Health in Iowa

Annual Report

From the

Behavioral Risk Factor Surveillance System

Iowa 2013

Iowa Department of Public Health

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

Completed in cooperation with the Centers for
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IDPH
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of Public Health

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

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

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1. INTRODUCTION

History

In 1984, the Centers for Disease Control and Prevention (CDC) launched the Behavioral Risk Factor Surveillance System (BRFSS) working in an ongoing fashion with several states to assess the health status and health risk behaviors of their citizens. In 1988, Iowa began full participation in BRFSS. The BRFSS is now conducted in all 50 states, the District of Columbia, and a few American territories.

Nature of the Survey

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

The BRFSS is designed to collect information on the health conditions, health-related behaviors, attitudes, and awareness of residents age 18 and over. It also monitors the prevalence of these indicators over time. The indicators surveyed are major contributors to illness, disability, and premature death.

This report focuses on the data collected during calendar year 2013. Some of the health-related issues discussed are general health status, health care access, cancer screening, tobacco use, alcohol consumption, body weight, physical activity, oral health, diabetes, respiratory conditions, immunizations, and HIV/AIDS awareness.

Objectives

The objectives of the BRFSS are:

1. To determine the state-specific prevalence of personal health behaviors related to the leading causes of premature death.

2. To develop the capacity of state health departments to conduct credible telephone surveys.

3. To advance the understanding that certain health-related behaviors are critical indicators of health.

Use of BRFSS Data

The CDC developed the BRFSS to help states assess health risks and monitor trends. Comparable surveillance methods are used in all states. This allows for comparisons among states and for the assessment of geographic patterns of risk factor prevalence.

The BRFSS information is used to design, implement, and support public health activities. These activities are designed to reduce the premature death and disability of Iowa residents. State public health departments are responsible for planning, implementing, and evaluating disease

prevention programs. Many of these programs involve health-risk behavior modification. Examples of health-risk behavior modification programs in Iowa are the Diabetes Prevention and Control Program, nutrition and physical activity campaigns, tobacco cessation and counter-marketing campaigns, campaigns encouraging flu vaccination, and campaigns to increase health screenings and checkups.

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

2. Methodology

Questionnaire Design

The BRFSS questionnaire is updated each calendar year by 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 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 on including them at the annual national BRFSS conference. A group of interested individuals from the Iowa Department of Public Health guided by the state coordinator met to discuss which optional modules and state-added questions to include in the coming year. The emerging survey plan was reviewed by the Iowa BRFSS Advisory Committee.

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

Sampling Process

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

In the landline sample, one person residing in a household was interviewed. Households were selected using list-assisted random-digit dialing. This method provides a list of randomly chosen phone numbers from the pool of all existing landline phone numbers. These numbers are not drawn in a simple random fashion, but use what is known as the disproportionate stratified sampling technique (DSS). This sampling methodology was designed to produce a random sample of Iowa telephone numbers, including unlisted numbers and new subscribers in an efficient fashion.

The DSS method divides landline phone numbers into two strata. The first stratum is residential but unlisted. The second stratum is composed of residential listed numbers. Each stratum was sampled at a different rate. The listed residential numbers were sampled at the highest rate. Some numbers were marked by the list provider as not to be called because they have been predetermined to be nonresidential or nonworking. There was no set number to be sampled per group, and completed interviews were not thrown out.

The landline sample was also stratified into six geographic regions. These regions are the same regions used by health resource and emergency planning groups within the state. Geographic regions were represented at the same proportion as their population within the state. A seventh stratum was drawn from census tracts throughout the state containing a relatively high

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

Increasingly many people, including the young, single, ethnic minorities, and renters are opting not to use traditional landline telephone service in favor of cell phones.[1,2] Therefore, another sampling frame was added devoted to households having only cell phones or using cell phones 90 percent of the time or more. If they used both cell phones and landline phones to a significant degree, it was considered that they could be included in the landline sample, and, therefore, not interviewed on their cell phone. For the first time, an attempt was made to geographically stratify the cell phone sample. The cell phone mostly sample was drawn from five strata. These are the same strata used for the landline sample except that region 2 and 3 are combined into one. Since the cell phone is more an individual appliance than a household appliance, the household selection was not done. College housing was also included in the cell phone sample. These respondents were also asked some procedural questions. For instance, they were asked if they were doing anything that would make it unsafe to conduct the interview and not interviewed if they were. We aimed for 25 percent of our total sample to be conducted with this cell phone sample by our data collection contractor. However, there were occasions when cell phone interviews were done involving people living in other states. The number of cell phone interviews in our sample is, therefore, larger than the number called by our contractor.

Approximately equal numbers of interviews per month were conducted from January through December in 2013 for a total sample size of 8,157. Of these, 6,129 were landline and 2,028 were cell phone. Interviews were conducted in both English and Spanish.

Interviewers made multiple attempts to reach a number to complete an interview before replacing that number. If the person selected to take the survey was not available, an appointment was made to complete the interview at another date and time. If the person was not available during the interview period, or if the person refused to participate, no other person was interviewed at that number. Attempts were made to convert initial refusals into participants.

The Interview Process

The interviews were conducted daytime, evenings, and weekends with appointments as needed to schedule or complete interviews. The average time to complete an interview was 29.3 minutes for landline and 25 minutes for cell phone. The response rate, defined as completed interviews plus partial completes divided by all eligible households called, was 53 percent for landline and 50 percent for cell phones[*]. Although the response rates seem rather low and have been declining in recent years, they are better than most states produce. A partial complete is an interview that was terminated before it was complete, but sufficient data had been collected to use for most measures. This means that results from questions later in the questionnaire are determined from a somewhat smaller sample than earlier questions, even when not restricted to some sub-sample such as a particular age group. See Appendix 3 for the questions and their order.

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

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

Advantages and Limitations

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

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

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

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

One main limitation to telephone surveys is that all Iowans are not reachable by telephone. Some do not live in households but are in institutions such as nursing homes or prisons. Some households do not have telephones. Persons of low socioeconomic status are less likely than persons of higher socioeconomic status to have uninterrupted telephone service and are therefore under-sampled. Furthermore, the percentage of households with a telephone varies by region. New telephone technology such as caller I.D., and call blockers that block telemarketers also pose problems for telephone surveys.

Furthermore, some inaccuracy is expected from any survey based on self-reported information. For example, respondents are known to under-report their weight and inaccurately recall socially undesirable habits. 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, including studies conducted by the National Center for Health Statistics and the American Heart Association.

Analysis of the data

Unless everyone in the state was asked questions about his or her health, there would be no way to know exactly what these answers would be. When analyzing BRFSS data, conclusions are to be drawn about the entire adult population of the State of Iowa based on only a sample of randomly chosen people. The true prevalence in the population can only be estimated.

The judgment of the value of prevalence in a population, such as the state based on the prevalence within a sample, always involves educated guesswork. The prevalence values from the survey and the true state prevalence values may differ by some amount, but a range of state values that are probably true can be determined with a high degree of confidence from the prevalence in the sample.

Most charts and tables in this report will indicate a range of values in which there is a 95% chance of the true Iowa value falling. This range is referred to as a 95% confidence interval (CI). Charts will indicate this by use of a black line at the end of the bars in the chart. The end of the bar is the sample value, while the value in the population is probably somewhere in the range represented by the line. When the CIs of two or more groups do not overlap, their population values can be considered truly or significantly different.

An important factor in determining how well we can judge the response of all Iowans from the survey sample is the number of responses to the questions. The smaller the number of responses, the poorer is our ability to draw a conclusion about the whole state. Analyzing the data by such categories as age, sex, income, and educational level means there are a smaller number of interviews in each particular group than in the whole survey. Furthermore, many questions are only answered depending on the answer to previous questions. For instance, a person would only be asked at what age they were diagnosed with diabetes if they answer "yes" to whether they have ever been told they had diabetes. These smaller numbers decrease the ability to determine statistically significant differences. Some data may not be reported as significant solely due to small sample sizes. In general, data in which the number of responses is less than 50 or the 95% confidence interval is larger than 20% will not be reported since this data is considered highly unreliable.

Some people refuse to answer select questions but choose to respond to the majority of the questions. Those interviews were still used in the final count for the total sample size. However, they were not counted on the specific questions they refused. Unless otherwise indicated, prevalence measures do not include those who refused to answer a question or said they did not know.

Weighting of the Data

Generally, the best guess for how many Iowan adults would answer a question a certain way would be the same as how many adults in the sample answer that way. This is true, however, only if everyone in the state had an equal chance of being in the sample. This is not the case. The number of adults per household and the number of phone numbers per household influence a person's likelihood of being included in the survey. Furthermore, certain demographic groups may be over or under-represented in the sample based on their ease of being reached and willingness to respond. For instance, about half the adult Iowa population is male, but typically only about 40 percent of the sample interviewed is male. To solve these problems the data in the sample is weighted to the state population. That means several of the above 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. Information should be as sound as ever for comparing demographic groups or for comparing states and regions.

The 2013 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.

References

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2. Blumberg SJ and Luke JV. Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July–December 2013, 2014.

3. DEMOGRAPHICS OF THE BRFSS RESPONDENTS

The 8,157 respondents to the BRFSS for the year 2013 included 3,276 males and 4,881 females, age 18 years and older. The following tables present the distribution of this respondent sample by 1) age and gender, 2) race/ethnicity, 3) level of education, and 4) annual household income.

Table 3.1: Distribution of Iowa Survey Respondents by Age and Gender for Year 2013

Age	Male		Female		Total	
	#	%	#	%	#	%
18-24	211	2.6	190	2.3	401	4.9
25-34	348	4.3	375	4.6	723	8.9
35-44	387	4.7	527	6.5	914	11.2
45-54	520	6.4	804	9.9	1,324	16.2
55-64	756	9.3	1,047	12.8	1,803	21.1
65-74	575	7.0	900	11.0	1,475	18.1
75+	455	5.6	1,000	12.3	1,455	17.8
Unknown	24	0.3	38	0.5	62	0.8
Total	3,276	40.2	4l881	59.8	8,157	100.0

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

Table 3.2: Distribution of Iowa Survey Respondents by Race/Ethnicity for Year 2013

Race/Ethnicity	# of Total Respondents	% of Total Respondents
White Non-Hispanic	7,601	93.2
Black Non-Hispanic	108	1.3
Other Non-Hispanic[1]	147	1.8
Hispanic	216	2.6
Unknown/Refused	85	1.0
Total	8,157	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 for Year 2013

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	491	6.0
High School Grad or GED	2,848	34.9
Some College or Technical School	2,302	28.2
College Graduate	2,507	30.7
Unknown/Refused	9	0.1
Total	8,157	100.0

Table 3.4: Distribution of Iowa Survey Respondents by Annual Household Income for Year 2013

Household Income	# of Total Respondents	% of Total Respondents[2]
<$15,000	630	7.7
$15,000-$24,999	1,258	15.4
$25,000- 34,999	904	11.1
$35,000-$49,999	1,152	14.1
$50,000-$74,999	1,213	14.9
>=$75,000	1,942	23.8
Unknown/Refused	1,258	13.0
Total	8,157	100.0

4. GENERAL HEALTH STATUS AND HEALTH-RELATED QUALITY OF LIFE

Background

General health status defined by responses to a single question such as "How is your health, in general?" have been found to be significant predictors of mortality. Additional studies that controlled for objective health status, age, sex, life satisfaction, income, residence, and other factors continue to find that the risk of mortality is two to six times greater for those individuals who had reported earlier that their health was bad or poor, compared to those who had reported their health as excellent.[2] The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician.[2]

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

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

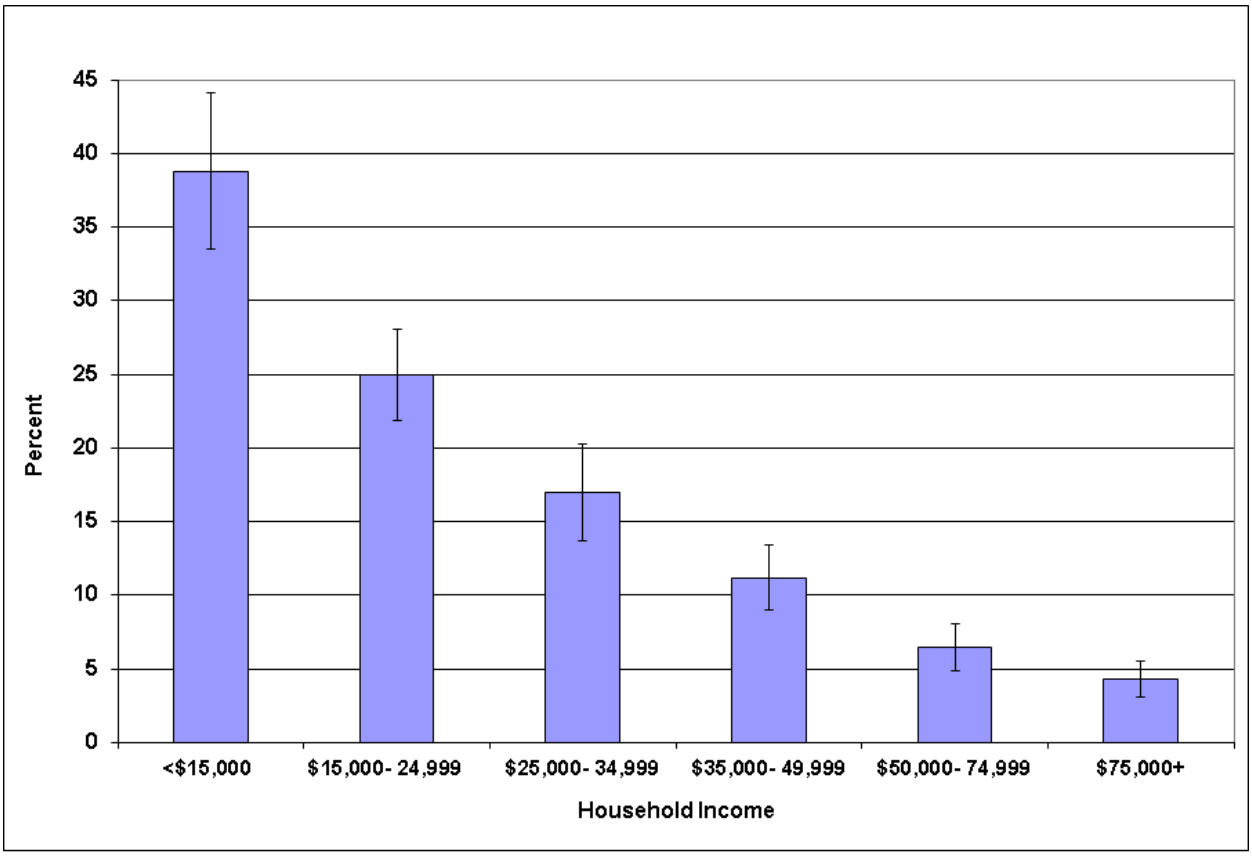
General Health Status Results

In 2013, when asked how their health was in general, 18.6 percent of respondents reported that it was excellent. Another 35.3 percent said it was very good. While 31.8 percent reported good health, 14.4 percent rated their health as fair or poor. This is slightly worse than the figure from 2012 when 14 percent rated their health as fair or poor.

Age, education, household income, and race/ethnicity all had a significant impact on reported health status (see table 4.1). Household income had the most impact on reporting fair or poor health. While only 4.3 percent of those with incomes of $75,000 or over reported fair or poor health, 38.8 percent of those with incomes below $15,000 did so (see figure 4.1). Other respondents who were more likely to report having fair or poor health were those with less than a high school education, racial minorities, and those 75 years old and older. Those with a college education, those with household incomes $50,000 or higher, and those age 18 to 34 years all reported less than 10 percent with fair or poor health.

In answer to the question about how many days during the past 30 days was their physical health not good, 68.1 percent of respondents reported none of the days and 9.9 percent reported 14 days or more.

Figure 4.1: Percent of Iowans Reporting Their Health as Fair or Poor by Household Income 2013



As shown in Table 4.2, there were fewer people reporting 14 or more bad physical days with younger age, higher education, and higher income. Again, household income had the greatest impact. People with household incomes less than $15,000 reported 27 percent having 14 or more bad physical health days, while people with household incomes of $75,000 or more had only 3.1 percent. People age 18 to 24 also reported less than 5 percent with 14 or more bad physical health days.

When responding to the question of how many days during the past 30 days their mental health was not good, 70.4 percent of the respondents indicated none of the days and 9.3 percent reported 14 or more days. Table 4.2 shows the pattern for bad mental health days. Fourteen or more days in the past 30 of bad mental health is referred to as frequent mental distress (FMD).

Men, Whites, older people, those with high education, and those with high income had a lower prevalence of FMD. Again, annual household income made the most difference. An annual household income of $15,000 or less had the most people with FMD (21.9%), while only 4.3 percent of those with $75,000 or more had FMD. A low prevalence was also seen among respondents age 75 years and older (4.1%).

Table 4.1: Percentage of Self-Reported Fair or Poor General Health Status, 2013

DEMOGRAPHIC GROUPS	General Health Status Fair or Poor	
	%	C.I. (95%)
TOTAL	14.4	(13.4-15.4)
SEX		
Male	13.9	(12.3-15.5)
Female	14.8	(13.4-16.2)
RACE/ETHNICITY		
Non-Hispanic White	13.8	(12.8-14.8)
Black Non-Hispanic	20.0	(10.3-29.7)
Other Non-Hispanic	16.1	(9-23.2)
Hispanic	21.5	(14.5-28.5)
AGE		
18-24	7.9	(4.6-11.2)
25-34	8.8	(6.3-11.3)
35-44	10.2	(7.8-12.6)
45-54	16.4	(13.9-18.9)
55-64	17.4	(15.2-19.6)
65-74	20.1	(17.6-22.7)
75+	23.7	(21.1-26.4)
EDUCATION		
Less Than H.S.	30.6	(25.3-35.9)
H.S. or G.E.D.	17.0	(15.2-18.8)
Some Post-H.S.	12.5	(10.7-14.3)
College Graduate	6.6	(5.6-7.6)
HOUSEHOLD INCOME		
<$15,000	38.8	(33.5-44.1)
$15,000- 24,999	25.0	(21.9-28.1)
$25,000- 34,999	17.0	(13.7-20.3)
$35,000- 49,999	11.2	(9-13.4)
$50,000- 74,999	6.5	(4.9-8.1)
$75,000+	4.3	(3.1-5.5)

When asked how many days poor physical or mental health kept them from performing their usual activities, 62.1 percent of those with some days of either bad physical or mental health said none. On the other hand, 12.9 percent said 14 days or more. This level increased with increasing age, decreasing education, and decreasing income.

Comparison with Other States

The percentage of people rating their health as fair or poor throughout the states and District of Columbia ranged from 12.1 percent to 25.7 percent. The median value was 16.7 percent. Iowa ranked better than the median with only 14.4 percent rating their health as fair or poor.

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

Table 4.2: Percentage of Reported Days of Poor Physical or Mental Health in the Past 30 Days, 2013

DEMOGRAPHIC GROUP	14 –30 Days of Poor Physical Health		14 –30 Days of Poor Mental Health (FMD)	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	9.9	(9.1-10.8)	8.8	(7.9-9.7)
SEX				
Male	8.7	(7.5-10)	7.1	(5.9-8.3)
Female	11.0	(9.9-12.2)	10.5	(9.2-11.8)
RACE/ETHNICITY				
White/Non-Hisp.	9.6	(8.8-10.5)	8.4	(7.5-9.3)
Black/Non-Hisp	10.4	(3.3-17.4)	9.7	(1.6-17.9)
Other/Non-Hisp	10.1	(4-16.3)	14.3	(5.9-22.6)
Hispanic	13.1	(6.9-19.3)	12.8	(6.4-19.1)
AGE GROUP				
18-24	4.3	(1.8-6.8)	11.9	(8.2-15.6)
25-34	5.6	(3.6-7.5)	10.5	(7.8-13.1)
35-44	7.6	(5.4-9.9)	8.3	(6.2-10.4)
45-54	11.2	(9.1-13.3)	11.0	(8.8-13.2)
55-64	13.2	(11.2-15.3)	7.9	(6.4-9.5)
65-74	13.3	(11.1-15.4)	5.2	(4-6.5)
75+	16.9	(14.6-19.3)	4.1	(2.9-5.3)
EDUCATION				
Less than H.S.	18.2	(13.6-22.8)	14.8	(10.4-19.3)
H.S. or G.E.D.	10.7	(9.4-12.1)	9.3	(7.9-10.7)
Some Post-H.S.	10.0	(8.5-11.6)	9.1	(7.4-10.8)
College Grad.	5.1	(4.2-6)	5.2	(4.1-6.2)
HOUSEHOLD INCOME				
< $15,000	27.0	(22.1-31.9)	21.9	(17.2-26.6)
$15,000- 24,999	16.6	(13.7-19.4)	14.8	(11.9-17.7)
$25,000- 34,999	10.5	(8.1-12.9)	8.7	(6-11.4)
$35,000- 49,999	8.4	(6.5-10.3)	5.4	(3.6-7.2)
$50,000- 74,999	5.4	(3.9-7)	5.9	(4.2-7.6)
$75,000+	3.1	(2.2-4)	4.3	(3-5.5)

5. INSURANCE COVERAGE AND ACCESS TO HEALTH CARE

Background

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

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

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

Health care costs have increased. This is especially true of particular sectors of costs such as pharmaceuticals. Such increases hit harder on individuals without health insurance and those living on fixed incomes. Both access and affordability of health care are important areas to monitor.

Insurance Coverage and Access to Health Care Results

In 2013, 10.4 percent of the survey respondents reported they had no health insurance. This figure is a little better than in 2012 when 11 percent of Iowans reported having no coverage.

Table 5.1 shows that 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. Racial and ethnic minorities had the highest percentage of individuals without health care coverage (26.3%). However, more than a fifth of those with less than a high school education and people with annual household incomes less than $25,000 also had no coverage. Almost everyone age 65 years and older had health care coverage due to Medicare. In fact, if only those age 18 to 64 years old are considered, 12.7 percent were without coverage.

