# Role of the Emergency Medical Services (EMS) System in Public Health Emergency Response

Michael J. Reilly, MPH NREMT-P<sup>1</sup> David S. Markenson, MD EMT-P<sup>2</sup>



<sup>1</sup>Assistant Director, Center for Disaster Medicine Assistant Professor of Public Health Practice New York Medical College, School of Public Health

<sup>2</sup>Director, Center for Disaster Medicine Associate Professor of Public Health Practice New York Medical College, School of Public Health



# Introduction

- The emergency medical services (EMS) system is one of the key components in disaster, terrorism and public health emergency preparedness and response.
- The EMS system has developed over the past 30 years into an effective means of delivering prehospital medical care.
- Public health agencies across the United States typically provide regulatory oversight of emergency medical services.
- Recent studies have demonstrated the value of a EMS/public health partnership in increasing a community's preparedness to disasters and other public health emergencies.

## **Methods**

# • 2 Separate Studies

- LEADS
  - A nationally representative sample of the 203,465 basic and paramedic emergency medical service providers in the United States was surveyed to assess training in core areas of public health emergency preparedness and their ability and willingness to perform public health duties in addition to their traditional job functions.
- NYC Metropolitan Region Provider Survey
  - A representative sample of all EMS agencies in the northern metropolitan New York City region were surveyed to determine their capacity to provide staffed ambulances to area hospitals during a disaster or pubic health emergency.
- Additionally, a literature review was performed of EMS systems and public health preparedness collaborations.

### **Methods**

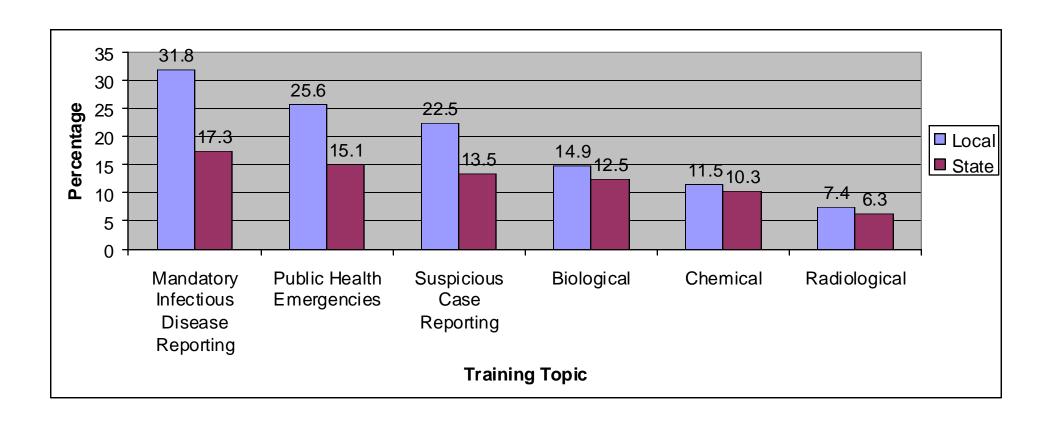
L ongitudinal
 E mergency Medical Technician
 A ttributes &
 D emographics
 S tudy



- The LEADS project is a longitudinal study project hosted by the National Registry of Emergency Medical Technicians (NREMT). It is designed to describe the attributes and demographic information that accurately reflect the individuals providing emergency medical services throughout the United States.
- The project began in August 1998 and is led by a team of researchers made up of State EMS Directors, State EMS Training Coordinators, EMS System Managers, Emergency Physicians, EMS Educators, survey researchers, and staff of the NREMT. Longitudinal data and cross sectional data are collected annually. Data collected will allow for description of the EMT population, their work activities, working conditions, and job satisfaction. Most importantly, these data permit longitudinal analyses in addition to cross sectional data analyses gained from snapshot surveys.

