



Community Preparedness

A Multidisciplinary Approach to Public Health in Southern Connecticut

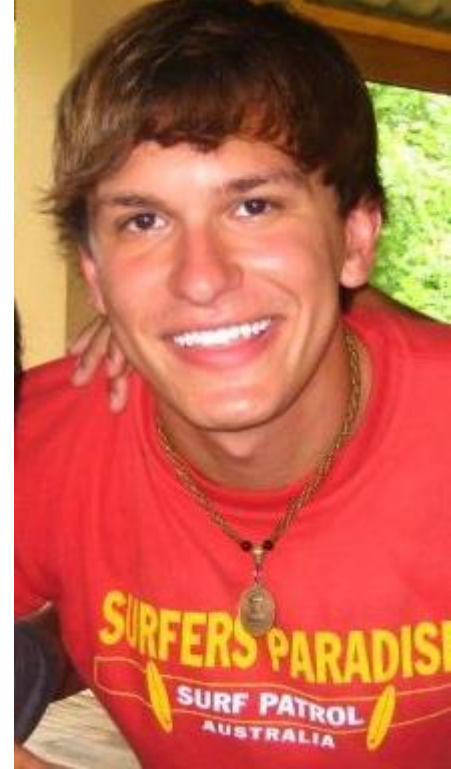
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2013

About The Author

- ▶ **Candidate for the degree:**
 - **MASTER OF PUBLIC HEALTH**
- ▶ **Emphasis area:**
 - **FOOD SAFETY AND BIOSECURITY**
- ▶ **Projected Graduation:**
 - **MAY, 2013**
- ▶ **Undergraduate degree:**
 - **B.S. Animal Science: Pre-Medicine, University of New Hampshire, 2008**



Background

- ▶ 240+ field experience hours were completed at **Naugatuck Valley Health District (NVHD)** in Seymour, CT between September and December, 2012.
- ▶ The **NVHD** is the **official public health entity** for **six coastal and inter-coastal Connecticut towns and cities**: Ansonia, Beacon Falls, Derby, Naugatuck, Seymour, and Shelton.

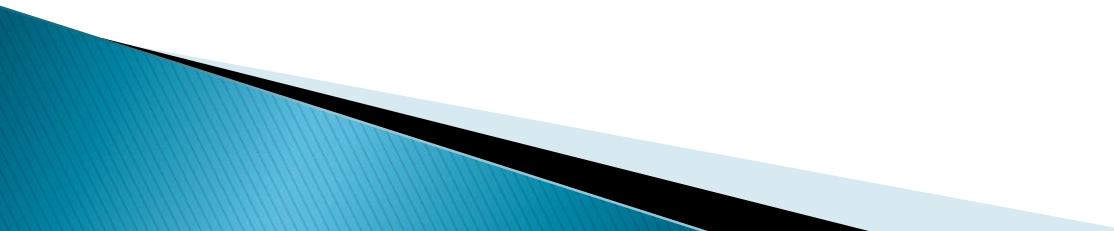
The NVHD Mission:

“NVHD is committed to improving the quality of life for all we serve through the promotion of health, prevention of disease and by assuring a safe and clean environment.”



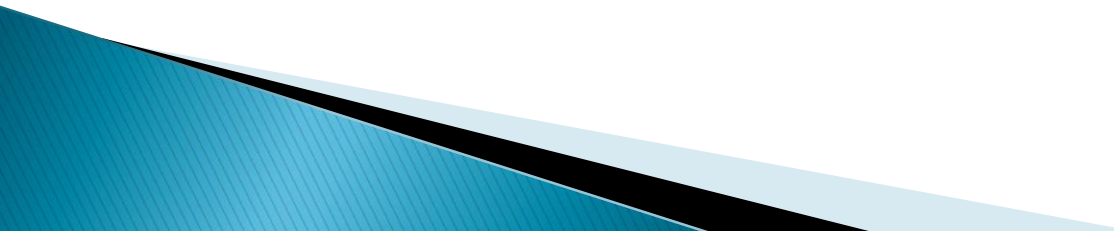
About the NVHD

The **NVHD** is comprised of **four separate divisions**:

- ▶ Environmental Health
 - ▶ Community Health
 - ▶ Emergency Preparedness, and
 - ▶ Administration
- 

Field Experience Overview

Field experience hours were spent working within **all four health district divisions** to improve **community preparedness** in the fields of:

1. Emergency Response
 2. Food Safety
 3. Senior Citizen Emergency Planning
 4. Radon Awareness
- 

Culminating Project Overview

- ▶ As a culminating project, **the Naugatuck Valley Medical Reserve Corps (NV-MRC)** was created.

The NV-MRC is a network of medical and non-medical volunteers who wish to contribute to public health initiatives and supplement existing response capabilities in times of emergency in the Naugatuck Valley.

5 Core Competencies

- ▶ The **Master of Public Health** program, at Kansas State University, promotes proficiency in **five core public health competencies**:

1. Biostatistics
2. Environmental Health
3. Epidemiology
4. Health Services Administration
5. Social and Behavioral Health

The report attached to this presentation presents detailed and specific examples of core competency knowledge and skills, in public health, from the projects performed at NVHD.

