 60 percent of new HIV diagnoses and 65 percent of persons living with HIV/AIDS (Iowa Department of Public Health, 2016).

HIV/AIDS prevalence continues to increase in Iowa. There were 2,496 persons diagnosed with HIV/AIDS who were living in Iowa on December 31, 2015, up from 2,369 a year earlier (Iowa Department of Public Health, 2016). The number of new diagnoses was up in 2015, breaking a generally downward trend.

The lifetime costs of health care associated with HIV have grown considerably. Currently, the lifetime treatment cost of HIV infections in Iowa is estimated at $46 million (Centers for Disease Control and Prevention, 2015).

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 (Centers for Disease Control and Prevention, 2011b). Treatment for HIV is better than ever before.

In 2015, 27.3 percent of all adult Iowans reported ever being tested for HIV, excluding testing related to a blood donation. This is up from 2014 when 24.7 percent said they had been tested, and is the highest level seen in the past five years (see figure 19.1).

Females, non-White or Hispanic race/ethnicity, younger people except those under 25 years, and those with a lower level of education except less than high school were more likely to be tested. The largest proportion of respondents tested was among those age 35 to 44 years (48.2%), although those age 25 to 34 years and non-White or Hispanics also had over 40 percent being tested. The smallest proportion reporting ever being tested was the age 75 years and older group (4.4%) (see table 19.1).

Table 19.1: Percentage of Iowans Tested for HIV/AIDS, 2015

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	27.3	(25.5-29.1)
SEX		
Male	25.5	(23.1-27.9)
Female	29.0	(26.6-31.4)
RACE/ETHNICITY		
Non-Hispanic White	25.8	(24.0-27.6)
Non-White or Hisp.	41.3	(34.1-48.4)
AGE		
18-24	21.7	(16.0-27.4)
25-34	48.2	(42.7-53.7)
35-44	46.0	(41.1-50.9)
45-54	29.5	(26.0-33.0)
55-64	18.6	(16.1-21.1)
65-74	10.0	(7.8-12.3)
75+	4.4	(3.0-5.9)
EDUCATION		
Less than H.S.	28.7	(21.4-36.0)
H.S. or G.E.D.	21.7	(19.0-24.4)
Some Post-H.S.	28.9	(26.0-31.8)
College Graduate	31.8	(28.9-34.7)
HOUSEHOLD INCOME		
<$15,000	35.1	(27.7-42.5)
$15,000- 24,999	30.2	(24.9-35.5)
$25,000- 34,999	33.7	(27.8-39.6)
$35,000- 49,999	25.9	(21.4-30.4)
$50,000- 74,999	25.4	(21.3-29.5)
$75,000+	28.9	(25.8-32.0)

Figure 19.1: Iowans Having HIV Test by Year—2011-2015

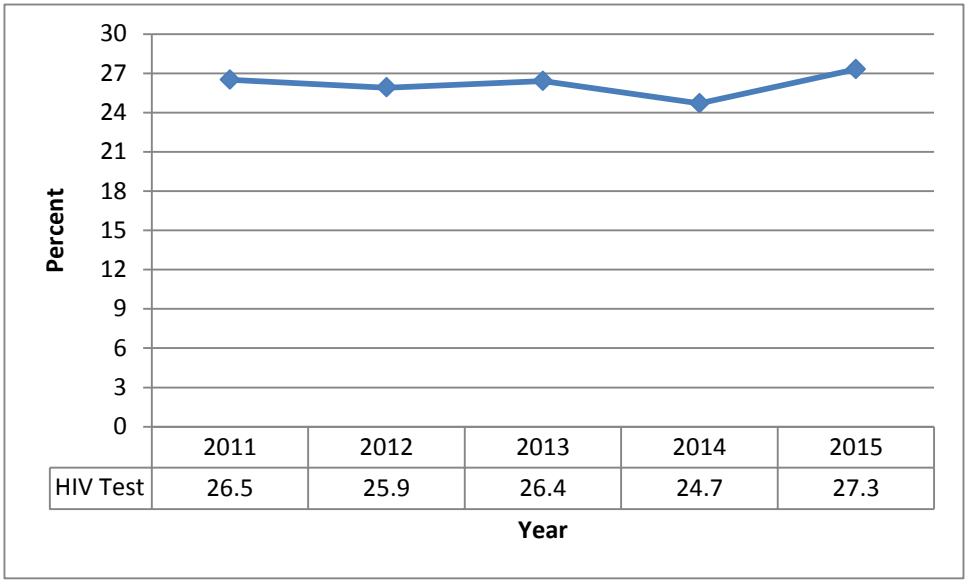
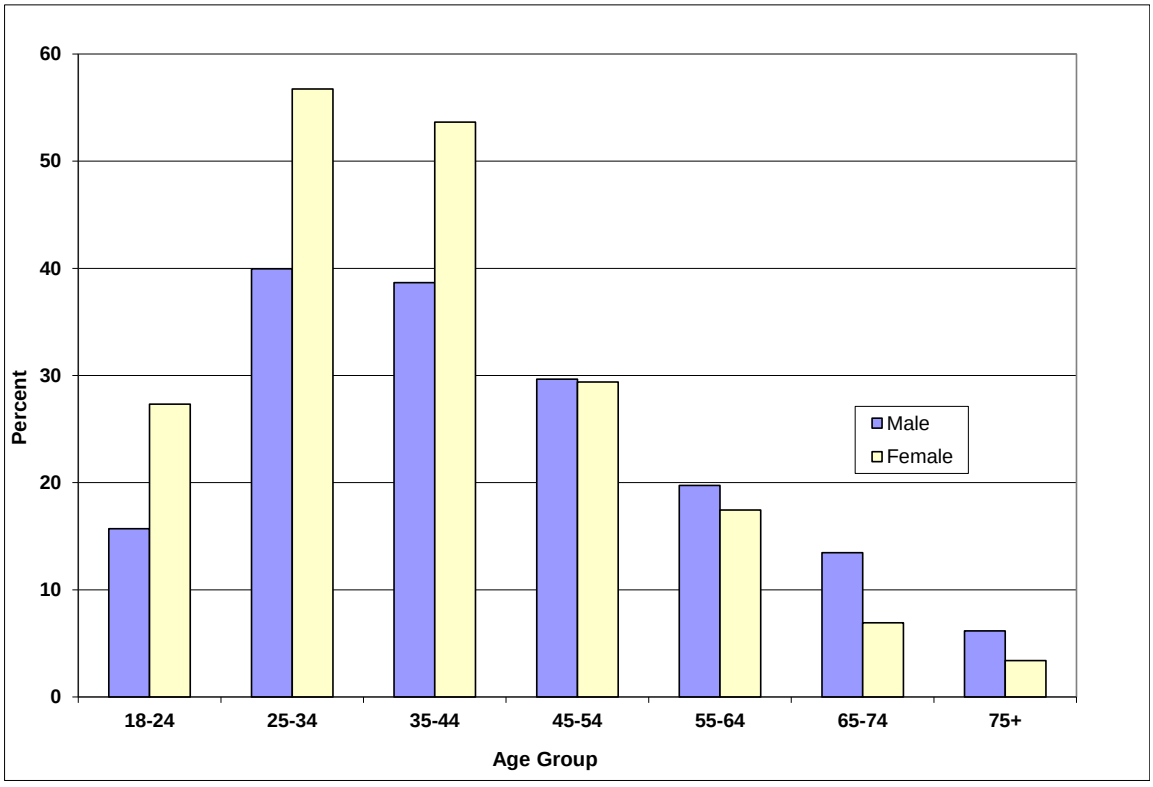


