**VHA-EMA Emergency Response and Recovery Competencies:
Competency Survey, Analysis, and Report[1]**

**Joseph A. Barbera, MD, Anthony G. Macintyre, MD, Greg Shaw, DSc, Valerie
Seefried, MPH, Lissa Westerman, RN, Sergio DeCosmos
Institute for Crisis, Disaster, and Risk Management
The George Washington University
June 16, 2005**

Introduction

In December 2004, the Veterans Health Administration (VHA) Emergency Management Strategic Healthcare Group awarded the Institute for Crisis Disaster & Risk Management (ICDRM) a contract to participate in establishing innovative training and personal development curricula for the VHA Emergency Management Academy (VHA-EMA). The objective of the project is to develop a nationally peer-reviewed, National Incident Management Systems (NIMS) compliant, instructional outline and course content. The curriculum is intended to educate VHA personnel for response and recovery in healthcare emergencies and disasters, to provide a resource for future VHA training programs, and to be placed in the public domain for use by other healthcare personnel.

The initial phase of the EMA project is presented in this paper, and consisted of developing peer-reviewed emergency response and recovery competencies for select VHA job categories. The competencies primarily describe knowledge and skills essential for adequate job performance during the emergency response and recovery phases of an incident. Peer review was accomplished through a web-based survey of the proposed competencies, which was distributed to a select, nationwide sampling of emergency management personnel who were identified as having extensive experience or advanced expertise in healthcare emergency response. The survey process was designed to obtain a balanced expert opinion as to whether the project team's written competencies were valid, and to assess the appropriate level of proficiency for each primary competency (i.e., awareness, operations, or

expert). The competencies will be used to guide the development of learning objectives for the instructional curriculum.

Background

Historical development of competencies

Competency modeling originated in business management research, and has evolved extensively over the past 25 years as other disciplines began adopting the practice (Newsome, Catano & Day, 2003). The original intent of competency development was to enhance the then common "job analysis" by relating a position's requisite knowledge, skills and abilities to the overall objectives of the organization in which the position existed. This approach aligns the objectives (i.e., desired outputs) of individual jobs with the overall objectives of the organization, such that organizational objectives are achieved through effective individual job performance. While this was the original intent of competencies, their definitions have varied widely as time has progressed. Competency definitions range from emphasizing *underlying characteristics* of an employee (e.g., a motive, trait, skill, aspects of one's self-image, social role, or a body of knowledge) that produce effective and/or superior performance (Boyatzis, 1982) to *performance characteristics* (i.e., how an employee conducted their job in relation to the organization's objectives) (US Office of Personnel Management, 2000).

The application of competencies across the many organizations that use them has also varied widely. The private sector has commonly employed competencies to define "superior performers" (Klein, 1996) and therefore, as a selection tool for hiring, promotion, and/or salary enhancement. In other organizations, competencies have been used for job-specific performance feedback and improvement. Still others have used competencies to guide future program training and development. Because of this variation in definition and application, it becomes critically important to address these vagaries at the outset of any competency development project. This concept was well-described by one competency research team:

> "The first step in the implementation of any competency-based management framework must be the organizational consensus on how to define 'competency.' This agreed upon definition will drive the methodology used to identify and assess the competencies within the organization." (Newsome, Catano & Day, 2003)

The GWU-ICDRM project team strongly agreed with this concept, and started the project by defining how the competencies within this initiative would be applied. The VHA-EMA competencies are intended to serve as a formative tool to guide healthcare facility personnel in the development of knowledge, skills and abilities for effective performance *during* emergency response and recovery. The competencies are also intended to serve as a guide for developing preparedness education and training, and therefore, serve as a basis for the VHA-EMA curriculum. Finally, the competencies may be employed as a tool for assessing individual healthcare facility personnel performance during emergency response and recovery operations.

Defining a competency framework

Despite an extensive search of published articles related to competencies, the GWU-ICDRM project team determined that no single authoritative source presented a consistent competency definition and competency framework to adequately support the VHA-EMA project needs. A framework was therefore developed, analyzed through pilot competency development, refined and completed before establishing the individual emergency response and recovery competencies for this project. The competency framework was therefore used to impose a strict methodological consistency when developing and defining the emergency response and recovery competencies.

The GWU-ICDRM project team first recognized the need for an alternative competency framework to the usual business management approach to establishing competencies. Business management models establish competencies by observing performance and relating it to individual and organizational outputs. Because emergencies are rare events, and therefore emergency response and recovery outputs occur very infrequently, the related competency framework and definitions for this project are based less upon observed outputs. Instead, the basis is the VHA's response and recovery objectives, together with the incident management structure and processes used by the VHA. Central to this framework is the critical importance of competencies being objective and measurable, internally and externally consistent, and tightly described within the context of the organization's specific objectives.

