Cardiovascular Health: More Than Just Preventing Heart Disease and Stroke!

A Comprehensive Plan for Cardiovascular Health in Arkansas 2011-2015

Arkansas Department of Health

Arkansas Heart Disease and Stroke Prevention Task Force

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A Comprehensive Plan for Cardiovascular Health in Arkansas, 2011-2015.

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Arkansas Department of Health

A Message from the Director and State Health Officer

Greetings!

I want to congratulate the Heart Disease and Stroke Task Force Workgroup members on the development and publication of the *Cardiovascular Health: More Than Just Preventing Heart Disease and Stroke! A Comprehensive Plan for Cardiovascular Health in Arkansas 2011-2015*. Heart disease and stroke cause more deaths in Arkansas than any other disease. The more people and sectors in the state that are involved in reducing this burden, the better our chances of success. I applaud all the hard work that so many put into the research and development of this plan.

The state plan's goal is to reduce deaths from heart disease and stroke and improve overall cardiovascular health among Arkansans and bring together communities, health systems, worksites and partners to accomplish its goal. It also supports the national Centers for Disease Control and Prevention's Million Hearts initiative goal.

The goal of the Million Hearts initiative is to prevent one million heart attacks and strokes in the US over five years. Million Hearts brings together communities, health systems, nonprofit organizations, government agencies, and private-sector partners from across the country to fight heart disease and stroke. Million Hearts aims to prevent heart disease and stroke by improving quality access to effective care; focusing clinical attention on the prevention of heart attack and stroke; activating the public to lead a heart-healthy lifestyle and improving the prescription and adherence to appropriate medications and quality of care around the ABCS: A – Appropriate aspirin therapy; B – Blood pressure control; C – Cholesterol management; and S – Smoking cessation. The Heart Disease and Stroke Task Force workgroup members address many of these same objectives in the Cardiovascular Health State Plan.

Your dedication, time and efforts in this endeavor are appreciated as together we continue to reduce the burden of heart disease and stroke and improve the health of our fellow Arkansans.

Sincerely,

Paul K. Halverson, DrPH, FACHE
Director and State Health Officer

Arkansas Department of Health

A Message from the Arkansas Chronic Disease Director

Greetings!

It is my pleasure to announce the *Cardiovascular Health: More Than Just Preventing Heart Disease and Stroke! A Comprehensive Plan for Cardiovascular Health in Arkansas 2011-2015.* A statewide comprehensive plan like this does not just happen; this is the combined work of the Heart Disease and Stroke Task Force and its various committees in their efforts to reduce the burden of heart disease and stroke in the state. Reducing cardiovascular disease in Arkansas is a huge task that can only be accomplished through the efforts of many organizations, policy makers, health care professionals, and business leaders partnering to bring about policy, environmental and system changes in worksite, community and health care settings to improve the health of our citizens. This strategic plan sets in motion the Heart Disease and Stroke objectives in the Healthy People 2020: Arkansas's Chronic Disease Framework for Action.

The burden of chronic disease in Arkansas and the increased risk of our citizens for heart disease, stroke and other diseases are directly linked to risk factors such as lack of physical activity, poor nutritional habits, tobacco use, exposure to secondhand smoke, uncontrolled hypertension and cholesterol, and other unhealthy lifestyle choices. The chronic disease burden in Arkansas is immense – about 70 percent of all deaths in the state are as a result of a preventable chronic disease – and chronic diseases and their complications take their toll in draining our state's resources even further, both economically and in human terms.

My personal thanks go to the Heart Disease and Stroke Task Force members who worked tirelessly to develop this plan over the last two years. The Heart Disease and Stroke Prevention staff of the Chronic Disease Prevention and Control Branch would not be successful without so many hard-working and dedicated partners!

Respectfully,

Namvar Zohoori, MD, MPH, PhD
Chronic Disease Director, Arkansas Department of Health

Executive Summary

Heart disease and stroke cause more deaths in Arkansas than any other disease. While treating major risk factors among patients can reduce the occurrence of events, if Arkansas is to achieve optimal cardiovascular health, an additional approach is needed. Arkansas needs to improve healthy behaviors starting at a young age so that most people are nonsmokers and have levels of weight, blood pressure, cholesterol, fasting glucose, diet, and physical activity that are optimal for health. Only by combining this low-risk approach with the traditional high-risk healthcare approach, can Arkansas achieve long-lasting and affordable optimal health.

Arkansas's long-term goal was modeled after the American Heart Association 2020 goal for cardiovascular health.

Arkansas Long-term Goal

Reduce Deaths from Heart Disease and Stroke and
Improve Overall Cardiovascular Health among Arkansans.

To achieve the long-term goal, Arkansas will address six goals:

Goal 1:

Increase healthy behaviors among Arkansas youth.

Goal 2:

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Goal 3:

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Goal 4:

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Goal 5:

Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Goal 6:

Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

Introduction

Past national and state efforts have focused on treatment of two major types of cardiovascular diseases (CVD), coronary heart disease (CHD), and stroke. The American Heart Association (AHA) recently announced efforts to broaden the focus to include more types of CVD in the prevention and treatment efforts. A more important shift is the change in focus from merely reducing the prevalence of disease and deaths due to CVD to improving cardiovascular health.[1] Cardiovascular health has been defined not only as the absence of disease but as the presence of ideal levels of factors and favorable health behaviors that result in longer life, reduced morbidity, and improved quality of life. Achieving this long-term goal will require the traditional high-risk approach and a population-based, low-risk approach to prevent and reduce risk factors in the general population.

Improved medical care and risk factor reductions have produced decades of declines in CHD and stroke mortality, and yet in the United States, CVD has been the leading cause of death every year except one (1918, influenza epidemic) since 1900.[1, 2] From 1995 to 2005, CVD mortality in the United States declined by 26.4%.[2] Yet CVD was still listed as present in 56% of all deaths and was identified as the cause of death in 35.3%.[2] Of the two major types of CVD (CHD and strokes), one out of every five deaths were from CHD (2005), and one out of 18 deaths were caused by strokes (2006).[2] Nationally, it has been estimated that 44% of the reductions in CVD mortality over the past decades are from reduced risk factors, while 47% of the CVD mortality reduction is due to improved medical care.[2, 3] An increase in obesity during the same period may have prevented greater mortality improvement and may explain slowed improvement in life expectancy for younger adults (ages 35-54) from 1991 to 2002.[4] Obesity-associated adverse risk factors may reduce life expectancy for our children and grandchildren if the current obesity trend continues. Additionally, current healthcare costs,[2, 5] which are mostly a result of the traditional approach, are unsustainable. Also, screening for markedly elevated risk factors identifies only a small fraction of those at risk of cardiovascular events.[6] These facts indicate the need for a broader approach to improving cardiovascular health that addresses prevention as well as treatment.

Arkansas Department of Health Heart Disease and Stroke Prevention Section

The Arkansas Department of Health's (ADH) Heart Disease and Stroke Prevention (HDSP) Section was established in October of 2000 through a capacity building grant from the Centers for Disease Control and Prevention (CDC). The purpose of the grant is to implement heart disease and stroke prevention interventions to reduce morbidity, mortality, and related health disparities.

First Arkansas Heart Disease and Stroke Prevention Plan

In 2000, the ADH HDSP Section brought together partners representing various state agencies, local and federal governments, healthcare agencies, quality control and other professional associations, academia, healthcare insurance carriers, pharmaceutical companies,

and priority population groups to form the Arkansas HDSP Task Force. The HDSP Task Force and other partners have worked tirelessly, assessing existing health-promoting activities, identifying existing gaps, and devising new actions to promote heart and brain health. Two accomplishments in 2004 synergized the state activities. First, the HDSP Task Force published its first state plan, *Small Steps, Great Strides toward a Healthier Arkansas,* and secondly, Arkansas received additional CDC funding through a Basic Implementation Grant.

CDC Funding of Delta States Stroke Network

In July 2007, the HDSP Section received CDC funding to lead the Delta States Stroke Network (DSSN). The DSSN was a five-state partnership between Alabama, Arkansas, Louisiana, Mississippi, and Tennessee. The aim of the network was to increase the ability of members to work across state boundaries and leverage efforts within the region to enhance partnership development, education, training, policy, and systems change strategies to reduce the burden of stroke. In June 2010, funding for the DSSN was discontinued. While the DSSN no longer exists, the work that was accomplished by the network continues to guide stroke prevention and treatment initiatives throughout the region.

2011-2015 Arkansas HDSP State Plan Development

A Time for a New Heart Disease and Stroke Prevention Plan

It has been six years since the first state plan; therefore, the Arkansas HDSP Task Force has been convened to assess where to concentrate efforts over the next five years. As the Arkansas population ages, heart disease and stroke will become even more important as an economic drain and as a cause of early death and reduced quality of life.

National Models

Many national organizations concerned with health have endeavored to identify effective strategies to reduce heart disease and stroke. In *A Public Health Action Plan to Prevent Heart Disease and Stroke (Action Plan)*, the CDC and the National Heart, Lung, and Blood Institute (NHLBI) in conjunction with the AHA established four priority areas to reduce heart disease and stroke.[7]

1. Prevent the development of risk factors for heart disease and stroke.
2. Detect and treat risk factors for heart disease and stroke.
3. Achieve early identification and treatment of cardiovascular disease and stroke, especially in their acute phases.
4. Prevent the recurrence and complications of heart disease and stroke.

This *Action Plan* provides a thoughtful model for Arkansas's work and addresses Arkansas's four priority areas representing the continuum of cardiovascular health.[7]

In developing goals, objectives, and strategies, the workgroups considered:

1. Primordial prevention - preventing risk factors from ever developing;
2. Primary prevention - preventing disease by reducing risk factors;
3. Secondary prevention - preventing disease recurrence and progression.

Objectives and Strategies

The *Objectives and Strategies for Cardiovascular Health in Arkansas, 2011-2015* is an integral part of this state plan and may be found in Appendix VI. This detailed document consists of goals, SMART objectives, strategies, key partners, and connected Healthy People 2020 objectives. A condensed version that provides an overview of the *Objectives and Strategies for Cardiovascular Health in Arkansas, 2011-2015*, as well as how the workgroups were developed, may be found in Section VIII.

Arkansas's Burden

Heart disease comprises several different diseases. It is important to note that this state plan focuses on preventing coronary heart disease and stroke. *The Burden of Heart Disease and Stroke in Arkansas* provides additional information on disease and risk factors not found in this document.

Intended Impact

The Arkansas plan to reduce heart disease and stroke includes recommendations to implement the system changes to reduce the development of risk factors, encourage lifelong healthy behaviors, and promote early identification and appropriate treatment of risk factors for CHD and stroke. While short and intermediate outcomes are expected, long-term outcomes should result in reduced morbidity and mortality from heart disease and stroke and disparity elimination. These changes should be accompanied by reduced healthcare, employer, and societal costs from heart disease and stroke. The Arkansas HDSP Task Force has provided this new five-year plan as a guide for moving Arkansas toward a healthier future.

An Invitation to Participate

Over the next five years Arkansas will see progress through the coordinated efforts of partners collaborating to reduce cardiovascular disease and stroke in the state. An important factor in the success of the 2011-2015 state cardiovascular plan will be partnership representation that is as diverse as the populations and communities impacted by CVD and stroke. If you or your organization would like to join efforts in implementing our state's plan, please contact the Arkansas Department of Health, Heart Disease and Stroke Prevention Section, at 501-661-2627 or visit http://www.healthy.arkansas.gov/programsServices/chronicDisease/HeartDiseaseandStrokePrevention/Pages/default.aspx.

Acknowledgements

Over the past decade in Arkansas, numerous concerned stakeholders have been working on different factors affecting heart disease and stroke. The development of this state plan would not have been completed without the technical assistance and funding provided by CDC, support of numerous Arkansas partners, and prior work done by other Arkansas task forces in the prevention areas of tobacco, diabetes, obesity, cancer, and chronic disease.

Finally, appreciation is extended for the dedicated work of numerous committee members of the HDSP Task Force. The HDSP Task Force workgroup members have spent numerous hours reviewing national and state recommendations to identify the strategies most likely to have a positive impact on

cardiovascular health in Arkansas. The list of HDSP Task Force workgroup members may be found in Appendix V.

Understanding the Figures

In order to understand the figures listed in this plan, it is important to understand the following:

- Because heart disease, stroke, and other vascular diseases can be separated into multiple overlapping categories (see Section I: What Is Cardiovascular Disease? and Appendix II: Definitions, Terminology, and Data Sources), it is important to determine to which specific disease category each figure is referring. For additional information not found in this document, refer to *The Burden of Heart Disease and Stroke in Arkansas.*
- In general, rather than providing the number of cases or deaths (counts), this document presents the number of deaths or cases that would be found in a population of 100,000.
- To remove age differences between groups or regions, the rates are age-adjusted.
- Removing the differences that exist because of population size and age allows determination of which population is more vulnerable (i.e., which population has a higher risk of disease or death because of factors that can be modified). Thus, age-adjusted rates for regions (or groups) can be compared, while the unadjusted counts/numbers of cases would be influenced too much by population size and age to be compared fairly.
- Because some disease or risk factor estimates are based on small numbers, small differences between groups or years may have occurred because of chance. Consistent disparities or trends are likely to represent true differences.

SECTION I

Heart Disease and Stroke

Section I: Heart Disease and Stroke

What Is Cardiovascular Disease?

Cardiovascular disease (CVD) is a term that includes many different types of diseases that cause damage to the heart and/or blood vessels.[8] Arteries are blood vessels that take blood to organs such as the heart, brain, kidneys, and legs. Many common cardiovascular diseases result from processes that damage arteries and reduce blood flow. Inadequate blood flow to an organ is called ischemia.

Heart attacks (myocardial infarctions) and strokes (brain attacks or cerebrovascular disease) are two major types of CVD resulting from ischemia. The ischemia is often the result of a chronic damaging process called atherosclerosis.[9] Atherosclerosis begins in childhood and progresses throughout life. Initially the vascular damage is asymptomatic (silent). Only when the vascular damage begins to cause ischemia does the process become symptomatic. If the blood flow is reduced sufficiently, there will be cell death that is recognized as a heart attack, a stroke, renal dysfunction, or gangrenous extremities. The initial event or recurrent events can cause disability or death.

What Is Heart Disease?

In the heart, atherosclerosis often causes narrowing or occlusion of the coronary arteries and is called coronary artery disease (CAD), coronary heart disease (CHD), or ischemic heart disease. Many risk factors contribute to the buildup of atherosclerotic plaques, which reduce blood flow.[8, 9] Plaques can also rupture and cause a thrombus (often referred to as a blood clot) to form quickly, causing a rapid reduction of blood flow and the sudden onset of a heart attack or stroke.

Some of the same factors (e.g., diabetes and hypertension) that contribute to atherosclerosis in large arteries can contribute to narrowing of small arteries in a process called arteriolosclerosis, which can also cause injuries to the heart, brain, and other organs.

Heart failure (HF) is when the heart pumping cannot maintain normal cardiac output or blood flow.[9] HF can result from many different types of heart damage.

What Is Cerebrovascular Disease (Stroke)?

A stroke occurs when insufficient blood reaches the brain, causing brain injury and sudden neurologic symptoms. A majority of strokes are ischemic and are similar to heart attacks in that they are caused by a lack of blood flow due to atherosclerosis of large arteries.[8, 10] Atherosclerosis can be found in arteries of the neck or brain. However, hemorrhagic strokes[10] can occur from rupture of a malformed artery (often at the base of the brain) that has been present since birth or from the rupture of small arteries damaged by high blood pressure. It is easy to see that the common ischemic stroke and less common hemorrhagic stroke have different causes or contributing factors. A thrombus can form in one of the heart chambers when the heart beats at a very high, uncontrolled rate (atrial fibrillation). If the thrombus breaks loose, it can travel to the brain and occlude an artery to cause an ischemic embolic stroke.

Different parts of the brain provide different neurologic functions. So, even though atherosclerosis is the underlying cause of most strokes, the symptoms can vary widely depending on the area of the brain that is deprived of blood flow. The symptoms do not usually help distinguish a hemorrhagic stroke from an ischemic stroke. Special tests are needed to make this distinction because ischemic strokes may be treated with thrombolysis (medications to dissolve the “clot”), while hemorrhagic strokes could be made worse by this treatment.

SECTION II

The Impact of Heart Disease and Stroke

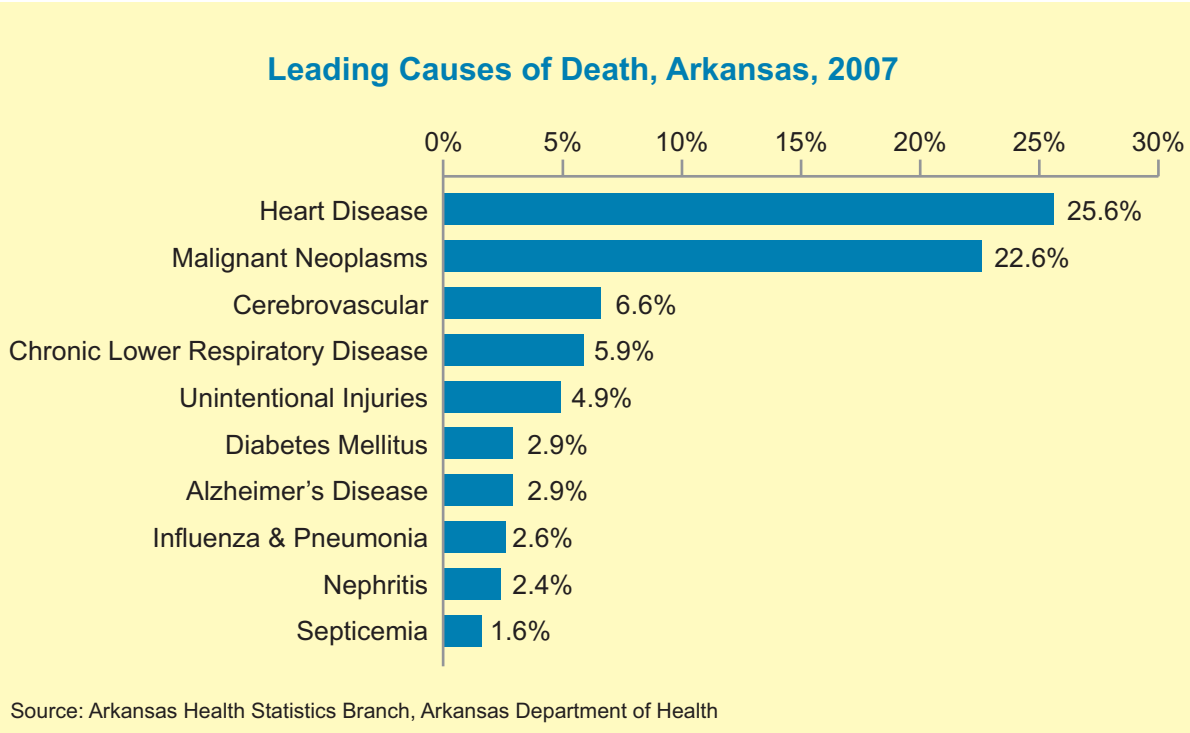
Section II: The Impact of Heart Disease and Stroke

Data: Heart Disease Mortality

Heart disease is the leading cause of death for Americans. Heart disease is composed of several diseases, including coronary heart disease (CHD), rheumatic heart disease, hypertensive heart disease, hypertensive heart and renal disease, heart failure, and other conditions afflicting the heart.

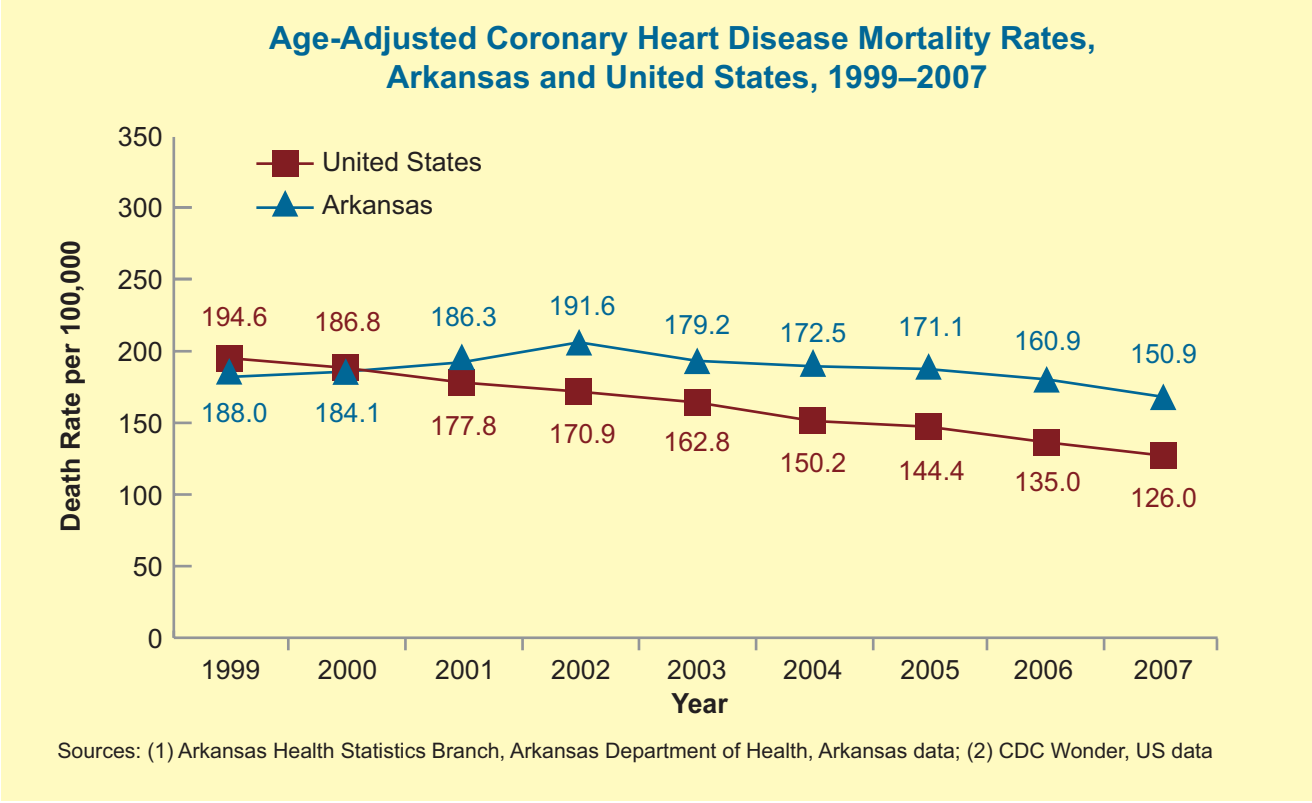
- Heart disease and stroke accounted for almost one out of every three deaths (32.2%) in Arkansas, for a total of 9,085 deaths in 2007 (Figure 1).
- Together, heart disease and stroke accounted for more deaths than any other disease in 2007 (Figure 1).
- More than a fourth (25.6%) of all Arkansas deaths were due to heart disease alone in 2007 (Figure 1).
- The largest contributor to heart disease is coronary heart disease (CHD) with over 67.4% of these deaths due to CHD (2007) (data not shown).

