



**CHRISTIAN COUNTY HEALTH DEPARTMENT  
ILLINOIS PROJECT FOR LOCAL ASSESSMENT OF NEEDS  
(IPLAN)**

**COMMUNITY HEALTH PLAN**

**2013 – 2018**

**Prepared By:**

**The Christian County Health Department  
And  
The External Community Health Needs Assessment Advisory Group**

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## PURPOSE

During the last ten years, national and state reports have indicated that new strategies are needed to address health promotion and disease prevention objectives in the United States. They further recognized the importance of long range health planning and evaluation of health needs at the community level. While all local health departments face similar problems, each is unique in the health problems prevalent to its own distinct communities. National health objectives such as those described in Healthy People 2020 provide guidance and goals for long range planning to be done; but without assessment, planning, and intervention at the local level, changes in the overall health status of the community are unlikely to occur.

The Illinois Project for Local Assessment of Needs (IPLAN) process addresses this need for intervention at the community level. By conducting the IPLAN process, each community, under the leadership of the local health department, determines its own health problems and proposes solutions through a comprehensive and ongoing planning process. This process ultimately results in the creation of a Community Health Plan which addresses a minimum of three health priorities with objectives and strategies for proposed intervention.

After the assessment has been completed, the data analyzed, and the priorities are decided upon, the External Community Health Needs Assessment Advisory Group helps to develop recommendations to present to the Christian County Board of Health for addressing the established priorities. This is an involved process which includes looking at risk factors that predispose an individual to a specific health problem or priority as well as a determination of what corrective actions can be taken to reduce the level of these risk factors. This involves setting future goals or objectives to work toward which are time-specific and which can be measured to determine success or failure. It also involves identifying available resources within the community to help achieve the established objectives. Finally, there must be a way of evaluating the plan to determine its overall effectiveness at achieving the desired goal.

The External Community Health Needs Assessment Advisory Group consisted of the following Christian County community partners:

- Christian County Health Department ~ Administrator, Staff, and Medical Director
- Christian County YMCA ~ Executive Director
- Christian County Ministerial Alliance ~ Representative
- Pana Community Hospital ~ President and Chief Executive Officer
- Senior Citizens Center of Christian County ~ Executive Director
- Taylorville Memorial Hospital ~ President and Chief Executive Officer and Staff
- United Way of Christian County ~ Executive Director

In summary, the completed Community Health Plan should include the following: A description of each health problem addressed by the External Community Health Needs Assessment Advisory Group, including the high risk population as well as current and projected statistical trends and factors which contribute to the level of the problem; what corrective activities are proposed; what community organizations are proposed to provide and coordinate the corrective activities; and how progress toward the outcome, process, and impact objectives will be measured.

The Christian County Health Department engaged in this process, as required, for state certification. As a result, several community health problems and needs were identified, and attempts were made to address them; not all of which have proven successful. However, as mentioned above, this process is ongoing. As needs and problems change from year to year, constant re-evaluation and restructuring of objectives and intervention strategies must be undertaken in order for the plan to be effective. The External Community Health Needs Assessment Advisory Group has agreed to meet at least annually to re-evaluate the objectives and intervention strategies for Christian County.

The ultimate goal of the community planning process is the promotion of positive lifestyle or behavioral changes which eventually lead to a reversal of negative trends and an overall improvement in community health status. Christian County Health Department hopes to accomplish this by developing stronger partnerships that will implement the strategies proposed herein, by encouraging health awareness, and promoting healthy lifestyle choices. Christian County Health Department and the External Community Health Needs Assessment Advisory Group hopes that the following Community Health Plan will achieve this goal in Christian County.

## PROCESS

In the first part of the community process as established Assessment Protocol for Excellence in Public Health (APEX-PH), the local health department assesses its own strengths and weaknesses and formulates a plan to address weak areas. This is followed by a community assessment in which all available data is gathered and analyzed to determine the community's health needs and to establish priorities for the next five-year cycle. Once the priorities are established, development of the Community Health Plan begins.

The External Community Health Needs Assessment Advisory Group met at the Taylorville Memorial Hospital Conference Room on the following dates: June 22, 2011; July 25, 2011; and July 29, 2013. During each meeting, data was presented and analyzed, community health needs were reviewed, and priorities for Christian County were established. In depth discussions and reviews were held at each meeting regarding risk factors, measurable goals and objectives and identifying which community partners were coordinating and assisting with activities to reach Christian County's goals. A discussion was also held regarding the gaps and which community partners in Christian County needed to be involved. The External Community Health Needs Assessment Advisory Group is committed to meet at least annually and continue to partner together to meet each of the goals for the three priorities in Christian County.

Christian County's priorities for the next five years are: Coronary heart disease, cerebrovascular disease and lung cancer. In attempting to design this Community Health Plan, the initial step was to analyze each health problem. The analysis involved looking first at risk factors that directly related to each health problem followed by an examination of direct and indirect contributing factors (direct contributing factors are scientifically established factors that directly affect the level of the direct contributing factor). All of this information for each priority was recorded on the Health Problem Analysis Worksheet. A variety of resources were utilized to compile this information such as published reports, various internet web sites, textbooks and individual community members' knowledge. Much of the information reviewed and used was obtained from the following Internet Web Sites: The American Heart Association, American Cancer Society, American Lung Association, Center for Disease Control and Prevention, and Healthy People 2020.