Core Competency	Major Project
Biostatistics	<ul style="list-style-type: none"> - NV-MRC - Senior Citizen Emergency Planning
Environmental Health	<ul style="list-style-type: none"> - NV-MRC - Radon Awareness - Senior Citizen Emergency Planning
Epidemiology	<ul style="list-style-type: none"> - NV-MRC - Radon Awareness - Food Safety by Season Program
Health Services Administration	<ul style="list-style-type: none"> - NV-MRC
Social/Behavioral Health	<ul style="list-style-type: none"> - NV-MRC - Senior Citizen Emergency Planning



Culminating Project

**Organization, Recruitment, Training
and Credentialing of the Naugatuck
Valley Medical Reserve Corps**

NV-MRC



The **Division of Civilian Volunteer Medical Reserve Corps** (DCVMRC) is “a national network of local groups of volunteers committed to improving the public health, emergency response, and resiliency of their communities”

(MRC, 2013b)

INTRODUCTION:

- ▶ Prior to September 2012, Connecticut was supported by twenty regionalized MRC organizations
- ▶ However, the six Connecticut cities which comprise the Naugatuck Valley region did not fall within any of these MRC supplemented jurisdictions
- ▶ As a culminating experience, work ensued on facilitating the development of the Naugatuck Valley Medical Reserve Corps (NV-MRC) from September to December 2012

OUTLOOK:

- ▶ Through continued public health efforts, the NV-MRC aims to garner significant community support and continue to be an ongoing, emergency support organization
- ▶ The NV-MRC volunteers' focus is to better prepare the valley community for future natural disasters, bioterrorism attacks, and any related public health emergencies in which existing response operations become overwhelmed

INCEPTION:

- ▶ During the inception phase of the NV-MRC in September 2012, two documents were required to secure Connecticut state funding
- 1. **NV-MRC Capacity Building Plan** – broadly highlights NV-MRC organizational, recruitment, engagement, recognition, retention, screening, and verification procedures
- 2. **Three year NV-MRC Strategic Plan** (2013 – 2016) – more specific in that it includes the mission, visions, situations, goals, objectives, and strategies promoted through the NV-MRC program

NV-MRC



RECRUITMENT/PROMOTION:

- ▶ An on-going promotional push has been enacted to recruit medical and non-medical NV-MRC volunteers
- ▶ A variety of promotional methods and items were produced to meet **objective #1**, outlined in the three year strategic plan:

OBJECTIVE #1: *“Recruitment of a total of 100 active volunteer responders to assist in management of a public health emergency by January 1, 2016”*

- ▶ The NV-MRC had an initial startup of 26 members in September, 2012
- ▶ As of January 2013, the NV-MRC had recruited a total of 40 active volunteers
- ▶ Of these 40 active volunteers, 22 were deemed “emergency medical” professionals
- ▶ This statistic is significant, for potentially 22 out of 40 NV-MRC volunteers may not be available for deployment during an emergency situation due to job related obligations
- ▶ For this reason, **objective #3** was included in the three year NV-MRC strategic plan

OBJECTIVE #3: “Increase the number of non-emergency medical volunteers by 15% over current levels (as of January 2013)”

Come Join Us!

The **Naugatuck Valley Medical Reserve Corps** is a network of **medical** and **non-medical volunteers** who wish to contribute to **public health** initiatives and **supplement** existing **response capabilities** in time of **emergency** in the valley.



We're looking to recruit:

Doctors
Nurses
EMTs
Public Health Officials
Firefighters
Students
General Public

*Anyone with an interest in
serving their community
during an emergency
situation!*

FREE Trainings:

- Personal Preparedness
- Bloodborne Pathogens
- CPR/HCP
- Firefighter Rehab
- Points of Dispensing (PODs)
- First Aid/Medical Response

More TBA!

Meetings are held just once a month at Echo Hose Ambulance, 286 Howe Avenue Shelton, CT. Please visit **WWW.ECHOHOSE.COM** to sign up or contact **Amy Shields** of the Naugatuck Valley Health District at **ashields@nvhd.org** or **(203) 881 - 3255**

*medical
reserve
corps*



Naugatuck Valley

**The Naugatuck Valley Medical Reserve Corps
is a network of medical and non-medical
volunteers who wish to supplement
existing response capabilities in time
of emergency in the valley.**

BECOME A MEMBER TODAY!

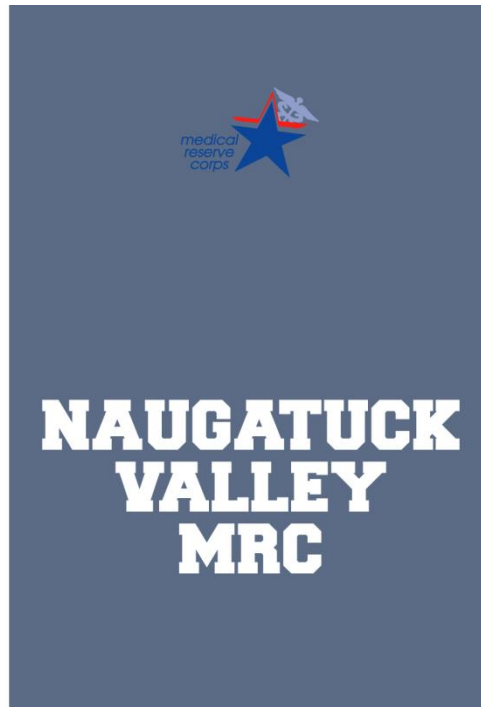
Visit **www.echohose.com** or call
The Naugatuck Valley Health District
at **(203) 881-3255** to join!



