Health and Wellness in Jefferson County
1st Report 2009
Survey Results of the First County Wide Administration of an Adapted Version of the Behavioral Risk Factor Surveillance System (BRFSS)

Adapted from the 2008-2009 Iowa BRFSS

Jefferson County Wellness Action Coalition

This report was prepared by:

Raul Calderon, Jr. Ph.D.
Director of Evaluations
Education Department
Maharishi University of Management
Fairfield, IA

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For additional information, contact Raul Calderon, Jr.
(641) 742-7000 x3328
evaluations@mum.edu

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1. INTRODUCTION

History of BRFSS

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

A point-in-time survey was conducted in Iowa in 1982. In 1988, Iowa began full participation in BRFSS. The BRFSS is now conducted in all 50 states, the District of Columbia, Puerto Rico and the Virgin Islands.

Nature of the Survey

The Iowa Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey. It is financially and technically supported by the Centers for Disease Control and Prevention with further financial support from public and private sources within the state.

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

BRFSS Adapted for Use in the Jefferson County Wellness Action Coalition (Jefferson Walk): Paths to Health and Happiness Wellness Initiative

The 2008–2009 BRFSS were adapted into a paper and pencil version to collect baseline data on the Jefferson County population to help identify the most critical wellness needs in residents and guide future planning and intervention efforts.

This report focuses on the data collected during May, 2009. Some of the risk factors discussed in this report are: general health status; health care coverage; cardiovascular disease; exercise; diet and nutrition; overweight and obesity; diabetes; asthma; tobacco use; alcohol consumption; anxiety and depression; mind/body techniques; and readiness to change health risk behaviors.

Objectives

The objectives of the Jefferson County BRFSS are:

1. To determine the county specific prevalence of personal health behaviors related to contributors to illness, disability and premature death.

2. To establish baseline data for Jefferson County residents in order to be able to evaluate the effectiveness of health initiatives in Jefferson County.

3. To determine the county specific prevalence of readiness of the Stages of Behavior Change (precontemplation, contemplation, preparation, action, and maintenance) for the leading personal health risk behaviors identified in this survey. (The data for these variables will be presented in a subsequent report.)

2. METHODOLOGY

Questionnaire Design

The paper questionnaire employed in the 2009 Jefferson County health and wellness assessment utilized items from the 2008 and 2009 Behavioral Risk Factor Surveillance System (BRFSS). Items were specifically taken from 14 core sections and 5 optional modules from the 2008 BRFSS. The core sections (with 2008 BRFSS section number) were: 1) health status, 2) healthy days, 3) health care access, 4) sleep, 5) exercise, 6) diabetes, 8) cardiovascular disease prevalence, 9) asthma, 11) tobacco use, 12) demographics, 13) alcohol consumption, 16) seatbelt use, 17) drinking and driving, and 22) emotional support and life satisfaction. The optional modules from the 2008 BRFSS included: 3) healthy days (symptoms), 6) binge drinking, 7) other tobacco products, 8) secondhand smoke, and 13) anxiety and depression. Two core sections from the 2009 BRFSS were also included. These were: 18) fruits and vegetables, and 19) physical activity.

Additionally, a few county specific questions were developed to assess the use of the Fairfield Trail Loop system, the purchase and consumption of organic and locally grown fruits and vegetables and practice of mind-body enhancing techniques. Moreover, a set of 12 questions were included to measure readiness to make positive changes in leading personal health risk behaviors, such as, diet, exercise, sleep, smoking, and alcohol consumption.

As with the state and national implementations of the BRFSS, participation in this survey was random, anonymous, voluntary and confidential. Lastly, respondents to this survey were entered into a raffle for one of ten $20 cash prizes as a response incentive.

Sampling Process

There are 12,235 adult (age 18+) residents in Jefferson county Iowa living in 6,649 household units according to the 2000 Census. Marketing Systems Group (MSG) was contracted to provide a simple random sample of adult residents with mailing addresses. The MSG database contained 6507 (97.9%) residents with mailing addresses. The database that was used contained all standard household addresses including seasonal residences and rural routes but excluding residences that were vacant and PO boxes. PO boxes were excluded after finding that many residents had both street addresses *and* PO boxes. Hence, to limit the possibility of sending duplicate surveys to the same respondent, PO boxes were excluded. From the MSG database of 6507, 2500 addresses were randomly selected. Surveys were mailed May 20th and 21st and returned before June 15th. Surveys from 365 residents (14.6%) were returned. This is a typical response rate for this type of survey. A sample size of 365 respondents offers a margin of error of approximately +/- 5%. A 5% margin of error allows for inferences to the adult population regarding health characteristics that 95% of the time will contain the true population value.

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 dietary habits. The potential for bias must always be kept in mind when interpreting self-reported data.

Analysis of the data

When analyzing BRFSS data, conclusions were to be drawn about the entire adult population of Jefferson County. However, since only a sample of randomly chosen people is asked the questions, 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 real county prevalence values may differ by some amount, but the probability of the amount of difference can be determined.

Charts and tables in this report will indicate a range of values based on the survey in which there is a 95% chance of the true County value falling. This range is referred to as a 95% confidence interval (CI). It is usually the case that when the CIs of two or more groups do not overlap, their population values are truly different.

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. They were not counted on, however, 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.

Throughout this report, for selected variables, a comparison between Jefferson County data is made with data reported in the 2006–07 BRFSS Iowa report; for the anxiety and depression module the 2006 BRFSS data was used. Data from the 2006–07 BRFSS report were used for comparison purposes because the 2008 BRFSS report (produced by the Iowa Department of Public Health) had not been published at the time of this report.

3. DEMOGRAPHICS OF THE JEFFERSON COUNTY RESPONDENTS

The 365 respondents in the Jefferson County BRFSS Wellness Survey in 2009 included 235 males and 135 females, age 18 years and older. The following tables present the distribution of the respondent sample by 1) age and gender; 2) race; 3) level of education; 4) household income; and 5) Marital Status.

Table 3.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Age and Gender for Year 2009

Age	Female		Male		Total	
	#	%	#	%	#	%
18–24	6	4.4	1	0.4	7	1.9
25–34	8	5.9	5	2.2	13	3.6
35–44	7	5.1	7	3.1	14	3.8
45–54	27	19.9	59	25.9	87	23.8
55–64	39	28.7	84	36.8	123	33.7
65–74	22	16.2	35	15.4	57	15.6
75–95	26	19.1	34	14.9	60	16.4
Unk/Ref	1	0.7	3	1.3	4	1.1
Total	136	100	228	100	365	100

Table 3.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Race for Year 2009

Race	# of Total Respondents	% of Total Respondents
White	349	95.6
Black/African American	1	0.3
Asian	3	0.8
Hawaiian/Pacific Islander	3	0.8
American Indian	1	0.3
Other	3	0.8
Refused	5	1.4
Total	365	100

Note: Ethnicity prevalence was very similar to race prevalence.