Figure 1: Leading Causes of Death, Arkansas, 2007



Source: Arkansas Health Statistics Branch, Arkansas Department of Health

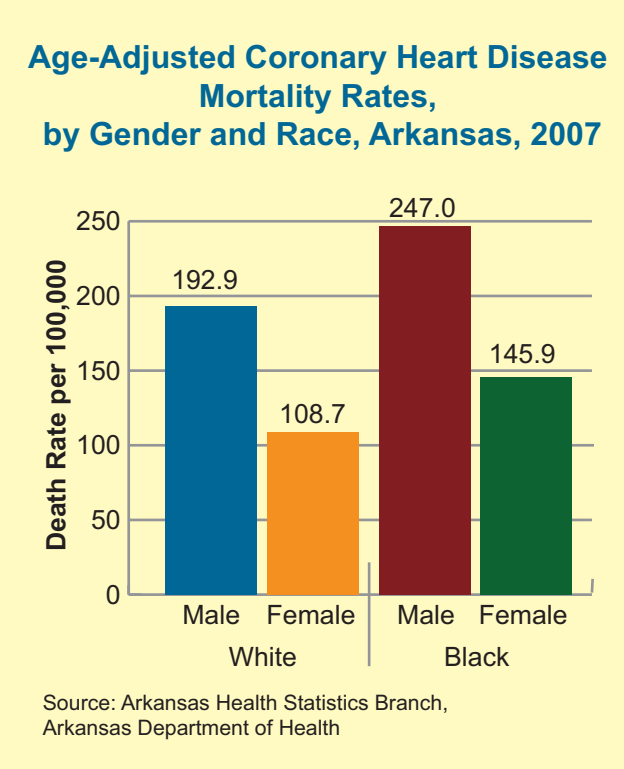
Figure 2: Age-Adjusted Coronary Heart Disease Mortality Rates, Arkansas and United States, 1999-2007



Sources: (1) Arkansas Health Statistics Branch, Arkansas Department of Health, Arkansas data; (2) CDC Wonder, US data

- The age-adjusted mortality rate for CHD decreased more rapidly for the United States (68.6 fewer CHD deaths per 100,000 in 2007 than in 1999) than for Arkansas (37.1 fewer deaths per 100,000), resulting in a widening of the gap for CHD deaths (Figure 2). (Note: Changes in the classification of the cause of death in Arkansas and other parts of the nation may have contributed to these differences.)
- After removing differences because of age and population size, the coronary heart disease mortality rate for Arkansas was greater than that for the nation from 2001 to 2007. In 2007, Arkansas's rate was 20% greater than the United States rate (Figure 2).

Figure 3: Age-Adjusted Coronary Heart Disease Mortality Rates, by Gender and Race, Arkansas, 2007



Note: All comparisons are made after removing differences because of age and population size.

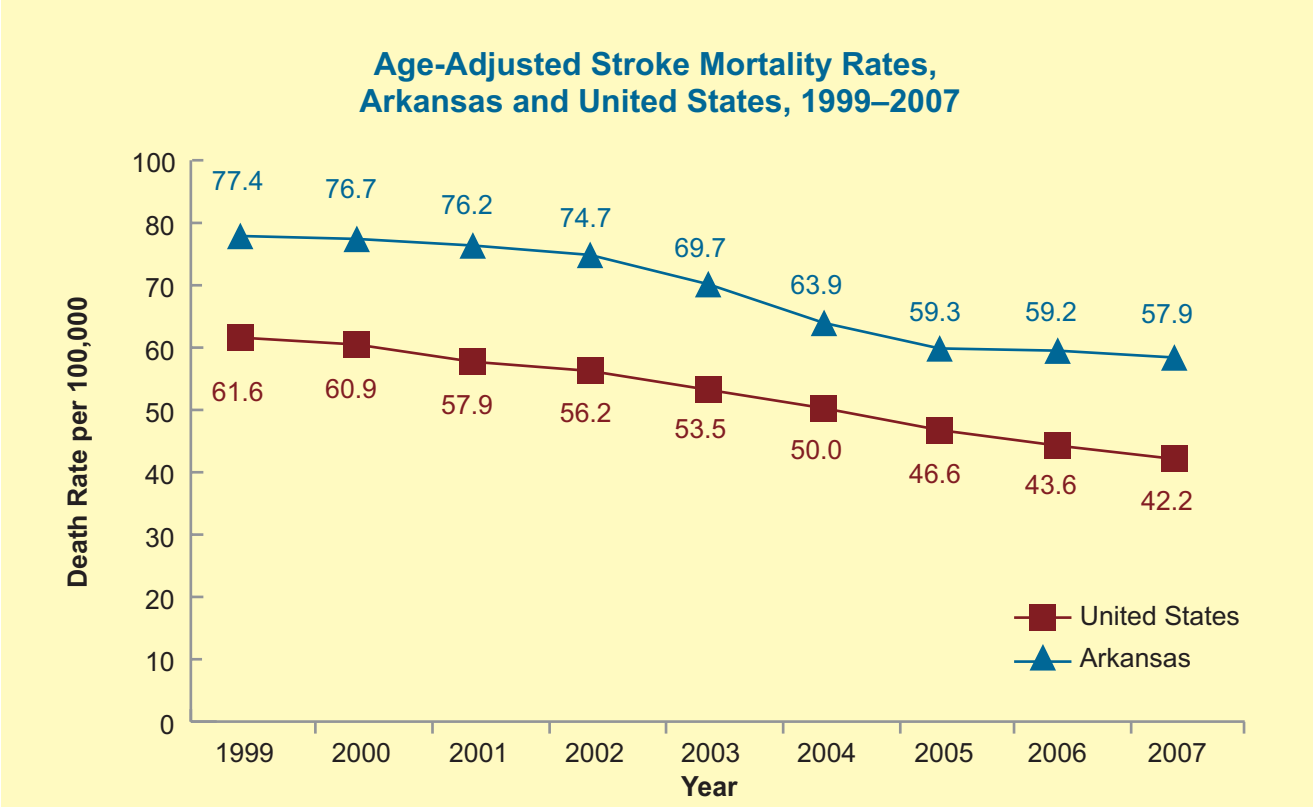
- In 2007, the heart disease mortality rate for Arkansas black men was 1.28 times the mortality rate for white men and over twice (2.27) as high as that for the group with the lowest mortality rate (white women) (Figure 3).
- The 2007 black-white gap in heart disease mortality was greater between men (54.1 deaths per 100,000) than women (37.2 deaths per 100,000) (Figure 3). In contrast, in 1999 the racial gap for men (42.2 deaths per 100,000) was lower than for women (61.9 deaths per 100,000). So, the black-white disparity narrowed for women but not for men.
- Black men and black women had consistently higher heart disease mortality from 1999 to 2007 than their white counterparts. For each year, black men had the highest mortality rates of all groups. White women had the lowest heart disease mortality over the entire period from 1999 to 2007 (data not shown).
- Heart disease mortality was consistently higher for men compared to women for both blacks and whites from 1999 to 2007 (data not shown).
- The reduction in heart disease deaths from 1999 to 2007 was similar for white men (56.0), black men (44.1), and black women (49.7). White women had the slowest decline (25.0 fewer deaths per 100,000 women) (data not shown).
- White women had the lowest heart disease mortality over the entire period from 1999 to 2007 (data not shown).

Data: Stroke Mortality

In 2007, the latest for which mortality data was available on a national level, Arkansas had the highest stroke mortality rate in the nation. For both the nation and Arkansas, age-adjusted mortality rates have been declining since 1999; however, Arkansas still lags behind the national average.

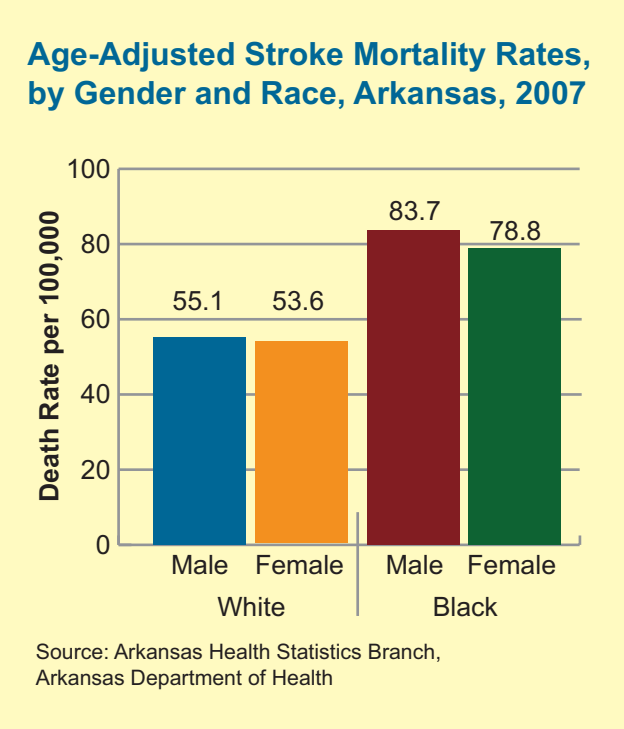
- In 2007, Arkansas reported an age-adjusted stroke mortality rate of 57.9 deaths per 100,000, which was the highest in the United States. The United States age-adjusted stroke mortality rate was 42.2 deaths per 100,000 (Figure 4).
- Stroke mortality decline in Arkansas was similar to the decline in the United States. Arkansas continues to have about 15.7 more stroke deaths per 100,000 than the United States overall (Figure 4).
- As with heart disease, stroke mortality rate in 2007 increased markedly with increasing age. The stroke mortality rate for persons ages 75 to 84 was 11.1 times that of persons ages 45 to 64 (data not shown).

Figure 4: Age-Adjusted Stroke Mortality Rates, Arkansas and United States, 1999-2007



Source: (1) Arkansas Health Statistics Branch, Arkansas Department of Health, Arkansas data; (3) CDC Wonder, US data

Figure 5: Age-Adjusted Stroke Mortality Rates, by Gender and Race, Arkansas, 2007



AHA Recommendation

By 2020, to improve the cardiovascular health of all Americans by 20% while reducing deaths from cardiovascular diseases and stroke by 20%.

Source: AHA Goals and Metrics Committee of the Strategic Planning Task Force

- In 2007, the mortality rate for black men was 52% higher compared to white women (Figure 5).
- Similar to heart disease, the age-adjusted stroke mortality rates for black Arkansans were consistently higher than that for white Arkansans between 1999 and 2007 (data not shown).
- From 1999 until 2007, there was a decrease in the age-adjusted stroke mortality rate in Arkansas among both men and women. The largest decline was found among black men, followed by white men, with about 49.7 and 20.1 fewer stroke deaths per 100,000 for black and white men, respectively, in 2007 compared to 1999 (data not shown).
- Black women had a higher stroke mortality rate than white men and white women and showed no consistent pattern of change (1999-2007) (data not shown).
- Black men had a higher stroke mortality rate for almost all years, but there was little gender difference among whites (1999-2007) (data not shown).

Common Symptoms of a Heart Attack[9]

- Pain or discomfort in jaw, neck or back
- Feeling weak, light-headed or faint
- Chest pain or discomfort
- Pain or discomfort in arms or shoulders
- Shortness of breath

Common Symptoms of a Stroke[10]

- Sudden confusion or trouble speaking or understanding others
- Sudden numbness or weakness of face, arm or leg
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Severe headache with no known cause

Recognizing the Signs and Symptoms of a Heart Attack and Stroke

When a heart attack occurs, the blood supply to the heart is reduced so that some heart muscle cells do not receive enough oxygen and begin to die. The longer it takes for a person to receive treatment to restore blood flow, the greater the damage to the heart. In the case of a stroke, blood supply to part of the brain is reduced so that parts of the brain become damaged or die. Therefore, it is very important to immediately call 911 when a person is suspected of having a heart attack or stroke.

The Arkansas Stroke Assistance through Virtual Emergency Support (SAVES) program is an important development in treatment of stroke patients in Arkansas. Stroke protocols with stroke neurologists available via telemedicine for stroke patient evaluation have improved the access of many stroke patients to life-saving evaluation and treatment.

Data: Signs and Symptoms of a Heart Attack and Stroke

- In 2007, 39% of Arkansas adults age 18 and older could correctly recognize all signs and symptoms of a heart attack.
- Forty-seven percent (47%) of Arkansas adults knew the signs and symptoms of a stroke (2007).
- For race, ethnic and gender differences on recognizing the common signs and symptoms of a heart attack or stroke, please refer to *The Burden of Heart Disease and Stroke in Arkansas.*

Summary of Mortality Data to the State Plan

Arkansas has shown improvement in coronary heart disease deaths for all race and gender groups. Stroke mortality rate did not improve much for black women.

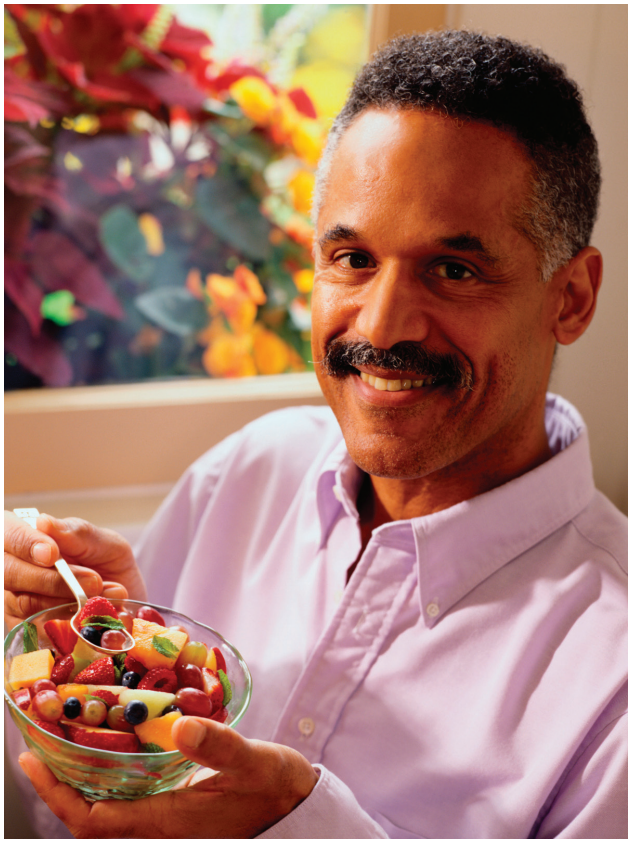
Coronary Heart Disease (CHD)

- While men, both blacks and whites, experienced great decline in CHD mortality from 1999 to 2007, they are still at substantially higher risk than women.
- A smaller proportion of men know heart attack signs and symptoms than women.
- Men should be considered a priority population to reduce CHD without neglecting women.
- Black men and women continue to have substantially higher CHD mortality than white men and white women, respectively.
- A smaller proportion of blacks know the signs and symptoms of a heart attack.
- Blacks should be considered a priority population for efforts to reduce CHD.
- The slightly increasing gap in CHD mortality compared to the United States suggests the need to consider plans that have worked in other states.

Strokes

- Blacks continue to be at higher risk of stroke than whites for both men and women.
- The gender and race disparity in knowledge of the signs and symptoms is less for stroke than for heart attacks.
- Blacks should be targeted as a priority population for stroke prevention:
  - » Black men because they have the highest mortality;
  - » Black women because of the lack of improvement in the preceding years.

Educational efforts to increase knowledge of the signs and symptoms for both heart disease and stroke should address all Arkansans but especially blacks and persons with lower educational attainment.



SECTION III

Cardiovascular Risk Factors and Healthy Behaviors

Section III: Cardiovascular Risk Factors and Healthy Behaviors

Traditional High-Risk Approach: Risk Factors

Cardiovascular risk factors are the conditions, behaviors, or factors that increase a person's chance of developing a heart attack or stroke. Some risk factors cannot be changed, such as age, race, or heredity (non-modifiable risk factors). But many more risk factors can be modified to prevent damage to a person's arteries. The Arkansas plan must use multiple settings and strategies to target these modifiable risk factors to be effective in improving cardiovascular health.[5, 11]

Hypertension (high blood pressure)

- Blood pressure is reported as the ratio of two numbers.[13]
  - » The upper number, or systolic pressure, is found when the heart is contracting.
  - » The lower number, or diastolic pressure, is the pressure when the heart is relaxing between contractions.
- Hypertension is the most common diagnosis in the United States, affecting 50 million people.[13]
- Hypertension causes widespread damage to arteries and multiple organs such as the heart, brain, and kidneys.
- Hypertension does not produce symptoms until late when damage may already have occurred.

American Heart Association Modifiable Risk Factors for a Heart Attack (CHD)[2]

- Smoking/tobacco use
- Diabetes
- Hypertension (high blood pressure)
- High cholesterol and other lipids
- Overweight and obesity
- Physical inactivity

American Heart Association/ American Stroke Association Modifiable Risk Factors for a Stroke (Cerebrovascular Disease)[12]

- Hypertension (high blood pressure)
- Exposure to cigarette smoke
- Diabetes
- Atrial fibrillation and other cardiac conditions
- Sickle cell disease
- Dysplipidemia
- Physical inactivity
- Obesity and fat distribution
- Poor diet
- Postmenopausal hormone therapy
- Cartoid artery stenosis

Risk of CVD increases twofold for every 20 mm Hg increase in systolic blood pressure or 10 mm Hg increase in diastolic blood pressure.[13]

Smoking

- Smoking is a major cardiovascular disease (CVD) risk factor and contributes to 140,000 deaths each year.[14]
- Compared to nonsmokers, cigarette smokers are twice as likely to develop an ischemic stroke and two to four times as likely to develop a hemorrhagic stroke.[12]
- Systems designed to identify smoking status increases clinical intervention rates.[15, 16]
- Population approaches, such as price increases and clean indoor air laws, appear especially effective in decreasing smoking in adolescents.[16]

High Cholesterol and Dyslipidemia

- Hyperlipidemia means high levels of lipids (cholesterol and triglycerides) in the blood.
- Dyslipidemia is a broader term indicating abnormalities in quantity or types of lipids e.g., low levels of good cholesterol, or high-density lipoproteins (HDL).
- It appears that the higher the level of bad cholesterol or low-density lipoproteins (LDL), the greater the risk of CVD, but the presence of other risk factors can modify what level of cholesterol is acceptable.
- Adult Treatment Panel (ATP) guidelines provide complete recommendations for the detection, evaluation, and treatment of high cholesterol.

Overweight

- The body mass index (BMI) range for overweight is 25-29.9 kg/m^2.

Obesity

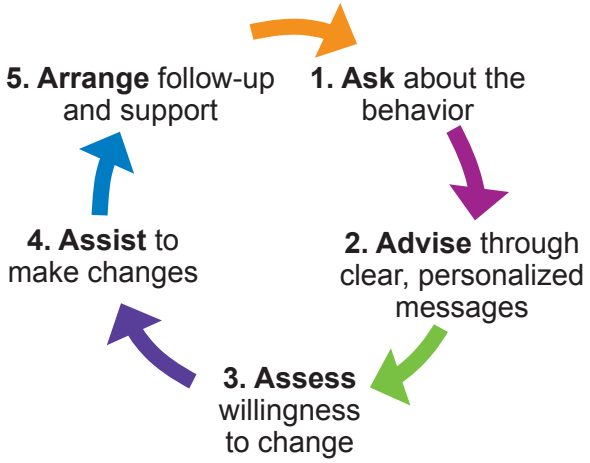
- The BMI range for obesity is ≥30 kg/m^2.
- Obesity is more common in:
  - » Women,
  - » African Americans,
  - » Native Americans,
  - » Native Hawaiians,
  - » Some Hispanic groups.[17]
- Obesity contributes to 5.7% of the United States total health expenditure.[17]

Just preventing additional weight gain can prevent progression of risk factors.[18]

Counseling Framework

In counseling individuals with multiple risk behaviors, the 5-A behavioral counseling technique is recommended. Counseling should include problem-solving guidance, assisting in plan development, and help in addressing common barriers and social support.[19]

The generalized steps of 5-A behavioral counseling include:[15]



Population or Low-Risk Approach: Healthy Behaviors and Health Factors

The above cardiovascular risk factors are well established. However, studies suggest that many CVD events occur because of the interplay of multiple factors at much lower levels.[1] In fact, persons who have cardiovascular events only have average or mild elevations of risk factors.[1] As a result, efforts have begun to identify "health factors and health behaviors" that contribute to heart and brain health.

Seven characteristics/factors have been shown to be extremely important to both cardiovascular health and general well being.[1, 20-25] Characteristics include:

Healthy Behaviors

- Being a nonsmoker (never or quit for > one year),
- Being physically active at recommended levels,
- Consuming a healthy diet.

Favorable Health Factors

- Total cholesterol <200 mg/dL,
- BMI <25 kg/m^2,
- Blood pressure <120/<80 mm Hg,
- Fasting blood glucose <100 mg/dL.

To help meet its 2020 goal of improving cardiovascular health for the United States, the American Heart Association (AHA) has created a new definition for ideal cardiovascular health. In this definition, the AHA has identified seven health factors and lifestyle behaviors that are supportive of cardiovascular health, known as *Life's Simple 7.* The focus of this goal is to prevent heart disease and stroke by assisting people in making healthier choices. According to the AHA, this has been the first time the association has adopted better health as a principal goal.

Having five or more healthy behaviors can reduce risk of cardiovascular events by more than 80% compared to persons without healthy behaviors.[21]

The Arkansas 2011-2015 Comprehensive State Plan is designed is designed to address multiple settings with numerous strategies to improve both behaviors and risk factors in the population as a whole and to improve treatment among high-risk individuals toward improving quality of life and reducing heart disease and stroke mortality.

Most persons who have cardiovascular events only have average or mild elevations of risk factors.[1]

American Heart Association 2020 Impact Goal

American Heart Association® | American Stroke Association®
Learn and Live®

Cardiovascular health defined using "Life's Simple 7"

For the first time, the association has defined cardiovascular health into three categories, using seven easy-to-understand measures called "Life's Simple 7." The chart below details how Life's Simple 7 determines poor, intermediate and ideal cardiovascular health.

LIFE'S SIMPLE 7 (Health Factor or Behavior)	POOR HEALTH (Warning)	INTERMEDIATE HEALTH (Needs Improvement)	IDEAL HEALTH (Excellent)
1. Smoking Status			
Adults	Smoker	Quit for 12 months or less	Never smoked or quit more than 12 months ago
Children	Tried in the last 30 days		Never tried/smoked a whole cigarette
2. Body Mass Index (BMI) *(a measure of body fat)*			
Adults	30 or greater	25-29.9	18.5-24.9
Children	More than 95 percentile	85th-95th percentile	Less than 85th percentile
3. Physical Activity			
Adults	None	1-149 minutes/wk moderate or 1-74 minutes/wk vigorous or 1-149 minutes/wk of moderate + vigorous	150+ minutes/wk moderate or 75+ minutes/wk vigorous or 150+ minutes/wk moderate + vigorous
Children	None	1-59 minutes/day moderate or vigorous	60 minutes+/day moderate or vigorous
4. Healthy Diet Score *(in the context of an overall healthy eating pattern and energy balance)*			
Adults	0-1 components of healthy diet	2-3 components of a healthy diet	4-5 components of a healthy diet
Children	0-1 components of healthy diet	2-3 components of a healthy diet	4-5 components of a healthy diet
5. Total Cholesterol			
Adults	240 or more mg/dL	200-239 mg/dL or treated to goal	Less than 200 mg/dL untreated
Children	200 or more mg/dL	170-199 mg/dL	Less than 170 mg/dL untreated
6. Blood Pressure			
Adults	SBP[1] of 140 or more, or DBP[2] 90 mm Hg or more	SBP of 120-139 or DBP of 80-89 mm Hg or treated to goal	SBP of less than 120 or DBP of less than 80 mm Hg untreated
Children	More than 95th percentile	90th-95th percentile or SBP of 120 or more or DBP of 80 mmHg or more	Less than 90th percentile
7. Fasting Plasma Glucose			
Adults	126 mg/dL or more	100-125 mg/dL or treated to goal	Less than 100 mg/dL
Children	126 mg/dL or more	100-125 mg/dL	Less than 100 mg/dL

[1] SBP: systolic blood pressure; [2] DBP: diastolic blood pressure

SECTION IV

National Guidelines for Reducing Adult Risk Factors

Section IV: National Guidelines for Reducing Adult Risk Factors

Use of Guidelines in the Arkansas State Plan

The adult risk factor workgroup began work in 2009 and used multiple published resources as they became available, including nationally recognized guidelines on screening for and treatment of high blood pressure, high cholesterol, and obesity.[5, 7, 12, 13, 15-17, 26-41] Many of these guidelines are undergoing revision (www.nhlbi.nih.gov/guidelines/index.htm), with new versions due out in 2012 or sooner. In the fall of 2010, the Centers for Disease Control and Prevention (CDC) provided a summary of useful strategies to address heart disease and stroke[38] that focuses on aspirin treatment, control of high blood pressure and cholesterol, smoking reduction, and reduction in sodium intake among adults. The United States Preventive Services Task Force (USPSTF) is considered the authoritative body when it comes to screening guidelines. The new requirements of the Affordable Care Act for insurance coverage of screening tests are based on the USPSTF recommendations. Because of the continuous evolution of these guidelines, we provided only a brief list of the primary prevention measures and the CDC and USPSTF guidelines that shaped our recommendations.