Within this framework, the project team defined a 'competency' as *a specific 'capability' required for effective performance, within the context of a job's responsibilities, which achieves the objectives of the organization*. A 'capability' is comprised of knowledge elements, skills, and abilities and is objective and measurable (i.e., demonstrable) on the job.

Focus upon response and recovery competencies

Published articles describing emergency management competencies commonly do not differentiate between preparedness and response competencies, and list them in an intermixed fashion. (INCMCE, 2004; ACEP, 2003). The GWU-ICDRM project team sought to maintain a separation of these two categories, with their primary focus on response and recovery competencies. Critical preparedness issues are addressed through supporting competencies.

Preparedness competencies are commonly based upon everyday organizational objectives, structure, processes, and relationships to other organizations. In contrast, response competencies in systems using the Incident Command or Incident Management System should be based upon incident objectives for the organization's response, and upon the organizational structures, processes, and relationships (with other organizations) that are *established during response* rather than those used during everyday experience. Emergency competencies are commonly developed without this relationship to a defined response system (ATPM, 2003), making it difficult to define how scientific or medical knowledge is to be implemented in an emergency response. Because of the NIMS mandate to use ICS/IMS to manage incident response, the GWU-ICDRM project team specifically included reference to the Incident Management System and processes in developing the project competencies.

Preparedness is unquestionably important, but for it to be accurate, comprehensive and successful in establishing an effective emergency response capability, a thorough understanding of the response system must be established first, and preparedness guided by this. It can therefore be reasoned that specific competencies for emergency response should be established and validated first, and then used to guide the development of valid preparedness competencies.

Developing draft emergency response and recovery competencies and establishing appropriate levels of proficiency

Using the competency framework established in this project, response and recovery "core" competencies were developed for all employees within the VHA organization, regardless of their emergency response and recovery function. Additional competencies were then established for three functionally based job groups within the VHA system. These were designated as (1) healthcare facility leaders, (2) patient care providers, and (3) emergency management program managers.

Initial competency identification and development was accomplished through an analysis of ICS as presented in NIMS, an extensive literature review, and an evaluation of the VHA system and processes for emergency response. Additionally, the GWU-ICDRM project team relied upon their extensive emergency management and disaster response experience, and upon related previous research efforts (Barbera & Macintyre, 2002; Barbera & Macintyre, 2003; CNA Corporation, 2004). Supporting competencies were established as a means to more fully define and clarify the primary competencies. Designating primary and supporting competencies helps to maintain a priority in the framework, which is important when listing a large number of individual competencies.

Concurring with other authors that competencies are not an all-or-none phenomenon, the GWU-ICDRM project team then qualified each primary competency by an indicated level of proficiency (awareness, operations, expert). Proficiency levels delineate the "The degree of understanding of the subject matter and its practical application through training and performance…" (FEMA, 2004)

Survey Methods

The project team developed a web-based survey to obtain expert peer review assessment of the competencies. The survey was designed to determine if identified healthcare emergency management experts judge the competencies as valid. The survey therefore presented, in a simplified fashion, competencies for all VHA personnel ('core competencies') and then three job groups that were pre-determined by the VHA.

Healthcare personnel were selected to participate, for both the pilot study and the full survey, based upon an informal judgment that they were experts (i.e., represented advanced expertise in their functional area), by either the GWU-ICDRM personnel or the VHA project officer. Because no acceptable, objective and published definition for 'expert' in this area was available, the judgment was based upon extensive experience or other 'demonstration of expertise' in healthcare emergency management. Demonstrated expertise was, in this instance, established through past participation in VHA emergency management initiatives, through speaker panels from the annual National Disaster Medical System conference (which identified preparedness, response, and research experience), and through the research/educational activities of the GWU-ICDRM project team members. The largest survey cohort was drawn from VHA personnel, representing the spectrum of VHA job types. A smaller but similarly balanced cohort of non-VHA personnel was included for comparison.

The survey was designed using Ultimate Survey v. 7.1-Advanced Edition, 2004 software. Demographic information was limited to data necessary for analyzing the survey results, and the survey participants remained anonymous. Respondents were asked to provide the following demographic data:

- Whether the respondent was a VHA employee (yes or no answer)
- The respondent's routine position within their healthcare organization (free-text answer)
- The respondent's self-assessment of his or her level of expertise in emergency management and response (three choices were provided: novice, intermediate, expert)
- The number of healthcare facility emergencies or disaster responses in which the respondent had participated (the choices were: 0 responses, 1 response, 2 responses, 3 responses, and 4 or more responses).

Four sets of primary emergency response and recovery competencies were included in the survey instrument. They were partitioned according to 'core' competencies for all healthcare facility personnel, designated as All Employees (AE), and the three specific job group categories, designated as Patient Care Providers (PCP), Facility Leaders (FL), and Emergency Management Program Managers (PM). Each job group was defined for survey participants within the body of the survey instrument (see Table 1).