Table 3.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Level of Education for Year 2009

Level of Education	# of Total Respondents	% of Total Respondents
Less than High School	20	5.4
High School Grad or GED	89	24.4
Some College or Technical School	88	24.1
College Graduate	162	44.4
Unknown/Refused	6	1.6
Total	365	100

Table 3.4: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Household Income for Year 2009

Household Income	# of Total Respondents	% of Total Respondents
<$15,000	41	11.2
$15,000–$24,999	51	14.0
$25,000–34,999	49	13.4
$35,000–$49,999	59	16.2
$50,000–$74,999	49	13.4
>=$75,000	72	19.7
Unknown/Refused	21	5.8
Total	365	100

Table 3.5: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Marital Status for Year 2009

Marital Status	# of Total Respondents	% of Total Respondents
Married	211	57.8
Divorced	53	14.5
Widowed	41	11.2
Separated	3	0.8
Unmarried couple	15	4.1
Never Married	40	11
Refused	2	0.5
Total	365	100

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?" has been found to be significant predictors of mortality. (22) 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. (17,13) The risk associated with poor self-rated health was actually higher than the risks associated with poor health status assessments by a physician. (13)

In public health and in medicine, the concept of health-related quality of life refers to a person's or group's perceived physical and mental health over time. Physicians have often used health-related quality of life (HRQOL) to measure the effects of chronic illness in their patients to understand better how an illness interferes with a person's day-to-day life. Similarly, public health professionals use health-related quality of life to measure the effects of numerous disorders, short- and long-term disabilities, and diseases in different populations. Tracking health-related quality of life in different populations can identify subgroups with poor physical or mental health and can help guide policies or interventions to improve their health. (8)

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 2009, when asked how their health was in general, 17.3% of respondents reported that it was excellent. Another 29.6% said it was very good. While 36.4% reported good health, 16.5% rated their health as fair or poor (Table 4.1).

Table 4.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by General Health Status for Year 2009

General Health	# of Total Respondents	% of Total Respondents
Excellent	63	17.3
Very good	108	29.6
Good	133	36.4
Fair	47	12.9
Poor	13	3.6
Refused	1	0.3
Total	365	100

When respondents were asked about how many days in the last month they had experienced problems in physical health (physical health not good) 10.4 % of respondents reported having had physical health problems on 14–30 days. For number of days experiencing mental health problems (mental health not good) 9.6% of respondents reported having had mental health problems on 14–30 days. Overall, 32.3% of respondents reported experiencing some physical health problem in the last 30 days and 29.6% reported experiencing some mental health problem in the last 30 days (Table 4.2, 4.3).

Table 4.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Experienced Problems in Physical Health in Last 30 Days 2009

# of Days Experienced Problems in Physical Health in Last 30 Days	# of Total Respondents	% of Total Respondents
Low (1-13 days)	80	21.9
High (14-30 days)	38	10.4
None (zero days)	35	9.6
Don't Know/Not Sure	206	56.4
Refused	6	1.6
Total	365	100

Table 4.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Experienced Problems in Mental Health in Last 30 Days 2009

# of Days Experienced Problems in Mental Health in Last 30 Days	# of Total Respondents	% of Total Respondents
Low (1-13 days)	73	20.0
High (14-30 days)	35	9.6
None (zero days)	31	8.5
Don't Know/Not Sure	219	60
Refused	7	1.9
Total	365	100

Comparison with Iowa 2007 BRFSS Data.

Table 4.4: Comparison of General, Physical, and Mental Health Results Between Jefferson County and Iowa 2007 BRFSS Data

Health Status	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/95% CI)
General Health Status Fair or Poor	17%/(13.1-20.9)	12.4%/(11.4-13.4)
Days of Poor Physical Health	10.4%/(7.2-13.6)	8.7%/(7.9-9.5)
Days of Poor Mental Health	9.6%/(6.5-12.7)	7.2%, /(6.5-7.9)

The percent of respondents in Jefferson County who reported general health status of fair or poor was higher than respondents in the Iowa 2007 BRFSS (17% vs. 12.4%, respectively). A similar pattern was also noticed in physical and mental health reports.

The percent of respondents in Jefferson County who reported experiencing between 14 to 30 days of physical and mental problems was higher than that found in the Iowa 2007 BRFSS (10.4% and 9.6% vs. 8.7% and 7.2%, respectively). The differences that are seen are not considered to be statistically significant because the confidence intervals overlap. In other words, there does not appear to be a significant difference between Jefferson County data and that of the Iowa 2007 BRFSS data (Table 4.4).

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. (14)

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. (15)

Accurate estimates of the uninsured are difficult to obtain. Much of this difficulty is due to the characteristics of the population lacking insurance. Examples include working in small companies that do not provide insurance as an employee benefit, being unemployed, or lacking a permanent residence.

Health care costs are escalating at an ever-increasing rate. This is especially true of particular sectors of costs such as pharmaceuticals. Such increases hit harder on individuals without health insurance and/or those living on fixed incomes.

Insurance Coverage and Access to Health Care Results

In 2009, 14.2% (Table 5.1) of the survey respondents reported they had no health insurance. Table 5.2 shows that 16.7% of the survey respondents indicated that they could not afford to see a doctor in the past year due to cost.

Table 5.3 shows that 70.1% of the survey respondents indicated that they have one person they consider to be their personal doctor or health care provider.

When asked about how long it had been since visiting a doctor for a routine checkup (Table 5.4) 38.9% of the survey respondents indicated that it had been 2 or more years since their last routine checkup.

Table 5.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Health Insurance Coverage 2009

Health Insurance Coverage	# of Total Respondents	% of Total Respondents
Yes	304	83.3
No	52	14.2
Don't Know/Not Sure	2	0.5
Refused	7	1.9
Total	365	100

Table 5.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Time Couldn't Afford to See a Doctor in Past 12 Months 2009

Time Couldn't Afford Help	# of Total Respondents	% of Total Respondents
Yes	61	16.7
No	299	81.9
Don't Know/Not Sure	3	0.8
Refused	2	0.5
Total	365	100

Table 5.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Have One Person As Health Provider 2009

Have One Person As Health Provider	# of Total Respondents	% of Total Respondents
Yes	256	70.1
No	104	28.5
Don't Know/Not Sure	1	0.3
Refused	4	1.1
Total	365	100

Table 5.4: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Time Since Last Checkup 2009

Time Since Last Checkup	# of Total Respondents	% of Total Respondents
Within past year	205	56.2
Within past 2 years	50	13.7
Within past 5 years	38	10.4
5 or more years ago	54	14.8
Don't know/not sure	6	1.6
Never	9	2.5
Refused	3	0.8
Total	365	100

Comparison with Iowa 2007 BRFSS data.