Figure 19.2: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2015



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 (51.5%) said private doctor or HMO.

Comparison with Other States

In all states and the District of Columbia, the percentage of people who had a test for HIV ranged from 24 percent to 70.2 percent. The median percentage of people tested was 36.3 percent. There were only four states with a lower percentage than Iowa's figure of 27.3 percent. The prevalence of HIV testing increased in both the nation as a whole and Iowa.

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 10.6 percent for respondents age 18 to 44 tested within this time period. This is much below the goal.

References

1. Centers for Disease Control and Prevention. HIV Basics. Divisions of HIV/AIDS Prevention. 2016. Available at www.cdc.gov/hiv/basics/whatishiv.html.
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20. Mental Illness

Background

Mental health and mental illness are two different things. Mental Health is a general term referring not only to the absence of mental disorder, but also the ability of a person to successfully handle the daily challenges and social interactions of life (Centers for Disease Control and Prevention, 2013). Mental illness refers to disorders of mood, thought, or behavior.

Health is not merely physical health, but also mental health, neither are these two independent of each other. Poor physical health can lead to poor mental health, and poor mental health can lead to poor physical health.

Depression is characterized by a state of low mood and an aversion to activity. Depression is the most common type of mental illness, affecting more than 26 percent of the U.S. adult population. It has been estimated that by the year 2020, depression will be the second leading cause of disability throughout the world, trailing only ischemic heart disease (Centers for Disease Control and Prevention, 2013).

Anxiety disorders are also common in the general population. Anxiety disorders are characterized by excessive worry about everyday events.

Dementias such as Alzheimer's have become an increasing problem due to the aging of the population. Dementias are characterized by increasing inability to remember and concentrate.

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. (Soni, 2009). But 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. Evidence has shown that mental disorders, especially depressive disorders, are strongly related to the occurrence, successful treatment, and course of many chronic diseases including diabetes, cancer, cardiovascular disease, asthma, and obesity and many risk behaviors for chronic disease such as physical inactivity, smoking, excessive drinking, and insufficient sleep (Centers for Disease Control and Prevention, 2013).

Mental Illness Results

Most of the data in this chapter will come from a module to evaluate mental illness and another on cognitive decline. For other information related to mental health, see Chapter 4 on general health status and health-related quality of life. The 2015 survey also included modules on adverse childhood experience and emotional neglect. The data from these modules are expected to be related to mental health. Data from these modules will be presented in another report.

When asked about various chronic conditions in 2015, 19 percent of adults reported that they had ever been told they had a depressive disorder. This is about the same as in 2014, when it was 18.7 percent. The prevalence of depression seems to have leveled off in the last three years after showing an increase in previous years (see figure 20.1).

The prevalence of depression was greater among women, people with the least education, and lower income individuals, and lower among the elderly. The highest prevalence was among those with annual household incomes less than $15,000 (31.1%). The lowest prevalence was among those age 75 years or more (10.2%) (see table 20.1).

The 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 certain ways related to both anxiety and depression. These are coded into numbers from zero to 4 and summed to obtain the K-6 score. The value of these scores, which can range from zero to 24, can then be divided to indicate levels of mental illness. A score of greater than 12 indicates serious mental illness (SMI) (Kessler et al., 2003).

According to the K-6, 3.2 percent of adult Iowans are experiencing serious mental illness. SMI was more frequent among those with lower income and younger people (see table 20.2). Those with less than $15,000 annual household income had the highest percent SMI (10.2%). Those with $75,000 or more annual household income had the lowest percent SMI (0.4%).

When asked if during the past 12 months they have experienced confusion or memory loss that is happening more often or is getting worse, 9.3 percent of Iowans over age 45 years said they had. This prevalence increased at the highest age, lower household income and lower education (see table 20.3). Income had the highest relation, with 24.2 percent of those having an annual household income of less than $15,000 and only 4.5 percent of those earning $75,000 or higher reporting cognitive problems.

Figure 20.1: Percent of Iowans Ever Told They Had Depression by Year, 2011 – 2015

