

The Strategic National Stockpile and Mass Prophylaxis

Melanie Simons, MPH

Office of Emergency Preparedness &
Response, CDPHE



CO L O R A D O

**Department of Public
Health & Environment**

The Strategic National Stockpile

Prepare partners and provide the right materiel at the right time to secure the nation's health.



Strategic National Stockpile

- Created in 1999
- Federally controlled cache of medical countermeasures (medical supplies, antibiotics, antivirals, antidotes, antitoxins, vaccines and other pharmaceuticals)
- Network of strategically located repositories that can be deployed quickly



Strategic National Stockpile

- Can only be requested by OEPR, CDPHE and the Governor
- **Two stages:**
 - 12-Hour Push Packages containing generic meds and supplies
 - Managed Inventory (MI) for specific events



If there is a need for supplies not stockpiled, CDC can purchase elsewhere (eg. DOD or VA)

Broad Spectrum Support

12-hour Push Packages

- 12 packs strategically located throughout the U.S.
- Delivered by world-class transportation partners
- Each push package:
 - 130 containers weighing over 50 tons
 - Fits in a wide-body cargo aircraft
 - 500,000 10-day antibiotic regimens
 - Requires 12,000+ sq ft warehouse space



What is a Medical Countermeasure (MCM)?

- Interventions used to prevent, mitigate, or treat the adverse health effects of an intentional, accidental, or naturally occurring public health emergency
- *Pharmaceutical* interventions, such as vaccines, antibiotics, antivirals, antidotes, and antitoxins
- *Non-pharmaceutical* interventions, such as ventilators, diagnostics, personal protective equipment (PPE), and patient decontamination equipment

SNS Medical Countermeasures



Pharmaceuticals

- *Antibiotics (Oral and IV)*
- *Vaccines and Antitoxins*
- *Antivirals*
- *Radiation Countermeasures*
- *Nerve Agent Antidotes*

Non-Pharmaceutical Medical Supplies

- *IV Administration*
- *Airway Management*
- *Wound Care*
- *Burn & Blast Care*
- *Masks, Respirators, & Ventilators*
- *Gloves and Gowns*





Medical Countermeasures for Specific Biological & Other Threats

- Based on Category A Threat Agents

- Smallpox
- Anthrax
- Botulism
- Viral Hemorrhagic Fevers
- Plague
- Tularemia



- And other Threats

- Nerve Agents, Pandemic Influenza, Radiological, Etc.



SNS Products by Threat

Threat	Key Products in the SNS to Help Treat/Prevent Threat*
Anthrax	Antibiotics (Ciprofloxacin, Doxycycline, Amoxicillin Penicillin, Clindamycin, Rifampin, Vancomycin, Levofloxacin), Anthrax Immune Globulin, ABthrax, , Anthrax Vaccine Adsorbed (AVA)
Plague	Antibiotics (Ciprofloxacin, Doxycycline, Gentamicin)
Tularemia	Antibiotics (Ciprofloxacin, Doxycycline, Gentamicin)
Smallpox	Vaccine (Acam2000, Aventis Pasteur-WetVax, Modified Vaccinia Ankara) Treatment of adverse reactions to vaccine: Vaccinia Immune Globulin, Cidofovir
Botulism	Antitoxins (Heptavalent, A,)
Chemical	Chempack - Atropine, Pralidoxime, Diazepam
Radiation	Prussian Blue, CA DTPA, ZN DTPA, Antiemetics, Neupogen, NAC (n-acetylcysteine)Limited IV antibiotics for secondary infections,
Burn/Blast	Medical/Surgical Supplies, IV Fluids
Influenza (Pandemic)	Antiviral drugs (oseltamivir, zanamivir), Personal Protective Equipment, Limited IV antibiotics for secondary infections
Natural Disasters	Medical/Surgical Supplies, IV Fluids, Federal Medical Stations (FMS)

Federal Medical Stations

A Federal Medical Station (FMS) is a cache of medical supplies and equipment that can be used to set up a temporary non-acute medical care facility.

Each FMS has beds, supplies and medicine to treat 250 people for up to three days.