Although the Jefferson county data shows a higher percent of residents with no health care coverage compared to the Iowa 2007 BRFSS data (14.2% vs. 10.5%), this difference is not statistically significant. The differences in the remaining three variables, however, are significantly significant. That is, Jefferson County had more people that could not afford to see a doctor in the past year (16.7% vs. 7.8%), had less people who had one person as health provider (70.1 vs. 77.1), and less people who had a checkup in past year (56.2% vs. 66.3%) compared to Iowa 2007 BRFSS data (Table 5.5).

Table 5.5: Comparison of Insurance Coverage and Access to Health Care Results Between Jefferson County and Jefferson County BRFSS Wellness 2007 BRFSS Data

Insurance and Access to Health Care	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
No Health Care Coverage	14.2/(10.5–17.9)	10.5/(9.1–11.9)
Time Couldn't Afford Help *	16.7/(12.8–20.6)	7.8/(6.8–8.8)
Have One Person As Health Provider *	70.1/(65.3–74.9)	77.1/(75.5–78.7)
Had Checkup in Past Year *	56.2/(51.0–61.4)	66.3/(64.5–68.1)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Year 2010 Health Objectives for Iowa and the Nation

The *Healthy Iowans 2010* and *Healthy People 2010* goals for health insurance coverage are to see all people be covered by some form of health insurance. In Iowa and Jefferson County this goal has not been met.

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" is most often referred to as coronary heart disease, heart attack or heart failure. "Stroke" refers to a sudden impairment of brain function, sometimes termed "brain attack", which results from interruption of circulation to one or another part of the brain. Heart disease and stroke are mainly consequences of clogged arteries (atherosclerosis) and high blood pressure (hypertension).

Since 1900, CVD has been the No. 1 killer in the United States every year except 1918. Nearly 2,400 Americans die of CVD each day, an average of one death every 36 seconds. According to the CDC/NCHS, if all forms of major CVD were eliminated, life expectancy would rise by almost seven years. (4) Heart disease and stroke are the most common cardiovascular diseases. They are the first and third leading causes of death for both men and women in the United States, accounting for nearly 40% of all annual deaths. (8)

Deaths are only part of the picture. More than 79 million Americans currently live with a cardiovascular disease. For example, coronary heart disease is a leading cause of premature, permanent disability in the U.S. workforce. Stroke alone accounts for disability in nearly 1 million Americans. More than 6 million hospitalizations each year are because of cardiovascular diseases. (8)

Each year about 700,000 people experience a new or recurrent stroke. On average, every 45 seconds, someone in the United States has a stroke. Fifteen to 30 per cent of stroke survivors are permanently disabled. (4) Stroke is a leading cause of serious, long-term disability in the United States.

The economic impact of cardiovascular diseases on our nation's health care system continues to grow as the population ages. The cost of heart disease and stroke in the United States is projected to be $431.8 billion in 2007, including health care expenditures and lost productivity from death and disability. (8)

In Iowa deaths from heart disease have steadily declined. The rate per 100,000 populations has gone from 344.9 in 1991 to 239.4 in 2006. The rate of deaths from stroke has gone from 74.7 in 1991 to 57.4 in 2006. Deaths from cardiovascular diseases were 35.1% of all deaths in 2006 in Iowa. Diseases of the heart made up 74.6% and cerebrovascular disease 17.9% of the cardiovascular deaths. (19)

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 such as smoke-free worksites. 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. (4)

Cardiovascular Diseases Results

In 2009, 6% (Table 6.1) of survey respondents had been told by a doctor that they had had a heart attack or myocardial infarction, 8.2% (Table 6.2) had been told they had cardiovascular heart disease or angina, and 3.6% (Table 6.3) had been told they had a stroke. These data for Jefferson County are very similar to the 2007 BRFSS data (Table 6.4); thus there does not appear to be any statistical differences in proportions in cardiovascular diseases between Jefferson County and the 2007 BRFSS data. Although these percentages may seem small, in comparison to the 2007 BRFSS data, they represent around 90,000 Iowans with a heart attack or heart disease and 60,000 with a stroke. Mortality data is required to complement the information from this survey.

Table 6.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Heart Disease 2009

Had any Heart Disease (MI)	# of Total Respondents	% of Total Respondents
Yes	22	6.0
No	322	88.2
Don't Know/Not Sure	3	0.8
Refused	18	4.9
Total	365	100

Table 6.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Angina or CVD 2009

Had Angina or CVD	# of Total Respondents	% of Total Respondents
Yes	30	8.2
No	309	84.7
Don't Know/Not Sure	5	1.4
Refused	21	5.8
Total	365	100

Table 6.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Event of Stroke 2009

Had Stroke	# of Total Respondents	% of Total Respondents
Yes	13	3.6
No	328	89.9
Don't Know/Not Sure	4	1.1
Refused	20	5.5
Total	365	100

Table 6.4: Comparison of Cardiovascular Diseases Between Jefferson County and Iowa 2007 BRFSS Data

Cardiovascular Diseases	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
Had any Heart Disease (MI or CHD)	6/(3.5–8.5)	6.3/(5.7–7)
Had Stroke	3.6/(1.6–5.6)	2.7/(2.3–3.1)
Had Angina or CVD	8.2/(5.3–11.1)	8/(7.2–8.7)

Note: differences in proportions between Jefferson County and Iowa 2007 BRFSS are not statistically significant.

7. 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. (23, 25,32) Despite its risks, a large proportion of people remain inactive.

Although the percentage of people who do not engage in regular physical activity remains high, many efforts are underway to try to increase the physical activity level of Iowans. Iowans Fit for Life, a program of the Iowa Department of Public Health, is actively working to increase the physical activity levels of Iowans. Interventions to increase physical activity include:

1) An increased number of great recreational trails.
2) Increased regular media attention to physical activity and related topics.
3) Development of worksite wellness programs.
4) Creating a culture where physical activity is the easy choice.
5) Continuous promotion of physical activity by the Iowa Department of Public Health and other organizations.
6) Continued development of programs by Parks and Recreation Departments.
7) The individual commitment of thousands of Iowans to make healthier choices.

