AFTER ACTION REPORT

FY2009 TCN 09238
Workshop 2

Building a Framework for the Development of Core Capabilities and Competencies for Medical Disaster Preparedness and Response:

A National Consultation Meeting

September 22, 2010 • Logistic Management Institute, McLean, VA

The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Defense position, policy or decision, unless so designated by other documentation.

TABLE OF CONTENTS

INTRODUCTION **1**

PREFACE 1
HANDLING INSTRUCTIONS 1

EXECUTIVE SUMMARY **3**

OVERVIEW 3
ATTENDANCE 3
SUMMARY OF PARTICIPANT FEEDBACK 4

WORKSHOP OVERVIEW **5**

BACKGROUND 7
WORKSHOP STRUCTURE 10
WORKSHOP EVALUATION 10

WORKSHOP KEY OBJECTIVES AND SUMMARY OF RESULTS **11**

OBJECTIVE 1: FRAMEWORK FOR DEVELOPING WORKFORCE COMPETENCIES 11
OBJECTIVE 2: DRAFT A SET OF CORE COMPETENCIES AND A LIST OF PERCEIVED BARRIERS TO ATTAINING CORE COMPETENCIES 12
OBJECTIVE 3: REVIEW THE CAPABILITIES MATRIX TO IDENTIFY POTENTIAL GAPS AND RECOMMENDED ACTIONS 12

RECOMMENDATIONS AND CONCLUSIONS **14**

RECOMMENDATIONS 14
CONCLUSION 14

FIGURES

Figure 1: **FRAMEWORK FOR DEVELOPING WORKFORCE COMPETENCIES FOR PUBLIC HEALTH AND MEDICAL DISASTERS**

APPENDICES

Appendix 1: **WORKSHOP AGENDA**

Appendix 2: **FACILITATOR BIOGRAPHIES**

Appendix 3: **PARTICIPANT SURVEY TOOLS**

Appendix 4: **PARTICIPANT SURVEY RESULTS**

Appendix 5: **BREAK-OUT SESSIONS REPORT-OUT TEMPLATE**

Appendix 6: **CAPABILITIES CROSS-WALK**

INTRODUCTION

PREFACE

This workshop was conducted through the Integrated Civilian-Military Domestic Disaster Medical Response (ICMDDMR) program of the Yale New Haven Center for Emergency Preparedness and Disaster Response under TCN 09238 funded by the United States Northern Command (USNORTHCOM). This task requires conduct of a study to: (1) clarify the federal disaster medicine and public health education and training products currently in existence; (2) identify needs and explore strategies to fill education and training gaps; and (3) synthesize long-term expectations of competencies. The means to accomplish this study is through a series of at least six (6) workshops where federal and non-federal stakeholders would convene. This workshop served as the second of the six workshops. It was sponsored by the National Center for Disaster Medicine and Public Health, the Federal Education and Training Interagency Group for Public Health and Medical Disaster Preparedness and Response (FETIG), the United States Northern Command and the Yale New Haven Center for Emergency Preparedness and Disaster Response.

HANDLING INSTRUCTIONS

1. The title of this document is FY'09 TCN 09238 Workshop #2 Education and Training Needs for Disaster Medicine and Public Health Preparedness Building Consensus, Understanding and Capabilities After Action Report
2. For additional information, please consult the following points of contact:

Beverly M. Belton, RN, MSN,CNA-BC 09238 Task Lead Yale New Haven Center for Emergency Preparedness and Disaster Response 1 Church Street, 5th Floor New Haven, CT 06510 T.203.688.4470 F.203.688.4618 beverly.belton@ynhh.org	**Noelle Gallant, M.A.** 09238 Training and Evaluation Specialist Yale New Haven Center for Emergency Preparedness and Disaster Response 1 Church Street, 5th Floor New Haven, CT 06510 T.203.688.4137 F.203.688.4618 noelle.gallant@ynhh.org

Special thanks to the Workshop Planning Committee:

CAPT D.W. Chen, MD, MPH, Department of Defense
Rick Cocrane, MPH, MA, Department of Defense
Michael Handrigan, MD, FACEP, Department of Health and Human Services
Debbie Hettler, OD, MPH, FAAO, Department of Veterans Affairs
Wanda King, MS, Centers for Disease Control and Prevention
Gina M. Piazza, DO, FACEP, Department of Health and Human Services
Kenneth Schor, DO, MPH, National Center for Disaster Medicine and Public Health
Merritt Schrieber, CAPT, PhD, Department of Defense
Kandra Strauss-Riggs, MPH, National Center for Disaster Medicine and Public Health
Andrea C. Young, PhD, Centers for Disease Control and Prevention

Yale New Haven Center for Emergency Preparedness and Disaster Response Workshop Planning Group & Staff:

Joseph Albanese, PhD
Kristy Anderson, BS, LP
Susan Begien
Beverly M. Belton, RN, MSN, CNA-BC
Rebecca Cohen, MPH
Lynn M. Egan
Lauren Esposito
Elaine Forte, BS, MT (ASCP)
Noelle Gallant, MA
Kristi Jenkins
Edith Kaye, BS, MS
LTC (Ret) Joanne McGovern
Bruce Pantani, MCP+1, MCSE
Mark Schneider, MBA, NREMT
Eugenie V. Schwartz, BSN, MHA
Stewart D. Smith, MPH, MA, FACCP

EXECUTIVE SUMMARY

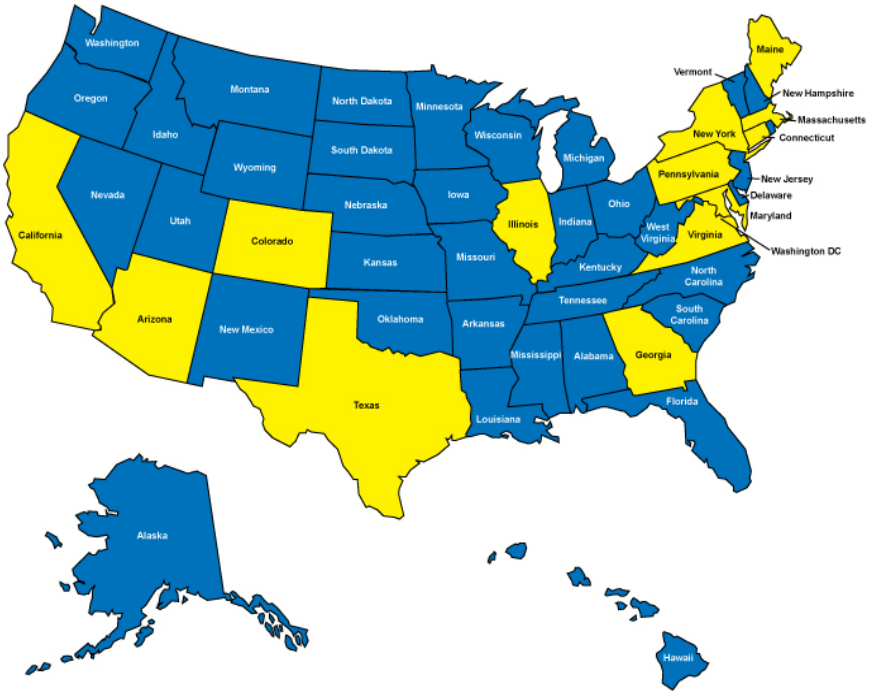
OVERVIEW

Participants in workshop #1 shared their concerns about the financial, organizational and time constraints associated with attending a conference longer than one day in length. Workshop #2 was designed as a one-day intensive scenario-based consultation meeting bringing together representatives of each of the 20 healthcare professions defined as part of the federal Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) to: (1) identify work underway by federal agencies and professional organizations to develop and disseminate profession-specific medical disaster preparedness and response capabilities and competencies; (2) review the capabilities matrix to identify potential gaps and recommend additions; (3) recommend specific competencies to achieve selected capabilities; and (4) identify different clinical professions' perceptions of barriers to attaining core capabilities and competencies.

Meeting strategies were employed to maximize dialog and interaction among participants and to increase exploration of the topic. These strategies included limiting attendance to 50 participants, setting up the physical space to support face-to-face interaction and breaking participants out into smaller groups for more focused discussions. The meeting began with a 1-hour introduction that included presentation of a disaster scenario and focused on setting the foundation for the work of the day. Participants spent the majority of the day in one of three identically structured breakout sessions designed to meet the objectives and achieve the desired outputs of the meeting. The disciplines represented were assigned and equally distributed across the breakout groups. Each breakout session was guided by a skilled facilitator with knowledge of the topic, who was supported by a strategically placed subject matter expert and a session evaluator. The breakout sessions were followed by a structured group report-out to provide an opportunity for further information sharing and discussion among the meeting participants. The complete agenda can be found in Appendix 1.

ATTENDANCE

The meeting was attended by 47 federal and non-federal representatives of the ESAR-VHP professions and representatives of the public health discipline. Approximately 40% of those present had attended the first workshop while several others were referred or heard about the workshop from someone who attended the first workshop. Attendees represented 13 states and the District of Columbia.



SUMMARY OF PARTICIPANT FEEDBACK

The majority of participants (65%) felt the scenario-based discussion was an effective approach to identifying specific core competencies to achieve the targeted capabilities and to identifying their associated barriers (85%). Participants identified potential gaps in capabilities associated with a lack of alignment across the multiple organizations, agencies and groups involved in the creation of competencies. Some of these include occupational safety and health, operational risk management, situational awareness and application of legal principles.

All respondents felt the current workshop attendance was diverse, representative of multiple disciplines and inclusive, validating that the right people were in the room. Participants felt the interactive format of the workshop facilitated the sharing of multiple ideas while simultaneously focusing the group to produce a single set of outputs reflective of the collaboration and networking that took place throughout the day. Additionally, participants felt the facilities at LMI were excellent and generally conducive to the work of the meeting. They also felt the facilitators worked hard to encourage and support dialogue and overall did an excellent job. A full description of participant survey results as well as a summary of the salient discussions conducted within each breakout session may be found in Appendix 4.