MRC Volunteers could be asked to work in an FMS



Overall Justification for Requesting the SNS

- Occurrence of chemical, biological, radiological, nuclear or explosive event
- Medical or public health emergency caused by a natural disaster
- Claim or threat of attack determined by law enforcement intelligence (CIAC)
- Unexplained increases in emergency medical service requests
- Unexplained increases in antibiotic prescription or OTC use

Medical Justification for Requesting SNS

- Clinical, laboratory or epidemiological indications of a medical or public health event
 - Large number of persons w/ similar symptoms, disease, syndrome
 - A higher than normal morbidity and mortality rate from a common disease
 - Failure of common disease to respond to usual therapy
 - Multiple unusual or unexplained disease entities in the same patient

Medical Justification for Requesting SNS (cont)

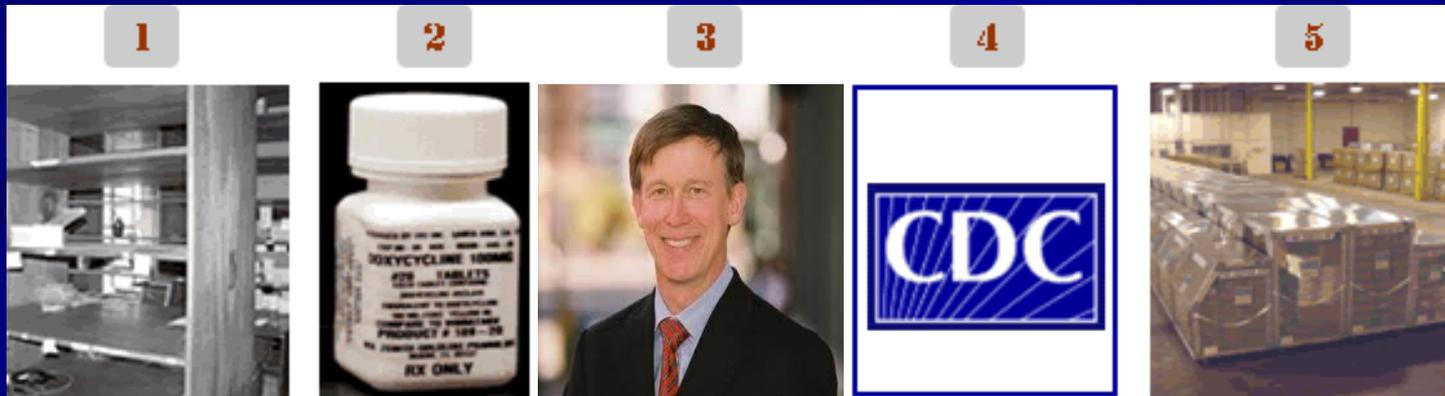
- Multiple atypical presentations of disease agent
- Similar genetic type in agents isolated from temporally or spatially distinct sources
- Unusual, genetically engineered, or an antiquated strain of a disease agent
- Simultaneous clusters of similar illness in non-continuous areas
- Atypical aerosol, food, or water-borne transmission of a disease

