

Medical Physicists and the Medical Reserve Corps



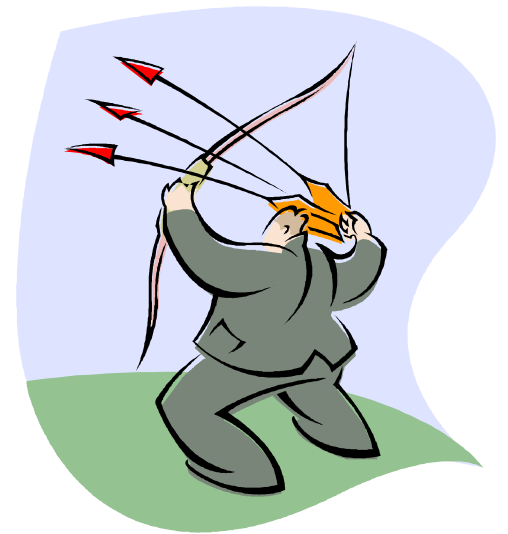
**2009 ACMP Annual Meeting
Virginia Beach, VA
May 4, 2009**



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Public Health & Medical Co-chair
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Northwest Florida Regional Domestic Security Task Force
Chair, HPS Homeland Security Committee**

Outline

- **Why are volunteer radiation safety professionals needed?**
- **Medical Reserve Corps**
 - History and Concept
 - Why volunteer as MP?
 - Expectations and benefits
- **How to join?**
- **RRVC**



Emergency Scenarios

- **The Homeland Security Council
National Planning Scenarios (April 2005)**
 - 15 scenarios
- **“FOR OFFICIAL E ONLY”**
- **Available from the Washington Post website!**

Scenario 1: Nuclear Detonation – 10-kiloton Improvised Nuclear Device

- **Casualties**
 - Hundreds of thousands
- **Evacuations/Displaced Persons**
 - 100,000 in affected area seek shelter in safe areas (decontamination needed)
 - 250,000 instructed to shelter-in-place as plume moves across region (s)
 - 1 million+ self-evacuate from major urban areas



Scenario 11: Radiological Attack – Radiological Dispersal Devices

- **Casualties**

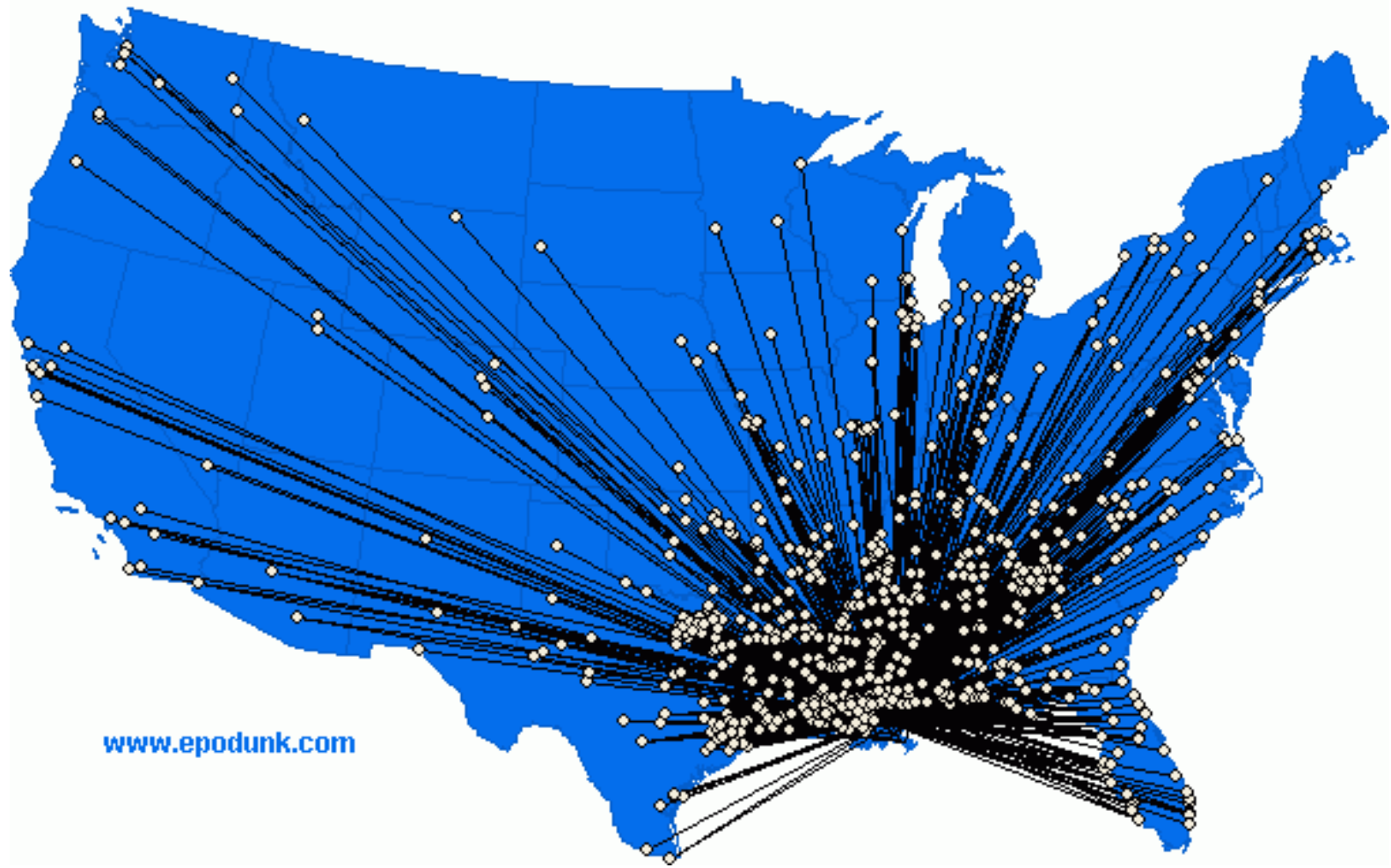
- 180 fatalities; 270 injuries; 20,000 detectable contaminations (at each site)