Patient Care Providers (**PCP**)	Physicians, physician assistants, registered nurses, licensed practical nurses, nurses working within expanded roles (RNA, RNP, and others), emergency medical technicians, paramedics, and respiratory therapists and others who provide direct clinical patient care. Not included are clinical support staff who provide patient care services under the direct supervision of patient care providers: e.g., nurse's aides, procedure technicians, orderlies, and others.
Facility Leaders (**FL**)	Hospital-wide senior executives (CEO, COO, CFO), hospital-wide managers, department heads, and/or senior managers in large departments. The project team assumes that members of this group, due to their everyday organizational positions, would be assigned to serve in the command and general staff positions of an ICS/IMS structure during a VHA facility's emergency response.[*]
Emergency Management Program Managers (**PM**)	Personnel primarily responsible for developing, implementing and maintaining VHA facility emergency management programs that include the Emergency Operations Plan. VHA Area Emergency Managers are also included in this job group.

Table 1 *– Job Group Definitions*

All respondents were asked to assess the primary competencies in the AE category, and then, if one of the three designated job groups encompassed their routine professional job title, they were instructed to assess the competencies in that specific category. Survey participants were asked to rate the criticality of each primary competency, and then asked to indicate the level of proficiency necessary for each of the competencies they rated. Supporting competencies were provided to present a clearer understanding

---

[*] Command and general staff, as defined by NIMS and ICS, include the manager, management staff, and section chiefs (leaders) of the individual sections: operations, logistics, plans, and finance/administration.

of each primary competency, but the supporting competencies were not rated. Respondents were only permitted to assess one job group category beyond the AE group of competencies.

For each primary competency, respondents were instructed to:

- Read the primary competency and its supporting competencies.
- Designate their assessment of the primary competency's criticality by selecting from a five-point Likert Scale gradient. The gradient range was defined as: 1 = 'unimportant', 2 = 'slightly important', 3 = 'moderately important', 4 = 'significantly important' and 5 = 'essential'.
- Assign an appropriate level of proficiency for each primary competency. The levels of proficiency were defined in the survey (see Table 2). The level of proficiency was graded on a 3-point scale, with a default proficiency level that could be changed by the respondent. The default assignment represented the proficiency level proposed by the Project Team, determined by their understanding of how the competency related to adequate knowledge, skills and abilities for emergency response and recovery by the VHA organization.
- Insert any additional competencies that should be added to the competency inventory for each work group category. This was accomplished through free text input in each survey section.

Awareness	Represents an understanding of the knowledge/skills/abilities encompassed by the competency, but not to a level of capability to adequately perform the competency actions within the organization's system.
Operations	Represents the knowledge/skills/abilities to safely and effectively perform the assigned tasks and activities, including equipment use as necessary
Expert	Represents operations-level proficiency plus the additional knowledge/skills/abilities to apply expert judgment to solve problems and make complex decisions.

Table 2 – Definition of the Levels of Proficiency

Twenty-one experts were invited to take the pilot survey by the VHA-EMA project manager. Participants were all VHA personnel, selected by the VHA project manager in an effort to provide a

cross section of experts from all job groups within the VHA. Of the 21 pilot respondents, 10 were emergency managers (representing Program Managers in the competency groups), 4 were facility leaders, 3 were patient care providers, and 4 respondents belonged to other job group categories. The pilot survey included an additional free-text comments box for respondents to provide feedback on any aspect of the survey instrument (e.g. format, content, instructions, etc.).

The results of the pilot survey, including text comments and recommended additional competencies, were analyzed and the survey was modified in the following manner:

- Instructions for respondents were clarified.
- Supporting competencies were added to the AE group that clarified the importance of this group's knowledge related to incident response stress.
- The term "rehabilitation," as it applies to emergency workers, was defined and provided in the final version of the survey. Rehabilitation was presented as procedures and methods utilized to restore an asset (person, place, or things) to baseline operational capability. For response personnel, this can involve both physical as well as psychological processes. Rehabilitation may occur during an event, to return an asset to its operational status, or during recovery, to return an asset to baseline readiness.
- The definition for each level of proficiency was slightly modified to emphasize the key differences between awareness, operational and expert. These definitions are presented in Table 2.
- The invitation to provide general comments was removed when constructing the final operational version of the survey. Free-text entry remained for respondents to suggest additional response and recovery competencies.

Technical problems with the survey software were also recognized during the pilot survey and addressed. For example, it was noted during the pilot survey that occasionally a respondent accessed the competencies for a specific job group, but then didn't submit any answers. When this occurred, the survey software auto-populated the database with the default (pre-selected) proficiency levels, thereby providing survey answers where the survey participant had provided none. This technical problem was addressed by identifying and manually removing the data specific to these cases, both for the pilot and in the subsequent final survey.

The competencies and supporting competencies are presented in Appendix A.