Regional & Local Considerations

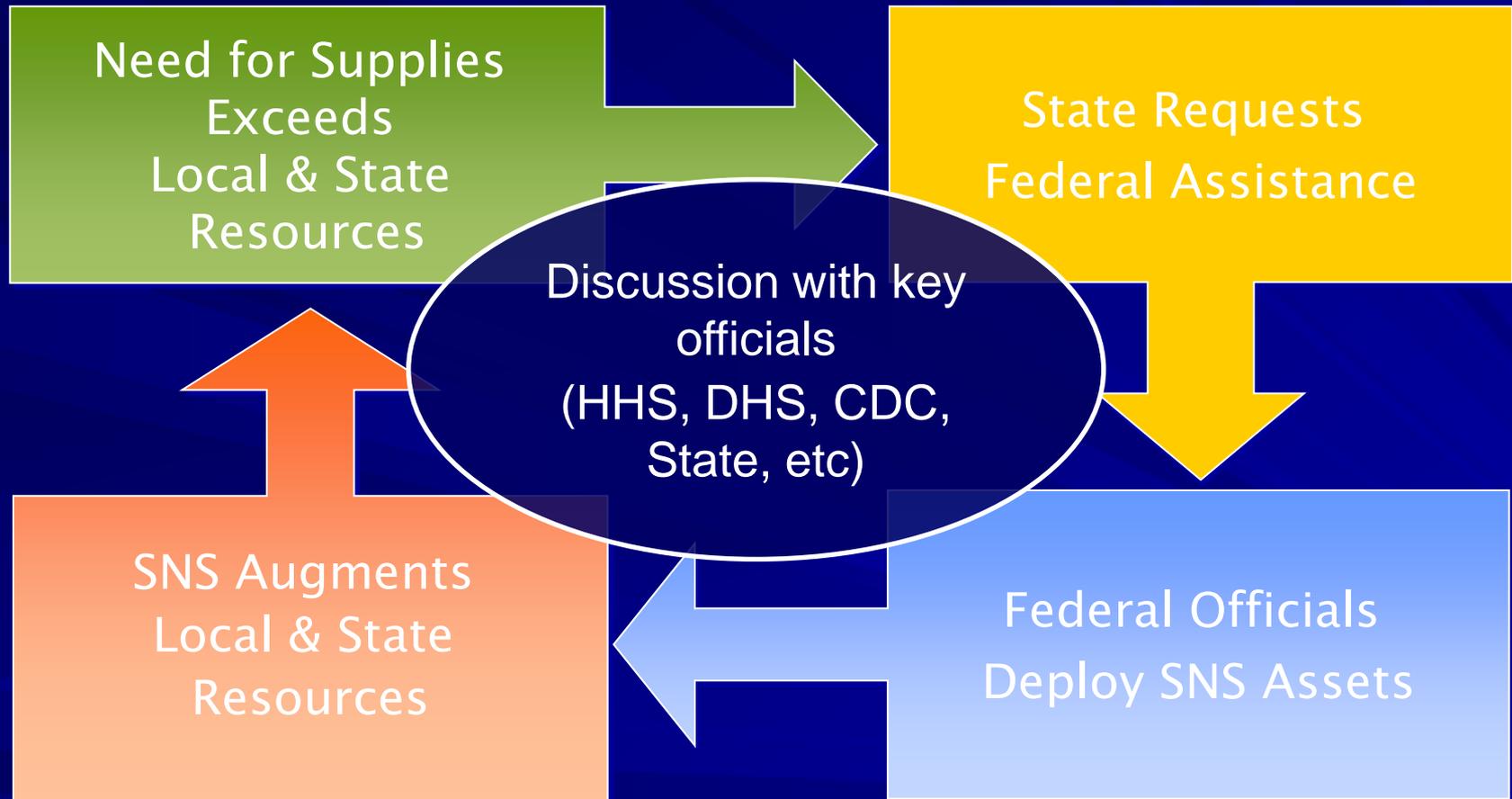
- Number of current casualties exceeding the local response capabilities available
- Projected needs of the population of the area (including transients-eg. mountain communities)
- Hospital surge capacity at the time of event
- State resource availability including pharmaceutical and oxygen distributors, nearby hospitals, transportation services
- Local resource availability

REQUESTING THE SNS

1. State/Local resources are insufficient or depleted
2. The Governor and OEPR are advised by the Governor's Expert Emergency Epidemic Response Committee (GEEERC)
3. OEPR makes the request to CDC
4. DHHS authorizes deployment of Push Package or Designated Managed Inventory