After analyzing each health problem, a discussion was held to discuss how objectives could be set and what objectives should be for each priority. This proved to be a difficult process. Christian County Health Department wanted the goals to be achievable and able to affect a change in behavior or lifestyle. The Christian County population according to the 2010 census was 34,800. The population of Illinois is 12,830,632. (Christian County Quickfacts for the U.S. Census Bureau.) The population in Christian County is 96.7% white. Persons living below poverty level (2007 – 2011) are 15.8% in Christian County and 13.1% in Illinois. The median household income (2007 – 2011) is \$43,964 in Christian County and \$56,576 in Illinois. In Christian County, 15.2% of the population avoids doctor visits due to the cost, and the rate is 12.8% in Illinois. In Christian County, 35.7% of the population has not had a routine checkup for over two years or in some cases ever, and the rate in Illinois is 19.3%. According to Behavioral Risk Factor Surveillance System (BRFSS) 2007 Illinois Adults, 15% of the population in Illinois has no health plan, and the rate is 17.1% in Christian County. The

Affordable Care Act being initiated in 2014 may help to improve those statistics. The risk factors proved to be directly related to all three of the priorities chosen. More specific information on the statistics of the risk factors is identified under each priority problem.

A list of all of Christian County's potential community resources that could be utilized in reaching the objectives were developed and how they could potentially fit into the Community Health Plan. Potential barriers to achieving these goals were also discussed. This information, along with the risk factors (with direct and indirect contributing factors) and objectives was compiled on the Community Health Plan Worksheet, from which the final Community Health Plan was adapted.

The final part of the planning cycle was evaluation. Evaluation involves establishing a tangible method of looking at the results of the Community Health Plan after it has been carried out in an attempt to determine its effectiveness. This can be done in a variety of ways such as administering pre- and post-tests to assess knowledge, keeping and examining local statistics, counting numbers of people who attended a program, collecting and comparing screening results such as cholesterol levels, weight loss, blood pressure values, etc. This was accomplished for each component of the Community Health Plan as well.

The final Community Health Plan was then adapted from a combination of all of these worksheets. Each of the three Community Health Plan priorities has at least one measurable outcome objective which covers a five year time frame as well as one measurable impact objective with a two to three year time frame which is related to each outcome objective. Each priority also contains at least one proven intervention strategy to address each impact objective and an evaluation plan to assess effectiveness.

The Christian County Health Department believes with the cooperation and collaboration of other Christian County community providers that the goals can be achieved that have been established in this Community Health Plan. Christian County Health Department realizes that the changes necessary to reverse the negative trends outlined herein will be very slow in occurring, but that they will happen if Christian County perseveres in its commitment to an improvement in an overall community health status.

# CORONARY HEART DISEASE

## Description of the Health Problem

Heart disease is the leading cause of death for both men and women. About 600,000 Americans die from heart disease each year – that is one in every four deaths. Coronary heart disease is the most common type of heart disease, killing more than 385,000 annually. In the United States, someone has a heart attack every 34 seconds. Each minute, someone in the United States dies from a heart disease-related event. Heart disease is the leading cause of death for people of most racial/ethnic groups in the United States. Coronary artery disease alone costs the United States \$108.9 billion each year. This total includes the cost of health care services, medications, and lost productivity. (Centers for Disease Control and Prevention 2013) A review of mortality data reveals that diseases of the heart account for more deaths in Illinois than any other cause of death. Diseases of the heart showed a decline in number of deaths to Illinois residents from 25,979 in 2008 to 24,868 in 2010, but in Christian County the number has increased from 90 to 111 deaths. (Healthy People 2020; Illinois Department of Public Health; Health Statistics 2010; IQuery 2008)

Heart Disease is the number one cause of death in Illinois and Christian County. The age adjusted death rate due to coronary heart disease in Christian County is 128.9 deaths per 100,000 population, an increase from 124.5 deaths per 100,000 population from 2007-2009. In the United States the rate in 2010 was 113.6 deaths per 100,000 population. The Healthy People 2020 target is 100.8 deaths per 100,000 population. For this reason, coronary heart disease will remain a priority for the Christian County Health Department. Christian County residents continue to be at risk for coronary heart disease, and will continue to be at risk for death or disability unless lifestyle changes are made. (Healthy Communities Institute Memorial Health System; Healthy People 2020)

## Risk Factors

There are many risk factors for heart disease. Some risk factors are beyond anyone's control such as age, gender and family history. These risk factors are non-modifiable. Other risk factors are modifiable and therefore can be controlled. These leading risk factors are high blood pressure, high cholesterol, cigarette smoking, diabetes, poor nutrition, obesity, and physical inactivity. Over time, these risk factors cause changes in the heart and blood vessels that can lead to heart attacks, heart failure, and strokes. It is critical to address risk factors early in life to prevent the potentially devastating complications of chronic cardiovascular disease. About half of Americans (49%) have at least one of these risk factors. (Center for Disease Control 2007-2009)

**Hypertension** – High blood pressure is the number one modifiable risk factor for stroke and contributes to heart attacks, heart failure, kidney failure, and atherosclerosis. In the United States, one in three adults have high blood pressure, and nearly one-third of these people are not aware that they have it. The only way to tell if a person has high blood pressure is to have their blood pressure checked on a regular basis. High blood pressure is most common among those over age 35. Blood pressure can be controlled through lifestyle changes including the following:

Eating a heart-healthy diet; limiting alcohol; avoiding tobacco; controlling weight; and staying physically active. In Illinois, 31% of residents were told that they had high blood pressure and 77.5% were currently taking medication. In Christian County, 42% of residents were told that they had high blood pressure and 80.8% were taking medication. The Healthy People 2020 Target is to reduce the proportion of adults aged 18 years and older with high blood pressure to 26.9%. Christian County rates have been consistently higher than state rates for over a decade. (Healthy People 2020; Illinois Behavioral Risk Factor Surveillance System 2011)

