

CDC Terrorism Preparedness and Emergency Response: Education and Training Summary

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Purpose of Summary

To describe the training and educational activities associated with terrorism preparedness and response including

- State and local BT grantee proposed education and training
- CDC-funded Centers for Public Health Preparedness program with primary purpose to contribute to education and training of the public health workforce
- CDC-directed education and training activities



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Education and Training Includes All Hazards Public Health Preparedness



Biological Terrorism

Chemical Terrorism

- Choking agents (phosgene / chlorine)
- Blood agents (cyanides)
- Blister agents (mustard gas)
- Nerve agents (sarin, soman, tabun, etc.)

Radiation Terrorism

- Dirty bombs
- Food / water contamination
- Power plants



CDC Terrorism Preparedness and Response Educational Activities

CDC educational activities are targeted at many audiences; “multi-directional”

- CDC staff → public health and healthcare professionals

Focus on: State/ local public health workforce, clinicians, laboratorians, others

- CDC funded partners → public health workforce

Focus on: BT Grantees, Centers for Public Health Preparedness



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CDC Cooperative Agreement for BT Preparedness and Planning

Goal:

To upgrade state and local public health jurisdictions' preparedness for and response to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies



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Education and Training (Focus Area G) Priorities

Education, appropriately planned and delivered, is critical to help demonstrate progress in Grantees' overall preparedness.

Priorities for coordination:

1. Know educational plans across content / focus areas
2. Provide assistance with planning based on identified needs, priority goals, input from other content/focus area leads, and (soon) national public health preparedness indicators
3. Ensure progress is being made and planned educational programs carried out



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Summary of Proposed State and Local Grantee Education and Training

32 grantees performed an educational needs assessment through July 2003 (52%)

Each grantee proposed many training/education programs and activities, spread throughout grant applications:

- Range 10-67
- Mean 40 & median 39

Based on interim review of Grantee applications:

- 73% proposed educational activities in all content and support areas (focus areas)
- 92% proposed in all but 1 content/support area



Summary of Proposed State and Local Grantee Education and Training *continued*

All (100%) Grantees proposed educational activities for

- Bioterrorism / Infectious diseases
- Smallpox (the majority of BT-focuses education)
- Laboratory training
- Public health and clinical audiences

Note: All have at least one or more educational activities directed to BOTH

- Detection / surveillance / epidemiology capacity
- Terrorism preparedness 101 / all-hazards



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Summary of Proposed State and Local Grantee Education and Training *continued*

Common educational activities proposed

98% Risk, crisis communication

97% Incident command / management system

92% Strategic National Stockpile, local dispensing

77% IT, including National Electronic Disease Surveillance System (NEDDS), PHIN, LMS systems

60% Psychological aspects / mental health



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Summary of Proposed State and Local Grantee Education and Training *continued*

Common educational activities proposed

56% Leadership training

50% Public Health Law / Forensic Epidemiology

50% Chemical terrorism preparedness

41% Zoonotic issues, targeting veterinarians

37% Operation of large-scale clinics

28% Food safety and/or food testing



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Summary of Proposed State and Local Grantee Education and Training *continued*

Other proposed educational activities

27% Occupational safety, PPE use

20% Training for special or vulnerable populations

14% Training for volunteers

10% Radiation / nuclear preparedness

<10%:

Water or air safety

Interstate or cross-border issues

Many other topics: GIS mapping, mortuary issues, disaster recovery, hotline training, design/conduct/evaluation of exercises, critical incident debriefing, HAN, environmental issues, hazard assessment



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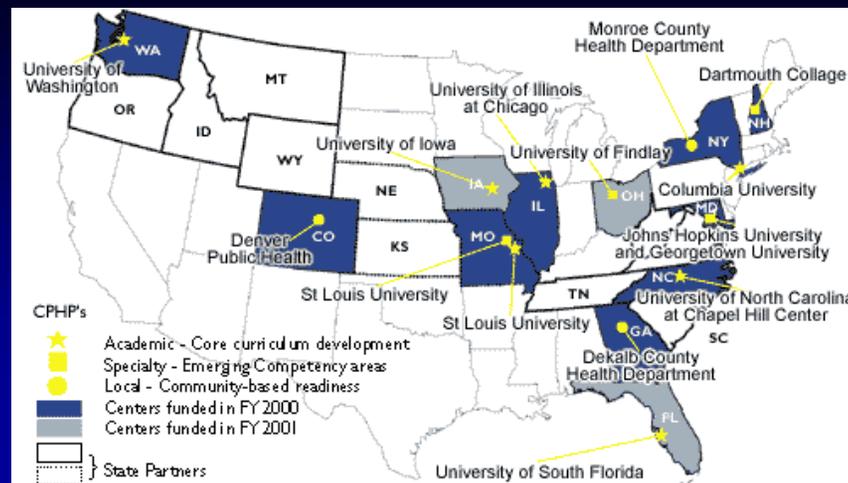


CDC Centers for Public Health Preparedness

Funded initially in 2000 (n=4)

More added each subsequent year

238 education programs, 2003



Several different, related programs:

- Academic Centers for Public Health Preparedness – 23 accredited Schools of Public Health
- Specialty Centers for Public Health Preparedness – 13 affiliated academic, professional schools; primarily congressional earmarks



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Centers for Public Health Preparedness: Developing a Shared Vision

We must have a vision that

- Is shared with and endorsed by national, state, and local stakeholders,
- Enables innovation,
- Is focused on institutionalizing systems and processes that will build our public health workforce, and
- Allows us to build upon the excellent work already completed or underway



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Shared Vision for Centers of Public Health Preparedness

- Better define role and contribution to workforce readiness
- All A-CPHP work focused on
 - 1) meeting a **pre-determined community need**
 - 2) contribution to the **national network** (ASPH lead)
- All CPHP activities
 - Performance-based
 - Support public health indicators
 - Contribute to life-long learning