Two other demographic variables that had a major impact on health care coverage were employment status and marital status. Unemployed respondents had 16.6 percent reporting they were not covered by health insurance, while 11.7 percent of employed or self-employed were not covered. Only 1.5 percent of retirees were without health insurance.

People who were married were much more likely to have health care coverage than those who were not. Only 6.1 percent of married respondents were without coverage, while 15.8 percent of unmarried respondents were without it.

For those who did have health care coverage 4.9 percent said they had been without it at some point in the past year. For those who did not have health care coverage most (38.9%) said they had been without it for more than three years.

Nearly half of those with health care coverage said their primary source was through an employer. Their own employer accounted for 34.7 percent, while someone else's employer accounted for 21.5 percent. Since the respondent could choose multiple items, It is possible, that these would not necessarily sum to 100 percentt.

When asked if there was a time in the past 12 months when they needed to see a doctor but could not because of the cost, 10.1 percent said that there was a time. The percentage was higher for females, younger people, people with less education, people with lower incomes, and racial and ethnic minorities. The lowest percentage (2%) was for people with annual household incomes of $75,000 or more. The highest percentage (24.2%) was for people earning less than $15,000.

In addition, 6.4 percent said there was a time in the past year that they had not taken their prescribed medications because of cost. This rate was nearly double for Hispanics (13%). Furthermore, 20.5 percent of all respondents said they had medical bills that were being paid off over time.

Since it is important that care be coordinated, respondents were asked if they had one person they thought of as their personal doctor or health care provider. A positive reply was given by 74 percent of respondents. Women, White non-Hispanics, older people, people with more education, and people with higher household incomes were more likely to report a regular provider. Non-White or Hispanic respondents were least likely to report one regular provider (58.3%), while those age 65 years old and older were most likely (86.3%).

When asked how long it had been since their last regular checkup, 69.6 percent said less than one year. On the other end, 0.8 percent said they had never had a checkup. People who were female, older, or had a higher household income were more likely to have a checkup in the past year. Respondents who were 65 years old or older were most likely to have a checkup (86.9%), while those from age 18 to 24 were least likely (59.6%) with those age 25 to 34 years being nearly identical. On the average, people said they had been to a doctor a median of three times in the past 12 months. Responses ranged up to 76 which was as high as they could report.

Most Iowans asked (67.5%) said they were very satisfied with the health care they received. Only three percent were not at all satisfied.

Comparison with Other States

In the 50 states and District of Columbia, the percent of non-elderly people without health insurance ranged from 7.2 percent to 32.8 percent. The lowest was from Massachusetts, which was the first state to pass major health reform legislation. Only six states had an equal or lower percentage of residents without health insurance than Iowa. Iowa had 12.7 percent of its non-elderly respondents reporting not having any insurance. The median for states and the District of Columbia was 20 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, only 87.3 percent of non-elderly adults have coverage. This is far short of the goal.

Having one specific source of primary care also missed the mark. *Healthy People 2020* has separate goals for people age 18 to 64 and people 65 and over. The goal for 18 to 64 is 89.2 percent, while the goal for age 65 and over is 100 percent. The results for Iowa were 71 percent and 86.3 percent respectively. The *Healthy Iowans* goal for all adults was 82.5 percent. The obtained prevalence of 74 percent also falls short.

References

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

Table 5.1
Percentage of Responses to Health Care Coverage and Access Questions in Iowa, 2013

DEMOGRAPHIC GROUPS	No Health Insurance Coverage		Time Couldn't Afford Help		Have One Person as Health Provider		Had Checkup in Past Year	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	10.4	(9.4-11.4)	10.1	(9.1-11.1)	74.0	(72.6-75.4)	69.6	(68.2-71)
SEX								
Male	12.1	(10.5-13.7)	9.4	(8-10.8)	67.1	(64.9-69.3)	62.1	(59.9-64.3)
Female	8.7	(7.3-10.1)	10.7	(9.3-12.1)	80.7	(79.1-82.3)	76.8	(75-78.6)
RACE/ETHNICITY								
Non-Hispanic White	8.5	(7.5-9.5)	9.2	(8.2-10.2)	75.8	(74.4-77.2)	69.4	(68-70.8)
Non-White or Hispanic	26.3	(20.9-31.8)	18.4	(13.6-23.1)	58.3	(52.3-64.4)	71.2	(65.8-76.5)
AGE								
18-24	16.1	(11.8-20.4)	13.7	(9.6-17.8)	59.7	(54.2-65.2)	59.6	(54.1-65.1)
25-34	18.9	(15.2-22.6)	12.0	(9.1-14.9)	61.1	(56.8-65.4)	59.9	(55.8-64)
35-44	13.4	(10.7-16.1)	12.9	(10.2-15.6)	72.3	(68.8-75.8)	59.0	(55.1-62.9)
45-54	9.6	(7.4-11.8)	13.6	(11.2-16)	75.5	(72.6-78.4)	68.5	(65.4-71.6)
55-64	6.8	(5.2-8.4)	7.3	(5.7-8.9)	82.6	(80.4-84.8)	75.9	(73.5-78.3)
65+	1.2	(0.6-1.8)	3.4	(2.6-4.2)	86.3	(84.7-87.9)	86.9	(85.5-88.3)
EDUCATION								
Less than H.S.	25.3	(19.4-31.2)	21.4	(15.9-26.9)	65.9	(60-71.8)	71.6	(65.9-77.3)
H.S. or G.E.D.	11.4	(9.6-13.2)	10.0	(8.4-11.6)	73.3	(70.9-75.7)	70.5	(68.1-72.9)
Some Post-H.S.	9.7	(7.9-11.5)	10.2	(8.4-12)	74.7	(72.2-77.2)	67.3	(64.8-69.8)
College Graduate	3.6	(2.6-4.6)	5.1	(3.9-6.3)	77.4	(75.2-79.6)	70.9	(68.5-73.3)
HOUSEHOLD INCOME								
Less than $15,000	21.5	(16.8-26.2)	24.2	(19.3-29.1)	66.1	(60.8-71.4)	66.3	(61-71.6)
$15,000- 24,999	22.2	(18.5-25.9)	17.6	(14.3-20.9)	69.5	(65.6-73.4)	64.9	(61-68.8)
$25,000- 34,999	14.2	(10.7-17.7)	16.7	(13-20.4)	73.1	(68.8-77.4)	63.2	(58.7-67.7)
$35,000- 49,999	8.8	(6.4-11.2)	7.6	(5.4-9.8)	75.0	(71.5-78.5)	71.9	(68.4-75.4)
$50,000- 74,999	3.1	(1.7-4.5)	4.3	(2.7-5.9)	79.4	(76.3-82.5)	71.2	(67.9-74.5)
$75,000+	1.7	(0.9-2.5)	2.0	(1.2-2.8)	78.0	(75.5-80.5)	72.3	(69.8-74.8)

6. CARDIOVASCULAR DISEASES

Background

Cardiovascular diseases (CVD) refer in principle to any or all of the many disorders that can affect the circulatory system. CVD most often means coronary heart disease, heart failure, and stroke, taken together, which are the circulatory system disorders of greatest public health concern in the United States today. Heart disease most often includes coronary heart disease, heart attack (myocardial infarction), or heart failure. Stroke refers to a sudden impairment of brain function, sometimes termed brain attack, which results from interruption of circulation to one or another part of the brain. Heart disease and stroke are mainly consequences of clogged arteries (atherosclerosis) and high blood pressure (hypertension).

Heart disease and stroke are the most common cardiovascular diseases. Although deaths from these diseases has fallen in the past few years, heart disease and stroke are still leading causes of death in the United States, accounting for nearly a third of all annual deaths.[1]

Deaths are only part of the picture. More than 80 million Americans currently live with a cardiovascular disease. For example, coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly 1 million Americans. Each year, 15 to 30 per cent of stroke survivors are permanently disabled. More than 7 million hospitalizations each year are because of cardiovascular diseases.[2]

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States was estimated to be $444 billion in 2010, including health care expenditures and lost productivity from death and disability.[1]

In Iowa, heart disease is the number one cause and stroke is the fourth leading cause of death. Even so, deaths from heart disease have steadily declined. The rate per 100,000 population has gone from 365.2 in 1981 to 219.6 in 2011. The rate of deaths from stroke has gone from 90.5 in 1981 to 46.7 in 2011.[3] These decreases are mainly a result of emergency response, medicines, surgical procedures and improved systems of care after an acute event.

At the same time mortality has declined, the BRFSS is documenting noteworthy increases in many risk factors that lead to heart disease and stroke. Reducing cardiovascular disease risk requires an integrated strategy that includes:

1) Lifestyle behavior change -- weight management; increased physical activity; no tobacco use; a low-fat, low-cholesterol diet with moderate sodium, sugar and alcohol intake; and control of high blood cholesterol, elevated blood pressure, and diabetes.

2) Community environmental support such as population screening to identify individuals with high levels of blood cholesterol, blood pressure, blood glucose, and other individuals at risk for heart disease. Community support also includes interventions that teach the skills necessary for behavior change that make living a healthier life easier.

One popular example is the establishment and upkeep of bicycle trails for use by the public.

3) Development of public policies that encourage healthy lifestyle behaviors. These may be implemented in the form of laws, regulations, standards, or guidelines that contribute to setting these and other social and environmental conditions. For example, dietary patterns result from the influences of food production policies, marketing practices, product availability, cost, convenience, knowledge, choices that affect health, and preferences that are often based on early-life habits.[1]

Cardiovascular Diseases Results

In 2013, 4.7 percent of adult Iowans had been told by a doctor that they had had a heart attack or myocardial infarction; 4.6 percent had been told they had coronary heart disease or angina; and 2.8 percent had been told they had a stroke. Although these figures may seem small, they represent around 110,000 Iowans with a heart attack or heart disease and 65,000 with a stroke. About 8.5 percent of Iowans reported being told they had any of the three conditions.

Table 6.1 shows the distribution of these conditions by demographic groups. To get at all heart disease conditions, myocardial infarction and coronary heart disease/angina are combined when looking at the influence of various demographic factors.

More cardiovascular conditions were experienced by men, older people, people with lower education and people with lower household incomes, and non-Hispanics. Age is the variable with the most impact on having had these conditions. Less than two percent of those under age 45 reported a heart condition, while 22 percent of those 75 years or older reported a heart condition and 27 percent reported any of the three cardiovascular conditions. There was no sex difference for having had a stroke.

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

Taking aspirin is a simple thing people can do to prevent heart attack and stroke. When asked if they take aspirin every day, 26.9% of Iowans age 35 years and older said they did. The majority of these were 45 years old or older. Only 8% of those who did not take aspirin reported any sort of health problem that would make taking aspirin unsafe for them.

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Table 6.1: Prevalence Among Iowans of Heart Attack, Heart Disease, and Stroke, 2013

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	6.9	(6.3-7.5)	2.8	(2.4-3.2)	8.5	(7.8-9.2)
SEX						
Male	8.7	(7.7-9.7)	2.8	(2.2-3.4)	10.2	(9.1-11.3)
Female	5.1	(4.4-5.8)	2.8	(2.2-3.4)	6.9	(6.1-7.7)
RACE/ETHNICITY						
White/Non-Hisp.	7.1	(6.5-7.8)	3.0	(2.6-3.4)	8.9	(8.2-9.6)
Black/Non-Hisp.	3.8	(0.3-7.3)	1.6	(0-3.4)	5.1	(1.2-9)
Other/Non-Hisp.	4.2	(1.3-7)	2.0	(0-4.2)	4.8	(1.7-7.8)
Hispanic	5.8	(2-9.5)	1.3	(0.1-2.5)	6.8	(2.9-10.7)
AGE						
18-24	0.0	(0-0)	0.2	(0-0.6)	0.2	(0-0.6)
25-34	1.0	(0-2)	0.5	(0-1.3)	1.0	(0-2.1)
35-44	2.0	(0.9-3.2)	0.9	(0.3-1.5)	2.7	(1.4-4)
45-54	3.7	(2.5-4.9)	2.3	(1.3-3.3)	5.4	(3.9-6.9)
55-64	10.5	(8.6-12.4)	3.9	(2.7-5.1)	12.7	(10.7-14.7)
65-74	16.9	(14.5-19.4)	5.3	(3.8-6.7)	20.3	(17.7-22.9)
75+	22.0	(19.4-24.6)	9.5	(7.6-11.4)	27.0	(24.2-29.7)
EDUCATION						
Less Than H.S.	14.6	(11-18.1)	6.3	(3.9-8.7)	16.9	(13.1-20.7)
H.S. or G.E.D.	8.2	(7.2-9.3)	3.3	(2.5-4.1)	10.4	(9.1-11.6)
Some Post-H.S.	4.8	(4-5.6)	2.3	(1.7-2.9)	6.2	(5.3-7.2)
College Graduate	4.7	(3.8-5.6)	1.5	(0.9-2.1)	5.8	(4.8-6.7)
HOUSEHOLD INCOME						
Less than $15,000	11.9	(8.7-15.2)	7.3	(4.8-9.8)	15.4	(11.8-18.9)
$15,000- 24,999	10.1	(8.2-12)	4.0	(2.8-5.2)	12.5	(10.4-14.5)
$25,000- 34,999	9.0	(7.9-10.1)	3.4	(2-4.8)	11.3	(9.1-13.5)
$35,000- 49,999	6.9	(5.4-8.5)	2.9	(1.7-4.1)	8.6	(6.9-10.3)
$50,000- 74,999	5.9	(4.4-7.4)	1.5	(0.7-2.3)	6.7	(5.2-8.3)
$75,000+	3.0	(2.3-3.8)	1.0	(0.4-1.6)	3.8	(2.9-4.6)

7. HYPERTENSION AWARENESS

Background

Blood pressure is the force of blood against the walls of arteries. If this pressure rises and stays high over time, it can damage the body in many ways. High blood pressure (HBP) is a serious condition that can lead to coronary heart disease, heart failure, stroke, kidney failure, and other health problems.[3]

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

High blood pressure, which often has no symptoms, is a major risk factor for heart disease and stroke. Lowering of diastolic blood pressure by a mere 2 mm could result in a 17 percent decrease in the prevalence of hypertension, a 6 percent decrease in coronary artery disease, and a 15 percent reduction in stroke.[1]

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

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

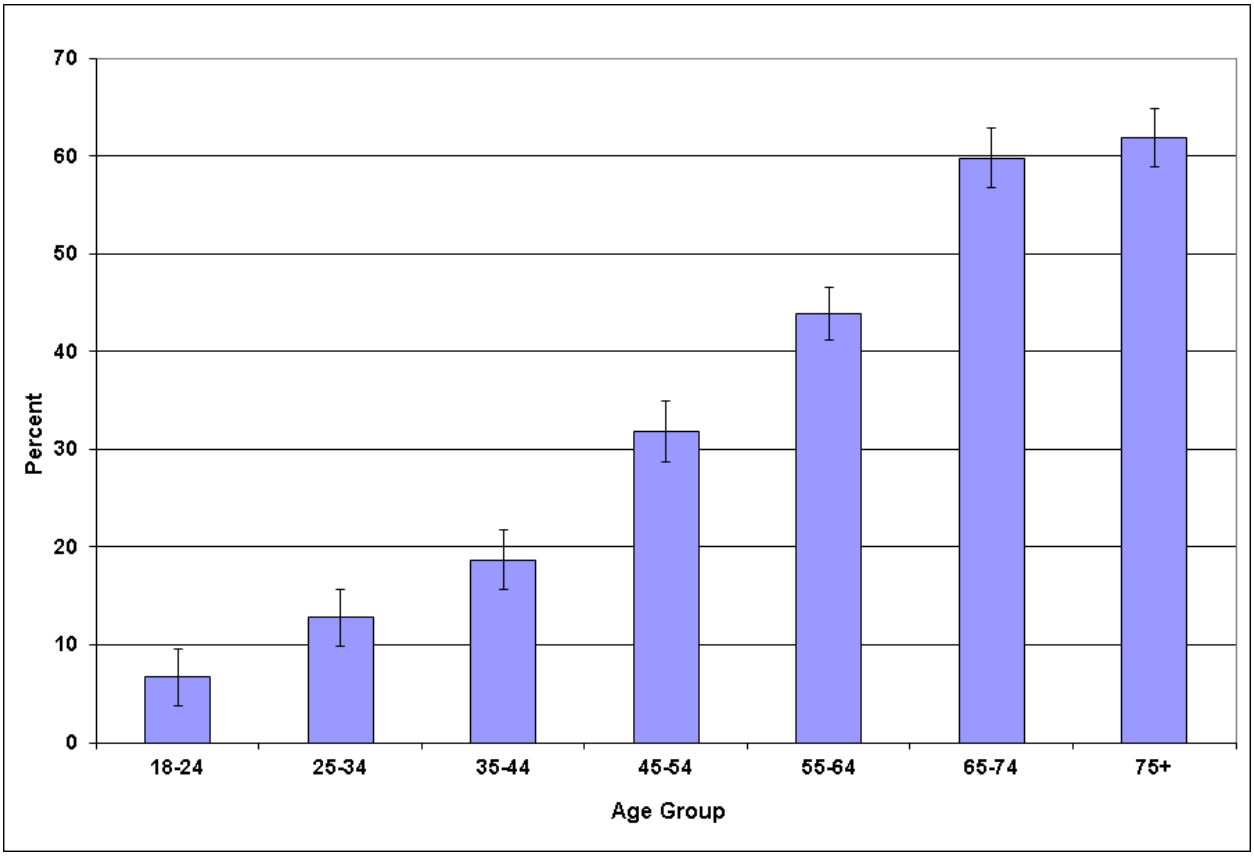
Hypertension Awareness Results

In 2013, 31.4 percent of all respondents reported ever being told they had high blood pressure. An additional 0.5 percent reported being told they had borderline or pre-hypertension. This hypertension figure is larger than the 29.9 percent reporting high blood pressure found in 2011.

The prevalence of reporting a high blood pressure diagnosis was greater for males, with lower levels of education and with lower levels of household income. People who were Non-White or Hispanics reported a lower percentage of being told they had high blood pressure (see table 7.1).

Age had the greatest impact on the percentage of respondents reporting high blood pressure. The highest percentage was 61.9 percent among respondents age 75 years and older, while the lowest was among those age 18 to 24 (6.7%) (see figure 7.1).

Figure 7.1: Iowans Ever Told Blood Pressure Is High by Age, 2013



Of those reporting high blood pressure, 78.1 percent reported taking medication for their condition. Like high blood pressure itself, this percentage increases steadily with age reaching a high of 94.1 percent for those 75 years old and over. Unlike high blood pressure itself, more females with high blood pressure took blood pressure medicine than males (83.1% versus 73.6%), while education and income showed no systematic relation to use of blood pressure medication.

Comparison with Other States

Among all the states and the District of Columbia, prevalence of reported hypertension ranged from 24.2 percent to 41 percent. The prevalence for Iowa fell exactly on the median value at 31.4 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 less than what is currently the case in Iowa (31.4%). Another *Healthy People 2020* goal is for 77.4 percent of people with high blood pressure to be taking medication to lower it. The *Healthy Iowans* goal

for this is a rate of 75 percent. Iowa's figure was 78.1 percent. This is higher than both the *Healthy Iowans* goal and the *Healthy People 2020* goal.

Table 7.1: Percentage of Iowans Told Blood Pressure Is High, 2013

DEMOGRAPHIC GROUPS	%	C.I. (95%)
TOTAL	31.4	(30.2-32.6)
SEX		
Male	33.4	(31.4-35.4)
Female	29.4	(27.8-31)
RACE/ETHNICITY		
Non-Hispanic White	31.9	(30.5-33.3)
Non-White or Hispanic	25.5	(20.5-30.5)
AGE		
18-24	6.7	(3.8-9.6)
25-34	12.8	(9.9-15.7)
35-44	18.7	(15.6-21.8)
45-54	31.8	(28.7-34.9)
55-64	43.9	(41.2-46.6)
65-74	59.8	(56.8-62.9)
75+	61.9	(58.9-64.9)
EDUCATION		
Less than H.S.	36.9	(31.4-42.4)
H.S. or G.E.D.	38.6	(36.2-41)
Some Post-H.S.	27.1	(24.9-29.3)
College Graduate	25.2	(23.2-27.2)
HOUSEHOLD INCOME		
Less than $15,000	37.9	(32.8-43)
$15,000- 24,999	37.6	(34.1-41.1)
$25,000- 34,999	38.2	(34.1-42.3)
$35,000- 49,999	31.3	(28-34.6)
$50,000- 74,999	26.0	(23.1-28.9)
$75,000	25.1	(22.7-27.5)

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8. CHOLESTEROL AWARENESS

Background

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

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

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

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

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

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

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

Table 8.1: Blood Cholesterol in Iowans, 2013

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	(74.3-77.1)	41.1	(39.5-42.7)
SEX				
Male	70.6	(68.4-72.8)	42.5	(40.1-44.9)
Female	80.6	(78.8-82.4)	39.8	(37.8-41.8)
RACE/ETHNICITY				
White/Non-Hisp.	76.7	(75.3-78.1)	41.8	(40.2-43.4)
Non-White or Hispanic	66.1	(60.1-72)	34.0	(27.2-40.8)
AGE				
18-24	34.2	(28.7-39.7)	8.4	(3.3-13.5)
25-34	60.4	(56.1-64.7)	19.1	(14.8-23.4)
35-44	74.9	(71.6-78.2)	26.5	(22.6-30.4)
45-54	85.5	(83-88)	43.0	(39.7-46.3)
55-64	90.8	(89-92.6)	52.4	(49.5-55.3)
65-74	93.3	(91.5-95.1)	61.9	(58.9-65)
75+	94.9	(93.6-96.2)	54.4	(51.3-57.6)
EDUCATION				
Less than H.S.	68.1	(62-74.2)	51.4	(44.5-58.3)
H.S. or G.E.D.	75.2	(72.8-77.6)	46.4	(43.9-48.9)
Some Post-H.S.	73.2	(70.7-75.7)	37.6	(35.1-40.1)
College Graduate	83.1	(80.9-85.3)	35.6	(33.2-38)
HOUSEHOLD INCOME				
Less than $15,000	61.3	(55.6-67)	54.3	(48-60.6)
$15,000- 24,999	72.5	(68.6-76.4)	41.9	(37.8-46)
$25,000- 34,999	72.6	(68.1-77.1)	47.5	(42.8-52.2)
$35,000- 49,999	75.7	(72.2-79.2)	42.8	(38.9-46.7)
$50,000- 74,999	79.0	(75.7-82.3)	38.1	(34.6-41.6)
$75,000+	83.6	(81.1-86.1)	34.6	(31.9-37.3)

Cholesterol Awareness Results

In 2013, the percentage of Iowans reporting ever having their cholesterol checked was 79.2 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 higher household income were more likely to report having a blood cholesterol test within the last five years. Hispanics and non-White races were less likely to have a blood cholesterol test in the past five years (see table 8.1).