**High Cholesterol** – People with high total cholesterol have approximately twice the risk of heart disease as people with optimal levels. Seventy-one million American adults (33.5%) have high LDL or “bad cholesterol”. Only one out of every three adults with high LDL has the condition under control. Less than half of all adults with high LDL cholesterol get treatment. The percentage of American adults with high LDL cholesterol has remained around 34% over the past decade, but treatment of high LDL cholesterol has increased from 28.4% in 1999-2002 to 48.1% in 2005-2008. According to the 2011 Behavioral Risk Factor Surveillance System (BRFSS) results for Illinois, 38% of residents were told that their blood cholesterol was high. In Christian County, 41.7% of residents were told their cholesterol was high which is consistently higher than state levels for over a decade. The national goal is to reduce the proportion of adults with high total blood cholesterol level from 15.0 (2005-2008) to a 2020 target of 13.5. (Healthy People 2020; Behavioral Risk Factor Surveillance System 2011)

**Poor Nutrition** – For purposes of this discussion, poor nutrition is defined as not getting the recommended number of servings of fruits and vegetables per day. Eating fruits and vegetables reduces the risk for stroke and may help to reduce the risk of heart disease and diabetes, as well as lower blood pressure. In 1991, about 8% of adults in the United States reported being aware that fruit and vegetable intake should be at least five servings a day. In 2004, that number had increased to 40%. Unfortunately, the heightened awareness has not translated into a behavioral change. Fewer than one in ten Americans eat enough fruits and vegetables. Results from the Illinois Behavioral Risk Factor Surveillance System (BRFSS) 2007-2009 showed that in Christian County only 9.2% of residents ate five or more servings of fruits and vegetables daily. In 2001-2004, the mean daily intake by persons age two and older was 0.8 cup equivalents of total vegetables per 1,000 calories (age adjusted). The Healthy People 2020 target asks for an increase to 1.1 cup equivalents per 1,000 calories (age adjusted). (Healthy People 2020; Behavioral Risk Factor Surveillance System 2011)

**Physical Inactivity** – The Federal “Physical Activity Guidelines” reflect the importance of regular physical activity as one of the most important things you can do for your health. Aerobic physical activity is defined as activity of at least moderate intensity for at least 150 minutes per week, or 75 minutes per week of vigorous intensity, or an equivalent combination and performed muscle-strengthening activities on two or more days of the week (age adjusted). Between 2008 – 2011, the rate of meeting physical activity guidelines for aerobic physical activity and muscle strengthening for adults 18 and older increased by 14% from 18.2 to 20.8% (age adjusted), exceeding the Healthy People 2020 target of 20.1% (age adjusted). Meeting the Healthy People 2020 target for this objective is an important initial step in addressing physical activity among Americans. However, continued progress is necessary to achieve success in this area. According to Behavioral Risk Factor Surveillance System (BRFSS) 2011, 74.9% of Illinois



residents said they had exercised in the past 30 days and 50.9% of residents in Christian County said that they were meeting or exceeding regular and sustained physical activity guidelines. (Healthy People 2020; Behavioral Risk Factor Surveillance System 2011)

**Tobacco Use** – Cigarette smoking is the leading cause of preventable illness and death in the United States, accounting for more than 440,000 deaths, or one of every five deaths, in the United States every year. Smoking is a key risk factor for heart disease. Smoking can damage and tighten blood vessels, lead to unhealthy cholesterol levels, and raise blood pressure. Smoking also can limit how much oxygen reaches the body's tissues. An estimated 43.8 million people, or 19.0% of all adults (aged 18 or older), in the United States smoke cigarettes. Current smokers are defined as persons who reported smoking at least 100 cigarettes during their lifetime and who reported smoking every day or some days. In Illinois, 20.9% of adults smoke. In Christian County, 26.5% of adults smoke and 49.9% started smoking regularly before the age of 18. More males (31.4%) are current smokers compared to females (21.7%) and the number of females has increased since 2007 when the Illinois Department of Public Health recorded female smokers at 18.6%. The Healthy People 2020 target is to reduce the proportion of adults aged 18 years and older who smoke cigarettes to 12.0%. (Healthy People 2020; Behavioral Risk Factor Surveillance System 2007-2009; Behavioral Risk Factor Surveillance System 2011)

**Obesity** – The percentage of obese adults is an indicator of the overall health and lifestyle of a community. In the United States, more than one-third of adults (35.7%) are obese. Obesity affects 17% of all children and adolescents in the United States, triple the rate from a generation ago. Obesity increases the risk of many diseases and health conditions including heart disease, Type 2 diabetes, cancer, hypertension, stroke, liver and gallbladder disease, respiratory problems, and osteoarthritis. A Body Mass Index (BMI) over 30 is considered obese. That is calculated by taking a person's weight and dividing it by their height squared in metric units. Losing weight and maintaining a healthy weight help to prevent and control these diseases. Being obese also carries significant economic costs due to increased healthcare spending and lost earnings, estimated at \$147 billion in 2008. Illinois has an obesity rate of 28.2% and Christian County has an obesity rate of 30.5% (2007-2009) which met the Healthy People 2020 national target to reduce the proportion of adults aged 18 and older who are obese to 30.6%. There was a dramatic increase in obesity in the United States from 1990 through 2010. State prevalence prior to 2011 should not be compared to the new baseline established in the 2011 Center For Control's Behavioral Risk Factor Surveillance System. No state met the nation's Healthy People 2010 with a goal to lower obesity prevalence to 15%. Rather, in 2010, there were 12 states with an obesity prevalence of 30%. In 2000, no state had an obesity prevalence of 30% or more. New guidelines were established in 2011. (Centers for Disease Control and Prevention; Behavioral Risk Factor Surveillance System 2007-2009; Behavioral Risk Factor Surveillance System 2011)

## **Contributing Risk Factors**

See attached Health Problem Analysis Worksheet on Page 11.