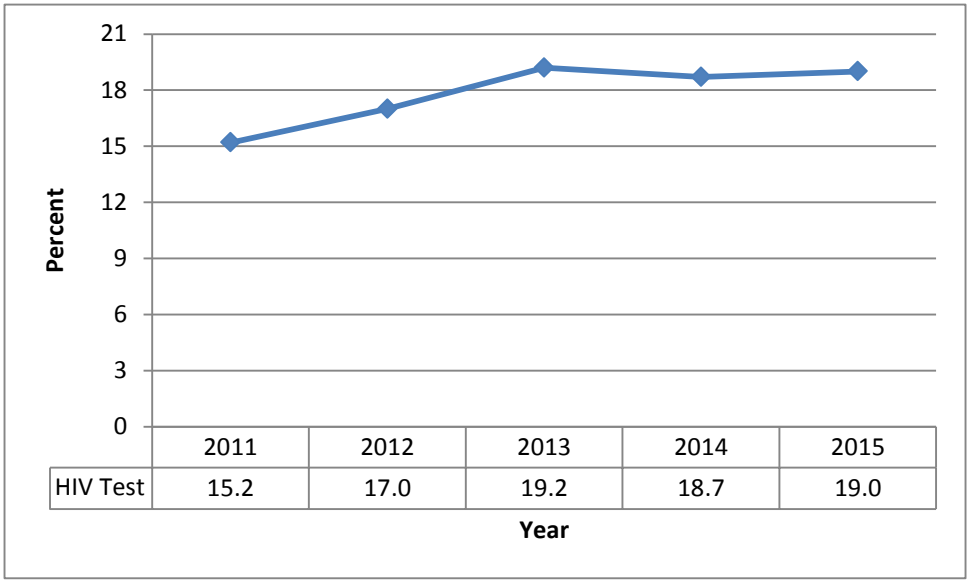

Table 20.1

Prevalence of Reported Depression in Iowa, 2015

DEMOGRAPHIC GROUPS	Depressive Disorder	
	%	C.I. (95%)
TOTAL	19.0	(17.6-20.4)
SEX		
Male	13.5	(11.7-15.3)
Female	24.4	(22.4-26.4)
RACE/ETHNICITY		
White/Non-Hispanic	19.2	(17.8-20.6)
Non-White or Hisp.	17.6	(12.8-22.4)
AGE GROUP		
18-24	20.4	(15.3-25.5)
25-34	21.6	(17.3-25.9)
35-44	22.6	(18.9-26.3)
45-54	22.4	(19.3-25.5)
55-64	16.8	(14.6-19.0)
65-74	15.3	(12.9-17.8)
75+	10.2	(8.1-12.2)
EDUCATION		
Less than H.S.	26.0	(19.9-32.1)
H.S. or G.E.D.	15.6	(13.6-17.6)
Some Post-H.S.	21.1	(18.6-23.6)
College Graduate	17.8	(15.6-20.0)
HOUSEHOLD INCOME		
Less than $15,000	31.1	(24.8-37.4)
$15,000- 24,999	28.4	(23.7-33.1)
$25,000- 34,999	18.2	(14.1-22.3)
$35,000- 49,999	17.8	(14.3-21.3)
$50,000- 74,999	19.1	(15.6-22.6)
$75,000+	13.3	(11.1-15.5)

Health Objectives for the Nation

Healthy People 2020 has a goal of 6.1 percent of people experiencing a major depression episode. The 2015 Iowa BRFSS shows 19 percent of adult Iowans reporting ever having a depressive episode. Although it is not certain if all the episodes would have been considered major depression, Iowa very likely exceeds the goal.

Table 20.2

Serious Mental Illness in Iowans as Measured by the K-6 Scale, 2015

DEMOGRAPHIC GROUPS	Serious Mental Illness – K-6	
	%	C.I. (95%)
TOTAL	3.2	(2.2-4.1)
SEX		
Male	2.4	(1.1-3.6)
Female	3.9	(2.4-5.3)
RACE/ETHNICITY		
White/Non-Hisp.	3.3	(2.2-4.3)
Non-White or Hisp.	1.2	(0.0-2.9)
AGE		
18-24	8.7	(3.4-14.1)
25-34	3.1	(0.6-5.6)
35-44	1.7	(0.0-3.4)
45-54	4.1	(1.9-6.3)
55-64	2.2	(0.7-3.7)
65-74	0.8	(0.0-1.5)
75+	1.6	(0.0-3.3)
EDUCATION		
Less than H.S.	2.9	(0.0-5.9)
H.S. or G.E.D.	3.6	(1.8-5.4)
Some Post-H.S.	3.9	(2.0-5.8)
College Graduate	1.6	(0.4-2.8)
HOUSEHOLD INCOME		
Less than $15,000	10.2	(4.2-16.2)
$15,000-24,999	7.9	(3.7-12.2)
$25,000-34,999	2.6	(0.0-5.7)
$35,000-49,999	3.7	(0.5-6.8)
$50,000-74,999	1.6	(0.1-3.1)
$75,000+	0.4	(0.0-0.8)

Table 20.3

Iowans Reporting Experiencing Cognitive Decline in the Past 12 Months, 2015

DEMOGRAPHIC GROUPS	Depressive Disorder	
	%	C.I. (95%)
TOTAL	9.3	(8.1-10.5)
SEX		
Male	9.1	(7.5-10.7)
Female	9.4	(8.0-10.8)
RACE/ETHNICITY		
White/Non-Hispanic	9.1	(7.9-10.3)
Non-White or Hisp.	11.3	(5.6-17.0)
AGE GROUP		
45-54	8.5	(6.3-10.7)
55-64	9.2	(7.4-11.0)
65-74	6.7	(4.7-8.7)
75+	13.9	(11.0-16.7)
EDUCATION		
Less than H.S.	15.4	(9.3-21.5)
H.S. or G.E.D.	10.0	(8.2-11.8)
Some Post-H.S.	8.6	(6.8-10.4)
College Graduate	6.8	(5.0-8.6)
HOUSEHOLD INCOME		
Less than $15,000	24.2	(17.3-31.1)
$15,000- 24,999	14.2	(10.5-17.9)
$25,000- 34,999	12.8	(8.5-17.1)
$35,000- 49,999	9.9	(7.0-12.8)
$50,000- 74,999	6.2	(4.0-8.4)
$75,000+	4.5	(3.1-5.9)

References

1. Centers for Disease Control and Prevention. Mental Health Basics. 2013. Available at www.cdc.gov/mentalhealth/basics.htm.

2. Kessler R. C., Barker P. R., Colpe L.J., Epstein J.F., Groerer J. C., Hiripi E., Howes M. J., Normand S-LT, Manderscheid R. W., Walters E. E., and Zaslavsky A. M. Screening for serious mental illness in the general population. *Archives of General Psychiatry,* 60(2). 2003. 184-189.

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Appendix A – Year 2020 Health Objectives for the Nation
State Summary of BRFSS Data for 2015 Iowa

Healthy People 2020 Objective[1]	HP2020 Target	State, 2015
Health Insurance (Objective #AHS-1.1) Ages ≥ 18	100%	93.7%
Specific Source of Ongoing Primary Care (Objective #AHS-5.3) Ages ≥ 18 & < 65	89.4%	71.9%
Specific Source of Ongoing Primary Care (Objective #AHS-5.4) Age ≥ 65	100%	85.6%
Increase the proportion of adults with diabetes who have an annual dilated eye examination (Objective #D-10)	58.7%	71.1%
Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year (Objective #D-11)	71.1%	78.9%
Increase the proportion of adults with diabetes who perform self-blood glucose monitoring at least once daily (Objective #D-13)	70.4%	63.9%
Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education (Objective #D-14)	62.5%	62.8%
Reduce the proportion of adults with hypertension (Objective #HDS-5.1)	26.9%	30.6%
Increase the proportion of adults with hypertension who are taking the prescribed medications to lower their blood pressure (Objective #HDS-11)	77.4%	78.5%
Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years (Objective #HDS-6)	82.1%	75.7%
Decrease the proportion of adults who have been told their blood cholesterol is high (Objective #HDS-7) (age >= 20)	13.5%	36.8%
Influenza Immunization, Within Past Year (Objective #IID-12.5) Ages 18 - 64	80%	44.2%
Influenza Immunization, Within Past Year (Objective #IID-12.7) Ages ≥ 65	90%	70.3%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #IID-13.1) Ages ≥ 65	90%	75.8%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #IID-13.2) Ages 18 – 64 at high risk	60%	42.8%
Increase the proportion of adults who are at a healthy weight (Objective #NWS-8) Age ≥ 20	33.9%	31.1%
Obese, BMI ≥ 30 (Objective NWS-9) Ages ≥20	30.6%	33%
No Leisure Time Physical Activity (Objective #PA-1) Ages > 18	32.6%	26.3%
Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for at least 150 minutes/week, or 75 minutes/week of vigorous intensity, or an equivalent combination (Objective #PA-2.1)	47.9%	48.8%