WORKSHOP OVERVIEW

Workshop Title:
Building a Framework for the Development of Core Capabilities and Competencies for Medical Disaster Preparedness and Response: A National Consultation Meeting

The topic and format for workshop #2 was developed in collaboration with the FETIG after a review of the findings from workshop #1.

Location and Date:
LMI Corporate Headquarters, McLean, Virginia. LMI generously offered the use of their modern, conveniently located facilities in support of the meeting on September 22, 2010.

Workshop Format:
Participants in workshop #1 shared their concerns about the financial, organizational and time constraints associated with attending a conference longer than one day in length. Workshop #2 was designed as a one-day intensive scenario-based consultation meeting bringing together representatives of each of the 20 healthcare professions defined as part of the federal Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) to (1) identify work underway by federal agencies and professional organizations to develop and disseminate profession-specific medical disaster preparedness and response capabilities and competencies, (2) review the capabilities matrix to identify potential gaps and recommend additions, (3) recommend specific competencies to achieve selected capabilities and (4) identify different clinical professions' perceptions of barriers to attaining core capabilities and competencies.

Meeting strategies were employed to maximize dialog and interaction among participants and to increase exploration of the topic. These strategies included limiting attendance to 50 participants, setting up the physical space to support face-to-face interaction and breaking participants out into smaller groups for more focused discussions. The meeting began with a 1-hour introduction that included presentation of a disaster scenario and focused on setting the foundation for the work of the day. Participants spent the majority of the day in one of three identically structured breakout sessions designed to meet the objectives and achieve the desired outputs of the meeting. The disciplines represented were assigned and equally distributed across the breakout groups. Each breakout session was guided by a skilled facilitator with knowledge of the topic, who was supported by a strategically placed subject matter

expert and a session evaluator. The breakout sessions were followed by a structured group report-out to provide an opportunity for further information sharing and discussion among the meeting participants.

The original intent was to follow the 1-day intensive consultation meeting with a wiki to expand the dialogue begun in Workshop #2 to a broader audience that would allow us to more thoroughly explore the topics discussed. Based in part on the success of the workshop and the short time period between this workshop and the workshop planned for November, the decision was made to cancel the wiki and continue the discussion during the November workshop.

Targeted Audience: Members of the following ESAR-VHP professions were targeted.

APRNs	**Dentists**	**LPNs**	**Physicians**
Behavioral Health Professionals	**Diagnostic Medical Sonographers**	**Medical and Clinical Laboratory Technologists**	**Physician Assistants**
Cardiovascular Technologists and Technicians	**Emergency Medical Technicians and Paramedics**	**Pharmacists**	**RNs**
Veterinarians	**Respiratory Therapists**	**Radiologic Technologists and Technicians**	

Meeting Objectives:

- Through a scenario-based workshop, elicit perspectives and recommendations from ESAR-VHP professionals to identify work underway by federal agencies and professional organizations to develop and disseminate profession-specific medical disaster preparedness and response capabilities and competencies
- Review the capabilities matrix to identify potential gaps and recommend additions
- Through a facilitated discussion, recommend specific competencies to achieve selected capabilities
- Identify different clinical professions' perceptions of barriers to attaining core capabilities and competencies

Desired Outputs:

- Framework for identification and validation of core capabilities and competencies for the clinical workforce responsible for medical preparation and response to a disaster event

- Process for identification and validation of core competencies for the clinical workforce responsible for medical preparation and response to a disaster event
- Draft set of core capabilities and recommended associated competencies for selected capabilities for the clinical workforce in attendance at this meeting
- List of perceived barriers to attaining core capabilities and competencies
- List of common core capabilities and potential gaps identified for ESAR-VHP professionals

Participating Organizations:
This workshop was sponsored by the National Center for Disaster Medicine and Public Health, the Federal Education and Training Interagency Group for Public Health and Medical Disaster Preparedness and Response, the United States Northern Command and the Yale New Haven Center for Emergency Preparedness and Disaster Response.

A total of 47 attendees came from a diverse cross-section of the medical and public health community that included representatives from:

- Federal, state and local government agencies and institutions
- Accredited academic institutions
- Private sector entities involved in accreditation/competency activities
- Practitioners in the field

BACKGROUND

The overarching mission of the ICMDDMR Project is to enhance the ability to develop integrated civilian/military approaches to large-scale disaster preparedness and response to maximize the coordination, efficiency and effectiveness of a medical response. This mission is being implemented through various activities, including:

- Developing a national strategy for civilian/military collaboration on integration of medical/public health preparedness education and training programs with USNORTHCOM
- Developing models for education and training which can be modified, replicated and made scalable for the civilian/military health delivery workforce
- Determining evaluation modalities for education and training programs implemented.
- Capturing and utilizing a best practices approach across the civilian/military continuum to implement education and training programs.

- Integrating civilian/military emergency preparedness strategies for medical and public health delivery

Both the military and the civilian sectors have significant resources that can be mobilized in the event of an emergency or disaster. Unfortunately, their respective organizational structures and lack of integration with each other have the unintended consequence of an ineffective mass casualty response in the homeland. In recognition of the importance of education and training as a strategy and tool to assist civilian and military organizations in better preparing to work together during a disaster, Homeland Security Presidential Directive 21: Public Health and Medical Preparedness called for the coordination of education and training programs related to disaster medicine and public health and the establishing of the National Center for Disaster Medicine and Public Health (NCDMPH) to lead those coordination efforts. The Federal Education and Training Interagency Group (FETIG) serves in an advisory role to the NCDMPH and worked closely with USNORTHCOM to craft ICMDDMR TCN 09238 to support and further the work of the NCDMPH.

ICCMDDMR TCN 09238 entitled "Study to determine the current state of disaster medicine and public health education and training and determine long-term expectations of competencies" establishes the following Statement of Work (SOW) and charges YNH-CEPDR with the following task:

> Conduct a study to (1) clarify the federal disaster medicine and public health education and training products currently in existence, (2) identify needs and explore strategies to fill education and training gaps, and (3) synthesize long-term expectations of competencies. The means to accomplish this study should be through a series of at least six (6) workshops where federal and non-federal stakeholders would convene.

The results of this study will:

- Provide the structure needed to address core curricula, training and research in disaster medicine as set forth in HSPD 21
- Ensure USNORTHCOM is prepared to provide continuous health service support in meeting its homeland defense and civil support missions

The proposed workshop development plan builds on the work done by the NCDMPH in its inaugural workshop entitled, "A Nation Prepared: Education and Training Needs for Disaster Medicine and Public Health". During this initial meeting, the NCDMPH

performed a needs assessment and brought together federal partners in a dynamic workshop intended to support networking across federal agencies and gathering of data that would be useful to the assessment. In addition, the inaugural meeting was structured to facilitate its replication and the collection of comparative data.

For TCN 09238, an external planning committee made up of representatives from the FETIG, the NCDMPH and representatives from YNH-CEPDR was convened to design a series of workshops to meet the stated objectives of the TCN. This integration of civilian, military and federal partners allows us to create workshops and other outputs that are meaningful to all sectors.

Our first workshop was designed to bring together federal and non-federal stakeholders for discussion of key issues, information sharing and networking related to disaster medicine and public health education and training. Participants were expected to:

- Receive the latest update regarding key federal activities and legislation
- Share federal and private sector education and training integration strategies
- Develop recommendations and a way ahead for future collaboration

The outputs of the initial workshop and feedback from the FETIG were used to design the structure and content of the remaining workshops to ensure that the objectives outlined in the SOW for this task are met. The structure and content of each successive workshop will also be re-evaluated in light of the results of the preceding workshop. Additional workshops will occur at intervals of approximately 3 months as outlined in the schedule below:

Workshop #	Date	Location	Topic	Workshop #
2010 Workshops				
1	May 5-6, 2010	Gaithersburg, MD	**Education and Training Needs for Disaster Medicine and Public Health Preparedness** Building Consensus, Understanding and Capabilities	
2	Sept. 22, 2010	McLean, VA	**Disaster Medicine and Public Health Preparedness Workforce Definition and Required Capabilities:** A National Consultation Meeting	
3	Nov. 17, 2010	McLean, VA	**Competencies for Specific Disciplines: A National Dialogue Between Academia and Practicing Professionals**	

2011 Workshops			
4	Feb./Mar. 2011	TBD	**Organizational Competencies**
5	May 2011	TBD	**TBD**
6	July/Aug. 2011	TBD	**TBD**

The workshops will be held in the National Capital Region, Colorado Springs, Colorado, or New Haven, Connecticut, depending on the topic and specific audience targeted. At the conclusion of all six workshops, a comprehensive final report will be developed that addresses key findings relative to the stated objectives of the TCN.

WORKSHOP STRUCTURE

The workshop took place over 1 day and consisted of plenary sessions, a working lunch and 3 concurrent breakout sessions. The plenary sessions focused on providing context and background information to support the breakout sessions. Each breakout session consisted of a facilitated scenario-based discussion (see Appendix 2 for Facilitator Biographies) that addressed 1-2 core capabilities selected from a cross-walk of capabilities (Appendix 6) available from several organizations, followed by identifying potential core competencies to fulfill those capabilities. The reporting template shown in Appendix 5 was utilized to capture the outcomes of each breakout group's discussion.

The breakout sessions were followed by a structured group report-out and closing remarks encouraging the group to consider the way ahead as we continue to explore issues related to the education and training needs for disaster medicine and public health preparedness. The primary goal of this format was to provide interactive informational sessions that would serve as the foundation for supporting dialogue and sharing of ideas among key stakeholders.