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

Exercise & Physical Activity Results

In 2009, 78.4% of survey respondents reported that they had engaged in some sort of physical activity for exercise during the past month other than their regular job. About 44% (Table 7.1) of the respondents reported that they mostly sat or stood at their place of work.

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

The percentage of survey respondents reporting they had engaged in moderate and vigorous physical activity was 89.3% and 58.6%, respectively (Table 7.2–7.3).

The percentage of respondents who met the recommended level of physical activity for moderate and vigorous activity was 83.4% and 40.2%, respectively (table not shown).

The median amount of time spent doing moderate or vigorous activity per day was 60 minutes. (The median time is reported instead of the mean because the distribution of times was not normally distributed).

Table 7.4 shows that Jefferson County has a significantly higher proportion of respondents meeting the recommended level of moderate and vigorous physical activity when compared to the Iowa 2007 BRFSS data.

Table 7.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Activity at Work 2009

Activity at Work	# of Total Respondents	% of Total Respondents
Mostly sitting or standing	161	44.1
Mostly walking	43	11.8
Mostly heavy labor or demanding work	34	9.3
Not employed	120	32.9
Don't Know/Not Sure	2	0.5
Refused	5	1.4
Total	365	100

Table 7.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Moderate Activity During the Week 2009

Moderate activity during week	# of Total Respondents	% of Total Respondents
Yes	326	89.3
No	34	9.3
Don't Know/Not Sure	4	1.1
Refused	1	0.3
Total	365	100

Table 7.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Vigorous Activity During the Week 2009

Vigorous activity during week	# of Total Respondents	% of Total Respondents
Yes	214	58.6
No	132	36.2
Don't Know/Not Sure	14	3.8
Refused	5	1.4
Total	365	100

Table 7.4: Comparison of Physical Activity Between Jefferson County and Iowa 2007 BRFSS Data

Physical Activity	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
Any Physical activities in last month	78.4/(74.1–82.7)	77.9/(76.5–79.3)
Moderate *	83.4/(79.5–87.3)	48.4/(47.0–49.8)
Vigorous *	40.2(35.1–45.3)	25/(23.8–26.2)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Use of the Fairfield Loop Trail

The Fairfield Loop Trail is a 17-mile recreational loop system of currently paved or gravel trails which circle the city of Fairfield. Table 7.5 shows that 43% of the respondents reported that they had used the Fairfield Loop Trail in the past year either on a daily, weekly, monthly or yearly basis. Table 7.6 shows the median use of the trail by daily, weekly, monthly or yearly use.

Moreover, of the 43% of respondents that indicated having used the Loop trail in the past year 47% and 49% of these respondents also met the recommended levels of moderate and vigorous physical activity, respectively. This suggests that the availability of the Jefferson County recreational loop trail may account, in part, for the significantly higher rates of moderate and vigorous physical activity levels reported in Table 7.4.

Table 7.5: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Use of Fairfield Loop Trial 2009

Type of Use of Fairfield Loop Trail	# of Total Respondents	% of Total Respondents
Daily	17	4.7
Weekly	60	16.4
Monthly	43	11.8
Yearly	37	10.1
Never	12	3.3
Don't Know/Not Sure	186	51
Refused	10	2.7
Total	365	100

Table 7.6: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Amount of Use of Fairfield Loop Trial 2009

Amount of Use of Fairfield Loop Trail	Median Use	% of Total Respondents
Per day	1 time per day	73%
Per week	3 times per week	28%
Per month	2 times per month	28%
Per year	4 times per year	19%

Note: percentages do not add up to 100% because each row is independent of other time frames. For example, of those respondents who indicated daily use, 73% of them had a median use of 1 time per day. Of those respondents who indicated weekly use, 28% of them had a median use of 3 times per week and so forth.

Year 2010 Health Objectives for Iowa and the Nation

The national target for objective 22.1, reducing the proportion of adults who engage in no leisure-time physical activity, is 20 percent. (21) Iowa's level of 22.1% is higher than this target. Jefferson County's level is 21.6% which is also higher than the national target.

The national targets for objective 22.2 and 22.3, to increase the proportion of adults engaging in regular moderate or regular vigorous physical activity, are both 30%. Jefferson County respondents reported 83.4% regular moderate physical activity and 40.2% regular vigorous physical activity. Jefferson County is well above the national target for moderate and vigorous physical activity.

8. DIET AND NUTRITION

Background

Eating a diet high in fruits and vegetables as part of an overall healthful diet can help lower chronic disease risk and aid in weight management. Fruits and vegetables contain essential vitamins, mineral, fiber, and other bioactive compounds; a diet high in these foods is associated with lower risk for numerous chronic diseases, including certain cancers and cardiovascular disease. (7, 35)

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. There is evidence that non-starchy vegetables and also fruits probably protect against cancers of the mouth, larynx, pharynx, esophagus, and stomach, and that fruits also probably protect against lung cancer; and that allium vegetables, and garlic specifically, probably protect against stomach cancer. (36)

Increased consumption of fruits and vegetables by individuals over age 2 is a practical and important means for optimizing nutrition to reduce disease risk and maximize good health. The most recent *Dietary Guidelines for Americans (2005)* recommends 3 1/2 to 6 1/2 cups of fruits and vegetables each day for adults, based on age, sex and physical activity. (34)

Diet and Nutrition Results

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

The percentage of Jefferson County respondents who eat five or more servings of fruits and vegetables per day was 35.6% in 2009 (Table 8.1). This percentage is significantly higher than the percent reported in the Iowa 2007 BRFSS of 19.9% (Table 8.2)

The city of Fairfield, Maharishi Vedic City and surrounding farmers are known to grow and/or sell certified organically or locally grown produce, which are usually available at several local stores or farmers markets. Some of the locally grown produce may also be grown organically but may not be certified organic. Table 8.3 shows that a total of 45.8% of survey respondents ate organically grown foods on a daily basis. Table 8.4 shows that a total of 63.6% of survey respondents ate locally grown foods.