Option A: Readiness training for existing workforce

Option B: Graduating students with readiness skills

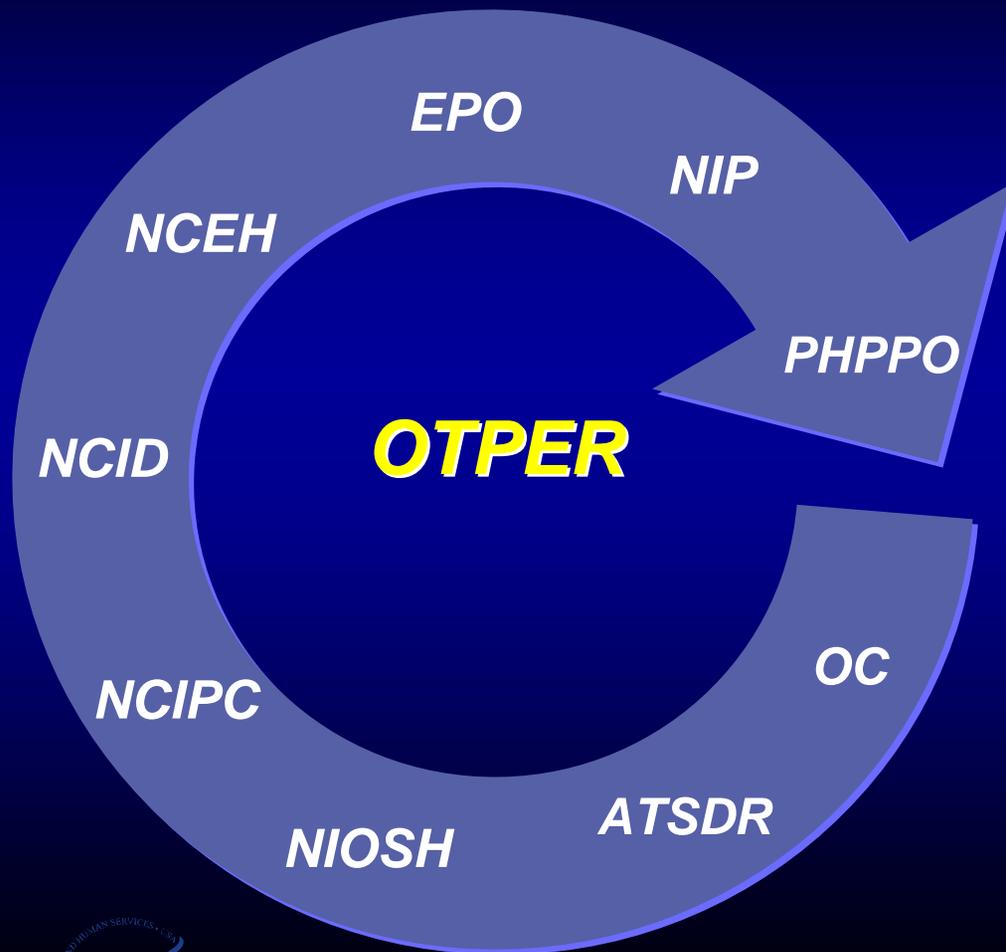


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CDC Terrorism Preparedness and Emergency Response

Need for coordination of all CDC programs with roles in the science and/or service of terrorism preparedness and emergency response; all have education activities



- OC CDC Director's Office of Communication
- ATSDR Agency for Toxic Substances & Disease Registry
- NIOSH National Center for Occupational Safety & Health
- NCIPC National Center for Injury Prevention & Control
- NCID National Center for Infectious Diseases
- NCEH National Center for Environmental Health
- EPO Epidemiology Program Office
- NIP National Immunization Program
- PHPPO Public Health Program Practice Office