FRONT
IMPRINT SIZE: 3.75" w x 2.5" h



BACK
IMPRINT SIZE: 11" w x 3.2" h



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Naugatuck Valley Medical Reserve Corps

In partnership with the Naugatuck Valley Health District & Echo Hose Ambulance

What is the Medical Reserve Corps (MRC)?

The MRC is a national network of volunteers that began in 2002. MRC units are community based and function as a way to locally organize and utilize volunteers who want to donate their time and expertise to prepare for and respond to emergencies, and promote safety among their communities.

What is the Mission of the Naugatuck Valley MRC?

To establish a dedicated team of volunteers that will be sustained over time to strengthen public health, emergency response and community resiliency.

NV-MRC



TRAINING/CREDENTIALING:

- ▶ In order to qualify for Connecticut state funding and various other grants and insurances, NV-MRC members must be credentialed through a series of specific trainings
- ▶ “Training” topics are semi- negotiable with state officials, and can be altered to best fit the needs of each individual MRC organization

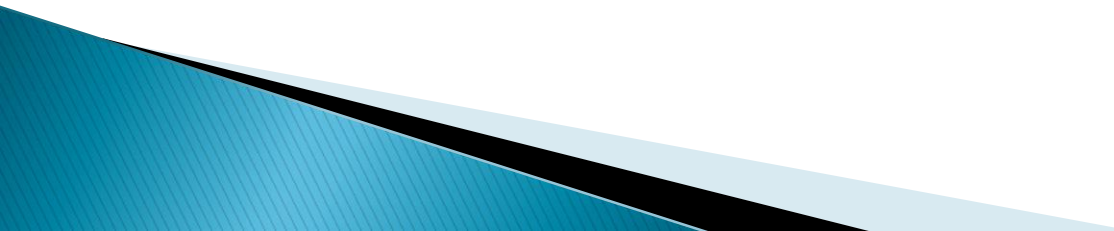
During field experience hours, the following **cyclical training schedule** was produced to **train** and **credential** NV-MRC volunteers over a **9 month** period:

- ▶ **Training 1:** Personal Preparedness
- ▶ **Training 2:** Bloodborne Pathogens
- ▶ **Training 3:** CPR/HCP
- ▶ **Training 4:** Sheltering
- ▶ **Training 5:** Psychological First Aid
- ▶ **Training 6:** Mass Dispensing of Vaccinations / Medications
- ▶ **Training 7:** Firefighter Rehabilitation
- ▶ **Training 8:** Search and Rescue
- ▶ **Training 9:** Review of CT-Train courses**

**ICS 100.b: Introduction to Incident Command Systems

**IS 200.b: ICS for Single Resources and Initial Action Incidents

**IS 700.a: National Incident Management System (NIMS)

- ▶ For each training session (aside from training 9), outside experts within the various disciplines are recruited to deliver one, 2–3 hour presentation to NV–MRC volunteers
 - ▶ NV–MRC members are given credit for each training completed, and are sworn in as official, state–recognized, NV–MRC members upon completion of the 9 month training cycle
 - ▶ Periodically, “make–up” trainings are scheduled for those members who may have missed a meeting
 - ▶ New members are welcome to join the NV–MRC on a rolling basis, for trainings recycle at training 1, upon completion of the 9 month training cycle
- 



Hurricane Sandy

Deployment and Evaluation of the NV-MRC


Hurricane Sandy

- ▶ On **October 29, 2012**, one of the most catastrophic natural disasters in American history devastated the tri-state area of New York, Connecticut, and New Jersey
- ▶ **Superstorm Sandy** ravaged through the northeastern United States, flooding streets, tunnels, and subway lines, knocking down trees, communication wires and power lines, and utterly demolishing thousands of homes
- ▶ It is estimated that **damage** from this disaster exceeds **\$50 billion**

(Fontevecchia, 2012)



Hurricane Sandy (cont)

- ▶ In Connecticut, Governor Dannel Malloy signed an executive declaration of emergency on October 28, 2012 (one day prior to storm)
 - ▶ This same day, President Barack Obama approved Connecticut's request for a declaration of emergency, and hundreds of National Guard personnel were immediately deployed to the area
 - ▶ On October 29, 2012, Governor Dannel Malloy signed an executive declaration to close all Connecticut state highways, effective immediately, and to order mandatory evacuations across the state
- 

Hurricane Sandy and the Naugatuck Valley

- ▶ The city of Shelton, CT, within the Naugatuck Valley municipality, was hit particularly hard by Sandy
- ▶ An October 30, 2012 press release, by United Illuminating, reported 9,326 Shelton homes were without power, or 53% of all households within Shelton, CT
- ▶ This left tens of thousands of people without heat, and of further concern, the five day weather forecast projected record low temperatures to come