WORKSHOP EVALUATION

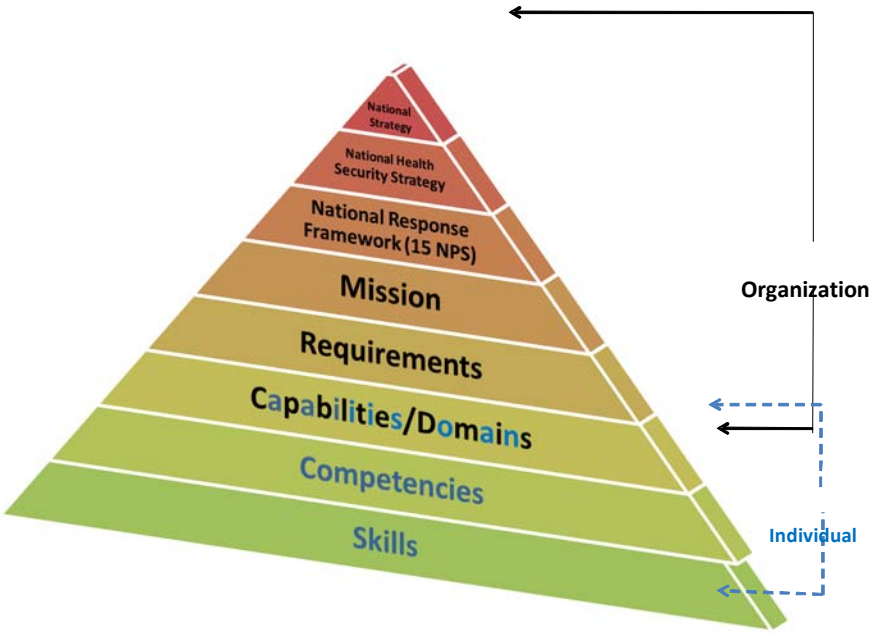
Evaluators were assigned to each breakout session to take notes and record key findings. At the end of the day, a specific evaluation questionnaire was administered (Appendix 3) to all participants. The questionnaire results are provided in Appendix 4.

WORKSHOP KEY OBJECTIVES AND SUMMARY OF RESULTS

OBJECTIVE 1: FRAMEWORK FOR DEVELOPING WORKFORCE COMPETENCIES

A key output of the meeting was achievement of consensus that the framework illustrated below is the appropriate framework for identification and validation of core capabilities and competencies for the workforce responsible for preparedness and response to public health and medical disasters.

Figure 1:
Framework for Developing Work Force Competencies for Public Health and Medical Disasters



McGovern, J. and Smith, S. 2010

The National Security Strategy sits at the pinnacle of the framework and outlines actions to keep the country safe and prosperous. The framework also recognizes that on a national level the National Health Security Strategy and the National Response Framework are key documents that define the organizational level approach to a medical or public health disaster. From the framework, missions are established which require response capabilities (or domains) at the organization and individual level. For individuals to establish these specified proficiencies, competencies are developed. Each competency leads to a specific skill to enable task completion.

A recommendation was made to reflect the Homeland Security Presidential Directives and requirements from private and local government organizations as well within the upper tiers of the framework. This recommendation will be integrated into future versions of the framework illustrated above.

Objective 2: Draft a Set of Core Competencies and a List of Perceived Barriers to Attaining Core Competencies

A draft set of core competencies for the preparedness, response and recovery scenario phases was developed for the following capabilities:

- Planning
- Communications
- Responder safety and health
- Patient evacuation
- Disease surveillance

Although the format of the competencies produced by the breakout groups does not consistently use accepted terminology and language, they reflect an understanding of the core tasks that cross over disciplines and are required in a medical or public health disaster. The groups also began but did not complete the identification of barriers to achievement of competencies and their associated solutions.

Objective 3: Review the Capabilities Matrix to Identify Potential Gaps and Recommended Actions

A capabilities matrix which compares capabilities from a cross-section of military and civilian medical and public health agencies (Appendix 6) was reviewed by participants. Participants decided that the following items are missing and should be added:

Sources of Additional Capabilities:	Capabilities:
• ESF#11 capabilities • Veterans Administration capabilities • Force Health Protection/Deployment Health • American Hospital Association • The Joint Commission • Public Health Accreditation Board	• Structure capabilities • Establishment of core/family resource centers • Occupational safety and health • Operational risk management • Situational awareness • Establishment of scene safety/security • Development of evaluation criteria • Application and validation of legal and external principles • Knowledge of principles to build effective functional response teams

RECOMMENDATIONS AND CONCLUSIONS

RECOMMENDATIONS

In response to both positive participant feedback and the quality of competency data collected via the breakout sessions, meeting planners are advised to conduct subsequent meetings according to the framework and processes implemented for this meeting.

In addition and in response to the participant survey question, **"***Are there any topics that should have been covered, but were not? Please list.", three* suggestions were provided and should be considered for future meetings*:*

- Include a discussion of how core competencies can be integrated into the accreditation process
- Some of the group discussions were too hospital-centric. Next time, ensure representation across multiple care settings
- Provide clarity concerning the level of competencies under consideration: core/intro, intermediate or advanced

CONCLUSION

This workshop was successful at achieving the majority of its objectives and desired outputs and has positively contributed to the achievement of the overall statement of work for this TCN. We will use the recommendations and participant feedback to design the 3rd workshop with a focus on creating a process for identification and validation of core competencies for the clinical workforce responsible for medical preparation and response to a disaster event.

APPENDIX 1

AGENDA

Building a Framework for the Development of Core Capabilities and Competencies for Medical Disaster Preparedness and Response: A National Consultation Meeting

September 22, 2010 • LMI Corporate Headquarters, McLean, Virginia

Agenda: Wednesday, September 22, 2010			
7:00 am-8:00 am	**Registration and Networking Breakfast** LOCATION: CONFERENCE FOYER 2ND FLOOR		
8:00 am-8:30 am	**Introduction and Meeting Overview** ***Rebecca Cohen, MPH*** **–** Yale New Haven Health Center for Emergency Preparedness and Disaster Response **Welcome and Opening Remarks** ***Houston Polson, JD*** – Chief Joint Education, United States Northern Command LOCATION: MAIN CONFERENCE ROOM (MCC1)		
8:30 am-9:30 am	**Review and Discussion of Capabilities Matrix** ***Stewart D. Smith, MPH, MA, FACCP*** **–** Yale New Haven Center for Emergency Preparedness and Disaster Response LOCATION: MAIN CONFERENCE ROOM (MCC1)		
9:30 am-9:45 am	**Break and Morning Refreshments** LOCATION: CONFERENCE FOYER 2nd FLOOR		
9:45 am-10:15 am	**Introduction of Scenario-Based Discussion** ***Stewart D. Smith, MPH, MA, FACCP*** **–** Yale New Haven Center for Emergency Preparedness and Disaster Response LOCATION: MAIN CONFERENCE ROOM (MCC1)		
10:15 am-1:45 pm *Includes working lunch and break as needed*	**Scenario Based Discussion**		
	Breakout Session A **FACILITATOR:** ***Jim Kupel*** MAIN CONFERENCE ROOM (MCC1)	**Breakout Session B** **FACILITATOR:** ***Julie Kipers*** BREAKOUT ROOM B (MCC2)	**Breakout Session C** **FACILITATOR:** ***Stewart D. Smith*** BREAKOUT ROOM C (MCC3)
1:45 pm-2:15 pm	**Breakout Session Group Report Out Preparation**		

Building a Framework for the Development of Core Capabilities and Competencies for Medical Disaster Preparedness and Response: A National Consultation Meeting

September 22, 2010 • LMI Corporate Headquarters, McLean, Virginia

Agenda: Wednesday, September 22, 2010 CONTINUED	
2:15 pm-2:30 pm	**Break**
2:30 pm-4:15 pm	**Breakout Session Report** ***Elaine Forte, BS, MT (ASCP)*** – Senior Deputy Director, Operations, Yale New Haven Center for Emergency Preparedness and Disaster Response LOCATION: MAIN CONFERENCE ROOM (MCC1)
4:15 pm – 4:30 pm	**Break**
4:30 pm-5:00 pm	**Closing Remarks/The Way Ahead** LOCATION: MAIN CONFERENCE ROOM (MCC1) ***Kenneth Schor, DO, MPH –*** *Acting Director,, National Center for Disaster Medicine and Public Health*

APPENDIX 2

FACILITATOR BIOGRAPHIES

Julie Kipers, PMP

Ms. Kipers is a Senior Consultant for LMI. She has 20 years of experience working with Department of Defense (DoD) resource analysis, requirements analysis, and technology initiatives. While at LMI, she has participated in a variety of studies and analysis tasks for clients, such as the Occupational Safety and Health Administration (OSHA), the Defense Safety Oversight Council (DSOC), the Defense Logistics Agency (DLA), the Department of Education, the U.S. Coast Guard (USCG), , and the U.S. Army Corps of Engineers (USACE). Ms. Kipers, a project management professional, has supported the Assistant Secretary of Defense (Health Affairs) on several projects including the Defense Critical Infrastructure Program. She is a trained facilitator that is experienced in eliciting decision criteria and reaching consensus within groups. She has led groups through strategic planning, resource decisions, framework developments, and vendor selections

Jim Kupel

Jim Kupel is the managing principal and co-founder of Crescendo Consulting Group. Currently, he also serves as the Program Manager for the Yale New Haven Health System - Center for Healthcare Solutions' Background Check Division. With more than 25 years of consulting experience, Jim has successfully managed a full range of assignments in program management, enterprise and business-line development, strategic planning, research, consumer engagement leadership and development, social media, facilitation, and public affairs. He is skilled at presenting technical and abstract concepts in a clear, concise, and detailed manner. He has conducted hundreds of measurably successful engagements for clients in the public, non-profit and private sectors. Clients with multi-disciplinary programs that would otherwise require a diverse group of experts often select Jim for his encompassing subject-matter and industry knowledge.