Of the respondents who had their blood cholesterol tested, 41.1% reported that they had ever been told by a doctor or other health professional that their blood cholesterol was high. This figure is higher than the 38.1 percent found in 2011.

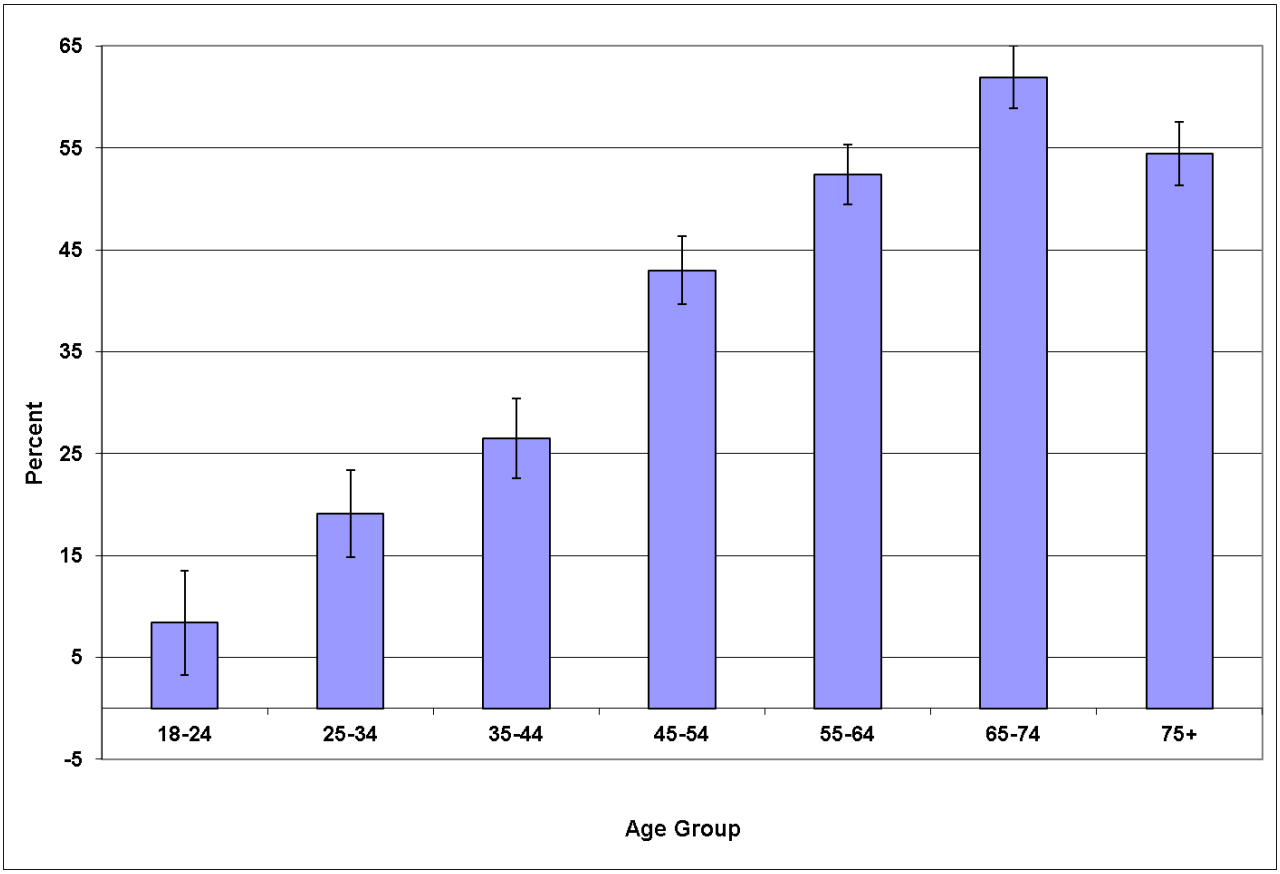
Age made a considerable difference in reporting high cholesterol. Among 18 to 24-year olds only 8.4 percent reported high cholesterol, while 61.9 percent of those age 65 to 74 reported high cholesterol (see figure 8.1). Women and people with higher education and income were somewhat less likely to report high cholesterol as were non-Whites or Hispanics (see table 8.1).

Comparison with Other States

The percentage of people having their cholesterol checked within the past five years among all the states and the District of Columbia ranged from 68.3 percent to 84 percent. Iowa's value of 75.7 percent was below the median of 76.4 percent.

In terms of those tested being told their cholesterol was high, the range was from 33.4 percent to 44.4 percent. Iowa's value of 41.1 percent was much higher than the median of 38.4 percent.

Figure 8.1: Iowans Ever Told Their Cholesterol Was High by Age, 2013



Health Objectives for the Nation

Based on the national health objectives for the year 2020, 82.1 percent of adults should have their blood cholesterol checked within the past five years. In 2013, only 75.7 percent of Iowans age 18 and older have had their blood cholesterol checked within the past five years. High cholesterol should be experienced by only 13.5 percent of all people over age 20 according to the *Healthy People* 2020 goals. The level in Iowa was more than double that amount at 34.5 percent.

References

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9. OVERWEIGHT AND OBESITY

Background

Overweight and obesity are probably the most serious health problems in America today. Obesity is a condition linked to risk factors for heart disease, cancer, and stroke, which are all leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis.[5] Obesity has been increasing so rapidly that it may be regarded as an epidemic.

The origin of overweight involves many factors. It reflects inherited, environmental, cultural, and socioeconomic traits. The increase in the prevalence of being overweight is a result of a shift in energy balance in which energy taken in from food is greater than energy used in physical activity.[1]

Strategies to combat obesity would seek to advance policies that

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

Exact measurements of body fat require sophisticated equipment. To eliminate this problem, obesity is often estimated from weight standards that are adjusted for body frame. Carefully measured weight and height remain the most easily performed and useful means to determine nutritional status and to predict mortality for the general population.[2]

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

The medical care costs of obesity in the United States are staggering. In 2008 dollars, these costs totaled about $147 billion.[2] There are other costs as well that are more difficult to estimate. For instance, obese people miss more work. Because people are fatter, airlines spend more on jet fuel, and the obese themselves spend more on gas for their cars.[3] The obesity epidemic is a big contributor to the skyrocketing health care costs in the United States. Because of the large number of people in the Baby Boomer generation and its high rate of obesity, obesity-related costs to Medicare are likely to grow significantly as this population ages. It is estimated that Iowa could save $5.7 billion by 2030 if BMI were lowered by five percent.[4]

Overweight & Obesity Results

The BRFSS data show that in 2013, 35.7 percent of non-pregnant adult Iowans were overweight and 31.3 percent were obese, based on BMI. The combined percentage of individuals who were overweight or obese was 67 percent. This combined prevalence is greater than in 2012 when 34.3 percent of non-pregnant adult Iowans were overweight and 30.4 percent were obese.

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 late middle age after which a decline is seen in obesity. Although more males are more obese than females in all age groups, this difference varies widely; between age 35 and 44 they are nearly equal. Obesity prevalence shows a very sharp decrease for both sexes in the 75 years of age and older group (see figure 9.1). There is a much stronger sex difference for overweight than for obesity. More men are overweight than women at all age groups and there is no decline at the oldest age group.

The effects of income are different for overweight and obesity. The percentage overweight tends to be lower at lower incomes but increase very gradually at incomes higher than $25,000. On the other hand, obesity is higher when income is lower (see table 9.1 and figure 9.2).

Figure 9.1: Obesity by Age and Sex, 2013

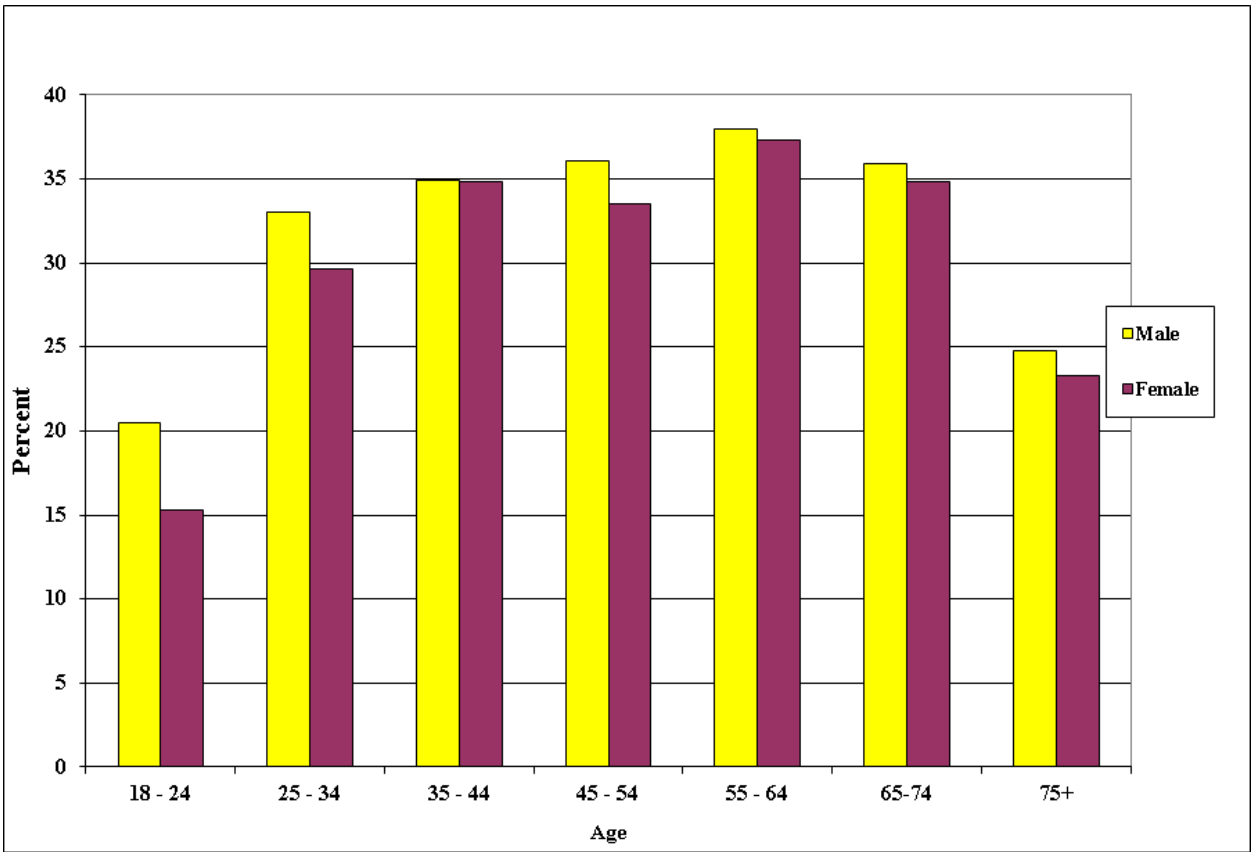


Table 9.1: Overweight and Obese Iowans Based on BMI, 2013

DEMOGRAPHIC GROUPS	Overweight		Obesity		Combined	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	35.7	(34.3-37.2)	31.3	(29.9-32.7)	67.0	(65.6-68.5)
SEX						
Male	41.0	(38.8-43.2)	32.4	(30.4-34.4)	73.4	(71.4-75.4)
Female	30.2	(28.2-32.2)	30.1	(28.3-31.9)	60.3	(58.3-62.3)
RACE/ETHNICITY						
White/non-Hisp.	35.9	(34.5-37.3)	31.0	(29.6-32.4)	66.8	(65.4-68.2)
Non-White or Hispanic	33.8	(27.8-39.8)	33.5	(27.6-39.5)	67.3	(61-73.6)
AGE GROUP						
18 - 24	27.2	(22.1-32.3)	18.1	(13.8-22.4)	45.2	(39.5-50.9)
25 - 34	34.5	(30.4-38.6)	31.5	(27.4-35.6)	66.0	(61.9-70.1)
35 - 44	36.4	(32.5-40.3)	34.8	(30.9-38.7)	71.2	(67.7-74.7)
45 - 54	37.3	(34-40.6)	34.8	(31.7-37.9)	72.1	(69.2-75)
55 - 64	36.6	(33.9-39.3)	37.7	(35-40.4)	74.3	(71.9-76.7)
65-74	37.9	(34.8-40.9)	35.3	(32.3-38.4)	73.2	(70.4-76)
75+	41.2	(38.1-44.3)	23.9	(21.2-26.6)	65.2	(62.2-68.1)
EDUCATION						
Less than H.S.	34.0	(28.1-39.9)	32.2	(26.5-37.9)	66.2	(60.3-72.1)
H.S. or G.E.D.	36.9	(34.5-39.3)	33.0	(30.6-35.4)	69.9	(67.5-72.3)
Some Post-H.S.	35.2	(32.7-37.7)	32.4	(29.9-34.9)	67.6	(64.9-70.3)
College Graduate	35.7	(33.3-38.1)	26.7	(24.5-28.9)	62.4	(59.9-64.9)
HOUSEHOLD INCOME						
Less than $15,000	31.5	(26.2-36.8)	37.1	(31.8-42.4)	68.6	(63.3-73.9)
$15,000- 24,999	36.0	(32.1-39.9)	33.0	(29.3-36.7)	69.0	(65.3-72.7)
$25,000- 34,999	36.6	(32.3-40.9)	32.1	(28-36.2)	68.7	(64.4-73)
$35,000- 49,999	35.8	(32.1-39.5)	33.1	(29.6-36.6)	68.9	(65.2-72.6)
$50,000- 74,999	37.9	(34.4-41.4)	31.4	(28.1-34.7)	69.3	(65.8-72.8)
$75,000+	37.6	(34.9-40.3)	29.4	(26.7-32.1)	67.0	(64.3-69.7)

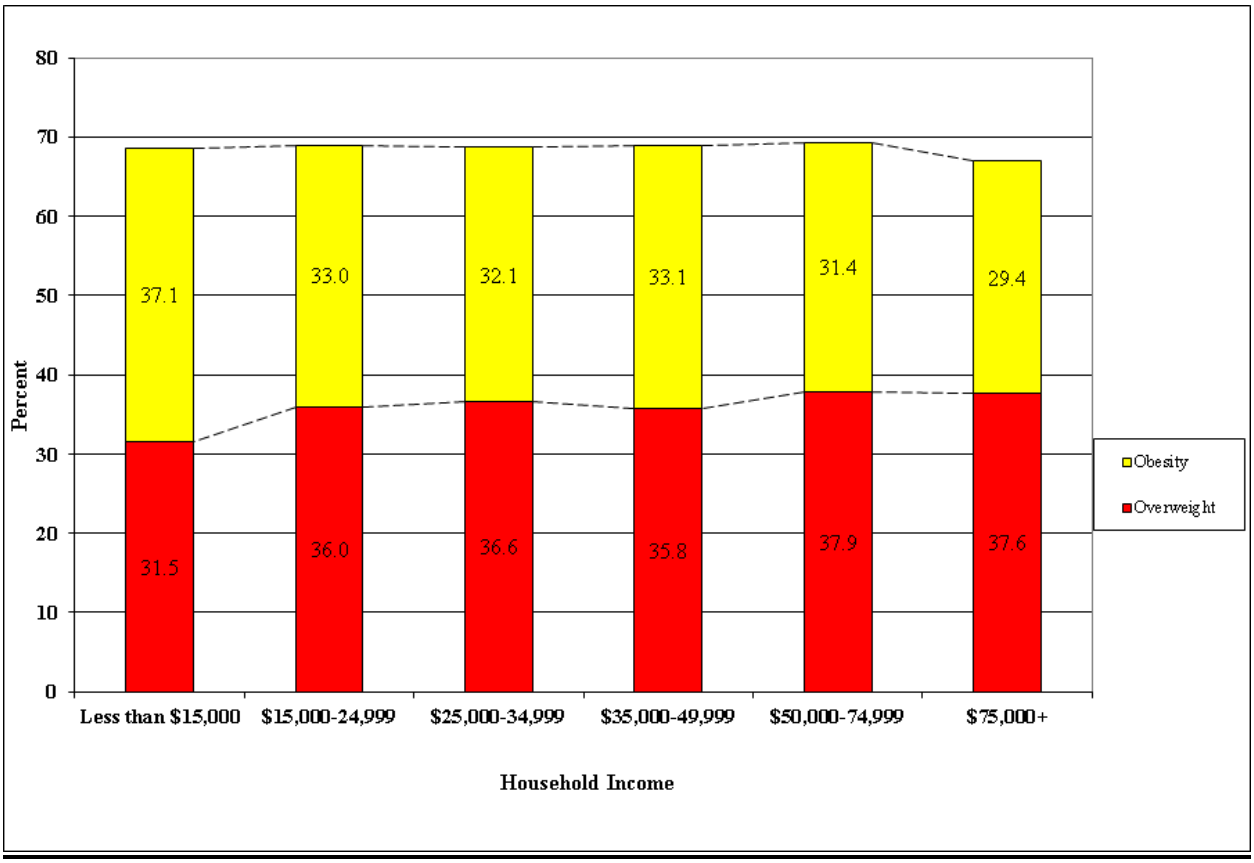
The effect of race/ethnicity is also reversed for overweight and obesity. More White non-Hispanics are overweight, but more non-White or Hispanics are obese.

Respondents in the demographic group with the highest prevalence over their healthy weight (combined overweight and obesity) were55 to 64 years old with a prevalence rate of 74.3 percent. The lowest prevalence group over their healthy weight was in the 18 to 24-year old age group (45.2%).

Comparison with Other States

Iowa's figure of 31.3 percent obese in 2013 was well above the U.S. median of 29.4 percent. The range of prevalence among the 50 states and District of Columbia for obesity was from a low of 21.3 percent to a high of 35.1 percent.

Figure 9.2: Overweight and Obese Iowans by Income, 2013



Health Objectives for Iowa and the Nation

The *Healthy People 2020* objectives for the nation to be achieved on weight call for increasing the prevalence of healthy weight (neither overweight nor obese) to 33.9 percent among adults age 20 years and older. Iowa is well below this target having 30.5 percent at healthy weight. The *Healthy People* 2020 goal for obesity is 30.6 percent. Iowa has a prevalence of 32.1 percent for those over age 20. This does not reach the *Healthy People* 2020 target. The *Healthy Iowans* goal for obesity is 27 percent. Iowa's figure of 31.3 percent for all adults fails to achieve this goal.

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10. DIABETES

Background

Diabetes mellitus is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action, or both.[1] Diabetes can be associated with serious complications and premature death.

Diabetes rates in the United States are approaching epidemic proportions. Diabetes may affect persons of all ages, although prevalence increases with age. More than 29 million people in the U.S. have diabetes, up from the previous estimate of 26 million in 2010. One in four people with diabetes doesn't know he or she has it.[3]

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

The good news is that research studies have found that positive lifestyle changes can prevent or delay the onset of Type 2 diabetes among high–risk adults. Lifestyle interventions include diet modification, weight loss and moderate-intensity physical activity (such as walking for 2 and one half hours each week).

The complications of diabetes are many and severe. They can include heart disease, stroke, high blood pressure, kidney disease, blindness, diseases of the nervous system, dental disease, complications of pregnancy, lower extremity amputations, biochemical imbalances such as ketoacidosis and diabetic coma, and lower resistance to other diseases. However, complications can be minimized when diabetes is diagnosed early and patients are taught to self-manage their disease through blood glucose control, weight control, taking medications appropriately, decreasing unhealthy lifestyles such as smoking, and implementing healthy lifestyle interventions.[1]

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

Diabetes Results

In 2013, 9.3 percent of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This is slightly lower than in 2012 when 9.7 percent of Iowans had ever been told that they have diabetes.
Table 10.1 shows that the rate of diabetes is much higher when respondents are older, have less education, and have a lower household income. People in the demographic group with the highest percentage of diagnosed diabetics were age 65 to 74 years old (24.4%), while the group with the lowest percentage is in the age group of 18 to 24 years (0.9%) (see table 10.1).

When asked if they had a test for diabetes in the past three years, 52.4 percent said they had.

Table 10.1: Iowans Ever Told They Had Diabetes, 2013

DEMOGRAPHIC GROUP	%	C.I. (95%)
TOTAL	9.3	(8.5-10.1)
SEX		
Male	9.3	(8.1-10.5)
Female	9.4	(8.4-10.4)
RACE/ETHNICITY		
White/Non-Hispanic	9.5	(8.7-10.3)
Black/Non-Hispanic	7.8	(2.5-13.1)
Other/Non-Hispanic	8.8	(4.3-13.3)
Hispanic	6.5	(2.6-10.4)
AGE GROUP		
18-24	0.9	(0-2.1)
25-34	2.1	(0.9-3.3)
35-44	4.2	(2.6-5.8)
45-54	8.1	(6.3-9.9)
55-64	13.6	(11.6-15.6)
65-74	24.4	(21.7-27.2)
75+	19.2	(16.7-21.6)
EDUCATION		
Less than H.S.	14.2	(10.7-17.7)
H.S. or G.E.D.	10.7	(9.5-11.9)
Some Post-H.S.	8.6	(7.2-10)
College Graduate	6.4	(5.4-7.4)
HOUSEHOLD INCOME		
Less than $15,000	15.1	(11.6-18.6)
$15,000- 24,999	14.8	(12.4-17.2)
$25,000- 34,999	12.1	(9.6-14.6)
$35,000- 49,999	9.2	(7.4-11)
$50,000- 74,999	6.8	(5.2-8.4)
$75,000+	4.4	(3.4-5.4)

More attention has been given lately to pre or borderline diabetes. People who catch their diabetes before it is fully developed stand a good chance of avoiding it altogether by making lifestyle changes. In 2013, 6.2 percent of non-diabetic respondents were told they had pre-diabetes.