Cardiovascular Disease (CVD) Primary Prevention Performance Measures

Summary recommendations for performance measures in the primary prevention of CVD among adults are provided by the American Heart Association (AHA) and the American College of Cardiology Foundation (ACCF).[27, 37]

These recommendations are for persons who have not had a CVD event. Recommendations for persons with disease are very different and should follow coronary heart disease (CHD) performance measures.[39] (See CVD Secondary Prevention Performance Measures, page 33.)

Lifestyle/Risk Factor Screening:

Diet and physical activity should be assessed and documented at least once every two years for persons ages 18 to 80. Assessing family history of early CHD and alcohol consumption may be useful. Screening for healthy behaviors may initiate dialog between provider and patients.

Dietary Counseling:

Patients ages 18 to 80 should be advised on healthy eating at least once every two years.

Physical Activity Counseling:

Patients ages 18 to 80 should be advised at least once every two years to participate in regular physical activity. Written prescriptions (which are already developed) for lifestyle changes may be useful.

Smoking/Tobacco Use Assessment:

All persons 18 and older should have tobacco use assessed once or more every two years with the exception of documented lifelong nonsmokers.

Smoking/Tobacco Cessation:

Interventions for smoking cessation should be provided to all smokers 18 and older at least every two years. Interventions may include counseling, referral, or pharmacotherapy.

Weight/Adiposity Assessment:

Both body mass index (BMI) and waist circumference should be assessed and recorded at least once every two years in all patients 18 to 80 years old. Using at least one assessment measure, either the BMI or waist circumference, is needed to comply with the recommended primary performance measure. These measures indicate overweight, obesity, and healthy weights.

Weight Management:

All patients with measures indicating a weight problem (BMI >30 kg/m^2 or waist circumference >40 inches in men or >35 inches in women) should be counseled at least once every two years. Counseling can be advice on calorie intake, physical activity, referral to a weight management program, or literature.

Blood Pressure Measurement:

All adult patients should have blood pressure measured and documented at least once every two years. Screening should begin at age 18 unless other factors indicate a need for earlier screening.

- Repeated measurement should be at least every two years if blood pressure is normal (<120/80 mm Hg).
- If blood pressure is elevated, more frequent screening is needed:
  - » Every year for prehypertension (blood pressure 120-139/80-89 mm Hg);
  - » Every two months for Stage 1 hypertension (blood pressure 140-159/90-99 mm Hg);
  - » Remeasurement in less than one month for Stage 2 hypertension (blood pressure >160/100 mm Hg);
- The presence of cardiovascular disease, diabetes, or kidney disease alters screening recommendations.

Blood Pressure Control:

To reduce CVD risk in hypertensive patients, successful goals include:

- <140/90 mm Hg (but lower blood pressure levels may be beneficial) or the patient being prescribed two antihypertensive drugs.
- If control is not achieved with appropriate treatment, other factors, such as lack of compliance, should be assessed.

Blood Lipid Measurement:

As a performance measure, the recommendation is to:

- Assess fasting lipid levels in women ages 45 to 80 once every five years.
- Assess fasting lipid levels in men ages 35 to 80 once every five years.

Total Cholesterol Blood Lipid Treatment and Control:

Treatment for dyslipidemia should be based on global risk that includes lipid and non-lipid factors. Adequate assessment of risk is measured by documentation of the various risk components such as age, high-density lipoprotein (HDL), diabetes mellitus, smoking status, hypertension, and family history of premature CHD. Successful control includes the

patient meeting low-density lipoprotein (LDL) treatment targets or the patient being prescribed at least one lipid-lowering medication at tolerable dosage.

Global Risk Assessment:

Comprehensive global 10-year risk of CHD should be assessed at least once every five years beginning at age 35 for men and age 45 for women.

- Lifetime global risk measures provide better indications of long-term risk of CVD than single risk factors.
- Global risk may act as an incentive for patients to reduce their risks, especially among individuals 50 years of age or younger.
- Patients at higher risk of CHD are also at higher risk of stroke.

Aspirin Use:

Men ages 35 to 80 and women 45 to 80 who are at high risk of CVD (10-year CHD risk >20%) should be advised yearly to use aspirin. (This measure is not a public reporting measure.)

- Daily aspirin use is beneficial in patients with established CVD[27] and may provide benefit in primary prevention among patients who are at high risk of CHD.

Recommendations for Prevention of CVD in Women[37]

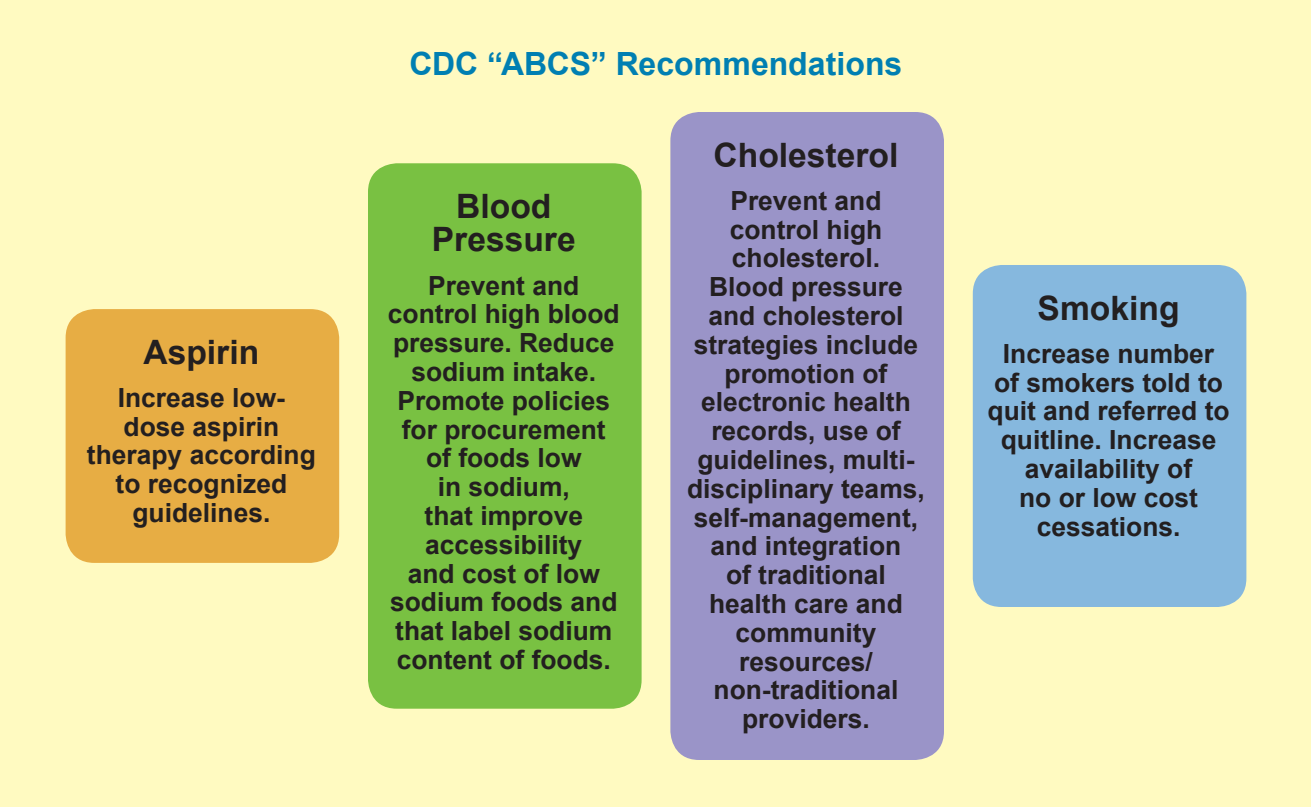
In addition to the recommendations for smoking cessation, physical activity guidelines, diet, weight loss and weight maintenance, and blood pressure and lipid treatment similar to the above measures, the guidelines recommend avoidance of environmental tobacco smoke, consumption of omega-3 fatty acids, and comprehensive cardiac rehabilitation regimens following myocardial infarction and strokes.[37]

CVD Secondary Prevention Performance Measures

Secondary CHD prevention recommendations from the American College of Cardiology, AHA, and the Physician Consortium for Performance Improvement can be found at http://content.onlinejacc.org/cgi/reprint/58/3/316.pdf.[39]

Clinical Practice Guidelines

Clinical practice guidelines are available at http://www.nhlbi.nih.gov/guidelines/index.htm. Guidelines for Cardiovascular Risk Reduction in Adults are expected to be released in 2011. This site also provides national guidelines on blood pressure (Joint National Committee [JNC]) and lipids (Adult Treatment Panel [ATP]) and treatments for specific indications. Both JNC 8 and ATP IV guidelines are due to be released in the spring of 2012.



CDC "ABCS" Recommendations

These recommendations concentrate on improving aspirin therapy, preventing and controlling high blood pressure and high cholesterol, reducing sodium intake, and preventing and reducing smoking.[38]

Stroke Primary Prevention Performance Measures

Summary recommendations for performance measures in the primary prevention of stroke among adults are provided by the American Heart Association/American Stroke Association (AHA/ASA).[12] Risk factors for CHD and stroke overlap.

Blood Pressure Measurement:

In most adults, screen for hypertension at least every two years. More frequent screening is needed for minority populations and the elderly.

Blood Pressure Control:

Control blood pressure through modifications in diet and lifestyle and pharmacological therapy as recommended in the latest JNC guidelines. It is still to be determined if specific classes of antihypertensive medication offer special protection against stroke.

Smoking/Tobacco Use:

- For current smokers, smoking cessation is recommended. Avoiding environmental tobacco smoke is also recommended.
- Counseling, nicotine replacement, and oral smoking-cessation medications are effective for smokers.

Atrial Fibrillation:

Antithrombotic treatment recommendations are provided on the American Heart Association's website (http://www.heart.org/HEARTORG/)

or the American Stroke Association's website (http://www.strokeassociation.org/STROKEORG/).

Blood Lipid Treatment and Control:

Refer to the latest National Cholesterol Education Program (NCEP) guidelines.

Refer to the AHA's *Life's Simple 7* recommendations for:

- Poor nutrition;
- Physical inactivity;
- Weight management.

United States Preventive Services Task Force (USPSTF) Screening Guidelines

High Blood Pressure:

The USPSTF recommends screening for high blood pressure in adults aged 18 and older. The task force found evidence lacking to recommend an interval for screening adults for hypertension; however, it cites the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC 7) recommendation to screen every two years in persons with optimal blood pressure levels and every year among persons with pre-hypertensive blood pressure levels.

Blood Lipid Measurement:

The USPSTF strongly recommends screening for lipid disorders in all men aged 35 and older and women aged 45 and older if they are at increased risk for coronary heart disease. Young adults at increased risk for coronary heart disease are also recommended to be screened for lipid disorders. The USPSTF does not specify optimal interval for screening, however, based on other guidelines and expert opinions, the task force states that reasonable options include every five years, shorter intervals for people who have abnormal lipid levels and longer intervals for those not at increased risk who have had repeatedly normal lipid levels.

Aspirin Use:

The USPSTF recommends the use of aspirin for men ages 45 to 79 when the potential benefits for reducing the risk of a heart attack outweigh the harm because of an increase in gastrointestinal bleeding. The task force recommends the use of aspirin for women ages 55 to 79 years whose benefits due to a reduction in ischemic stroke outweigh the harm from an increase in gastrointestinal bleeding.

Weight/Adiposity Assessment & Weight Management:

The USPSTF recommends that clinicians screen all adult patients for obesity and offer high-intensity counseling on diet and/or exercise and behavioral interventions to promote sustained weight loss for obese adults.

More Information on USPSTF Guidelines:

For additional information on the USPSTF screening guidelines for cardiovascular health, please go to http://www.uspreventiveservicestaskforce.org.

Summary and Importance of Adult Risk Factors to the State Plan

Arkansas data used to formulate the summaries below may be found in *The Burden of Heart Disease and Stroke in Arkansas* or by visiting http://www.healthy.arkansas.gov/programsServices/chronicDisease/HeartDiseaseandStrokePrevention/Pages/default.aspx.

- Among Arkansas adults, the prevalence of many heart disease and stroke risk factors occurred prior to middle age and often even at younger ages.
  - » Among adults, the greatest increase in the prevalence of elevated BMI occurred between age groups 18-24 and 25-34 and between age groups 25-34 and 45-54.
  - » The prevalence of physical inactivity increased most markedly between young adults (ages 25-34) and adults who were slightly older (35-44).
  - » Prevalence of high blood pressure awareness increased most between ages 25-34 and 35-44.
  - » Prevalence of high cholesterol awareness increased most prior to middle age (45-54).
  - » Diabetes prevalence increased markedly during middle age.
    - Ages 45-54 (10.5%)
    - Ages 55-64 (17.9%)
- These data must be interpreted cautiously since these apparent risk factor increases could be, in part, because of more testing, with increasing age contributing to an increase in diagnosis and/or awareness.
- It is clear that risk factors among young adults should be targeted (especially among the higher risk groups such as blacks and men) to prevent the development of heart disease and strokes.
  - Physical inactivity should target women and blacks.
  - Diet should target everyone, especially men.
  - Diabetes prevention should target blacks.
  - Obesity should target all groups, but especially blacks.

SECTION V

Preventing and Reducing Risk Factors in Children

Section V: Preventing and Reducing Risk Factors in Youth

Importance of Youth Risk Factors

Healthy Behaviors

Healthy behaviors in childhood may carry over into adulthood.

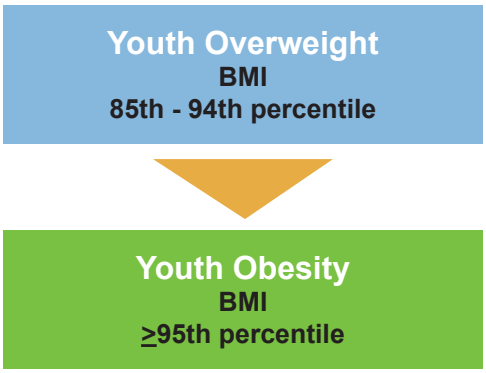
African American and Latino children tend to be less healthy than white children.

Higher education is linked to improved health.[42]

Overweight/Obesity

Body Mass Index (BMI) is based on weight and height. BMI is used to identify children and adolescents who weigh too much or too little for their height. In children, normal values vary with age and sex, so percentiles are used to determine normal values.[43]

- Obesity increases risk of diabetes, orthopedic problems, sleep disturbances, and kidney problems among youth.[44]
- Obesity during childhood increases their risk of high blood pressure, high cholesterol, and heart disease as adults.[44]
- Obesity increases cardiovascular risk factors:
  - 65% of obese five- to ten-year-olds have a minimum of one cardiovascular disease (CVD) risk factor.
  - 25% of obese five- to ten-year-olds have two or more CVD risk factors.[44]
- Obese children may live ten fewer years than their parents.[44]



- Factors related to obesity:
  - Parental obesity doubles the risk of the child becoming an obese adult;[44]
  - Poor diet;
  - Lack of physical activity;
  - Social and demographic factors (income, race/ethnicity, education);
    - School and home environments;
    - Lack of access to grocery stores with healthy foods;
    - Lack of access to safe parks and playgrounds;
    - Lack of healthcare services that encourage healthy weight.[42]

High Blood Pressure (Hypertension)

High blood pressure has been associated with atherosclerosis in youth.[45]

Cholesterol

An elevated cholesterol level in youth may indicate future problems as an adult.

Physical Activity

Physical activity can improve weight, blood pressure, and blood lipids.[45]

Tobacco Use

Cigarette smoking impacts immediate and future health.

- 90% of smokers start smoking before 18 years of age.[16]
- One out of four teen smokers remain addicted as adults.[16]

National Recommendations for Youth

Overweight/Obesity

The American Academy of Pediatrics and the Institute of Medicine (IOM) both recommend obesity screening in childhood.

- Suggest schools conduct annual assessments on students' weight, height, and BMI.
- Talking with parents about BMI results provides an opportunity to educate parents about the impact of their child's weight. One-third of mothers and more than one-half of fathers whose children are obese said they thought their children's weight was "about right."[44]
- Currently, population-based interventions that increase physical activity show the greatest promise for reducing obesity in youth, more so than healthcare settings.[43]

High Blood Pressure (Hypertension)

Blood pressure should be measured in all children three years or older using the appropriate-size cuff. Elevated blood pressure must be confirmed on repeated visits.

- Certain conditions should cause blood pressure to be measured in children younger than three years.

Having an obese parent doubles the risk that a child will be obese as an adult.[44]

- Guidelines provide for additional testing if hypertension is confirmed.
- Lifestyle behavioral changes are important for control, but pharmacologic management may be necessary.[45]

Cholesterol

Screening for lipid abnormalities may be beneficial among high-risk children and adolescents.[40] Regardless of family history or other risk factors, overweight and obese children should be screened.[40]

- High risk may be indicated by a family history of premature coronary heart disease (CHD) or having at least one parent with a total cholesterol $\geq$240 mg/dL or clinical findings in the child.
- Gaps in Evidence: The appropriate responses to abnormal lipids in youth are not yet clear.[34] Further research needs to be conducted on the effectiveness of lifestyle interventions, lipid-lowering medications, and the benefit of universal screening.

Physical Activity

Physical activity appears to be linked with physical and environmental characteristics making community-based interventions important.

Community Interventions for Physical Activity:

- Effective interventions include creating or enhancing access to places for physical activity, community-wide education, social support interventions in community settings, point-of-decision prompts such as using the stairs instead of elevators or escalators, physical education in schools, and behavior change programs that are individually adapted.[35]

Clinical Interventions for Physical Activity:

- National recommendations call for physical activity assessment and counseling in the clinical setting for children and youth during regular visits to the healthcare provider.
  - » Counseling to engage in regular physical activity should be tailored to the individual and developmentally appropriate.[35]
  - » It is recommended healthcare providers also refer patients to community resources.[46]

Tobacco Use

Preventing smoking among youth could have immediate and future health benefits since many community and population approaches have been especially effective in reducing secondhand smoke among adolescents.[16]

Arkansas was the first state in the United States to have mandatory BMI assessments for school-aged children. According to the Arkansas Center for Health Improvement (ACHI), the progression of the childhood obesity epidemic in Arkansas has been halted.

Arkansas's Response to Childhood Obesity

Passage of Act 1220 of 2003[44]

- Created a comprehensive program to combat childhood obesity in the state.
- Created school nutrition and physical activity committees, banned vending machines in elementary schools, required public disclosure of school vending contracts, and established the Arkansas Child Health Advisory Committee (CHAC).
- Established mandatory BMI assessments for school-aged children.

Summary and Importance of Youth Risk Factors to the State Plan

The Arkansas data that was used to formulate the summaries below may be found by visiting http://www.healthy.arkansas.gov/programsServices/chronicDisease/HeartDiseaseandStrokePrevention/Pages/default.aspx.

In recent years, there have been improvements in high school student behaviors that should contribute to better cardiovascular health.

Obesity and Overweight

- Obesity and overweight appear to have stabilized over the last few years among Arkansas youth. However, the prevalence of obesity is greater than the Healthy People 2020 target of 14.6% for ages two to 19.

Tobacco Use

- Conclusions for smoking:
  - » Black students report the lowest prevalence of cigarette smoking.
  - » Interventions that address smoking among white and female students need improving.

Poor Nutrition

- Conclusions for fruit/vegetable intake:
  - » All groups need to be targeted, with special emphasis among white students.
- Conclusions on sodas/pops:
  - » All groups, but especially whites, should be targeted to decrease consumption of sugary drinks.

Physical Inactivity

- After initial improvement in physical activity for most groups from 2005 to 2007, little improvement occurred by 2009 for boys and Latinos (60 minutes of physical activity on five of the last seven days).
- Excess TV watching was most detrimental among black students (more than 50% reported watching TV three or more hours on most school days) and had minimal improvement from 2005 to 2009.
- Computer use (unrelated to school work) and video games also increased among black and male students from 2007 to 2009 with little changes in the other groups.
- Conclusions regarding physical activity:
  - » All groups, but especially black students and boys, should be targeted to decrease the hours spent on TV and video games.

SECTION VI

Rehabilitation

Section VI: Rehabilitation

Participating in a rehabilitation program immediately after leaving the hospital for a heart attack or stroke can increase the patient's chance of recovery. Rehabilitation programs, also known as secondary prevention programs, are an important step in reducing mortality, morbidity, and functional disability due to both heart disease and stroke. Comprehensive cardiac rehabilitation has been shown to reduce re-hospitalization rates, reduce recurrent events and sudden cardiac death, lessen the need for cardiac medications, and increase the rate of persons returning to work. Following a stroke, most of the recovery a patient experiences is related to participation in stroke rehabilitation. Little, if any, improvement is made when a patient does not participate in stroke rehabilitation.[47, 48]

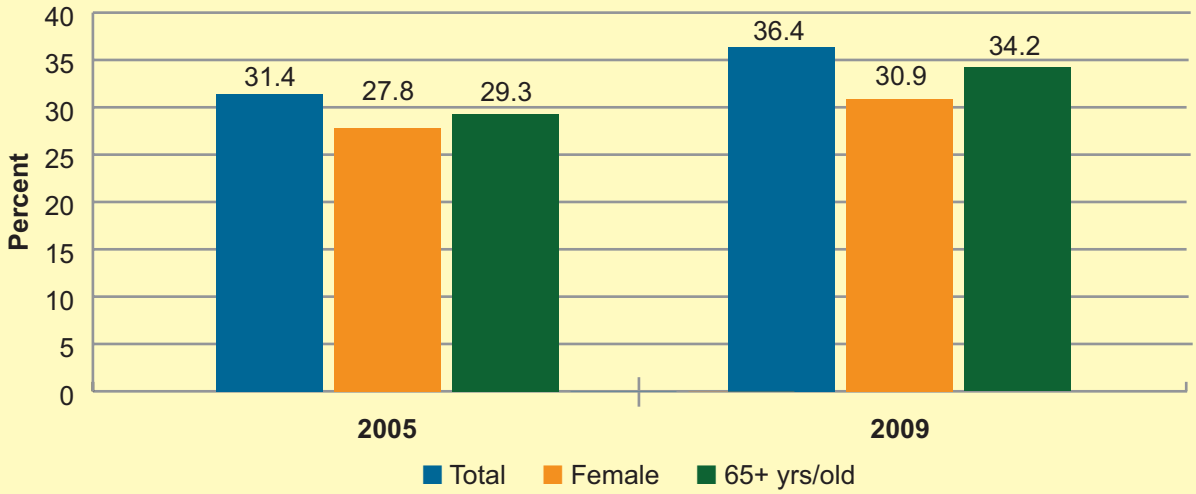
While cardiac and stroke rehabilitation programs are proven to be effective, they are often underutilized. Each year two million patients are eligible for cardiac rehabilitation due to an acute myocardial infarction or because of coronary revascularization. Of the two million, the participation rate for cardiac rehabilitation is between 10-20%.[47] There are a number of reasons cardiac rehabilitation programs are underused. These include:

1. Geographic limitations (accessibility of program sites)
2. Transportation
3. Low patient self-esteem
4. Low patient referral rate, lack of perceived benefit, and poor social support.