As a nationally requested speaker, Jim's presentations have focused on planning, marketing, customer relationship management, strategy, market research, and collaboration to groups both large and small. The National Business Coalition on Health, American Society for Health Care Marketing, Institute of Management Accountants, and the annual meeting of the American Marketing Association's Health Care Marketing Division are among the groups to whom he has spoken.

Jim was co-founder and president of Commonwealth Marketing and Development. He also was director of the Growth Management Consulting Division at Baker Newman & Noyes, one of the largest professional services firms in New England (with historical roots in KPMG Peat Marwick and Ernst & Young).

He has written numerous articles and two books and has been a columnist for Maine's largest daily paper, the **Portland Press Herald**. He has a BA in philosophy and English from the Honors College of the University of Oregon. Currently, he is on the board of directors from Camp Ketcha.

Stewart Smith, MPH, MA, FACCP

Stewart Smith provides direct support to Yale New Haven's Center for Emergency Preparedness and Disaster Response as Program Manager for Department of Defense

activities to include the National Center for Integrated Civilian-Military Domestic Disaster Medical Response (ICMDDMR).

Stewart is the Founder, President and Chief Executive Officer of Emergency Preparedness and Response International, LLC (EP&R International). A retired Navy Commander, Medical Service Corps Officer, his previous military work history spans over 25 years of progressive assignments that includes Chief of the Joint Regional Medical Plans and Operations Division for the North American Aerospace Defense Command and the United States Northern Command (NORAD-USNORTHCOM), Surgeons Directorate; Director of International Health Operations Policy, Homeland Defense, and Contingency Planning Policy for the Assistant Secretary of Defense for Health Affairs; Branch Chief for the Joint Staff, Health Services Support Division; and Branch Head for the Deployable Medical Systems, Office of the Chief of Naval Operations, Medical Plans and Policy (OPNAV-N931).

Stewart holds graduate degrees in Public Health Management and Policy from the Yale School of Medicine, Department of Public Health and Epidemiology; and the Naval War College in National Security and Strategic Studies.

He is the co-founder of and immediate past President to the American College of Contingency Planners (ACCP). His particular areas of interest and expertise include strategic medical planning; domestic consequence management operations, the National Disaster Medical System (NDMS), and the National Response Framework (NRF) with a focus on complex emergencies and calamitous events (including medical operations in the WMD/asymmetrical environment); and finally, international Weapons of Mass Destruction medical countermeasures policy. Stewart was selected as the first American to chair the North Atlantic Treaty Organization's (NATO's) Biomedical Defense Advisory Committee (BIOMEDAC); holding that appointment from 2003-2005 while assigned to the Secretary of Defense and USNORTHCOM staffs.

APPENDIX 3

PARTICIPANT SURVEY TOOLS

Thank you for taking the time to participate in this evaluation. Your comments will enable us to better plan and execute future meetings and tailor them to meet your needs.

1. How do you rate (in terms of delivery of material, knowledge of material and discussion facilitation) the speaker who conducted the morning session: **Review and Discussion of Capabilities Matrix**?

☐ **Excellent**

☐ **Good**

☐ **Average**

☐ **Below Average**

☐ **Poor**

Comments

2. How do you rate (in terms of delivery of material, knowledge of material and discussion facilitation) the facilitator who conducted the afternoon breakout session: **Scenario Based Discussion?** *Please circle appropriate name***.**

Jim Kupel **Julie Kipers** **Stew Smith**

☐ **Excellent**

☐ **Good**

☐ **Average**

☐ **Below Average**

☐ **Poor**

Comments

3. **How do you rate the effectiveness of the Scenario Based Discussion as an approach to identifying specific core competencies to achieve the target capabilities?**

☐ **Excellent**

☐ **Good**

☐ **Average**

☐ **Below Average**

☐ **Poor**

Comments

4. **How do you rate the effectiveness of the Scenario Based Discussion as an approach to identifying barriers to achievement of competencies and capabilities?**

- ☐ **Excellent**
- ☐ **Good**
- ☐ **Average**
- ☐ **Below Average**
- ☐ **Poor**

Comments

5. **HOW DO YOU RATE THE REPRESENTATIVENESS OF THE MEETING PARTICIPANTS (THE RIGHT PEOPLE IN TERMS OF LEVEL AND MIX OF DISCIPLINES)?**

- ☐ **Excellent**
- ☐ **Good**
- ☐ **Average**
- ☐ **Below Average**
- ☐ **Poor**

Comments

6. **Is your organization using competencies to guide your education and training?**

- ☐ **Yes**
- ☐ **No**
- ☐ **Don't Know**

Comments

7. **Who should be developing core competencies (mark all that apply) :**

- ☐ **Federal agencies**
- ☐ **Academia**
- ☐ **Professional associations**
- ☐ **Accrediting bodies**
- ☐ **State/Local governments**
- ☐ **All of the above**

☐ **Don't Know**

Comments

8. **Please respond to the following statement:** *It is more appropriate to develop discipline-specific competencies than it is to share core competencies across many disciplines.*

☐ **Strongly Agree**

☐ **Agree**

☐ **Disagree**

☐ **Strongly Disagree**

☐ **Don't Know**

Comments

9. **Please respond to the following statement***: I am satisfied with the core competency effort in disaster medicine and public health.*

☐ **Strongly Agree**

☐ **Agree**

☐ **Disagree**

☐ **Strongly Disagree**

☐ **Don't Know**

Comments

10. What did you find most useful about the national consultation meeting?

11. Are there any topics that should have been covered, but were not? Please list.

The following questions address the location and facilities of the workshop.

12. **Please rate the location of this meeting (LMI, McLean, VA).**

☐ **Excellent**

☐ **Good**

☐ **Average**

☐ **Below Average**

- ☐ **Poor**

13. **Please rate the food.**

- ☐ **Excellent**
- ☐ **Good**
- ☐ **Average**
- ☐ **Below Average**
- ☐ **Poor**

14. **Please rate the parking accommodations.**

- ☐ **Excellent**
- ☐ **Good**
- ☐ **Average**
- ☐ **Below Average**
- ☐ **Poor**

15. **Please rate the pre-registration process.**

- ☐ **Excellent**
- ☐ **Good**
- ☐ **Average**
- ☐ **Below Average**
- ☐ **Poor**

16. **Please rate the on-site meeting check-in process.**

- ☐ **Excellent**
- ☐ **Good**
- ☐ **Average**
- ☐ **Below Average**
- ☐ **Poor**

APPENDIX 4

PARTICIPANT SURVEY RESULTS

OVERVIEW

This evaluation was designed and conducted to measure the meeting's achievement of the following objectives and desired outputs**:**

Objective 1: Through a scenario-based workshop, elicit perspectives and recommendations from ESAR-VHP professionals to identify work underway by federal agencies and professional organizations to develop and disseminate profession-specific medical disaster preparedness and response capabilities and competencies.

Objective 2: Review the capabilities matrix to identify potential gaps and recommend additions.

Objective 3: Through a facilitated discussion, recommend specific competencies to achieve selected capabilities.

Objective 4: Identify different clinical professions' perceptions of barriers to attaining core capabilities and competencies.

Output 1: Framework for identification and validation of core capabilities and competencies for the clinical workforce responsible for medical preparation and response to a disaster event

Output 2: Process for identification and validation of core capabilities and competencies for the clinical workforce responsible for medical preparation and response to a disaster event

Output 3: Draft set of core capabilities and recommended associated competencies for selected capabilities for the clinical workforce in attendance at this meeting

Output 4: List of perceived barriers to attaining core capabilities and competencies

Output 5: List of common core capabilities and potential gaps identified for ESAR-VHP professionals

Demonstration of these outputs is provided in the narrative of this document. The outputs provide a measurement of the meeting's attainment of the four objectives as follows:

Output	Objectives Demonstrating Output
1	1, 2, 3
2	1, 2, 3
3	3
4	4
5	3

SECTION 1

Output 1 - Framework for identification and validation of core capabilities and competencies for the clinical workforce responsible for medical preparation and response to a disaster event

Output 2 - Process for identification and validation of core capabilities and competencies for the clinical workforce responsible for medical preparation and response to a disaster event

Output 5 - List of common core capabilities and potential gaps identified for ESAR-VHP professionals

These outputs were developed during the meeting as demonstrated by data collected via the Participant Evaluation Survey. Charts #1 and #2 illustrate that 65% and 85% of participants, respectively, had a positive view of the efficacy of the scenario-based discussion.

Chart 1

How do you rate the effectiveness of the Scenario-Based Discussion as an approach to identifying specific core competencies to achieve the target capabilities?

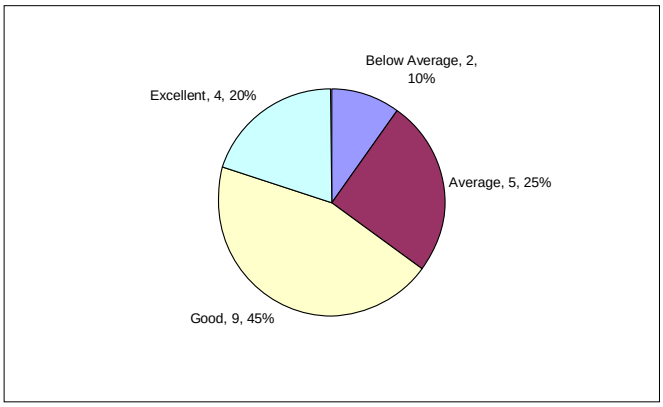
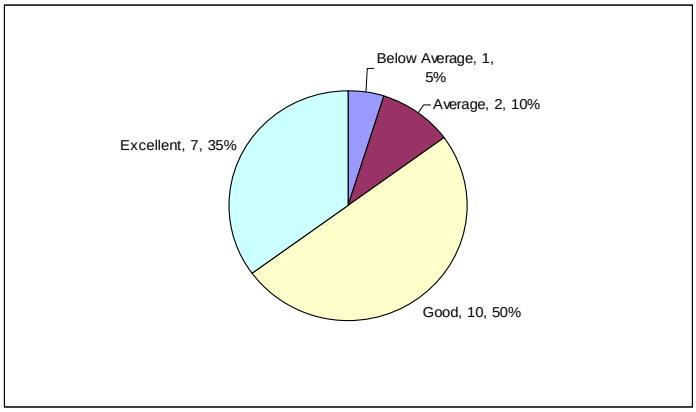


Chart 2

How do you rate the effectiveness of the Scenario-Based Discussion as an approach to identifying barriers to achievement of competencies and capabilities?