Among individuals who had been told they had diabetes, the highest percentage reported being first diagnosed at age 46 to 60 years old (41.8%). The age group in which the least reported being first diagnosed was less than age 16 years (3.4%).

Of those ever told by a physician that they have diabetes, 33.7 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 (26.3%), while 11.9 percent said never.

Respondents told by a physician they had diabetes were asked how many times they had their blood sugar checked in the past 12 months. About 61.9 percent checked their blood sugar one to five times a day themselves or with the help of a friend or family member. About 11.5 percent reported never testing their blood sugar. Around 90.9 percent had it checked at least

once within the past year by a health professional through a glycosylated hemoglobin test, frequently referred to as an A1C. Around 7.4 percent reported not having had the A1C test. Another 1.7 percent reported they had never heard of such a test. It is recommended that this test be done at least twice a year and at least three months apart.

Individuals with diabetes should check their feet daily for sores and irritations and should have them checked at least once a year by their health care provider. When asked how often they check their feet, 60.7 percent of respondents who were ever diagnosed with diabetes claimed to have checked them at least daily. Another 15 percent said they never checked them. Around 78.8 percent of respondents with feet reported they had their feet checked by a health professional at least once within the past 12 months.

Because persons with diabetes are at high risk of eye complications leading to blindness, regular eye examinations, including pupil dilation, are important. Respondents who reported ever having diabetes were asked when they had their last eye exam where their pupils were dilated. About 71.6 percent reported within the last year, while 4.3 percent reported never having such an examination. Among Iowans with diabetes, 18.8 percent had been told it had affected their eyes.

Learning how to manage diabetes is very important to those who have the condition to keep it from leading to deteriorating health. Only 62.2 percent of those with diabetes in 2013 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 9.6 percent in 2013. Prevalence ranged from 6.5 percent to 13.8 percent. The figure for Iowa was somewhat better than the median at 9.3 percent.

Health Objectives for Iowa and the Nation

Healthy People 2020 has a goal of 58.7 percent of people with diabetes having a dilated eye exam. *Healthy Iowans* has a goal of 85 percent. Iowa's figure of 71.6 percent is better than the national goal but less than the Iowa goal.

Healthy People 2020 also has the goal for the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year to be 71.1 percent. Iowa surpasses this goal with 77.1 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 63.4 percent.

In terms of the *Healthy People 2020* goal for the proportion of persons with diagnosed diabetes who receive formal diabetes education, Iowa is very close to the mark. The goal calls for 62.5 percent to have such education, while Iowa's prevalence is 62.2 percent.

References

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11. RESPIRATORY DISEASES

Background

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

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

This chronic disease affects nearly 24 million Americans of all ages.[2] Asthma is the most common chronic disease of childhood. About seven million children in the U.S. suffer from asthma. Prevalence among adults and children has increased sharply since 1980.[2] More than 200,000 Iowans now have asthma of which 148,000 are adults.[1]

The causes of asthma are not completely understood, but are most likely a combination of personal and environmental risk factors. Those risk factors for asthma include family history of asthma and allergies, acute respiratory infections, exposure to indoor air pollution (tobacco smoke, animal dander, dust mites, cockroaches, occupational exposures to more than 250 substances), outdoor air pollution (burning leaves, pollen, air pollutants), obesity, and lack of exercise. Diet and early exposure to certain infectious agents may provide some protection. After developing asthma, a person often becomes especially sensitive to any exposures to the listed environmental risk factors.[3]

Asthma is a leading cause of inpatient admission and of unscheduled emergency department and physician office visits. Many of these admissions and visits could be avoided if medical and self-management of asthma were carried out according to national guidelines. Self-management of asthma involves the use of drugs and the avoidance of known triggers. People who suffer from asthma are encouraged to develop an asthma management plan.

Poor asthma control continues to be associated with increased emergency department visits, hospitalizations, and medical costs. The estimated total cost of asthma to society, including medical expenses ($50.1 billion per year), loss of productivity resulting from missed school or work days ($3.8 billion per year), and premature death ($2.1 billion per year) was $56 billion (2009 dollars) in 2007; a $3 billion (5.7%) increase from 2002. Medical expenses associated with asthma were $3,259 per person per year during 2002--2007.[2]

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

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

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

Respiratory Diseases Results

In 2013, 12.2 percent of Iowans reported ever being diagnosed by a physician with asthma. About 7.8 percent of Iowans currently have asthma, and 4.1 percent formerly had asthma.[*] This is about the same as in 2012 when 11.7 percent of Iowans reported ever having asthma.

Table 11.1: Iowans Currently and Formerly Having Asthma, 2013

DEMOGRAPHIC GROUPS	Current Asthma		Former Asthma	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	7.8	(7-8.6)	4.1	(3.5-4.7)
SEX				
Male	5.5	(4.5-6.5)	4.9	(3.9-5.9)
Female	9.9	(8.7-11.1)	3.3	(2.5-4.1)
RACE/ETHNICITY				
White/non-Hispanic	7.9	(7.1-8.7)	4.1	(3.4-4.8)
Black Non-Hispanic	4.7	(0.2-9.3)	3.4	(0.4-6.4)
Other Non-Hispanic	7.6	(2.7-12.6)	5.5	(0.3-10.8)
Hispanic	7.5	(2.9-12)	2.0	(0.1-4)
AGE				
18-24	10.0	(6.7-13.3)	9.8	(6.5-13.1)
25-34	7.4	(5.2-9.6)	5.2	(3.4-7)
35-44	8.0	(5.8-10.2)	3.4	(2-4.8)
45-54	7.3	(5.7-8.9)	3.2	(2-4.4)
55-64	7.2	(5.8-8.6)	2.9	(1.9-3.9)
65-74	7.8	(6.1-9.5)	1.9	(1.1-2.7)
75+	6.6	(5.2-8.1)	1.6	(0.9-2.3)
EDUCATION				
Less than H.S.	11.5	(7.6-15.4)	5.3	(2.2-8.4)
H.S. or G.E.D.	6.3	(5.1-7.5)	3.4	(2.4-4.4)
Some Post-H.S.	9.1	(7.5-10.7)	4.4	(3.2-5.6)
College Graduate	6.1	(4.9-7.3)	4.0	(3-5)
HOUSEHOLD INCOME				
Less than $15,000	14.8	(10.9-18.7)	3.3	(1.5-5.1)
$15,000- 24,999	10.5	(8.1-12.9)	3.9	(2.1-5.7)
$25,000- 34,999	7.7	(5.2-10.2)	5.3	(2.9-7.7)
$35,000- 49,999	6.0	(4.4-7.6)	3.9	(2.5-5.3)
$50,000- 74,999	4.8	(3.4-6.2)	4.0	(2.4-5.6)
$75,000+	5.7	(4.3-7.1)	3.3	(2.3-4.3)

[*] Figures do not sum exactly since For some who had ever had asthma, their current status could not be determined.

In Iowa, more women, young adults and Iowans with lower education levels and lower household income, currently have asthma. The highest current asthma prevalence was among those with annual household incomes less than $15,000 (14.8%), while the lowest prevalence was for those with incomes of $50,000 to $75,000 and African Americans (4.8%) (see table 11.1).

Table 11.2
Iowans Who Have Been Told They Have COPD

DEMOGRAPHIC GROUPS	COPD	
	%	C.I. (95%)
TOTAL	6.2	(5.6-6.8)
SEX		
Male	5.9	(4.9-6.9)
Female	6.6	(5.6-7.6)
RACE/ETHNICITY		
White/Non-Hispanic	6.1	(5.5-6.7)
Black/Non-Hispanic	11.9	(3.5-20.3)
Other/Non-Hispanic	12.0	(6.4-17.6)
Hispanic	1.9	(0-4.3)
AGE		
18-24	1.7	(0.3-3.1)
25-34	3.9	(1.9-5.9)
35-44	3.3	(1.7-4.9)
45-54	5.8	(4.2-7.4)
55-64	7.7	(6.1-11.3)
65-74	13.1	(11-15.2)
75+	12.1	(11.9-14.4)
EDUCATION		
Less than H.S.	11.7	(8.6-14.8)
H.S. or G.E.D.	6.8	(5.8-7.8)
Some Post-H.S.	6.8	(5.4-8.2)
College Graduate	2.2	(1.6-2.8)
HOUSEHOLD INCOME		
Less than $15,000	18.3	(14.4-22.2)
$15,000- 24,999	12.5	(10-15)
$25,000- 34,999	8.1	(5.9-10.3)
$35,000- 49,999	4.3	(2.9-5.7)
$50,000- 74,999	2.6	(1.6-3.6)
$75,000+	1.8	(1-2.6)

Starting in 2006, the BRFSS has collected a considerable amount of information from respondents who reported they or their children had ever had asthma in a special callback survey. Most of the data from that survey is not included in this report, but will be presented separately. From the 2012 callback survey, however, it was found that 11.5 percent of adults with asthma had asthma-related emergency or urgent care visits.

When asked if they had been told they had COPD, 6.2 percent said they had. This is the same as was found in 2012. COPD was more common among women, older people, people with less education, and people with lower household income. Prevalence among Blacks and other non-Hispanic respondents was higher, but Hispanics were less likely to report COPD (see Table 11.2). The highest prevalence of having COPD was found among those with annual household incomes less than $15,000 (18.3%). Respondents age 18 to 24 years, Hispanics, and Iowans with annual household incomes of $75,000 or more all had a prevalence of COPD below two percent.

Comparison with Other States

While Iowa reported 7.8 percent of the entire adult population currently suffering from asthma, the median for the nation was 9 percent. Iowa's asthma prevalence was well below the median. Prevalence ranged from a low of 7.1 percent to a high of 12 percent. Only six states had a lower prevalence of current asthma.

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12. CANCER SCREENING AND SURVIVORSHIP

Background

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

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

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

An estimated 136,800 new cases of colon and rectal cancer were expected in the United States in 2014.[2] There were estimated to be 50,310 deaths.[2] Incidence and mortality rates have been decreasing for most of the last two decades. The decline has been steeper in the most recent time period, partly due to an increase in screening, which can result in the detection and removal of colorectal polyps before they progress to cancer.[3,4]

The U.S. Preventive Services Task Force recommends that men and women who are not at special risk begin regular screening for colorectal cancer at age 50.[1] If everybody aged 50 to 75 had regular screening tests, as many as 60 percent of deaths from colorectal cancer could be prevented.

For the past 40 years, we have been fighting "a war on cancer". While cancer is still a very common disease, more people are surviving cancer. Overall, the American Cancer Society predicted 1,596,670 new cancer cases in the United States and 571,950 deaths in 2011. However, death rates for all cancer types fell by 1.9 percent a year from 2001 to 2007 in men and by 1.5 percent a year in women from 2002 through 2007.[5] Steady overall declines in cancer death rates have meant about 898,000 who would have died prematurely from cancer in the past 17 years did not.

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

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

Cancer Screening and Survivorship Results

In 2013, 6.1 percent of Iowans had ever been told they had skin cancer, while 7.1 percent reported having been told they had some other type of cancer. This is an increase from 2012 when 5.8 percent of Iowans had ever been told they had skin cancer, while 6.2 percent reported having been told they had some other type of cancer.

Skin cancer behaves somewhat differently from other types of cancers, which themselves may vary in prevalence and prognosis according to type. Most cancers, however, are more common with age. Skin cancer is more common among white non-Hispanics. It is somewhat less common among respondents with the least education and household incomes. Other cancers, on the other hand, were more common among females and lower income and education. The highest prevalence of ever having cancer was for people age 75 and over. In this age group the prevalence was 20.9 percent for skin cancer and 19.3 percent for other cancers. All racial and ethnic minorities as well as those age 18 to 24 years had a skin cancer prevalence of less than one percent, while for other cancers, only people age 18 to 24 years had anywhere near as low a prevalence (0.6%) (see table 12.1).

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

Respondents 50 years old and older reported that a health care professional talked to him or her about colorectal cancer screening in 76.8 percent of the cases. When the health care professional talked about screening, 93.2 percent recommended having a sigmoidoscopy or colonoscopy. Of the respondents who had a test recommended, 84.3 percent then had the test. Even if they had not been advised to have a sigmoidoscopy or colonoscopy, 28.4 percent had that procedure.

As for cancer survivors: the age at which a survivor had been told they had cancer was quite variable ranging from 5 to 95 years. The median age when a cancer survivor had been told they had cancer was 55 years. Over one fourth (25.1%) of cancer diagnoses had been between the ages of 60 and 73 years.

Of all the Iowa cancer survivors, 9.6 percent were currently receiving treatment.

Of all cancer survivors, 31.7 percent had received a summary of cancer treatments received. A set of instructions for follow-up was received by 69.3 percent of survivors. For about 71.3 percent these instructions were written or printed.

Health insurance was reported to have paid for all or part of cancer treatments for 95.4 percent of cancer survivors. Having health or life insurance denied because of cancer was reported by 5.5 percent of cancer survivors.

Table 12.1 Prevalence of Iowans Reporting Ever Having Cancer, 2013

DEMOGRAPHIC GROUPS	Ever Had Skin Cancer		Ever Had Other Cancer	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	6.1	(5.5-6.7)	7.1	(6.5-7.7)
SEX				
Male	6.4	(5.6-7.2)	5.4	(4.6-6.2)
Female	5.8	(5-6.6)	8.6	(7.8-9.4)
RACE/ETHNICITY				
White/Non-Hisp.	6.7	(6.1-7.3)	7.5	(6.8-8.1)
Black/Non-Hisp.	**0.0**	(0-0)	1.5	(0-3.2)
Other/Non-Hisp.	0.5	(0-0.9)	3.1	(0.6-5.5)
Hispanic	0.6	(0-1.7)	3.0	(0.5-5.4)
AGE				
18-24	0.5	(0-1.3)	0.6	(0-1.4)
25-34	1.2	(0.2-2.2)	1.5	(0.7-2.3)
35-44	1.7	(0.7-2.7)	2.2	(1.2-3.2)
45-54	3.4	(2.2-4.6)	6.1	(4.5-7.7)
55-64	7.5	(6.1-8.9)	10.2	(8.6-11.8)
65-74	14.8	(12.7-17)	15.3	(13.1-17.5)
75+	20.9	(18.4-23.4)	19.3	(17-21.7)
EDUCATION				
Less Than H.S.	4.3	(2.3-6.3)	6.8	(4.3-9.3)
H.S. or G.E.D.	6.9	(5.9-7.9)	8.9	(7.7-10.1)
Some Post-H.S.	5.3	(4.3-6.3)	6.1	(5.1-7.1)
College Graduate	6.9	(5.9-7.9)	6.1	(5.1-7.1)
HOUSEHOLD INCOME				
Less than $15,000	4.8	(2.6-7)	8.7	(6.2-11.2)
$15,000- 24,999	5.3	(4.1-6.5)	7.9	(6.5-9.3)
$25,000- 34,999	6.5	(4.9-8.1)	7.8	(6-9.6)
$35,000- 49,999	6.3	(4.9-7.7)	8.3	(6.5-10.1)
$50,000- 74,999	6.7	(5.3-8.1)	6.6	(5-8.2)
$75,000+	5.4	(4.4-6.4)	4.8	(3.8-5.8)

Only 5.7 percent of cancer survivors reported having participated in a clinical trial for treatment of their cancer.

Physical pain from cancer or treatment was reported for 6.2 percent of cancer survivors. The majority of these (75%) reported their pain was under control.

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, and other debilitating conditions.[1] 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*[2] 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. In addition, they should also 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 including drivers of cars, cyclists, and pedestrians.).
5) Developing recreational trails.
6) Continuously promoting 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 & Physical Activity Results

In 2013, 71.5 percent of respondents reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. This is significantly worse than the 76.9 percent found in 2012.

A larger proportion of younger respondents reported engaging in leisure physical activity than older respondents. The percentage of respondents who exercised also increased with education and household income. This percentage was also higher for White non-Hispanics than for other racial or ethnic groups. The lowest percentage of all examined demographic variables was for those having less than a high school education (55.4%), while the highest was for those with a college degree (84.3%) (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 including both characteristics of the activity and of the person considering expected maximum oxygen usage. For each activity the frequency of times engaged in for at least ten minutes per week and the total duration of these times is determined.

Table 13.1:
Percentage Participating in Leisure Exercise in the Past Month in Iowa, 2013

Demographic Groups	Any Leisure Physical Exercise in Past Month	
	%	C.I. (95%)
TOTAL	71.5	(70.1-72.9)
SEX		
Male	71.2	(69-73.4)
Female	71.8	(70-73.6)
RACE/ETHNICITY		
White/Non-Hisp.	72.0	(70.6-73.4)
Non-White or Hispanic.	66.4	(60.1-72.7)
AGE		
18-24	80.1	(75.2-85)
25-34	76.1	(72.2-80)
35-44	73.4	(69.7-77.1)
45-54	71.6	(68.5-74.7)
55-64	68.4	(65.7-71.1)
65-74	66.8	(63.8-69.8)
75+	61.1	(58.1-64.2)
EDUCATION		
Less than H.S.	55.4	(49.1-61.7)
H.S. or G.E.D.	63.2	(60.8-65.6)
Some Post-H.S.	74.7	(72.3-77.1)
College Graduate	84.3	(82.5-86.1)
HOUSEHOLD INCOME		
Less than $15,000	61.7	(56.2-67.2)
$15,000- 24,999	61.3	(57.4-65.2)
$25,000- 34,999	68.2	(64.1-72.3)
$35,000- 49,999	72.3	(68.8-75.8)
$50,000- 74,999	78.4	(75.5-81.3)
$75,000+	79.4	(77-81.8)

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 2013 was 46.9 percent. The percentage of respondents who met the recommended level of strengthening activity was 27.2 percent. Both recommendations were met by 17.9 percent.

The relation of meeting the recommend-ations for aerobic and strengthening activity differed among the demographic groups. The percentage of respondents reporting they had engaged in the recommended amount of aerobic activity was higher for people with higher income and higher education. It was a little higher for White non-Hispanics. Again, education made the most difference. The group with the highest percentage meeting the aerobic recommendation was college graduates (58.2%). The lowest percentage was among those who had less than a high school education (33.1%).

The strengthening recommendation was met by a higher percentage of men, White non-Hispanics, younger people, people with more education, and people with the highest incomes. The highest percentage was found among those age 18 to 24 years (44%). The lowest percentage was found among age 65 to 74 years (18.5%).

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).

Table 13.2: Percent of Iowans Receiving Recommended Levels of Physical Activity, 2013

Demographic Groups	Recommended Level of Physical Activity					
	Aerobic		Strengthening		Both Aerobic & Strength	
	%	C.I. (95%)	%	C.I. (95%)	%	C.I. (95%)
TOTAL	46.9	(45.3-48.5)	27.2	(25.8-28.6)	17.9	(16.7-19.1)
SEX						
Male	45.6	(43.2-48)	29.5	(27.3-31.7)	17.3	(15.5-19.1)
Female	48.2	(46.2-50.2)	25.0	(23.2-26.8)	18.6	(17-20.2)
RACE/ETHNICITY						
White/Non-Hisp.	47.6	(46-49.2)	27.4	(26-28.8)	18.0	(16.8-19.2)
Non-White or Hispanic.	39.8	(33.4-46.3)	23.5	(18.1-28.9)	16.9	(11.9-21.8)
AGE						
18-24	46.1	(40.2-52)	44.0	(38.3-49.7)	27.2	(22.1-32.3)
25-34	47.9	(43.4-52.4)	31.1	(27-35.2)	18.1	(14.6-21.6)
35-44	42.4	(38.5-46.3)	27.6	(24.1-31.1)	17.8	(14.9-20.7)
45-54	48.7	(45.4-52)	25.5	(22.8-28.2)	18.3	(15.9-20.7)
55-64	46.5	(43.6-49.4)	21.5	(19.1-23.9)	14.0	(12-16)
65-74	48.5	(45.3-51.7)	18.5	(16.2-20.9)	13.6	(11.5-15.7)
75+	50.6	(47.4-53.8)	19.7	(17.2-22.3)	16.4	(13.9-18.8)
EDUCATION						
Less than H.S.	33.1	(27-39.2)	20.0	(14.7-25.3)	9.5	(5.4-13.6)
H.S. or G.E.D.	40.7	(38.2-43.2)	21.0	(18.8-23.2)	13.8	(12-15.6)
Some Post-H.S.	48.6	(45.9-51.3)	30.1	(27.6-32.6)	19.6	(17.2-22)
College Graduate	58.2	(55.7-60.7)	33.9	(31.5-36.3)	24.2	(22-26.4)
HOUSEHOLD INCOME						
Less than $15,000	37.2	(31.7-42.7)	26.0	(20.7-31.3)	11.6	(7.7-15.5)
$15,000- 24,999	40.0	(35.9-44.1)	24.1	(20.4-27.8)	15.6	(12.3-18.9)
$25,000- 34,999	46.8	(42.3-51.3)	23.0	(18.9-27.1)	18.2	(14.3-22.1)
$35,000- 49,999	48.8	(44.9-52.7)	27.8	(24.1-31.5)	20.1	(16.8-23.4)
$50,000- 74,999	50.2	(46.5-53.9)	25.8	(22.5-29.1)	16.2	(13.5-18.9)
$75,000+	54.6	(51.7-57.5)	34.9	(32-37.8)	23.4	(21-25.8)

Some questions were also asked concerning screen time. In today's world there are many opportunities to sit in front of a screen to play games or watch videos. These activities contribute to a sedentary lifestyle with inadequate physical activity. During the week, Iowans reported spending a median of two to three hours per day involved in screen time activities. This rose to four to five hours on the weekend.