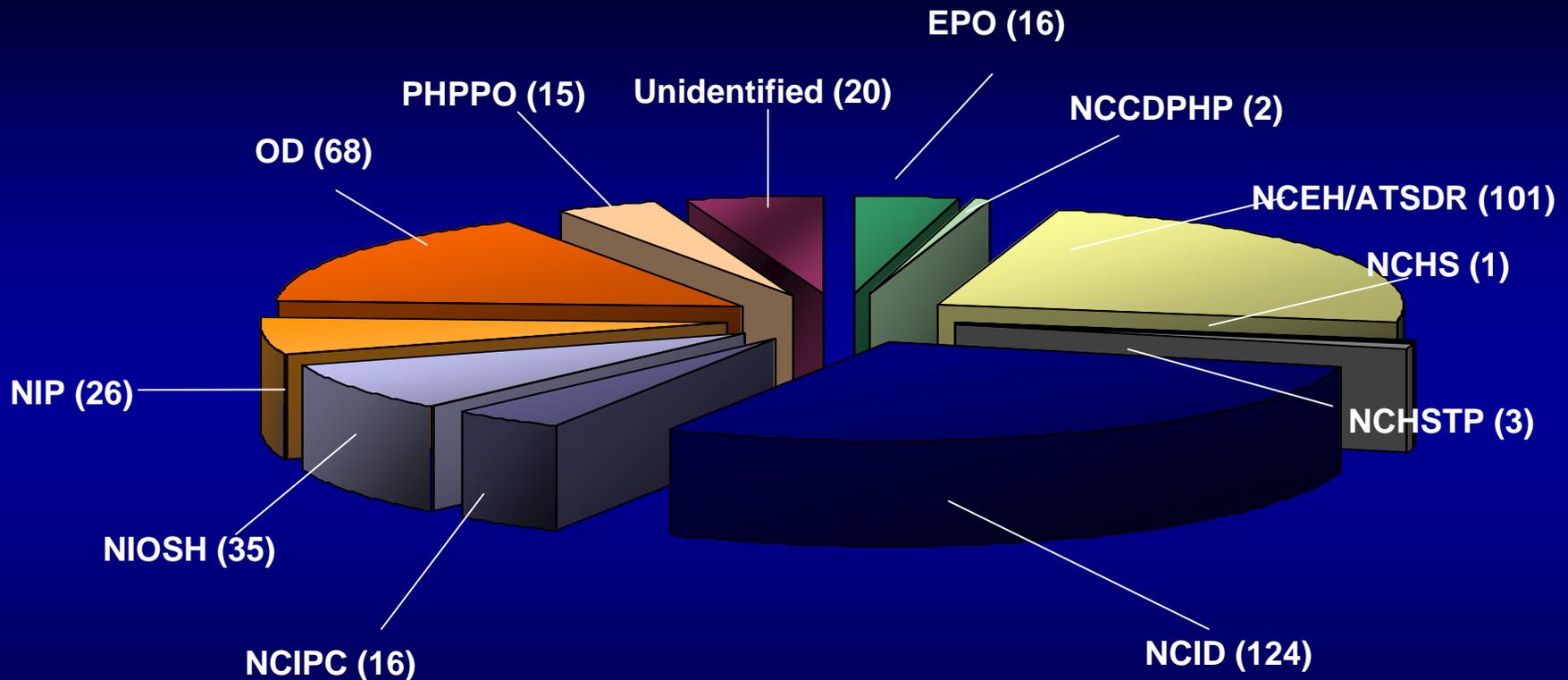


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CDC-Staff Terrorism Preparedness Educational Activities

Interim Summary By Center, Institute, Office



NOTE: Interim analysis based on review of 331 CDC educational activities for public health, healthcare, and preparedness workforce, 2003



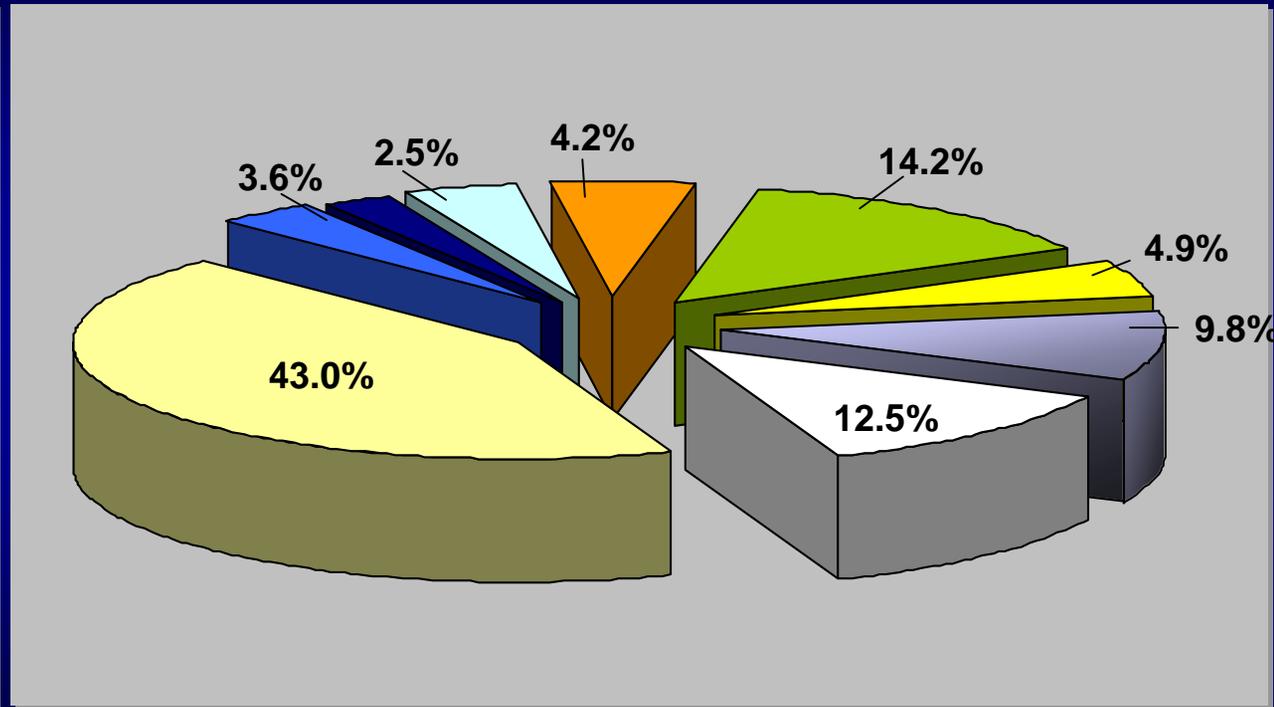
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CDC-Staff Terrorism Preparedness Educational Activities

Interim Summary By Subject Matter

| Subject Matter Categories | |
|--------------------------------------|-------|
| Biological Agents | 43% |
| Chemical Agents | 3.6% |
| Radiation Agents | 2.5% |
| Detection and Surveillance | 4.2% |
| Mass Trauma | 5.3% |
| Preparedness, Planning, and Response | 14.2% |
| Communication | 4.9% |
| Occupational Health and Safety | 9.8% |
| Other | 12.5% |



NOTE: Interim analysis based on review of 331 CDC educational activities for public health, healthcare, and preparedness workforce, 2003