Even after one is enrolled in cardiac rehabilitation, many do not adhere to the program and drop out. Factors associated with nonadherence include:

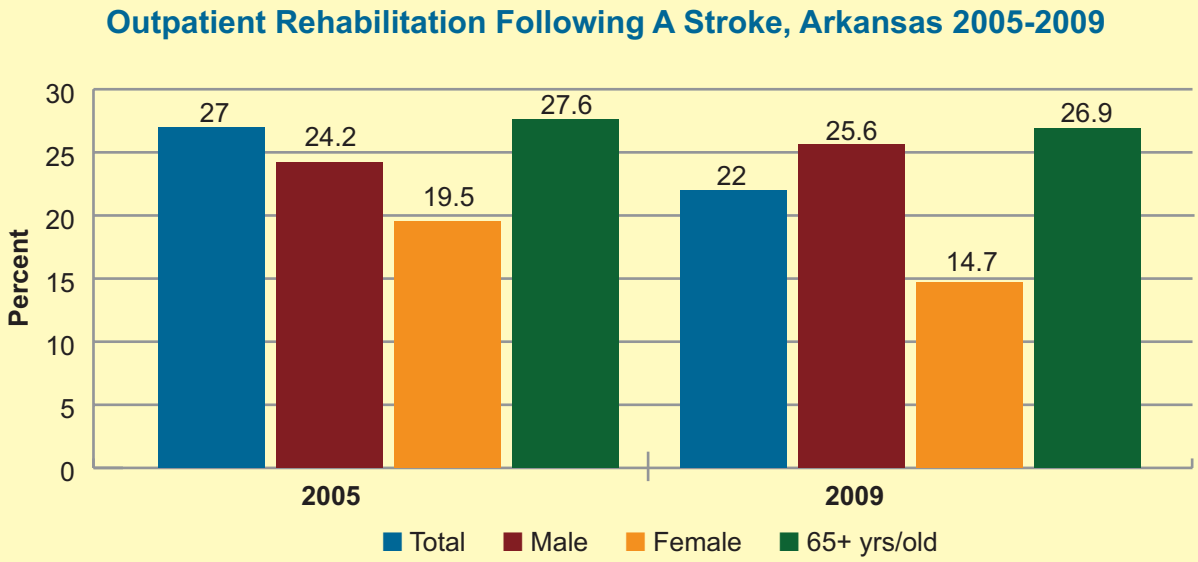
1. Older age
2. Female sex
3. Lower premorbid levels of physical activity.[48]

Figure 6: Outpatient Rehabilitation Following A Heart Attack, Arkansas 2005-2009



Source: Arkansas BRFSS, 2005-2009
Results for men were not included due to sample sizes.

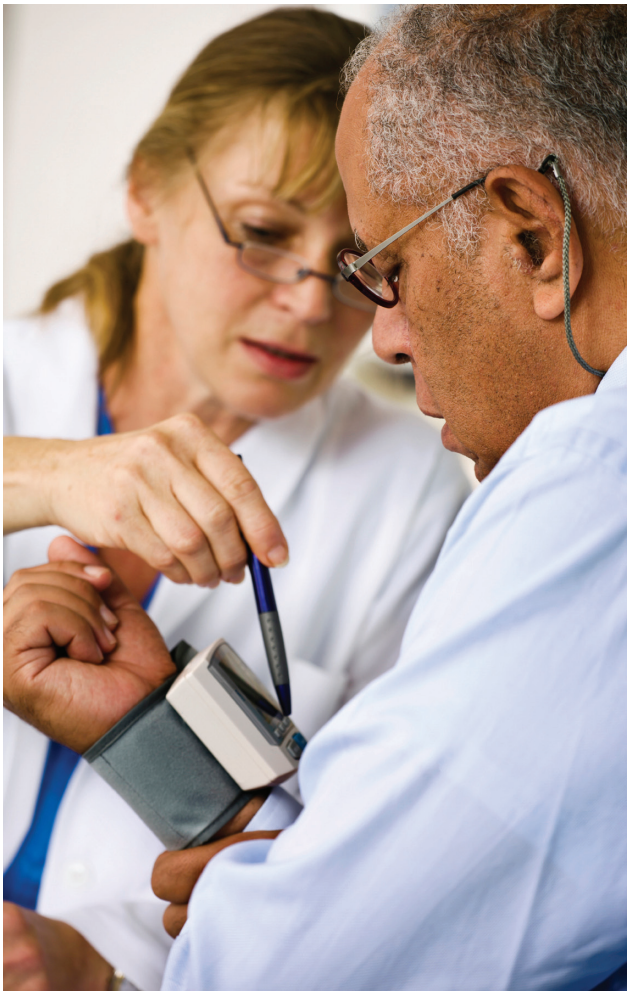
Figure 7: Outpatient Rehabilitation Following A Stroke, Arkansas 2005-2009



Source: Arkansas BRFSS, 2005-2009
Results for men should be interpreted with caution due to sample sizes.

From 2005 to 2009, the percentage of Arkansans going to outpatient rehabilitation following a heart attack increased. With the exception of men, outpatient rehabilitation following a stroke decreased (Figures 6 and 7).

While in cardiac rehabilitation, many patients experience depression, anger, anxiety disorders, and social isolation. Studies have shown psychosocial disorders can also be associated with the risk of initial or subsequent cardiovascular events.[47] Following hospital discharge, ensuring the patient participates in and completes cardiac and stroke rehabilitation is vital to reducing re-hospitalizations, as well as further disability and death.



Healthy People 2020 Target:

(Developmental) Increase the proportion of adult stroke survivors who are referred to a stroke rehabilitation program at discharge.

SECTION VII

Advocacy/Policy

Section VII: Advocacy/Policy

Historical evidence suggests that health problems can be prevented when the environment promotes healthy living. Neighborhoods, schools, and workplaces all influence our health. Environments that make healthy eating and physical activity difficult produce unhealthy, physically inactive citizens and impact our long-term health. It can be argued people have a choice whether or not to eat healthy; however, when access to grocery stores is limited, then our environment makes the choice for us.

Health status and related health behaviors are impacted on multiple levels: personal, organizational/institutional, environmental, and policy. Policies and legislation that will have the most far-reaching impact on improving Arkansas's cardiovascular health are described below.

State-Level Legislation Successes

Act 1220 of 2003 (An Act to Create a Child Health Advisory Committee)

Act 1220 of 2003 creates a comprehensive program to combat childhood obesity in Arkansas. The key components of Act 1220 include:

- Annual measurement of Body Mass Index (BMI) for all children attending public schools. BMI results and associated health risks are confidentially reported to parents in a child health report.
- Elimination of student access to vending machines in elementary schools.
- Specification of funding to hire Community Health Promotion Specialists with expertise in community health promotion to work with schools and communities.
- Establishment of a statewide Child Health Advisory Committee (CHAC) to recommend additional physical activity and nutrition standards for public schools.
- Disclosure of schools' contracts with food and beverage companies.
- Establishment of school nutrition and physical activity advisory committees made up of parents, teachers, and local community leaders.

Act 663 of 2005 (Acute Stroke Care Task Force for Arkansas)

This Task Force is charged with coordinating statewide efforts to combat the debilitating effects of strokes on Arkansans, to improve healthcare for stroke victims, and for other purposes. Funding was secured to implement a voluntary statewide stroke registry and other programs deemed appropriate for stroke issues across Arkansas.

Act 724 of 2005 (An Act to Provide Incentives for the Improvement of State Employee Health)

The Arkansas Healthy Employee Lifestyle Program (AHELP) grew out of the Healthy Arkansas Initiative. Act 724 authorizes leave incentives (up to three days per 52 weeks) for state employees who participate in AHELP and earn target numbers of points for engaging in healthy behaviors, including eating fruits and vegetables, engaging in regular physical activity, obtaining age-appropriate health screenings, and avoiding or quitting the use of all tobacco

products. Act 724 also requires state agencies, when practicable, to identify and maintain areas for walking exercise. The AHELP intervention includes four main components: participant enrollment through the Health Risk Assessment (HRA) process, web-based monitoring/tracking, employee education and support, and incentive awards.

Act 8 of 2006 (The Arkansas Clean Indoor Air Act of 2006)

Act 8 is designed to protect employees and the public from secondhand smoke. Act 8 of 2006 restricts smoking in the workplace but allows some exemptions.

Act 13 of 2006 (The Arkansas Protection from Secondhand Smoke for Children Act of 2006)

Act 13 bans smoking in all motor vehicles carrying a child less than six years of age and weighing less than 60 pounds. The child should also be restrained by a child passenger safety seat properly secured in accordance to law.

Act 201 of 2006

Act 201 amends the law requiring public schools to report the BMI of students by providing that appropriate protocols for assessments be developed and that community health nurses assist schools with administering BMI screenings according to the protocols. Screenings are required biannually for kindergarten through 10th grade. Parents may opt out of the screenings for their children.

Act 317 of 2007 (An Act to Increase Academic Instruction Time in Public Schools and to Limit Physical Activity Requirements for Public School Students)

Act 317 of 2007 amends the physical education and physical activity requirements for public school students. This act provides for 60 minutes of physical education weekly and 90 minutes of physical activity weekly for kindergarten through fifth grade only. There are no requirements for physical activity in 6th-12th grades.

Act 719 of 2007 (To Change the Membership of the Child Health Advisory Committee and to Amend the Powers and Duties of the Child Health Advisory Committee [CHAC])

Act 719 of 2007 expands CHAC's role in Coordinated School Health and adds additional members to the committee. CHAC will make recommendations concerning the implementation of the Arkansas Coordinated School Health Program, expansion beyond physical activity and nutritional standards.

Act 1598 of 2007 (The Arkansas Automatic External Defibrillator Act of 2007)

Act 1598 establishes that the State Board of Education shall promulgate rules to require that each school have an automated external defibrillator if funds are available.

Act 180 of 2009 (To Increase the Tax on Cigarettes and Certain Tobacco Products and to Authorize the Department of Finance and Administration to Pay the Commission to the Stamp Deputies for Certain Cigarette Taxes)

Act 180 raises the tax on a pack of cigarettes by 56 cents ($1.15 total tax/pack) and increases the tax on smokeless tobacco products. Funds collected will be used to fund a statewide trauma system.

Act 496 of 2009 (An Act to Create "The Anthony Hobbs III Act" and to Create School-Based Automated External Defibrillator and Cardiopulmonary Resuscitation Programs)

Act 496 of 2009 establishes that every Arkansas public and charter school campus have an automated external defibrillator (AED) and school personnel trained in its use.

State-Level Opportunities and Challenges

Arkansas's Smoke-free Policy

Passed in 2006, the current smoke-free policy does not cover all workers; therefore, the policy is not considered to be a comprehensive smoking law. As a result, steps are being taken to remove many of the policy's current exemptions to further protect Arkansas's workforce. Health advocates will continue urging Arkansas's legislature to add more restrictive measurements to current laws to move the state forward in protecting all workers from secondhand smoke.

Physical Education

The current level of physical activity/physical education in Arkansas is:

- K-6th grade – 90 minutes/week of physical activity;
- K-8th grade – 60 minutes/week of physical education;
- High school – one semester of physical education is required in high school to graduate.

The national recommendation is for 150 minutes per week of physical education for students in elementary grades and for 225 minutes per week for junior and senior high school students. The Arkansas CHAC continues to move this forward when the opportunity arises. Work is focused on how to incorporate physical activity and education into the daily activities of all school children across Arkansas.

For more detailed information on legislation in Arkansas that impacts cardiovascular health, please refer to http://www.healthy.arkansas.gov/programsServices/chronicDisease/HeartDiseaseandStrokePrevention/Pages/default.aspx or http://www.arkleg.state.ar.us/.

SECTION VIII

Goals and Objectives in the 2011-2015 State Plan

Section VIII: Goals and Objectives in the 2011-2015 State Plan

In 2010, the Arkansas Heart Disease and Stroke Prevention (HDSP) Section brought together a task force of partners representing various state agencies, local and federal governments, healthcare agencies, quality control and other professional associations, academia, healthcare insurance carriers, pharmaceutical companies, and priority population groups. The Arkansas HDSP Task Force was charged with helping to develop the state plan for heart disease and stroke. These partners will also be instrumental in carrying out the strategies throughout the next five years in order to achieve the state goals and objectives.

In November 2009, the HDSP Task Force convened to outline a roadmap for constructing Arkansas's 2011-2015 Heart Disease and Stroke Prevention Plan. Five workgroups were established and workgroup chairs appointed. The five workgroups consisted of

1. Preventing and Reducing Risk Factors: Adults
2. Preventing and Reducing Risk Factors: Youth
3. Rehabilitation/Long-term Care
4. Addressing Asymptomatic (Silent) and/or Clinical Disease
5. Advocacy/Policy

These workgroups met throughout 2010 to develop goals, objectives, and strategies. In their deliberations, each workgroup utilized national resources, Healthy People (HP) 2020, other state Heart Disease and Stroke Prevention Program plans, as well as Arkansas state plans relating to chronic diseases and obesity. Also, the relevant data on heart disease and stroke mortality, hospitalization, and risk factors among different groups in Arkansas have been used to identify priority populations.

The Arkansas HDSP Task Force utilized the socio-ecological model in developing a multi-tiered approach. While it is up to the individual to maintain healthy behaviors, one's social and physical environments, such as the community's norms, values, regulations, policies, and physical structures, also contribute to a healthy lifestyle. This model takes into consideration that the environment affects one's health status and how public policy efforts could impact both social and physical environments. For instance, neighborhoods with accessibility to sidewalks will provide greater opportunities for individuals to engage in physical activity. As behavior change barriers are removed, success increases. Furthermore, for healthy behaviors to spread throughout the population, efforts must exist in each of these levels: individual, interpersonal, community, organizational, and public policy.

The Arkansas HDSP Task Force developed six goals to reduce heart disease and stroke in Arkansas and to improve overall cardiovascular health. In this plan, each goal area has objectives that are SMART – specific, measureable, achievable, realistic, and time-bound. For the most part, objectives are measureable using existing surveillance data. Some objectives relating to improving system changes and other processes that support prevention and/or treatment of cardiovascular disease (CVD) are in the initial phases of being developed and therefore have indicators

for measuring success that are yet to be determined. The HDSP Task Force worked diligently to develop objectives and strategies emphasizing interventions that address the population as a whole, with special attention given to priority populations where disparities are known to exist. Disparity objectives are included for each of the six goals addressed in the plan. Goals, objectives, and strategies are from evidence-based research. The plan will assist policymakers, public health personnel, healthcare providers, schools, communities, and voluntary organizations in developing coordinated approaches for CVD prevention.

While the Arkansas Department of Health HDSP Section is the convener of this plan, publishing this work plan alone will not assure its success. Over the next five years Arkansas will see progress through the coordinated efforts of partners collaborating to reduce CVD and stroke in the state. If you or your organization would like to join efforts in implementing our state's plan, please contact the Arkansas Department of Health, Heart Disease and Stroke Prevention Section, at 501-661-2627, or visit http://www.healthy.arkansas.gov/programsServices/chronicDisease/HeartDiseaseandStrokePrevention/Pages/default.aspx.

In using this plan, Arkansas stakeholders, organizations, and individuals should be able to identify where their efforts fit within this plan and determine how their vision and mission play a role. Partners interested in utilizing this plan may conduct action planning around the implementation of one or more strategies. When these strategies are completed, short- and long-term objectives will be impacted. The complete work plan with goals, SMART objectives containing target levels and timelines, strategies, key partners, and connected Healthy People 2020 objectives may be found in Appendix VI. It is important to note, targets for disparity objectives may vary in some instances from the target of the overall objective.

Arkansas Long-term Goal

Reduce Deaths from Heart Disease and Stroke and
Improve Overall Cardiovascular Health among Arkansans.

Goal 1:

Increase healthy behaviors among Arkansas youth.

Objectives

G1-O1: Achieve two of the four following healthy behavior objectives.

a) Nutrition. (Developmental) Increase the percentage of Arkansas youth (grades 6th-12th) who maintain healthy eating.

b) Physical Activity. Increase the percentage of Arkansas youth (grades 9th-12th) who achieve 60 minutes of moderate or vigorous activity every day.

c) BMI. Increase the percentage of youth (grades K-10th) whose BMI fall within the 5th to 85th percentile on the CDC BMI-for-age growth charts for boys and girls.

d) Tobacco. Increase the percentage of Arkansas youth (grades 6th-12th) who have never tried cigarette smoking.

Disparity Objectives

G1-O2: Decrease disparity by achieving two of the four following objectives:

a) Physical Activity. Increase the percentage of each race/ethnic high school student group that is physically active for at least 60 minutes every day.

b) Television Screen Time. Decrease the percentage of each race/ethnic high school student group that watches television for three or more hours per day on an average school day.

c) Video or Computer Game Time. Decrease the percentage of each race/ethnic high school student group that plays video or computer games for three or more hours per day on an average school day.

d) Tobacco Use. Increase the percentage of each race/ethnic youth group (grades 6-12) that has never smoked cigarettes.

Goal 2:

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Objectives

G2-O1: Maintain the percentage of youth who have been screened in Arkansas public schools according to national guidelines for overweight and obesity.

G2-O2: (Developmental) Encourage medical providers to identify, counsel, and/or refer youth who are at risk of CVD because of being overweight/obese or because of family history.

G2-O3: (Developmental) Increase the percentage of diabetic Arkansas youth who:

a) Exercise at recommended levels,

b) Eat healthy, and

c) Are tobacco-free.

Disparity Objective

G2-O4: (Developmental) Decrease disparity by expanding diabetes self-management education opportunities to youth who live in geographic areas with low access to medical care or belong to an at-risk population that lacks access to adequate self-management education resources.

Goal 3:

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Objectives

G3-O1: Improve identification and treatment of major heart disease and stroke risk factors (smoking, dyslipidemia, hypertension, diabetes, obesity, and atrial fibrillation) among Arkansas adults. Achieve seven of the 13 following objectives:

a) Smoking. Increase the percentage of adult smokers who have been advised to stop smoking.

b) Smoking. Increase the percentage of adult smokers who are assisted to quit smoking using a proven cessation method.

c) Dyslipidemia. Increase the percentage of adults who have been screened within the recommended timeframe for dyslipidemia.

d) Dyslipidemia. Increase the percentage of CVD patients with LDL cholesterol <100 mg/dL.

Goal 3:
Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Objectives continued

e) Hypertension. (Developmental) Increase the percentage of Arkansans who have been screened within the recommended timeframe for hypertension and who are treated for abnormal levels.

f) Hypertension. Decrease the prevalence of hypertension in Arkansas adults.

g) Hypertension. Increase the percentage of adults with hypertension who have achieved blood pressure control.

h) Diabetes. Increase the percentage of adults with diabetes who achieve healthy behaviors (exercise at recommended levels, eat a healthy diet, and do not smoke).

i) Obesity. Reduce the percentage of adult Arkansans who are: 1) obese (BMI ≥30) and 2) overweight or obese (BMI ≥25).

j) Obesity. Increase the percentage of obese/overweight adult Arkansans who are taking actions that should contribute to a healthy weight.

k) Atrial Fibrillation. (Developmental) Increase the use of accredited national guidelines by hospitals for the detection and treatment of atrial fibrillation.

l) Aspirin. Increase the use of aspirin or other anti-thrombotic agent for the treatment of heart disease and stroke among CVD patients in accordance with accredited national guidelines.

m) Arkansas Chronic Illness Collaborative. Increase the number of new clinics participating in the Arkansas Chronic Illness Collaborative (ACIC) to improve systems of care for cardiovascular disease and diabetes.

Disparity Objective

G3-O2: Decrease disparity by improving healthy behaviors and decreasing adverse risk factors. (Percentage of Arkansas adults who have three or more cardiovascular disease risk factors - diabetes, high blood pressure, high cholesterol, current smoking, overweight/obese, physical inactivity, and inadequate intake of fruits and vegetables.)

Goal 4:
Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Objectives

G4-O1: Improve emergency treatment of heart attacks and stroke. Achieve four of the seven following objectives:

a) Increase the percentage of adults who correctly recognize the common signs and symptoms of a heart attack.

b) Increase the percentage of adults who correctly recognize the common signs and symptoms of a stroke.

c) Increase the percentage of adults who would call 911 as a first response to a heart attack or stroke.

d) Increase the percentage of ambulance runs for a) heart attack and b) stroke that were arranged through a 911 contact.

e) (Developmental) Increase the percentage of medical providers who use appropriate guidelines to treat acute stroke events.

f) Decrease the percentage of adult patients hospitalized for a) heart attacks and b) stroke and die within one month of hospitalization.

g) Decrease the percentage of out-of-hospital deaths for a) heart attack and b) stroke.

G4-O2: (Developmental) Increase the percentage of medical providers who use appropriate guidelines for long-term treatment of heart disease and stroke.

G4-O3: Increase the number of hospitals participating in the stroke registry.

Disparity Objective

G4-O4: Decrease disparity in knowledge regarding risk factors for the common signs and symptoms and appropriate action for a) heart attack and b) stroke.

Goal 5:
Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Objectives

G5-O1: (Developmental - heart failure) Increase the percentage of patients who undergo cardiac rehabilitation after hospitalization for a) heart attack, b) stroke, and c) heart failure.

G5-O2: Increase the percentage of patients with cardiovascular disease in need of long-term care who are discharged from the hospital with in-home care.

G5-O3: (Developmental) Develop statewide healthcare professional standards of care recommendations for care transitions.

Disparity Objective

G5-O4: Decrease race/ethnic and gender disparity in cardiac rehabilitation.

Goal 6:
Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

Objectives

G6-O1: Improve local-level environments, policies, and programs that encourage/support healthy behaviors and reduce risk factors. Achieve three of the four following objectives:

a) Nutrition. (Developmental) Develop food procurement recommendations for communities and worksites.

b) Physical Activity. Increase the number of Arkansas public schools that have partnerships/joint use agreements with communities to promote community access to public school facilities and playgrounds outside of regular school hours. (See G1-O1-S2.3)

c) BMI. Continue to provide BMI education targeting all parents through their child's BMI report. (Currently, BMI report letters go out to parents discussing risk factors and behaviors.)

d) Tobacco. Increase the number of counties/cities that have comprehensive smoke-free air laws.

Goal 6:
Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

Objectives continued

G6-O2: Improve state-level environments, policies, and programs that encourage/support healthy behavior, reduce risk factors, and provide funding. Achieve four of the seven following objectives:

a) Nutrition. (Developmental) Develop food procurement guidelines for state agencies.

b) Physical Activity. Maintain or increase physical activity levels in all grade levels through monitoring and public health policy advocacy.

c) BMI. Maintain and/or add health policies to improve BMI monitoring and education in all grade levels through advocacy.

d) Tobacco. Remove all exemptions in Act 8 of 2006, resulting in a comprehensive 100% smoke-free workplace law.

e) Tobacco. Increase the age limit for preventing smoking in cars when children and adolescents are present (Act 811 of 2011). (See G1-O1-S4)

f) Funding. (Developmental) Monitor and advocate for Medicare/Medicaid reimbursement for the purpose of improving tobacco cessation and hypertension compliance.

g) Funding. Continue to secure state funding for the stroke registry.