Comparison with Other States

Among the 50 states and the District of Columbia, values for the prevalence of not engaging in leisure time physical activity ranged from a low of 17.9 percent to a high of 38.1 percent. Iowa ranked worse than the median on not engaging in leisure time physical activity. Iowa was at 28.5 percent, while the median for the nation was at 25.3 percent.

Iowa also did not fare well on meeting the recommended levels of physical activity. Aerobic physical activity recommendations were met by 36.5 percent to 63.2 percent of people in the 50 states and District of Columbia. The median was 50.1 percent, while Iowa had only 46.9 percent. The strengthening recommendation was met by 18.6 percent to 36 percent of residents in the states. The median was 29.8 percent, while Iowa had only 27.2 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 28.5 percent, while higher than in previous years, is still 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 46.9 percent achieving this recommendation either by itself or along with the strengthening criterion. This falls short of the target for recommended aerobic activity.

The national target for meeting the recommended strengthening goal of two or more times per week is 24.1 percent. Iowa respondents report 27.2 percent achieving this recommendation either by itself or along with the aerobic criterion. Iowa is better than the target for recommended strengthening activity.

The *Healthy Iowans* goal is that 55 percent of adult Iowans should attain the recommended level of aerobic physical activity. Iowa's level of 46.9 percent falls far short of this.

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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, mineral, fiber, and other bioactive compounds; a diet high in these foods is associated with lower risk for numerous chronic diseases, including certain cancers and cardiovascular diseases.[1,3]

Fruits and non-starchy vegetables are generally low energy-dense foods and may have a role in preventing weight gain that could lead to obesity – a risk factor in some cancers. Evidence that vegetables and fruits protect against some cancers is supported by evidence on foods containing various micronutrients, found especially in vegetables, fruits, and pulses (legumes), and nuts and seeds, as well as in cereals, roots, tubers, and other plant foods.[4]

Increased consumption of fruits and vegetables by individuals is a practical and important means for optimizing nutrition to reduce disease risk and maximize good health. The most recent *Dietary Guidelines for Americans (2010)* recommends eating a variety of fruit and vegetables each day including dark green vegetables, orange vegetables, legumes, starchy vegetables, and other vegetables.[2]

The *Dietary Guidelines* also recommends consuming a variety of foods, rich in nutrients, in all food groups. People should limit their intake of saturated fats and trans-fats, cholesterol, 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.[2]

Diet and Nutrition Results

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

According to the BRFSS survey responses, 39.2 percent of adult Iowans reported consuming fruit less than one time per day. For vegetables, 26.8 percent of adult Iowans reported consuming them less than one time per day (see Table 14.1).

Women, older people, people with more education, and people with higher household incomes were all more likely to eat fruit and vegetables every day. The most likely group to eat some fruit per day were those age 75 years and older (20.2% ate less than once). Those most likely to eat some vegetables per day were college graduates (17% ate less than once). The worst consumption patterns were found among those with household incomes less than $15,000 annually where 49 percent ate fruit less than once per day and people with less than a high school education where 39.3 percent ate vegetables less than once per day.

Table 14.1:
Iowans Eating Fruits and Vegetables Less Than Once a Day, 2013

Demographic	<1 per day Fruit		<1 per day Vegetables	
Groups	%	C.I. (95%)	%	C.I. (95%)
TOTAL	39.2	(37.6-40.8)	26.8	(25.4-28.2)
SEX				
Male	46.5	(44.1-48.9)	31.5	(29.3-33.7)
Female	32.4	(30.4-34.4)	22.4	(20.6-24.2)
RACE/ETHNICITY				
White/Non-Hispanic	39.3	(37.7-40.9)	26.8	(25.4-28.2)
Non-White or Hispanic	39.1	(32.5-45.7)	27.3	(21.3-33.4)
AGE				
18 – 24	46.7	(40.8-52.6)	37.2	(31.5-42.9)
25 – 34	39.9	(35.4-44.4)	27.1	(23-31.2)
35 – 44	42.0	(37.9-46.1)	27.5	(23.8-31.2)
45 – 54	44.8	(41.5-48.1)	26.1	(23-29.2)
55 – 64	39.8	(37.1-42.5)	22.4	(20-24.8)
65-74	32.4	(29.3-35.4)	24.6	(21.8-27.5)
75+	20.2	(17.6-22.8)	21.2	(18.4-24)
EDUCATION				
Less than H.S.	46.0	(39.5-52.5)	39.3	(32.8-45.8)
H.S. or G.E.D.	44.3	(41.8-46.8)	31.1	(28.7-33.5)
Some Post-H.S.	39.5	(36.8-42.2)	26.4	(23.9-28.9)
College Graduate	29.3	(26.9-31.7)	17.0	(15-19)
HOUSEHOLD INCOME				
Less than $14,000	49.0	(43.3-54.7)	39.3	(33.6-45)
$14,000- 24,999	43.4	(39.3-47.5)	31.5	(27.6-35.4)
$25,000- 34,999	42.4	(37.9-46.9)	26.3	(22-30.6)
$35,000- 49,999	36.9	(33-40.8)	24.9	(21.4-28.4)
$50,000- 74,999	39.4	(35.9-42.9)	22.5	(19.4-25.6)
$75,000+	34.9	(32-37.8)	22.0	(19.3-24.7)

The survey asked several other questions concerning dietary habits. When asked, "How often do you drink soda or pop containing sugar?" the median response was 0.5 times per week. The mean, however, was 3.8 times per week. This indicates that, although nearly half the respondents drank soda less than once a week, a few drank it many times. Actually, 38.6 percent said they did not drink it at all. Around 5.9 percent said they drank sweetened soda three or more times a day.

When asked "How often do you drink sweetened fruit drinks?" 50.4 percent said they did not drink them at all. On the other hand, 9.8 percent drank sweetened fruit drinks once a day or more.

When asked how often they used low-fat or fat-free dairy products such as milk yogurt, or cheese, 57.8 percent of respondents said once a day but 17.7 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, 48.3 percent of respondents said once a day but 11.3 percent said less than once a week.

Concerning sodium or salt,47.8 percent of respondents said they were currently watching their salt intake. In addition, 19.3 percent said that a doctor had advised them to watch their salt intake.

Comparison with Other States

The median consumption of fruit and vegetables per day in the 50 states and District of Columbia ranged from a low of 49 percent of fruit at least one time per day and 65.8 percent of vegetables at least one time per day to a high of 69.3 percent of fruit and 82.5 percent of vegetables. Iowa's level of 60.8 percent for fruit and 73.2 percent for vegetables is below the medians of 60.3 and 76.1 percent respectively, particularly with respect to vegetables.

Health Objectives for Iowa

Healthy Iowans has the objective of 20 percent of Iowans eating five or more fruit and vegetables per day. The figure obtained from Iowa BRFSS of 12.9 percent falls far short of this goal.

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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 annually cigarette smoking causes more than 480,000 deaths each year or one in every five deaths.[1]

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.[2]

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.[1]

Consequences of smoking during pregnancy include spontaneous abortions, low birth weight babies, and sudden infant death syndrome (SIDS).[1]

Secondhand Smoke (SHS) increases the risk of heart disease and lung cancer in adults. SHS also affects children by increasing lower respiratory tract infections and asthma and by decreasing pulmonary function. According to the surgeon general, there is no safe level of exposure to secondhand smoke.[3]

Public health efforts to reduce the prevalence of tobacco use began after the health risks were announced in the first surgeon general's report on tobacco in 1964.

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

The legal environment has recently made it much more difficult to continue smoking. In March of 2007, the Iowa State Legislature passed a $1.00 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 also was quite beneficial at reducing exposure to secondhand smoke.

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

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

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 2013, 19.5 percent reported being a current smoker. This is an increase from the 18.1 percent found in 2012. The proportion of current smokers was higher for males than for females. Smoking generally declined with increasing age, education, and income, although it did not show a significant decline with age until age 65 and actually showed a slight increase until age 55. Respondents with household incomes less than $15,000 reported the highest proportion of current smokers (33.9%). Only 4.4 percent of respondents age 75 years and older were current smokers (see table 15.1).

Table 15.1: Percentage of Current and Former Smokers in Iowa, 2013

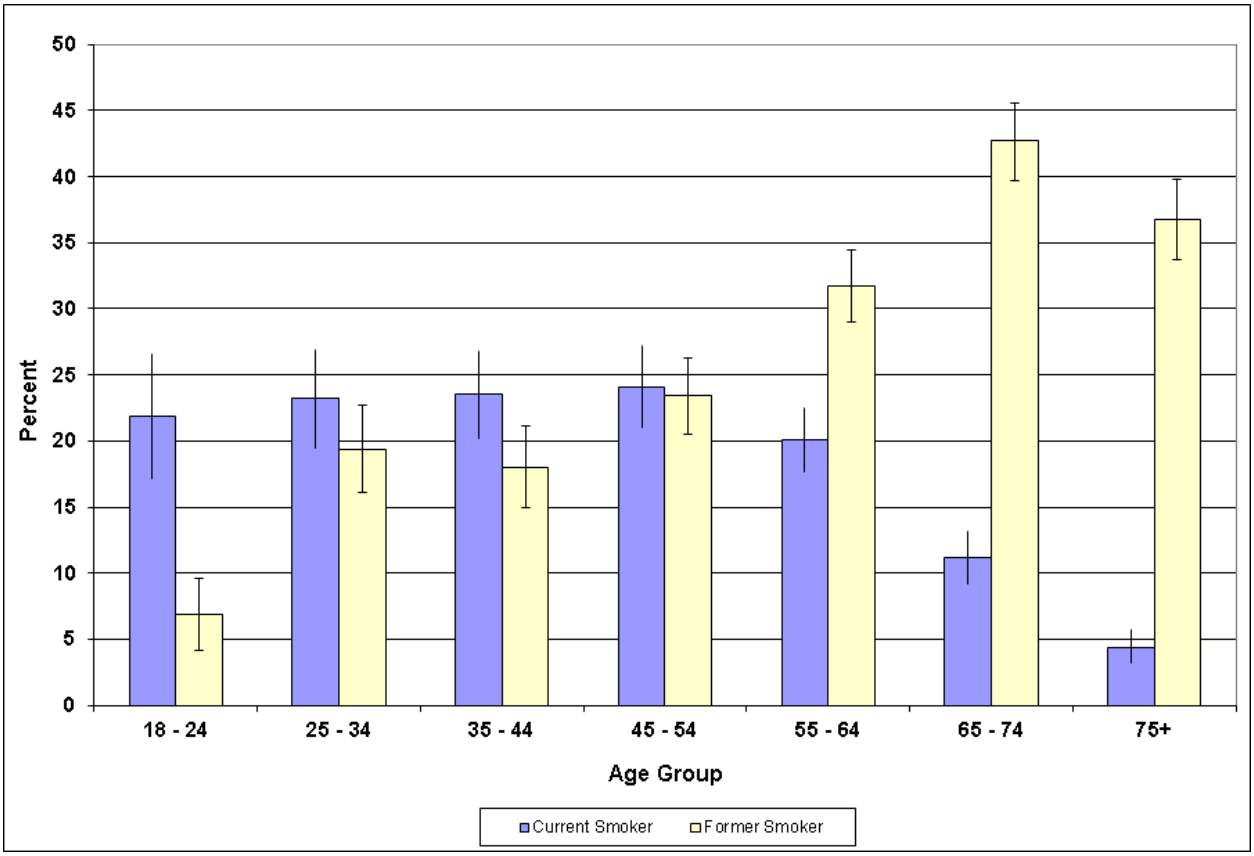
DEMOGRAPHIC	Current Smoker		Former Smoker	
GROUPS	%	C.I. (95%)	%	C.I. (95%)
TOTAL	19.5	(18.3-20.7)	24.4	(23.2-25.6)
SEX				
Male	22.5	(20.5-24.5)	27.7	(25.7-29.7)
Female	16.6	(15-18.2)	21.2	(19.6-22.8)
RACE/ETHNICITY				
White/Non-Hisp.	19.7	(18.3-21.1)	25.3	(24.1-26.5)
Non-White or Hispanic	18.7	(14-23.4)	15.2	(11-19.4)
AGE				
18-24	21.9	(17.2-26.6)	6.9	(4.2-9.6)
25-34	23.2	(19.5-26.9)	19.4	(16.1-22.7)
35-44	23.5	(20.2-26.8)	18.0	(14.9-21.1)
45-54	24.1	(21-27.2)	23.4	(20.5-26.3)
55-64	20.1	(17.7-22.5)	31.7	(29-34.4)
65-74	11.2	(9.2-13.2)	42.7	(39.7-45.6)
75+	4.4	(3.2-5.7)	36.8	(33.7-39.8)
EDUCATION				
Less Than H.S.	32.1	(26.2-38)	23.7	(18.8-28.6)
H.S. or G.E.D.	25.3	(22.9-27.7)	26.8	(24.8-28.8)
Some Post-H.S.	18.3	(16.1-20.5)	23.8	(21.6-26)
College Graduate	19.5	(18.3-20.7)	22.3	(20.3-24.3)
HOUSEHOLD INCOME				
Less than $15,000	33.9	(28.6-39.2)	20.7	(16.4-25)
$15,000- 24,999	27.7	(24-31.4)	21.6	(18.7-24.5)
$25,000- 34,999	22.8	(18.7-26.9)	27.1	(23.4-30.8)
$35,000- 49,999	19.0	(15.9-22.1)	25.3	(22.2-28.4)
$50,000- 74,999	15.1	(12.6-17.6)	28.8	(25.5-32.1)
$75,000+	11.9	(9.7-14.1)	24.2	(21.8-26.6)

Nearly 25 percent of respondents were former smokers. This means that they had smoked at least 100 cigarettes in their lifetime, but did not smoke now. While more males were former smokers than females, the age trend for former smokers was the opposite of that for current smokers. The 18 to 24-year age group had only 6.9 percent former smokers, while the 65 to 74-year age group had 42.7 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 (58%) said ten or more years.

When asked about attempts to quit smoking, 52.7 percent of current Iowa smokers reported they quit smoking for a day or more during the past year. Women and smokers under age 45 years were more likely to try to quit than men or older smokers. 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.

All respondents were asked if they currently use chewing tobacco, snuff, or snus. Only 4.9 percent said they used one of these every day or some days.

Figure 15.1: Percentage of Current and Former Smokers by Age, 2013



In the past year, 61.8 percent of smokers who had seen a doctor reported that the doctor had advised them to quit smoking. For those smokers with doctors advising them to quit, 64.8 percent had been offered some form of assistance. The most common form of assistance was medical resources. This form of assistance was given to 39.2 percent of respondents whose doctors advised them to quit.

For former smokers who did not use other tobacco products, 8.4 percent said they used a quitline. Among all Iowans, 48 percent had heard of Quitline Iowa.

Concerning secondhand smoke, 36.9 percent said they had been exposed to someone else's smoke in a typical week. The mean number of hours of such exposure was 3.5 hours. The median was zero hours. The maximum reported was 70 hours. Although the majority (63.1%) was not exposed at all to secondhand smoke, some were extensively exposed.

When asked if they ever use smokeless tobacco or e-cigarettes instead of smoking cigarettes, seven percent said they did. More than half of these used e-cigarettes. For those who said they used e-cigarettes for such a purpose, 11.5 percent said they used them every day and 62.5 percent said only some days.

Comparison with Other States

In all the states and District of Columbia, smoking prevalence ranged from a low of 10.3 percent to a high of 27.3 percent. Iowa's current smoking prevalence of 19.5 percent was somewhat above the median of 19 percent for all states.

Health Objectives for Iowa and the Nation

The goal for *Healthy People* 2020 is to reduce the percentage of smokers to 12 percent, while the goal for *Healthy Iowans* is 15 percent. The prevalence of those reporting currently smoking is 19.5 percent in Iowa which is well above both goals.

The *Healthy People 2020* goal for use of smokeless tobacco is only 0.3 percent. Iowa's prevalence of such use is 4.9 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 52.7 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; 4.7 percent of former smokers said they had not smoked regularly for six months to a year, while the goal was eight 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 promote health. Even at this level, factors such as family history, health condition, and use of medications can mean a person should not drink at all. Furthermore, many people find it impossible to consume alcohol in a controlled manner.

Several million adults engage in risky drinking that could lead to alcohol problems. These patterns include binge drinking (drinking too much at one time) and chronic heavy drinking (drinking a large quantity of alcohol on a regular basis).[1]

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. In fact, excessive alcohol use is the third leading lifestyle-related cause of death for people in the United States each year.[1] Excessive drinking cost the nation $223.5 billion in 2006.[1]

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.[1]

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

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

Several groups and techniques exist to help people control their problem drinking.[2] 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 2013, 57.2 percent of Iowans reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank, 36.7 percent had an average of only one drink. The median was two drinks. About 13.1 percent reported drinking five or more drinks per day on the average.

In our analysis, chronic heavy drinking was defined to be an average of greater than two drinks per day for men and one drink per day for women. According to this definition, 6.5 percent of

Table 16.1
Heavy Drinking Among Iowans, 2013

DEMOGRAPHIC GROUPS	Heavy Drinking	
	%	C.I. (95%)
TOTAL	6.5	(5.7-7.3)
SEX		
Male	8.4	(7-9.8)
Female	4.7	(3.9-5.5)
RACE/ETHNICITY		
White/Non-Hisp.	6.8	(6-7.6)
Black/Non-Hisp.	0.7	(0-1.7)
Other/Non-Hisp.	2.6	(0-5.7)
Hispanic	5.8	(0.8-10.8)
AGE		
18-24	9.0	(5.7-12.3)
25-34	7.6	(5.2-10)
35-44	5.9	(3.9-7.9)
45-54	8.4	(6.4-10.4)
55-64	6.3	(4.9-7.7)
65-74	4.2	(2.9-5.5)
75+	1.8	(0.8-2.7)
EDUCATION		
Less than H.S.	6.4	(2.9-9.9)
H.S. or G.E.D.	5.9	(4.7-7.1)
Some Post-H.S.	7.9	(6.3-9.5)
College Graduate	5.3	(4.1-6.5)
HOUSEHOLD INCOME		
Less than $15,000	6.7	(3.6-9.8)
$15,000- 24,999	4.9	(3.1-6.7)
$25,000- 34,999	5.6	(3.2-8)
$35,000- 49,999	7.5	(5.3-9.7)
$50,000- 74,999	7.1	(5.1-9.1)
$75,000+	8.4	(6.6-10.2)

Table 16.2
Binge Drinking Among Iowans, 2013

DEMOGRAPHIC GROUPS	Binge Drinking	
	%	C.I. (95%)
TOTAL	21.7	(20.3-23.1)
SEX		
Male	28.5	(26.3-30.7)
Female	15.1	(13.5-16.7)
RACE/ETHNICITY		
White/Non-Hisp.	22.5	(21.1-23.9)
Black Non-Hisp.	11.9	(3.3-20.5)
Other Non-Hisp.	13.4	(6.2-20.6)
Hispanic	18.7	(10.9-26.5)
AGE		
18-24	34.8	(29.5-40.1)
25-34	34.0	(29.9-38.1)
35-44	29.8	(25.9-33.7)
45-54	21.6	(18.9-24.3)
55-64	14.7	(12.7-16.7)
65-74	6.1	(4.5-7.6)
75+	1.7	(0.8-2.7)
EDUCATION		
Less than H.S.	16.1	(11.2-21)
H.S. or G.E.D.	19.1	(16.9-21.3)
Some Post-H.S.	25.7	(23.2-28.2)
College Graduate	21.4	(19-23.8)
HOUSEHOLD INCOME		
Less than $15,000	15.9	(11.4-20.4)
$15,000- 24,999	16.6	(13.3-19.9)
$25,000- 34,999	19.8	(15.7-23.9)
$35,000- 49,999	24.0	(20.5-27.5)
$50,000- 74,999	26.9	(23.4-30.4)
$75,000+	27.3	(24.6-30)

all respondents were heavy drinkers. This is about the same as in 2012 when 6.2 percent were heavy drinkers.

In spite of the fact that men had to have a larger number of drinks to be considered heavy drinkers, 8.4 percent of men were considered to be heavy drinkers, while only 4.7 percent of women were considered to be heavy drinkers. Age, race/ethnicity, and household income were also associated with the prevalence of heavy drinking. Only 1.8 percent of those age 75 and over reported heavy drinking (see table 16.1). There were more heavy drinkers among men than women at almost all ages (see figure 16.1). With respect to race/ethnicity, White non-Hispanics

reported more heavy drinkers than the others. There was a somewhat higher prevalence of heavy drinking among people with higher household incomes.

Binge drinking is defined for men as more than five drinks or for women as more than four drinks on one occasion. Among all adult Iowans, 21.7 percent reported at least one binge episode in the last 30 days. This is exactly the same as in 2012.

Even with the lessened requirement on females, nearly twice as many males binge than females (28.5 percent versus 15.1 percent). Again, non-Hispanic Whites reported a higher prevalence of binge drinking. In addition, the likelihood of bingeing decreases with age from 34.8 percent for 18 to 24-year olds to only 1.7 percent for those 75 years old and older. Unlike most risky behaviors, respondents with higher education and those with a higher household income were somewhat more likely to binge drink (see table 16.2). Men were more likely than women to binge drink at all age levels (see figure 16.2).

Comparison with Other States

The prevalence of people reporting heavy drinking in the 50 states and District of Columbia ranges from 3.3 percent to 8.6 percent. Iowa's figure of 6.5 percent is above the 6.2 percent median for the states .

For binge drinking, the range is from a low of 9.6 percent to a high of 23.8 percent with a median of 16.8 percent. Iowa's figure of 21.7 percent is well above the median. There are only four states with a higher prevalence of reported binge drinking. Six out of eight of the highest states for binge drinking are in the upper Midwest with a seventh being contiguous.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* goal for the nation for binge drinking is 24.3 percent. This modest goal is met in Iowa with 21.7 percent. The *Healthy Iowans* goal for binge drinking is 16 percent. Iowa's prevalence was above this goal.