## **Resources Available/Stakeholders**

Numerous partnerships have been built over the last several years surrounding the Illinois Project for Local Assessment of Needs (IPLAN) as well as other community projects. All of Christian County's partners have a sincere desire to promote positive lifestyle changes that will impact the overall health of Christian County residents. Some of Christian County's active partners include the following: Local hospitals, medical providers, school districts, local government, University of Illinois Cooperative Extension, home health agencies, senior citizen centers, and even private businesses who hold regular health fairs. Christian County has also partnered with the American Heart Association, American Cancer Society, American Lung Association, and the American Red Cross.

## **Barriers**

As is always the case, there are barriers which impact utilization of available services and programs by the intended beneficiaries. There are also barriers which impact those agencies or organizations that provide the services or programs. Some of the barriers affecting the beneficiaries include the following: Lack of motivation or interest; cultural issues; transportation; scheduling/time conflicts; etc. Those which can affect the providers include the following: Lack of financial resources to offer programs; staffing issues; location; too many other responsibilities; etc.

## **OUTCOME OBJECTIVE**

By the year 2017, reduce coronary heart disease deaths to 120 deaths per 100,000 population in Christian County. Current: 128.9 deaths per 100,000 population.

## **Impact Objectives**

1. Obesity – By 2016, reduce the proportion of Christian County's adults who are obese to no more than 30.6%. Current: 30.5%.
2. High Cholesterol – By 2016, reduce the proportion of Christian County's adults with high total blood cholesterol to 30%. Current: 41.7%.
3. Physical Inactivity – By 2016, increase the proportion of adults who meet current federal physical activity guidelines to 55%. According to present statistics, Christian County has met this goal which was 50.9% of residents who have claimed to have met Federal guidelines and 74.9% in Illinois who have claimed to have exercised in the past 30 days in 2011; however, the national percentage was 48.8% in 2011. Healthy People 2020 reports that 80% of adults do not meet the guidelines yet the target for 2020 is 47.9%.

## **Proven Intervention Strategies**

1. Promote free physical fitness activities.
2. Increase access to screenings and community health activities that address risk factors.
3. Assist with coordination and promotion of health promotion and wellness activities.
4. Increase community awareness of screenings for risk factors.
5. Promote public awareness of health hazards associated with obesity and other risk factors.
6. Increase community awareness and promote the Child and Adolescent Trial for Cardiovascular Health (CATCH) Program in Illinois and Christian County. With other community organizations such as the YMCA, schools, the hospitals, and Christian County Health Department will promote the CATCH Program by sending out 500 copies of a CATCH Newsletter to at-risk families to promote physical fitness.

# COMMUNITY HEALTH PLAN

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**DESCRIPTION OF THE HEALTH PROBLEM, RISK FACTORS AND CONTRIBUTING FACTORS** including high risk populations, and current and projected statistical trends:

High rate of death from coronary heart disease.

- \* Heart disease is the leading cause of death in Christian County.
- \* County mortality rate higher than Illinois rate. (Age-adjusted rate for United States – 113.6; Christian County – 128.9; Healthy People 2020 target – 100.8)

Risk Factors:

- |                                      |   |
|--------------------------------------|---|
| * Unhealthy blood cholesterol levels | * Obesity                               |
| * High blood pressure                | * Lack of physical activity             |
| * Smoking                            | * Unhealthy diet                        |
| * Insulin resistance                 | * Aging                                 |
| * Diabetes                           | * Family history of early heart disease |
- 

**CORRECTIVE ACTIONS** to reduce the level of the indirect contributing factors:

- \* Promote free physical fitness activities.
  - \* Increase access to screenings and community health activities that address risk factors.
  - \* Assist with coordination and promotion of health promotion and wellness activities.
  - \* Increase community awareness of screenings for risk factors.
  - \* Increase community awareness of controllable risk factors/promote CATCH program.
  - \* Promote public awareness of health hazards associated with obesity and other risk factors.
- 

**PROPOSED COMMUNITY ORGANIZATION(S)** to coordinate the activities:

Christian County Health Department	YMCA
Local Hospitals	Schools
Local Medical Providers	Local Businesses
Cooperative Extension	Local Government
American Heart Association	American Cancer Society
Local Media	

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**EVALUATION PLAN** to measure progress towards reaching objectives:

- \* Review annual statistics. (Behavioral Risk Factor Surveillance System (BRFSS) data, Centers for Disease Control (CDC), Healthy People 2020)
- \* Count and track the number of individuals who attend screenings, educational programs, and wellness programs. Monitor individual progress toward meeting their own wellness goals.
- \* Annually meet to evaluate progress toward meeting objectives – report progress to local board and to the public.