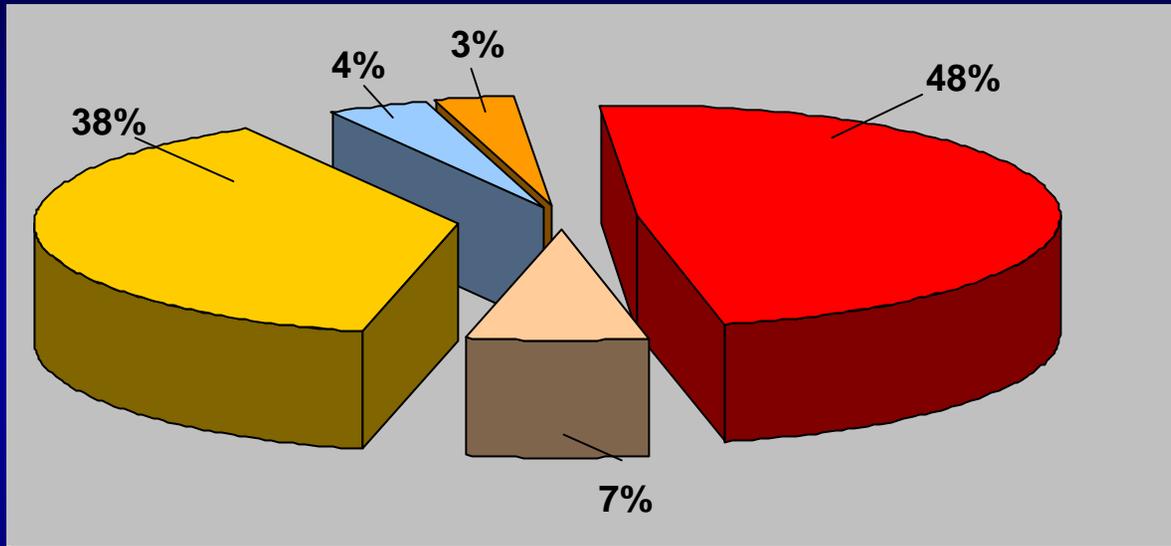


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CDC-Staff Terrorism Preparedness Educational Activities

Interim Summary By Delivery Method



| Delivery Method of Educational Offerings | |
|---|--|
|  | Audioconference 4% |
|  | Facilitated Web-based Training 3% |
|  | On-site Classroom Course or Workshop 48% |
|  | Videoconference 7% |
|  | Self-study / Web-based Education 38% |

NOTE: Interim analysis based on review of 331 CDC educational activities for public health, healthcare, and preparedness workforce, 2003



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CDC-Staff Terrorism Preparedness Educational Activities

Interim Summary General Findings

Interim analysis based on review of 331 CDC educational activities developed/delivered in 2003 by CDC staff for public health, healthcare, and preparedness workforce audiences

Of educational activities assessed to date

- 90% based on needs assessment
- 40% underwent formative evaluation during development
- 14% associated with continuing education credits (CEU, CE, CME, CNE, CHES)
- 67% followed by end-of-course evaluation



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CDC Supported TPER Education Projects

Steps to Ensure a Competent and Sustainable Workforce

Centers for Public Health Preparedness

State and Local Support - Education / Focus Area G

Project Public Health Ready

12 pilot projects in local health depts; emphasis on 3 areas: planning, education, drills/exercises

Forensic Epidemiology Course

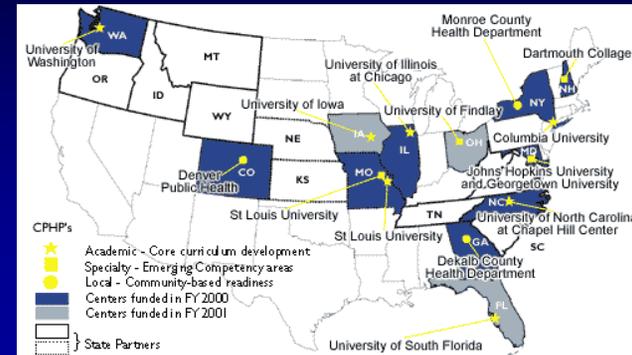
Model curriculum (developed to be tailored for local use);
> 60 community programs, educating >3500 since Aug 03.

Distance learning offerings / PHTN

>5.9 million cumulative viewers for terrorism preparedness / emergency topics

Blended-media education strategy:

Satellite broadcast → Webcast → Slide sets →
Videotapes / CDROMs → "Job aides"



Public Health Training Network



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Analysis of Terrorism Preparedness Educational Activities

Combined educational efforts of State/Local Terrorism Grantees, the Centers for Public Health Preparedness (CPHP), and CDC reach public health and clinician workforce through a wide variety of methods

Distance learning

- Audio conferences
- Satellite broadcasts
- Web-based
- Audio Tapes
- CD-ROM / diskettes
- Videotape/DVD
- Certification courses

Presentations

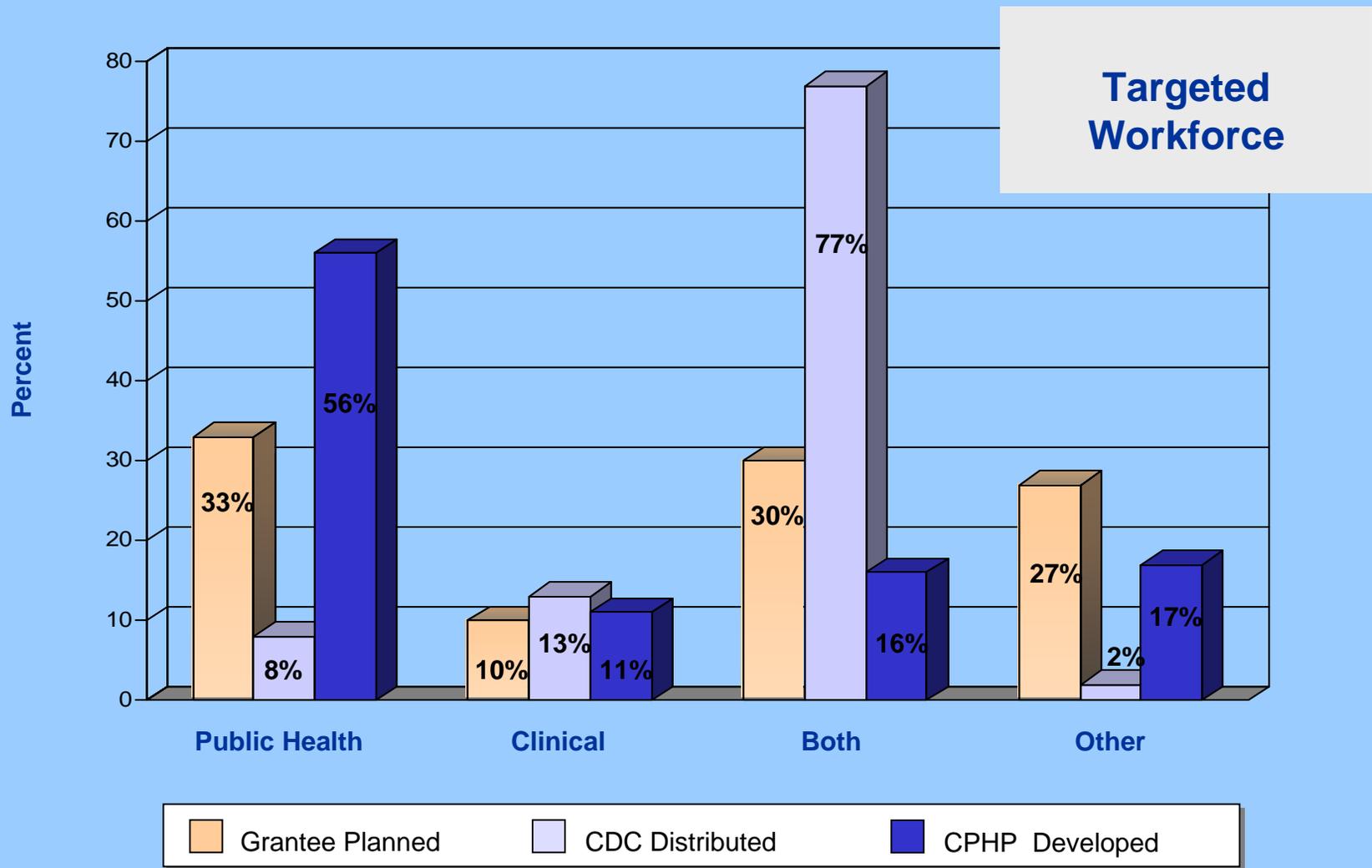
- Videoconferences
- Classroom courses / workshops
- Lectures/seminars
- Professional meetings
- Grand rounds
- Publications / literature
- Train-the-trainer
- Exercises