The revised survey was posted on the Internet for a total of 34 days. Access to the survey was password protected, and the password was provided to those invited to take the survey. One hundred forty VHA invitees, 12 non-VHA federal personnel (including HHS and DHS healthcare facility experts), and 18 non-federal invitees received brief project explanations and an invitation to participate. Throughout the active survey period, the Project Team monitored the evolving responses, but intervened only to address individual technical problems that survey respondents experienced (for example, a few noted difficulty in accessing the survey using a specific web browser, or experienced problems due to their computer system protection). A reminder notice was sent to the VHA cohort midway through the survey period.

After the survey closed, the data was aggregated and analyzed as a whole, and by demographic and job group comparisons for each competency. The analysis utilized relatively basic statistical methods: percentages, calculation of means, standard deviations, and correlations. These methods were applied to the respondents' ratings of level of criticality and level of proficiency for the specified competencies and for comparisons between the demographic and job groupings within the responding cohort. The project team assumed that a criticality rating of 3 (moderately critical) or above indicated that the respondent assessed the competency as important enough to be included in competencies for that category of jobs. In addition, the ranked calculated means of criticality for each respondent group were analyzed by simple correlation methods.

The respondents' free-text submissions of additional competencies, and any other comments included in these free-text boxes, were collected, analyzed, and either accepted to modify the response competencies or deferred to be considered during the VHA-EMA curriculum development. A tracking document was developed to group the recommended additional competencies and other comments, and to summarize the analysis and disposition of each. This document was provided in a separate communication to the VHA-EMA project manager.

Survey Results

In total, the survey produced 94 useable responses. The vast majority (>90%) of survey respondents entered data for all indicated data fields, although the survey protocol did not require a respondent to answer any or all of the demographic questions, or to rate all of the competencies in their appropriate job group section(s). Due to some cases where demographic data entry or competency rating fields weren't submitted, the total number of demographic entries does not add up to the total number of responses. This discrepancy in numbers is easily identifiable for the above reasons and did not affect the accuracy of the data analysis methods used in this project.

Demographic data

Seventy-six of 140 VHA invitees (54.3%) responded to the survey; thirteen of 30 non-VHA invitees (43.3%) responded; and five respondents (2.9% of total invitees) did not specify their VHA status. The number of respondents, completed job categories, and number with unspecified demographic data (VHA status or self-assessment of expertise) are displayed in Table 3. For the purpose of analysis, the expertise categories of 'intermediate' and 'novice' were combined into a single category, 'non-expert.'

Number of responses

	AE	PCP	FL	PM
VHA employee	76	16	16	44
Non VHA employee	13	5		4
Not Specified	5	1	1	1
Total resp.	94	22	17	49
Expert	43	6	5	29
Non Expert	50	16	11	20
Not Specified	1		1	
Total resp.	94	22	17	49

Table 3 *– Demographic results*

(AE=All Employees, PCP=Patient Care Providers, FL=Facility Leaders, PM=EM Program Managers)

The demographic distribution of the respondent population as being affiliated with the Department of Veterans Affairs is presented in Figure 1.
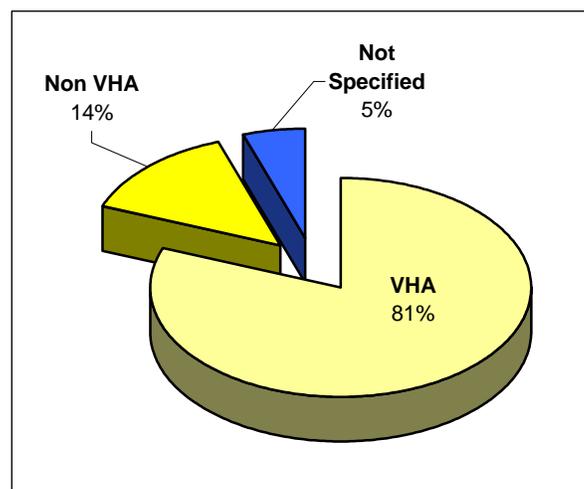
Fig. 1 *– VHA employees as percent of total respondents*

The breakdown of the respondents into their self-selected job categories is displayed in Figure 2. For this figure, respondents who did not designate one of the three job categories are presented as All Employees (AE) (i.e., 15% of respondents evaluated only this set of competencies).
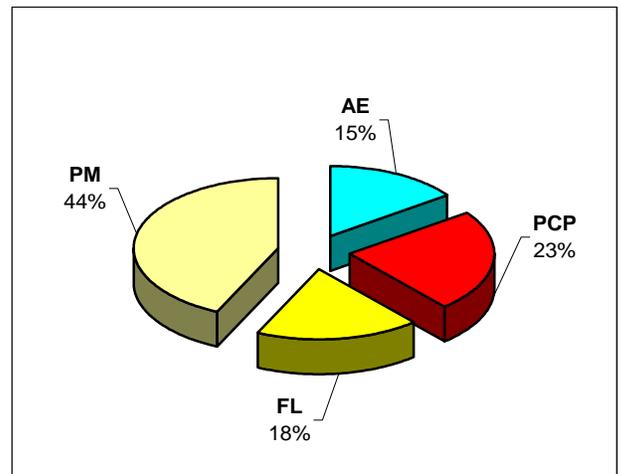
Fig. 2 *– Job Group category*