Disparity Objective

G6-O3: (Developmental) Decrease health disparity issues among minority populations by developing a health education heart disease and stroke initiative targeting minority leaders/advocates. Potential initiatives could include increasing representation on the HDSP Task Force from groups such as Arkansas Legislative Black Caucus, LULAC, Minority Health Commission, and AARP.

APPENDICES

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Appendix II: Definitions, Terminology and Data Sources

Definitions

International Classification of Diseases (ICD) Codes:

- Cardiovascular Disease includes ICD10 codes I00-I99
- Heart Disease includes ICD10 codes I00-09, I11, I13, I20-I51
- Coronary Heart Disease includes ICD10 codes I20-I25
- Stroke (Cerebrovascular Disease) includes ICD10 codes I60-I69

The following chart contains definitions for four **Healthy Behaviors.** These definitions are taken directly from the American Heart Association's (AHA) 2010 recommendations as reported in Circulation 2010;121:586-613 (http://circ.ahajournals.org). Arkansas does not have information available for all AHA-defined healthy behaviors. Therefore, healthy behavior definitions and data sources that are available for Arkansas are also indicated in the following chart.

Healthy Behavior Definitions

Youth		Adult	
American Heart Association Healthy Behavior Definitions	**Arkansas CVD Workplan Healthy Behavior Definitions, Data Source & Year**	**American Heart Association Healthy Behavior Definitions**	**Arkansas CVD Workplan Healthy Behavior Definitions, Data Source & Year**
Nutrition (additional terms found in the plan may include: favorable diet, healthy eating, healthy diet)			
A diet that is appropriate in energy balance, pursuing an overall dietary pattern that is consistent with a DASH (Dietary Approaches to Stop Hypertension) type eating plan, including but not limited to: a) Fruits and vegetables: 4.5 cups/day b) Fish: two 3.5-oz servings/ week (preferably oily fish) c) Fiber-rich whole grains (1.1 g of fiber per 10 g of carbohydrate): three 1-oz-equivalent servings/day d) Sodium: 1500 mg/day e) Sugar-sweetened beverages: 450 kcal (36oz)/week. Note: The DASH diet in youth varies with age, gender, and physical activity level. Refer to the Dietary Guidelines for Americans, 2010 http://www.cnpp.usda.gov/DGAs2010-PolicyDocument.htm for more information.	a) Fruits and vegetables: Consumption of F/V >5 times in last 7 days among youth grades 6th-12th b) Sugar-sweetened beverages: among youth grades 6th-12th who drank a can, bottle, or glass of soda or pop at least 1x/day during the last 7 days. Data Source: *YRBS, 2009*	A diet that is appropriate in energy balance, pursuing an overall dietary pattern that is consistent with a DASH (Dietary Approaches to Stop Hypertension) type eating plan, including but not limited to: a) Fruits and vegetables: 4.5 cups/day b) Fish: two 3.5-oz servings/ week (preferably oily fish) c) Fiber-rich whole grains (1.1 g of fiber per 10 g of carbohydrate): three 1-oz-equivalent servings/day d) Sodium: 1500 mg/day e) Sugar-sweetened beverages: 450 kcal (36oz)/week	a) Fruits and vegetables: Consumption of F/V >5 times/day among adults ages 18 and older b) Sugar-sweetened beverages: N/A Data Source: *BRFSS, 2009*
Physical Activity			
>60 min of moderate or vigorous activity every day for youth 12-19 years old	Physically active at least 60 minutes/day on 7 days among middle school (grades 6th-8th) and high school students (grades 9th-12th) Data Source: *YRBS, 2009*	>150 minutes/week of moderate intensity or >75 minutes/week of vigorous intensity or combination among adults >20 years of age	>30 minutes of moderate physical activity >5 days/week or vigorous physical activity for >20 minutes >3 days/week among adults ages 18 and older Data Source: *BRFSS, 2009*

Healthy Behavior Definitions			
Youth		Adult	
American Heart Association Healthy Behavior Definitions	**Arkansas CVD Workplan Healthy Behavior Definitions, Data Source & Year**	**American Heart Association Healthy Behavior Definitions**	**Arkansas CVD Workplan Healthy Behavior Definitions, Data Source & Year**
Body Mass Index (BMI)			
>85th percentile for children 2-19 years of age	Healthy weight among children and youth in grades K, 2, 4, 6, 8, and 10 Data Source: *ACHI School BMI, 2008-2009 school year*	Neither overweight nor obese (>25.0 kg/m2) among adults >20 years of age	Neither overweight nor obese (>25.0 kg/m2) Data Source: *BRFSS, 2009*
Tobacco-Free			
Never tried; never smoked whole cigarette among children 12-19 years of age.	Never tried cigarette smoking Data Source: *Arkansas Youth Tobacco Survey (YTS), 2010*	Never or quit >12 months ago among adults >20 years of age	Never smoked more than 100 cigarettes or quit more than 12 months ago among adults >20 years old. Data Source: *BRFSS 2010*

Terminology

Age adjusted means the rates are adjusted to the United States 2000 standard population.

Body Mass Index (BMI) is a number calculated from a person's weight (in kg) and height (in m^2).

Disparities include those such as education, income status, mental health status, race, ethnicity, geographic location, disability, and including, but not limited to, sexual orientation.

Dyslipidemia refers to a condition marked by abnormal concentrations of lipids or lipoproteins in the blood.

Obesity in adults indicates a body mass index >30.

Overweight in children indicates ≥85th percentile for age and sex.

Data Sources

- *CDC Wonder* indicates the data was from the Centers for Disease Control and Prevention (CDC). The CDC Wonder website is http://wonder.cdc.gov/.
- The *Behavioral Risk Factor Surveillance System (BRFSS)* is a standardized, random telephone health survey conducted by each of the 50 states, Washington, D.C., and three United States territories under the guidance of the CDC. BRFSS information may be obtained by visiting http://www.cdc.gov/brfss/. The Arkansas Center for Health Statistics has been conducting a monthly BRFSS survey continuously since 1993 and currently completes more than 400 telephone interviews per month. The Arkansas BRFSS website is http://www.healthy.arkansas.gov/programsServices/healthStatistics/Brfss/Pages/default.aspx.
- The *Youth Risk Behavior Surveillance System (YRBSS)* monitors priority health-risk behaviors and the prevalence of obesity and asthma among adolescents. The YRBSS includes a national school-based survey conducted by the CDC and state, territorial, tribal, and district surveys conducted by state, territorial, and local education and health agencies and tribal governments. The YRBSS website is http://www.cdc.gov/HealthyYouth/yrbs/index.htm. In Arkansas, the YRBSS is a standardized, pencil and paper, state-wide health survey conducted in a sample of Arkansas schools every two years by the Arkansas Department of Education. The Arkansas YRBSS website is http://www.arkansascsh.org/track-the-results/youth-risk-behavior-survey-yrbs.php.
- The *Arkansas Youth Tobacco Survey (YTS)* is a standardized, pencil and paper, statewide survey conducted in a sample of Arkansas schools every two years by the Arkansas Department of Health. The YTS is used to monitor and measure outcomes related to the use of cigarettes and other tobacco products among 6th-12th graders in Arkansas. It is similar to the YRBSS survey but uses a questionnaire developed by the CDC Office on Smoking and Health. Information on the YTS may be found by visiting http://www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/tobaccoSurveys.aspx.
- The *Arkansas Adult Tobacco Survey (ATS)* is a standardized, random telephone statewide health survey collected using the same procedures and guidance as the BRFSS survey. However, this survey asks questions developed by the CDC Office on Smoking and Health. Information on the ATS may be found by visiting http://www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/tobaccoSurveys.aspx.
- The *Arkansas Center for Health Improvement (ACHI) School BMI* is a statewide analysis of BMI data collected in public schools. This data monitors childhood obesity trends in Arkansas, and weight classification percentages by gender, grade, and ethnicity. The ACHI website is http://www.achi.net/index.asp.

- *Arkansas Cardiovascular Health Examination Survey (ARCHES)* looks at risk factors for heart disease, stroke, diabetes, cancer and other chronic disease. Almost 1400 participants from all over the state were asked questions about their health and risks for certain chronic diseases. The following were measured: height, weight, waist size, and blood pressure. Blood and urine samples were tested, and participants received their results. Participants also completed a form about their diet. ARCHES is a project of the Arkansas Department of health with primary funding from the Centers for Disease Control and Prevention (CDC). For additional information visit the website at http://www.healthy.arkansas.gov/programsServices/chronicDisease/Initiatives/Pages/Arches.aspx.

National Expert Panels Referenced in this Report

- The *United States Preventive Services Task Force (USPSTF)* uses systematic reviews of evidence for benefits and risks. The USPSTF makes recommendations about preventive care services for patients who are asymptomatic for the targeted disease/condition. USPSTF publishes their recommendations in the form of Recommendation Statements. For this plan, USPSTF Expert Panels on the following topics were reviewed:
  a) Overweight and obesity;
  b) Hypertension;
  c) Smoking and tobacco use;
  d) Physical activity;
  e) Screening for lipid disorders in children;
  f) Nutrition.
- The USPSTF website is http://www.ahrq.gov/Clinic/uspstfix.htm.
- The purpose of *The Joint National Committee (JNC) on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure* is to provide an evidence-based approach to increase awareness, prevention, treatment, and control of hypertension for clinicians and other health professionals. The eighth report of the JNC is currently in development and expected to be released in the spring of 2012. Information on the JNC may be found at http://www.nhlbi.nih.gov/guidelines/hypertension/.
- The *Adult Treatment Panel (ATP) of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol* in Adults provides the evidence-based recommendations on cholesterol management. ATP IV is currently in development and expected to be released in the spring of 2012. Information on the ATP may be found at http://www.nhlbi.nih.gov/guidelines/cholesterol/atp4/index.htm.

Workplan Explanations and Definitions

Goals, objectives, and strategies are given numbers in this workplan. Goals are numbered G1, G2, G3, G4, G5, and G6, while the corresponding objectives (O) and strategies (S) follow this same pattern.

For the purpose of this plan, "youth" includes adolescents and children from kindergarten through 12th grade.

Note regarding Goal 1: Because some measures have recently been instituted on the federal level, these changes may have an impact on state level goals and objectives. For example, healthier nutrition in Arkansas youth may occur because federal legislation/systems changes have been instituted in the school lunch program to increase participation among eligible students in the free and reduced lunch program.

Note regarding Goal 6: Some objectives and/or strategies in Goal 6 focus only on the local or state level, while others may focus on both the local and state level. Therefore, the left column may indicate "local level," "state level" or "local and state level."

The 2011-2015 Arkansas Cardiovascular Health Plan supports the goals, objectives, and action steps outlined in the *Arkansas Strategic Plan to Prevent and Reduce Tobacco Use, 2009-2014.* This plan may be obtained by contacting the Arkansas Department of Health, Office of Tobacco Prevention and Cessation or visiting http://www.healthy.arkansas.gov/programsServices/tobaccoprevent/Documents/TPCPStrategicPlan.pdf.

The 2011-2015 Arkansas Cardiovascular Health Plan supports guidelines as defined and recommended by **Healthy People 2020.**

ABCS

The ABCS is an initiative from the Centers for Disease Control and Prevention. The ABCS recommendations concentrate on improving aspirin therapy, preventing and controlling high blood pressure and high cholesterol, reducing sodium intake, and preventing and reducing smoking.

Arkansas Chronic Illness Collaborative (ACIC)

The Arkansas Chronic Illness Collaborative (ACIC) is based on the National Health Disparities Collaborative. The National Health Disparities Collaborative uses systems approaches to improve quality of care and utilize evidence-based strategies including the Chronic Care Model, learning sessions, and a rapid improvement process. The model envisions communities having supportive resources and policies, which are linked to health systems organized to provide good chronic illness care. These health system components include:

- Self-management support (e.g., patients acquire the skills necessary to be active participants in managing their own care);
- Delivery system design (e.g., staffing, appointments, etc., are organized to support quality care);
- Decision support (i.e., evidence-based guidelines are integrated into practice); and
- Clinical information systems (i.e., patient care is proactively managed using computerized systems that include a patient database, a reminder system for implementing guidelines, and provider feedback on compliance with guidelines).

The ACIC is a forum for clinic healthcare teams that commit to three two-day learning sessions and a Congress over a 13-month period of training in the delivery of care to their patients with diabetes and cardiovascular disease. For more information, please contact the Arkansas

Department of Health, Heart Disease and Stroke Prevention Program at 501-661-2627.

Arkansas Healthy Employee Lifestyle Program (AHELP)

The Arkansas Healthy Employee Lifestyle Program (AHELP) grew out of the Healthy Arkansas Initiative. The Arkansas Department of Health and the Department of Human Services created a worksite wellness committee that recommended an incentive-based intervention. The committee surveyed state employees and learned that money, time off, and insurance premium reductions were the most highly rated incentives. In response to these findings, Act 724 (2005) was introduced and enacted, authorizing leave incentives (up to three days per 52 weeks) for state employees who participate in AHELP and earn target numbers of points for engaging in healthy behaviors, including eating fruits and vegetables, engaging in regular physical activity, obtaining age-appropriate health screenings, and avoiding or quitting the use of all tobacco products. Act 724 also requires state agencies, when practicable, to identify and maintain areas for walking exercise. The AHELP intervention includes four main components: Participant enrollment through the Health Risk Assessment (HRA) process; Web-based Monitoring/ Tracking; Employee Education and Support; and Incentive Awards. More information on the AHELP program may be obtained by contacting the Arkansas Department of Health, Lifestage Health Branch at 501-661-2227.

Aspirin in Preventing Cardiovascular Disease

In March 2009, the United States Preventive Services Task Force published the following recommendations for the use of aspirin in preventing cardiovascular disease. Their recommendations include:

1. Aspirin for men ages 45 to 79 years when the potential benefit due to a reduction in myocardial infarctions outweighs the potential harm due to an increase in gastrointestinal hemorrhage.
2. Aspirin for women ages 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.
3. Current evidence is insufficient to assess the balance of benefits and harms of aspirin for cardiovascular disease prevention in men and women 80 years or older.
4. Aspirin for stroke prevention in women younger than 55 years and for myocardial infarction prevention in men younger than 45 years is not recommended.

Chronic Care Model

The Chronic Care Model is a population-based model that relies on knowing that patients have the disease, ensuring that they receive evidence-based care, and actively aiding them in participating in their own care. The implementation of this comprehensive system leads to informed, activated patients and prepared, proactive practice teams, and produces improved outcomes.

National Salt Reduction Initiative (NSRI)

Led by the New York City Department of Health and Mental Hygiene, the National Salt Reduction Initiative (NSRI) is a coalition of cities, states, and health organizations working to help food manufacturers and restaurants voluntarily reduce the amount of salt in their

products. This public-private partnership has developed voluntary two- and four-year targets for the average salt levels in 62 categories of packaged food and 25 categories of restaurant food. The goal of the initiative is to cut the salt in packaged and restaurant foods by 25% over five years - an achievement that would reduce the nation's salt intake by 20% and prevent many thousands of premature deaths. For a list of companies that have already signed on to the commitment or more information about the initiative, visit http://www.nyc.gov/html/doh/html/cardio/cardio-salt-initiative.shtml.

STAR-Health Initiative

The STAR-Health Initiative is a pilot initiative to explore fresh approaches to health problems in three rural southeast Arkansas counties. STAR-Health (Southeast Targeted Area Resources for Health) includes Chicot, Desha, and Lincoln Counties. The initiative's aim is to utilize community health workers and AmeriCorps workers as "helping hands" in garnering Arkansas Department of Health resources and using them to serve people in the most need for public services. This pilot initiative includes many partners from other state agencies, education, human services, economic development, and workforce development, as well as key experts within the state's universities who have joined this consortium to target family, health, and personal needs in these three counties. For more information on STAR-Health, please contact the Arkansas Department of Health, Hometown Health Initiative.

Telehomecare Pilot Project

The purpose of the Telehomecare Pilot Project is to evaluate the use of the telehomecare model to improve the health and quality of care of Medicaid patients residing in Arkansas who have chronic diseases, with the specific intent of reducing avoidable hospitalizations. Project funding will be through use of American Recovery and Reinvestment Act of 2009 state grant appropriations.

Targeted Patient Population:

- Medicaid patients (primary payer source) with a diagnosis of heart failure, chronic obstructive pulmonary disease, or diabetes who have been hospitalized for disease-related complications in the year prior to project initiation.
- Patients will meet additional patient participation criteria to ensure the most vulnerable populations are served. These criteria were mutually defined by the HomeCare Association of Arkansas and the Arkansas Medicaid program.

Care Providers:

- Eighteen Arkansas home health agencies currently using remote patient monitoring, and who meet project participation criteria as defined by the HomeCare Association of Arkansas, will have the opportunity to participate. These criteria specify staff competency and certification requirements, monitoring and equipment use standards, and outcome reporting requirements.

Service Detail:

- The patient's care and services will be ordered by his or her primary care physician.
- Home visits will be conducted by a home health chronic care certified nurse case manager for patient assessment, evaluation, care planning, health coaching, and patient education in disease self-management.

- Care may include communication with patient physician regarding early warning signs or the need for medication or other order changes, and care coordination with other patient care providers.
- Placement of a home monitor for the measurement and transmission of patient physiological data (e.g., heart rate, blood pressure, weight, blood glucose level).
- Nurse assessment of physiological data and intervention as needed.

Design and Length of Pilot:

- Patients will be participating for a period of one year. The total length of the project will be two years from start of program to data analysis. A pre-post design will be utilized with the patient serving as his or her own control for baseline data.

Outcome Measures:

- A reduction in hospitalization rates from year prior as compared to participating year.
- A reduction in emergency room visits from year prior as compared to participating year.
- Improvement in self-management support skills as demonstrated by improvement in physiological data from program participation entry to exit.

More information on the Telehomecare Pilot Project may be obtained by contacting the HomeCare Association of Arkansas at 501-376-2273.

Target Setting Methodology

Several methods were utilized in determining targets for this state plan. The most common method used included a three- to five-percentage point increase/decrease. Targets were developed by each of the work groups, as well as content experts from partnering organizations. Additional methods utilized were based on data trends, 10% increase/decrease, as well as targets from other chronic disease state plans.

Appendix III: List of Acronyms

AARP	American Association of Retired Persons
ABCBS	Arkansas Blue Cross Blue Shield
ABCS	Aspirin, Blood Pressure, Cholesterol, Smoking
ACHI	Arkansas Center for Health Improvement
ACHRI	Arkansas Children's Hospital Research Institute
ACIC	Arkansas Chronic Illness Collaborative
ADA	Arkansas Dietetic Association
ADE	Arkansas Department of Education
ADFA	Arkansas Department of Finance and Administration
ADH	Arkansas Department of Health
AFMC	Arkansas Foundation for Medical Care
AHELP	Arkansas Healthy Employees Lifestyle Program
AHTD	Arkansas Highway and Transportation Department
AMDPA	Arkansas Medical, Dental and Pharmaceutical Association
ARCHES	Arkansas Cardiovascular Health Examination Survey
ARCOP	Arkansas Coalition for Obesity Prevention
ARNIRI Group	Arkansas Nutrition Intervention Research Initiative
ASCTF	(Arkansas) Acute Stroke Care Task Force
ASHPCA	Arkansas State Hospice and Palliative Care Association
ATP	Adult Treatment Panel (National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults
ATS	Arkansas Adult Tobacco Survey
AWC	Arkansas Wellness Coalition
BMI	Body Mass Index
BRFSS	Behavior Risk Factor Surveillance System
CAD	Coronary Artery Disease
CDC	Centers for Disease Control and Prevention
CHAC	Child Health Advisory Committee
CHD	Coronary Heart Disease
CHF	Congestive Heart Failure
CME	Continuing Medical Education
CPR/AED	Cardio Pulmonary Resuscitation/Automatic External Defibrillator

CSHP	Coordinated School Health Program (Arkansas Department of Education)
CVD	Cardiovascular Disease
DASH	Dietary Approaches to Stop Hypertension
DHHS	(Arkansas) Department of Health and Human Services
DPCP	Diabetes Prevention and Control Program (Arkansas Department of Health)
EMS	Emergency Medical Services
HDSP	Heart Disease and Stroke Prevention
HHI	Hometown Health Improvement Program (Arkansas Department of Health)
ICD	International Classification of Diseases
JNC	The Joint National Committee (JNC) on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure
LULAC	League of United Latin American Citizens
NCEP	National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults
NHANES	National Health and Nutrition Examination Survey
PAD	Peripheral Artery Disease
PPACA	Patient Protection and Affordable Healthcare Act
SAVES	(Arkansas) Stroke Assistance Through Virtual Emergency Support
SCOPE	School Nurse Childhood Obesity Prevention Education (National Association of School Nurses)
SNAP	Supplemental Nutrition Assistance Program (former Food Stamp Program)
SOS	Stamp Out Smoking
STEMI	ST-Segment Elevation Myocardial Infarction
TCYB	Tobacco Control Youth Board
TIA	Transient Ischemic Attack
TPCP	Tobacco Prevention and Cessation Program (Arkansas Department of Health)
UACES	University of Arkansas Cooperative Extension Service
UAMS	University of Arkansas for Medical Sciences
UAMS-COPH	University of Arkansas for Medical Sciences, College of Public Health
UAMS-DFPM	University of Arkansas for Medical Sciences, Department of Family and Preventive Medicine, Office of Continuing Medical Education
UAPB	University of Arkansas at Pine Bluff
USPSTF	United States Preventive Services Task Force
WIC	Women, Infants and Children (Arkansas Department of Health)
YRBSS	Youth Risk Behavior Surveillance System
YTS	Youth Tobacco Survey

Appendix IV: Accomplishments Since 2004

In 2004, the Arkansas Department of Health's Cardiovascular Health Program published its first state plan titled *Small Steps, Great Strides to a Healthier Arkansas: A Comprehensive Plan to Reduce the Burden of Heart Disease and Stroke in Arkansas 2001-2010.* Since this first report, Arkansas has made significant steps in addressing heart disease and stroke in the state. Initiatives and accomplishments since 2004 include:

Arkansas Legislative Acts

Act 663 of 2005 (Acute Stroke Care Task Force for Arkansas)

The Arkansas Acute Stroke Care Task Force (ASCTF) was created by the Acute Stroke Care Act (Act 663 of 2005). The ASCTF consists of representative from 12 organizations within the state, appointed by the Director of the Arkansas Department of Health. The ASCTF is charged, among other things, with the task of coordinating statewide efforts to combat the debilitating effects of strokes on Arkansans, by making recommendations to the State Board of Health and pursuing public and private funding to achieve its goals. In 2010, the ASCTF received funding to implement a stroke registry in Arkansas to aid in improving the quality of care for stroke victims. The ASCTF also recognizes the importance of the prevention of stroke in the state, and the role that high blood pressure plays as a risk factor in the development of strokes.

Act 724 of 2005 (An Act to Provide Incentives for the Improvement of State Employee Health)

The Arkansas Healthy Employee Lifestyle Program (AHELP) grew out of the Healthy Arkansas Initiative. Act 724 authorizes leave incentives (up to three days per 52 weeks) for state employees who participate in AHELP and earn target numbers of points for engaging in healthy behaviors, including eating fruits and vegetables, engaging in regular physical activity, obtaining age-appropriate health screenings, and avoiding or quitting the use of all tobacco products. Act 724 also requires state agencies, when practicable, to identify and maintain areas for walking exercise. The AHELP intervention includes four main components: participant enrollment through the Health Risk Assessment (HRA) process; web-based monitoring/tracking; employee education and support; and incentive awards.