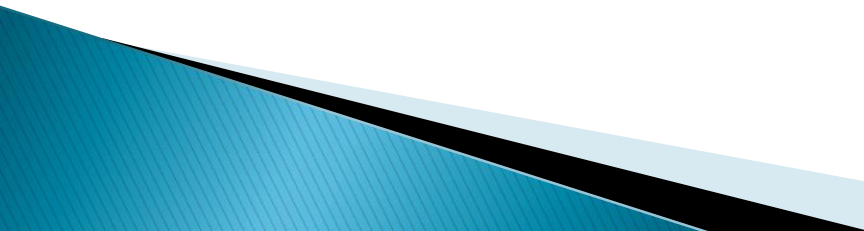
(Malloy, 2012)

October 30, 2012

After meeting with local and state emergency preparedness professionals, public health officials, and authorities, Shelton fire Chief Joseph Laucella **formally requested assistance from NV-MRC volunteers** with three defined tasks in the Shelton, CT, area.

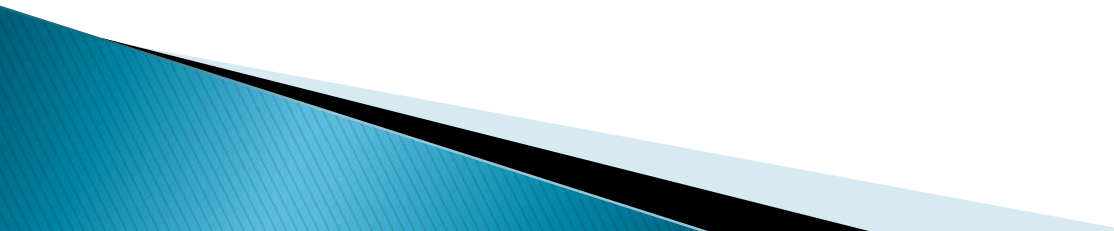
1. Staffing an emergency shelter
2. Mass dispensing of FEMA provided food and water at a local Point of Dispensing (POD)
3. “Door to door” distribution of emergency response information

1. NV-MRC Emergency Shelter Staffing


- ▶ With more than 53% of households in Shelton, CT, without power and record low temperatures in the forecast, an emergency shelter and “warming station” was established at the Shelton Community Center in Shelton, CT
 - ▶ In his professional opinion, fire Chief Joseph Laucella concluded that he did not have access to enough personnel to man this shelter
 - ▶ From October 30 to November 5, 2012, several NV-MRC members took rotating shifts working the shelter
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1. NV-MRC Emergency Shelter Staffing

NV-MRC SHELTER STAFF DUTIES:

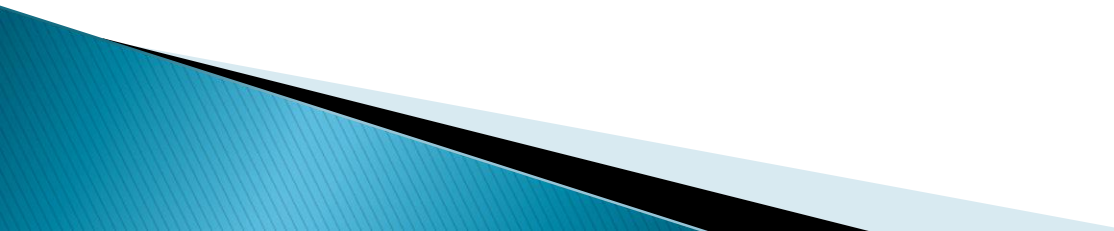
- ▶ Arranging cots in sleeping areas
 - ▶ Providing FEMA supplied foods and water to patrons
 - ▶ Maintaining order amongst shelter guests
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2. NV-MRC Mass Dispensing of FEMA Provided Foods and Water at Shelton POD

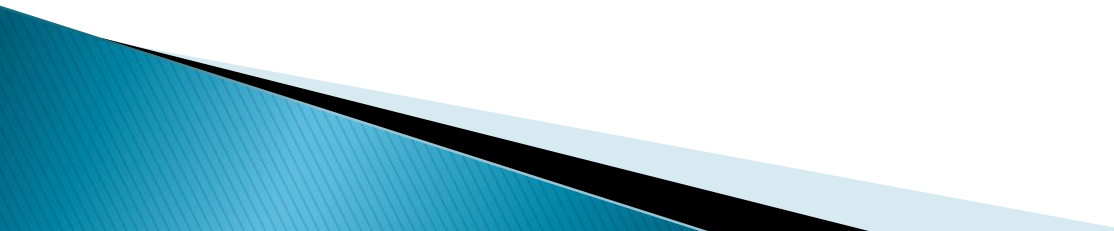
- ▶ An emergency POD was established at Echo Hose, the local ambulance station, in Shelton, CT on October 30, 2012
 - ▶ The POD was stocked with “Meals, Ready-to-Eat” (MRE), bottled water, and ice – all of which were provided by FEMA via the Strategic National Stockpile
 - ▶ NV-MRC members manned this POD for several days by mass dispensing food, water, and ice to valley residents in need
 - ▶ Residents were allowed two MRE’s and one case of water per two people, per day.
- 



3. NV-MRC “Door to Door” Distribution of Emergency Response Information

- ▶ NV-MRC members further assisted in hurricane Sandy disaster relief by working with emergency preparedness personnel to go “door to door” and inform Shelton, CT citizens about the local shelter, and food/water POD
 - ▶ Roughly 500 homes, in the hardest hit areas of Shelton, were visited by seven NV-MRC volunteers and Echo Hose Ambulance personnel
- 

The various duties, performed by NV-MRC members during Hurricane Sandy, mimic those which could occur during a bioterrorism event – including **manning PODs, operating shelters,** and assembling a team to **disseminate necessary information** to valley residents.



