

# Epidemiologist Functions & Public Health Essential Services

(Adapted from *Essential Functions of Chronic Disease Epidemiology in State Health Departments*, September 2004: available at [www.cste.org](http://www.cste.org))

<b>Tier 1 – Essential Functions</b>	1. Surveillance
	2. Communication
	3. Consultation
<b>Tier 2 – Supportive and/or Coordinating Role</b>	4. Evaluation
	5. Education
	6. Investigation
	7. Mobilization
<b>Tier 3 – Limited Role</b>	8. Innovation
	9. Regulation
	10. Utilization

## Tier 1 - Surveillance

### Monitor health status to identify and solve community health problems

- Use surveillance methods to:
  - Assess burden of disease
  - Identify disease trends in general and subpopulations
  - Identify new problems of public health importance
  - Identify and track causes and risk factors
  - Evaluate changes in disease, health events or risk factors associated with public health interventions
- Develop & maintain surveillance systems to analyze and implement quality control
  - Analyze data from critical data sources
  - Encourage data integrity
  - Implement quality control
  - Ensure: usefulness, simplicity, flexibility, data quality, acceptability, accuracy and representativeness
- Provide leadership by coordinating information and resources across multiple systems existing in numerous agency to ensure comprehensive disease surveillance

## Tier 1 - Communication

### Inform, educate and empower people about health issues

- Report findings of surveillance efforts and investigations
- Interpret results and incorporate them into communications and publications
- Identify populations at risk and create appropriate messages to reach those populations
- Ensure target audiences understand message so it can be used for making health decisions

## Tier 1 - Consultation

### Develop policies and plans that support individual and community health efforts

- Collect, assemble, analyze, and interpret surveillance and evaluation data to provide information for planning and evaluating public health programs and policies, and for establishing goals and priorities
- Guide and educate decision makers in the interpretation and use of scientific evidence for program planning and new policies

# **Epidemiologist Functions & Public Health Essential Services**

- Review, synthesize and interpret the literature to ensure program plans are linked to desired outcomes and new policies are evidence-based
- Provide technical assistance on accessing and understanding epidemiologic information to the general public, legislators and collaborators (medical professionals, academicians, non-profit organizations, etc.)

## **Tier 2 - Evaluation**

### **Evaluate effectiveness, accessibility, and quality of personal and population-based health services**

- Design, implement, and coordinate scientifically-sound evaluations of program outcomes, assessing effectiveness, accessibility and quality
- Provide information on using evaluation results to increase existing program's effectiveness, and to design new programs to address identified needs
- Perform evaluation research activities (analysis and data interpretation) about program impacts (quantitative and qualitative)

## **Tier 2 - Education**

### **Assure a competent public health and personal health care workforce**

- Training and technical assistance in use of surveillance tools, study design, data analysis methods and tools, data interpretation
- Ensure consistent approaches and methods for surveillance, disease investigations, and evaluation
- Ensure public health officials understand and use data for decision-making
- Integrate chronic disease epidemiology expertise into program planning and implementation,
- Aid health care providers in developing evidence-based guidelines for screening and managing chronic diseases and that appropriate actions are taken to address these diseases

## **Tier 2 – Investigation**

### **Diagnose and investigate health problems and health hazards in the community**

- Promptly investigate unusual chronic disease occurrences
- Identify and quantify health risks associated with environmental exposures, personal and social risk factors
- Diagnose long-term health threats based on risk factors
- Collect and correlate data from disparate sources and collaborate with multiple programs and agencies

## **Tier 2 – Mobilization**

### **Mobilize community partnerships and action to identify and solve health problems**

- Create and facilitate partnerships and use data collected from partnerships to inform community, policy makers and others to develop action plans to solve defined health problems
- Use data collected from partnerships to inform community, policy makers and others to develop action plans to solve defined health problems
- Ensure action plans are based on appropriate data interpretation and research-based best practices, linking science-base interventions and outcomes

# **Epidemiologist Functions & Public Health Essential Services**

## **Tier 3 – Innovation**

### **Research for new insights and innovative solutions to health problems**

- Review scientific literature, perform original research, and collaborate with others to develop new approaches for conducting surveillance, investigations and evaluations; design innovative public health interventions emphasizing prevention
- Provide decision-makers with interpretation of scientific research and implications for public health programs

## **Tier 3 - Regulation**

### **Enforce laws and regulations that protect health and ensure safety**

- Collect, analyze and report data on critical health issues related to chronic diseases to:
  - Enable officials to take action regarding violations of current laws and regulations
  - Inform policy makers of potential impact of changing laws and regulation

## **Tier 3 - Utilization**

### **Link people to needed personal health services and assure the provision of health care when otherwise unavailable**

- Collect, analyze and report data on availability, access and utilization of personal health services, prevention and health promotion programs among population subgroups, including trends over time