Healthy People 2020 Objective[1]	HP2020 Target	State, 2015
Increase the proportion of adults who engage in aerobic physical activity of at least moderate intensity for more than 300 minutes/week, or more than 150 minutes/week of vigorous intensity, or an equivalent combination. (Objective #PA-2.2)	31.3%	27.7%
Increase the proportion of adults who perform muscle-strengthening activities on 2 or more days of the week (Objective #PA-2.3) Ages > 18	24.1%	29.8%
Increase the proportion of adults who meet the objectives for aerobic physical activity and for muscle-strengthening activity (Objective #PA-2.4) Ages > 18	20.1%	19.4%
Binge Drinking, During the Past Month (Objective #SA-14.3) Ages > 18	24.3%	19.8%
Cigarette Smoking (Objective #TU-1.1) Ages > 18	12%	18.1%
Smokeless Tobacco Use (Objective #TU-1.2) Ages > 18	0.3%	4.5%
Increase smoking cessation attempts by adult smokers (Objective #TU-4.1) Ages > 18	80%	56.4%
Increase recent smoking cessation success by adult smokers 6 Mo. To 1 Yr. (Objective #TU-4.1) Ages > 18	8%	4.8%
Tested for HIV in the past 12 months. (Objective #HIV-14.1) Ages 15 - 44	16.9%	10.6%
Use of safety belts (Objective #IVP-15)	92.4%	86.8%
Mean joint pain from arthritis (Objective #AOCBC-1) Age > 18	5.0	4.3
Proportion of adults with doctor-diagnosed arthritis who experience a limitation in activity due to arthritis or joint symptoms. (Objective #AOCBC-2)	35.5%	40.8%
Reduction in the proportion of adults with doctor-diagnosed arthritis who are limited in their ability to work for pay due to arthritis. (Objective #AOCBC-6.2) Age 18-64	29.8%	28.1%
Colorectal cancer screening according to latest guidelines (Objective #C-16) Ages $\geq$ 50 < 75	70.5%	70%
Reduce the proportion of persons who experience major depressive episodes (Objective MHMD-4.2) Age >= 18	6.1%	19.0%

References

1. 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.

[1]Behavioral Risk Factor Surveillance System
[2]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 B: Health Objectives for Iowa
State Summary of BRFSS Data for 2015

Healthy Iowans Objective[1]	HI2016 Target	Iowa, 2015
An increase in the proportion of people with health insurance Ages 18 – 64	100%	92.2%
An increase in the proportion of people who have one person as a health provider	87%	74.8%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	70.3%
Pneumonia Vaccination, Ever Had Ages >= 65	90%	75.8%
A reduction in adult binge drinking	16%	19.8%
A reduction in adult tobacco use (Cigarette Smoking)	15%	18.1%
A decrease in the number of persons with doctor-diagnosed arthritis who experience limitations in activity due to arthritis and other joint symptoms	38%	40.8%
People with diabetes receiving annual dilated eye exams	85%	71.1%
An increase in the proportion of persons with high blood pressure who are taking their medication	75%	78.5%
An increase in the percentage of persons who eat five or more servings of fruits and vegetables each day	20%	13.5%
An increase in the proportion of adults who get the recommended levels of physical activity	53%	48.8%
A reduction in the proportion of adults who are obese	27%	32.1%
An increase in seatbelt usage to reduce injuries and deaths from motor vehicle crashes	96%	86.8%

References

1. Iowa Department of Public Health. Healthy Iowans: Iowa's Health Improvement Plan 2012-2016. 2012. Available at http://idph.iowa.gov/Portals/1/Files/HealthyIowans/plan_2012_2016.pdf.

[1]Behavioral Risk Factor Surveillance System
[2]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 C: Iowa 2015 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
2 No

3.2: Do you have one person you think of as your personal doctor or health care provider?
If "No," ask: "Is there more than one, or is there no person who you think of as your personal doctor or health care provider?"
1 Yes, only one
2 More than one
3 No

3.3: Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?
1 Yes
2 No

3.4: About how long has it been since you last visited a doctor for a routine checkup? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition.
1 Within past year (any time less than 12 months ago)
2 Within past 2 years (one year but less than 2 years ago)
3 Within past 5 years (two years but less than 5 years ago)
4 5 or more years ago
8 Never

Section 4: Hypertension Awareness
4.1: Have you ever been told by a doctor, nurse or other health professional that you have high blood pressure?
Read only if necessary:
By "other health professional" we mean a nurse practitioner, a physician's assistant, or some other licensed health professional.
If "Yes" and respondent is female, ask: "Was this only when you were pregnant?"
1 Yes
2 Yes, but female told only during pregnancy
⇨ Go to next section
3 No ⇨ Go to next section
4 Told borderline high or pre-hypertensive ⇨ Go to next section

4.2: Are you currently taking medicine for your high blood pressure?
1 Yes
2 No

Section 5: Cholesterol Awareness
5.1: Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked?
1 Yes
2 No ⇨ Go to next section

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

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

Section 6: Chronic Health Conditions
Now I would like to ask you some questions about general health conditions.
Has a doctor, nurse, or other health professional EVER told you that you had any of the following? For each, tell me "Yes," "No," or you're "Not sure."
6.1: (Ever told) you had a heart attack, also called a myocardial infarction?
1 Yes
2 No

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

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

6.4: (Ever told) you had asthma?
1 Yes
2 No ⇨ Go to Q6.6

6.5: Do you still have asthma?
1 Yes
2 No

6.6: (Ever told) you had skin cancer?
1 Yes
2 No

6.7: (Ever told) you had any other types of cancer?
1 Yes
2 No

6.8: (Ever told) you have 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, go to next question. If any other response to Q6.12, go to Section 7.
6.13: How old were you when you were told you have diabetes?
__ __Code age in years [97 = 97 and older]

Module 2: Diabetes
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
Interviewer Note: If the respondent uses a continuous glucose monitoring system (a sensor inserted under the skin to check glucose levels continuously), fill in '98 times per day.'