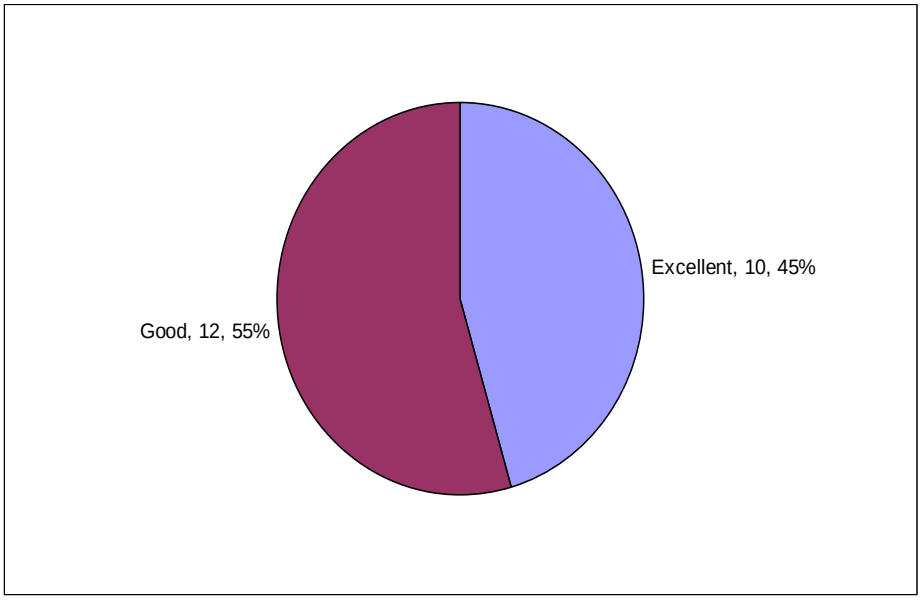


In demonstration of potential gaps in capabilities (Output #5), participants conveyed that meeting planners should consider adding the following capabilities to the matrix:

- ESF#11 capabilities
- VA capabilities
- Structure capabilities
- Establishment of core/family resource centers
- FHP/Deployment health
- Occupational safety and health
- Operational risk management
- Situational awareness
- Establishment of scene safety/security
- Development of evaluation criteria
- Application and validation of legal and external principles
- Knowledge of principles to build effective functional response teams
- Add American Hospital Association and Association for Community Health Improvement as well as TJC and PHAB

In further demonstration that the meeting's approach was well-received by participants, 100% of participants gave a positive rating to the inclusiveness of the invitees (Chart 3).

Chart 3
How do you rate the representativeness of the meeting participants (the right people in terms of level and mix of disciplines)?



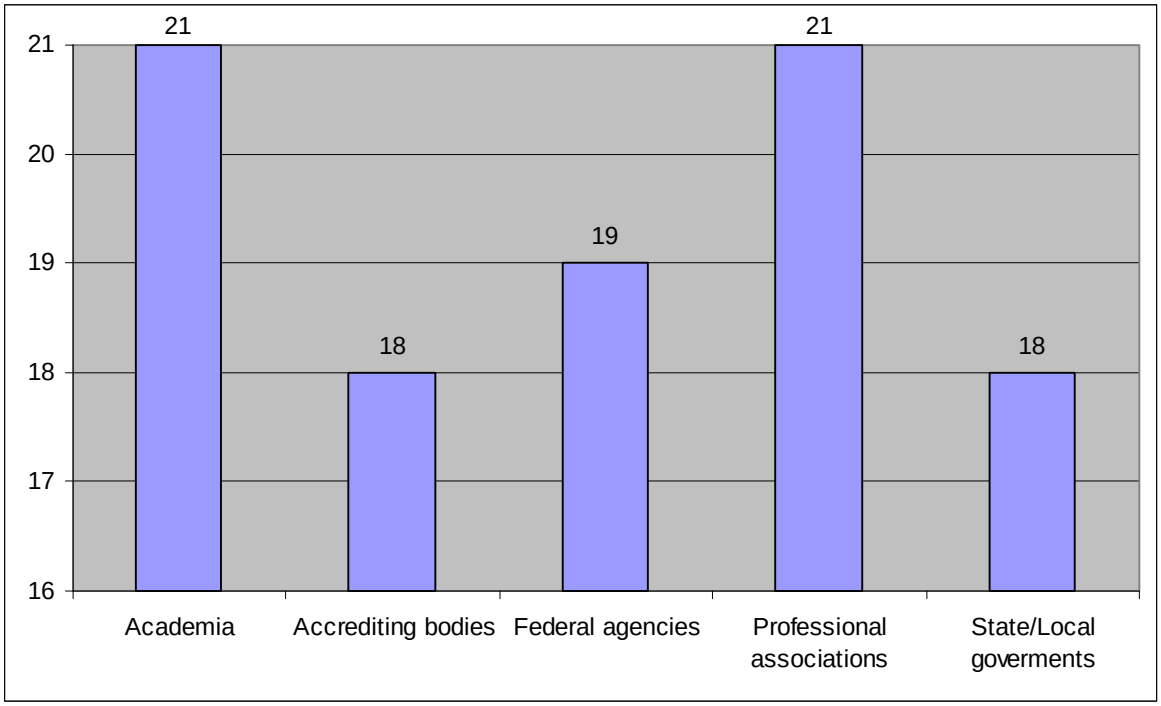
Participants also provided the following qualitative feedback in response to this question (responses are *unedited*):

- very good mix. one out of control participant who dominated with self promotion all day.
- I think it was very diverse.
- need IT individuals in this - technology

- very inclusive
- Suggestions for future attendees: Radiology Techs (contact American Society of Rad Techs); Occupational Therapists
- If same attendees in future, recommend mix the group breakouts Some strong personalities, but OK. Need more attendees and a few more professions.
- Need multi-disciplinary/multi-organizational approach across all response disciplines, e.g. emergency management, law enforcement as well as healthcare/public health practitioners
- Would like to see more participation from key stakeholders to develop buy-in for work. This is a national discussion.

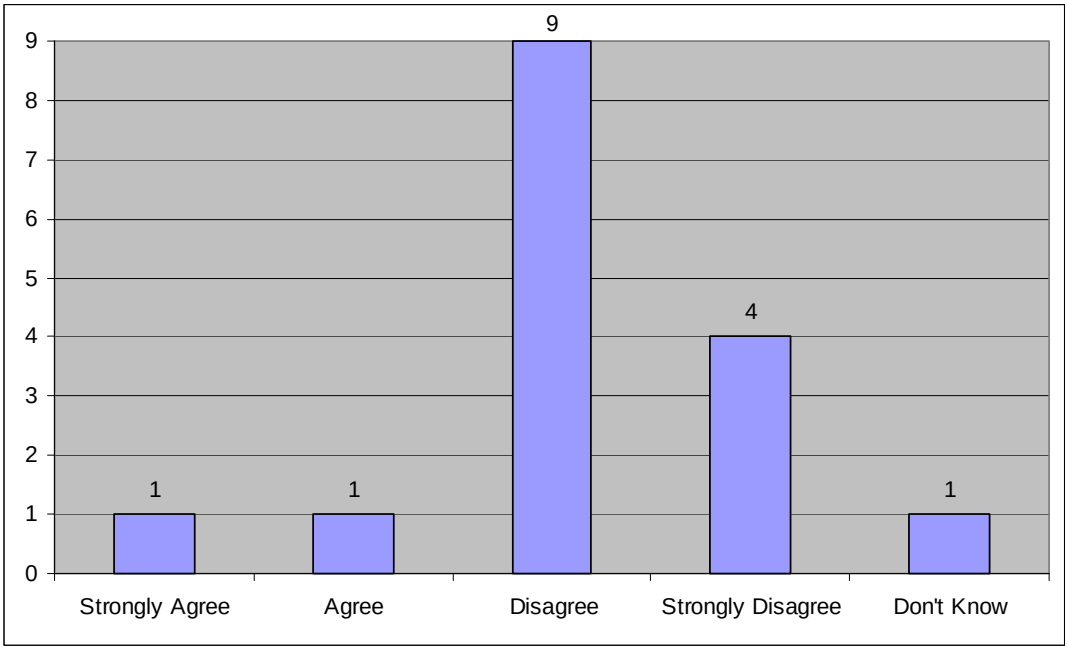
Chart 4 further illustrates that participants are highly supportive of an inclusive and collaborative approach to core competency development; nearly 100% of respondents believe that competencies should be developed by a wide spectrum of agencies.

Chart 4
Who should be developing core competencies (respondents asked to mark all that applied)?



In further demonstration of this collaborative attitude, 8% (n=16) of participants disagreed with statement provided below in Chart 5.

Chart 5
Please respond to the following statement: It is more appropriate to develop discipline-specific competencies than it is to share core competencies across many disciplines.