Evaluation of the NV–MRC Response to Hurricane Sandy

- ▶ In early November 2012, a team of NVHD personnel, local authorities, and state public health professionals met to review the **strengths, weaknesses, and lessons learned** during the Naugatuck Valley Health District's **response to Hurricane Sandy**
- ▶ Though not solely focused on the NV–MRC response, the NV–MRC is discussed often throughout the **After Action Report (AAR)** produced from this meeting

Evaluation of the NV-MRC Response to Hurricane Sandy

STRENGTH listed in AAR:

- ▶ “...the newly formed Medical Reserve Corps (MRC) was activated for the first time in response to a real event [and there] was MRC representation for all requests made for volunteer assistance [by Fire Chief Joseph Laucella]”

WEAKNESS listed in AAR:

- ▶ “...a written protocol needs to be developed and tested for communicating and monitoring Medical Reserve Corps Volunteers”

(Shields and Spargo, 2012)

Evaluation of the NV-MRC Response to Hurricane Sandy

Four OBSERVATIONS listed in AAR:

- ▶ **1.** The MRC was activated via notification to the state MRC coordinator and DEMHS region 2 coordinator. The process was quick and efficient.
- ▶ **2.** Prior to landfall, MRC volunteers were notified via email of the potential need for volunteer assistance after Hurricane Sandy. This was in an effort to determine who may be available to assist prior to hurricane landfall.

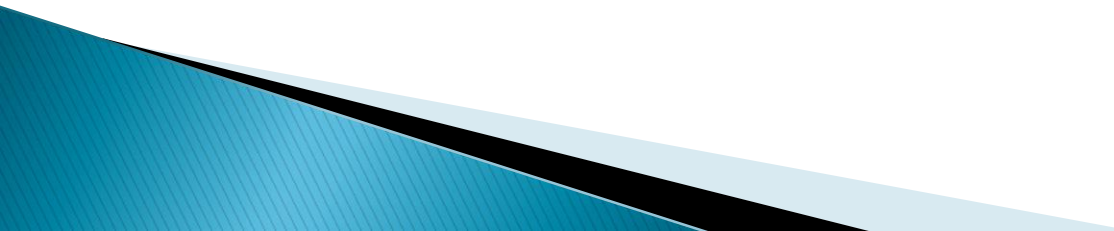
(Shields and Spargo, 2012)

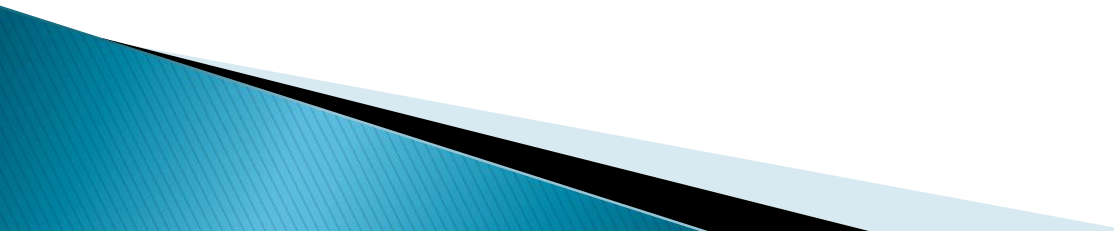
- ▶ 3. The only communication system in place to contact MRC volunteers was an email contact list. Redundant communication systems need to be established. This will be coordinated with “Premier Global” for email, call and text capabilities.
- ▶ 4. Although there were limited modes of communication to contact the MRC volunteers, MRC members did respond to requests made for commodity distribution, shelter operations, and dissemination of emergency response information.

(Shields and Spargo, 2012)

Evaluation of the NV-MRC Response to Hurricane Sandy

CONCLUSIONS from AAR:

- ▶ Having only email communication capabilities in place for MRC deployment is not sufficient.
 - ▶ Future MRC protocol will include uploading all contacts into “Premier Global” (an automated emergency notification system) to quickly utilize blast communication in the form of email, phone calls, and text messages to NV-MRC members.
- 

- ▶ Many current NV-MRC members are emergency medical personnel. During an emergency situation, many of these people are required to work in their full-time job position and therefore are unable to assist with assigned volunteer NV-MRC relief tasks.
 - ▶ There needs to be a push to all NVHD member municipalities to promote the MRC and recruit individuals from various professional disciplines to join.
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Acknowledgements