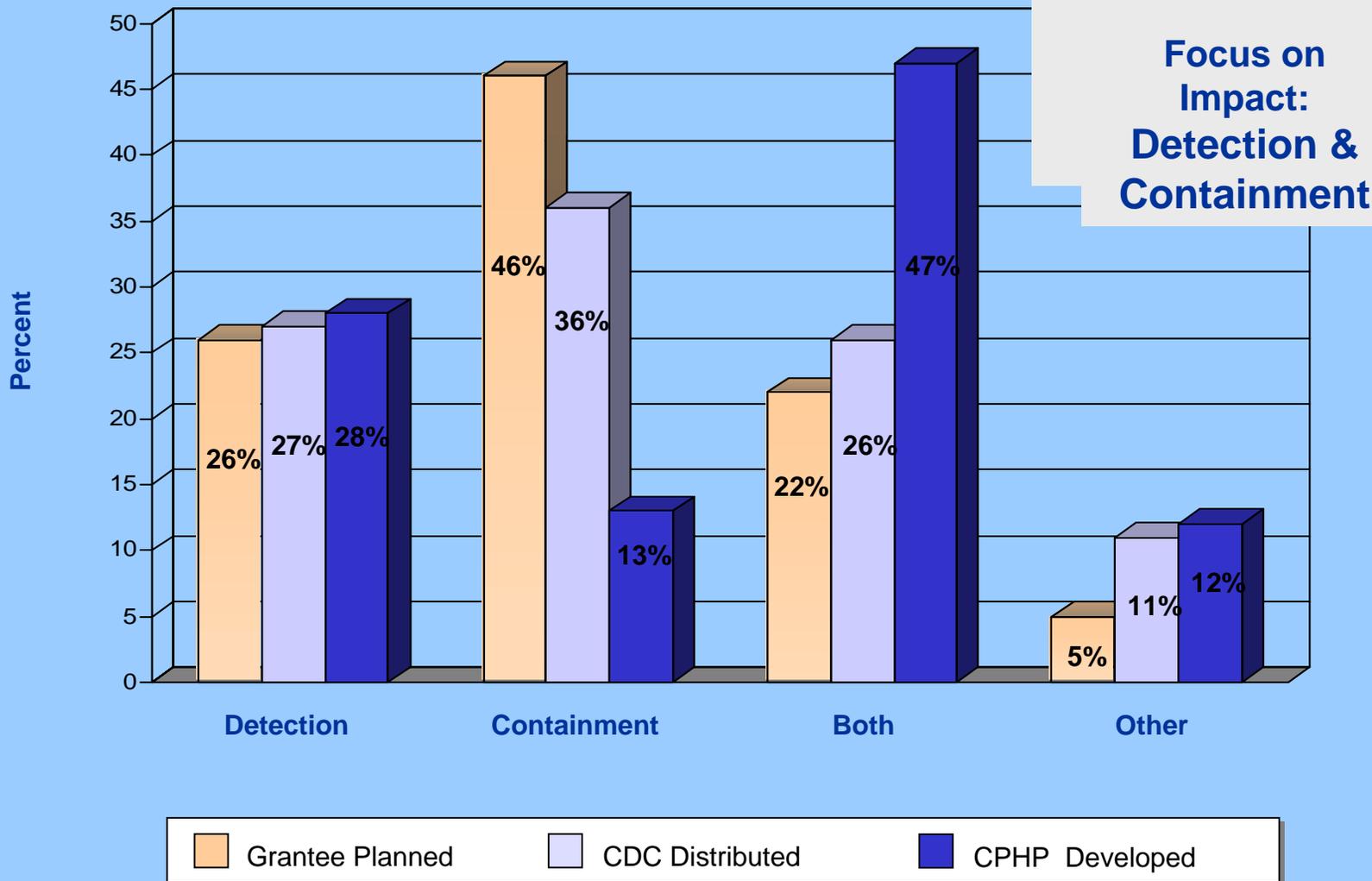
Analysis of Terrorism Preparedness Educational Activities