## HEALTH PROBLEM ANALYSIS WORKSHEET

### Health Problem – CORONARY HEART DISEASE

<u>Risk Factors</u>	<u>Direct Contributing Factor</u>	<u>Indirect Contributing Factor</u>
Obesity	Poor eating habits	Lack of knowledge regarding nutrition Time/schedule; stressors/fast food
Obesity	Physical inactivity	Lack of motivation Time stressors/heavy schedules Low self-esteem
Obesity	Genetic factors	Family history
Hypertension	Obesity	Physical inactivity Poor diet Lack of knowledge
Hypertension	Smoking	Addiction Stress Lack of motivation to quit
Hypertension	High sodium diet	Lack of knowledge regarding nutrition Inadequate funds to buy good foods
Smoking	Addiction	Nicotine levels Excessive use Availability of products
Smoking	Lack of knowledge or use of cessation programs	Inadequate resources/programs Difficult to quit Lack of motivation to quit
Smoking	Societal acceptance	Peer pressure, intensive marketing
Elevated cholesterol	Obesity	Poor eating habits Sedentary lifestyle Low self-esteem
Elevated cholesterol	Poor nutrition	Inadequate funds for healthy food Large portions/higher calories Lack of knowledge regarding nutrition
Elevated cholesterol	Physical inactivity	Lack of motivation/low self-esteem Time/schedule; stressors

# CEREBROVASCULAR DISEASE

## Description of the Health Problem

Stroke is ranked the third most frequent cause of death in the United States. Ischemic strokes happen when blood clots block the blood vessels to the brain. About 87% of all strokes are ischemic. Strokes kill 130,000 Americans each year – that is 1 in every 19 deaths. On average, one American dies from a stroke every 4 minutes. Over 795,000 people in the United States each year have a stroke. About 610,000 of these are first time or new strokes. One in four are recurrent strokes. Strokes cost the United States an estimated \$38.6 billion each year. This total includes the cost of health care services, medications, and days of work missed. Stroke is a leading cause of serious long-term disability.

Although people of all ages may have strokes, the risk more than doubles with each decade of life after age 55. In 2009, 34% of people hospitalized for stroke were under the age of 65. In 2010, age-adjusted death rate due to cerebrovascular disease showed that more females died from a stroke than males as evidenced by 47.3 females per 100,000 population to 36.7 males per 100,000 population. African Americans risk of having a first stroke is nearly twice that of whites. In 2008, Illinois had 38.5 deaths per 100,000 population and in Christian County there were 41.0 deaths per 100,000. Between 2008-2010, the number of deaths increased to 44.5 deaths per 100,000 population in Christian County. Healthy People 2020 national health target is to reduce the stroke death rate to 33.8 deaths per 100,000 population. Cerebrovascular disease has consistently remained the third leading cause of death in Christian County, and behind heart disease and malignant neoplasms. For this reason and because risk factors for heart disease and stroke are almost identical, we have chosen cerebrovascular disease as our second priority. Since they are so closely tied together, interventions aimed at one should also impact the other. (Center for Disease Control; IQuery; Behavioral Risk Factor Surveillance System 2008-2010; Illinois Department of Public Health; Healthy People 2020)

As with heart disease events, time between onset of symptoms and medical treatment is critical. Patients who arrive at the emergency room within three hours of onset of symptoms tend to be healthier three months after a stroke.

## Risk Factors

High blood pressure, high LDL cholesterol, and smoking are key risk factors for stroke. About half of Americans (49%) have at least one of these three risk factors. Several other medical conditions and lifestyle choices can also put people at a higher risk for stroke, including: diabetes, obesity, poor diet, physical inactivity, and excessive alcohol use. (Center for Disease Control, Behavioral Risk Factor Surveillance System)

**High Blood Pressure** – High blood pressure is the number one modifiable risk factor for stroke, heart failure, and atherosclerosis. The higher an individual's blood pressure, the greater an individual's risk of a heart attack, heart failure, stroke, and kidney disease. In the United States, one in three adults have high blood pressure, and nearly one-third of those individuals are not aware that they have it. High blood pressure can occur in people of any age or sex, however, it is more common

among those over age 35. It is particularly prevalent in African Americans, older adults, obese people, heavy drinkers, and women taking birth control pills. The Healthy People 2020 national health target is to reduce the proportion of adults aged 18 years and older with high blood pressure to 26.9%. According to Behavioral Risk Factor Surveillance System 2007-2009, Christian County was at 42.0%. (Center for Disease Control; Behavioral Risk Factor Surveillance System 2007-2009; Healthy People 2020)

**Tobacco Use** – Tobacco is the agent most responsible for avoidable illness and death in America today. Tobacco use brings premature death to almost half a million people in the United States each year; and contributes to profound disability and pain in many others. Approximately one-third of all tobacco users in this country will die prematurely because of their dependence on tobacco. In areas with a high smoking prevalence, there will be greater exposure to secondhand smoke for non-smokers, which can cause or exacerbate a wide range of adverse health effects, including cancer, respiratory infections, and asthma. According to Behavioral Risk Factor Surveillance System 2007- 2009, Christian County had 26.5% per 100,000 population adults who smoked. The Healthy People 2020 national health target is to reduce the proportion of adults aged 18 years and older who smoke cigarettes to 12.0%. (Center for Disease Control; Behavioral Risk Factor Surveillance System 2007-2009; Healthy People 2020.)