- **Evacuations/Displaced Persons**

- 10,000 evacuated to shelters in safe areas (decontamination needed)
- 25,000 in each city are given shelter-in-place instructions
- Hundreds of thousands self-evacuate from major urban areas in anticipation of future attacks

Internally Displaced Persons Communities Affected Post-Katrina





TOPOFF II Exercise

- **Issue:** radiation monitoring of people reporting to Red Cross shelters in King County



“There were so many places to be and we could not cover them all.”

Public Health Issues After *Any* Disaster

- **Assessment of Health and Medical Care Delivery**
- **Rapid Assessment of Community Health/Medical Needs**
- **Delivery of Health and Medical Care**
- **Pharmaceutical Supply**
- **Potable Water, Safe Food, and Sanitation and Hygiene**
- **Injury and illness Surveillance**
- **Vector Control**
- **Solid Waste**
- **Hazardous Materials**
- **Registry**
- **Mental Health**
- **Sheltering and Housing**
- **Mass Congregation**
- **Handling of the Deceased (humans and animals)**
- **Staffing**
- **Rumor Control**
- **Public Service Announcements/Media**



Public Health
Prevent. Promote. Protect.

Medical Reserve Corps

“The mission of the MRC is to establish teams of local volunteer medical and public health professionals who can contribute their skills and expertise throughout the year as well as during times of community need.”



MRC History



- **Formally launched in July 2002**
- **MRC is part of the federal Citizen Corps**
- **Citizen Corps, along with AmeriCorps, Senior Corps, and the Peace Corps are part of the USA Freedom Corps, which promotes volunteerism and service nationwide.**





Citizen Corps

Programs and Partners

- Community Emergency Response Team

Administered by DHS



- The Fire Corps

Funded by DHS, managed thru partnership with National Volunteer Fire Council, the International Association of Fire Fighters, and the International Association of Fire Chiefs.



- National Neighborhood Watch Program

Funded by DOJ, administered by the National Sheriffs' Association.



- Medical Reserve Corps

Administered by DHHS



- Volunteers in Police Service

Funded by DOJ, managed by International Association of Chiefs of Police





MRC Concept

- Establish groups of volunteers with interest in strengthening local public health system and providing help in emergencies
- Organize/utilize locally usually
- Integrate with existing programs and resources in the community, public health, emergency mgt etc.
- Identify, credential, train and prepare in advance
- Include medical and public health professionals, and others...