Table 8.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Amount of Servings of Fruits and Vegetables Consumed Per Day

Five or more servings of fruits and vegetables per day	# of Total Respondents	% of Total Respondents
No	226	61.9
Yes	130	35.6
Refused	9	2.5
Total	365	100

Table 8.2: Comparison of Five or More Servings of Fruits and Vegetables per Day Between Jefferson County and Iowa 2007 BRFSS Data

Five or more servings of fruits and vegetables per day	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
Yes *	35.6/(30.6–40.6)	19.9/(18.8–21.0)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Table 8.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Daily Consumption of Organically Grown Food 2009

Daily consumption of organically grown food	# of Total Respondents	% of Total Respondents
1 to 2 times per day	115	31.5
3 to 5 times per day	47	12.9
5 to 8 times per day	5	1.4
No organic food	198	54.2
Total	365	100

Table 8.4: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Daily Consumption of Locally Grown Food 2009

Daily consumption of locally grown food	# of Total Respondents	% of Total Respondents
1 to 2 times per day	215	58.9
3 to 5 times per day	16	4.4
5 to 8 times per day	1	0.3
No locally grown food	133	36.4
Total	365	100

Year 2010 Health Objectives for Iowa and the Nation

According to the national health objectives for the year 2010, 75% of people over two years old need to consume two helpings of fruit daily and 50% need to consume three helpings of vegetables daily. (31) The Healthy Iowans 2010 goal was simpler at 50% of adults eating five helpings a day of fruit or vegetables. Although the percentage of Jefferson County survey respondents consuming five or more helpings of fruits or vegetables daily is higher (35.6%) than the Iowa 2007 BRFSS data (19.9%) it still falls short of both the 2010 Health Objectives for Iowa and the nation.

9. OVERWEIGHT AND OBESITY

Background

Overweight and obesity are probably the most serious health problems in America today. Obesity is a condition linked to risk factors for heart disease, cancer, and stroke, which are the first, second and third leading causes of death. It is associated with Type II diabetes, atherosclerosis (hardening of the arteries), gout, asthma, hypertension, sleep apnea, and osteoarthritis. (35) Obesity has been increasing so rapidly that it may be regarded as an epidemic. (14)

Obesity is already a significant factor in rising health care costs. Increase in its prevalence is driving these costs even higher. Obesity costs the United States $117 billion each year. (18) Iowa's direct costs attributable to obesity were estimated from data from the late 1990s to be $783 million, of which $198 million is paid by Medicaid and $165 million, by Medicare. (13)

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. (27)

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. (27)

Body mass index (BMI) is used to determine the appropriateness of weight for a person's height. BMI is defined as a person's body weight in kilograms divided by their height in meters squared [weight (kg)/height (m2)]. Estimations of the prevalence of overweight and obesity in this report are based on BMI determined from self-reported weight and height. In adults, overweight is considered to be a BMI value greater than or equal to 25 and less than 30. Obesity is considered to be a BMI greater than or equal to 30. This self-report method is likely to result in an underestimation of the actual extent of obesity. However, comparisons among demographic groups, years, and geographic regions (states) are likely to be valid. Furthermore, this is the only measure of overweight and obesity available on the state level.

Overweight & Obesity Results

The Jefferson County BRFSS data (Table 9.1) shows that, in 2009, 29.6% of survey respondents were overweight, and 24.7% were obese, based on BMI. The combined percentage of individuals who are overweight or obese is 54.3%.

Table 9.2 shows a comparison in overweight, obese, and combined categories between Jefferson County and the Iowa 2007 BRFSS data. Jefferson County survey respondents were significantly lower than Iowans in the overweight and combined categories.

Although the trend of obese respondents is lower for Jefferson County than Iowa respondents this difference is not considered to be statistically significant.

It should also be noted that a significant amount of survey respondents (16.2%) were not included in the final BMI calculations—these respondents refused to provide height and weight information. Thus, the actual percentages for the overweight, obese, and combined categories for Jefferson County survey respondents might be higher than what is cited in this report.

Table 9.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Body Mass Index Categories 2009

Body Mass Index Categories	# of Total Respondents	% of Total Respondents
Healthy Weight	108	29.6
Overweight	108	29.6
Obese	90	24.7
Refused	59	16.2
Total	365	100

Table 9.2: Comparison of Body Mass Index Categories Between Jefferson County and Iowa 2007 BRFSS Data

Body Mass Index Categories	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
Overweight ≥25 *	29.6/(24.8-34.4)	37/(35.4-38.6)
Obese ≥30	24.7/(20.2-29.2)	27.7/(26.1-29.3)
Combined *	54.3/(49.1-59.5%)	64.7/(61.2-64.8)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Year 2010 Health Objectives for Iowa and the Nation

The health objectives on weight for the nation to be achieved by the year 2010 call for increasing the prevalence of healthy weight (neither overweight nor obese) to 60% among adults age 20 years and older. In Iowa and Jefferson County this target is not being met.

The *Healthy People 2010* target for obesity is 15%. Iowa and Jefferson County have a prevalence that is much higher. The *Healthy Iowans 2010* goals for overweight and obesity are to halt the increasing prevalence. Jefferson County results for overweight and obesity are lower than the Iowa 2007 BRFSS data, which suggests that Jefferson County may be heading in the right direction.

10. DIABETES

Background

Diabetes rates in the United States are approaching epidemic proportions. Almost 16 million people live with the burden of diabetes daily, and another 5.2 million may have the disease and do not know it. In 2001–2004, 11% of persons 40 to 59 years of age and more than one-fifth (23%) of adults 60 years and over had diabetes, including those with diabetes previously diagnosed by a physician and those with undiagnosed diabetes determined by results of a fasting blood sugar test. (9)

Skyrocketing costs accompany this epidemic with an estimated total annual cost (direct and indirect) in 2007 of $174 billion. This includes direct medical costs of 116 billion and indirect costs resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality of another $58 billion. This is an increase of $42 billion since 2002. This 32% increase means the dollar amount has raised over $8 billion more each year. (3)

The good news is that research studies have found that positive lifestyle changes can prevent or delay the onset of Type 2 diabetes among high–risk adults. Lifestyle interventions included diet modification, weight loss and moderate-intensity physical activity (such as walking for 2 ½ hours each week).

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

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

Diabetes Results

In 2009, 11.8% (Table 10.1) of respondents had ever been told by a physician that they have diabetes, excluding women told only during pregnancy. This figure is higher than the 6.8% (Table 10.2) found in the Iowa 2007 BRFSS. This result is almost twice as high as that of Iowans and is unexpected given that Jefferson County survey respondents as a whole showed lower rates of being overweight, eating more fruits and vegetables, and being more physically active. This higher percent of Diabetes in Jefferson County survey respondents could be a random fluctuation, but it does merit further investigation due to

the significant health risks and the health policy ramifications that it poses for Jefferson County.