SNS Asset Request Flow



SNS Delivery Sequence

Federal

Storage & Transport



RSS Site

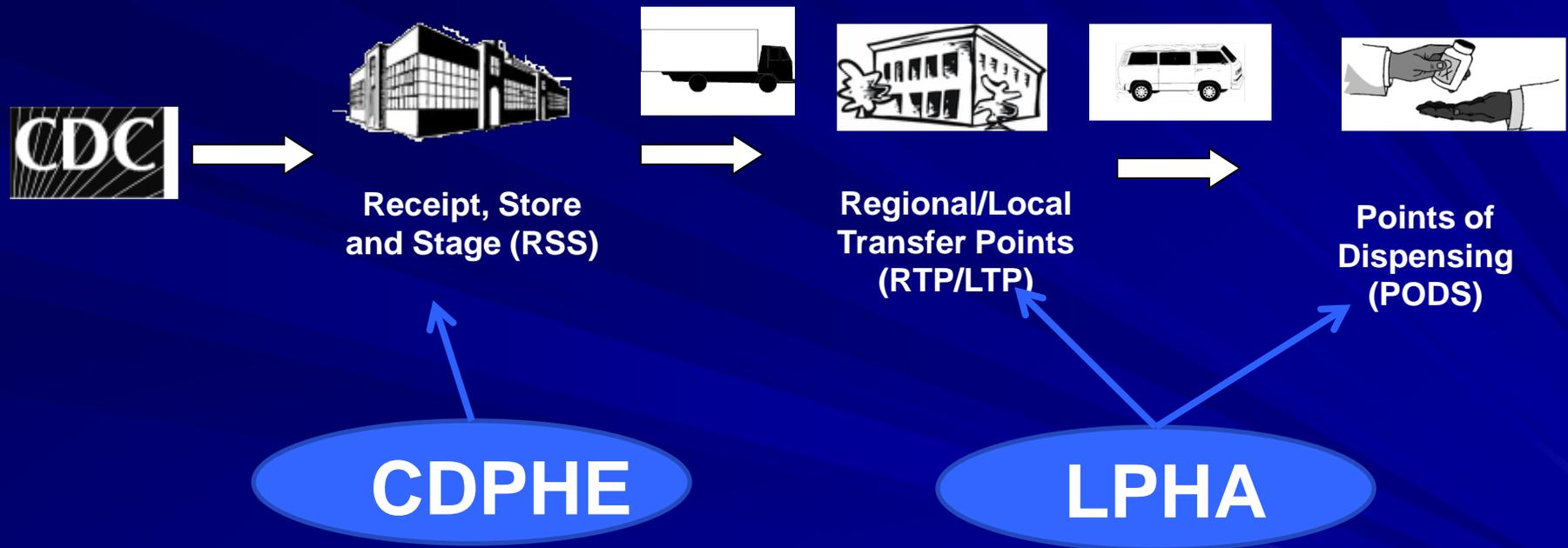


Local

PODs & Treatment Centers

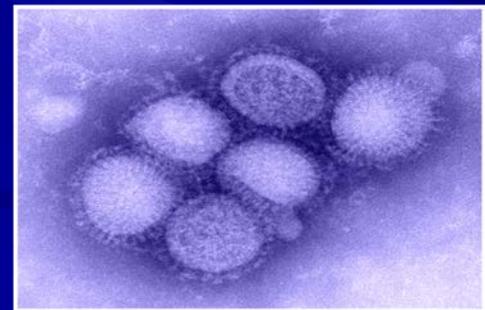


Colorado Distribution Process



SNS Response History

- 2001 New York City 9/11 Attacks and 2001 Anthrax
- 2005 Hurricanes Katrina & Rita
- 2009 H1N1
- 2010 Haiti Earthquake and Red River Floods in North Dakota
- 2011 Hurricane Irene and Japan Earthquake
- 2012 Superstorm Sandy (Federal Medical Stations)
- 2016 Zika Response-USVI, Puerto Rico, American Samoa (pregnancy kits)



Points of Dispensing (PODs) for Mass Vaccination/Prophylaxis and Medical Surge



What is Prophylaxis?

(Clue: it is not a contraceptive device)

- *Prevention of or protective treatment for disease and control of its possible spread*



Antibiotics

(eg. Doxycycline, Ciprofloxacin, Levofloxacin, Amoxicillin)



Antivirals

(eg. Tamiflu, Relenza)



Vaccine

(eg. Influenza, Smallpox, Anthrax)

State Planning Considerations for Mass Prophylaxis

- What is the incident?
 - Anthrax (antibiotics)
 - H1N1 (antivirals, vaccine)
- What is the availability of other resources in state?
- Are distribution operations ready to activate? (RSS, RTPs, transportation, security, staff)
- How will assets be delivered to POD sites?
- How quickly can dispensing sites be opened and meds dispensed to the public?
- How many staff and volunteers are available to assist with distribution and dispensing operations?

Regional/Local Planning Considerations for Dispensing and Prophylaxis

- How will we dispense to the public?
 - Public Points of Dispensing (PODs)
 - Closed PODs
 - Home delivery to those with functional and special needs
- Do our POD and RTP sites have adequate transportation and security and security plans?
- Do we have MOUs/MOUs in place for certain resources (eg. volunteers, food, essential employee med caches)
- Who will staff our PODs? (eg. LPHAs, county employees, MRC volunteers, Behavioral Health staff)
- How do we request Medical Supplies? Non-medical supplies?