Act 8 of 2006 (The Arkansas Clean Indoor Air Act of 2006)

Act 8 prohibits smoking in worksites and in public places to protect employees and the public from secondhand smoke.

Act 13 of 2006 (The Arkansas Protection from Secondhand Smoke for Children Act of 2006)

Act 12 bans smoking in all motor vehicles carrying a child less than six years of age and weighing less than 60 pounds.

Act 201 of 2006

Act 201 amends the law requiring public schools to report the body mass index of students by providing that appropriate protocols for assessments be developed and that community health nurses assist schools with administering body mass index screenings according to the protocols.

Act 317 of 2007 (An Act to Increase Academic Instruction Time in Public Schools and to Limit Physical Activity Requirements for Public School Students)

Act 317 amends the physical education and physical activity requirements for public school students. Act 317 provides for 60 minutes of physical education weekly and 90 minutes of physical activity weekly for kindergarten through 5th grade only. There is no requirement for physical activity in 6th-12th grades.

Act 719 of 2007 (To Change the Membership of the Child Health Advisory Committee and to Amend the Powers and Duties of the Child Health Advisory Committee)

Expands the Arkansas Child Health Advisory Committee's role in Coordinated School Health and adds additional members to the committee.

Act 1598 of 2007 (The Arkansas Automatic External Defibrillator Act of 2007)

Act 1598 establishes that the State Board of Education shall promulgate rules to require that each school have an automated external defibrillator if funds are available.

Act 180 of 2009 (To Increase the Tax on Cigarettes and Certain Tobacco Products and to Authorize the Department of Finance and Administration to Pay the Commission to the Stamp Deputies for Certain Cigarette Taxes)

Act 180 raises the tax on a pack of cigarettes by 56 cents and increases the tax on smokeless tobacco products. Funds collected will be used to fund a statewide trauma system.

Act 496 of 2009 (An Act to Create "The Anthony Hobbs III Act" and to Create School-Based Automated External Defibrillator and Cardiopulmonary Resuscitation Programs)

Act 496 establishes that every Arkansas public and charter school campus has an automated external defibrillator and trained school personnel.

Act 197 of 2011 (An Act to Provide for Certain Water Systems to Maintain a Level of Fluoride to Prevent Tooth Decay)

A statewide fluoridation program that provides for certain water systems to maintain a level of fluoride to prevent tooth decay.

Act 640 of 2011 (An Act Concerning Minimum Training Standards for 911 Public Safety Communication Center Personnel)

A public safety agency, a public safety answering point, a dispatch center, or a 911 public safety communications center may provide training opportunities for 911 personnel through the Arkansas Commission on Law Enforcement Standards and Training and the Arkansas Law Enforcement Training Academy. The Arkansas Law Enforcement Training Academy shall develop training standards for dispatchers and instructors in consultation with the Association of Public-Safety Communications Officials.

Act 811 of 2011 (An Act to Raise the Age of Children for Whom Smoking is Prohibited in Motor Vehicles)

Act 811 of 2011 raises the age of children for whose presence smoking is prohibited in motor vehicles; provides that smoking is prohibited in any motor vehicle in which a child who is less than 14 years of age is a passenger.

Act 855 of 2011 (An Act to Require Health Benefit Plans to Provide Coverage for the Treatment of Morbid Obesity)

Effective January 1, 2012, this act requires state and public school employee health benefit plans to provide coverage for the diagnosis and treatment of morbid obesity. The coverage offered includes without limitation coverage for bariatric surgery.

Initiatives Impacting Arkansas

American Heart Association's Search Your Heart and Conozca Su Corazón Programs

From 2005-2010 the Heart Disease and Stroke Prevention Section partnered with the American Heart Association (AHA) to promote their Search Your Heart and the Conozca Su Corazón Program. This was a community-based educational program with tools designed to reach high-risk audiences. The program educated and raised awareness of the heart health disparities among African-American and Hispanic communities and provided them with insight on how to live a heart-healthy lifestyle. Train the Trainer workshops were available to churches, schools, or organizations interested in implementing the program.

Arkansas Chronic Illness Collaborative (ACIC)

From 2003-2011 the Arkansas Chronic Illness Collaborative (ACIC) has trained 100 clinic teams. The ACIC started as a partnership between the Heart Disease and Stroke Prevention and Diabetes Prevention and Control Sections at the Arkansas Department of Health. The ACIC provides a forum for clinic healthcare teams who commit to a 13-month period of training in the delivery of care to their patients with diabetes and cardiovascular disease. Using the Health Resources and Services Administration (HRSA) Planned Care Model, the healthcare teams learn to target a practice area for improvement, design a quality improvement project to move from a reactive system to a planned system, implement a patient care plan with the support of diabetes and cardiovascular specialists, and sustain and spread clinic projects for improvement to include other chronic care conditions addressed in their practice. The ACIC also prepares clinics to apply for Medical Home Certification. Scholarships to participate in the collaborative are available.

Arkansas Healthy Employee Lifestyle Program (AHELP)

The Adults in Worksite Section of the Lifestage Health Branch and the Heart Disease and Stroke Prevention Section of the Chronic Disease Branch at the Arkansas Department of Health work collaboratively to improve worksite wellness through AHELP. The Center of Excellence for Training and Research Translation at the University of North Carolina lists the AHELP program as an emerging intervention on their website. The program is designed to encourage employees to maintain and participate in healthy lifestyle behaviors. Since 2011, 16 state agencies are offering the AHELP web-based wellness program to 12,000 state employees. Approximately 5,305 employees have joined the program. Points are earned for activities completed weekly and incentives are given according to points earned.

Arkansas River Trail Medical Mile

In November 2006, the Arkansas River Trail Medical Mile became a national first-of-its kind public health education/outdoor linear museum project. The Medical Mile is a combination of a plaza, promenade, and three-dimensional mural wall that takes its users and visitors on a one-mile section of trail filled with health prevention information, including the warning signs and symptoms of a heart attack and stroke. This section of the trail will eventually connect to

a trail that runs 17 miles from downtown Little Rock to the Big Dam Bridge and Pinnacle State Park.

Arkansas Stroke Assistance through Virtual Emergency Support (SAVES)

Operational since November 2008, the Arkansas SAVES program provides rural hospitals with a high-tech video communications system so that when stroke patients come through the emergency room they can quickly and expediently receive appropriate care and a real-time consult from one of the state's board-certified vascular neurologists. Stroke neurologists are on call 24 hours a day. The purpose of the SAVES program is to 1) increase subspecialty access to Arkansas stroke patients, 2) impact stroke-related disability and mortality, and 3) enhance emergent stroke support by consulting on the administration of t-PA medication to eligible patients.

Arkansas Stroke Registry (ASR)

The Arkansas Department of Health's Heart Disease and Stroke Prevention Section received grant funding in 2009 from the Centers for Disease Control and Prevention (CDC), Division of Heart Disease and Stroke Prevention, and state funding in 2010 through the Arkansas Acute Stroke Care Task Force. The purpose was to develop and implement a statewide hospital-based stroke registry, in which information concerning emergency transport, clinical evaluation, diagnosis, and treatment of adult patients presenting to hospitals with an admitting diagnosis of stroke are prospectively entered into a database.

The mission of the Arkansas Stroke Registry (ASR) is to measure, track, and improve the quality of care for acute stroke patients; to decrease the rate of premature death and disability from acute stroke through secondary prevention; to increase public awareness of stroke treatment and prevention; and to reduce disparities in acute stroke care by providing underserved populations with better access to such care. The Heart Disease and Stroke Prevention Section is currently recruiting hospitals to participate in the newly developing registry.

Arkansas Wellness Coalition (AWC)

The Arkansas Wellness Coalition is a nonprofit voluntary organization composed of a diverse group of professionals working to improve quality of care. Since 2001, the AWC has annually distributed national guidelines, recognized clinical guidelines, and patient self-management tools to more than 3,000 healthcare providers.

Arkansas Cardiovascular Health Examination Survey (ARCHES)

In 2005, the CDC funded Arkansas, Kansas, and Washington to serve as models of state-level health examination surveys to inform and provide guidance to states in the development of hypertension and cholesterol control strategies. The purpose of this project was to collect data on levels of blood pressure and blood cholesterol and other relevant information. Data collected was used to provide information to guide the state in the development, implementation, and evaluation of cardiovascular health promotion and risk factor control strategies and to eliminate health disparities.

The Arkansas Coalition for Obesity Prevention (ArCOP)

The ArCOP membership includes representatives from a diverse group of organizations. Its mission is to improve the health of all Arkansas communities by increasing physical activity and healthy eating to reduce and prevent obesity. Its goal is to increase the percentage of Arkansans of all ages who have access to healthy and

affordable food and who engage in regular physical activity. The coalition is structured around six working teams: Access to Healthy Foods; Built Environment; Early Childhood and Schools; Healthcare; Worksite Wellness; and Social Marketing.

Since 2010, ArCOP has supported eighteen Growing Healthy Communities sites around the state to implement policy, systems, and environmental changes to ensure healthy living. The coalition serves as a resource and provides technical assistance to communities throughout the state. Over 30,000 individuals were directly reached through the Growing Healthy Communities project with an additional 535,488 people in 21 communities potentially impacted by environmental changes and at least 38 policies.

Chronic Disease Forum

The Arkansas Chronic Disease Forum is an "open" (no membership application required) and informally structured group of Arkansas organizations and individuals interested in combating chronic disease in the state. With the development of the 2004 Chronic Disease State Plan, *Changing the Culture of Health in Arkansas: Coordinated Approach to Health Promotion and Prevention of Chronic Diseases and Related Complication*, the first chronic disease forum was held in 2005. Since then, through annual meetings and growing participation, the forum has worked to increase awareness and collaboration around chronic disease issues in Arkansas. In October 2008, the forum became more structured with the formation of the Arkansas Chronic Disease Coordinating Council. Since then the Coordinating Council, consisting of program managers of the Arkansas Department of Health's chronic disease programs, chairs of the various chronic disease coalitions, and a number of other organizational representatives, have overseen the development of a mission statement, overarching goals, and objectives for the forum. In 2010, a series of Regional and State Chronic Disease Forum meetings took place across Arkansas. During the fifth forum in 2011, the Coordinating Council released the Healthy People 2020 Arkansas Framework for Action plan.

Arkansas Chronic Disease Framework for Action (2011)

The *Healthy People 2020: Arkansas's Chronic Disease Framework for Action* project was supported in part by a grant from the United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion, a grant from John Snow Inc., and by the Centers for Disease Control and Prevention through cooperative agreements that fund the chronic disease programs of the Arkansas Department of Health. This first version of Arkansas's Healthy People 2020 Chronic Disease Objectives was developed over a one-year period through an iterative process between the Arkansas Chronic Disease Coordinating Council, the Chronic Disease programs of the Arkansas Department of Health, and their coalitions and partners. The goal of this process was to develop a set of chronic disease objectives, with Arkansas baseline data and target goals, to be used to track progress towards Healthy People 2020 objectives in Arkansas. In this process, the collaboration of all entities involved was a key component. Program managers, epidemiologists, scientists, coalitions and their chairs, boards and advisory councils, and staff at the Arkansas Department of Health all contributed to identifying data sources and developing target goals. The six overarching goals of the Action plan are 1) Increase the percentage of Arkansans of all ages who engage in regular physical activity, 2) promote tobacco cessation among Arkansans of all

ages, 3) improve access to screening and health care services for all chronic diseases in rural and underserved areas, 4) educate and inform the public on health issues related to community partnerships, prevention, screening, treatment, outreach and control of chronic diseases, 5) develop and implement a legislative agenda to support the policy and fiscal needs of chronic disease activities, and 6) support the development of communities that promote life-long physical activity, healthy nutrition, and tobacco free environments.

Community Grants Initiative (2005-2009)

The Arkansas Department of Health's Cardiovascular Health Program issued its first community grant in 2005. The purpose was to provide funding to select counties to improve cardiovascular health and quality of life through the prevention, detection, and treatment of risk factors; early identification and treatment of heart attacks and strokes; and prevention of recurrent cardiovascular events. Program priorities included increasing control of high blood pressure; increasing control of high cholesterol; improving emergency response; increasing awareness of signs and symptoms of heart attacks and strokes and to call 911; improving quality of care, and eliminating disparities. In 2007, the Heart Disease and Stroke Prevention Section (formerly the Cardiovascular Health Program) issued a second Request for Application and in 2008 a third request. Applicants included any Arkansas public or private nonprofit organization or worksite with an employee base of 100-500 employees. Between 2005 and 2009, approximately $840,000 was provided to communities to improve the burden of heart disease and stroke statewide.

Cardiovascular Continuing Medical Education (CME) Updates

Since 2005, the Heart Disease and Stroke Prevention Section, Chronic Disease Branch, ADH has contracted with the University of Arkansas for Medical Sciences Department of Family and Preventive Medicine, Office of Continuing Medical Education (CME) to provide a series of evidence-based CME sessions annually. The year-long series is marketed to more than 8,000 healthcare providers for independent activities and more than 17,000 for activities imbedded in the Intensive Review Course (IRC) and Family Medicine Update (FMU) conferences. Topics are based on relevant needs assessments and offered statewide via live and interactive video programming (ITV). Approximately 6,682 healthcare providers have taken advantage of this educational opportunity.

Delta States Stroke Network

The Delta States Stroke Network (DSSN) was founded in 2004, with funding through the Centers for Disease Control and Prevention (CDC), and was a regional network of five states working collaboratively to increase stroke awareness, prevention, and quality of care. From 2007-2010, the Arkansas Department of Health had the primary role as the coordinating agency to facilitate projects, coordinate interventions, and support the network in achieving its goals. In November 2009, the state health officers of the states of Alabama, Arkansas, Louisiana, Mississippi, and Tennessee signed an Interstate Regional Consensus Statement on Stroke agreeing to collaborate to the extent possible and allowable within our resources and limitations to improve stroke outcomes. In 2010, the funding for the DSSN was discontinued but with other

resources these states are continuing to promote stroke interventions. All five states have since started tele-stroke interventions.

Emergency Medical Services Advanced Stroke Life Support (ASLS) Instructor Training

The Arkansas Department of Health's Heart Disease and Stroke Prevention Section partnered with the Emergency Management Services (EMS) and Trauma Section to bring the Advanced Stroke Life Support (ASLS) training course to more than 50 EMS instructors twice—once in April 2008 and again in October 2009. The ASLS curriculum is a hands-on, how-to stroke course for healthcare professionals and was developed at the Gordon Center for Research in Medical Education of the University of Miami, Miller School of Medicine. The program provided the trainers to teach the course, instructor certification, curriculum materials, and follow-up technical assistance for attendees who will teach other EMS personnel statewide. Continuing education units (CEU) were provided by the EMS/Trauma Section. The purpose of the training was to teach the importance of recognizing the signs and symptoms of a stroke; neurologic assessment and urgent care; documenting vital information; and providing other appropriate medical procedures and techniques to reduce death and disability due to strokes in Arkansas.

Hypertension Interim Study

In 2010, Hypertension in Arkansas, an interim study for the Public Health, Welfare, and Labor Committees of the Arkansas Senate and House of Representatives, was presented. High blood pressure is the most important risk factor for stroke. The purpose of the interim study was to urge the committee and the Arkansas Legislature to give serious consideration to investing in the prevention and control of hypertension; development of an ongoing hypertension surveillance system; removal of barriers to timely and economically accessible diagnosis, treatment, and medications for patients; and to develop policies aimed at reducing salt intake.

Hypertension Summit

In 2010, the Arkansas Department of Health's Heart Disease and Stroke Prevention Section sponsored the Arkansas Hypertension Summit, in Little Rock, Arkansas. The Hypertension Summit addressed the magnitude and scope of hypertension, nationally and in Arkansas; risk factors for hypertension at the population level; increased screening; improving clinical practice in hypertension management; and barriers to controlling hypertension.

Los Angeles (LA) Stroke Scale

In 2006, the Heart Disease and Stroke Prevention Section and the Emergency Management Services (EMS) and Trauma Section at the Arkansas Department of Health partnered to add a specific section for EMS licensed ambulance personnel to report strokes in the state's existing EMS pre-hospital data reports. The Los Angeles (LA) Stroke Scale was developed, and if a patient presents with signs and symptoms of a stroke, a drop-down box must be filled out capturing the appropriate data for a stroke. Data collected includes ambulance calls; ambulance response time; age; patient history; facial, grip, and arm weakness asymmetry; and blood glucose range.

Radio Media Campaign

The Arkansas Department of Health's Heart Disease and Stroke Prevention Section annually conducts a statewide heart and stroke Warning Signs and Symptoms and Know Your Numbers radio campaign to reach the largest number of the general public and African Americans in a community setting to increase their knowledge of heart attack and stroke warning signs and

symptoms and to call 911; and to know their blood pressure and cholesterol numbers. The campaign runs during February – National Heart Month; May – National Stroke Month and Hypertension Education Month, and September – American Cholesterol Education Month. "Don't Let Salt Shake Up Your Health" ads also run in the month of June.

Stanford Chronic Disease Self Management Program (SCDSMP) for Adults 50-65

Stanford's Chronic Disease Self Management Program (SCDSMP) has been developed with more than 20 years of federally funded grants from the National Institutes of Health, the United States Agency for Healthcare Research and Quality, and the Centers for Disease Control & Prevention. The Heart Disease and Stroke Prevention Section and the Arkansas Aging Initiative, an infrastructure of eight satellite Centers on Aging, partners to offer the SCDSMP to adults ages 50-65. The program includes classes for Arkansans with chronic diseases, specifically for individuals with heart disease, stroke, and its risk factors, such as high blood pressure, high cholesterol, and smoking.

STAR-Health

Southeast Targeted Area Resources for Health (STAR-Health) is a pilot initiative to explore fresh approaches to health problems in three rural Southeast Arkansas counties. STAR-Health includes Chicot, Desha, and Lincoln Counties. The initiative's aim is to utilize community health workers and AmeriCorps workers as "helping hands" in garnering ADH resources and using them to serve people in the most need for public services. This pilot initiative includes many partners from other state agencies, education, human services, economic development, and workforce development, as well as key experts within the state's universities who have joined this consortium to target family, health, and personal needs in these three counties.

Telehomecare Pilot Project

The purpose of the Telehomecare Pilot Project is to evaluate the use of the Telehomecare model to improve the health and quality of care of Medicaid patients residing in Arkansas who have chronic diseases, with the specific intent of reducing avoidable hospitalizations. Project funding is through the use of American Recovery and Reinvestment Act of 2009 state grant appropriations.

Appendix V: Arkansas HDSP Task Force Workgroup Members

PREVENTING AND REDUCING RISK FACTORS/ADULTS

Rebecca Krukowski, PhD Chair	University of Arkansas for Medical Sciences, Fay W. Boozman College of Public Health
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Leanne Lefler, PhD, RN	University of Arkansas for Medical Sciences, College of Nursing
Lewis Leslie	Arkansas Department of Health, Chronic Disease Branch, (Retired)
Rachel Luckett, MSCN	Arkansas Department of Health, Diabetes Prevention and Control Section
Vanessa Nehus, MA	University of Arkansas for Medical Sciences, Partners for Inclusive Communities
Todd Price, BS	CareLink
Rosemary Rodibaugh, PhD, RD, LD	University of Arkansas Division of Agriculture, Cooperative Extension Service
Arlene Rose	Arkansas Department of Health, Obesity Treatment
Brandy Sutphin, MPH, CPH	Arkansas Department of Health, Chronic Disease Epidemiology
Helen Weir, RN, BSN	Arkansas Department of Health, Adults in Worksites (Retired)

PREVENTING AND REDUCING RISK FACTORS/CHILDREN AND YOUTH

Bonnie J. Bradley, MPH, RD, LD Co-Chair	Arkansas Department of Health, Diabetes Prevention and Control Section
Margaret Harris, PhD, MS Co-Chair,	University of Arkansas Division of Agriculture, Cooperative Extension Service
Joyce Biddle, MPA	Arkansas Department of Health, Senior Epidemiologist
Mary Jane Cagle, RD, LD	Arkansas Department of Health, Women, Infants and Children
Angela Green, PhD, APN	Arkansas Children's Hospital University of Arkansas for Medical Sciences College of Nursing

ACUTE REHABILITATION AND LONG TERM CARE

Paula Suter, RN, MA Chair	Sutter VNA and Hospice
Carol Amerine, RDH, MSDH	Arkansas Department of Health, Oral Health
Glen Lusby, RN	Baptist Health Medical Center
Vanessa Nehus, MA	University of Arkansas for Medical Sciences, Partners for Inclusive Communities
Barbara Pauly, BA	Arkansas Department of Health, Grants Manager
LaVona Traywick, PhD, CFLE	University of Arkansas Division of Agriculture, Cooperative Extension Service

ADDRESSING ASYMPTOMATIC (SILENT) AND/OR CLINICAL DISEASE

Becky Fortenbury, RN, BSN CCM Manager Co-Chair	Health Improvement Programs Arkansas Blue Cross and Blue Shield
Randal Hundley, MD, FACC Co-Chair	Baptist Health
Bonnie J. Bradley, MPH, RD, LD	Arkansas Department of Health, Diabetes Prevention and Control Section
Pam Brown, BSN, CPHQ	Arkansas Foundation for Medical Care
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ADVOCACY AND POLICY

Barbara Kumpe Chair	American Heart Association and American Stroke Association
Allyson Cook	University of Arkansas for Medical Sciences, College of Medicine, Department of Family and Preventive Medicine, Continuing Medical Education Division
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WORKGROUP SUPPORT

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Appendix VI: Objectives and Strategies for Cardiovascular Health in Arkansas, 2011-2015

The US Healthy People 2020 and the *Healthy People 2020: Chronic Disease Framework for Action* objectives, national resources, other states' heart disease and stroke prevention program plans, as well as Arkansas state plans relating to chronic diseases and obesity, have been considered in the development of Arkansas's 2011-2015 Heart Disease and Stroke Prevention Plan. Also, the relevant data on heart disease and stroke mortality, hospitalization, and risk factors among different groups in Arkansas have been used to identify priority populations. For the most part, objectives are measureable using existing surveillance data. Some objectives relating to improving systems changes and other processes for preventing and treating cardiovascular disease are in the initial phases of being developed and therefore have indicators for measuring success that are yet to be determined. Objectives and strategies detailed below are from evidence-based research. Acronyms, definitions, and methods for setting 2015 targets may be found in Appendix II and III. It is important to note that targets for disparity objectives may vary in some instances from the target of the overall objective. Definitions and data sources for the four healthy behaviors used in this report may be found in Appendix II of *Cardiovascular Health: More Than Just Preventing Heart Disease and Stroke! A Comprehensive Plan for Cardiovascular Health in Arkansas, 2011-2015.*

Over the next five years Arkansas will see progress through the coordinated efforts of partners collaborating together to reduce heart disease and stroke in the state. If you, or your organization, would like to join efforts in implementing our state's plan, please contact the Arkansas Department of Health, Heart Disease and Stroke Prevention Section at 501-661-2627 or visit http://www.healthy.arkansas.gov/programsServices/chronicDisease/HeartDiseaseandStrokePrevention/Pages/default.aspx.

Arkansas Long-term Goal

Reduce Deaths from Heart Disease and Stroke and
Improve Overall Cardiovascular Health among Arkansans.

Overall Objective	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Decrease deaths from heart disease and stroke.	a) Heart Disease: 142.4 deaths per 100,000 b) Stroke: 54.5 deaths per 100,000 (Based on AR Healthy People 2020 goal for 5 years)	a) Heart Disease: 2007, Arkansas Health Statistics Branch, Rate: 149.9 deaths per 100,000 b) Stroke: 2007, Arkansas Health Statistics Branch, Rate: 57.3 deaths per 100,000		HDS-2,3

Goal 1:

Increase healthy behaviors among Arkansas youth.