References

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Figure 16.1: Heavy Drinking in Iowa by Age and Sex, 2013

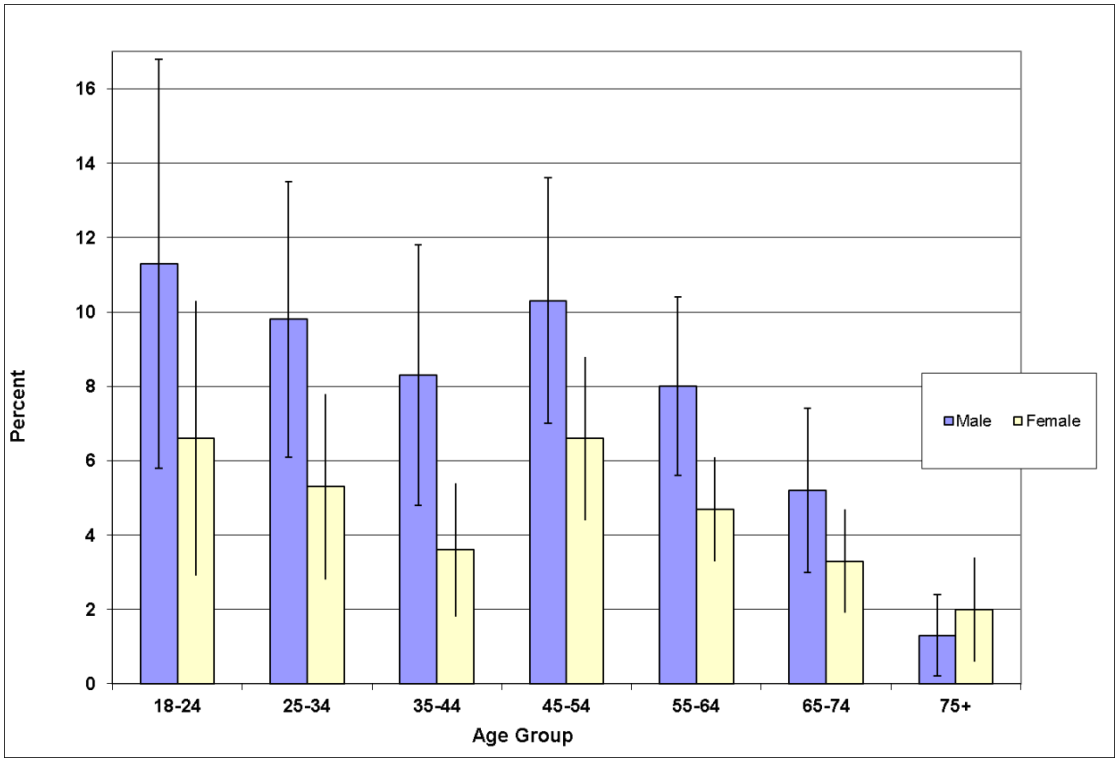
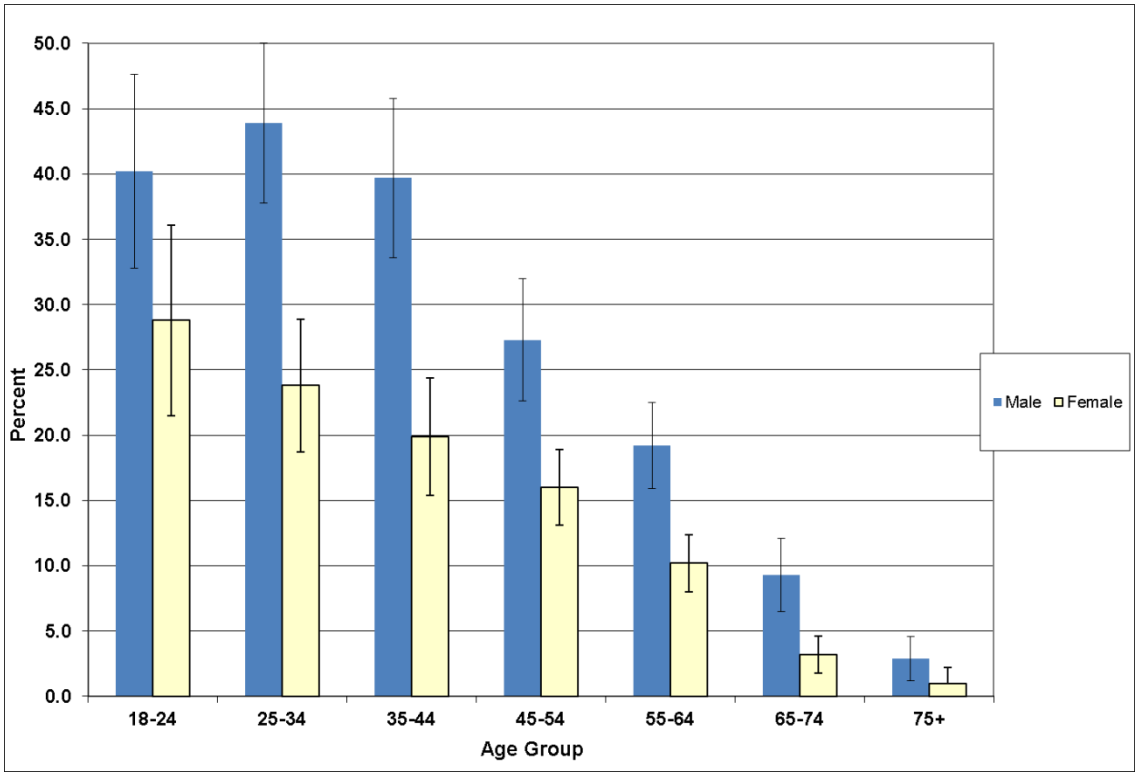


Figure 16.2: Binge Drinking in Iowa by Age and Sex, 2013



17. DISABILITY AND ARTHRITIS

Disability

Background

The World Health Organization's *International Classification of Impairments, Disability and Handicaps (ICIDH)*[5] 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."[4]

Chronic physical, mental, and emotional conditions can limit the ability of adults to carry out important activities such as working and doing everyday household chores. With advancing age, an increasing percentage of adults experience limitation of activity.[2]

The latest available census estimates for 2011 found that over 37 million people in the United States (more than 12%) had a disability that prevented or limited them in some way.[3]

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 healthcare system on an equal basis with the non-disabled.[2] 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.

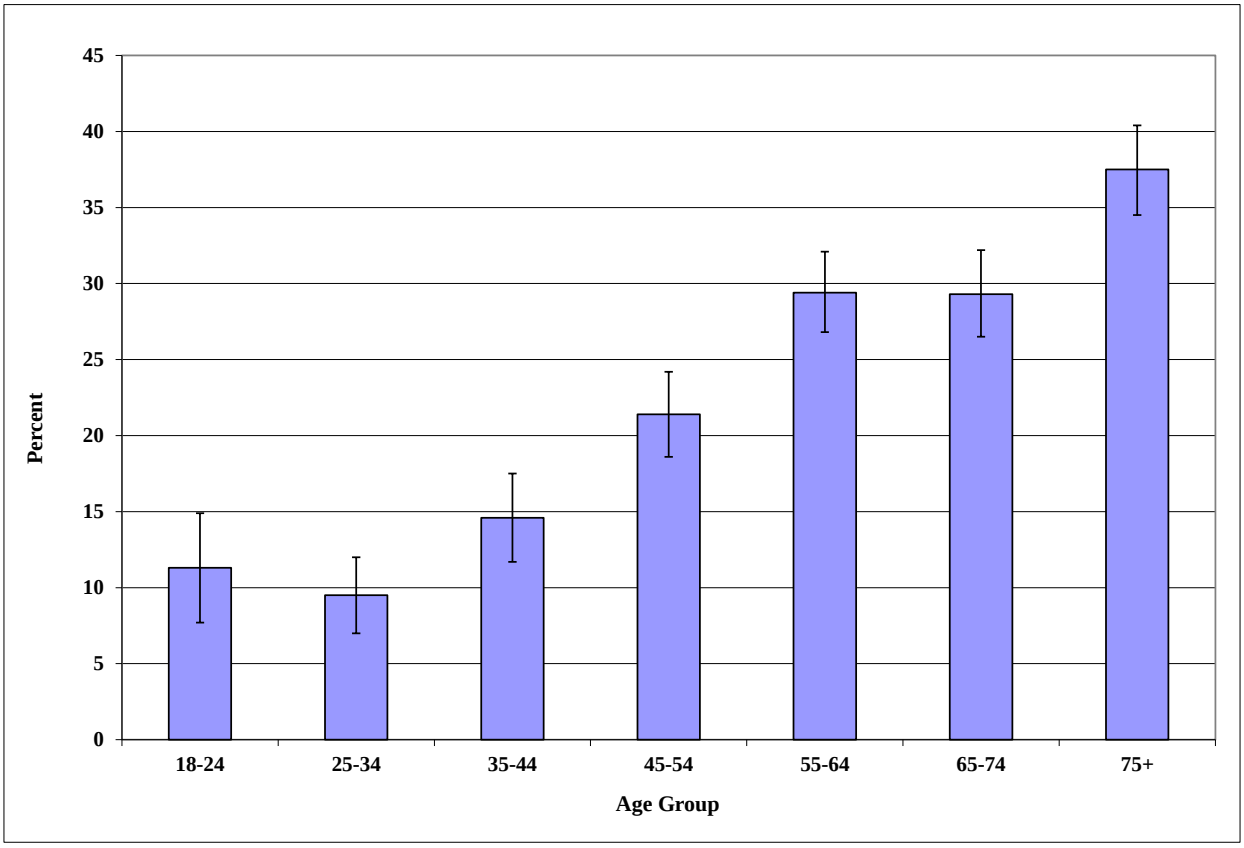
Disability Results

In 2013, 19.1 percent of Iowans responded "yes" to being limited in any way in activities due to an impairment or health problem. When asked whether they had a health problem requiring the use of special equipment, 7.3 percent of adult Iowans said they needed such items as a cane, a wheelchair, a special bed, or a special telephone. Whether someone is considered to have a disability in this analysis is based on a positive response to either of these two questions. In 2013, 20.9 percent of respondents were considered to have a disability. This compares to 20.4 percent in 2012.

As shown in Table 17.1, females, older people, people with less education, and people with lower household incomes reported higher percentages of disability. African Americans and Hispanics showed a lower level of disability. Of the five demographic variables analyzed, people age 25 to 34 years reported the lowest percentage (9.5%). Those with household incomes less than $15,000 reported the highest percentage of disability (44.4%). Many disabled people

are unable to work due to their disability. The second highest reporting group was those age 75 and over (37.5%). This group is the most rapidly growing group in the population.

Figure 17.1: Percent of Iowans with a Disability by Age, 2013



The following disability questions were added to the survey:

When asked if they were blind, 3.6 percent of Iowans said they were.

When asked if they had serious difficulty concentrating, remembering, or making decisions, 9.4 percent said that they did.

When asked if they had serious difficulty walking or climbing stairs, 12.3 percent said they did.

When asked if they had difficulty dressing or bathing, 3.2 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, 5.4 percent said that they did.

Arthritis

Background

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

Arthritis is the leading cause of disability in the United States. Each year, arthritis results in 992,100 hospitalizations and 44 million outpatient visits.[1] It also limits everyday activities and adversely affects the physical and mental health of those who are affected by it. Arthritis may affect people of all ages, but it is particularly common in the elderly. Due to the aging of the population, it is predicted that the number of Americans with doctor-diagnosed arthritis will reach 67 million by 2030.[1]

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

Arthritis Results

In 2013, a doctor had told 24.3% of Iowans that they had some form of arthritis. This compares to 25.9 percent in 2012. 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. Far fewer Hispanics reported having arthritis than other race/ethnic groups. Age had the strongest association, however. The demographic group reporting the highest prevalence of arthritis was people age 75 years and older (56.1%). The group with the lowest prevalence was people age 18 to 24 years old (3.1%) (see table 17.2).

Of respondents who had been told they had arthritis, 43.3 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, 30.3 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, 14.8% said a lot. When asked to rate their joint pain on a ten 10 point scale with zero being none and 10 being very severe, there was a wide range of ratings. The median was 4, while the most frequent rating (15.4%) was 5.

Table 17.1
Percent Reporting Being Disabled, 2013

Demographic Groups	Disabled	
	%	C.I. (95%)
TOTAL	20.9	(19.7-22)
SEX		
Male	20.1	(18.4-21.8)
Female	21.6	(20.1-23.1)
RACE/ETHNICITY		
White/Non-Hisp.	21.3	(20.1-22.4)
Black/Non-Hisp.	17.4	(9.3-25.5)
Other/Non-Hisp.	21.6	(13-30.1)
Hispanic	11.6	(5.9-17.3)
AGE		
18-24	11.3	(7.7-14.9)
25-34	9.5	(7-12)
35-44	14.6	(11.7-17.5)
45-54	21.4	(18.6-24.2)
55-64	29.4	(26.8-32.1)
65-74	29.3	(26.5-32.2)
75+	37.5	(34.5-40.4)
EDUCATION		
Less than H.S.	30.5	(25.2-35.7)
H.S. or G.E.D.	22.8	(20.8-24.7)
Some Post-H.S.	19.7	(17.8-21.7)
College Grad.	15.9	(14.3-17.6)
HOUSEHOLD INCOME		
<$15,000	44.4	(39-49.9)
$15,000- 24,999	26.6	(23.6-29.7)
$25,000- 34,999	24.5	(20.8-28.1)
$35,000- 49,999	19.1	(16.2-22)
$50,000- 74,999	15.4	(12.9-17.9)
$75,000+	10.3	(8.6-11.9)

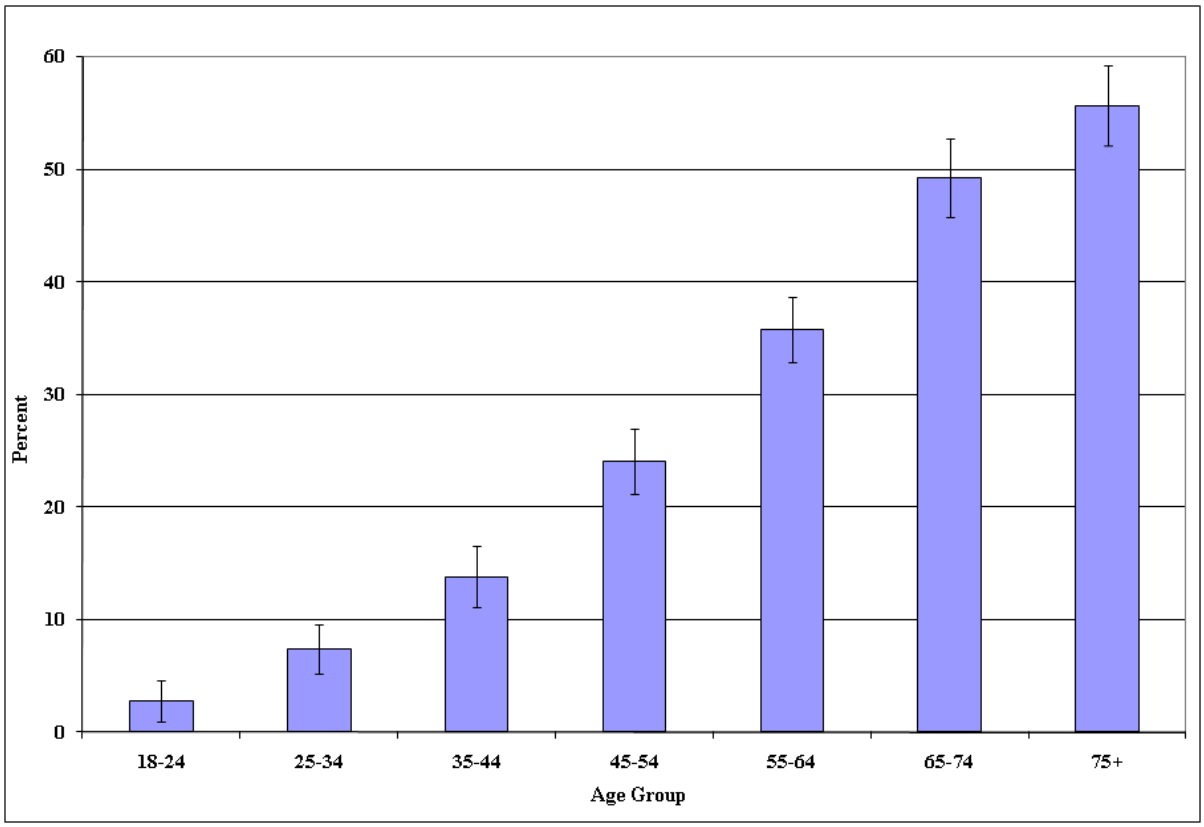
Table 17.2
Percent Having Been Told by a Doctor They Had Some Form of Arthritis, 2013

DEMOGRAPHIC GROUPS	Told by Doctor You Have rthritis	
	%	C.I. (95%)
TOTAL	24.3	(23.1-25.5)
SEX		
Male	20.2	(18.6-21.8)
Female	28.2	(26.6-29.8)
RACE/ETHNICITY		
White/Non-Hisp.	25.5	(24.4-26.7)
Black/non-Hisp.	18.6	(10.4-26.8)
Other/ non-Hisp.	17.9	(10.4-25.4)
Hispanic	8.9	(4.8-13)
AGE		
18-24	3.1	(1.1-5.1)
25-34	6.3	(4.3-8.3)
35-44	13.4	(10.5-16.3)
45-54	24.0	(21.3-26.7)
55-64	36.7	(34-39.4)
65-74	45.8	(42.8-48.9)
75+	56.1	(53-59.2)
EDUCATION		
Less Than H.S.	27.8	(23.1-32.5)
H.S. or G.E.D.	28.0	(26-30)
Some Post-H.S.	23.9	(21.9-25.9)
College Graduate	18.2	(16.4-20)
HOUSEHOLD INCOME		
<$15,000	32.1	(27.4-36.8)
$15,000- 24,999	29.2	(26.1-32.3)
$25,000- 34,999	27.8	(24.3-31.3)
$35,000- 49,999	24.6	(21.7-27.5)
$50,000- 74,999	25.2	(22.3-28.1)
$75,000+	15.9	(13.9-17.9)

Comparison with Other States

The percent of people in the 50 states and District of Columbia reporting being disabled ranged from 16.9 percent to 29.9 percent with a median of 21.6 percent. Iowa's rate of disability at 20.9 percent was slightly higher than in 2012 but still better than the median.

Figure 17.2: Percent of Iowans with Arthritis by Age, 2013



For diagnosed arthritis, the range was from 19.5 percent to 36.2 percent. The median of all states was 25.3 percent. Iowa was better than the median at 24.3 percent. This figure is rather good considering the high numbers of elderly in Iowa and that the state prevalence is not adjusted to control for differences in age. Oddly, while the prevalence of reported disability for the nation declined, diagnosed arthritis increased.

Health Objectives for Iowa and the Nation

The *Healthy People 2020* goal for people with arthritis who are limited in their activities is 35.5 percent. For *Healthy Iowans*, it is 38 percent. In Iowa, the percent of those with doctor-diagnosed arthritis who report being limited is 43.6 percent. This is higher than both Iowa and the national goals. *Healthy People 2020* also had the goal of 29.8 percent of people whose work was limited due to arthritis. Only 27 percent of Iowans reported 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 4.2 which also 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.[1]

Influenza and pneumonia combined are the eighth leading cause of death among all Americans and the seventh leading cause for people over age 65. Influenza and pneumonia together resulted in more than 53,600 deaths in 2011 in the U.S.[6] and 673 in Iowa in 2011.[5]

Influenza can vary greatly from year to year in the severity of its impact. For instance, the usual seasonal influenza primarily was a problem for the elderly, while the recent H1N1 pandemic focused more on younger people. For healthy children and adults, influenza is typically a moderately severe illness. For unhealthy or elderly people, influenza can be very dangerous. Adults 65 years old and older who contract influenza are much more likely to have serious complications from this illness, which can affect their health and independence.

Influenza can be prevented with the influenza vaccine. This vaccine is produced each year so that it can be effective against influenza viruses that are expected to cause illness that year. A yearly influenza vaccination has been reported to be between 67 percent and 92 percent effective in preventing influenza and reducing its severity. The vaccine may be taken by a shot or by nasal spray. The nasal spray is not recommended for people at high risk, however. The best time to receive the influenza vaccine is soon after the vaccine becomes available in the fall of each year.[4] The recommendation for annual vaccination against seasonal influenza includes almost everyone in the United States population from six months old and older.

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

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

Some of the symptoms associated with influenza are fever, chills, coughing, weakness, muscle aches and pains, sore throat, or head ache.[1]

Pneumonia is a lung disease usually caused by bacteria, viruses, and other infectious agents such as fungi. Pneumonia is frequently a complication of influenza and is responsible for the vast majority of deaths from the two. In 2010, 1.1 million people in the U.S. were hospitalized with pneumonia and more than 50,000 people died from the disease.[2]

The Advisory Committee on Immunization Practices (ACIP) recommends that persons aged 65 years old or older receive at least one lifetime dose of pneumococcal vaccine.[3] People at higher risk should receive the pneumonia vaccine at age 18 and older. Such people would be smokers, people with respiratory problems such as asthma or COPD, and those with compromised immunity.

Immunization Results

In 2013, 67.4 percent of Iowans age 65 and over reported having a flu shot in the past 12 months. This is not as good as the 70.1 percent reported in 2012. Among all adults, 46.4 percent had a flu immunization in the past 12 months. This was either in the form of a flu shot or a FluMist™ nasal spray. Females, older people, people with more education, people with higher household incomes, and non-Hispanic Whites were more likely to have a flu immunization. The lowest percentage was found among people between age 18 and 24 years (35.2%), while the highest was for those age 75 and older (69.8%) (see table 18.1).

In 2013, 72.6 percent of Iowans age 65 and over reported ever having a pneumonia vaccination. This is somewhat higher than the figure found in 2012 (70.8%).