POD Types

Open (Public) PODs

- Schools
- Fairgrounds
- Sports Arenas
- Local Health Departments
- Community Centers

Closed (Employee) PODs*

- Large Businesses
- Universities
- HMOs (eg. Kaiser)
- Health facilities (eg. Nursing Homes)
- State/Federal Agencies
- Military Bases

* includes family members

Role of Behavioral Health in a Mass Prophylaxis Event

- Community/patient education at the PODs
- Crowd control (providing stress management, validation, just-in-time education etc)
- Responder support (helping POD staff to handle their stress/fear).
- Development and support of social distancing messages and strategies

We need your input!

Cities Readiness Initiative

- The Cities Readiness Initiative (CRI) is a federally funded effort to prepare major US metropolitan areas to effectively respond to a large scale bioterrorist **anthrax** event by dispensing antibiotics to the entire identified population within 48 hours of the decision to do so. The antibiotics or other medical supplies are contained in the Strategic National Stockpile (SNS).

Cities Readiness Initiative

- The CRI project started in 2004 with 21 cities, including the Denver Metro Region
- In 2005, CDC funded 15 additional cities and 36 cities in 2006 for a total of 72 participating cities, including at least 1 CRI city each state
- The CRI Jurisdiction in Colorado encompasses the North Central Region and part of the South Central Region which includes the following counties: **Adams, Arapahoe, Boulder, Broomfield, Clear Creek, Denver, Douglas, El Paso, Elbert, Jefferson and Park**

CO All-Hazards Regions

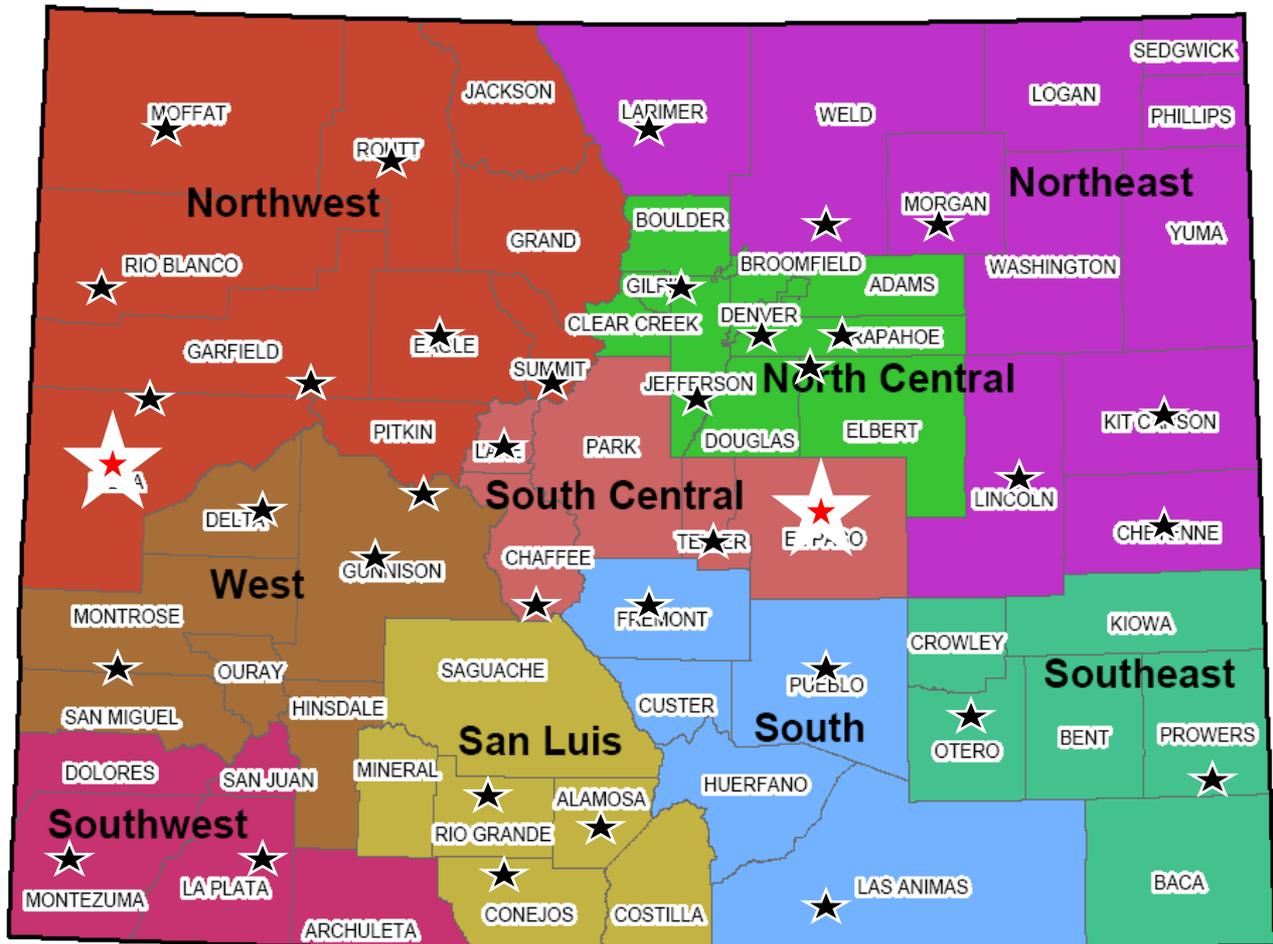
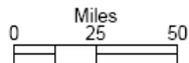
Colorado All Hazards Emergency Management Regions