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: **Demographics**
7.1: Indicate sex of respondent. Ask only if necessary.
1 Male
2 Female
7.2: What is your age?

_ _ Code age in years

7.3: Are you Hispanic Latino/a, or Spanish origin?
1 No, not of Hispanic, Latino/a, or Spanish origin
If yes, ask: Are you…
Interviewer Note: One or more categories may be selected.
2 Mexican, Mexican American, Chicano/a
3 Puerto Rican
4 Cuban
5 Another Hispanic, Latino/a, or Spanish origin
8 No additional choices

7.4: Which one or more of the following would you say is your race?
Mark 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 Q7.4, continue. Otherwise, go to Q7.6.
7.5: Which one of these groups would you say best represents your race?
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]

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

7.7: 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)

7.8: 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.

7.9: What county do you live in?
__ __ _ ANSI County Code (formerly FIPS county code)

7.10: What is your ZIP Code where you live?
_ _ _ _ _ ZIP Code

7.11: 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 Q7.13

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

7.13: Do you have a cell phone for personal use? Please include cell phones used for both business and personal use.
1 Yes
2 No

7.14: 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

7.15: 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 19: Industry and Occupation
If Core Q7.15 = 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 Q7.15 = 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 Q7.15 = 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 Q7.15 = 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 Q7.15 = 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] _____

7.16: How many children less than 18 years of age live in your household?
_ _ Number of children
8 8 None

7.17: 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

7.18: Have you used the internet in the past 30 days?
1 Yes
2 No

7.19: 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

7.20: 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

If male, go to 7.22, If female respondent is 45 years old or older, go to Q7.22
7.21: To your knowledge, are you now pregnant?
1 Yes
2 No

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

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

7.23: 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

7.24: Are you blind or do you have serious difficulty seeing, even when wearing glasses? (182)
1 Yes
2 No

7.25: Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?
1 Yes
2 No

7.26: Do you have serious difficulty walking or climbing stairs?
1 Yes
2 No

7.27: Do you have difficulty dressing or bathing?
1 Yes
2 No

7.28: 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 8: Tobacco Use
8.1: Have you smoked at least 100 cigarettes in your entire life?
5 packs = 100 cigarettes
1 Yes
2 No ⇨ Go to Q8.5

8.2: 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 Q8.4

8.3: 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 Q8.5
2 No ⇨ Go to Q8.5

8.4: 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

8.5: 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 9: Alcohol Consumption
9.1: 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

9.2: 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

9.3: 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

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

Section 10: Fruits and Vegetables
These next questions are about the fruits and vegetables you ate or drank during the past 30 days. Please think about all forms of fruits and vegetables including cooked or raw, fresh, frozen or canned. Please think about all meals, snacks, and food consumed at home and away from home.
I will be asking how often you ate or drank each one: for example, once a day, twice a week, three times a month, and so forth.
INTERVIEWER NOTE: If respondent responds less than once per month, put "0" times per month. If respondent gives a number without a time frame, ask: "Was that per day, week, or month?"
10.1: During the past month, how many times per day, week, or month did you drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never
INTERVIEWER NOTE: Do not include fruit drinks with added sugar or other added sweeteners like Kool-aid, Hi-C, lemonade, cranberry cocktail, Tampico, Sunny Delight, Snapple, Fruitopia, Gatorade, Power-Ade, or yogurt drinks.
Do not include fruit juice drinks that provide 100% daily vitamin C but include added sugar.
Do not include vegetable juices such as tomato and V8 if respondent provides but include in "other vegetables" question 10.6.
DO include 100% pure juices including orange, mango, papaya, pineapple, apple, grape (white or red), or grapefruit. Only count cranberry juice if the R perception is that it is 100% juice with no sugar or artificial sweetener added. 100% juice blends such as orange-pineapple, orange-tangerine, cranberry-grape are also acceptable as are fruit-vegetable 100% blends. 100% pure juice from concentrate (i.e., reconstituted) is counted.

10.2: During the past month, not counting juice, how many times per day, week, or month did you eat fruit? Count fresh, frozen, or canned fruit
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never
Read only if necessary: "Your best guess is fine. Include apples, bananas, applesauce, oranges, grape fruit, fruit salad, watermelon, cantaloupe or musk melon, papaya, lychees, star fruit, pomegranates, mangos, grapes, and berries such as blueberries and strawberries."
INTERVIEWER NOTE: Do not count fruit jam, jelly, or fruit preserves.
Do not include dried fruit in ready-to-eat cereals.
Do include dried raisins, cran-raisins if respondent tells you - but due to their small serving size they are not included in the prompt.
Do include cut up fresh, frozen, or canned fruit added to yogurt, cereal, jello, and other meal items.
Include culturally and geographically appropriate fruit that are not mentioned (e.g. genip, soursop, sugar apple, figs, tamarind, bread fruit, sea grapes, carambola, longans, lychees, akee, rambutan, etc.).

10.3: During the past month, how many times per day, week, or month did you eat cooked or canned beans, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu or lentils. Do NOT include long green beans.
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never
Read only if necessary: "Include round or oval beans or peas such as navy, pinto, split peas, cow peas, hummus, lentils, soy beans and tofu. Do NOT include long green beans such as string beans, broad or winged beans, or pole beans."
Interviewer NOTE: Include soybeans also called edamame, tofu (bean curd made from soybeans), kidney, pinto, hummus, lentils, black, black-eyed peas, cow peas, lima beans and white beans.
Include bean burgers including garden burgers and veggie burgers.
Include falafel and tempeh.

10.4: During the past month, how many times per day, week, or month did you eat dark green vegetables for example broccoli or dark leafy greens including romaine, chard, collard greens or spinach?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never
INTERVIEWER NOTE: Each time a vegetable is eaten it counts as one time.
INTERVIEWER NOTE: Include all raw leafy green salads including spinach, mesclun, romaine lettuce, bok choy, dark green leafy lettuce, dandelions, komatsuna, watercress, and arugula.