Goal 2:

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Goal 3:

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Goal 4:

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Goal 5:

Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Goal 6:

Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Objectives				
G1-O1: Achieve 2 of the 4 following healthy behavior objectives.				
a) Nutrition. Increase the percentage of Arkansas youth (grades 6-12) who maintain healthy eating.	a) Nutrition: Increase fruit/ vegetable consumption to 18.9%; decrease soda/pop consumption to 29.5%.	a) Nutrition: Developmental- not currently measureable. Until other data is obtained, data on sodas, fruit, and vegetable intake will be used. 1) Ate fruits/ vegetables >5 times/day in last 7 days (2009, YRBS, 14.9%). 2) Drank a can, bottle or glass of soda or pop at least 1x/ day during last 7 days (2009, YRBS, 33.5%).		(Nutrition): NWS-14, 15, 15.1, 15.2, 16, 17, 17.1, 17.2, 17.3, 18, 19, 20
b) Physical Activity. Increase the percentage of Arkansas youth (grades 9-12) who achieve 60 minutes of moderate- or vigorous-intensity activity every day.	b) Physical Activity: 26.3%	b) Physical Activity: 2009, YRBS, 24.3%		(Physical Activity): PA-3, 3.1, 3.2, 3.3
c) BMI. Increase the percentage of youth (grades K-10th) whose BMI fall within the 5th to 85th percentile on the CDC BMI-for-age growth chart for boys and girls.	c) BMI: 66%	c) BMI: 2008-09 School Year, ACHI School BMI, 60.4%		(BMI): NWS-10, 10.1, 10.2, 10.3, 10.4, 11, 11.1, 11.2, 11.3, 11.4

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Objectives Continued				
d) Tobacco. Increase the percentage of Arkansas youth (grades 6-12) who have never tried cigarette smoking.	d) Tobacco: 50.5% High School; 77.2% Middle School	d) Tobacco: 2010, AR YTS, High School-47.5%; Middle School-74.2%		(Tobacco): TU-3, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7
Youth Healthy Behaviors Nutrition Strategies				
G1-O1-S1: **Promote environmental and systems changes and programs that support healthy eating.**				
G1-O1-S1.1: Continue existing programs and implement new programs for improving healthy eating such as: • Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) • Programs to address food insecurity such as SNAP (formerly food stamps) • "Pick a Better Snack" **Action Step 1**: Recommend that the Arkansas Department of Education Child Nutrition Unit continue to provide training and technical assistance on an ongoing basis to Child Nutrition Programs.			UACES, ADH, ADE, ADA, WIC, ADHS	
G1-O1-S1.2: Recommend school cafeteria lines, even those for a la carte entrée items, offer/provide all necessary components to meet the requirements of a reimbursable meal.			CHAC, ADE, ADA	

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Nutrition Strategies Continued				
G1-O1-S1.3: Encourage Arkansas schools to use locally grown produce. **Action Step 1:** Encourage all Arkansas schools to participate in community gardens. **Action Step 2:** Encourage Arkansas schools to buy locally grown produce.			CHAC, ARCOP, ADE, ACES-State Plant Board, Arkansas Farmer's Market Association, ADA	
G1-O1-S1.4: Encourage elementary schools to evaluate and change class schedules such as providing recess before lunch to improve nutrition.			CHAC, ADE-Child Nutrition Unit	
Youth Healthy Behaviors Physical Activity Strategies				
G1-O1-S2: **Promote environments, policies, and programs that encourage/support daily physical activity.**				(Physical Activity): PA-13, 13.1, 13.2, 14, 14.1, 14.2, 15
G1-O1-S2.1: Support the implementation of the statewide Safe Routes to School Program.			AHTD-State Network Project Safe Routes to School Program, ADH	
G1-O1-S2.2: Increase participation in physical activity programs such as Walk Across Arkansas, the Blue and You Fitness Challenge for youth 13 years of age and older, and Little Rocker Marathon for students in the 4th grade and higher. **Action Step 1:** Recruit participants from youth at churches. **Action Step 2:** Encourage physical education teachers to recruit students for the programs.			UACES, ABCBS, ADH	

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Physical Activity Strategies Continued				
G1-O1-S2.3: Increase the number of Arkansas public schools that have partnerships/joint use agreements with communities to promote community access to public school facilities and playgrounds outside of regular school hours. **Action Step 1:** Encourage the Arkansas Department of Education to grant funding for joint use agreement implementation to increase physical activity. **Action Step 2:** Encourage schools to have a resource directory to inform communities on available space for public use.			CHAC, ADE, ADH, ARCOP	PA-10
G1-O1-S2.4: Recommend the Arkansas Board of Education requires at least three of the 60 hours of annual professional education for licensed teachers address lifetime physical activity.			CHAC	
G1-O1-S2.5: Recommend all Arkansas schools provide safe indoor and outdoor places for physical activity. **Action Step 1:** Encourage the Arkansas Board of Education to require all schools have a space for physical activity and physical education. **Action Step 2:** Encourage the Arkansas Board of Education to require all public schools built after 2015 to have a designated physical education facility.			CHAC-Healthy School Environment, ADE	

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Physical Activity Strategies Continued				
G1-O1-S2.6: Recommend that Arkansas public schools implement a policy in which teachers would guide students in movement/physical activities for at least two minutes after every hour of seated time.			CHAC, ADE	
G1-O1-S2.7: Encourage incremental changes in physical activity by 2015. **Action Step 1:** Encourage the Arkansas Board of Education to recommend that schools develop and implement physical activities within the regular core curriculum. **Action Step 2:** Encourage the Arkansas Board of Education and Arkansas Legislature to maintain the current level of physical activity/ physical education. As of 2010, requirements are: • 90 minutes/week of physical activity for K-6 • 60 minutes/week of physical education for K-8 • 1 semester of physical education for high school graduation **Action Step 3:** Increase physical activity to 150 minutes per week for elementary and 225 minutes per week for secondary schools by 2015.			CHAC, CSHP	PA-4, 4.1, 4.2, 4.3, 5

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Physical Activity Strategies Continued				
G1-O1-S2.8: Increase the number of families who exercise together. **Action Step 1:** Ensure location/ activity lists for family physical activity are available and distributed through school and partner organizations. **Action Step 2:** Enlist youth organizations to promote family physical activity as service projects. **Action Step 3:** Promote park and recreation programs for family physical activity.			ARCOP, ACH, APRA, AR State Parks, AR Game and Fish AGCF, UACES, AHTD	
Youth Healthy Behaviors BMI Strategies				
G1-O1-S3: **Promote environments, policies and programs that encourage/support healthy BMI (or healthy weight).**				
G1-O1-S3.1: Continue existing and implement new interventions that directly or indirectly address overweight/obesity (ex.: Natural Wonders, School BMI Initiative and National Outdoor Day).			ARCOP, ADH-HDSP Section, ADE, UACES	
G1-O1-S3.2: Encourage Arkansas public schools to provide education regarding obesity's contribution to hypertension, diabetes, and future heart disease and stroke.			ARCOP, ADH-HDSP Section, ADE	
G1-O1-S3.3: Raise awareness of new obesity risk factors such as sleep deprivation and chronic disease risk factors such as vitamin D deficiency and poor oral health.			AR Oral Health Coalition, CHAC, ADA	

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Tobacco Strategies				
G1-O1-S4: **Support the ADH's TPCP strategies that encourage/support absence of tobacco use and exposure to secondhand tobacco smoke among youth such as:** • Encourage collaboration with existing TPCP grantees. • Encourage local health unit partnerships with schools to prevent youth smoking. • Increase awareness among kids and adults on Act 811 of 2011. • Advocate for Act 811 of 2011 to cover youth up to the age of 18 years.			ADH-TPCP, TCYB	U-12, 13, 15, 16, 18, 19, 20

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Overarching Strategies				
G1-O1-S5: **Expand the availability of and the health promotion activities of wellness centers/health services and parent resource centers.** **Action Step 1:** Initiate annual development of school wellness centers in new sites. **Action Step 2:** Support the activities of Growing Healthy Communities. **Action Step 3:** Increase parental use of the Arkansas State Parent Information and Resource Center (PIRC). **Action Step 4:** Support SCOPE training for school nurses. **Action Step 5:** Provide local businesses with opportunities to promote after-school wellness and educational activities for children. **Action Step 6:** Identify barriers and challenges for school wellness committees that are inactive.			CHAC, ARCOP, ADH, ADE	
G1-O1-S6: **Recommend to the Arkansas Board of Education that Arkansas public schools replace current advertising on vending machines, equipment, etc., to reflect and allow for more positive health messaging and advertisements.** **Action Step 1:** Allow product advertisement (such as banners and signage) by corporate sponsors of food products if they meet the following guidelines: **Beverages** • Unflavored, unsweetened water • 100% fruit juice • Low-fat or fat-free milk			CHAC, ARCOP, USDE grant, ADH, ADE	

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Healthy Behaviors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Healthy Behaviors Overarching Strategies Continued				
G1-O1-S6: **Action Step 1 continued** **Food Items (nuts are exempt)** • Fat content ≤35% total calories, and trans fat content 0% • Sugar ≤35% total package/item weight • Reduced sodium **Action Step 2:** Encourage signage with positive health messages in prominent or high traffic locations (such as bathrooms, vending machines in faculty area and faculty staff lounge).			CHAC, ARCOP, USDE grant, ADH, ADE	
G1-O1-S7: **Encourage partnerships between schools and youth organizations (e.g., Future Farmers of America, Girl Scouts, Boy Scouts, etc.) to increase student community service hours related to health-promoting activities such as school gardens.** **Action Step 1:** Enlist the help of the Arkansas Cooperative Extension Service Master Gardeners to provide technical assistance for school gardens.			ARCOP, ADE, UACES-Master Gardeners	
G1-O1-S8: **Encourage research or investigation into additional ways to promote healthy school environments.** **Action Step 1:** Provide support that integrates science curriculum with gardening by presenting possible evidence-based curricula as options to teachers.			UAMS-COPH, ACHRI	

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Disparity Objectives				
G1-O2: Decrease disparity by achieving two of the four following objectives:			ADE (Joint Use Agreement with communities), ADH, ARCOP-built environment system and policy changes in the funded and unfunded Growing Healthy Communities	
a) Physical Activity. Increase the percentage of each high school student group that is physically active for at least 60 minutes every day.	a) Physical Activity: 27.7%	a) Physical Activity: 2009 YRBS Total: 24.3% Black: 22.7% Hispanic: 20.0% White: 25.2%		
b) Television Screen Time. Decrease the percentage of each high school student group that watches television for 3 or more hours per day on an average school day.	b) Television Screen Time: 27.7%	b) Television Screen Time: 2009 YRBS Total: 36.4% Black: 54.6% Hispanic: 37.1% White: 30.8%		
c) Video or Computer Game Time. Decrease the percentage of each high school student group that plays video or computer games for three or more hours per day on an average school day.	c) Video or Computer Game Time: 16.5%	c) Video or Computer Game Time: 2009 YRBS Total: 21.0% Black: 26.4% Hispanic: 18.3% White: 19.0%		

Goal 1: **YOUTH**

Increase healthy behaviors among Arkansas youth.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Disparity Objectives Continued				
d) Tobacco Use. Increase the percentage of each race/ethnic youth group (grades 6-12) that has never smoked cigarettes.	d) Tobacco Use: High School Students-61.7%; Middle School Students-83.1%	2010 AR YTS High School Students: Total: 47.5% Black: 56.1% Hispanic: 42.3% White: 45.8% Middle School Students: Total: 74.2% Black: 73.6% Hispanic: 70.6% White: 75.5%		

Goal 2: **YOUTH**

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Adverse Risk Factors Objective				
G2-O1: **Maintain the percentage of youth who have been screened in Arkansas public schools according to national guidelines for overweight and obesity.**	97.6%	2009-Spring 2010 Participation in BMI Assessments, ACHI School BMI, 97.6% of students in grades K, 2, 4, 6, 8, 10 in AR public schools.	ACHI, CSH	AH-1, NWS-5, 5.2, 6.1, 6.2, 10, 10.1, 10.2, 10.3, 10.4, 11, 11.1, 11.2, 11.3, 11.4
Youth Adverse Risk Factors Strategies				
G2-O1-S1: Improve the screening, referral, and follow-up for adverse risk factors among Arkansas children and adolescents identified as obese through the school BMI program.				NWS-6.1
Youth Adverse Risk Factors Objective				
G2-O2: **Encourage medical providers to identify, counsel, and/or refer youth at risk of CVD because of being overweight/obese or because of family history.**	Developmental	Developmental		NWS-5.2, 6.1, 6.3
Youth Adverse Risk Factors Strategies				
G2-O2-S1: Provide concise guidelines regarding obesity management, including BMI charts and physician tools.			AWC	
G2-O2-S2: Encourage providers to promote healthy lifestyles through member lifestyle education programs like the Arkansas Blue Cross and Blue Shield Cardiovascular Education Program.				

Goal 2: **YOUTH**

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Adverse Risk Factors Strategies Continued				
G2-O2-S3: Encourage insurance providers to have a product option that includes obesity-screening and related treatment among children.				
G2-O2-S4: Encourage school referral and medical provider screenings of at-risk youth according to national guidelines for hypertension and lipid abnormalities.			ACH, CSH	AH-1
G2-O2-S5: Increase the screening for elevated blood pressure and lipid abnormalities among high-risk children. **Action Step 1:** Educate pediatricians and family practitioners regarding the need to screen for hypertension and dyslipidemia among high-risk children. Educate about what constitutes a high-risk child. **Action Step 2:** Educate medical providers who see children on the appropriate method for measuring blood pressure among children.				HDS-5.2

Goal 2: **YOUTH**

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Adverse Risk Factors Objective				
G2-O3: **Increase the percentage of diabetic Arkansas youth who:**		Developmental (Data sources that measure diabetes status among AR youth are not available. Until a data source is available, YRBS, BMI, ACHI, Healthy Eating Index and AR YTS will be used.) Measure	ADE, ADH	D-16, 16.1, 16.3
a) Exercise at recommended levels,	a) Physical Activity: Increase to 26.3% those who participate in 60 minutes of moderate- or vigorous-intensity activity every day.	a) Physical Activity: 24.3%, 2009 YRBS		
b) Eat healthy,	b) Healthy Eating: Increase to 18.9% those who eat fruits/ vegetables 5 times or more per day. Decrease to 29.5% those who drank a can, bottle, or glass of soda or pop at least 1 day during the last 7 days.	b) Healthy Eating: Fruits/ vegetables- 14.9%, 2009, YRBS. Soda or pop intake- 33.5%, 2009, YRBS.		

Goal 2: **YOUTH**

Identify and treat risk factors for heart disease and stroke among Arkansas youth.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Youth Adverse Risk Factors Objective Continued				
G2-O3 continued c) Are tobacco-free	c) Tobacco-free: Reduce tobacco use by high school students to 17.5%. Reduce initiation of tobacco use among middle school students to 54%.	c) Tobacco-free 2010 AR YTS, Current tobacco use in High School 20.4%; Current initiation in Middle School 58.6%.		
Youth Adverse Risk Factors Strategies				
G2-O3-S1: Encourage the Arkansas Department of Education to include a diabetes section in the YRBS.				
G2-O3-S2: Encourage medical care providers to improve education to all diabetic patients, beginning at young ages, on ways to improve their health through lifestyle changes.			ADH-DPCP, ACH, Juvenile Diabetes Research Foundation	D-14
Youth Disparity Objective				
G2-O4: **Decrease disparity by expanding diabetes self-management education opportunities to youth who live in geographic areas with low access to medical care or belong to an at-risk population that lacks access to adequate self-management education resources.**	10% of at-risk youth will have access to diabetes self-management education or other chronic disease resources and services.	Developmental Measure: YRBS, ACH, CDC-SEARCH. Data: data sources that measure diabetes status among AR youth are not available. Until a data source is available, CDC-SEARCH will be used.		

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factors Objectives				
G3-O1: Improve identification and treatment of major heart disease and stroke risk factors (smoking, dyslipidemia, hypertension, diabetes, obesity, and atrial fibrillation) among Arkansas adults. Achieve 7 of the 13 following objectives:	Achieve 7 of the 13 following objectives.			
a) Smoking. Increase the percentage of adult smokers who have been advised to stop smoking.	69.9%	2008, ATS, 66.9% (Current adult smokers who visited a physician in the 12 months preceding the survey and were advised to quit smoking)		TU-1, 1.1, 1.2, 1.3
b) Smoking. Increase the percentage of adult smokers who are assisted to quit smoking using a proven cessation method.	55.1 %	2008, ATS 52.1% (Adults advised to stop smoking)		TU-4, 4.1, 4.2, 5, 5.1, 5.2
c) Dyslipidemia. Increase the percentage of adults who have been screened within the recommended time frame for dyslipidemia.	77.2%	2009, BRFSS, 74.2% 2007, ARCHES 69.6%		HDS-6
d) Dyslipidemia. Increase the percentage of CVD patients with LDL cholesterol <100 mg/dL.	65.8%	2010, ACIC, 62.8%		HDS-6, 7, 20, 20.1, 20.2

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factors Objectives Continued				
e) Hypertension. Increase the percentage of Arkansans who have been screened within the recommended timeframe for hypertension and who are treated for abnormal levels.	Developmental	Developmental: ADH Local Health Units		HDS-4
f) Hypertension. Decrease the prevalence of hypertension in Arkansas adults.	31.4%	2009, BRFSS, 34.4% (Have been told by a healthcare professional that their blood pressure was high) 2007, ARCHES 48.3%		HDS-5
g) Hypertension. Increase the percentage of adults with hypertension who have achieved blood pressure control.	47.0%	2010, ACIC, 44.0%		HDS-5, 5.1,12
h) Diabetes. Increase the percentage of adults with diabetes who achieve healthy behaviors (exercise at recommended levels, eat a healthy diet, and do not smoke).	Increase the percentage of adults with diabetes who: • Exercise at recommended levels to 39.2% • Eat ≥5 fruits/ vegetables per day to 25.3% • Do not smoke to 88.6%	2009, BRFSS, • Exercise at recommended levels: 36.2% • Eat ≥5 fruits/ vegetables per day: 22.3% • Do not smoke: 80.5%		D-16, 16.1, 16.2, 16.3
i) Obesity. Reduce the percentage of adult Arkansans who are: ***1) Obese (BMI ≥30) and*** ***2) Overweight or obese (BMI ≥25)***	1) Obese (BMI ≥30): 28.5% 2) Overweight or obese (BMI ≥25): 63.6%	2009, BRFSS 1) Obese (BMI ≥30): 31.5% 2) Overweight or obese (BMI ≥25): 66.6%		HDS-9.1, 10.1 NWS-8, 9, 10, 10.1, 10.2, 10.3, 10.4, 11, 11.1, 11.2, 11.3, 11.4, 11.5

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factors Objectives Continued				
j) Obesity. Increase the percentage of obese/overweight adult Arkansans who are taking actions that should contribute to a healthy weight.	Percent of obese/ overweight adults who are: 1) Meeting physical activity guidelines: 48.5% 2) Eating recommended amounts of fruits and vegetables: 22.6% 3) Meeting either #1 or #2 above: 54.0%	2009, BRFSS Percent of obese/ overweight adults who are: 1) Meeting physical activity guidelines: 45.5% 2) Eating recommended amounts of fruits and vegetables: 19.6% 3) Meeting either #1 or #2 above: 51.0%		
k) Atrial Fibrillation. Increase the use of accredited national guidelines by hospitals for the detection and treatment of atrial fibrillation.	Developmental	Developmental. "AHA Get with the Guidelines," 2010. 100% of patients (79 patients in 5 hospitals) with ischemic stroke or TIA who also had atrial fibrillation or atrial flutter discharged on anticoagulant therapy.		AHS-7

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factors Objectives Continued				
l) ***Aspirin. Increase the use of aspirin or other anti-thrombotic agent for the treatment of heart disease and stroke among CVD patients in accordance with accredited national guidelines.***	48%	2010, ACIC, 45% of patients at 1 clinic. "Aspirin on Arrival" is a publicly reported measure for hospitals at this time and could be reported. AFMC will be working on cardiovascular measures beginning in August 2011. At this time it is not known if aspirin will be one of these measures.		HDS-15, 15.1, 15.2, 21
m) Arkansas Chronic Illness Collaborative (ACIC). Increase the number of new clinics participating in the ACIC to improve systems of care with cardiovascular disease and diabetes.	10 new clinics	From 2005 to 2011 a total of 74 clinics have participated in the ACIC. (Cancer clinic is included for the baseline value.)		HC/HIT-7, 8, 11, 12

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factor Worksite Strategies				
G3.O1.S1: Increase screenings for heart disease and stroke risk factors (blood pressure, glucose, and cholesterol) at workplaces.			ADH-DPCP, ADH-HDSP Section, ARCOP, ADH-Lifestage Health Branch, ACHI, ADFA-Employee Benefits Division	ECBP-8, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6
G3-O1-S1.1: Use health risk assessments in the workplace to identify patients with cardiovascular health risks and to target those patients for increased education about heart disease and stroke risk factors and the need for appropriate treatment.			ADH-Lifestage Health Branch (AHELP)	HDS-5,8,12 ECBP-8,8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 9
Adult Adverse Risk Factor Healthcare Strategies				
G3-O1-S2: Improve identification and treatment of adverse heart disease and stroke risk factors by healthcare providers.				
G3-O1-S2.1: Increase provider and patient educational efforts regarding accredited national guidelines for adult patients on the ABCS (example: JNC 8 and USPSTF). a) Aspirin. Increase low-dose aspirin therapy according to recognized guidelines. **Action Step 1:** Utilize existing data to identify target populations with lowest compliance and those most at risk. **Action Step 2:** Increase provider and patient educational efforts on aspirin guidelines.			ABCBS, ACIC, ADH-HDSP Section, AFMC, AWC, American College of Cardiology-Arkansas Chapter, AR SAVES, Star Health Initiative, UAMS-DFPM	AHS-7, HC/HIT-10, 11, 13 HDS-4, 6, 7, 8, 11, 12, 15, 15.1, 15.2 OH-10.3, 14.1

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factor Healthcare Strategies Continued				
G3-O1-S2.1 continued b) Blood Pressure. Prevent and control high blood pressure. Reduce sodium intake. Promote policies for procurement of foods low in sodium that improve accessibility and cost of low-sodium foods and that label sodium content of foods. **Action Step 3:** Increase the percentage of individuals with recorded high blood pressure self-management goal(s) by increasing the percentage of healthcare providers who use a collaborative approach such as the Chronic Care Model (participate in the Chronic Illness Collaborative).				TU-4, 4.1, 4.2, 5, 5.1, 5.2, 9, 9.1, 9.2, 9.3, 9.4, 10, 10.1, 10.2, 10.3, 10.4
c) Cholesterol. Prevent and control high cholesterol. Blood pressure and cholesterol strategies include promotion of electronic health records, use of guidelines, multi-disciplinary teams, self-management, and integration of traditional healthcare and community resources/nontraditional providers. **Action Step 4:** Increase the percentage of patients with documentation of fasting lipid profiles that are appropriate for age and clinical situation.				