All Hazard Emergency Management Regions

- South Central
- North Central
- Northeast
- Northwest
- San Luis
- South
- Southeast
- Southwest
- West



Map Printed May 1, 2003
by MapTern Productions
for CCI
Data Source: Colorado
Department of Local Affairs



Cities Readiness Initiative

- Funding for CRI is provided through CDC's Public Health Emergency Preparedness (PHEP) Cooperative Agreement. The funding is provided to enhance the mass dispensing capabilities of the CRI cities and jurisdictions.
- In addition, the United States Postal Service (USPS) is working with select CRI cities to develop Postal Plans, in which mail carriers will deliver antibiotics to the homes in selected zip codes (not in Colorado at the time)

Planning & Operational Requirements- for the CRI Jurisdictions

- Capability 1: Community Preparedness
- Capability 3: Emergency Operations Coordination
- Capability 4: Public Information and Communication
- Capability 6: Information Sharing
- Capability 8: Medical Countermeasure Dispensing
- Capability 9: Medical Materiel Management & Distribution
- Capability 14: First Responder Safety and Health
- Capability 15: Volunteer Management



Community Containment

- Social Distancing

- Isolation

- Quarantine

Social Distancing

- Social Distancing means keeping people apart
- Two main Social Distancing strategies:
 - Isolation
 - Quarantine



Isolation

- Symptomatic
 - Hospital
 - Negative pressure
 - Respiratory precautions
 - In home



Quarantine

- Exposed, No symptoms
- At home
- Monitored
- Good tool if used well

SARS ALERT!

FACTS ABOUT HOME QUARANTINE ORDER



The Home Quarantine Order (HQO) serves to reduce the risk of the community's exposure to SARS. Early isolation of those who have been in contact with infected persons will break the chain of transmission and control the spread of SARS.

WHO WILL BE ISSUED A HQO?

Most people issued with HQO do not end up becoming ill with SARS but are quarantined because they :

- have had contact with SARS patient
- are a discharged SARS patient
- are discharged non-SARS patient with chronic illness which may affect the SARS symptoms, or from hospitals that had exposure to SARS or suspect patients.

Those on quarantine are well and not infectious unless they develop a fever.

Ministry of Health

WILL NEIGHBOURS OF THOSE UNDER HQO BE AT RISK?

Neighbours of those on HQO need not fear a similar Amoy Gardens incident occurring in Singapore. In the case of Amoy Gardens, infected people had spread the disease. Those under quarantine in Singapore do not show symptoms and are not contagious.

HDB and private apartments in Singapore comply to strict hygiene standards and our sewage systems are well designed to prevent contamination by waste materials.



WHAT HAPPENS TO PEOPLE UNDER QUARANTINE?

They are required to stay at home and check their temperature, which will be monitored by the Ministry of Health.

If they develop a fever, an ambulance will be despatched immediately to send them to Tan Tock Seng Hospital for screening and treatment if necessary.

ARE PEOPLE ON HQO GIVEN GOVERNMENT ASSISTANCE?

Our Government provides financial assistance to those on HQO. Self-employed persons receive a grant of \$70 per day throughout the quarantine period. Employers are reimbursed the actual salary of their employees, up to \$70 per day.

WHY PEOPLE ON HQO NEED OUR SUPPORT?