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

10.5: During the past month, how many times per day, week, or month did you eat orange-colored vegetables such as sweet potatoes, pumpkin, winter squash, or carrots?
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never
Read only if needed: "Winter squash have hard, thick skins and deep yellow to orange flesh. They include acorn, buttercup, and spaghetti squash."
FOR INTERVIEWER: Include all forms of carrots including long or baby-cut.
Include carrot-slaw (e.g. shredded carrots with or without other vegetables or fruit).
Include all forms of sweet potatoes including baked, mashed, casserole, pie, or sweet potatoes fries.
Include all hard-winter squash varieties including acorn, autumn cup, banana, butternut, buttercup, delicate, hubbard, kabocha (Also known as an Ebisu, Delica, Hoka, Hokkaido, or Japanese Pumpkin; blue kuri), and spaghetti squash. Include all forms including soup.
Include pumpkin, including pumpkin soup and pie. Do not include pumpkin bars, cake, bread or other grain-based desert-type food containing pumpkin (i.e. similar to banana bars, zucchini bars we do not include).

10.6: Not counting what you just told me about, during the past month, about how many times per day, week, or month did you eat OTHER vegetables? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried such as baked or mashed potatoes.
1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never
Read only if needed: "Do not count vegetables you have already counted and do not include fried potatoes."
INTERVIEWER NOTE: Include corn, peas, tomatoes, okra, beets, cauliflower, bean sprouts, avocado, cucumber, onions, peppers (red, green, yellow, orange); all cabbage including American-style Cole-slaw; mushrooms, snow peas, snap peas, broad beans, string, wax-, or pole-beans.
Include any form of the vegetable (raw, cooked, canned, or frozen).
Do not include products consumed usually as condiments including ketchup, catsup, salsa, chutney, relish.
Do include tomato juice if respondent did not count in fruit juice.
Include culturally and geographically appropriate vegetables that are not mentioned (e.g. daikon, jicama, oriental cucumber, etc.).
Do not include rice or other grains.

Section 11: Exercise (Physical Activity)
The next few questions are about exercise, recreation, or physical activities other than your regular job duties.

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

11.1: 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

11.2. What type of physical activity or exercise did you spend the most time doing during the past month?
_ _ (Specify) [See Coding List A]
INTERVIEWER INSTRUCTION: If the respondent's activity is not included in the Coding List A, choose the option listed as "Other".
INTERVIEWER NOTE: Housework may be included as a physical activity or exercise spent and can be coded as "Other".

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

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

11.5. What other type of physical activity gave you the next most exercise during the past month?
__ _ (Specify) [See Coding List A]
8 8 No additional physical [Go to Q11.8]
INTERVIEWER INSTRUCTION: If the respondent's activity is not included in the Coding List A, choose the option listed as "Other".
INTERVIEWER NOTE: Housework may be included as a physical activity or exercise spent and can be coded as "Other".

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

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

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

Section 12: Arthritis Burden
If Q6.9 = 1 (yes) then continue, else go to next section.
Next I will ask you about your arthritis.
Arthritis can cause symptoms like pain, aching, or stiffness in or around a joint.
12.1: Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?
1 Yes
2 No
INTERVIEWER INSTRUCTION: If a question arises about medications or treatment, then the interviewer should say: "Please answer the question based on your current experience, regardless of whether you are taking any medication or treatment."

INTERVIEWER NOTE: Q12.2 should be asked of all respondents regardless of employment status.
12.2: In this next question, we are referring to work for pay. Do arthritis or joint symptoms now affect whether you work, the type of work you do, or the amount of work you do?
1 Yes
2 No
INTERVIEWER INSTRUCTION: If respondent gives an answer to each issue (whether works, type work, or amount of work), then if any issue is "yes" mark the overall response as "yes." If a question arises about medications or treatment, then the interviewer should say: "Please answer the question based on your current experience, regardless of whether you are taking any medication or treatment."

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

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

Section 13: Seatbelt Use
13.1: How often do you use 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: 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™.
14.1: During the past 12 months, have you had either a seasonal flu shot or a seasonal flu vaccine that was sprayed in your nose?
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.
1 Yes
2 No ⇨ Go To Q14.4

14.2: During what month and year did you receive your most recent flu shot injected into your arm or flu vaccine that was sprayed in your nose?
_ _/_ _ _ _ Month/Year

14.3: At what kind of place did you get your last flu shot/vaccine?
0 1 A doctor's office or health maintenance organization (HMO)
0 2 A health department
0 3 Another type of clinic or health center (Example: a community health center)
0 4 A senior, recreation, or community center
0 5 A store (Examples: supermarket, drug store)
0 6 A hospital (Example: inpatient)
0 7 An emergency room
0 8 Workplace
0 9 Some other kind of place
1 0 Received vaccination in Canada/Mexico (Volunteered –)
1 1 A school

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

Section 15: **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.
15.1: Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation. Include tests using fluid from your mouth.
1 Yes
2 No ⇨ Go to next section.

15.2: 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

15.3: 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: Caregiver
People may provide regular care or assistance to a friend or family member who has a health problem or disability.

1. During the past 30 days, did you provide regular care or assistance to a friend or family member who has a health problem or disability?
INTERVIEWER INSTRUCTIONS: If caregiving recipient has died in the past 30 days, say "I'm so sorry to hear of your loss." and code 8.
1 Yes
2 No [Go to Question 9]
8 Caregiving recipient died in past 30 days [Go to next module]

2. What is his or her relationship to you? For example is he or she your (mother or daughter or father or son)?
INTERVIEWER NOTE: If more than one person, say: "Please refer to the person to whom you are giving the most care?"
CODE RESPONSE USING THESE CATEGORIES]
01 Mother
02 Father
03 Mother-in-law
04 Father-in-law
05 Child
06 Husband
07 Wife
08 Same-sex partner
09 Brother or brother-in-law
10 Sister or sister-in-law
11 Grandmother
12 Grandfather
13 Grandchild
14 Other relative
15 Non-relative/Family friend

3. For how long have you provided care for that person? Would you say…
1 Less than 30 days
2 1 month to less than 6 months
3 6 months to less than 2 years
4 2 years to less than 5 years
5 More than 5 years

4. In an average week, how many hours do you provide care or assistance? Would you say…
1 Up to 8 hours per week
2 9 to 19 hours per week
3 20 to 39 hours per week
4 40 hours or more