Among all adults, 33.7 percent had ever received a pneumonia vaccination. Older people, females, Non-Hispanic Whites, people with lower education, and people with lower income, were more likely to have pneumonia vaccinations. Age made the greatest difference in whether someone had a pneumonia vaccination. The lowest percentage of pneumonia vaccination occurred among those who were 35 to 44 years old (13.3%), while those 75 years old and older were highest by far (76.75%). 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 increasing age until age 55. It dramatically increased after age 65. Since it is only recommended for those age 65 years and older except under special conditions, this is not surprising.

Those who had ever been told they had several chronic conditions that could increase the risk from flu or pneumonia were more likely to receive their flu and pneumonia vaccinations than those who had not been told they had these conditions. Of all respondents ever told they had diabetes, asthma, COPD, or kidney disease, 55.6 percent had a flu vaccination and 54.8 percent had a pneumonia vaccination. This compares with 43.9 percent and 27.8 percent respectively for those who did not have any of these conditions.

Comparison with Other States

The median percentage of the population age 65 and over who have had a flu shot in the past 12 months from all the states and the District of Columbia was 62.8 percent in 2013. The range was from 51.6 percent to 73.9 percent. The prevalence in Iowa was higher than the median at 67.4 percent. This is a decline in relative standing from past years, though still in the top ten.

The median percentage of the population age 65 years old and older who ever had a pneumonia vaccination was 69.5 percent. The range was from 61.9 percent to 75.6 percent. Iowa's value of 72.6 percent is above the median. It is also among the top ten states.

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

DEMOGRAPHIC GROUPS	Influenza		Pneumonia	
	%	C.I. (95%)	%	C.I. (95%)
TOTAL	46.4	(44.8-48)	33.7	(32.3-35.1)
SEX				
Male	40.2	(38-42.4)	33.0	(30.8-35.2)
Female	52.2	(50.2-54.2)	34.3	(32.5-36.1)
RACE/ETHNICITY				
White/Non-Hispanic	47.4	(45.8-49)	34.4	(33-35.8)
Non-White or Hispanic	38.3	(32-44.6)	25.9	(19.7-32.2)
AGE GROUP				
18-24	35.2	(29.7-40.7)	30.6	(24.3-36.9)
25-34	38.2	(33.9-42.5)	20.4	(16.3-24.5)
35-44	36.5	(32.6-40.4)	13.3	(10.4-16.2)
45-54	42.5	(39.2-45.8)	18.9	(16.2-21.6)
55-64	50.3	(47.4-53.2)	27.2	(24.7-29.7)
65-74	65.3	(62.2-68.3)	69.0	(66-72)
75+	69.8	(66.8-72.7)	76.7	(73.9-79.4)
EDUCATION				
Less than H.S.	44.5	(38.2-50.8)	39.6	(33.5-45.7)
H.S. or G.E.D.	44.7	(42.2-47.2)	37.4	(34.9-39.9)
Some Post-H.S.	44.5	(41.8-47.2)	32.5	(30-35)
College Graduate	52.3	(49.8-54.8)	27.9	(25.7-30.1)
HOUSEHOLD INCOME				
Less than $15,000	42.1	(36.4-47.8)	41.0	(35.1-46.9)
$15,000- 24,999	43.5	(39.6-47.4)	44.0	(39.9-48.1)
$25,000- 34,999	42.5	(38.2-46.8)	38.8	(34.5-43.1)
$35,000- 49,999	44.3	(40.4-48.2)	34.8	(31.1-38.5)
$50,000- 74,999	51.2	(47.5-54.9)	27.7	(24.4-31)
$75,000+	49.9	(47-52.8)	21.1	(18.7-23.5)

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%. Iowa's 2013 figures of 67.4 percent for having a flu shot and 72.6 percent for ever having a pneumonia vaccination, although much higher than the nation as a whole, are far short of these targets. The *Healthy People 2020* goal for flu immunization of people age 18 to 64 is 80 percent. Iowa misses this by an even greater amount having an immunization prevalence of only 41 percent.

The *Healthy People 2020* goal for ever having a pneumonia vaccination for people age 18 to 64 is 60 percent. Iowa's figure of 22 percent also is substantially lower.

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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.[2]

The HIV epidemic has now been with us for more than 30 years.[4] The most recent Estimates from the World Health Organization (WHO) suggest that 34 million persons were living with HIV infection worldwide at the end of 2011. At the end of 2010, there were an estimated 872,990 persons in the U.S. living with diagnosed HIV infection. Over one fifth of these people do not know that they are infected.[1] Not knowing puts them and others at risk.

From 2008 through 2011, the estimated numbers of annual diagnoses of HIV infection in the United States remained reasonably stable. In 2011, the estimated rate of diagnoses of HIV infection in the United States was 15.8 per 100,000 population.[1]

Groups with the largest exposure include "men who have sex with men", injection drug users, African Americans, and Hispanics. New diagnoses are occurring among women and people infected heterosexually. These data must be used to ensure targeted prevention efforts to reach those in greatest need, with a primary focus on young African American and Hispanic men and women at risk through sexual and drug-related behaviors.

African Americans and Hispanics continue to be over-represented among persons with HIV diagnoses when compared to the size of their populations in Iowa. However, it is important to keep in mind that Non-Hispanic Whites account for 60 percent of HIV diagnoses and persons living with HIV/AIDS.[6]

HIV/AIDS prevalence continues to increase in Iowa. There were 2,023 persons living with HIV/AIDS who were diagnosed in Iowa on December 31, 2012, up from 1,939 a year earlier.[6]

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

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.[5] Treatment for HIV is better than ever before.

HIV/AIDS Results

In 2013, 26.4 percent of all adult respondents reported ever being tested for HIV, not including part of a blood donation. This is similar to 2012 when 25.9 percent said they had been tested. Females, Non-White or Hispanic race/ethnicity, and younger people except those under 25 years, were more likely to be tested. The largest proportion of respondents tested was among Non-Whites or Hispanics (46%). The smallest proportion reporting ever being tested was 2.7 percent of those age 75 years and older (see table 19.1).

Table 19.1: Percentage of Iowans Tested for HIV/AIDS, 2013

DEMOGRAPHIC GROUPS	Had HIV Test	
	%	C.I. (95%)
TOTAL	26.4	(25-27.8)
SEX		
Male	25.4	(23.2-27.6)
Female	27.3	(25.3-29.3)
RACE/ETHNICITY		
Non-Hispanic White	24.3	(22.9-25.7)
Non-White or Hispanic.	46.0	(39.4-52.6)
AGE		
18-24	26.2	(21.1-31.3)
25-34	44.3	(39.8-48.8)
35-44	42.4	(38.3-46.5)
45-54	30.7	(27.4-34)
55-64	15.9	(13.7-18.1)
65-74	10.7	(8.4-12.9)
75+	2.7	(1.7-3.8)
EDUCATION		
Less than H.S.	27.5	(21.4-33.6)
H.S. or G.E.D.	20.8	(18.4-23.2)
Some Post-H.S.	29.5	(26.8-32.2)
College Graduate	28.7	(26.3-31.1)
HOUSEHOLD INCOME		
<$15,000	30.3	(24.8-35.8)
$15,000- 24,999	29.7	(25.6-33.8)
$25,000- 34,999	23.7	(19.6-27.8)
$35,000- 49,999	24.6	(20.9-28.3)
$50,000- 74,999	25.3	(21.8-28.8)
$75,000+	30.0	(27.3-32.7)

There is an interesting interaction between sex and age. Figure 19.1 shows that in younger people, many more women have been tested, while men are a little more likely to be tested in the older age groups.

Finally, when asked where they had received their last HIV test, most (43.7%) said private doctor or HMO.

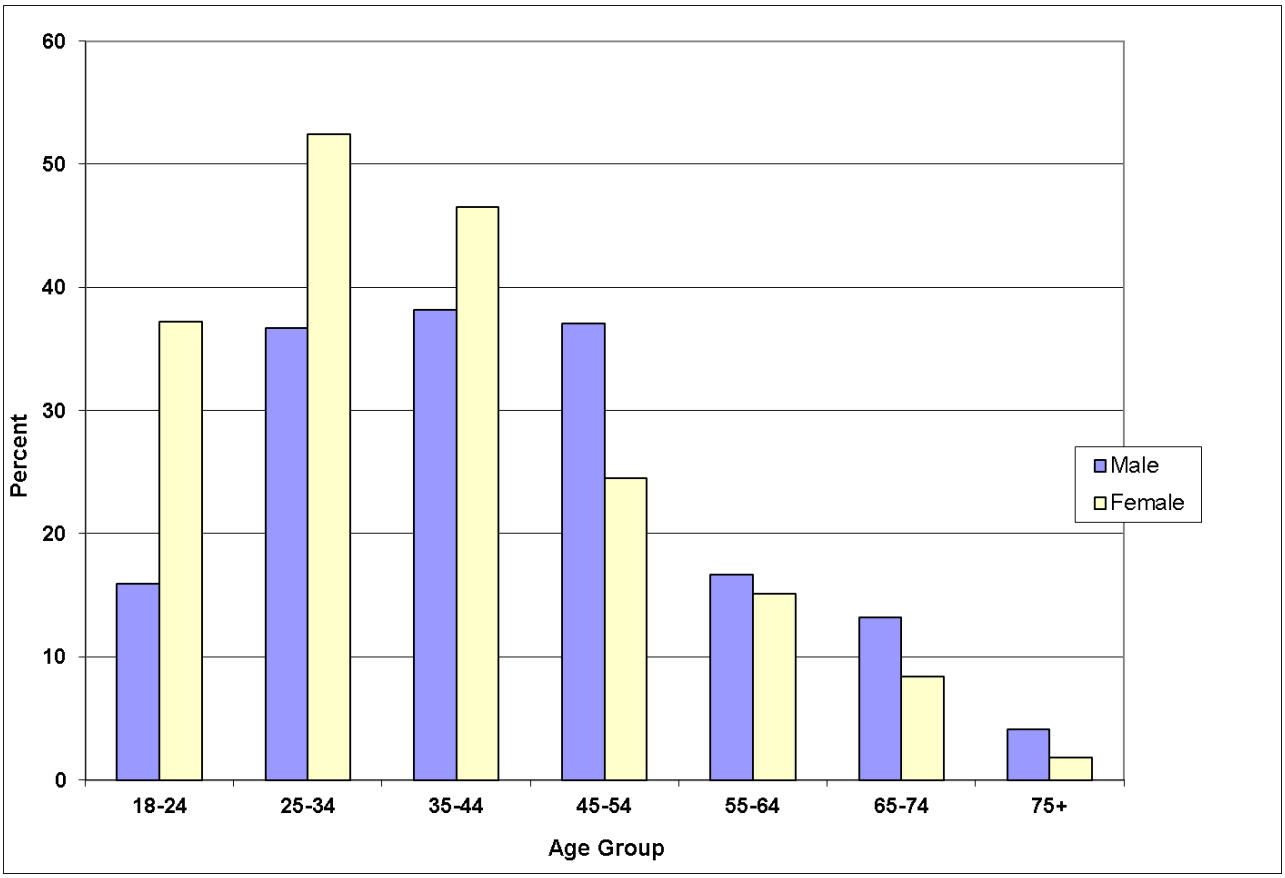
Comparison with Other States

The percentage of people who had a test for HIV ranged from 25.3 percent to 70.7 percent. The median percentage of people tested was 35.2 percent. There were only three states with a lower percentage than Iowa's figure of 26.4 percent. Five out of six of the states with the lowest testing prevalence were in the upper Midwest.

Health Objectives for the Nation

Healthy People 2020 has the goal of 16.9 percent of people age 15 to 44 being tested for HIV in the past 12 months. Iowa had a level of 9.3 percent for respondents age 18 to 44 tested within this time period. This is much below the goal.

Figure 19.1: Percentage of Iowans Reporting Ever Being Tested for HIV by Age and Gender, 2013



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20. MENTAL HEALTH

Background

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.[1] Health is not merely physical health, but also mental health. Nor 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.

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

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.[2] 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 support, 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 healthcare system. Up to half of all visits to primary care physicians are due to conditions caused by or made worse by mental or emotional problems. People with depression are more than four times as likely to have a heart attack as those without such a history. Roughly 37percent of alcohol abusers and 53percent of drug abusers also have at least one serious mental illness.[1]

Mental Health Results

Data in this chapter has come from a module to evaluate mental illness. For other information related to mental health, see Chapter 4 on general health status and health-related quality of life. The 2013 survey also included a module on adverse childhood experience. The data from this module is expected to be related to mental health. Data from this module will be presented elsewhere.

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 a certain way. These are coded into numbers from zero to four and summed to obtain the K-6 score. The value of these scores which can range from zero to 24 can then be divided up to indicate levels of mental illness. A score of greater than 12 indicates serious mental illness (SMI).[1]

According to the K-6, 2.8 percent of adult Iowans are experiencing serious mental illness. SMI was more frequent among those with lower income, lower education, African Americans and other/non-Hispanics, women, and younger people (see table 20.1). Those with less than $15,000 annual household income had the greatest percent reporting SMI (11.3%).

Table 20.1
Serious Mental Illness in Iowans as Measured by the K-6 Scale, 2013

DEMOGRAPHIC GROUPS	Serious Mental Illness – K-6	
	%	C.I. (95%)
TOTAL	2.8	2.2-3.3
SEX		
Male	2.4	1.6-3.1
Female	3.1	2.3-4.0
RACE/ETHNICITY		
White/Non-Hisp.	2.6	2.0-3.1
Black/Non-Hisp.	5.1	0.0-11.2
Other/Non-Hisp.	6.8	0.0-13.9
Hispanic	2.8	0.0-6.7
AGE		
18-24	4.0	1.5-6.5
25-34	3.0	1.2-4.8
35-44	2.9	1.4-4.4
45-54	3.9	2.5-5.2
55-64	2.3	1.4-3.2
65-74	1.0	0.4-1.5
75+	1.5	0.8-2.2
EDUCATION		
Less than H.S.	8.4	4.5-12.2
H.S. or G.E.D.	3.3	2.4-4.3
Some Post-H.S.	1.9	1.1-2.8
College Graduate	1.1	0.5-1.6
HOUSEHOLD INCOME		
Less than $15,000	11.3	7.7-14.9
$15,000-24,999	5.1	3.3-6.8
$25,000-34,999	2.8	0.8-4.9
$35,000-49,999	1.6	0.2-3.0
$50,000-74,999	1.1	0.3-1.9
$75,000+	0.5	0.0-1.0

Table 20.2
Prevalence of Reported Depression in Iowa, 2013

DEMOGRAPHIC GROUPS	Depressive Disorder	
	%	C.I. (95%)
TOTAL	19.2	(18.0-20.4)
SEX		
Male	13.9	(12.3-15.5)
Female	24.3	(22.5-26.1)
RACE/ETHNICITY		
White/Non-Hispanic	19.2	(18.4-20.0)
Hispanic	19.6	(14.5-24.8)
AGE GROUP		
18-24	22.6	(17.9-27.3)
25-34	17.7	(14.6-20.8)
35-44	20.7	(17.6-23.8)
45-54	21.4	(18.7-24.1)
55-64	21.1	(18.7-23.5)
65-74	14.9	(12.8-17.0)
75+	12.8	(10.7-14.8)
EDUCATION		
Less than H.S.	25.5	(20.2-30.8)
H.S. or G.E.D.	19.5	(17.5-21.5)
Some Post-H.S.	19.5	(17.3-21.7)
College Graduate	15.6	(13.8-17.4)
HOUSEHOLD INCOME		
Less than $15,000	36.6	(31.3-41.9)
$15,000- 24,999	24.9	(21.6-28.2)
$25,000- 34,999	22.6	(18.7-26.5)
$35,000- 49,999	15.9	(13.2-18.6)
$50,000- 74,999	15.8	(13.3-18.3)
$75,000+	12.0	(10.0-14.0)

When asked about various chronic conditions in 2013, 19.2 percent of adults reported that they had ever been told they had a depressive disorder. This is somewhat higher than in 2012 when it was 17 percent. The prevalence of depression was greater among women, people with less education, and lower-income individuals and less among the elderly. The highest prevalence was among those with annual household incomes less than $15,000 (36.6%). The lowest prevalence was among those with annual household incomes of $75,000 or more (12%) (see table 20.2).

Health Objectives for the Nation

Healthy People 2020 has a goal of 6.1 percent of people experiencing a major depression episode. The 2013 Iowa BRFSS shows 19.2 percent of adult Iowans reporting ever having a depressive episode. Although it is not certain if all these would have been considered major depression, Iowa very likely exceeds the goal.

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Appendix 1

Year 2020 Health Objectives for the Nation: State Summary of BRFSS[1] Data for 2013

Iowa

Healthy People 2020[2] Objective[3]	Yr 2020 Target	State, 2013
Health Insurance (Objective #AHS-1.1) Ages ≥ 18	100%	89.6%
Specific Source of Ongoing Primary Care (Objective #AHS-5.3) Ages ≥ 18 & ≤ 65	89.4%	71%
Specific Source of Ongoing Primary Care (Objective #AHS-5.4) Age ≥ 65	100%	86.3%
Increase the proportion of adults with diabetes who have an annual dilated eye examination (Objective #D-10)	58.7%	71.6%
Increase the proportion of adults with diabetes who have a glycosylated hemoglobin measurement at least twice a year (Objective #D-11)	71.1%	77.1%
Increase the proportion of adults with diabetes who perform self-blood glucose-monitoring at least once daily (Objective #D-13)	70.4%	63.4%
Increase the proportion of persons with diagnosed diabetes who receive formal diabetes education (Objective #D-14)	62.5%	62.2%
Reduce the proportion of adults with hypertension (Objective # HDS-5.1)	26.9%	31.4%
Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years (Objective #HDS-6)	82.1%	75.7%
Increase the proportion of adults with hypertension who are taking the prescribed medications to lower their blood pressure (Objective #HDS-11)	77.4%	78.1%
Influenza Immunization, Within Past Year (Objective #IID-12.5) Ages 18 - 64	80%	41%
Influenza Immunization, Within Past Year (Objective #IID-12.7) Ages ≥ 65	90%	67.4%
Pneumococcal Pneumonia Vaccination, Ever Had (Objective #IID-13.1) Ages ≥ 65	90%	72.6%
Increase the proportion of adults who are at a healthy weight (Objective #NWS-8) Age ≥ 20	33.9%	30.5%
Obese, BMI ≥ 30 (Objective NWS-9) Ages ≥ 20	30.6%	32.1%
No Leisure Time Physical Activity (Objective # PA-1) Ages ≥ 18	32.6%	28.5%

Healthy People 2020[2] Objective[3]	Yr 2020 Target	State, 2013
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%	46.9%
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%	26.8%
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%	27.2%
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%	17.4%
Binge Drinking, During the Past Month (Objective #SA-14.3) Ages ≥ 18	24.3%	21.7%
Cigarette Smoking (Objective #TU-1.1) Ages ≥ 18	12%	19.5%
Smokeless Tobacco Use (Objective #TU-1.2) Ages ≥ 18	0.3%	4.9%
Increase smoking cessation attempts by adult smokers (Objective #TU-4.1) Ages ≥ 18	80%	52.7%
Increase recent smoking cessation success by adult smokers 6 Mo. To 1 Yr. (Objective #TU-4.1) Ages ≥ 18	8%	4.7%
Tested for HIV in the past 12 months. (Objective #HIV-14.1) Ages 15 – 44	16.9%	9.3%
Use of safety belts (Objective #IVP-15)	92.4%	95.1%
Adults getting sufficient sleep (Objective #SH-4) Age ≥ 18 **Sufficient > 7 hr. if age > 21, else >8 hr.**	71.1%	66.2%
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%	43.3%
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%	30.3%

1 Behavioral Risk Factor Surveillance System

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

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

Appendix 2

Health Objectives for Iowa:
State Summary of BRFSS[1] Data for 2013

Healthy Iowans[2] Objective[3]	Yr 2016 Target	Iowa, 2013
An increase in the proportion of people with health insurance Ages 18 – 64	100%	87.3%
An increase in the proportion of people who have one person as a health provider	87%	74%
Influenza Immunization, Within Past Year (Objective #10-2) Ages >= 65	90%	67.4%
Pneumonia Vaccination, Ever Had Ages >= 65	90%	72.6%
A reduction in adult binge drinking	16%	21.7%
A reduction in adult tobacco use (Cigarette Smoking)	15%	19.5%
A decrease in the number of persons with doctor-diagnosed arthritis who experience limitations in activity due to arthritis and other joint symptoms	38%	43.3%
People with diabetes receiving annual dilated eye exams	85%	71.6%
An increase in the proportion of persons with high blood pressure who are taking their medication	75%	78.1%
An increase in the percentage of persons who eat five or more servings of fruits and vegetables each day	20%	12.9%
An increase in the proportion of adults who get the recommended levels of physical activity	55%	46.9%
A reduction in the proportion of adults who are obese	27%	31.3%
An increase in seatbelt usage to reduce injuries and deaths from motor vehicle crashes	96%	95.1%

[1]Behavioral Risk Factor Surveillance System
[2]Iowa Department of Public Health. Healthy Iowans: Iowa's Health Improvement Plan 2012-2016.
[3]In some cases, BRFSS definitions of objectives differ slightly from those in Healthy Iowans. See Healthy Iowans for the exact definition of the objective.

Appendix 3

Iowa 2013 BRFSS Questionnaire

Section 1: Health Status

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

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

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

2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?
Number of days
8 8 None

2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
__ __ Number of days
8 8 None If Q2.1 also "None", skip to next module

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

2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?
__ __ Number of days
8 8 None

Section 3: Health Care Access

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

1 Yes [**If PPHF state go to Module 4, Question 1, else continue]**
2 No

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

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

1 Yes, only one
2 More than one
3 No

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

1 Yes
2 No

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

1 Within past yr. (any time less than 12 months ago)
2 Within past 2 yrs. (one year but less than 2 years ago)
3 Within past 5 yrs. (two years but less than 5 years ago)
4 5 or more years ago
8 Never

Section 4: Inadequate Sleep

I would like to ask you about your sleep pattern.