**Obesity** – More than one-third of adults (35.7%) in the United States are obese. Obesity–related conditions include the following: Heart disease; stroke; Type 2 diabetes; and certain types of cancer. These are the leading causes of preventable death. During the past 20 years, there has been a dramatic increase in obesity in the United States and, although there has been some leveling off in recent years, rates remain at historically high levels. Between 1988 – 1994 and 2009 – 2010, the obesity rate increased by 57% among adults age 20 and over from 22.8% to 35.7% (age adjusted). During the same time period, the obesity rate among children and adolescents age 2 to 19 increased by 69% from 10.0% to 16.9%. The Healthy People 2020 national health target is to reduce the proportion of adults aged 20 and older who are obese to 30.6%. The Center for Disease Control’s Behavioral Risk Factor Surveillance System 2010 state obesity rates showed that Illinois had 28.2% adults who were obese. Christian County showed 30.5% adults who were obese. (Centers for Disease Control and Prevention; Behavioral Risk Factor Surveillance System 2011; Healthy People 2020)

**Physical Inactivity** – Not engaging in the recommended levels of physical activity contributes to risk factors, such as obesity, high blood pressure, high triglycerides, a low level of HDL cholesterol and diabetes. Healthy People 2020 tracks the proportion of adults who meet Federal physical activity guidelines for aerobic physical activity and for muscle – strengthening activity. In 2008, 18.2% of individuals aged 18 years and older were engaged in exercise meeting the guidelines. The Healthy People 2020 target is 20.1%. (Center for Disease Control; Behavioral Risk Factor Surveillance System; Healthy People 2020)

### **Contributing Risk Factors**

See attached Health Problem Analysis Worksheet on Page 17.

## **Resources Available/Stakeholders**

Numerous partnerships have been built over the last several years surrounding the Illinois Project for Local Assessment of Needs (IPLAN) as well as other community projects. All of Christian County's partners have an impact on the overall health of Christian County residents. Some of Christian County's active partners include the following: Local hospitals, YMCA, medical providers, school districts, local government, University of Illinois Cooperative Extension, home health agencies, senior citizen centers, and even private businesses who hold regular health fairs. Christian County has also partnered with the American Heart Association, American Cancer Society, American Lung Association, and the American Red Cross.

## **Barriers**

As is always the case, there are barriers which impact utilization of available services and programs by the intended beneficiaries. There are also barriers which impact those agencies or organizations that provide the services or programs. Some of the barriers affecting the beneficiaries include the following: Lack of motivation or interest; cultural issues; transportation; scheduling/time conflicts; etc. Those which can affect the providers include the following: Include lack of financial resources to offer programs; staffing issues; location; too many other responsibilities; etc.

## **OUTCOME OBJECTIVE**

The Healthy People 2020 national health target is to reduce the stroke death rate to 33.8% deaths per 100,000 population. Christian County shows a death rate of 44.5% due to stroke. Our outcome objective is to reduce the stroke deaths to 40% by 2017.

## **Impact Objectives**

1. Hypertension – The Healthy People 2020 national health target is to reduce the proportion of adults aged 18 years and older with high blood pressure to 26.9%. In Behavioral Risk Factor Surveillance System 2007 – 2009, Christian County's current rate is 42.0%. Our objective for Christian County is to reduce the number of adults with hypertension to 38% by 2016.
2. Tobacco use – The Healthy People 2020 national health target is to reduce the proportion of adults aged 18 years and older who smoke cigarettes to 12.0%. Our goal in Christian County is to reduce the number of adults who smoke to 22% by 2016.

## **Proven Intervention Strategies**

1. Promote free physical fitness activities.
2. Increase access to screenings and community health activities that address risk factors.
3. Assist with coordination and promotion of health promotion and wellness activities.
4. Increase community awareness of screenings for risk factors.
5. Increase community awareness of controllable risk factors.
6. Provide access to smoking cessation activities within the community.



7. Promote public awareness of the health hazards of second-hand smoke.
8. Promote anti-tobacco programs and campaigns, such as the Illinois Tobacco QuitLine and the “Great American Smoke Out.”
9. Coordinate programs with other stakeholders to implement policies to reduce tobacco use among youth and adults.

# COMMUNITY HEALTH PLAN

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## **DESCRIPTION OF THE HEALTH PROBLEM, RISK FACTORS**

**AND CONTRIBUTING FACTORS** including high risk populations, and current and projected statistical trends:

Cerebrovascular disease ranks third nationally, and in Illinois and Christian County cerebrovascular disease ranks behind heart disease and cancer as a leading cause of death.

- \* County rates have consistently been higher than Illinois rates for same time period.
- \* Death from stroke in adults is 44.5% per 100,000 population in Christian County, and Healthy People 2020 to reduce the stroke rate to 33.8%.
- \* Every year, more than 795,000 people in the United States have a stroke. About 610,000 of these are first or new strokes. One in four are recurrent.
- \* Stroke is the leading cause of adult disability.

Risk Factors:

High blood pressure, high LDL cholesterol, and smoking are key risks factors for a stroke. Also diabetes, obesity, poor diet, physical inactivity and excessive alcohol use.

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**CORRECTIVE ACTIONS** to reduce the level of the indirect contributing factors:

- \* Promote free physical fitness activities.
  - \* Increase access to screenings and community health activities that address risk factors.
  - \* Assist with coordination and promotion of health promotion and wellness activities.
  - \* Increase community awareness of screenings for risk factors.
  - \* Promote anti-tobacco campaigns, such as “Great American Smoke Out.”
  - \* Promote public awareness of the health hazards of second-hand smoke.
  - \* Provide access to smoking cessation activities within the community.
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**PROPOSED COMMUNITY ORGANIZATION(S)** to coordinate the activities:

Christian County Health Department	YMCA
Local Hospitals	Schools
Local Medical Providers	Local Businesses
Cooperative Extension	Local Government
American Heart Association	American Cancer Society
Local Media	

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**EVALUATION PLAN** to measure progress towards reaching objectives:

- \* Review annual statistics. (Behavioral Risk Factor Surveillance System (BRFSS) Data, Center for Disease Control (CDC), Healthy People 2020.
- \* Count and track the number of individuals who attend screenings, educational programs, and wellness programs. Monitor individual progress toward meeting their own wellness goals.
- \* Annually meet to evaluate progress toward meeting objectives – report progress to public.