| Subject Matter Categories | CDC Developed | Grantee Developed | CPHP Developed | Total # | Total % |
|---|---------------|-------------------|----------------|---------|---------|
| General Preparedness, Planning, Response | 32 | 352 | 70 | 454 | 14.8 |
| Laboratory | 14 | 420 | 0 | 434 | 14.1 |
| Biological/Infectious Agents | 85 | 245 | 33 | 363 | 11.8 |
| Early Detection/Surveillance | 24 | 265 | 24 | 313 | 10.2 |
| Communication | 4 | 285 | 12 | 301 | 9.8 |
| Emergency Mgmt/ICS | 8 | 237 | 33 | 278 | 9.1 |
| Information Technology | 5 | 149 | 6 | 160 | 5.2 |
| Other | 10 | 148 | 0 | 158 | 5.1 |
| Environmental Sampling (incl food safety) | 18 | 64 | 13 | 95 | 3.1 |
| Mental Health | 13 | 48 | 16 | 77 | 2.5 |
| Vaccination/Prophylaxis | 36 | 40 | 1 | 77 | 2.5 |
| Chemical | 16 | 60 | 2 | 78 | 2.5 |
| Occupational Health and Safety/PPE | 41 | 27 | 1 | 69 | 2.3 |
| Leadership Development | 3 | 57 | 8 | 68 | 2.2 |
| Public Health Law | 2 | 44 | 12 | 58 | 1.9 |
| All Hazards | 4 | 37 | 1 | 42 | 1.4 |
| Mass Trauma | 5 | 11 | 3 | 19 | 0.6 |
| Radiological/Nuclear | 6 | 11 | 1 | 18 | 0.6 |
| Remediation/Consequence Mgmt | 5 | 3 | 1 | 9 | 0.3 |

Analysis of Terrorism Preparedness Educational Activities



Analysis of Terrorism Preparedness Educational Activities



CDC Information Development and Dissemination

Critical Health Information



Communication

Public
Media
Other stakeholders

Professional Education

Public health professionals
Clinicians
Others

Identification, development, and dissemination of critical information to support terrorism preparedness and emergency response activities at CDC requires planning and close coordination between OTPER, the Office of Communication (OC), and other affected CDC offices and programs.



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CDC Terrorism Preparedness and Emergency Response Information and Education Considerations

“Just in case”: Information that all frontline PH professionals and clinicians will need to recognize illness caused by terrorist agents

- Delivery: Ongoing rollout; didactic, interactive, web-based formats; distance learning

“Just in time”: Information that can be immediately accessed by PH professional and clinicians when presented with suspect or known persons affected by terrorism events

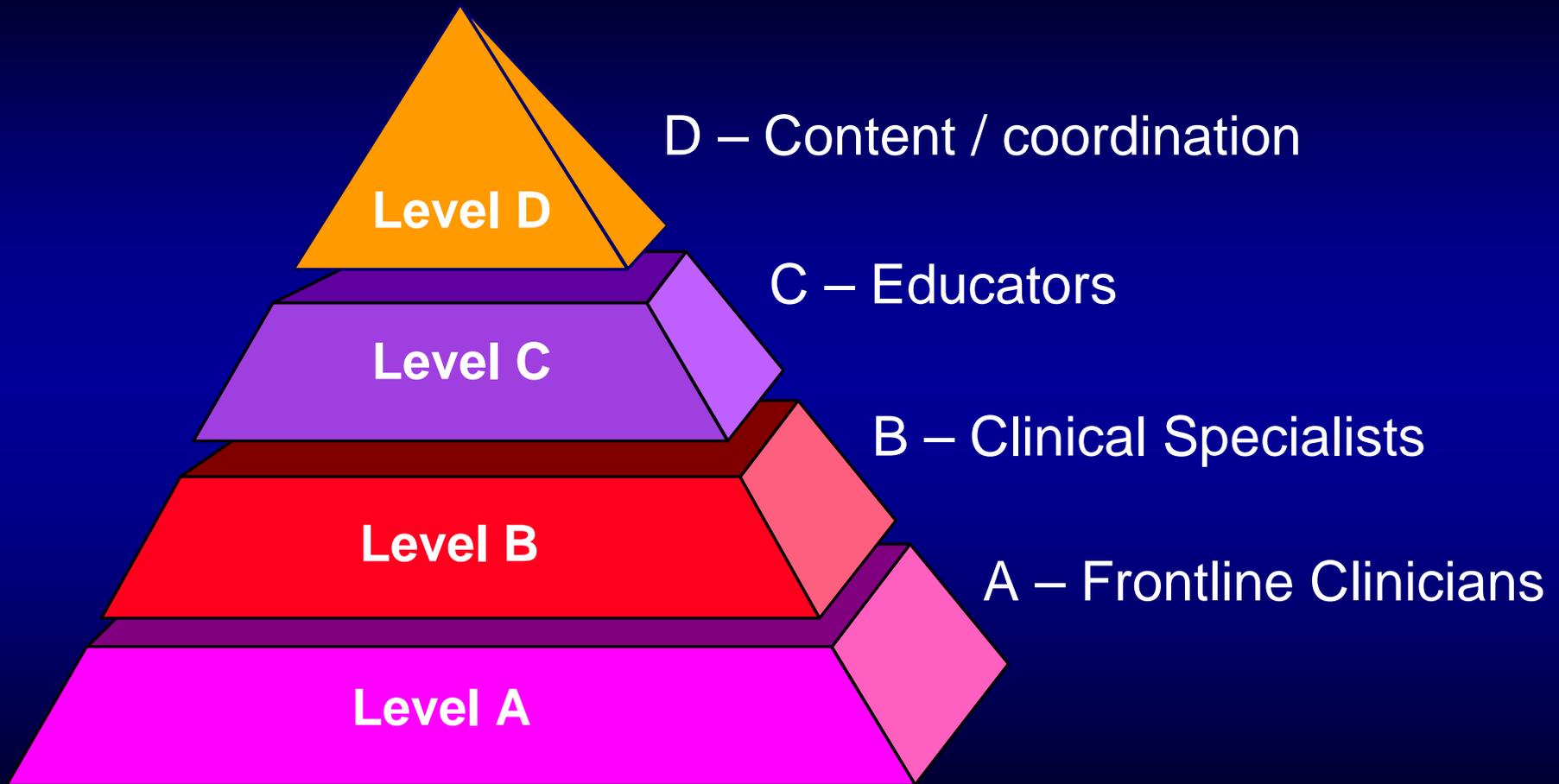
- Delivery Real-time; continuous updates; quick communication