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

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

_ _ Number of hours [01-24]

Section 5: Hypertension Awareness

5.1: 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**

5.2: Are you currently taking medicine for your high blood pressure?

1 Yes
2 No

Section 6: **Cholesterol Awareness**

6.1: 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**

6.2: 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

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

1 Yes
2 No

Section 7: 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."

7.1: (Ever told) you had a heart attack, also called a myocardial infarction?

1 Yes
2 No

7.2: (Ever told) you had angina or coronary heart disease?

1 Yes
2 No

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

7.4: (Ever told) you had asthma?
1 Yes
2 No ⇨ **Go to Q5.6**

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

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

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

7.8: (Ever told) you have Chronic Obstructive Pulmonary Disease or COPD, emphysema or chronic bronchitis?
1 Yes
2 No

7.9 (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)**

7.10: (Ever told) you have a depressive disorder, including depression, major depression, dysthymia, or minor depression?
1 Yes
2 No

7.11: (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

7.12: (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

Module 1: Pre-Diabetes
NOTE: Only asked of those not responding "Yes" (code=1) to Core Q7.12 (Diabetes awareness question).
1. Have you had a test for high blood sugar or diabetes within the past three years?
1 Yes
2 No

CATI note: If Core Q7.12 = 4 (No, pre-diabetes or borderline diabetes); answer Q2 "Yes" (code = 1).
2. Have you ever been told by a doctor or other health professional that you have pre-diabetes or borderline diabetes?
If "Yes" and respondent is female, ask: "Was this only when you were pregnant?"
1. Yes
2. Yes, during pregnancy
3. No

Module 2: Diabetes
To be asked following core Q7.12 if response is "yes"
1. How old were you when you were told you have diabetes?
___ Code age in years [97 = 97 and older]

2. Are you now taking insulin?
1 Yes
2 No

3. About how often do you check your blood for glucose or sugar? Include times when checked by a family member or friend, but do not include times when checked by a health professional.
1 __ __ Times per day
2 __ __ Times per week
3 __ __ Times per month
4 __ __ Times per year
8 8 8 Never

4. About how often do you check your feet for any sores or irritations? Include times when checked by a family member or friend, but do not include times when checked by a health professional.
1 ____ Times per day
2 ____ Times per week
3 ____ Times per month
4 ____ Times per year
8 8 8 Never
5 5 5 No feet

5. About how many times in the past 12 months have you seen a doctor, nurse, or other health professional for your diabetes?
__ __ Number of times **[76 = 76 or more]**
8 8 None

6. A test for "A one C" measures the average level of blood sugar over the past three months. About how many times in the past 12 months has a doctor, nurse, or other health professional checked you for "A one C"?
__ __ Number of times **[76 = 76 or more]**
8 8 None
9 8 Never heard of "A one C" test

CATI note: If Q4 = 555 (No feet), go to Q8.
7. About how many times in the past 12 months has a health professional checked your feet for any sores or irritations?
__ __ Number of times **[76 = 76 or more]**
8 8 None

8. When was the last time you had an eye exam in which the pupils were dilated? This would have made you temporarily sensitive to bright light.
1 Within the past month (any time less than 1 month ago)
2 Within the past year (1 month but less than 12 months ago)
3 Within the past 2 years (1 year but less than 2 years ago)
4 2 or more years ago
8 Never

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

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

Section 8: Demographics
8.1: What is your age?
__ __ Code age in years

8.2: 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

8.3: 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 Q8.3, continue. Otherwise, go to Q8.5
8.4: 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]**

8.5: Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit? Active duty does not include training for the Reserves or National Guard, but DOES include activation, for example, for the Persian Gulf War.
1 Yes
2 No

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

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

8.8: What is the highest grade or year of school you completed?
1 Never attended school or only attended kindergarten
2 Grades 1 through 8 (Elementary)
3 Grades 9 through 11 (Some high school)
4 Grade 12 or GED (High school graduate)
5 College 1 year to 3 years (Some college or technical school)
6 College 4 years or more (College graduate)

8.9: Are you currently:
1 Employed for wages
2 Self-employed
3 Out of work for more than 1 year
4 Out of work for less than 1 year
5 A Homemaker
6 A Student
7 Retired or
8 Unable to work

8.10: Is your annual household income from all sources:
01 Less than $10,000
02 $10,000 to less than $15,000
03 $15,000 to less than $20,000
04 $20,000 to less than $25,000
05 $25,000 to less than $35,000
06 $35,000 to less than $50,000
07 $50,000 to less than $75,000
08 $75,000 or more

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

8.12: About how tall are you without shoes?
If respondent answers in metric, put "9" in the first position, Round fractions down
__/__ __ Height ft./inches/meters/centimeters

8.13: What county do you live in?
__ __ _ County name

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

8.15: Do you have more than one telephone number in your household?
Do not include cell phones or numbers that are only used by a computer or fax machine.
1 Yes
2 No ⇨ **Go to Q8.17**

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

8.17: Do you have a cell phone for personal use? Please include cell phones used for both business and personal use.
1 Yes
2 No ⇨ **Go to Q8.19**

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

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

8.20: Do you own or rent your home?
1 Own
2 Rent
3 Other arrangement
INTERVIEWER NOTE: "Other arrangement" may include group home, staying with friends or family without paying rent.
Note: Home is defined as the place where you live most of the time/the majority of the year.

8.21: Indicate sex of respondent. Ask only if necessary.
1 Male ⇨ **Go to Q8.23.**
2 Female **If respondent 45 years old or older, go to Q8.23**

8.22: To your knowledge, are you now pregnant?
1 Yes
2 No

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

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

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

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

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

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

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

8.29: Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?
1 Yes
2 No

Section 9: Tobacco Use

9.1: Have you smoked at least 100 cigarettes in your entire life?
5 packs = 100 cigarettes
1 Yes
2 No ⇨ **Go to Q9.5**

9.2: Do you now smoke cigarettes every day, some days, or not at all?
1 Every day
2 Some days
3 Not at all ⇨ **Go to Q9.4**

9.3: During the past 12 months, have you stopped smoking for one day or longer because you were trying to quit smoking?
1 Yes ⇨ **Go to Q9.5**
2 No ⇨ **Go to Q9.5**

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

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

Section 10: Alcohol Consumption

10.1: During the past 30 days, how many days per week or per month did you have at least 1 drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?
1 __ __ Days per week
2 __ __ Days in past 30
8 8 8 No drinks in past 30 days **Go to next section**

10.2: One drink is equivalent to a 12 ounce beer, a 5 ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average?

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

__ __ Number of drinks

10.3: Considering all types of alcoholic beverages, how many times during the past 30 days did you have **X [X = 5 for men, X = 4 for women]** or more drinks on one occasion?

__ __ Number of times

8 8 None

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

_ _ Number

Section 11: 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?"

11.1: 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 11.6.
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.

11.2: During the past month, not counting juice, how many times per day, week, or month did you eat fruit? Count fresh, frozen, or canned fruit

1 _ _ Per day
2 _ _ Per week
3 _ _ Per month
5 5 5 Never

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

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

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

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

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

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

11.3: 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.

11.4: 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.

11.5: 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).

11.6: 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 12: 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.

12.1: 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

12.2: 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".

12.3: 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

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

12.5: 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 Q12.8]
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".

12.6: 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

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

12.8: 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 13: Arthritis Burden
If Q7.9 = 1 (yes) then continue, else go to next section.
Next I will ask you about arthritis.
Arthritis can cause symptoms like pain, aching, or stiffness in or around a joint.
13.1:. 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: Q13.2 should be asked of all respondents regardless of employment status.

13.2: 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."

13.3: 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."

13.4: 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 14: Seatbelt Use

14.1: 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 15: 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™.

15.1: During the past 12 months, have you had either a seasonal flu shot or a seasonal flu vaccine that was sprayed in your nose?

1 Yes
2 No ⇨ **Go To Q11.4**

15.2: 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

15.3: Since 2005, have you had a tetanus shot?
If yes, ask: "Was this Tdap, the tetanus shot that also has pertussis or whooping cough vaccine?"

1 Yes, received Tdap
2 Yes, received tetanus shot, but not Tdap
3 Yes, received tetanus shot but not sure what type
4 No, did not receive any tetanus since 2005

15.4: 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 16: HIV/AIDS

The next few questions are about the national health problem of HIV, the virus that causes AIDS. Please remember that your answers are strictly confidential and that you don't have to answer every question if you don't want to. Although we will ask you about testing, we will not ask you about the results of any test you may have had.

16.1: Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation.
Include tests using fluid from your mouth.

1 Yes
2 No ⇨ **Go to Q18.3**

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

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

__ __ /__ __ __ __ Code month and year

CATI NOTE: If Core Q16.2 = within last 12 months continue, else go to optional module.

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

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

Module 4: Health Care Access

1. Do you have Medicare?

1 Yes
2 No

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

2. Are you CURRENTLY covered by any of the following types of health insurance or health coverage plans?
(Select all that apply)

01 Your employer
02 Someone else's employer
03 A plan that you or someone else buys on your own
04 Medicaid or Medical Assistance [or substitute state program name]
05 The military, CHAMPUS, or the VA [or CHAMP-VA]
06 The Indian Health Service [or the Alaska Native Health Service]
07 Some other source
88 None

CATI Note: If PPHF State go to core 3.2

3. Other than cost, there are many other reasons people delay getting needed medical care.
Have you delayed getting needed medical care for any of the following reasons in the past 12 months? Select the most important reason.

1 You couldn't get through on the telephone.
2 You couldn't get an appointment soon enough.
3 Once you got there, you had to wait too long to see the doctor.
4 The (clinic/doctor's) office wasn't open when you got there.
5 You didn't have transportation.
6 Other _____ specify

8 No, I did not delay getting medical care/did not need medical care

CATI Note: If PPHF State, go to core 3.4

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

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

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

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

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

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

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

_ _ Number of times
8 8 None

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

1 Yes
2 No
3 No medication was prescribed.

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

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

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

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

1 Yes
2 No

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

Module 5: Sugar Sweetened Beverages and Menu Labeling

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

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

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

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

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

2. During the past 30 days, how often did you drink sweetened fruit drinks (such as Kool-Aid, cranberry juice cocktail, and lemonade), sweet tea, and sports or energy drinks (such as Gatorade and Red Bull)? Do not include 100% fruit juice, diet drinks, or artificially sweetened drinks.

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

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

Module 6: 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 8: Cardiovascular Health

I would like to ask you a few more questions about your cardiovascular or heart health.

CATI note: If Core Q7.1 = 1 (Yes), ask Q1. If Core Q7.1 = 2, 7, or 9 (No, Don't know, or Refused), skip Q1.

1. Following your heart attack, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."

1 Yes
2 No

CATI note: If Core Q7.3 = 1 (Yes), ask Q2. If Core Q7.3 = 2, 7, or 9 (No, Don't know, or Refused), skip Q2.

2. Following your stroke, did you go to any kind of outpatient rehabilitation? This is sometimes called "rehab."

1 Yes
2 No

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

Module 10: Influenza
CATI Note: If Q15.1 = 1 (Yes) then continue, else go to next section.
Earlier, you told me you had received an influenza vaccination in the past 12 months.
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

Module 19: Social Context [FORM B ONLY]
Now, I am going to ask you about several factors that can affect a person's health.
If Core Q8.20 = 1 or 2 (own or rent) continue, else go to Q2.
1. How often in the past 12 months would you say you were worried or stressed about having enough money to pay your rent/mortgage? Would you say you were worried or stressed-
1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never
8 Not applicable

2. How often in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals? Would you say you were worried or stressed---
1 Always
2 Usually
3 Sometimes
4 Rarely
5 Never
8 Not applicable

If Core Q8.9 = 1 (Employed for wages) or 2 (Self-employed), go to Q3 and Q4.
If Core Q8.9 = 3 (Out of work for 1 year or more), 4 (Out of work for less than 1 year), or 7 (Retired), go to Q5 and Q6.
If Core Q8.9 = 5 (A homemaker), 6 (A student), or 8 (Unable to work), go to Q7.
3. At your main job or business, how are you generally paid for the work you do? Are you:
1 Paid by salary
2 Paid by the hour
3 Paid by the job/task (e.g. commission, piecework)
4 Paid some other way
INTERVIEWER NOTE: If paid in multiple ways at their main job, select option 4 (Paid some other way).

4. About how many hours do you work per week at all of your jobs and businesses combined?
_ _ Hours (01-96 or more) [Go to Q7]
9 7 Don't know / Not sure [Go to Q7]
9 8 Does not work [Go to Q7]

5. Thinking about the last time you worked, at your main job or business, how were you generally paid for the work you did? Were you:
1 Paid by salary
2 Paid by the hour
3 Paid by the job/task (e.g. commission, piecework)
4 Paid some other way

6. Thinking about the last time you worked, about how many hours did you work per week at all of your jobs and businesses combined?
_ _ Hours (01-96 or more)
9 7 Don't know / Not sure
9 8 Does not work

7. Did you vote in the last presidential election? The November 2012 election between Barack Obama and Mitt Romney.
1 Yes
2 No
8 Not applicable (I did not register, I am not a U.S. citizen, or I am not eligible to vote)

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 Adverse Childhood Experience
I'd like to ask you some questions about events that happened during your childhood. This information will allow us to better understand problems that may occur early in life, and may help others in the future. This is a sensitive topic and some people may feel uncomfortable with these questions. At the end of this section, I will give you a phone number for an organization that can provide information and referral for these issues. Please keep in mind that you can ask me to skip any question you do not want to answer.
All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18 years of age—
1. Did you ever live with anyone who was depressed, mentally ill, or suicidal?
1 Yes
2 No

2. Did you live with anyone who was a problem drinker or alcoholic?
1 Yes
2 No

3. Did you live with anyone who used illegal street drugs or who abused prescription medications?
1 Yes
2 No

4. Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?
1 Yes
2 No

5. Were your parents separated or divorced?
1 Yes
2 No
8 Parents not married

6. How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?
1 Never
2 Once
3 More than once

7. Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking. Would you say---
1 Never
2 Once
3 More than once

8. How often did a parent or adult in your home ever swear at you, insult you, or put you down?
1 Never
2 Once
3 More than once

9. How often did anyone at least 5 years older than you or an adult ever touch you sexually?
1 Never
2 Once
3 More than once

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

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

State Added Cancer Survivorship
CATI note: If Core Q6.6 = 1 (Yes) or Core Q6.7 = 1 (Yes), continue, otherwise go to next module.
Previously you said that you had been told by your doctor that you had cancer. I will now ask you about your experiences with cancer.
1. How many different types of cancer have you had?
1 Only one
2 Two
1Three or more

2. At what age were you told that you had cancer?
_ _ Code age in years [**97 = 97 and older]**
CATI note: If Q1 = 2 (Two) or 3 (Three or more), ask: "At what age were you first diagnosed with cancer?"
INTERVIEWER NOTE: This question refers to the first time they were told about their first cancer.

3. What type of cancer was it?
If Q1 = 2 (Two) or 3 (Three or more), ask: "With your most recent diagnoses of cancer, what type of cancer was it?"
INTERVIEWER NOTE: Please read list only if respondent needs prompting for cancer type (i.e., name of cancer) [1-28]:
Breast
0 1 Breast cancer
Female reproductive (Gynecologic)
0 2 Cervical cancer (cancer of the cervix)
0 3 Endometrial cancer (cancer of the uterus)
0 4 Ovarian cancer (cancer of the ovary)
Head/Neck
0 5 Head and neck cancer
0 6 Oral cancer
0 7 Pharyngeal (throat) cancer
0 8 Thyroid
Gastrointestinal
0 9 Colon (intestine) cancer
1 0 Esophageal (esophagus)
1 1 Liver cancer
1 2 Pancreatic (pancreas) cancer
1 3 Rectal (rectum) cancer
1 4 Stomach
Leukemia/Lymphoma (lymph nodes and bone marrow)
1 5 Hodgkin's Lymphoma (Hodgkin's disease)
1 6 Leukemia (blood) cancer
1 7 Non-Hodgkin's Lymphoma
Male reproductive
1 8 Prostate cancer
1 9 Testicular cancer
Skin
2 0 Melanoma
2 1 Other skin cancer

Thoracic
2 2 Heart
2 3 Lung

Urinary cancer:
2 4 Bladder cancer
2 5 Renal (kidney) cancer
Others
2 6 Bone
2 7 Brain
2 8 Neuroblastoma
2 9 Other

4. Are you currently receiving treatment for cancer? By treatment, we mean surgery, radiation therapy, chemotherapy, or chemotherapy pills.
1 Yes ⇨ **Go to next module**
2 No

5. What type of doctor provides the majority of your health care?
INTERVIEWER NOTE: If the respondent requests clarification of this question, say: "We want to know which type of doctor you see most often for illness or regular health care (Examples: annual exams and/or physicals, treatment of colds, etc.)."
0 1 Cancer Surgeon
0 2 Family Practitioner
0 3 General Surgeon
0 4 Gynecologic Oncologist
0 5 Internist
0 6 Plastic Surgeon, Reconstructive Surgeon
0 7 Medical Oncologist
0 8 Radiation Oncologist
0 9 Urologist
1 0 Other

6. Did any doctor, nurse, or other health professional EVER give you a written summary of all the cancer treatments that you received?
1 Yes
2 No

7. Have you EVER received instructions from a doctor, nurse, or other health professional about *where* you should return or *who* you should see for routine cancer check-ups after completing your treatment for cancer?
1 Yes
2 No ⇨ **Go to Q10**

8. Were these instructions written down or printed on paper for you?
1 Yes
2 No

9. With your most recent diagnosis of cancer, did you have health insurance that paid for all or part of your cancer treatment?
1 Yes
2 No
INTERVIEWER NOTE: "Health insurance" also includes Medicare, Medicaid, or other types of state health programs.

10. Were you EVER denied health insurance or life insurance coverage because of your cancer?
1 Yes
2 No

11. Did you participate in a clinical trial as part of your cancer treatment?
1 Yes
2 No

12. Do you currently have physical pain caused by your cancer or cancer treatment?
1 Yes
2 No ⇨ **Go to next module**

13. Is your pain currently under control?
1 Yes
2 No

State Added Colorectal Cancer Screening
[ASK IF AGE > 49]
1. Next, I would like to ask you some questions about colorectal cancer screening.
Has a health care provider ever talked to you about being tested for colorectal or colon cancer?
1 Yes
2 No ⇨ **Go to Q4**

2. What test did your health care provider recommend?
1 Blood Stool Kit
2 Sigmoidoscopy or colonoscopy (exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems)
3 Other test
4 Recommended both Blood Stool Kit and sigmoidoscopy or Colonoscopy
5 Did not recommend a test ⇨**Go to Q4**

3. Did you have the test [if Q2 = 4, tests] your health care provider recommended?
1 Yes
2 No

4. 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

5. Which of the following best describes your plan for getting screened for colorectal cancer? Would you say…
[Interviewer note: repeat "for colorectal cancer" when necessary]
[SELECT BEST ANSWER]
1 You do not plan to get screened for colorectal cancer,
2 You plan on getting screened at some point in the future,
3 You plan on getting screened within the next six months,
4 You plan on getting screened within the next month
5 You have made an appointment to get screened, or
6 You have already been screened for colorectal cancer. **[Go to Q7**]

[IF Q4 = 1 or Q3 = 1 SKIP TO SACCRQ1]
6. If you have not been screened for colorectal cancer, what has kept you from being screened?
11 No symptoms
12 No family history of colorectal or colon cancer
13 Cost/Not covered by insurance
14 Don't know where to get the exam
15 I am nervous about the procedure
16 OTHER **Specify:_____**
17Doctor didn't recommend it

7. In terms of your own risk, what would you say your chances are of developing colorectal cancer? Would you say...
1 High,
2 Medium,
3 Low, or
4 None?

8. If a person is of average risk for colorectal cancer, at what age should the person be screened for the first time?
___ ___ AGE [18-97]
97. 97 years old or older

State Added Nutrition and Physical Activity

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

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

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

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

3. On a typical WEEKEND, how many hours do you usually spend watching television or videos? Do not count video or computer games.

1 Less than 1 hour
2 1 hour to less than 2 hours
3 2 hours to less than 3 hours
4 3 hours to less than 4 hours
5 4 hours to less than 5 hours
6 5 hours or more
8 None

4. On a typical WEEKDAY, how many hours do you usually spend watching television or videos? Do not count video or computer games.

1 Less than 1 hour
2 1 hour to less than 2 hours
3 2 hours to less than 3 hours
4 3 hours to less than 4 hours
5 4 hours to less than 5 hours
6 5 hours or more
8 None

State Added Tobacco Use

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

1 Yes
2 No

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

___ ___ Number of hours per week [1-70]
01 = One hour or less
70 = Seventy hours or more
88 = None

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

Note: e-cigarettes are also called electronic, or vapor cigarettes
[IF YES, PROBE FOR WHICH]
1 Yes, smokeless **[SKIP TO Q5**]
2 Yes, e-cigarettes
3 Yes both smokeless and e-cigarettes
4 No **[SKIP TO Q5]**

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

1 Everyday
2 Some Days
3 Not at all

5. Have you ever heard of Quitline Iowa?

1 Yes
2 No

IF Q9.2 > 2 AND Q9.5 > 2, SKIP TO SAGQ1]

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

1 Yes
2 No
3 I have never tried to quit

[IF M4.5 = 88, SKIP TO next module]

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

1 Yes
2 No [Skip to next section]

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

[SELECT ALL THAT APPLY]
1 Medication
2 Nicotine replacement therapy
3 Cold turkey
4 Other tobacco products
5 Other method
6 Did not suggest a method

State Added Gambling

1. Have you gambled or bet for money or possessions in the past 12 months?

1 Yes
2 No **[SKIP TO ASTHMA CALLBACK]**

2. Have you ever felt the need to bet or gamble more and more money?

1 Yes
2 No

3. Have you ever had to lie to people important to you about how much you gambled or bet?

1 Yes
2 No