- ▶ Dr. Deanna Retzlaff
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 - ▶ Dr. Sandra Procter
 - ▶ Dr. Justin Kastner
 - ▶ Ms. Amy Shields
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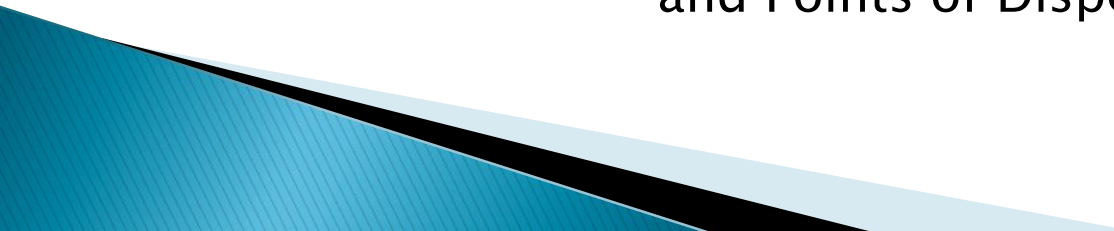
Supplemental Slides

Supplemental Slides

The following slides depict an outline for **NV-MRC Training 6: Mass Dispensing of Vaccinations/Medications**

A panel of NVHD employees has assumed the role of “outside experts” to deliver the presentation for training 6: Mass Dispensing of Vaccinations/Medications.

This training, scheduled for March 2013, will discuss NV-MRC members' biosecurity role in the context of the Cities Readiness Initiative, the Strategic National Stockpile, Managed Inventory, and Points of Dispensing.





Mass Dispensing



Naugatuck Valley
Medical Reserve Corps
March, 2013

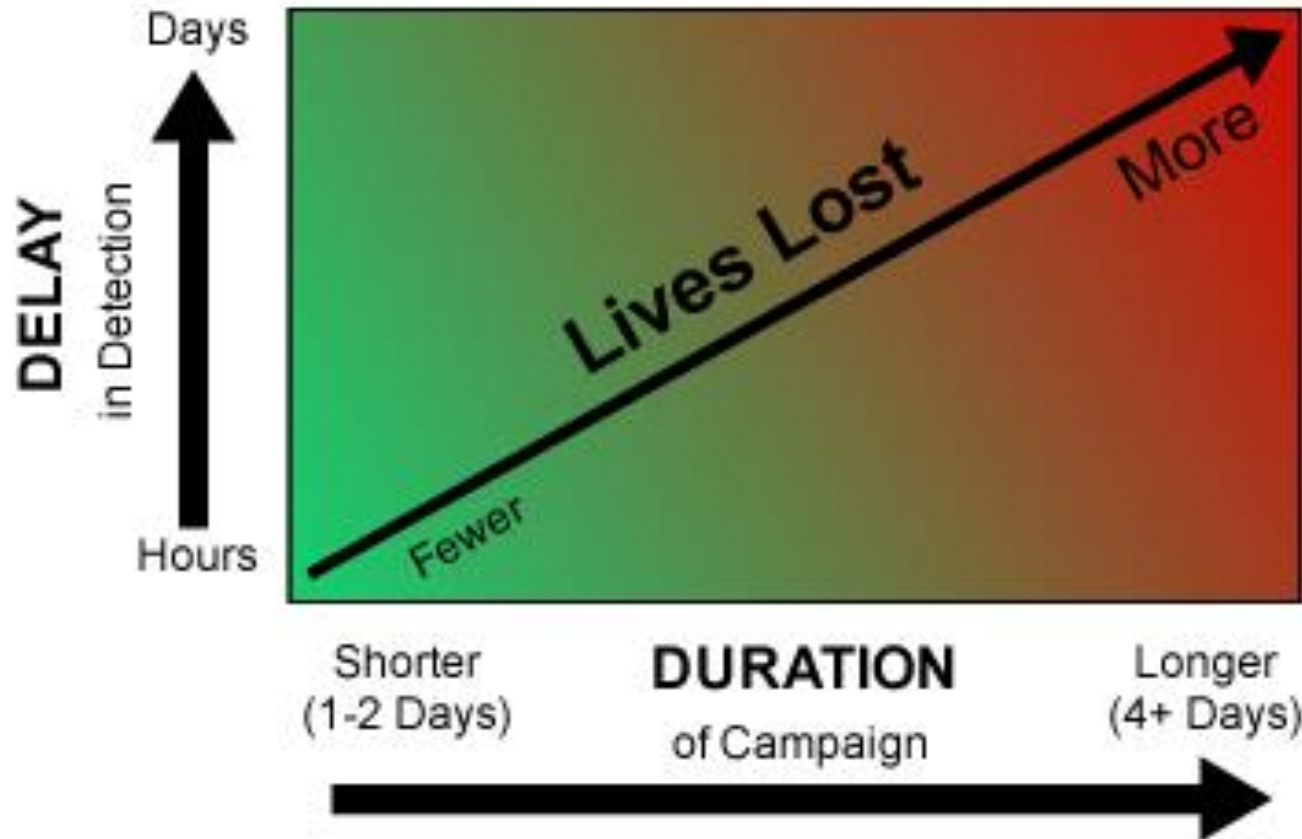


Cities Readiness Initiative

*The **Cities Readiness Initiative (CRI)** is a federal effort designed to **increase bioterrorism preparedness** in the nation's larger cities. The goal is to **save lives** in these selected cities by **rapidly dispensing medication** to their entire population within 48 hours of the decision to do so*