People on HQO have not committed any offence nor behaved irresponsibly. In fact, they are being socially responsible to avoid contaminating others around them.

They do not intentionally expose themselves to SARS. It is unkind to judge them as trouble-makers. We should give them our sympathy and support rather than discriminate against them.

WHAT CAN WE DO TO HELP THOSE UNDER QUARANTINE?

People and families under quarantine need your support and encouragement, especially from their relatives, friends and neighbours. We can ease their stress and difficulties of being confined at home by :

- showing understanding
- providing emotional support
- helping them run errands and send them food.

MDH Special Ambulance Hotline: **993**

For enquiries, call Ministry of Health Hotline: **1800 333 9999**

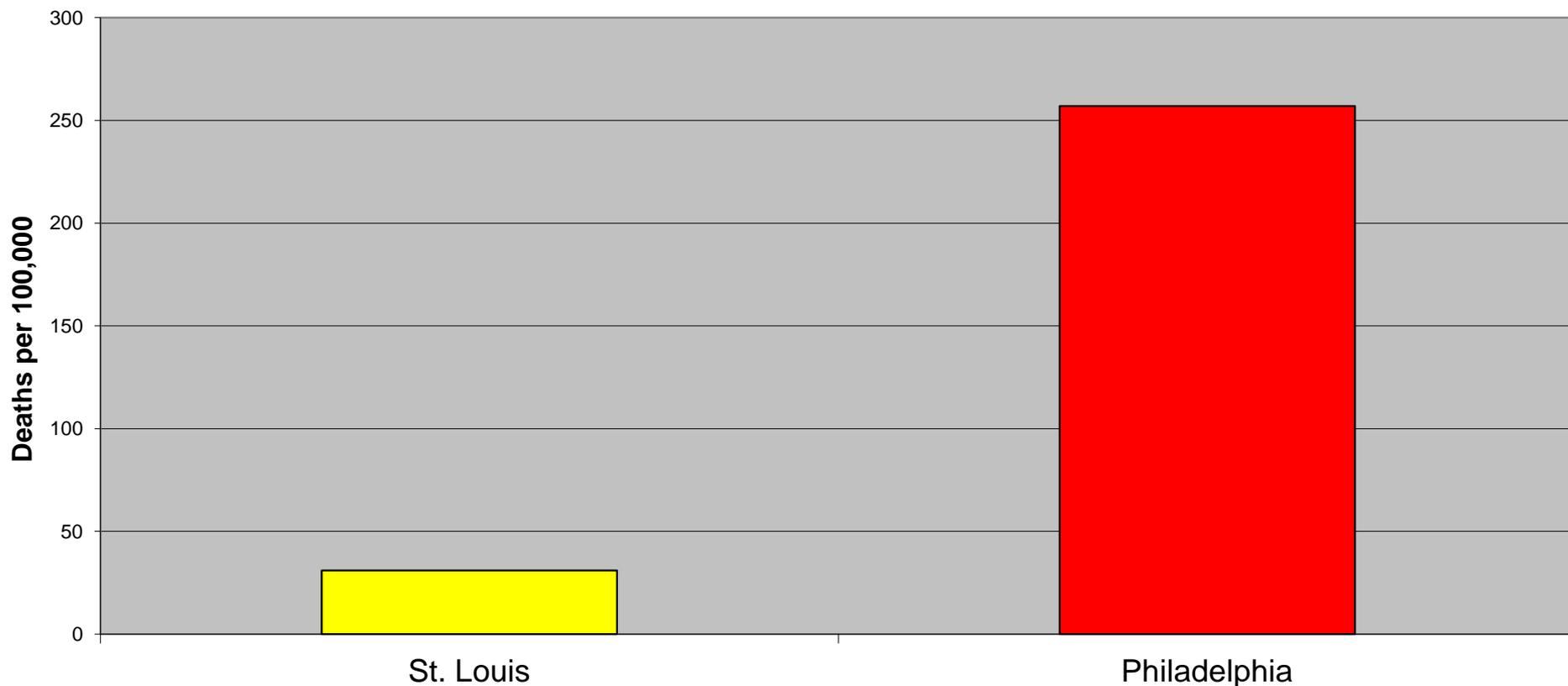
Log on: www.moh.gov.sg/sars or www.epic.gov.sg

How well does Social Distancing work?