5. What is the main health problem, long-term illness, or disability that the person you care for has?
IF NECESSARY: Please tell me which one of these conditions would you say is the *major* problem?
RECORD ONE RESPONSE]
1 Arthritis/Rheumatism
2 Asthma
3 Cancer
4 Chronic respiratory conditions such as Emphysema or COPD
5 Dementia and other Cognitive Impairment Disorders
6 Developmental Disabilities such as Autism, Down's Syndrome, and Spina Bifida
7 Diabetes
8 Heart Disease, Hypertension
9 Human Immunodeficiency Virus Infection (HIV)
10 Mental Illnesses, such as Anxiety, Depression, or Schizophrenia
11 Other organ failure or diseases such as kidney or liver problems
12 Substance Abuse or Addiction Disorders
13 Other

6. In the past 30 days, did you provide care for this person by managing personal care such as giving medications, feeding, dressing, or bathing?
1 Yes
2 No

7. In the past 30 days, did you provide care for this person by managing household tasks such as cleaning, managing money, or preparing meals?
1 Yes
2 No

8. Of the following support services, which one do you MOST need, that you are not currently getting?
[INTERVIEWER NOTE: IF RESPONDENT ASKS WHAT RESPITE CARE IS]: Respite care means short-term or long-term breaks for people who provide care.
1 Classes about giving care, such as giving medications
2 Help in getting access to services
3 Support groups
4 Individual counseling to help cope with giving care
5 Respite care
6 You don't need any of these support services

9. In the next 2 years, do you expect to provide care or assistance to a friend or family member who has a health problem or disability?
1 Yes
2 No

Module 6: Cognitive Decline
CATI Note: If respondent is 45 years of age or older continue, else go to next Module
The next few questions ask about difficulties in thinking or remembering that can make a big difference in everyday activities. This does not refer to occasionally forgetting your keys or the name of someone you recently met, which is normal. This refers to confusion or memory loss that is happening more often or getting worse, such as forgetting how to do things you've always done or forgetting things that you would normally know. We want to know how these difficulties impact you.
1. During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?
1 Yes
2 No [Go to Next Module]

2. During the past 12 months, as a result of confusion or memory loss, how often have you given up day-to-day household activities or chores you used to do, such as cooking, cleaning, taking medications, driving, or paying bills?
1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never

3. As a result of confusion or memory loss, how often do you need assistance with these day-to-day activities?
1 Always
2 Usually
3 Sometimes
4 Rarely [Go to Q5]
5 Never [Go to Q5]
4. When you need help with these day-to-day activities, how often are you able to get the help that you need?
1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never

5. During the past 12 months, how often has confusion or memory loss interfered with your ability to work, volunteer, or engage in social activities outside the home?
1 Always

2 Usually
3 Sometimes
4 Rarely
5 Never

6. Have you or anyone else discussed your confusion or memory loss with a health care professional?
1 Yes
2 No

Module 7: Sodium or Salt-Related Behavior
Now I would like to ask you some questions about sodium or salt intake.
Most of the sodium or salt we eat comes from processed foods and foods prepared in restaurants. Salt also can be added in cooking or at the table.
1. Are you currently watching or reducing your sodium or salt intake?
1 Yes
2 No [Go to Q3]

2. How many days, weeks, months, or years have you been watching or reducing your sodium or salt intake?"
1_ _ Day(s)
2_ _ Week(s)
3_ _ Month(s)
4_ _ Year(s)
5 5 5 All my life

3. Has a doctor or other health professional ever advised you to reduce sodium or salt intake?
1 Yes
2 No

Module 9: Cardiovascular Health
I would like to ask you a few more questions about your cardiovascular or heart health.
CATI note: If Core Q6.1 = 1 (Yes), ask Q1.
1. Following your heart attack, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."
1 Yes
2 No

CATI note: If Core Q6.3 = 1 (Yes), ask Q2.
2. Following your stroke, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."
1 Yes
2 No

Interviewer Note: Question 3 is asked for all respondents
3. Do you take aspirin daily or every other day?
Interviewer Note: Aspirin can be prescribed by a health care provider or obtained as an over-the-counter (OTC) medication.
1 Yes [Go to question 5]
2 No

4. Do you have a health problem or condition that makes taking aspirin unsafe for you?
If "Yes," ask "Is this a stomach condition?" Code upset stomach as stomach problems.

1 Yes, not stomach related [Go to next module]
2 Yes, stomach problems [Go to next module]
3 No [Go to next module]

5. Do you take aspirin to relieve pain?
1 Yes
2 No

6. Do you take aspirin to reduce the chance of a heart attack?
1 Yes
2 No

7. Do you take aspirin to reduce the chance of a stroke?
1 Yes
2 No

State Added: Colorectal Cancer Screening
CATI Note: If respondent is ≤ 49 years of age, go to next section
The next questions are about colorectal cancer screening.
1. A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?
1 Yes
2 No Go to Q3

2. How long has it been since you had your last blood stool test using a home kit?
1 Within the past year (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

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

4. 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 than10 years ago)
5 10 or more years ago

5. Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No ⇨ Go to Next Section

6. What test, if any, 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

7. Did you have the test [if Q6 = 4, tests] your health care provider recommended?
1 Yes
2 No

Module 21: 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:
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 1. male-to-female, 2. female-to-male, or 3. gender non-conforming?
INTERVIEWER NOTE: Please say the number before the "yes" text response. Respondent can answer with either the number or the text/word.
1 Yes, Transgender, male-to-female
2 Yes, Transgender, female to male
3 Yes, Transgender, gender nonconforming
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 transgender. 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: 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, sports fields in your community for physical activity?
1 Yes
2 No
3 My community does not have these facilities

State Added: Nutrition
1. During the past 30 days, how often did you drink regular soda or pop that contains sugar? Please include regular soda that was mixed with alcohol, but do not include diet soda or diet pop.
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

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.
You can answer times per day, week, or month: for example, twice a day, once a week, and so forth.
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.
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 to cook with or eat directly?
1 Less than once a 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, pasta, oatmeal, or bran cereal to cook with or eat directly?
1 Less than once a week
2 Once a week
3 2-3 times a week
4 4-6 times a week
5 Once a day

State Added Tobacco Use
1. Do you now smoke cigars, cigarillos, or little filtered cigars every day, some days, rarely or not at all?
1 Every day
2 Some days
3 Rarely
4 Not at all

2. Do you now smoke a regular pipe filled with tobacco every day, some days, rarely or not at all?
1 Every day
2 Some days

3 Rarely
4 Not at all

3. Have you ever tried smoking tobacco in a water pipe or hookah in your entire life, even one or two puffs?
1 Yes
2 No [Go to Q5]

4. Do you now smoke tobacco in a water pipe or hookah every day, some days, rarely or not at all?
1 Every day
2 Some days
3 Rarely
4 Not at all