Office of the Civilian Volunteer **MEDICAL RESERVE CORPS**

Sponsored by: Office of the U.S. Surgeon General

**Volunteers Building Strong, Healthy,
and Prepared Communities**

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**2009 INTEGRATED MEDICAL,
PUBLIC HEALTH, PREPAREDNESS
AND RESPONSE TRAINING SUMMIT**

- ▶ NIMS Guidance
- ▶ MRC/ESAR-VHP Integration PDF (44 KB)
- ▶ MRC 101 PowerPoint (4.13 MB)
- ▶ Self Evaluation

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★ [Acting Surgeon General, RADM Steven Galson](#)



Dedicated to establishing teams of local volunteer medical and public health professionals to contribute their skills and expertise throughout the year as well as during times of community need. [more about the MRC](#)

Did you know...?

In 2008, eleven students with the Hatch High School Junior MRC (NM) verified the school fire safety plans, and performed a safety check of the fire... [read the entire article](#)

MRC Info

MRC Units

797

[Find MRC Units](#)

Volunteers

174,225

[Learn about Volunteering](#)

Volunteers

- ★ [About Volunteering](#)
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Leaders

- ★ [Update My MRC](#)
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- ★ [MRC Spotlights](#)
- ★ [Unit Leader Development Tools](#)