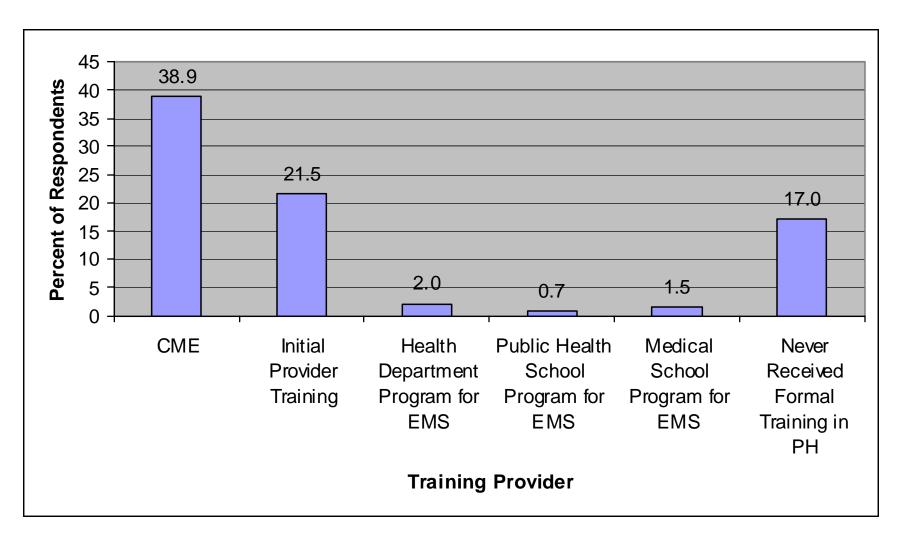
## **Results - LEADS**

#### Types of training provided by local and state health departments to EMS personnel

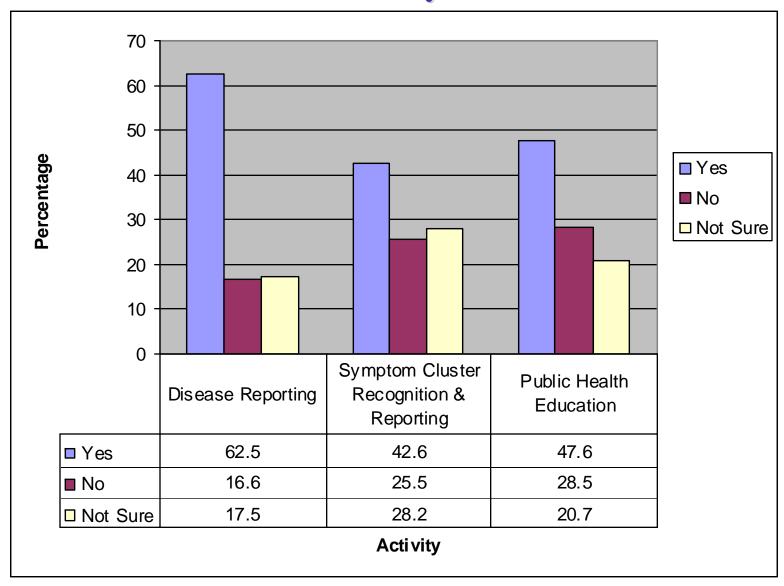


## **Results - LEADS**

Where are EMS providers receive training on public health topics.



# Public Health Activities Emergency Medical Services (EMS) Providers State they Can Perform While on Duty (LEADS)



# Results - NYC Metropolitan Region Provider Survey

- Despite the staffing levels only 15.1% of the agencies surveyed stated they would NOT be able to provide staffed ambulances to area hospitals or medical centers to assist in transferring patients to other facilities or rapidly discharging patients to make room for disaster victims.
- However, only 12.1% of services stated that they had formal agreements with acute or non-acute care hospitals to provide dedicated ambulances in the setting of a natural or man-made disaster, terrorist event, mass casualty incident, or public health emergency.

# **Conclusion**

- There is good evidence that an EMS-public health partnership can work to enhance the overall ability of the health system to deliver the necessary emergency medical care to the public during many types of disasters and public health emergencies.
- EMS can offer the public health community a wealth of resources including vaccine administration, case and contact tracing, prehospital and emergency communications syndromic surveillance, and increased surge capacity through health care facility evacuation and mass patient transportation.

# **Questions, Comments...**





Prof. Michael J. Reilly
New York Medical College, School of Public Health
Center for Disaster Medicine
Valhalla, New York USA
michael\_reilly@nymc.edu