(AE=All Employees, PCP=Patient Care Providers, FL=Facility Leaders, PM=EM Program Managers)

The reported self-assessment by respondents of their level of expertise is presented in Figure 3. Figure 4 presents what was used as an assumed component of expertise for the respondents, experience in healthcare facility emergency response. This was evaluated by the number of times in which the respondents had participated in a healthcare facility incident that activated the Emergency Operations Plan.
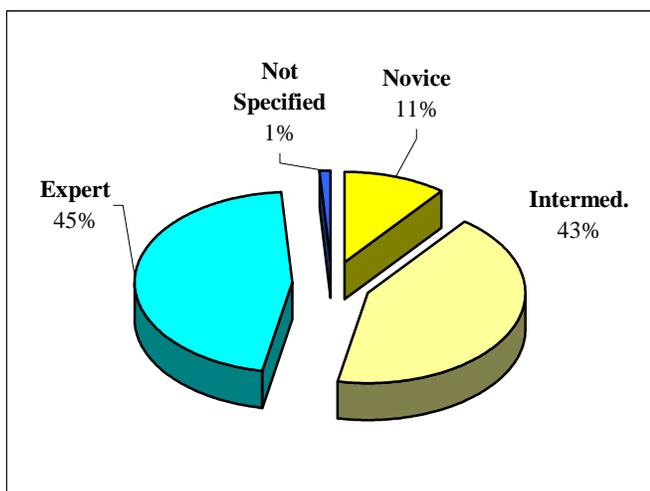
Fig. 3 *– Self-assessed Level of expertise*
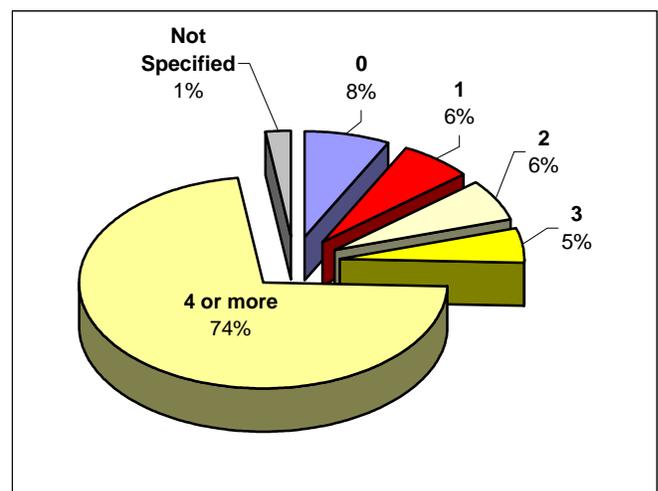
Fig. 4 *– Number of times respondents participated in a health care facility emergency response requiring activation of the facility Emergency Operations Plan.*

Respondents also listed their normal, day-to-day job position title as a component of their demographic profile. Due to the disparity in job title designations made by the respondents (presented in Appendix B), no attempt was made to analyze the list other than to demonstrate the wide range of job positions obtained through the participant selection process.

Competency data

The data and analysis tables in Appendix C provide all of the details of the competency ratings. For simplicity, the individual primary competencies from Appendix A are presented using abbreviated titles in the data tables in this report. As representative of the overall study data, Tables 4 and 5 display an analysis for responses to the AE competencies. As indicated in Table 4, the calculated mean values for the criticality of AE competencies range from a low of 3.670 (AEC-4: Applying the VHA core mission to response) to a high of 4.728 (AEC-9: Prioritizing assigned EOP roles and responsibilities). Also, Table 4 shows the distribution of responses for each criticality rating and the fact that for each of the 15 AE competencies, over 90% of the respondents rated the criticality of the competency as: 3 = moderately important; 4 = significantly important; or 5 = essential. Table 4 also shows that only two of the competencies (AEC-5: Applying the VHA code of ethics to response – 1 response; and AEC-7: Maintaining a personal "go kit" – 2 responses) received any criticality rating of 1 = not important, *from any respondent.*

|	AEC-1	AEC-2	AEC-3	AEC-4	AEC-5	AEC-6	AEC-7	AEC-8	AEC-9	AEC-10	AEC-11	AEC-12	AEC-13	AEC-14	AEC-15
1					1%		2%								
2	1%	2%		9%	5%	1%	7%						1%	3%	2%
3	4%	5%	4%	36%	20%	16%	22%	5%	2%	2%	9%	8%	7%	20%	17%
4	38%	33%	42%	34%	40%	42%	30%	47%	23%	41%	43%	30%	43%	48%	48%
5	57%	59%	52%	21%	33%	38%	37%	47%	75%	57%	47%	60%	49%	28%	32%
mean:	4.500	4.495	4.484	3.670	3.989	4.200	3.956	4.418	4.728	4.543	4.385	4.533	4.402	4.022	4.099
stdev:	0.638	0.705	0.584	0.907	0.925	0.753	1.038	0.598	0.494	0.543	0.646	0.640	0.664	0.789	0.761