## HEALTH PROBLEM ANALYSIS WORKSHEET

### Health Problem – CEREBROVASCULAR DISEASE ( STROKE)

<u>Risk Factors</u>	<u>Direct Contributing Factor</u>	<u>Indirect Contributing Factor</u>
Hypertension	Obesity	Physical inactivity Poor diet Lack of knowledge
Hypertension	Smoking	Addiction Stress Lack of motivation to quit
Hypertension	High sodium diet	Lack of knowledge regarding nutrition Inadequate funds to buy healthy food
Smoking	Addiction	Nicotine levels, Excessive use Availability of products
Smoking	Lack of knowledge or use of cessation programs	Inadequate resources/programs Difficult to quit, lack of motivation
Smoking	Societal acceptance	Peer pressure, intensive marketing
Obesity	Poor eating habits	Lack of nutritional knowledge Time/schedule; stressors/fast food
Obesity	Physical inactivity	Lack of motivation Time stressors/busy schedules Low self-esteem
Obesity	Genetic factors	Family history
Elevated Cholesterol	Obesity	Poor eating habits Sedentary lifestyle Low self-esteem
Elevated Cholesterol	Poor nutrition	Inadequate funds for healthy food Large portions/higher calories Lack of knowledge regarding nutrition
Elevated Cholesterol	Physical inactivity	Lack of motivation Low self-esteem Time/schedule stressors

# LUNG CANCER

## Description of the Problem

Lung cancer is the leading cause of cancer death and the second most diagnosed cancer in both men and women in the United States. In 2009, 14% of all cancer diagnoses and 28% of all cancer deaths were due to lung cancer. According to the American Lung Association, more people die from lung cancer annually than any other type of cancer, exceeding the total deaths caused by breast cancer, colorectal cancer, and prostate cancer combined. After increasing for decades, lung cancer rates are decreasing nationally, paralleling decreases in cigarette smoking. Cigarette smoking is the number one cause of lung cancer. Lung cancer also can be caused by using other types of tobacco (such as pipes or cigars), breathing secondhand smoke, being exposed to substances such as asbestos or radon at home or work, and having a family history of lung cancer. (National Cancer Institute) In 2009, 205,974 people in the United States were diagnosed with lung cancer, including 110,190 men and 95,784 women. In the United States, 158,081 people died from lung cancer, including 87,694 men and 70,387 women. The annual death rate (2006 – 2010) is 49.5 per 100,000 population in the United States; 51.8 per 100,000 population in Illinois; and 75.4 per 100,000 in Christian County. The Healthy People 2020 national health target is to reduce the lung cancer death rate to 45.5 deaths per 100,000 population. Lung cancer is a major concern for Christian County.

## Risk Factors

**Tobacco Use** – Cigarette smoking is the number one risk factor for lung cancer. In the United States, cigarette smoking causes about 90% of lung cancers. Tobacco smoke is a toxic mix of more than 7,000 chemicals. Many are poisons and at least 70 are known to cause cancer in people or animals. People who smoke are 15 to 30 times more likely to get lung cancer or die from lung cancer than people who do not smoke. People who quit smoking have a lower risk of lung cancer than if they had continued to smoke, but their risk is higher than the risk of people who never smoked. Quitting smoking at any age can lower the risk. Smoking can cause cancer almost anywhere in the body. Smoking causes cancer of the mouth, nose, throat, larynx, esophagus, bladder, kidney, pancreas, cervix, stomach, blood, and bone marrow. Secondhand smoke also causes lung cancer. Two out of five adults who don't smoke and half of children in the United States are exposed to secondhand smoke. Every year in the United States, about 3,000 people who never smoked die from lung cancer due to secondhand smoke.

**Radon** – Risk of lung cancer may be higher if a person's parents, siblings or children have had lung cancer. They may share behaviors, like smoking. They may live in the same place where there are carcinogens such as radon. Radon is a gas that comes from rocks and dirt and can get trapped in homes and buildings. It cannot be tasted or smelled. According to the United States Environmental Protection Agency, radon causes about 20,000 cases of lung cancer each year, making it the second leading cause of lung cancer. Nearly 1 out of every 15 homes in the United States is estimated to have high radon levels.

**Radiation Therapy and Food and Dietary Supplements** – Cancer survivors who had radiation therapy to the chest are at a higher risk for lung cancer. Scientists are studying many different foods and dietary supplements to see whether they increase or decrease the risk of getting lung cancer. (Center for Disease Control, Behavioral Risk Factor Surveillance System, American Cancer Society, American Lung Association)

### **Contributing Risk Factors**

See attached Health Problem Analysis Worksheet on Page 22.

### **Resources Available/Stakeholders**

Numerous partnerships have been built over the last several years surrounding the Illinois Project for Local Assessment of Needs (IPLAN) as well as other community projects. All of Christian County's partners have a sincere desire to affect positive lifestyle changes to impact the overall health of Christian County residents, and are willing to help. Some of Christian County's active partners include the following: Local hospitals, YMCA, medical providers, school districts, local government, University of Illinois Cooperative Extension, home health agencies, senior citizen centers, and even private businesses who hold regular health fairs. Christian County has also partnered with the American Heart Association, American Cancer Society, American Lung Association, and the American Red Cross.

### **Barriers**

As is always the case, there are barriers which impact utilization of available service and programs by the intended beneficiaries. There are also barriers which impact those agencies or organizations that provide the services or programs. Some of the barriers affecting the beneficiaries include the following: Lack of motivation or interest; cultural issues; transportation; scheduling/time conflicts; etc. Those which can affect the providers include the following: Include lack of financial resources to offer programs; staffing issues; location; too many other responsibilities; etc.

