

Capacity Building

Samuel J. Stratton, MD, MPH
Harbor-UCLA Medical Center
Los Angeles County EMS Agency

Capacity Building

◆ Two Research Kingdoms

■ Experimental

- ◆ Control variables to limit bias

■ Observational

- ◆ Variables difficult to control, risk of bias

Types of Observational Studies

- ◆ **Analytical (comparison group)**
- ◆ **Descriptive (without a comparison group)**
 - **Surveillance studies**
 - **Cross-sectional (prevalence) studies**
 - **Ecological correlation studies**
 - **Case-series reports**
 - **Case reports**

Public Health Responsibilities in Disasters

- ◆ **Prevent or minimize the public health threat when possible**
- ◆ **Respond quickly and effectively when disaster does occur**
- ◆ **Coordinate a unified response to disaster**
- ◆ **Restore normalcy as quickly as possible**

Surveillance

◆ Information Networks

- **These are ongoing field data collection systems that are used to show variations in predicted health trends, such as influenza**
- **Allow for prompt identification of public health threats**
 - ◆ **Example: West Nile Virus outbreak in New York State (Gotham et al, J Public Health Manag Pract, 2001)**

Prompt Response

- ◆ **A prompt, effective response is dependent on planning**
 - **Example: Y2K and hospital preparedness (Silber et al, Prehosp Disaster Med, 2001)**
- ◆ **Matching needs and resources**
 - **Example: Rapid Needs Assessment (Guha-Sapir, World Health Stat Q, 1991)**
 - ◆ **Simplicity**
 - ◆ **Speed**
 - ◆ **Operational feasibility**

Effective Response

- ◆ **Requires application of known methods that have proven to be effective**
 - **Example: Post-disaster vaccination programs (Noji, Prehosp Disaster Med, 2000)**
 - ◆ **Mass vaccination programs:**
 - **Divert limited personnel and resources from other tasks**
 - **Create a false sense of security and decrease basic hygiene efforts (consider multiple bioterrorist agents)**

Summary

- ◆ Evidence-based knowledge from natural and technological disaster experiences readily transfer to public health planning for terrorist events:
 - Anticipate and Plan
 - Identify threat or disaster promptly
 - Assess and match resources to needs
 - Prevent further adverse effects
 - Evaluate effectiveness