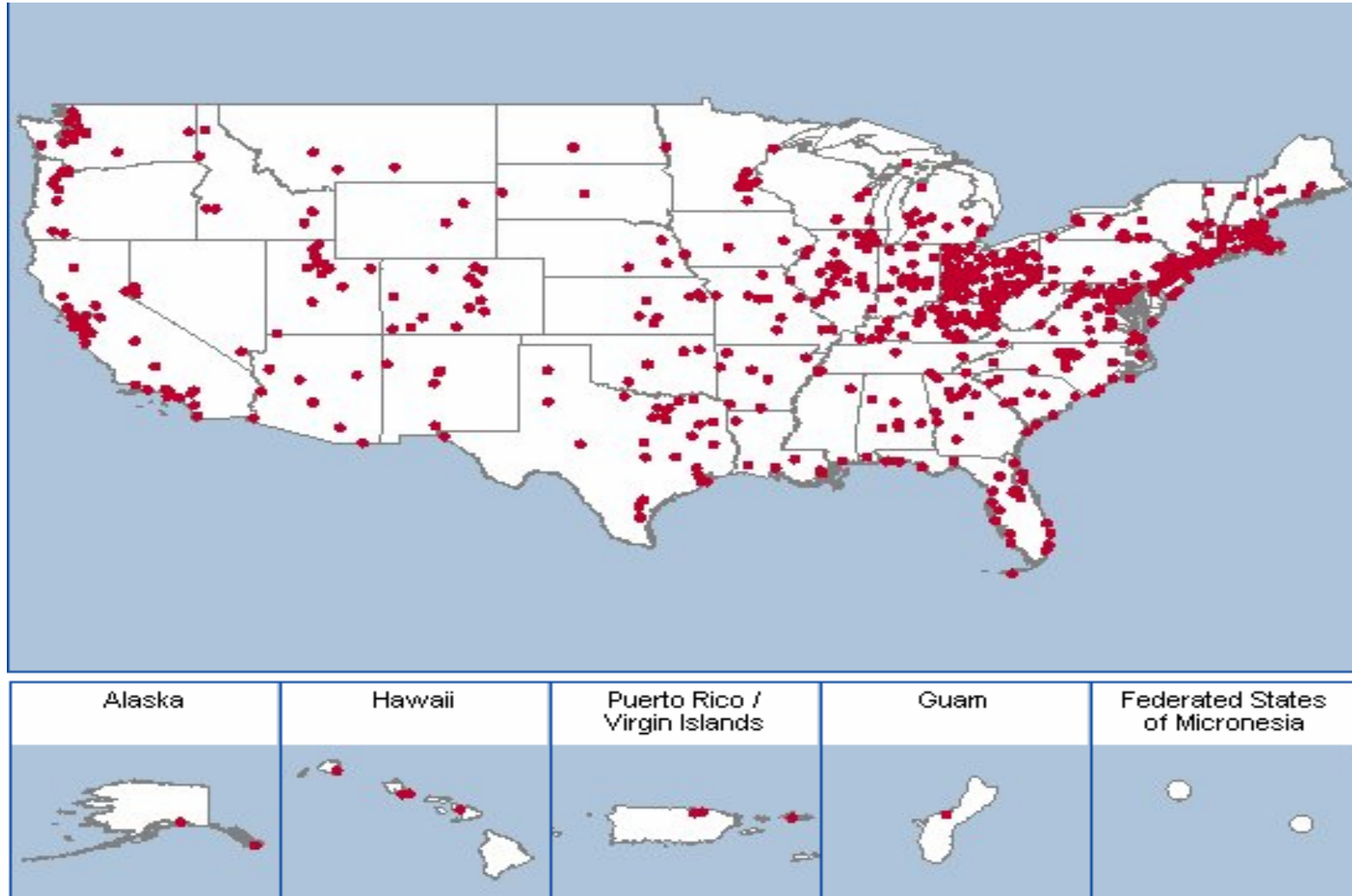
Media

- ★ [MRC Brochure](#)
- ★ [SG Priorities and the MRC](#)
- ★ [MRC Fact Sheets](#)
- ★ [News and Events](#)

www.medicalreservecorps.gov



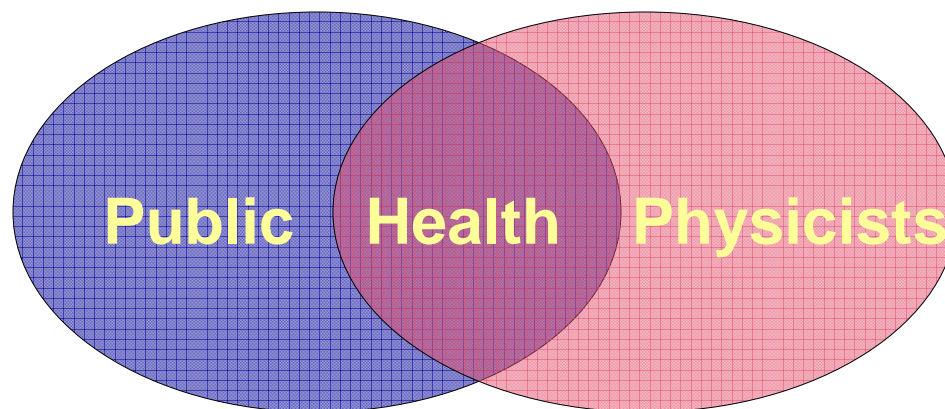
Medical Reserve Corps Units (797 as 03/06/09)



In a radiation emergency:



- **Public health practitioners need to work closely with radiation safety professionals (medical/health physicists)**



Medical/Health Physics Resources

- **Hospitals**
- **Federal agencies**
- **Armed forces**
- **State and local agencies**
 - **Don't forget the state university systems and community colleges**
- **Retired or semi-retired physicists**



Professional Organizations

- Health Physics Society
- American Association of Physicists in Medicine
- American Nuclear Society
- National Registry of Radiation Protection Technologists



Professional Organizations

- Society of Nuclear Medicine
- American Society for Radiation Oncology

SNM

Advancing Molecular Imaging and Therapy

ASTRO
TARGETING CANCER CARE



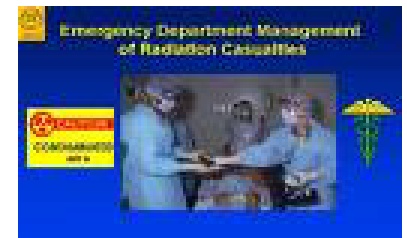
Medical Reserve Corps



- **Program “administered” in the Office of the U.S. Surgeon General**
- **10 Regional Coordinators; 38 State Coordinators**
- **Individual MRCs rather autonomous**
- **75% are housed in local health departments**

Medical Reserve Corps

- MRC units are community-based.
- Medical and non-medical volunteers supplement existing local emergency resources.
- MRC units are NOT first responders.
- Respond to natural disasters, terrorism and/or urgent public health needs.
- Address credentialing/liability issues.
- Activated by sponsoring organization.