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factor Healthcare Strategies Continued				
G3-O1-S2.1 continued **Action Step 5:** Explore providing options for online continuing medical and nursing education for distance learning. **Action Step 6:** Pilot Medical Home clinics in Arkansas with use of electronic medical records for reminders of care. **Action Step 7:** Share Medical Home clinic data with healthcare providers.				
d) Smoking. Increase the number of smokers told to quit and refer patients to programs such as the SOS Quitline. Increase the use of the "Ask. Advise. Refer. Program" for smoking cessation. Increase availability of no- or low-cost cessations. Support SOS clinical recommendations. **Action Step 8:** Share smoking cessation statistics with healthcare providers and provide information on referral resources for smoking cessation.				
G3-O1-S2.2: Encourage medical providers to counsel overweight/obese patients and/or refer them to weight management programs. **Action Step 1:** Provide concise guidelines regarding overweight/ obesity management, including BMI charts and physician tools.			AWC, UAMS -DFPM	HDS-9.1, 10.1, 13.3, 14.3 PA-11, 11.1, 11.2

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factor Healthcare Strategies Continued				
G3-O1-S2.2 continued **Action Step 2:** Share overweight/obesity statistics with healthcare providers and provide information on referral resources for weight management programs.				
G3-O1-S2.3: Utilize clinical staff in nontraditional settings. **Action Step 1:** Encourage the use of worksite/occupational nurses for secondary management of blood pressure. **Action Step 2:** Share cardiovascular outcomes of a piloted worksite clinic that uses electronic medical records for reminders, follow-up, and tracking outcomes with the HDSP Task Force. **Action Step 3:** Train, recruit, and retain certified diabetes educators and registered dieticians in order to increase the number of Medicare-certified diabetes education programs throughout the state, especially in underserved areas.			Action Step 2: ABCBS Action Step 3: AFMC	D-14 HC/HIT-10, 11 HDS-9,10,12
G3-O1-S2.4: Establish diabetes self-management education programs in counties where none exist. **Action Step 1:** Develop diabetes education and treatment criteria for Centers of Excellence. **Action Step 2:** Assess and identify resources. **Action Step 3:** Implement self-management education programs.			Diabetes Advisory Council	AHS-7

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Adverse Risk Factors	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Adverse Risk Factor Healthcare Strategies Continued				
G3-O1-S2.5: Provide continuing medical education for healthcare providers on atrial fibrillation detection and treatment.			UAMS-DFPM , AWC	AHS-7
G3-O1-S2.6: Identify data sources to track the proportion of stroke patients who have atrial fibrillation at the time of diagnosis.				PHI-11.9

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Disparity Objectives				
G3-O2: Decrease disparity by improving healthy behaviors and decreasing adverse risk factors. (Percentage of Arkansas adults who have three or more cardiovascular disease risk factors [diabetes, high blood pressure, high cholesterol, current smoking, overweight/obese, physical inactivity, and inadequate intake of fruits and vegetables].)	All Adult Arkansans: 43.7% White, NH: 43.7% Black, NH: 43.7% Hispanic: 43.7% Other, NH: 43.7%		2009, BRFSS, All Adult Arkansans: 56.2% White, NH: 56.5% Black, NH: 62.9% Hispanic: 47.2% Other, NH: 46.7% *Definition Note:* The CDC revised the 2011 BRFSS questionnaire to reflect new recommendations in physical activity. Dietary intake questions were also expanded. Baseline data obtained from the 2009 BRFSS survey may not be comparable to prevalence estimates obtained from future BRFSS surveys.	

Goal 3: **ADULT**

Increase healthy behaviors and improve the identification and treatment of adverse risk factors among Arkansas adults.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Disparity Strategies				
G3-O2-S1: Provide health initiatives targeted toward minority/high-risk populations (example: utilizing community health workers, the STAR-Health Initiative and Delta Dental's "Seal the State").			ADH-HHI, ADH-Chronic Disease Branch, ADH-Center for Health Advancement, ADH-Office of Oral Health	
G3-O2-S2: Provide educational opportunities for physicians and other healthcare providers regarding the disparities in cardiovascular disease diagnosis and treatment. Share statistics and proven provider interventions regarding those populations.			AWC, UAMS-DFPM	AHS-7 HDS-15, 15.1, 15.2
G3-O2-S2.1: Expand providers' cultural competency and knowledge of cultural/racial differences in risk factors and skills in health literacy.				ECBP-11 HC/HIT-1, 2, 2.1, 2.2, 2.3, 2.4

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Emergency Treatment	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Emergency Treatment Objectives				
G4-O1: Improve emergency treatment of heart attacks and stroke. Achieve 4 of the 7 following objectives:	Achieve 4 of the 7 following objectives.			
a) Increase the percentage of adults who correctly recognize the common signs and symptoms of a heart attack.	42%	2007, BRFSS, 39% (Correctly answered 5 of the signs and symptoms of a heart attack.)		HDS-16, 16.1, 16.2, 16.3
b) Increase the percentage of adults who correctly recognize the common signs and symptoms of a stroke.	50%	2007, BRFSS, 47% (Correctly answered 5 of the signs and symptoms of a stroke.)		HDS-17, 17.1, 17.2, 17.3
c) Increase the percentage of adults who would call 911 as a first response to a heart attack or stroke.	86.9%	2007, BRFSS, 83.9%		HDS-16.1, 16.3, 17.1, 17.3

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Emergency Treatment	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Emergency Treatment Objectives Continued				
d) Increase the percentage of ambulance runs for a) heart attack or b) stroke that were arranged through a 911 contact.	a) Heart attack: 89% b) Stroke: 60%	ADH EMS/Trauma Section, Jan-Dec 2010 a) Heart attack: 588 total ambulance runs for a primary illness of cardiac arrest. Among these, 508(86.4%) were through 911 calls. b) Stroke: 924 total ambulance runs for a primary illness of cerebrovascular accident. Among these, 500 (54.1%) were ambulance runs where the primary illness was cerebrovascular accident were through 911 calls		AHS-8
e) Increase the percentage of medical providers who use appropriate guidelines to treat acute stroke events.	Developmental	Developmental. Future data source will be the Arkansas Stroke Registry.		AHS-7 HDS-18, 19, 19.1, 19.2, 19.3

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Emergency Treatment	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Emergency Treatment Objectives Continued				
f) ***Decrease the percentage of adult patients hospitalized for a) heart attack and b) stroke who die within one month of hospitalization.***	a) Heart disease: 10.3% b) Stroke: 8.0%	a) Heart disease: 10.8% b) Stroke: 8.4%		
g) Decrease the percentage of adult out-of-hospital deaths for a) heart attack and b) stroke.	a) Pre-transport deaths for heart attack-47.2% b) Pre-transport deaths for stroke-42.8%	ADH Vital Statistics, 2007 a) Pre-transport deaths for heart attack-50.2% b) Pre-transport deaths for stroke-45.8%		
Adult Emergency Treatment Strategies				
G4-O1-S1: Increase CPR/AED training in worksites.			ADH-Lifestage Health Branch	AHS-8, 8.1, 8.2
G4-O1-S2: Provide educational opportunities in the healthcare setting for patients regarding the signs and symptoms of heart attack and stroke and the need to call 911. **Action Step 1:** Provide posters and/or videos for healthcare areas (e.g., physician waiting rooms or examining rooms) regarding the signs and symptoms of heart attacks and strokes and appropriate action. **Action Step 2:** Provide education on effectively calling 911 (e.g., report location, remain on the line).			Action Step 1: AWC Action Step 2: ADH-EMS/Trauma Section	HDS-16, 16.1, 16.2, 16.3, 17, 17.1, 17.2, 17.3

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Emergency Treatment	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Emergency Treatment Strategies Continued				
G4-O1-S3: Increase hospital and physician use of telemedicine for acute stroke care.			AR SAVES	HC/HIT-11,12
G4-O1-S4: Increase training opportunities for first responders and EMS instructors.			ADH-HDSP Section, ADH-EMS/Trauma Section	
G4-O1-S5: Develop and implement a protocol for identifying the outcomes after the patient is delivered by the EMS to the hospital.				
G4-O1-S6: Educate key stakeholders about the American Heart Association's "Operation Mission Lifeline" to increase EMS awareness regarding the need to triage STEMI patients before arriving at the hospital.			AHA	HDS-19, 19.2
G4-O1-S7: Educate the public on the current guidelines for emergency response for cardiac arrest and CPR.			AHA, American Red Cross, affiliated hospital certifications	HDS 16, 16.1, 16.2, 16.3, 17, 17.1, 17.2, 17.3, 18

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Non-Emergency Treatment	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Non-Emergency Treatment Objective				
G4-O2: **Increase the percentage of medical providers who use appropriate guidelines for long-term treatment of heart disease and stroke.**	Developmental	Developmental	UAMS-DFPM	AH-9
Adult Non-Emergency Treatment Strategies				
G4-O2-S1: Increase the percentage of group medical practices that use a collaborative approach to treatment of cardiovascular-related illnesses. **Action Step 1:** Increase the number of providers participating in the ACIC training.			ADH-HDSP Section, UAMS-DFPM	
G4-O2-S2: Provide education to healthcare professionals on the latest updates on appropriate screening and treatment of cardiovascular disease.			ADH-HDSP Section, STAR Health Initiative, AWC, UAMS-DFPM	AHS-7
G4-O2-S3: Provide education to healthcare professionals on the depression link with heart attacks and stroke and the appropriate screening and treatment.				

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Non-Emergency Treatment	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Non-Emergency Treatment Objective				
G4-O3: **Increase the number of hospitals participating in the stroke registry.**	50	2011, Stroke Registry, 0	ADH-HDSP Section, AR Acute Stroke Care Task Force, AHA "Get with the Guidelines"	HC/HIT-12 PHI-2
Adult Non-Emergency Treatment Strategies				
G4-O3-S1: Continue implementation of the Arkansas Stroke Registry's Action Plan.				
G4-O3-S2: Develop a Hypertension Advisory Council to address recommendations from the Hypertension Summit.				
G4-O3-S3: Advocate increasing the current level of funding for the Arkansas Acute Stroke Care Task Force for issues related to hypertension and stroke.			AHA	

Goal 4: **ADULT**

Improve recognition and treatment of acute heart attacks and stroke among Arkansas adults.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Disparity Objective				
G4-O4: **Decrease disparity in knowledge regarding risk factors for the common signs and symptoms and appropriate action for a) heart attacks and b) stroke.**	a) Heart attacks All races: 42% White, NH: 45% Black, NH: 24% b) Stroke All races: 50% White, NH: 51% Black, NH: 47% Hispanic: 28%	2007, BRFSS. Correctly answered five of the signs and symptoms of: a) Heart attacks All races: 39% White, NH: 42% Black, NH: 21% b) Stroke All races: 47% White, NH: 48% Black, NH: 44% Hispanic: 25%		
Adult Disparity Strategies				
G4-O4-S1: Increase education to high-risk populations about heart attack and stroke signs and symptoms and the need to call 911 for acute events.				HDS-16, 16.1, 16.2, 16.3, 17, 17.1, 17.2, 17.3
G4-O4-S2: Provide continuing education on health literacy and culturally appropriate communication on the signs and symptoms of heart attacks and strokes to healthcare providers.			ADH-HDSP Section, ADH-EMS/Trauma Section, UAMS-DFPM	ECBP-11, 12.2, 13.2, 14.2, 15.2, 16.2

Goal 5:
Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Long-term Care and Rehabilitation	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Long-term Care and Rehabilitation Objectives				
G5-O1: Increase the percentage of patients who undergo cardiac rehabilitation after hospitalization for:			Arkansas Association of Cardiopulmonary Rehabilitation, Baptist Health	HDS-1, 22, 23
a) Heart Attack	a) Heart Attack: 25%	2009, BRFSS a) Heart Attack: 22.0%		
b) Stroke	b) Stroke: 39.4%	b) Stroke: 36.4%		
c) Heart Failure	c) Heart Failure: Developmental	c) Heart Failure: Developmental		
Adult Long-term Care and Rehabilitation Strategies				
G5-O1-S1: Advocate for increased access to cardiac rehabilitation Medicare/Medicaid reimbursement for patients with congestive heart failure.			HomeCare Association of Arkansas, Baptist Health	OA-4 AHS-9
G5-O1-S2: Educate healthcare professionals to refer cardiovascular patients to appropriate rehabilitation.			ADH-HDSP Section	OA-4
G5-O1-S3: Improve access to long-term care resources for Arkansans by adding a resource page with links pertaining to cardiac rehabilitation on the ADH website.			ADH	HC/HIT-5, 5.1, 5.2, 6, 6.1, 6.2, 6.3, 8, 9

Goal 5:
Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Long-term Care and Rehabilitation	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Long-term Care and Rehabilitation Objective				
G5-O2: **Increase the percentage of patients with cardiovascular disease in need of long-term care who are discharged from the hospital with in-home care.**	12%	2009, Hospital Discharge Data System, 8.7% discharged to home healthcare (ICD-9: 390-459, 645-747)		HDS-1, 3 OA-8
Adult Long-term Care and Rehabilitation Strategies				
G5-O2-S1: Advocate for an extended homecare reimbursement to be provided to patients with cardiovascular disease who require ongoing support.			National Association of Homecare and Hospice	AHS-1,2,6,9 OA-4
G5-O2-S2: Advocate for Medicaid/ Medicare reimbursement for remote patient monitoring services for patients with cardiovascular diseases who are currently receiving homecare or hospice services.			Home Health Agencies	AHS-1,2,6,9 OA-4
G5-O2-S3: Educate healthcare professionals about services provided by hospice and homecare agencies to increase referrals to those services.			Arkansas State Hospice and Palliative Care Association, AWC, American Association of Hospice, AFMC	OA-8
G5-O2-S4: Facilitate adoption of the Telehomecare State Pilot Project, which will improve health literacy and increase access to telehomecare.			Arkansas Medical Dental and Pharmaceutical Association, HomeCare Association of Arkansas	HC/HIT-1,3,11,12 HDS-11,23
G5-O2-S5: Improve access to long-term care resources for Arkansans by adding a resource page with link pertaining to long-term care and in-home services on the ADH website.			ADH	HC/HIT-5, 5.1, 5.2, 6, 6.1, 6.2, 6.3, 8, 9

Goal 5:
Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Long-term Care and Rehabilitation	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Long-term Care and Rehabilitation Objective				
G5-O3: **Develop statewide healthcare professional standards of care recommendations for care transitions.**			Arkansas Hospital Association, AFMC, AHA	
Adult Long-term Care and Rehabilitation Strategies				
G5-O3-S1: Evaluate models for the potential of developing statewide healthcare professional standards of care recommendations for care transitions.	Developmental	Developmental	Arkansas Hospital Association, AFMC, AHA	
G5-O3-S2: Report feasibility to policymakers such as the Arkansas State Senate and House Public Health, Welfare and Labor Committees.			Arkansas Hospital Association, AFMC, AHA	

Goal 5:
Reduce re-hopitalization rates for Arkansans recently discharged after a heart attack, stroke, or heart failure.

Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Disparity Objective				
G5-O4: **Decrease disparity in cardiac rehabilitation.**	28.2% (10% improvement of the group with the optimal value)	2009, BRFSS, Rehabilitation for stroke: Male-25.6%; Female-14.7% Note: These percentages were estimated from small samples and may not be reliable.		
Adult Disparity Strategies				
G5-O4-S1: Advocate for Medicaid copay reimbursement for cardiac rehabilitation.				AHS-1, 2
G5-O4-S2: Conduct focus groups to develop appropriate messaging to encourage participation in cardiac rehabilitation among high-risk populations such as women and African Americans.				HC/HIT-1, 2, 4, 13
G5-O4-S3: Provide educational opportunities for healthcare providers in recognizing the importance of depression in patients who have had cardiovascular events.			Baptist Health, UAMS-DFPM, UAMS-Partners for Inclusive Communities	

Goal 6: **ADULT & YOUTH**

Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

Local Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth Local Level Advocacy Objectives				
G6-O1: Improve local level environments, policies, and programs that encourage/support healthy behaviors and reduce risk factors. Achieve 3 of the 4 following objectives:	Achieve 3 of the 4 following objectives.			PA-13, 13.1, 13.2, 14, 14.1, 14.2, 15
a) Nutrition. Develop food procurement recommendations for communities and worksites.	Developmental	Developmental	ADH	
b) Physical Activity. Increase the number of Arkansas public schools that have partnerships/ joint use agreements with communities to promote community access to public school facilities and playgrounds outside of regular school hours. (See G1-O1-S2.3)	120 Joint Use Agreements (funded through the Tobacco Excise Tax)	2009, Earmarked through the Tobacco Excise Tax (Arkansas Department of Education), 45 funded Joint Use Agreements.		
c) BMI. Continue to provide BMI education targeting all parents through their child's BMI report. (Currently BMI report letters go out to parents discussing risk factors and behaviors.)	Maintain current level	2011, ACHI BMI Report/Letter to parents, currently a small paragraph exists on the BMI report. The information on risk factors and behaviors is presented for all children, regardless of weight.		

Goal 6: **ADULT & YOUTH**

Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

Local Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth Local Level Advocacy Objectives Continued				
d) Tobacco. Increase the number of counties/cities that have comprehensive smoke-free air laws.	By 2012, 2 communities will pass comprehensive laws (i.e., stronger than Act 8 of 2006). By 2013, a comprehensive smoke free law. By 2013, all private colleges and universities will have comprehensive tobacco-free laws.	2011, ADH TPCP, 0 comprehensive smoke-free counties or cities.		
Adult and Youth Local Level Advocacy Nutrition Strategies				
G6-O1-S1: Educate community and worksites on food procurement recommendations.				
G6-O1-S2: Advocate for community program initiatives to reduce sodium content of available foods in restaurants and packaged foods in the community.			ARCOP, CSHP ADH-Lifestage Health Branch (AHELP), HHI, ARCOP, UACES, ADH-HDSP Section partner with the National Salt Reduction Initiative	NWS-19
Adult and Youth Local Level Advocacy Physical Activity Strategies				
Additional strategies previously discussed in this workplan that addresses "Youth Local Level Advocacy Physical Activity Strategies" include: **G1-O1-S2.3** **G1-O1-S2.4**				

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Local Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth Local Level Advocacy BMI Strategies				
Additional strategies previously discussed in this workplan that addresses "Youth Local Level Advocacy BMI Strategies" include: G1-O1-S3.2				
Adult and Youth Local Level Advocacy Tobacco Strategies				
G6-O1-S4: Increase the number of workplaces that have a comprehensive 100% smoke-free policy.				ECBP-10.4 TU-11, 11.1, 11.2, 11.3, 12, 13, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7
Additional strategies previously discussed in this workplan that addresses "Adult & Youth Local Level Advocacy Tobacco Strategies" include: G1-O1-S4				

Goal 6: **ADULT & YOUTH**

Implement policy and systems changes to improve local and state capacity to address heart disease, stroke and related factors among Arkansans.

State Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth State Level Advocacy Objectives				
G6-O2: Improve state level environments, policies, and programs that encourage/support healthy behavior, reduce risk factors, and provide funding. Achieve 4 of the 7 following objectives:	Achieve 4 of the following 7 objectives.			
a) Nutrition. Develop food procurement guidelines for state agencies.	Developmental	Developmental. Possibly legislative reports from ADE, ADH, ARCOP, CHAC and/or AHA.		
b) Physical Activity. Maintain or increase physical activity levels in all grade levels through monitoring and public health policy advocacy.	Maintain current levels or increase to 150 minutes per week for elementary and 225 minutes per week for secondary schools.	As of 2010, requirements are: • 90 minutes/week of physical activity for K-6 • 60 minutes/ week of physical education for K-8 • 1 semester of physical education for high school graduation		
c) BMI. Maintain and or add health policies to improve BMI monitoring and education in all grade levels through advocacy.	Maintain or add	1 state level policy, Act 1220 of 2003		
d) Tobacco. Remove all exemptions in Act 8 of 2006, resulting in a comprehensive 100 percent smoke-free workplace law.	By 2015, passage of comprehensive smoke-free law	Act 8 of 2006; exemptions exist creating a smoke-free law that is not comprehensive.	Strategic Plan for Tobacco, AHA	TU-11,12,13, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 14, 15, 15.1, 15.2, 15.3, 15.4

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State Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth State Level Advocacy Objectives Continued				
e) ***Tobacco. Increase the age limit for preventing smoking in cars when children and adolescents are present (Act 811 of 2011). (See G1-O1-S4)***	18 years	Act 811 of 2011; bans smoking in all motor vehicles carrying a child less than 14 years of age.		
f) ***Funding. Monitor and advocate for Medicare/Medicaid reimbursement for the purpose of improving tobacco cessation and hypertension compliance.***	Developmental	Developmental	AHA, ADH-TPCP, ADH-HDSP Section	
g) ***Funding. Continue to secure state funding for the stroke registry.***	Continuation of existing funding ($180,000/year)	In 2009 one-time funding of $113,750 was received from the CDC Division of Heart Disease & Stroke Prevention to develop a stroke registry action plan. In 2010, the state legislature awarded the AR Acute Stroke Care Task Force annual funding in the amount of $180,000 to implement the registry.		

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State Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth State Level Advocacy Nutrition Strategies				
G6-O2-S1: Advocate for a standard written policy/guideline for vending machines, cafeterias, and catered meals for state agencies.			ADH-Chronic Disease Branch, Lifestage Health Branch, Adults in Worksites Section ARCOP, ADFA, UACES-Nutrition	
G6-O2-S2: Advocate for policies in workplaces such as schools and state agencies to implement programs to reduce sodium content of available foods.			ARCOP, CSHP ADH-Lifestage Health Branch (AHELP), HHI, ARCOP, UACES	NWS-7, 19
G6-O2-S3: Advocate for tax incentive legislation that would encourage food stores to provide healthier food choices where none currently exist.			ARCOP, AR Food Policy Group	NWS-3
Additional strategies previously discussed in this workplan that addresses "Adult & Youth State Level Advocacy Nutrition Strategies" include: G1-O1-S6				
Youth State Level Advocacy Physical Activity Strategies				
Additional strategies previously discussed in this workplan that addresses "Youth State Level Advocacy Physical Activity Strategies" include: G1-O1-S2.4 G1-O1-S2.5 G1-O1-S2.7				

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State Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult and Youth State Level Advocacy BMI Strategies				
G6-O2-S4: Continue to monitor the state's childhood obesity epidemic through the collection of BMI information on children in grades K-10 in alternating years as currently performed in public schools.				
G6-O2-S5: Increase BMI education for parents through their children.				
Adult and Youth State Level Advocacy Tobacco Strategies				
G6-O2-S6: Increase the number of workplaces that are covered by a statewide comprehensive clean indoor air and smoke-free policy.				ECBP-10.4 TU-11, 11.1, 11.2, 11.3, 12, 13, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7
G6-O2-S7: Advocate for legislation to remove all exemptions in Act 8 of 2006, resulting in a comprehensive 100 percent smoke-free workplace law.			Strategic Plan for Tobacco, AHA	TU-11,12,13, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 14, 15, 15.1, 15.2, 15.3, 15.4
Additional strategies previously discussed in this workplan that addresses "Adult & Youth State Level Advocacy Tobacco Strategies" include: **G1-O1-S4**				

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State Level	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult State Level Advocacy Funding Strategies				
Additional strategies previously discussed in this workplan that addresses "Adult State Level Advocacy Funding Strategies" include: G4-O3-S1 G4-O3-S2 G4-O3-S3 G5-O1-S1 G5-O2-S2 G5-O4-S1				

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Disparity	2015 Target	Baseline (Year, Source, Amount)	Key Partners	US & AR HP 2020 Obj. Number
Adult Disparity Objective				
G6-O3: Decrease health disparity issues among minority health populations by developing a health education heart disease and stroke initiative targeting minority leaders/advocates. Potential initiatives could include increasing representation on the HDSP Task Force from groups such as Arkansas Legislative Black Caucus, LULAC, Minority Health Commission, and AARP.	Developmental	Developmental		
Adult Disparity Strategy				
G6-O3-S1: Provide training and technical assistance to minority leaders, advocates, and organizations.				