### **OUTCOME OBJECTIVE**

The Healthy People 2020 national health target is to reduce the lung cancer death rate to 45.5 deaths per 100,000 population. Christian County's lung cancer death rate is 75.4 per 100,000 population and Illinois' lung cancer death rate is 51.8 per 100,000 population. Christian County's goal is to reduce the rate to 60 per 100,000 population by 2017.

### **Impact Objective**

1. Tobacco Use: The percentage of adults who currently smoke cigarettes in Christian County is 26.5% and 20.9% in Illinois. The Healthy People 2020 national target is to reduce the number of adult smokers to 12%. The goal for Christian County is to reduce the number of adults who smoke to 21% by 2016. (Center for Disease Control, Behavioral Risk Factor Surveillance System, Healthy People 2020)

### **Proven Intervention Strategies:**

1. Increase access to community health activities that address risk factors.
2. Provide access to smoking prevention education and smoking cessation activities within the community to include schools.
3. Promote anti-tobacco programs and campaigns, such as the Illinois Tobacco QuitLine and the “Great American Smoke Out.”

# COMMUNITY HEALTH PLAN

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## **DESCRIPTION OF THE HEALTH PROBLEM, RISK FACTORS AND CONTRIBUTING FACTORS** including high risk population and current and projected statistical trends:

Lung cancer is the leading cause of cancer death and the second most diagnosed cancer in both men and women.

- \* In 2009, 14% of all cancer diagnoses and 28% of all cancer deaths were due to lung cancer.
- \* In 2009, 205,974 people in the United States were diagnosed with lung cancer and 158,081 people died from lung cancer.
- \* The annual death rate (2006 – 2010) in the United States is 49.5 per 100,000 population due to lung cancer. Illinois’ rate is 51.8 per 100,000 population and Christian County’s rate is 75.4 per 100,000. Healthy People 2020 national health target is to reduce the lung cancer death rate to 45.5 deaths per 100,000 population.

Risk factors:

Cigarette smoking is the number one cause of lung cancer. Other types of tobacco are also a risk. Radon, asbestos, radiation therapy, and family history also are causes of the disease.

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## **CORRECTIVE ACTIONS** to reduce the level of the indirect contributing factors:

- \* Provide access to smoking prevention education and smoking cessation activities in area schools and within the community.
- \* Promote public awareness of the health hazards of secondhand smoke.
- \* Promote anti-tobacco programs and campaigns, such as the Illinois Tobacco QuitLine and the “Great American Smoke Out.”
- \* Provide Nicotine Replacement Therapy for those trying to quit smoking.

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## **PROPOSED COMMUNITY ORGANIZATION(S)** to coordinate the activities:

Christian County Health Department	YMCA
Local Hospitals	Schools
Local Medical Providers	Local Businesses
Cooperative Extension	Local Government
American Heart Association	American Cancer Society
Local Media	

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## **EVALUATION PLAN** to measure progress towards reaching objectives:

- \* Review annual statistics. (mortality records, Behavioral Risk Factor Surveillance System (BRFSS), CDC, American Cancer Society, Healthy People 2020).
- \* Count and track the number of individuals who attend screenings, educational programs, and wellness programs. Monitor individual progress toward meeting their own wellness goals.
- \* Annually meet to evaluate progress toward meeting objectives – report progress to local board and to the public.

# HEALTH PROBLEM ANALYSIS WORKSHEET

## **Health Problem – LUNG CANCER**

<u>Risk Factors</u>	<u>Direct Contributing Factor</u>	<u>Indirect Contributing Factor</u>
Tobacco use	Physical addiction	Lack of motivation to quit Lack of discipline Nicotine level
Tobacco use	Stress	Job/school demands Inadequate financial resources
Tobacco use	Peer Pressure	Poor self-esteem Lack of support Easy access/availability



## REFERENCES

American Cancer Society, [www.statecancerprofiles.cancer.gov/cg](http://www.statecancerprofiles.cancer.gov/cg) and [www.cancer.org](http://www.cancer.org)

American Heart Association, [www.heart.org](http://www.heart.org)

American Lung Association, [www.lung.org](http://www.lung.org)

Behavioral Risk Factor Surveillance System 2007 – 2009, <http://app.idph.state.il.us/brfss/county>

Behavioral Risk Factor Surveillance System 2007 Illinois Adults,  
<http://app.idph.state.il.us/brfss/county>

Behavioral Risk Factor Surveillance System 2011 Illinois, <http://app.idph.state.il.us/brfss/county>

Center for Disease Control 2007 – 2009, [www.cdc.gov](http://www.cdc.gov)

Center for Disease Control and Prevention 2013, [www.cdc.gov](http://www.cdc.gov)

Christian County Quickfacts from the United States Census Bureau,  
[www.Quickfacts.census.gov](http://www.Quickfacts.census.gov)

Health Community Institute, Memorial Health System,  
[www.choosememorial.org/healthycommunities](http://www.choosememorial.org/healthycommunities)

Health Statistics 2010, <http://www.cdc.gov/nchs/data/hus/hus10.pdf>

Healthy People 2020, [www.healthpeople.gov](http://www.healthpeople.gov)

Illinois Department of Public Health, <http://www.idph.state.il.us/health/statshome.htm>

IQuery, [www.idph.com](http://www.idph.com)

United States Census Bureau, 2007 – 2011 Tables and 2009 – 2011 Tables, [www.census.gov](http://www.census.gov)