Participants also provided the following qualitative feedback in response to this question (responses are unedited):

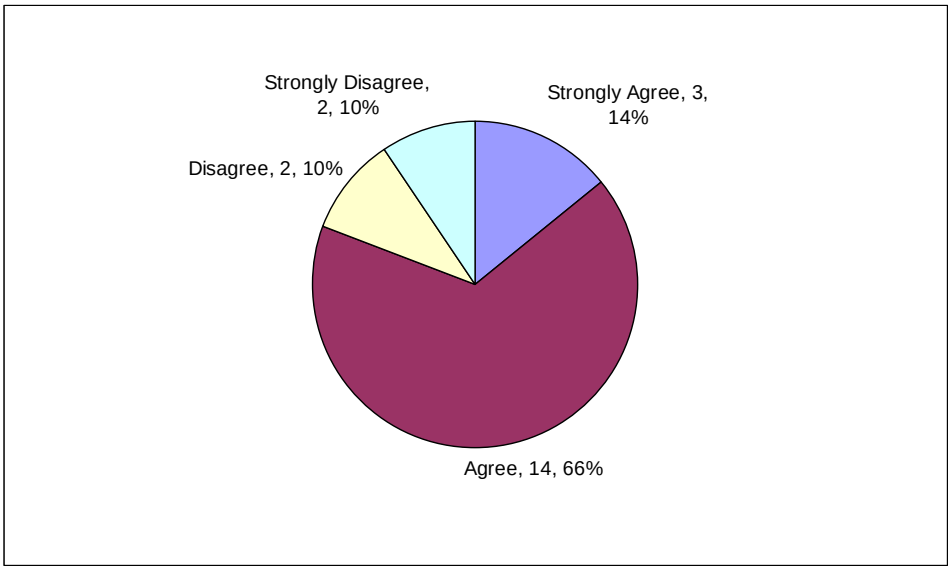
- Discipline specific competencies should come from the individual academic program - we don't need to do this - could assist with adding a preparedness track to their already developed specialty.
- we need to focus on shared core competencies
- We need to unify. This task is difficult.
- must think cross disciplines
- Need both
- need to do both
- need to understand teams
- core competencies - followed by profession/role specific
- Need both
- Cross-cutting competencies are vital, but may also flow from discipline-specific competencies

Participants submitted the following comments in response to the question: "*What did you find most useful about the national consultation meeting?"* (responses are unedited). As this data indicates, the value in diversity and inclusiveness to the topic addressed by the meeting was raised by 12 (75%) of the 16 participants who responded to this question.

- interesting discussions in the open – realization that this is a “huge” undertaking. Group dialog was very interactive and helpful since there are such a diverse number of folks in the room
- good forum to share ideas
- it was a great blend of people
- Broadening the understanding of myself and others by bringing all the disciplines together.
- Great diversity represented.
- Diversity of workforce represented.
- brainstorming with interdisciplinary professionals
- Reaffirms and informs individual methods.
- shared discussions
- the discussion and recommendations will be very useful as I continue to develop the strategic direction of the National ESAR-VHP program and develop training recommendations for the state volunteers.
- Very focused and had specific goals to achieve. Networking. Overall, just learning that much more about all-hazards preparation and what other professions are doing to integrate curriculum
- networking, stakeholders in meeting
- Participation of multiple disciplines. Very good facilitation by hosts. Good guidance, adherence to timelines and discussions off-line. Having examples of competencies from NDLS and ASPH.
- Diversity of knowledge, experience and insight in building a framework
- Different points of view – different disciplines. The opportunity to participate in the conversation.
- The multiple conversation bringing forced multiple ideas but only with the single outcome.
-

As illustrated in Chart 6, participants were generally (80%) satisfied with the core competency efforts in the fields under discussion.

Chart 6
Please respond to the following statement: I am satisfied with the core competency effort in disaster medicine and public health.



Participants also provided the following qualitative feedback in response to this question (responses are unedited):

- still has a long way to go ... but good start
- can't read
- it only deals with medicine and military - where is public health and military as part of community
- Not done yet!
- Good honest work
- But needs to involve more professions
- Improving over time and with each iteration
- A work in progress
- Keep the momentum?

SECTION 2

Output 3 - Draft set of core capabilities and recommended associated competencies for selected capabilities for the clinical workforce in attendance at this meeting

Output 5 - List of common core capabilities and potential gaps identified for ESAR-VHP professionals

Outputs 3 and 5 were achieved during the meeting as demonstrated by data collected via a template developed for the capability-specific breakout sessions (see Appendix E). Following each breakout group discussion, participants completed the blank template and identified the following competencies for each of the five capabilities provided in Table 1.

Table 1

Capability	Competencies
Communications	– Develop and/or disseminate standard education and communication systems – Understand common terminology – Use emergency communication systems and networks – Understand recall procedures – Utilize emergency communications systems to report critical health information. – Access standard, timely and credible health and safety information for all ages and populations affected (e.g., Medical management, community information, personnel protective countermeasures and specific hurricane related info) – Display knowledge of disaster scope – Able to assess and coordinate available services and recovery needs
Disease Surveillance	- Assess risk of disease in response scenario - Use the Health Assessment Network from public health departments - Stockpile and share assets - Reference SOP (Standard of Procedures) – mutual aid – know response (environment, food, water, infection) procedures - Know and apply response procedures - Implement infection control procedures - Conduct toxicology/disease modeling in anticipation of disease outbreak - Conduct EPI monitoring (e.g., assess and report) - Maintain communication of non-hospital sentinel-surveillance - Obtain and track resources needed to manage outbreak and control progression/spread - Update communication and models - Conduct field assessments - Monitor exacerbation of co-morbidity/resource use
Patient Evacuation	– Identify chain of command/ICS, communications capabilities and assets – Assess deployment of staff, supplies, space (SSS) – Monitor longevity workload/hrs worked by staff – Monitor accounts payable

Capability	Competencies
	– Conduct patient tracking on arrival to locations – Conduct family reunification – Address mental health/behavioral health issues – Conduct fatality management – Prepare after action reports
Planning	– Conduct hazard vulnerability assessments using CEM approach – Develop emergency/disaster plans – Knowledge and exercise of emergency/disaster response mechanisms and your role in the emergency /disaster operations plan. – Prepare to perform expected roles in a disaster – Able to effectively implement plans – Summarize regional, community, office, institutional and family disaster plans – Possess knowledge and awareness of post event public health risks and their management – Describe and implement solutions for ensuring the recovery of clinical records, supplies and services to meet physical and mental health needs – Contribute to and ensure after action report
Responder Safety and Health	– Describe how to function in an austere environment – Demonstrate the ability to forecast the impact – Have awareness of crisis standards of care – Employ protective behaviors according to changing conditions, personal limitations and threats – Conduct risk reassessments to mitigate hazards as appropriate – Understand team teams dynamics and individual roles and responsibilities in team-based competencies – Demonstrate what is required to restore and reset to post disaster protocols and new adaptation – Monitor heath and mental health over time – Identify emerging health threats

SECTION 3

Output 4: List of perceived barriers to attaining core capabilities and competencies

Output 4 was achieved during the meeting as demonstrated by data collected via the template described above. As a component of the charge to complete the blank template for each of the five identified capabilities, participants identified the following barriers to achievement and associated solutions as provided in Table 2 (responses are unedited).

Table 2

Capability	Barriers to Achievement of Competencies	Solutions to Barriers
Communications	– Different systems/equipment – Literacy levels – Cultural differences – Availability of resources – Differences in terminology – Physical infrastructure – Groups working together – Interagency coordination and cooperation. – Misinformation – Overtaxed or disrupted networks – Equipment or technology failure – Poor training – Physical isolation – Lack of accurate and ongoing communication – Lack of infrastructure to accomplish tasks – Overtaxed of disrupted networks – Standing down incident command structure too soon	
Disease Surveillance	- Awareness and use of HAN reports/information - Competing and shifting of priorities and funding - Lack of standard of practice for some disciplines and/or education/certification/ licensing - Dissemination of information - Lack of organizational Leadership	- HAN leadership national to local level - Disseminate information through multiple media/ associations/groups - Formal and informal networking - Passion and persistence - Reference ICS - daily operations use - Involve all professional organizations and stakeholders

Capability	Barriers to Achievement of Competencies	Solutions to Barriers
Patient Evacuation	– Education prior to event – Jammed curriculum at schools of healthcare – Lack of accreditation and licensure – Lack of training and exercise – EP again becoming a grey priority	– Define and broaden SOP – Funding – Curriculum mandates from Fed and State levels – Consensus on Core Competencies immersed into curriculums – Consistent priority from educators – JIT, CEU, JC and State Regulation
Planning	– Resource limitations – Competing priorities, including patient care – Time and regulatory limitations – Lack of administrative support – State limitations to utilization of ESAR-VHP professionals – Disrupted infrastructure – Disparities in training and equipment – Lack of agreements between organizations and jurisdictions. – Delay of implementation in Stafford Act – Unanticipated consequences – Difficulty in gathering post-event information – Difficulty in following up with affected population – Lack of interoperability – Lack of improvement planning – Lack of financial resources	
Responder Safety and Health	– Opportunity to experience/replicate an austere environment – Inadequate information about the risk/threat – Time – Cost – Liability – Available resources – Lack of evidence base/translational research – Lack of team structure and organizational support – No measurement of team outcome	– Interdisciplinary professional drills – Exercises – Simulation – Licensure requirement – Privileges – Time leave – Efficient training venues – Graduation requirement – Fund and conduct evidence-based/ translational research

Capability	Barriers to Achievement of Competencies	Solutions to Barriers
	– Lack of performance standards – Lack of a core curriculum – Do not assemble the teams until the last minute – Decision process linked to actionable information – Mechanism for conducting longitudinal health surveillance – No national expectation to reset the response force – A “new” normal – Lack of workman’s comp	– Institutionalize ICS/ESF#8 structure across professions thru licensing and accreditation – Instill team-based competencies into daily operations – Develop interdisciplinary team-based curricula – Measure team-based outcomes – Couple information and decision making – Develop a national longitudinal health surveillance system – Enhance the understanding of behavioral health and environmental hazards – Develop a process to monitor health over time

SECTION 4

In response to both positive participant feedback and the quality of competency data collected via the breakout sessions, meeting planners are advised to conduct subsequent meetings according to the framework and processes implemented for this Building a Framework for the Development of Core Capabilities and Competencies for Medication Disaster Preparedness and Response: A National Consultation Meeting.