Table 10.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Ever Been Told They Had Diabetes 2009

Ever Been Told They Had Diabetes	# of Total Respondents	% of Total Respondents
Yes	43	11.8
No	318	87.1
Don't Know/Not Sure	1	0.3
Refused	3	0.8
Total	365	100

Table 10.2: Comparison of Ever Been Told They Had Diabetes Between Jefferson County and Iowa 2007 BRFSS Data

Ever Been Told They Had Diabetes	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
Yes *	11.8/(8.4-15.2)	6.8/(6.2-7.4)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Year 2010 Health Objectives for Iowa

The *Healthy Iowans 2010* objective set for prevalence of diabetes was for an increase of no more than 0.2% per year. This made the desired prevalence in 2007 no higher than 7.1%. In 2007, Iowa was at 6.8%, which was below the maximum goal. If we project forward to the present year of 2009, the desired prevalence would be no higher than 7.5%. Jefferson County in 2009 was found to have a prevalence of 11.8%, which is significantly higher than the desired goal for Healthy Iowans 2010.

11. ASTHMA

Background

Asthma is a chronic, inflammatory disease of the lungs in which the airways become blocked or narrowed causing breathing difficulty. It is characterized by recurrent wheezing, breathlessness, coughing, and chest tightness. (6)

This chronic disease affects 20 million Americans of all ages. (1) Asthma is the most common chronic disease of childhood. At least five million children in the U.S. suffer from asthma. Prevalence among adults and children has increased sharply since 1980. (2, 3) More than 200,000 Iowans now have asthma. (5)

The causes of asthma are not completely understood, but are most likely a combination of personal and environmental risk factors. Those risk factors for asthma include family history of asthma and allergies, acute respiratory infections, exposure to indoor air pollution (tobacco smoke, animal dander, dust mites, cockroaches, occupational exposures to more than 250 substances), outdoor air pollution (burning leaves, pollen, air pollutants), obesity, and lack of exercise. Diet and early exposure to certain infectious agents may provide some protection. After developing asthma, a person often becomes especially sensitive to any exposures to the environmental risk factors listed. (15)

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.

The direct and indirect costs of asthma, including inpatient and outpatient care and medications, and socio-economic costs are estimated to exceed $12 billion each year. (6, 19) Based on national data, it is estimated about 140,000 days of school are missed each year due to asthma by Iowa children, 21 and half of all children and a quarter of all adults with asthma miss at least one day of school or work each year. (30)

Asthma Results

In 2009, 9.9% (Table 11.1) of Jefferson County respondents reported ever being diagnosed by a physician with asthma. Out of all Jefferson County respondents, 6.3% (Table 11.2) currently had asthma, and 3.6% formerly had asthma. *

Table 11.3 shows that Jefferson County survey respondents had a lower percent of "ever been told they had asthma," a lower percent with current asthma, and a higher percent of former asthma. Although these differences indicate that Jefferson County may have lower rates of asthma compared to other Iowans, these differences are not significantly different from those reported in the Iowa 2007 BRFSS.

Compared to other states and territories Iowa, in 2007, with a prevalence of 7% was below the national median of 8.3% of adults suffering from asthma. Iowa and Jefferson County thus seem to compare favorably to other states and territories in the battle against asthma.

Table 11.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Ever Been Told They Had Asthma 2009

Ever Been Told They Had Asthma	# of Total Respondents	% of Total Respondents
Yes	36	9.9
No	324	88.8
Don't Know/Not Sure	1	0.3
Refused	4	1.1
Total	365	100

Table 11.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Still Have Asthma 2009

Still Have Asthma	# of Total Respondents	% of Total Respondents
Yes	23	6.3
No	24	6.6
Don't Know/Not Sure	4	1.1
N/A	314	86
Total	365	100

Table 11.3: Comparison of Ever Been Told They Had Asthma Between Jefferson County and Iowa 2007 BRFSS Data

Ever Been Told They Had Asthma	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
Ever Been Told They Had Asthma	9.9/(6.8–13.0)	10.2/(9.4–11.0)
Current Asthma	6.3/(3.8–8.8)	7.0/(6.2–7.8)
Former Asthma	3.6/(1.6–5.6)	2.9/(2.3–3.5)

* To determine current and former asthmatics, those who indicated they still have asthma (6.3%) were subtracted from the total indicating those who had ever been told they had asthma (9.9%), and the result of 3.6% was used to represent former asthmatics.

12. TOBACCO USE

Background

Tobacco use remains the leading preventable cause of death in the United States. It is responsible for more than 440,000 deaths each year, or one in every five deaths. (11, 34) Over $75 billion is spent every year on direct medical expenditures, and another $82 billion on indirect costs such as lost work time resulting from tobacco use. (11, 34)

Tobacco use is known to cause heart disease, peripheral vascular disease, and chronic lung disease, as well as cancers of the lung, larynx, esophagus, pharynx, mouth, and bladder. In addition, cigarette smoking contributes to cancer of the pancreas, kidney, and cervix. In fact, smoking causes diseases in nearly every organ of the body. (34)

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. (33)

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. Smoking prevalence declined from 42.4% in 1965 to 24.7% in 1997. (9) After a leveling off in the 1990s, these rates have recently begun to further decline.

Iowa and 45 other states agreed to a master settlement with the tobacco industry on November 23, 1998. A portion of the settlement provided from this agreement is allocated to reducing tobacco use. Currently, funding for tobacco prevention and control programs in Iowa is almost 70% below the Centers for Disease Control and Prevention minimum recommended funding level for Iowa of $19.35 million.

The key settlement program components include reducing exposure to environmental tobacco smoke, smoking prevention education, the restriction of minors' access to tobacco, the treatment of nicotine addiction, and working toward changing social norms and environments that support tobacco use. The last component of the settlement involves counter-advertising and promotion, product regulation, and economic incentives against tobacco. (21)

In March of 2007, the Iowa state legislature passed a one dollar increase in the tax on a pack of cigarettes. Although the number of interviews conducted per month in this survey were too small to establish that this had any immediate effect on the number of smokers, evidence from other sources suggests that it will in the long run further reduce the number of smokers by inducing people to try to quit and by making it less likely that new people will start.

Tobacco Use Results for Jefferson County

A current smoker was defined as someone who had smoked at least 100 cigarettes in their lifetime and indicated having smoked everyday or some days during the past 30 days. Of all Jefferson county respondents surveyed in 2009, 7.9% (Table 12. 2) reported being a current smoker. Forty percent (Table 12.3) of respondents classified themselves as a former smoker. When asked about attempts to quit smoking, 7.1% (Table 12.4) of current smokers reported they quit smoking for a day or more during the past year.

Questions included: ever used or tried any smokeless tobacco products such as chewing tobacco, snuff, or snus, and 15.1% of survey respondents said they had ever tried a smokeless product. However, only 1.4% reported being current users (Tables not shown).