Column headers (abbreviated competency titles):
- AEC-1: Utilizing ICS/IMS Principles
- AEC-2: Recognizing job-related triggers for EOP activation
- AEC-3: Participating in facility mobilization
- AEC-4: Applying the VHA core mission to response
- AEC-5: Applying the VHA Code of Ethics in response
- AEC-6: Personal/family preparedness plans
- AEC-7: Maintaining a personal "go-kit"
- AEC-8: Following the Facility Emergency Plan (FEP)
- AEC-9: Performing assigned EOP roles and responsibilities
- AEC-10: Following reporting requirements and communication plan
- AEC-11: Following VHA safety rules and plan
- AEC-12: Following the EOP security measures
- AEC-13: Utilizing equipment, supplies and personnel
- AEC-14: Following demobilization procedures
- AEC-15: Following facility recovery procedures

Table 4 *– Criticality level: percentage, mean and standard deviation for AE Competencies*

As indicated in Table 5, respondents selected the default proficiency value, for each AE competency, at a rate of 68% or higher across all AE primary competencies.

	AEC-1 Utilizing ICS/IMS Principles	AEC-2 Recognizing job-related triggers for EOP activation	AEC-3 Participating in facility mobilization	AEC-4 Applying the VHA core mission to response	AEC-5 Applying the VHA Code of Ethics in response	AEC-6 Personal/family preparedness plans	AEC-7 Maintaining a personal "go-kit"	AEC-8 Following the Facility Emergency Plan (FEP)	AEC-9 Performing assigned EOP roles and responsibilities	AEC-10 Following reporting requirements and communication plan	AEC-11 Following VHA safety rules and plan	AEC-12 Following the EOP security measures	AEC-13 Utilizing equipment, supplies and personnel	AEC-14 Following demobilization procedures	AEC-15 Following facility recovery procedures	
	9%	5%	9%	9%	15%	4%	10%	8%	4%	5%	7%	8%	2%	5%	8%	A
	71%	74%	75%	80%	73%	22%	22%	79%	70%	80%	79%	80%	82%	87%	82%	O
	21%	21%	16%	11%	12%	74%	68%	13%	26%	14%	14%	12%	16%	8%	11%	E
	O	O	O	O	O	E	E	O	O	O	O	O	O	O	O	Default:

Table 5 *– Proficiency level: default level of proficiency and percentage for AE Competencies*

(A=Awareness, O=Operations, E=Expert)

Table 6 further summarizes the data provided in Appendix C as a summary of the range of competency ratings and selected proficiency levels across the primary competencies in each of the four survey categories: AE, PCP, FL and PM.

Work Group	Range of Calculated Means of Criticality Ratings	Lowest Rated Competency and Value	Highest Rated Competency and Value	Competencies and number of responses 1 = not important	Lowest Percent of Responses Selecting the Default Value for Required Level of Proficiency
AE	3.670 : 4.728	AEC - 4 : 3.670	AEC - 9 : 4.728	AEC - 5 : 1	68.0%
PCP	4.136 : 4.727	PCP - 12 : 4.136	PCP - 2 : 4.727 PCP - 3 : 4.727 PCP - 9 : 4.727	None	81.8%
FL	3.882 : 4.824	FL - 12 : 3.882	FL - 1 : 4.824	None	70.6%
PM	0.167 : 4.592	PM - 8 : 4.000	PM - 1 : 4.592	PM - 2 : 1 PM - 8 : 1 PM - 10 : 1	71.4%

Table 6 *– Summary of Competency Criticality and Level of Proficiency Ratings*

(AE=All Employees, PCP=Patient Care Providers, FL=Facility Leaders, PM=EM Program Managers)

To determine if any significant assessment differences existed between the various demographic groups of survey participants, the mean value of competency criticality ratings were sorted. The ordering was determined by the value of the calculated means rating of criticality, from highest to lowest, within the job groups and demographic categories. The ordered lists of calculated means were then compared two at a time by demographic grouping and job group to determine the correlation of the ordering. Table 7 displays the correlation values for these comparisons. Correlations in these comparisons range from (-1) to (+1), with any value above +0.5 considered significant for correlation. The small number of respondents within some of the demographic groups and job groups should be noted in evaluating the meaning of some correlations.

In summary, the calculated mean level of criticality assigned each competency by respondents across all job groups was high, and the level of proficiency designated by respondents largely matched the default level initially assigned by the survey authors. The calculated means of competency criticality remained consistent across job groups and demographic cohorts when the survey results were compared/correlated between demographic groups.