Time is Critical



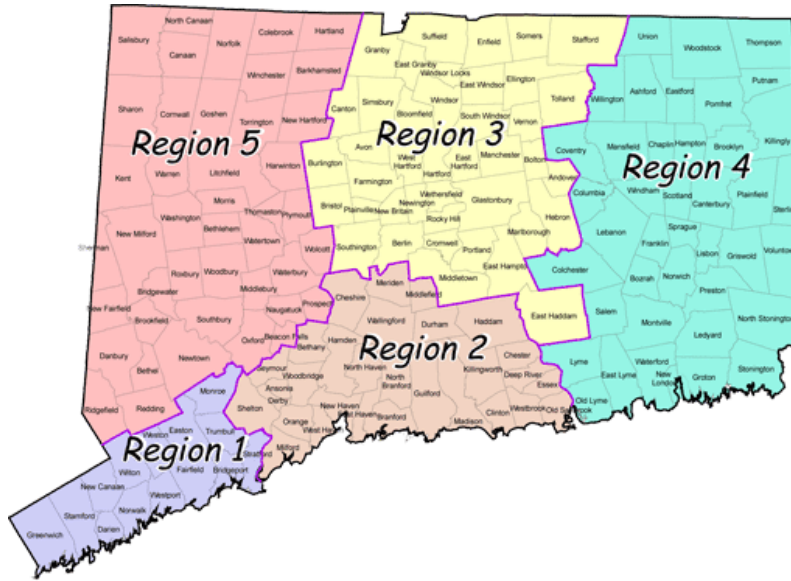
(CDC, 2012)

Cities Readiness Initiative

- ▶ Since 2004, the CDC has provided special funding for the CRI through the Public Health Emergency Preparedness Cooperative Agreement
- ▶ Funding is provided to enhance the mass dispensing capabilities of the CRI metropolitan statistical areas (MSAs)
- ▶ 72 MSAs will use this special funding to develop plans that support mass dispensing of drugs to 100% of the identified population within 48 hours of a decision to do so



Cities Readiness Initiative



- Connecticut is broken down into Mass Dispensing Areas or MDAs
- Naugatuck Valley Health District is a MDA covering Ansonia, Beacon Falls, Derby, Naugatuck, Seymour and Shelton
- In the event of a bioterrorism attack, NVHD is responsible for providing necessary medications and supplies to the total affected valley population within a 48 hour timeframe

Strategic National Stockpile

- ▶ In the event of such a large scale attack, few state or local governments have the resources to create sufficient stockpiles on their own
- ▶ Therefore, a national stockpile has been created as a resource for all called the **Strategic National Stockpile**



Strategic National Stockpile

*CDC's **Strategic National Stockpile (SNS)** is a large national repository of **life-saving pharmaceuticals** and **medical supplies** to **protect** the American public if there is a **public health emergency** (terrorist attack, pandemic influenza outbreak, earthquake) severe enough to cause local supplies to run out.*



Strategic National Stockpile

- ▶ The SNS is **NOT** a first response tool
- ▶ It is designed to supplement, and resupply state and local public health agencies in the event of a national emergency anywhere and anytime within the United States or its territories