In addition and in response to the participant survey question, **"***Are there any topics that should have been covered, but were not? Please list.",* two suggestions were provided and should be considered for future meetings*:*

- Accreditation
- Some of the discussions in red group were too hospital-centric. Next time, responders in all settings would be more helpful focus. Need to be clear concerning the level of competencies under consideration core/intro, intermediate or advanced.

APPENDIX 5

BREAKOUT SESSION REPORT-OUT TEMPLATE

Capability - Patient Evacuation (sample)

Scenario Phase	Top 3 Competencies	Barriers to Achievement of Competencies	Solutions to Barriers
Preparedness			
Response			
Recovery			

1

APPENDIX 6

CAPABILITIES CROSS-WALK

CAPABILITY	DMRTI	ESF-8	TCL	MHS	Columbia	NHSS	UTL	CDC - PH	NDLSEC	ACEP	MRC	NEPEC
Provision of Medical Care	x	x		x		x	x			x		x
Perform Triage			x	x						x		
Conduct Extraction/Evacuation	x	x	x				x			x		
Provide Behavioral Health Care		x		x						x	x	x
Perform Fatality Management		x	x									
Event Recognition/Detection										x	x	x
Provide Veterinary Medical Support		x	x									
Provide Health/Medical/ Veterinary Equipment and Supplies		x	x									
Supply Blood, Organs, and Blood Tissues		x										
Provide Communications/ Disseminate Information		x	x	x	x		x	x		x	x	x
Provide All-Hazard Public Health and Medical Consultation, Technical Assistance, and Support		x					x					
Ensure Safety and Security of Drugs, Biologics, and Medical Devices		x										
Provide Food Safety and Security		x	x									
Ensure Responder Safety and Health		x	x			x		x	x	x	x	
Ensure Agriculture Safety and Security		x	x				x					

CAPABILITY	DMRTI	ESF-8	TCL	MHS	Columbia	NHSS	UTL	CDC - PH	NDLSEC	ACEP	MRC	NEPEC
Conduct Health Surveillance		x						x				
Establish Environmental Health Activities		x	x				x					
Threat/Risk Assessment	x	x		x	x			x	x			
Provide Health Risk Management			x	x					x			x
Situational Awareness					x	x				x		x
Ensure/Build Medical Surge Capacity			x							x		
Conduct Mass Prophylaxis			x	x								x
Implement Isolation and Quarantine Protocols			x			x						x
Provide Emergency Response	x		x		x		x			x	x	
Conduct Urban Search and Rescue							x					
Carry-out Firefighting Operations							x					
Conduct WMD/HazMat Response and Decontamination	x		x	x						x		
Conduct Resource Management/ Manage Volunteers			x	x						x		
Contingency, Continuity and Recovery			x			x	x	x	x			

CAPABILITY	DMRTI	ESF-8	TCL	MHS	Columbia	NHSS	UTL	CDC - PH	NDLSEC	ACEP	MRC	NEPEC
Provide Patient Transportation				x			x			x		x
Conduct Medical Planning			x	x	x	x	x	x	x			
Regional, State and Local Prevention Operations/ National Prevention Operations							x					
Incident Management and Support Systems	X		x	x	x		x		x	x	x	
Infrastructure						x	x					
National Strategic Intelligence							x					
Manage Special Needs Populations										x		
Demonstrate Procedures for Assigning Roles, Event Reporting and Activating and Deactivating Personnel											x	x
Identify Limits to skills, knowledge and abilities as they apply to MRC Role(s)											x	
Apply Ethical Principles								x	x	x		x
Establish Patient Identification and Tracking										x		

X = Capability Recognized within the Specified Policy/Recommendations Document

Appendix B - Information Organization Needs Session Results

1.) Disaster medicine and public health preparedness information is accessible to me.	Responses	
Strongly Agree	7	24.14%
Agree	20	68.97%
Disagree	1	3.45%
Strongly Disagree	0	0.00%
Don't know	1	3.45%
Totals	**29**	**100%**

2.) Disaster medicine and public health preparedness information adequately prepares me for medical disasters*	Responses	
Strongly Agree	0	0.00%
Agree	7	25.00%
Disagree	11	39.29%
Strongly Disagree	3	10.71%
Don't know	7	25.00%
Totals	**28**	**100%**

3.) Is there a need for training on accessing reliable information in the field?	Responses	
Yes	28	93.33%
No	0	0.00%
Unsure	2	6.67%
Totals	**30**	**100%**

* This question was asked out of sequence in one of the sessions.

4.) How do you stay knowledgeable on cutting edge information in the field?	Responses	
Reading journals	4	14.29%
Visiting federal websites	6	21.43%
Visiting non-federal websites	0	0.00%
Attending conferences	5	17.86%
Professional societies	1	3.57%
Social networking	6	21.43%
RSS feeds	2	7.14%
Maintaining certification / licensing require...	0	0.00%
Other	4	14.29%
Totals	**28**	**100%**

5.) Federal information should be available via: (Choose answer that best displays your belief)	Responses	
One website with multiple access points	11	36.67%
A meta website with information that is coordinated across agencies	16	53.33%
Automatic email updates	1	3.33%
Podcasts	0	0.00%
RSS feeds	0	0.00%
Other	0	0.00%
Don’t know	2	6.67%
Totals	**30**	**100%**

6.) Which is your most trusted source for preparedness information?	Responses	
Via internet or smart phone	7	23.33%
Discussion with a subject matter expert	13	43.33%
Peer reviewed findings	4	13.33%
Professional journal	3	10.00%
Via media (TV, radio, newspaper)	2	6.67%
Other	1	3.33%
Totals	**30**	**100%**

7.) Is there a need for standardized tagging (e.g. nomenclature) to help make information organized and accessible?	Responses	
Yes	26	89.66%
No	0	0.00%
There is a better way	3	10.34%
Totals	**29**	**100%**

8.) What is the best way to disseminate information to preparedness professionals and responders?	Responses	
Via websites or smart phone	19	63.33%
Social networking platforms	4	13.33%
Discussion with a trusted source	2	6.67%
Via media (TV, radio, newspaper)	3	10.00%
Other	2	6.67%
Totals	**30**	**100%**

9.) What do you consider the most trusted, authoritative source for preparedness information?	Responses	
Federal agencies	18	60.00%
Peer reviewed literature	11	36.67%
Grey literature	0	0.00%
Internet search engines	1	3.33%
Other	0	0.00%
Totals	**30**	**100%**

Appendix C – Competencies Results

1.) Is your agency using competencies to guide your education and training?	Responses	
Yes	15	57.69%
No	8	30.77%
Don't know	3	11.54%
Totals	**26**	**100%**

2.) Core competencies are an appropriate way to reach education and training goals.	Responses	
Strongly Agree	17	48.57%
Agree	14	40.00%
Disagree	1	2.86%
Strongly Disagree	0	0.00%
Don't know	3	8.57%
Totals	**35**	**100%**

3.) Who should be developing core competencies?	Responses	
Federal agencies	3	8.33%
Academia	4	11.11%
Professional associations	4	11.11%
Accrediting bodies	5	13.89%
State/Local governments	0	0.00%
Other	15	41.67%
Don't know	5	13.89%
Totals	**36**	**100%**

4.) There should be greater standardization of competencies across federal and non-federal agencies.	Responses	
Strongly Agree	17	47.22%
Agree	14	38.89%
Disagree	3	8.33%
Strongly Disagree	0	0.00%
Don't know	2	5.56%
Totals	**36**	**100%**

5.) It is more appropriate to develop discipline-specific competencies than it is to share core competencies across many disciplines.	Responses	
Strongly Agree	4	11.11%
Agree	5	13.89%
Disagree	16	44.44%
Strongly Disagree	6	16.67%
Don't know	5	13.89%
Totals	**36**	**100%**

6.) I am satisfied with the core competency effort in disaster medicine & public health.	Responses	
Strongly Agree	1	2.86%
Agree	4	11.43%
Disagree	14	40.00%
Strongly Disagree	10	28.57%
Don't know	6	17.14%
Totals	**35**	**100%**

7.) It is possible to conduct performance-based evaluation of competencies at an individual level?	Responses	
Yes	29	78.38%
No	3	8.11%
Don't know	5	13.51%
Totals	**37**	**100%**

8.) It is possible to conduct performance-based evaluation of competencies at a group level?	Responses	
Yes	31	86.11%
No	2	5.56%
Don't know	3	8.33%
Totals	**36**	**100%**

9.) What is the most common use of competencies at your agency?	Responses	
Writing position descriptions	6	17.14%
Workforce planning and recruitment	0	0.00%
Succession planning	0	0.00%
Training, education, and development	21	60.00%
Individual performance assessments	3	8.57%
Exercise design and evaluation	5	14.29%
Totals	**35**	**100%**

10.) What is the least common use of competencies at your agency?	Responses	
Writing position descriptions	3	8.57%
Workforce planning and recruitment	5	14.29%
Succession planning	17	48.57%
Training, education, and development	2	5.71%
Individual performance assessments	5	14.29%
Exercise design and evaluation	3	8.57%
Totals	**35**	**100%**

Appendix D – Incentives and Mandates Session Results

1.) Does your agency use incentives or mandates when training in disaster medicine and public health?	Responses	
Incentives	2	6.25%
Mandates	5	15.63%
Both	16	50.00%
Neither	4	12.50%
Don't know	5	15.63%
Totals	**32**	**100%**

2.) How do you get people to want to learn?	Responses	
Incentives	6	19.35%
Mandates	4	12.90%
Both	15	48.39%
Neither	4	12.90%
Don't know	2	6.45%
Totals	**31**	**100%**

3.) Which do you consider to be more successful for education?	Responses	
Incentives	19	38.78%
Mandates	6	12.24%
Other	6	12.24%
Don't know	18	36.73%
Totals	**49**	**100%**

4.) Which do you consider more successful for training?	Responses	
Incentives	8	25.81%
Mandates	19	61.29%
Other	2	6.45%
Don't know	2	6.45%
Totals	**31**	**100%**

5.) In your experience, what is the strongest motivator for your disaster medicine and public health peers to become educated and/or trained?	Responses	
Their organization	5	16.13%
Job requirements	19	61.29%
Peer influence	3	9.68%
Money	4	12.90%
Power	0	0.00%
Prestige/accolades	0	0.00%
Totals	**31**	**100%**

6.) In your experience, what is the strongest motivator for you to become educated and/or trained?	Responses	
Your organization	5	16.67%
Job requirements	14	46.67%
Peer influence	4	13.33%
Money	3	10.00%
Power	0	0.00%
Prestige/accolades	4	13.33%
Totals	**30**	**100%**

7.) Federal grants have been used as incentives for education and training, has this mechanism been effective?[†]	**Responses**	
Yes, effective	10	62.50%
Not effective	3	18.75%
Don't know	3	18.75%
Totals	**16**	**100%**

[†] This question was only asked in session 2.