		VHA	Non VHA	Expert	Non Expert	PCP	FL	PM
AE	VHA employee	1.000	0.768					
	Non VHA employee		1.000					
	Expert			1.000	0.907			
	Non Expert				1.000			
	PCP					1.000	0.805	0.774
	FL						1.000	0.783
	PM							1.000
PCP	VHA employee	1.000	0.583					
	Non VHA employee		1.000					
	Expert			1.000	0.501			
	Non Expert				1.000			
FL	VHA employee	1.000	0.750					
	Non VHA employee		1.000					
	Expert			1.000	0.740			
	Non Expert				1.000			
PM	VHA employee	1.000	0.810					
	Non VHA employee		1.000					
	Expert			1.000	0.820			
	Non Expert				1.000			

Table 7 – *Correlations of Competency Criticality Ratings between Demographic Groups*

(AE=All Employees, PCP=Patient Care Providers, FL=Facility Leaders, PM=EM Program Managers)

Finally, the submitted free-text competency recommendation by participants resulted in the addition of three supporting competencies and minor word changes in a small number of the primary competencies. The finalized competencies are therefore the version presented in Appendix A, with a copy of the survey version available upon request.

Discussion

This competency survey completed the initial component of a project that will ultimately result in a public domain curriculum for educating VHA personnel about preparedness, response and recovery in healthcare emergencies and disasters. The emergency response and recovery competencies were established with rigorous methods in an effort to guide the second phase of this project: the establishment of learning objectives and overall content of the curriculum. The survey results indicate that across the respondent cohort, by job group and demographic groupings and by comparison between groups, respondents support the established competencies.

The high correlation of agreement (through ranking of criticality) with the survey competencies was not surprising, since the competencies were developed using a systems approach and a carefully pre-constructed competency framework. Furthermore, the competencies describe critical response and recovery activities that are consistent with the National Incident Management System (NIMS) as applied to healthcare facilities, and it was expected that the respondents would recognize the importance of using Incident Management System processes for response and recovery activities. The pre-designation of default proficiencies, where the respondents then agreed or disagreed with the project team's selection, was specifically intended to assess expert agreement with that selection, rather than to obtain an independent and highly variable proficiency designation by respondents.

Many competencies, benchmarks (HRSA, 2004), performance measures (JCAHO, 2005) and other informal measures of effectiveness for normal healthcare and for emergency preparedness have been put forth, with little formal research to validate preparedness measures that predict optimal response (i.e., predictive indicators). Similarly, some organizations (ACEP, 2003 and others) have promulgated preparedness competencies that are meant to establish adequate emergency response performance, but the authors do not indicate any process that validates their competencies, either by actual experience or by wide peer-review expert judgment. This VHA project was conceived to obtain independent expert opinion on the validity of the competencies prior to their use in guiding curriculum development. The competencies were constructed to be objective and measurable, with the intent that they can be further evaluated, and potentially validated, in the future through exercises and actual emergency response experience.

Interestingly, the project team and the VHA project officer selected the survey participants based upon the informal assessment that the invitees were experts within the domains of emergency preparedness, response and/or recovery. The respondents, however, were less favorable to themselves in assessing their own level of expertise, with less than 50% indicating they should be considered 'experts' in emergency preparedness or response from a healthcare facility perspective. This discrepancy may be explained by a variance between the selection criteria and the individuals' self-assessment criteria. Invitees were selected based upon past experience, or upon demonstration of expert knowledge during committee, work group, and conference presentation activities. The selection criteria are reinforced by the responses to the demographic question asking for respondents' experience (Figure 4), demonstrating that 79% reported participating in at least three significant healthcare emergencies. The discrepancy between expertise assessments may be interpreted to represent the lack of a uniform, accepted definition of 'expert' in healthcare emergency management and response. By defining objective, measurable competencies for response and recovery during healthcare emergencies, this project takes an important first step in providing this expert definition.

During development of the proposed project scope, the VHA project manager delineated the three job groups (PCP, FL, PM) that are presented in this survey. The job group titles describe "non-response" positions, but were established through judgment that they have similar enough "response" activities that competencies could be described for them as groups. It is recognized that every job position in a healthcare facility has competencies that exceed the AE competencies described. By recognizing similar capabilities of individual positions within an organization, proper grouping of jobs allows for a layer of large-group competencies before describing very specific competencies for each specific job title. The importance of developing job *group* competencies, rather than jumping from competencies for 'all employees' to competencies for individual positions, is evident when considering the use of competencies for education, training, and evaluation of job performance:

- Grouping allows greater efficiency of training by minimizing the amount of individualized training that must be developed and conducted.
- Job groups that train together receive a wider understanding of the overall response and recovery system.
- Group training promotes the progression of personnel towards becoming proficient in multiple jobs within a job group.

This strategy should be further examined in order to provide the most efficient basis for systems implementation in the current time-demanding environment of day-to-day healthcare operations.