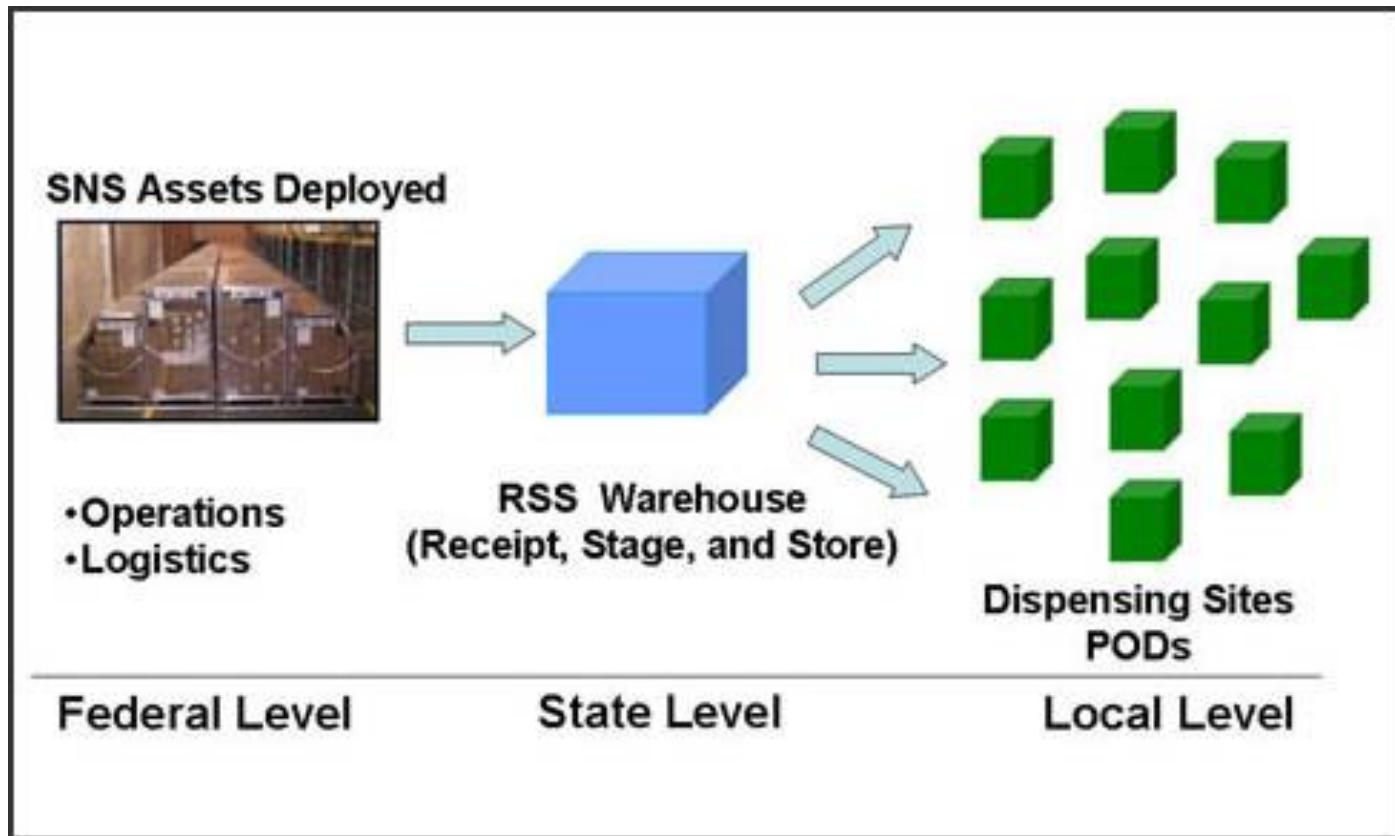


Strategic National Stockpile (Operations)

In the event of a bioterrorist attack:

- ▶ The U.S. Department of Health and Human Services (HHS) will deliver SNS assets to a pre-designated state warehouse
- ▶ This warehouse is referred to as a **receiving, staging, and storing (RSS)** site
- ▶ Once SNS assets arrive at the designated RSS site, HHS will transfer authority for the materiel to state authorities
- ▶ State and local authorities will then begin the breakdown of the **12-hour Push Package** for distribution and dispensing of medications





(CDC, 2012)

Mass Dispensing

12 Hour Push Package:

*A cache of **pharmaceuticals, antidotes and medical supplies** designed to provide **rapid delivery** of a **broad spectrum of assets** for an ill-defined threat in the **early hours** of an event.*

The 12-hour Push Packages are positioned in strategically located, secure warehouses. They are ready for immediate deployment to a designated MDA within 12 hours of the federal decision to deploy SNS assets.



Managed Inventory

- ▶ **Managed inventory** is a division of the Strategic National Stockpile (DSNS) which contains medications and medical supplies for **specific threats**
- ▶ MI can be shipped if the disease agent is known or as “follow-on material” to 12-hour Push Packages during an ill-defined threat
- ▶ MI will take longer to reach project areas (upwards of 24 – 36 hours), but can be tailored to a specific, well-defined threat or disease agent





Points of Dispensing

- ▶ **Points of Dispensing** (PODs) are designated dispensing locations for persons who are currently healthy, but **may have been exposed** and **need prophylactic medication**
- ▶ PODs can be thought of as a temporary clinic
- ▶ Each Mass Dispensing Area (MDA) has local POD plans in place in which the POD can be activated and operated within a 48 hour timeframe
- ▶ These plans are updated annually



Points of Dispensing

- ▶ PODs are the traditional method of providing prophylaxis in the **Cities Readiness Initiative (CRI)**

pro·phy·lax·is  [proh-fuh-lak-sis, prof-uh-]  [Show IPA](#)

noun

1. *Medicine/Medical* .
 - a. the preventing of disease.
 - b. the prevention of a specific disease, as by studying the biological behavior, transmission, etc., of its causative agent and applying a series of measures against it.



Points of Dispensing

- ▶ The key to survival for most people affected by a bioterrorist attack, is to provide antibiotics/vaccines as soon as possible and/or before an individual begins to show any clinical symptoms
- ▶ Persons eligible to receive medications/vaccine will be determined by Public Health officials working within a unified command structure



Open vs Closed PODs

- ▶ An **open POD** is a clinic that is opened to the **public** specifically to get **medication** to a large number of people **rapidly**
- ▶ On average, an open POD that is dispensing oral medication can process 500 people or more an hour



Open vs Closed PODs

- ▶ A **closed POD** is a **private** location where medications are dispensed to a **specific group** of people
- ▶ Closed PODs help to reach specific portions of the community more quickly
- ▶ Long lines and public anxiety can be reduced and resources can be used more efficiently
- ▶ Closed PODs are a benefit to public health as they help with planning efforts and decrease the number of people at open PODS