Table 12.5 shows a significant lower percentage of current smokers in Jefferson County (7.9%) compared to the Iowa 2007 BRFSS data (19.8%). The percent of former smokers is much higher for Jefferson County (40%) compared to the Iowa 2007 BRFSS data (23.5%). This difference represents almost twice as many former smokers in Jefferson County compared to Iowans as a whole. It would be valuable to further investigate the reasons and processes involved in this result. One possible factor that may be involved in these differences is the two recent legislative bills passed in the last couple of years (i.e., the 2007 cigarette tax increase and the 2008 statewide smoking ban in most public places).

Furthermore, the percent of Jefferson county respondents who tried to quit smoking in the past year (7.1%) is also lower compared to the Iowa 2007 BRFSS data (55.5%). With a lower percent of people smoking in Jefferson County one might expect to have a lower percent of people trying to quit smoking as well. Because Jefferson County appears to have a relatively low percent of current smokers this group may represent a group of smokers who have a fairly high level of addiction, which would make it more difficult to quit, and/or less likely to consider a change in smoking behavior.

Questions were asked about policies concerning exposure to secondhand smoke. Most Jefferson County survey respondents (79.2%) said they had rules against smoking anywhere in their home. However, 15.1% said they allowed smoking anywhere in the house or had no rules concerning smoking in the house (Table not shown).

Table 12.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Have Smoked at Least 100 cigarettes in Lifetime 2009

Have smoked 100 cig. in lifetime	# of Total Respondents	% of Total Respondents
Yes	179	49
No	174	47.7
Don't know/not sure	2	0.5
Refused	10	2.7
Total	365	100

Table 12.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Current Smoker Status 2009

Current Smoker	# of Total Respondents	% of Total Respondents
No	326	89.3
Yes	29	7.9
Refused	10	2.7
Total	365	100

Table 12.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Former Smoker Status 2009

Former Smoker	# of Total Respondents	% of Total Respondents
No	206	56.4
Yes	146	40
Refused	13	3.6
Total	365	100

Table 12.4: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Tried to Quit Smoking in Past Year 2009

Tried to Quit Smoking in Past Year	# of Total Respondents	% of Total Respondents
Yes	26	7.1
No	161	44.1
Don't Know/Not Sure	9	2.5
N/A	169	46.3
Total	365	100

Table 12.5: Comparison of Tobacco Use Between Jefferson County and Iowa 2007 BRFSS Data

Tobacco Use	Jefferson County %/(95%CI)	Iowa 2007 BRFSS %/(95%CI)
Current Smoker *	7.9/(5.1–10.7)	19.8/(18.4–21.2)
Former Smoker *	40/(34.9–45.1)	23.5/(22.1–24.9)
Tried to Quit *	7.1/(4.4–9.8)	55.5/(51.4–59.6)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Year 2010 Health Objectives for Iowa and the Nation

The goal for *Healthy People 2010* is to reduce the percentage of smokers to 12%, while the goal for *Healthy Iowans 2010* is 18%.

At present the data for Jefferson County shows that it has achieved the state and national goals for both *Healthy Iowans* 2010 and *Healthy People* 2010.

The *Healthy Iowans 2010* goal was 69% for people having rules against smoking in their home. The Iowa 2007 BRFSS results of 75.3% for Iowans saying they had such rules surpass the 2010 goals. In Jefferson County the proportion of survey respondents saying they had such rules was 79.2%, which also surpasses the 2010 goal.

13. ALCOHOL CONSUMPTION

Background

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

Nearly 14 million Americans abuse alcohol or are alcoholic. Several million more 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). In addition, 53% of men and women in the United States report that one or more of their close relatives has a drinking problem. (29)

Alcohol dependency and abuse are major public health problems carrying a large economic cost and placing heavy demands on the health care system. Chronic alcohol use affects every organ and system of the body. It also can lead to medical disorders (e.g., fetal alcohol syndrome, liver disease, cardiomyopathy, and pancreatitis). Heavy drinking can increase the risk for certain cancers. Drinking increases the risk of death from automobile crashes as well as recreational and on-the-job injuries. Furthermore, both homicides and suicides are more likely to be committed by persons who have been drinking.

In purely economic terms, alcohol-related problems cost society approximately $185 billion per year. In human terms, the costs cannot be calculated.

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 who are students appear to engage in more unplanned sexual activity and to abandon safe sex techniques more often than students who do not binge. (28)

Alcohol consumption has been considered to lead to 85,000 deaths (3.5% of all deaths) in the United States in 2000. (23)

Alcohol Consumption Results

In the BRFSS survey, a standard drink is defined as one 12-ounce beer, one 5-ounce glass of wine, or a drink with one shot of hard liquor.

In 2009, 46.8% (Table 13.1) of Jefferson County survey respondents reported that they had at least one drink of alcohol in the past 30 days. On the days when they drank,

22.5% had only one drink. The median was 1.5 drinks. About 4.4% reported drinking five or more drinks per day on the average (Tables not shown).

Table 13.2 shows significant differences across the board in alcohol use between Jefferson County and the Iowa 2007 BRFSS data. Jefferson County alcohol use was lower in every category except heavy drinking. This result does not seem consistent with the overall pattern of lower alcohol use by Jefferson County survey respondents, especially when the difference is more than two times higher than the Iowa 2007 BRFSS data. This particular result may just be an anomaly in the data. However, further investigation is warranted to verify if in fact there are a greater proportion of heavy drinkers in Jefferson County.

Table 13.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Had at Least One Alcoholic Drink in Last 30 Days 2009

1 alcoholic drink past 30 days	# of Total Respondents	% of Total Respondents
Yes	171	46.8
No	187	51.2
Don't Know/Not Sure	1	0.3
Refused	6	1.6
Total	365	100

Table 13.2: Comparison of Alcohol Use Between Jefferson County and Iowa 2007 BRFSS Data

Alcohol Use	Jefferson County %/(95% CI)	Iowa 2007 BRFSS %/(95% CI)
1 Drink Past 30 Days*	46.8/(41.6–52.0)	56.7/(55.4–58.0)
1 Drink on Days of Drinking*	22.5/(18.1–26.9)	37.1/(35.8–38.4)
5 or More Drinks/day*	4.4/(2.3–6.5)	14.4/(13.4–15.4)
Binge Drinking*	12.9/(9.4–16.4)	19.9/(18.3–21.5)
Heavy Drinking*	13.7/(10.1–17.3)	5.5/(4.7–6.3)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2007 BRFSS data

Year 2010 Health Objectives for the Nation

The *Healthy People 2010* goal for the nation for binge drinking is only 6%. No state has achieved that goal. Iowa exceeds it by more than three times and Jefferson County by more than two times. Jefferson County and Iowa still have a significant amount of work to do to find ways to help reduce the current levels of binge drinking.

