Collaborative Syndromic Surveillance by the Mississippi Department of Health and the University of Mississippi Medical Center

K. Mills McNeill, MD, PhD
State Epidemiologist

Brian W. Amy, MD, MHA, MPH
State Health Officer

Mississippi Department of Health
570 East Woodrow Wilson
Jackson, MS 39216

Why Syndromic Surveillance?

- *The threat of terrorism has changed the environment in which surveillance systems must operate.*
- *Passive disease reporting is not enough.*
- *Active disease detection must operate on an around-the-clock basis.*
- *Rapid response to terrorism events is required.*

Partnerships Now Required

- *Departments of health must partner with private and academic medical communities.*
- *The Mississippi Department of Health (MDH) is partnering with the University of Mississippi Medical Center (UMMC) to deploy a new, hospital-based, electronic surveillance technology.*
- *The system will detect both intentional events and naturally occurring emerging infectious diseases.*

Our Approach

- *UMMC is the largest academic teaching center in Mississippi and receives a wide spectrum of patients from over the state.*
- *Using CDC PHP CA monies, MDH purchased a commercially-available, state-of-the-art, decision-support system with a strong public health surveillance capability for installation at UMMC.*
- *MDH is the first state health department to partner with an academic teaching center to install this system.*

Modules of the System

- *Public Health Surveillance Assistant*
- *Antibiotic Assistant*
- *Adverse Drug Event Assistant*
- *Pain Management Assistant*
- *Infection Control Assistant*

Infection Control Assistant Module

- *Hospital-wide surveillance and reporting*
- *Continuous monitoring and analysis of patient data from multiple sources such as:*
  - *Electronic patient record*
  - *Pharmacy*
  - *Laboratory*
  - *Radiology*

Infection Control Assistant Module

- ***Notifiable disease alerts include:***

Anthrax	*Psittacosis*
Botulism	*Q fever*
Brucellosis	*Salmonellosis*
Cholera	*Shigellosis*
Glanders	*Smallpox*
Melioidosis	*Tularemia*
Plague	*Viral encephalitis*
VHF	

Public Health Surveillance Assistant Module

- *Provides real-time, event-based monitoring of HL7 data*
- *Permits early recognition of unusual trends across patient populations*
- *Uses indicators such as:*
  - *Laboratory and radiographic findings*
  - *Hospital admissions*
  - *Early death after admission*
  - *Outpatient visit counts*

Operational Timetable

- *Installation began in January 2005*
- *System is scheduled to be fully operational in June 2005*

Summary

- *Will detect intentional disease events*
- *Will detect naturally occurring emerging infectious diseases*
- *Future expansion to other Mississippi hospitals will be considered*