Appendix E - Federal & Non-Federal Disconnects Session Results

1.) There is a Federal/Non-Federal disconnect on education and training expectations and requirements.	Responses	
Strongly Agree	10	31.25%
Agree	13	40.63%
Disagree	4	12.50%
Strongly Disagree	0	0.00%
Don't know	5	15.63%
Totals	**32**	**100%**

2.) Does your agency proactively share information on training and education for disaster medicine / public health with non-federal partners?	Responses	
Yes	22	70.97%
No	5	16.13%
Don't know	4	12.90%
Totals	**31**	**100%**

3.) Does your agency involve non-federal partners in the development of education and training?	Responses	
Yes	18	62.07%
No	7	24.14%
Don't know	4	13.79%
Totals	**29**	**100%**

4.) What communication tool does your agency think non-federal partners prefer?	Responses	
Social Media (Facebook, blogs, wiki)	0	0.00%
Newsletters (electronic or print)	3	11.11%
Face-to-Face Meetings and Conferences	18	66.67%
Exercises	3	11.11%
Other	2	7.41%
None	1	3.70%
Totals	**27**	**100%**

5.) Does your agency offer courses that are appropriate for non-federal audiences?	Responses	
Yes	14	53.85%
No	7	26.92%
Some are, but not all	5	19.23%
Totals	**26**	**100%**

6.) How do federal agencies determine the education and training needs of non-federal audiences?	Responses	
Needs assessment	3	11.54%
Literature review/academic research	0	0.00%
Consultants	2	7.69%
Media attention	2	7.69%
Disaster impact reports	7	26.92%
Requests from Congress	3	11.54%
Requests from advocacy groups	0	0.00%
Don’t know	6	23.08%
Other	3	11.54%
Totals	**26**	**100%**

7.) What area most needs improved federal/nonfederal education and training collaboration?	Responses	
Communication of funding announcements	3	10.71%
Requirements	7	25.00%
Knowledge of education and training courses	10	35.71%
Use of educational technology	3	10.71%
Creating a research agenda	2	7.14%
Learning assessment	2	7.14%
Don't know	1	3.57%
Totals	**28**	**100%**

8.) What area least needs improved federal/nonfederal education and training collaboration?	Responses	
Communication of funding announcements	7	25.00%
Requirements	4	14.29%
Knowledge of education and training courses	2	7.14%
Use of educational technology	2	7.14%
Creating a research agenda	6	21.43%
Learning assessment	1	3.57%
Don't know	6	21.43%
Totals	**28**	**100%**

9.) What do you think the non-federal partners need most?	Responses	
Training	0	0.00%
Education	2	7.69%
Access to resources for training and education	13	50.00%
Flexible training options	3	11.54%
Licensing/certification requirements	5	19.23%
Other	3	11.54%
Totals	**26**	**100%**

10.) What do you think the non-federal partners need least?	Responses	
Training	0	0.00%
Education	3	11.54%
Access to resources for training and education	1	3.85%
Flexible training options	4	15.38%
Licensing/certification requirements	11	42.31%
Other	7	26.92%
Totals	**26**	**100%**

Appendix F - Learning Research Needs Session Results

1.) Do you believe there is quality research being conducted to develop the evidence base for education and training in disaster medicine and public health preparedness?	Responses	
Yes	18	60.00%
No	8	26.67%
Don't know	4	13.33%
Totals	**30**	**100%**

2.) Education and training content delivery methods are based on sound evidence.	Responses	
Strongly Agree	3	9.38%
Agree	8	25.00%
Neutral	7	21.88%
Disagree	12	37.50%
Strongly Disagree	2	6.25%
Totals	**32**	**100%**

3.) Do you believe there is an accepted critical appraisal or evidence based rubric for assessing the quality and outcome of education and training efforts in disaster medicine and public health?	Responses	
Yes	3	9.38%
No	25	78.13%
Don't know	4	12.50%
Totals	**32**	**100%**

4.) Exercises (real, table top, and/or virtual) provide value in evaluating disaster medicine and public health preparedness knowledge.	Responses	
Strongly agree	18	54.55%
Agree	13	39.39%
Disagree	2	6.06%
Strongly Disagree	0	0.00%
Don't know	0	0.00%
Totals	**33**	**100%**

5.) In-person exercises are the best way to test competencies.	Responses	
Strongly Agree	7	21.21%
Agree	15	45.45%
Neutral	6	18.18%
Disagree	5	15.15%
Strongly Disagree	0	0.00%
Totals	**33**	**100%**

6.) Do you believe that After-Action Reports and Lessons Learned can be used to improve education and training?	Responses	
Yes	28	87.50%
No	1	3.13%
Yes, but there is a better option	3	9.38%
Don't know	0	0.00%
Totals	**32**	**100%**

7.) Do you believe simulation or virtual reality might help strengthen education and training?	Responses	
Yes	31	96.88%
No	1	3.13%
Don't know	0	0.00%
Totals	**32**	**100%**

8.) Is there research funding in this field?	Responses	
Yes	7	21.21%
No	10	30.30%
Don't know	16	48.48%
Totals	**33**	**100%**

Appendix G - IM/IT Needs Session Results

1.) As a learner, which mechanism works best for you?	Responses	
Face to face courses	11	50.00%
Distance learning	0	0.00%
Conferences/seminars	9	40.91%
Correspondence courses	0	0.00%
Other	2	9.09%
Don't know	0	0.00%
Totals	**22**	**100%**

2.) Is your agency/department currently providing distance learning or online training to employees?	Responses	
Yes	20	90.91%
No	1	4.55%
Not Sure	1	4.55%
Totals	**22**	**100%**

3.) Do you think the training your agency/department currently offers is effective?	Responses	
Yes	15	75.00%
No	0	0%
Unsure	5	25.00%
N/A because we do not provide it	0	0%
Totals	**20**	**100%**

4.) Do you believe it is important for your agency to engage in social media (Facebook, Twitter, YouTube, Blogs, 2nd Life, etc.)?	Responses	
Yes	10	55.56%
No	5	27.78%
Don't know	3	16.67%
Totals	**18**	**100%**

5.) What is the primary barrier to the incorporation of technology into your agency's education and training efforts?	Responses	
Cost	5	23.81%
IT Expertise	1	4.76%
Security	10	47.62%
User Access	1	4.76%
Bureaucracy	2	9.52%
Other	2	9.52%
Don't know	0	0.00%
Totals	**21**	**100%**

6.) Does your agency use technology that other agencies can utilize?	Responses	
Yes	11	61.11%
No	2	11.11%
Don't know	5	27.78%
Totals	**18**	**100%**

7.) There appear to be many educational redundancies between departments. My agency could use IT to collaborate and reduce redundancies.	**Responses**	
Yes	11	68.75%
No	2	12.50%
Don’t know	3	18.75%
Totals	**16**	**100%**

Appendix H – Post Workshop Questionnaire

1.) I attended:	Responses	
Both days	20	69.00%
Day 1 (Thursday) only	8	27.60%
Day 2 (Friday) only	1	3.40%
I did not attend the workshop	0	0.00%
Totals	**29**	**100%**

2.) How well did the workshop assess federal sector education and training needs in disaster medicine and public health?	Responses	
Very well	4	14.30%
Well	19	67.90%
Poorly	5	17.90%
Very poorly	0	0.00%
Totals	**28**	**100%**

3.) This workshop covered the key topics in the field.	Responses	
Agree strongly	8	29.60%
Agree	17	63.00%
Disagree	2	7.40%
Disagree strongly	0	0.00%
Totals	**27**	**100%**

4.) There was adequate representation of pertinent federal agencies at this workshop.	**Responses**	
Strongly agree	8	29.60%
Agree	15	55.60%
Disagree	4	14.80%
Strongly Disagree	0	0.00%
Totals	**27**	**100%**

Works Cited

[1] United States. National Commission on Terrorist Attacks Upon the United States. Final Report of the National Commission on Terrorist Attacks Upon the United States. 2004.

[2] United States. Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina. A Failure of Initiative: The Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina. 2006.

[3] Marcozzi, David. "Lunch Remarks." A Nation Prepared: Education and Training Needs for Disaster Medicine and Public Health. Federal Workshop. Doubletree Hotel, Bethesda. 25 Sept. 2009.

[4] Hsu, EB and Subbarao, I. "The Myths of Disaster Education." Annals of Emergency Medicine. 48.1 (2006): 107-108.

Links to Supplemental Sources

United States. Department of Homeland Security. Homeland Security Presidential Directive-21. 2007.

Public Law 109-417. Pub. L. 19 Dec. 2006. Stat 2831.

National Center for Disaster Medicine and Public Health at the Uniformed Services University Charter. 2008.