14. 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. (21) 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. (21) 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. (20)

The combined indirect and related costs of mental illness are immense and include the costs of lost productivity; lost earnings due to illness; and societal costs, such as increased criminal justice and family-caregiver costs. Clinical depression alone costs the United States $43.7 billion annually; anxiety disorders, $46.8 billion; and schizophrenia, $65 billion.

Mental health and mental disorders also have a significant impact on the total health-care system. Up to half of all visits to primary care physicians are due to conditions caused by or made worse by mental or emotional problems. People with depression are more than four times as likely to have a heart attack as those without such a history. Roughly 37% of alcohol abusers and 53% of drug abusers also have at least one serious mental illness. (21)

Mental Health Results

<u>General Well Being</u>

Data in this chapter comes from questions found in the Iowa 2006 BRFSS. These questions are about emotional support, satisfaction, and a module to evaluate anxiety and depression.

When asked how often they got the emotional support they needed, 32.1% of Jefferson County survey respondents responded always, and another 38.4% responded usually. Never was reported by 4.9%. (Table 14.1)

When asked in general how satisfied they were with their lives, 84.7% of Jefferson County survey respondents reported either very satisfied or satisfied (Table 14.2).

Table 14.1: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Frequency of Social and Emotional Support 2009

Frequency of social and emotional support	# of Total Respondents	% of Total Respondents
Always	117	32.1
Usually	140	38.4
Sometimes	54	14.8
Rarely	25	6.8
Never	18	4.9
Don't know/not sure	4	1.1
Refused	7	1.9
Total	365	100

Table 14.2: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Satisfied with Life 2009

Satisfied with Life	# of Total Respondents	% of Total Respondents
Very satisfied	113	31.0
Satisfied	196	53.7
Dissatisfied	39	10.7
Very dissatisfied	6	1.6
Don't know/not sure	4	1.1
Refused	7	1.9
Total	365	100

Anxiety and Depression

The anxiety and depression module in the Iowa 2006 BRFSS contained ten questions. For the Jefferson County Health Survey, 8 of the 10 questions were used. Two questions were eliminated in the interest of survey length. All other procedures for computing an anxiety and depression index score were similar in nature to the Iowa 2006 BRFSS.

Results from the first six questions made up a single measure of depression called PHQ6. The questions in the PHQ6 scale all ask how many days in the past two weeks the respondent has felt a certain way. These are coded into numbers from zero to three and summed to obtain the PHQ6 score. The value of these scores, which can range from zero to 18, can then be divided up to indicate five levels of depression. Due to small numbers in the highest three levels, they are combined here. Thus, only three levels of current depression are examined.

According to the PHQ6, 6% of Jefferson County survey respondents are experiencing moderate to severe depression, and another 24.4% are experiencing mild depression and mild moderate depression; 42.7% indicated no depression (see table 14.3).

When asked if they had ever been diagnosed with anxiety or depression, 12.3% and 16.4%, said they had, respectively (Tables 14.4, 14.5).

Table 14.3: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Level of Depression 2009

Level of Depression	# of Total Respondents	% of Total Respondents
No depression	156	42.7
Mild depression	67	18.4
Mild moderate depression	22	6
Moderate depression	14	3.8
Severe depression	8	2.2
N/A	98	26.8
Total	365	100

Table 14.4: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Diagnosed with Anxiety 2009

Diagnosed with Anxiety	# of Total Respondents	% of Total Respondents
Yes	45	12.3
No	311	85.2
Don't Know/Not Sure	3	0.8
Refused	6	1.6
Total	365	100

Table 14.5: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Diagnosed with Depression 2009

Diagnosed with Depression	# of Total Respondents	% of Total Respondents
Yes	60	16.4
No	292	80
Don't Know/Not Sure	4	1.1
Refused	9	2.5
Total	365	100

Table 14.6 shows a comparison in both emotional and social support, and diagnosed anxiety and depression. Jefferson County had a significantly lower proportion of respondents who indicated always and usually receiving emotional and social support, compared to Iowans of 2006. Although the Jefferson County survey respondents had higher proportions of diagnosed anxiety and depression than Iowans of 2006 these differences were not statistically significant.

Table 14.6: Comparison of Emotional and Social Support, Life Satisfaction, Anxiety and Depression Between Jefferson County and Iowa 2006 BRFSS Data

Emotional and Social Support, Life Satisfaction and Ever Diagnosed with Anxiety or Depression	Jefferson County %/(95% CI)	Iowa 2006 BRFSS %/(95% CI)
Emotional and Social Support—always and usually *	70.5/(65.7–75.3)	85.0/(84.0–86.0)
Life Satisfaction—very satisfied and satisfied *	84.7/(80.9–88.5)	96.2/(95.7–96.7)
Diagnosed with Anxiety	12.3/(8.9–15.7)	9.1/(8.1–10)
Diagnosed with Depression	16.4/(11.4–21.4)	14.7/(13.5–15.9)

* = a statistically significant difference in proportions between Jefferson County data and the Iowa 2006 BRFSS data

Fairfield and Maharishi Vedic City are known throughout the state of Iowa as having a large number of people who have been attracted to Jefferson County because of it's spiritual orientation. Two questions were included in this survey to assess how often people practice a technique to enhance the mind/body connection and to identify the most widely used technique(s) by county residents.

Table 14.7 shows that 62.4% of survey respondents reported that they used a technique to enhance their mind and body either daily, weekly, monthly, or yearly. The majority of the respondents (53.7%) used a technique on a daily basis.

The two most widely used techniques (Table 14.8) were the Transcendental Meditation Program (TM) and the TM Sidhi program, an advanced TM program, (22.5 %), and Prayer or Religion (15.3%). Forty- three percent of survey respondents indicted that they did not use any technique.

Table 14.7: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Use of Technique to Enhance Mind and Body 2009

Use of technique to Enhance Mind and Body	# of Total Respondents	% of Total Respondents
Daily use	196	53.7
Weekly use	25	6.8
Monthly use	6	1.6
Yearly use	1	0.3
Never	33	9
Don't know/Not sure	101	27.7
Refused	3	0.8
Total	365	100

Table 14.8: Distribution of Jefferson County BRFSS Wellness Survey Respondents by Major Types of Mind Body Techniques Practiced in Jefferson County 2009

Major types of Mind Body Techniques Practiced	# of Total Respondents	% of Total Respondents
TM/TM-Sidhi programs	82	22.5
Prayer/Religion	56	15.3
Mixture of techniques	36	9.9
Other type of techniques	34	9.3
No technique	157	43
Total	365	100

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APPENDIX

Copy of the Behavioral Risk Factor Surveillance System (BRFSS)