Sponsor/Housing Organizations

- Health Departments
- Boards of Health
- Medical Centers/Hospitals
- Medical Societies
- Emergency Management
- Citizen Corps Councils
- Police/Fire Departments
- Volunteer Centers
- Faith Based Organizations
- Regional Planning Groups
- Non-Profit Community Organizations



No Typical MRC

One “Size” Does Not Fit All



- All MRC units provide:
 - Organizational and administrative structure
 - Pre-identification of members
 - Credentialing standards; verification of professional licensure/certification
 - Training - NACCHO developed core competencies
 - Legal protection
 - Activation procedures
- Units vary by:
 - Types/numbers of volunteers
 - Sponsor organizations
 - Partner organizations
 - Mission/focus



MRC Partners



- Health Departments
- Boards of Health
- Health Care Systems/Hospitals/Clinics
- Medical Retiree Groups
- Emergency Management
- Local Emergency Planning Committees
- Police and Fire Departments
- Community-Based Disaster Groups
- Healthcare Outreach Coalitions
- Retired and Senior Volunteer Programs
- Schools and Universities
- Emergency Medical Services
- Military Organizations/National Guard
- Neighborhood Associations
- City Attorney Offices
- Local Businesses/Corporations
- MMRS/CRI/UASI
- NDMS/DMAT
- CDC and HRSA Grant Coordinators
- SNS Coordinators
- Others...



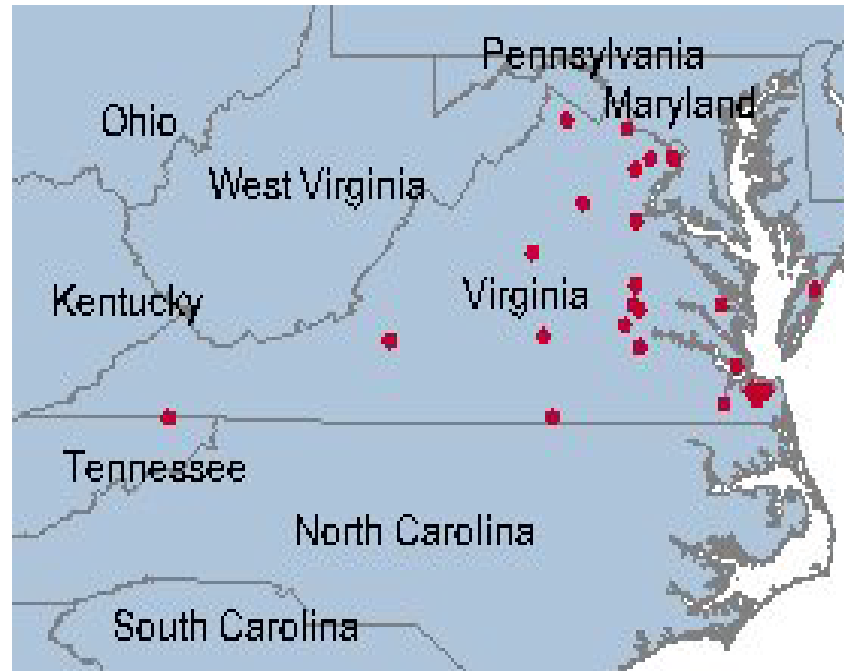
Finding Your Local MRC

Go to:

<http://www.medicalreservecorps.gov>



Medical Reserve Corps Unit for Region III



Finding Your Local MRC

Virginia Beach, VA



- Community/Jurisdiction Served: Virginia Beach
- Sponsoring Organization: Virginia Beach Department of Health
- Date Established: September 30, 2003
- Unit Members: 327



Who Can Volunteer?

- Active and retired healthcare professionals; other non-medical professionals; skilled or unskilled volunteers
 - **Physicians**
 - **Physician Assistants**
 - **Nurse Practitioners**
 - **Pharmacists**
 - **Dentists**
 - **Veterinarians**
 - **Mental Health Professionals**
 - **EMTs and Paramedics**
 - **Epidemiologists**
 - **Health Educators**
 - **Others...**
 - **Interpreters**
 - **Clergy**
 - **IT staff**
 - **Administrative staff**
 - **Communications staff**
 - **Social workers**
 - **Health physicists, medical physicists, rad techs**
 - **Other ...**

Exercise - RDD blast in shopping center food court

- Local MRC unit later wrote to ask for volunteers in addition to “pure medical”:

- Mental health specialists
- Social workers
- Chaplains
- Language interpreters
- Lawyers
- Funeral directors
- Administrators

❖ No health physicist, radiation safety professional, or radiation expert requested!