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Clinician Preparedness: Just in Case / Just in Time



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Levels of Clinician Education

- **Level A**: All frontline clinicians (hospitals, out-patient clinics, dental offices, urgent care centers, etc.)
- **Level B**: Specialists who will be called to consult on suspect cases detected by Level A clinicians and provide treatment
- **Level C**: Peer educators who train specialists (speakers' bureaus, continuing education specialists, distance learning enterprises)
- **Level D**: Content / subject matter experts at CDC and academic centers



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Identifying Information Needs and Gaps

In the event of a terrorist act or emergency, CDC needs to provide just-in-time information immediately in at least the following 5 areas

Just-in-Time Information --- Ready and Available

- Guidance for first responders
- Immediate clinical guidance, medical management
- Public health response
- Clinical and reference laboratory protocols
- Basic information for the public



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CDC Emergency Communication System

10 teams with resources to disseminate emergency information through defined channels (e.g. **web, media, hotlines**) and to intended audiences (e.g. **clinicians, affected communities, public**).

CDC Emergency Communication System (ECS) Teams

- | | |
|---------------------|----------------------------|
| 1. Leadership | 6. Community Education |
| 2. Information Mgmt | 7. Public Health Workforce |
| 3. Media | 8. <u>Clinicians</u> |
| 4. Web | 9. Policymakers |
| 5. Hotlines | 10. Research |



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CDC Emergency Communication System continued

Coordination of emergency information through ECS ensures:

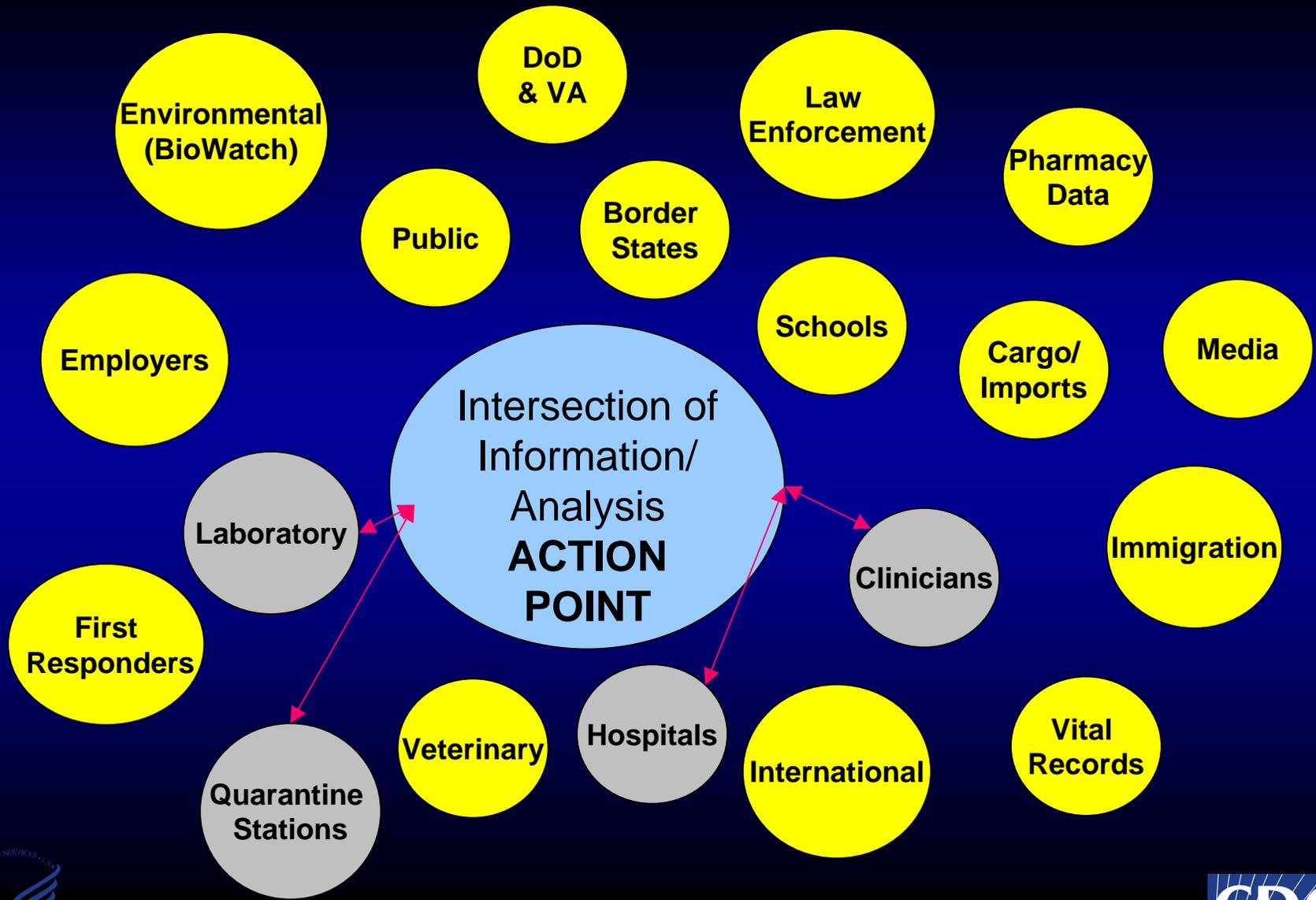
1. CDC is speaking, responding in one voice in concert with DHHS
2. Diverse target audiences are served during emergency
3. Information is shared between teams working with different constituency groups
4. Information checked for consistency between audiences, over time