- 1918 Pandemic: St. Louis vs. Philadelphia
 - In **St. Louis**, officials implemented social distancing within two days of the first cases of influenza
 - In **Philadelphia**, officials downplayed the illness, and even held a scheduled parade
 - Social Distancing measures were not implemented until weeks after the first cases of influenza

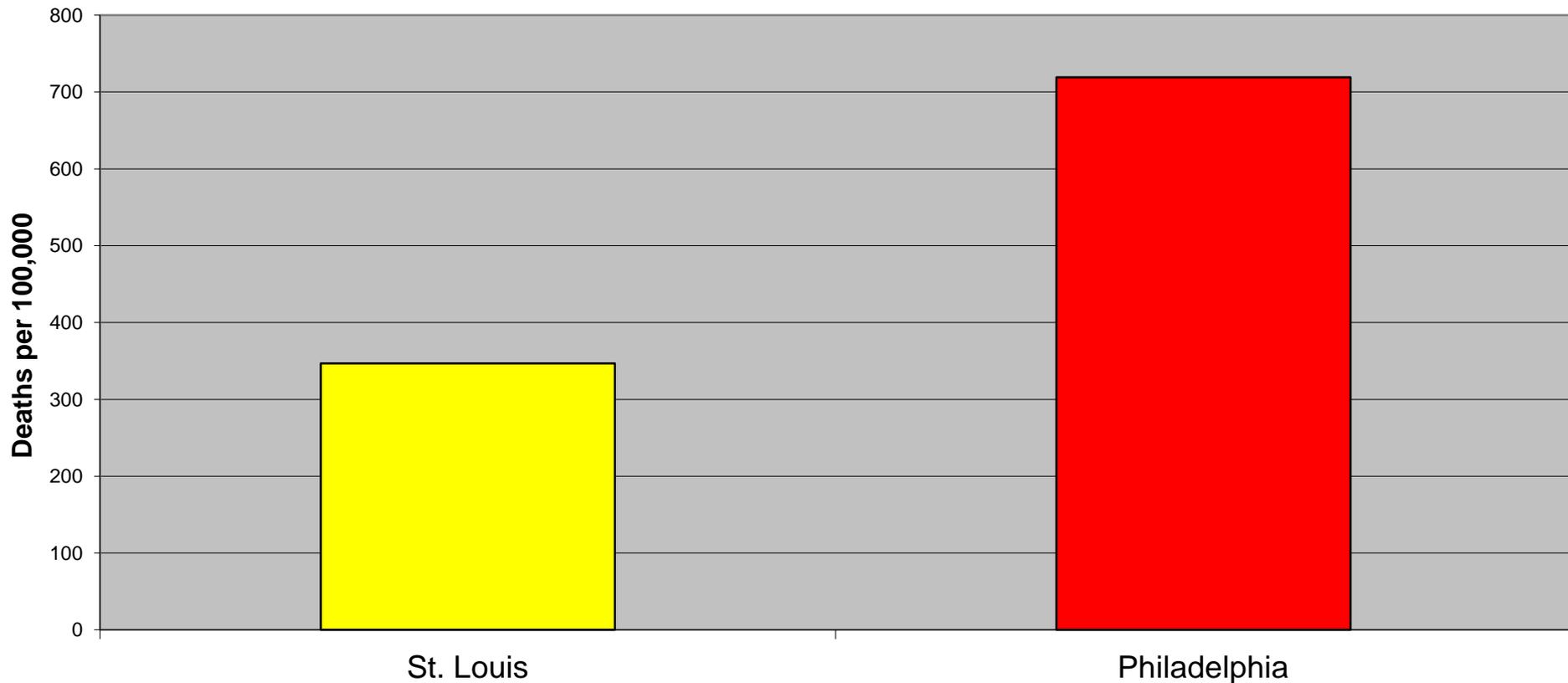
A Tale of Two Cities: Philadelphia & St. Louis

Highest Weekly Death Rate



A Tale of Two Cities: Philadelphia & St. Louis

Final Death Rate



If Social Distancing is needed...

- Public Health has the legal authority to implement Social Distancing measures
- If measures are implemented
 - Stay home!
 - Encourage your friends and family to stay home too
- If some people won't follow the measures
 - Public Health can “persuade” them to reconsider





QUESTIONS ?

Melanie Simons, MPH
SNS Program Manager

Melanie.Simons@state.co.us

303-692-2950



COLORADO

Department of Public Health & Environment