Hundreds play the part for antiterrorism drill

The Boston Globe

Dirty bomb scenario tests rescue response

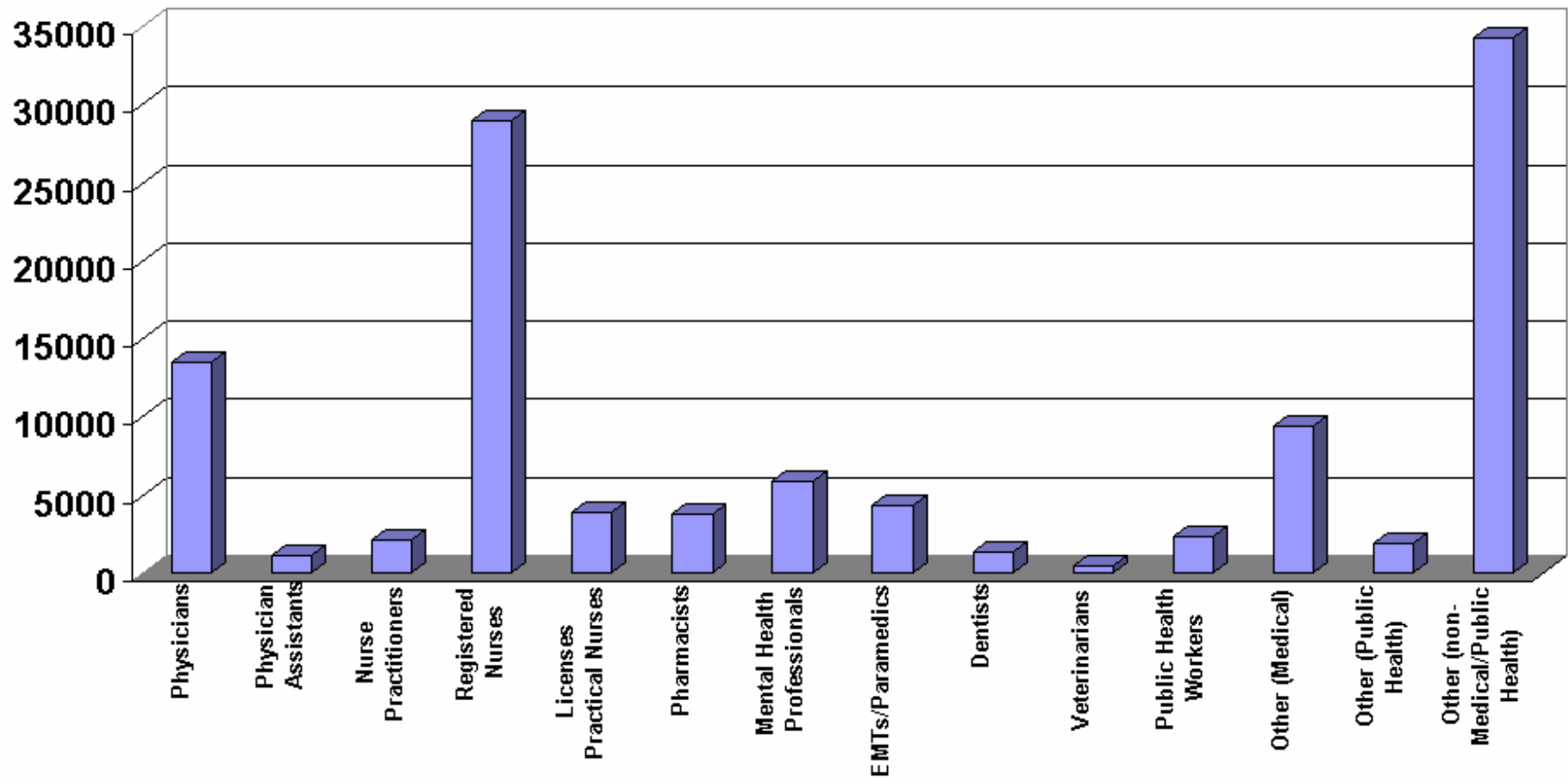


Victims in makeup to simulate wounds wore white suits so that rescuers could find them in the terrorist attack drill. (David Kamerman/Globe Staff)

By Mac Daniel, Globe Staff | September 18, 2006

MRC Volunteers (03/06/09)

> 174,225



How would you help?