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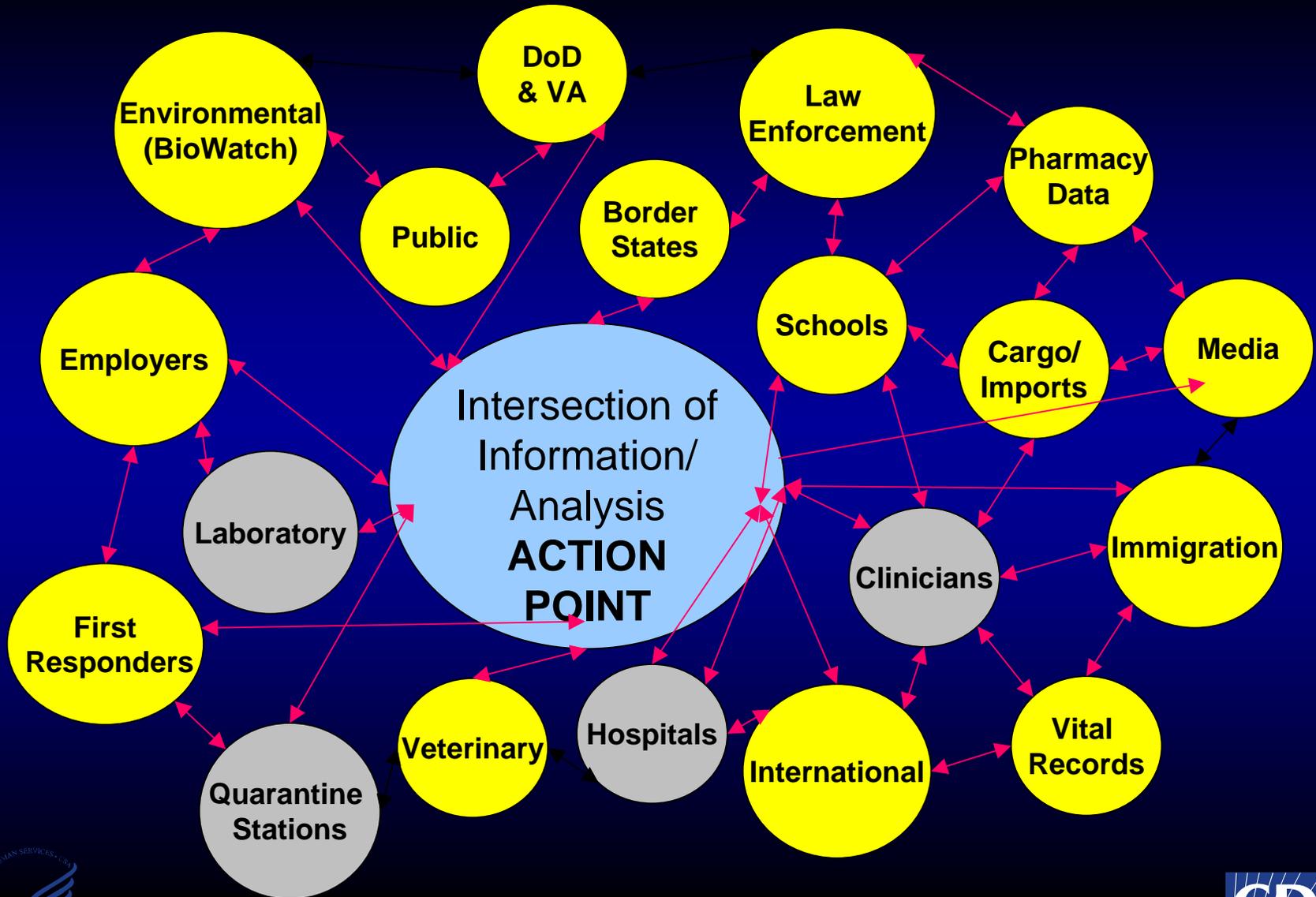
Current State of Connectivity



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Desired State of Connectivity



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Developing a Terrorism Preparedness Education Strategy

Questions to Consider

What have we learned from the needs assessments?

How can we minimize redundancy of materials?

Can we consolidate / standardize?

What actions can be taken to ensure consistent, accurate information? Quality education?

What is the impact of education? How do we know that learning has occurred? What evaluation programs are/should be in place?

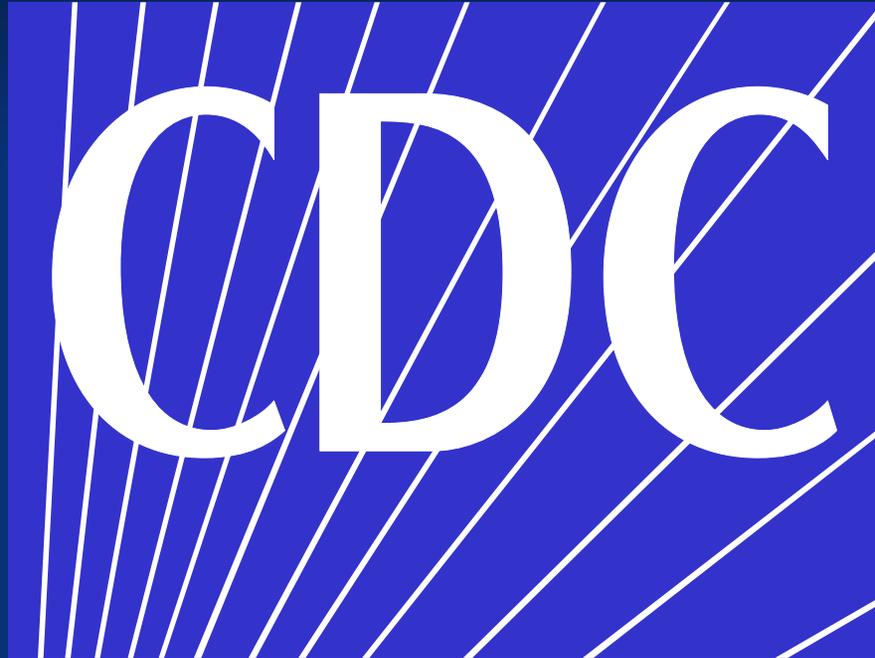
Where are the content gaps in training and education materials? In audiences reached?

Can we better coordinate resources for development and delivery of training?



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