**Problem:**
Before 2011, there was no local level surveillance of cardiovascular disease trends specific to the Mississippi (MS) Delta Region.

**Project:**
A representative, population-based survey, the Cardiovascular Health Examination Survey (CHES), was administered to adults in the 18-county MS Delta region to describe health behaviors and heart disease risk factors.

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**Overview**

The MS Delta is an 18-county area known for persistent poverty and high burden of chronic diseases and related risk factors. The MS Delta Health Collaborative (MDHC), an initiative of the MS State Department of Health (MSDH), provides leadership and guidance in the MS Delta region to improve the cardiovascular health of the population through the promotion of the ABCS: appropriate Aspirin use, A1c (hemoglobin control), Blood pressure control, Cholesterol management, and Smoking cessation. MDHC works to achieve these goals by putting into action heart disease and stroke prevention strategies that include environmental and systems changes, community-clinical linkages, and collaboration with a diverse group of partners.

The Cardiovascular Health Examination Survey (CHES) is a cross-sectional survey of health behaviors and heart disease risk factors that has been conducted in Washington, Kansas, Arkansas, and Oklahoma. CHES provides a comprehensive description and understanding of the heart disease burden among MS Delta residents. The MDHC CHES initiative began in 2011 and has helped to provide a more precise assessment of chronic disease in the Delta region. The Delta CHES was developed to help address the Healthy People 2010 focus areas of heart disease and stroke and to collect data that would guide or enhance the development, implementation, and evaluation of health promotion and chronic disease prevention and control activities in the MS Delta region.

**Selection and Recruitment Process**
The majority of participants were randomly selected by using US Postal addresses. A subsequent group of participants were self-selected and volunteered to participate in the survey. These individuals learned of the study through a communication campaign designed to inform the community of CHES and recruit potential participants. The campaign incorporated culturally appropriate approaches that included posters, local radio ads using blues music, and community health workers that participated in town hall meetings.

**Implementation Process**
During an in-home visit, trained examiners collected data from participants using three methods: health behavior and lifestyle questionnaire, physical examination, and blood specimen.

- **Health Behavior and Lifestyle Questionnaire.**
  A questionnaire was administered to collect data on participants’ medical history, cardiovascular disease (CVD) risk factors, health behaviors, and sociodemographics. Participants also provided their perceptions on policies that promote or hinder healthy choices.

- **Physical Examination.**
  Data collectors recorded measurements on height, weight, hip and waist circumference, and three resting blood pressure levels using standardized protocols.

- **Blood Specimen.**
  Participants were asked to fast 9 hours before data collection. Interviewers collected samples of blood to measure areas such as cholesterol levels, hemoglobin A1c, and insulin.
After completing the home visit, participants received a Food Frequency Questionnaire (FFQ) that was used to record the type, amount, and frequency of foods consumed over a 3-month period. Participants were also given a pedometer and a Daily Steps Diary to track the number of steps taken each day for five consecutive days.

Participants received a $45 gift card for completing the in-home visit, a $10 gift card for returning the FFQ, and a $10 gift card for returning the Daily Steps Diary. Participants also received their individualized health report and were encouraged to share the results with their health care provider. A local telephone number for health care provider referral information was included for those participants who did not have a health care provider. If participant results were above critical values, Delta CHES staff contacted the participant and used a standardized protocol for recommendations.

**Goals and Objectives**

The goal of the Delta CHES is to fill a population health gap by adding detailed information on CVD and CVD risk factors from Mississippi Delta residents to inform interventions designed to reduce morbidity, mortality and health disparities. The objectives of the Delta CHES are to (1) determine the prevalence and distribution of CVD and associated risk factors using self-reported and directly measured health metrics and (2) to describe resident perception of existing policies that support or deter healthy choices. The Delta CHES also sought to create a replicable, regional-level data collection model.

**Intended Participants**

Delta CHES participants were non-institutionalized individuals aged 18 years or older who reside in the 18-county MS Delta region. Delta CHES was also designed to communicate data to MSDH stakeholders to inform future strategies on preventing heart disease and stroke, and improving the health of Delta residents.

**Progress toward Implementation**

The data collection process was completed in July 2014. Data cleaning and analysis are underway, and dissemination of the results is planned for spring 2015.

**Community Involvement**

Delta CHES staff work in collaboration with community health providers to give local health provider referral information to participants. Delta CHES staff also work with other MDHC and MSDH community-based initiatives. For example, Delta CHES staff also participate in the MSDH’s Mobilizing for Action through Planning and Partnerships (MAPP). MAPP is a community-based accreditation initiative that has been used to promote MDHC and Delta CHES efforts.

**Reach and Impact**

Data were collected on more than 800 participants. There was a high-level of participation with the FFQ and Daily Steps Log with an 82% and 80% response rate, respectively. Findings from the Delta CHES meet a long-awaited need to comprehensively ascertain the cardiovascular health prevalence of the MS Delta population. Additionally, as an integrated model designed to assess the prevalence of cardiovascular disease and associated risk factors, the Delta CHES can serve as a model for collecting local, regional, or state-level data in other regions of the United States. Lessons learned from the planning, implementation, and dissemination phases of the Delta CHES can be used by other partner groups with an interest in accurately assessing the health of a population.