- Consultants on human radiation effects
- Contamination screening services
- Collection of bioassays
- Radiation monitoring
- Liaison in identifying and triaging victims



CAPTUS 2000 WELL SYSTEM
ITEM # 5-630-0077



Example:

Community Reception Centers

- To assess people for exposure, contamination and the need for decontamination, and to register for follow-up.
- Some should be established at or near shelters
- Compare to:
 - Points of Dispensing (POD)
 - Alternative Medical Treatment Sites
 - Neighborhood Emergency Help Centers
 - Acute Care Centers



Training Requirements

- For every volunteer member
- Provided by the MRC, free
- NOT a prerequisite to join

OFFICE OF THE SURGEON GENERAL

April 2007

MRC Core Competencies Matrix



PROLOGUE

The Medical Reserve Corps Core Competencies Matrix is a suggested guide for training MRC volunteers at the local level.

Core Competencies represent the baseline level of knowledge and skills that *all* MRC volunteers should have, regardless of their roles within the MRC unit. Because the core competencies establish only a minimum standard, units may choose to expand on the competencies in order to train volunteers at a more advanced level. Units may also choose to link the MRC core competencies to other existing sets of competencies for health professionals.

The Competencies Matrix presents a “menu” of options to guide MRC unit leaders. Leaders may choose trainings from the matrix, use other trainings not listed in the matrix, or create their own unit-specific trainings based on the competencies.

Utilizing the competencies makes interoperations between MRC units more efficient by providing a “common language” in which units can communicate their volunteers’ capacities to each other and to partner organizations.



Core Competencies represent the baseline level of knowledge and skills that all MRC volunteers should have, regardless of their roles within the MRC unit.

CORE COMPETENCIES MATRIX

The Core Competencies Matrix is organized into the following categories:

- Domains* are groups of competencies related to a certain topics. The domains may help you conceptualize how the competencies relate to one another. One training may cover one or all of the competencies within a domain.
- Specific Competencies* are the demonstrable skills an individual should have in order to be activated as an MRC volunteer.
- Knowledge, Skills, and Attitudes* break the competencies down into measurable actions a volunteer should be able to perform in order to be considered “competent” in an area.
- Suggested Trainings/Tools* are recommended trainings, most of which are available on-line, free of cost, that will enable volunteers to meet the competencies. These trainings are not required, nor is this list comprehensive; rather it is a starting point for unit leaders to consider available trainings.
- Assessment* is a suggested method for unit leaders to assess whether a volunteer has fulfilled a competency. All competencies may be observationally assessed in the context of exercises or drills in which the unit participates.



Personal Benefits

- **Opportunity to serve your community during times of need**
- **Free educational and training opportunities**
 - Incident Command System function
 - Public health system
- **Gain experience from exercise participation**
- **Personal recognition**
- **Be among the first group who receives vaccinations or antibiotics during a bioterrorism incident or disease outbreak (This includes your immediate family as well!)**





For Our Profession

- Introducing local public health and emergency response communities to the profession of medical/health physics
 - Educate, increase “radiation literacy”
 - A greater appreciation of medical/health physicists working in the community
- Medical/health physicists gain valuable real-world experience working and collaborating with their public health/emergency management partners.

ESAR-VHP



- Federal DHHS – Emergency System for Advance Registration of Volunteer Health Professionals
- Provides guidance and assistance for the development of standardized state-based programs for registering and verifying the credentials of volunteer health professionals in advance of an emergency or disaster.

Florida Emergency Health Volunteer Registry (FEHVR)

- www.servfl.com
- Volunteer registry for health care providers and other private volunteers





What's next?

- **Outreach**
 - Radiation community
 - Public health community
 - Individuals!!!
- **Coordination/support**
 - HPS Homeland Security Committee
 - AAPM Working Group on Response to Radiation Incidents



For More Information:

- **MRC Program Office**
www.medicalreservecorps.gov
- **MRC Regional Coordinators**
<http://www.medicalreservecorps.gov/Coordinators/Regional>
- **MRC State Coordinators**
<http://www.medicalreservecorps.gov/Coordinators/State>
- If interested, contact your local MRC.
- **HPS, Homeland Security Committee**
<http://www.hps.org/hsc/>
- **AAPM, Working Group on Response to Radiation Incidents**
<http://www.aapm.org/links/rri.asp>



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