The next questions ask about electronic cigarettes or e-cigarettes. Electronic cigarettes or e-cigarettes are battery-operated devices that simulate smoking a cigarette. The heated vapor produced by an e-cigarette often contains nicotine. You may also know them as vape-pens, hookah-pens, e-hookahs, e-vaporizers, e-cigars, or e-pipes.
5. Have you ever used an electronic cigarette, even just one time in your entire life?
1 Yes
2 No [Go to Q7]

6. Do you now smoke electronic cigarettes or e-cigarettes every day, some days, rarely or not at all?
1 Every day
2 Some days
3 Rarely
4 Not at all

Quitlines are telephone or internet/web-based services that help people quit smoking or quit tobacco use.
7. Have you ever heard of Quitline Iowa?
1 Yes
2 No

[ASK IF 8.3 = 2]
8. During the past 12 months, have you made a serious attempt to stop smoking cigarettes because you were TRYING to quit – even if you stopped for less than a day?
1 Yes
2 No

[ASK IF 8.5 = 1 or 2 OR Q1 = 1 or 2 OR Q2 = 1 or 2]
9. During the past 12 months, have you made a serious attempt to stop using smokeless tobacco, cigars or pipe tobacco because you were TRYING to quit – even if you stopped for less than a day?
1 Yes
2 No

□

[ASK IF 8.3 = 1 OR 8.4 < 5 OR Q8 = 1 OR Q9 = 1]
10. Thinking back to the (LAST TIME/time) you tried to QUIT smoking or quit using tobacco in the past 12 months. Did you do ANY of the following…
A Call a telephone help line or quit line?
B Use an internet or web-based program, app, smartphone or tool?
C Try to quit by SWITCHING to electronic or E-cigarettes?
D Try to quit by SWITCHING to some other form of tobacco?
1 Yes
2 No

[ASK IF Q6<4, ELSE GO TO Q12]

11. The next question is about the reasons people use e-cigarettes. Please tell me which reasons apply to you.
[INTERVIEWER NOTE: Say about E-cigarettes if required: You may also know them as vape pens, hookah-pens, e-hookahs, e-vaporizers, e-cigars, or e-pipes]

1 I can use e-cigarettes at times or in places where smoking cigarettes isn't allowed.
2 They might be less harmful to me than cigarettes.
3 They might be less harmful to people around me than cigarettes.
4 Using e-cigarettes helps people to quit smoking cigarettes.
5 They seem cheaper than cigarettes.

[ASK IF Q5=2 AND AGE = 18-29 YEARS OR Q6>3, ELSE GO TO Q13]
[INTERVIEWER NOTE: Say about E-cigarettes if required: You may also know them as vape pens, hookah-pens, e-hookahs, e-vaporizers, e-cigars, or e-pipes]
12. The next question is about the reasons people use e-cigarettes. Do you think the following statements apply to people who use e-cigarettes?
a Someone can use e-cigarettes at times or in places where smoking cigarettes isn't allowed.
b They might be less harmful to someone than cigarettes.
c E-cigarettes might be less harmful to people around a smoker than cigarettes.
d Using e-cigarettes helps people to quit smoking cigarettes
e They seem cheaper than cigarettes
1 Yes
2 No

13. In the past 12 months, have you seen a doctor, dentist, nurse, or other health care professional?
[INTERVIEWER NOTE: Answer is "YES" if they visited doctor, dentist, nurse practitioner or physician's assistant for ANY reason, not just smoking.]
1 Yes
2 No [GO TO NEXT SECTION]

[ASK IF 8.2 = 1 or 2 OR 8.4 < 5 OR 8.5 = 1 or 2 OR Q1 = 1 or 2 OR Q2 = 1 or 2]
14. In the PAST 12 MONTHS, when you visited your health care provider, did they…
A Advise you to stop smoking or using tobacco?
B Suggest that you call or use a telephone or web-based quit line?
C Suggest that you use a smoking or tobacco use cessation class, program, or counseling?
D Recommend or prescribe a medicine to help you quit?
E Suggest that you set a specific date to stop smoking or using tobacco?
1 Yes
2 No

State Added Health Literacy
Now I would like to ask you some questions about health forms that you fill out and health information that you might read.

1. Health forms include insurance forms, questionnaires, doctor's office forms, and other forms related to health and healthcare. In general, how confident are you in your ability to fill out health forms yourself? Would you say…
1 Extremely Confident,
2 Somewhat Confident, or
3 Not at all Confident?

4 Depends on form
8 Do not fill out health forms

2. You can find written health information on the internet, in newspapers and magazines, on medications, at the doctor's office, in clinics, and many other places. How often is health information written in a way that is easy for you to understand? Would you say…

1 Always,
2 Nearly Always,
3 Sometimes,
4 Seldom, or
5 Never?
8 Have not gotten health information to read

3. People who might help you read health information include family members, friends, caregivers, doctors, nurses, or other health professionals. How often do you have someone help you read health information? Would you say…
1 Always,
2 Nearly Always,
3 Sometimes,
4 Seldom, or
5 Never?
8 Have not gotten health information to read

State Added Oral Health

1. During the past 12 months, have you had a dental problem which you would have liked to see a dentist about but you did not see the dentist?
1 Yes
2 No [SKIP TO NEXT SECTION]

2. What is the main reason you have not visited the dentist for problems in the last 12 months?
11 Fear, apprehension, nervousness, pain, dislike going
12 Cost
13 Do not have/know a dentist
14 Did not have time
15 Cannot get to the office/clinic (too far away, no transportation)
16 Cannot get an appointment
17 Other priorities
18 Have not thought of it
19 Other

State Added Preparedness

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

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

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

4. What is the primary source of your health care coverage? Is it…
01 A plan purchased through an employer or union (includes plans purchased through another person's employer)
02 A plan that you or another family member buys on your own (includes Obama Care)
03 Medicare
04 Medicaid or other state program
05 TRICARE (formerly CHAMPUS), VA, or Military
06 Alaska Native, Indian Health Service, Tribal Health Services
07 Some other source
08 None (no coverage)
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.

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

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

State Added Mental Illness and Stigma

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
As I mentioned when we started this section, I would give you a phone number for an organization that can provide information and referral for these issues. Would you like that number? You can dial 1-800-422-4453 to reach the National Hotline for child abuse.

State Added Gambling
1. Have you gambled or bet for money or possessions in the past 12 months?
1 Yes
2 No [SKIP TO CLOSE

2. During the past 12 months, have you become restless, irritable or anxious when trying to stop or cut down on gambling?
1 Yes
2 No

3. During the past 12 months, have you tried to keep your family or friends from knowing how much you gamble?
1 Yes
2 No