Only three job groups beyond "All Employees" were studied. Analysis of job titles that were not included in these job group categories suggests that two additional groupings of "non-response" positions may be necessary to encompass all hospital-related jobs relevant to healthcare facility emergency response and recovery. These additional job groups can be delineated by 1) those positions that provide direct support to the clinical providers (pharmacy, biomedical engineering, laboratory and imaging services, and others); and 2) those jobs that provide vital facility and non-clinical support (security, physical plant and engineering, food services, and others) that address logistics for the facility. Any remaining competencies beyond these job groups are specific to individual positions *during response and recovery*, and therefore should be described through position titles that are used in the healthcare facility's emergency response plan (or emergency operations plan), rather than through 'non-response' job titles and positions.

As the VHA Emergency Management Academy project continues, the finalized competencies will be used in developing the educational curriculum outline and objectives. The detailed curriculum outline will also be peer-reviewed by a panel of VHA and non-VHA personnel to evaluate completeness and consistency with NIMS and other standard emergency management concepts.

References

ATPM (Association of Teachers of Preventive Medicine) in collaboration with Center for Health policy, Columbia University School of Nursing. *Emergency response Clinician Competencies in Initial Assessment and Management, 2003.* Available at:
http://www.nursing.hs.columbia.edu/institutes-centers/chphsr/clincomp.pdf

ACEP (American College of Emergency Physicians) and the U.S Department of Health & Human Services, Office of Emergency Preparedness. *Developing Objectives, Content, and Competencies for the Training of Emergency Medical Technicians, EmergencyPhysicians, and Emergency Nurses to Care for Casualties Resulting From Nuclear, Biological, or Chemical (NBC) Incidents.* FINAL REPORT April 23, 2001
http://www.acep.org/NR/rdonlyres/7F6821C5-7186-4AAA-9BB5-4D19472D7C62/0/NBCreport2.pdf

Barbera, Joseph A and Anthony G. Macintyre. *Medical and Health Incident Management System: A Comprehensive Functional Description for Mass Casualty Medical and Health Incident Management.* Institute for Crisis, Disaster & Risk Management. The George Washington University, Washington DC, October 2002. Available at www.gwu.edu/~icdrm/

Barbera, Joseph A and Anthony G. Macintyre. *Mass Casualty Handbook: Hospital Emergency Preparedness and Response, First Edition*. Jane's Information Group, 2003.

Boyatzis, Richard. *The Competent Manager: A Model for Effective Performance* New York: Wiley, 1982.

CNA Corporation. *Medical Surge Capacity & Capability: The Management System for Integrating Medical and Health Resources During large-Scale Emergencies.* August 2004. Available at:
http://www.hhs.gov/ophep/mscc_handbook.html

FEMA. *Urban Search & Rescue Incident Support Team Training: Student Manual*. Module 1, Unit 4, Page 6: Planning Process Overview. *n/a*:40. 4/16/2004. Available at:
http://www.fema.gov/pdf/usr/mod1_u4.pdf

HRSA FY. *Continuation Guidance & National Bioterrorism Hospital Preparedness Program*. Catalog of Federal Domestic Assistance (CFDA). 2004 No 99.003
Available at www.hrsa.gov/grants/review04/guidance/hrsa04biot.htm#priorities

INCMCE (International Nursing Coalition for Mass Casualty Education). *Educational Competencies for Registered Nurses Responding to Mass Casualty Incidents, 2003.* Available at:
http://www.nursing.hs.columbia.edu/institutes-centers/chphsr/hospcomps.pdf

JCAHO (Joint Commission on Accreditation of Healthcare Organizations). A Comprehensive Review of Development and Testing for National Implementation of Hospital Core Measures, 2005. Available at: http://www.jcaho.org/pms/core+measures/cr_hos_cm.htm

Klein AL. *Validity and Reliability for Competency-based Systems: Reducing Litigation Risks.*
Compensation Benefits and Review, 28, 31-37, 1996. cited in "Newsome, Shaun, Victor M Catano,
and Arla L. Day. *Leader Competencies: Proposing a Research Framework.* 2003.

Newsome, Shaun, Victor M Catano, and Arla L. Day. *Leader Competencies: Proposing a Research
Framework.* 2003. available at
http://www.cleleadership.ca/paper/leader_competencies-proposing_a_research_framework.pdf

US Office of Personnel Management. *Executive Core Qualifications (ECQ's).*
http://www.opm.gov/ses/ecq.asp MSE-00-6

APPENDIX SECTION

APPENDIX A

Primary and Supporting Competencies

Introduction

For the Competencies presented in this appendix, the following definitions apply:

Primary Competency: Expressed as a capability demonstrable on the job. The context for the competency, if not otherwise stated, is implied to be emergency response and recovery operations. For the purpose of this project, the emergency response context is stressful, requires emergent decision-making and action despite uncertainty, and proceeds despite incomplete and unstructured information. The primary competency is expressed wherever possible, as an emergency response skill.

Supporting Competency: Provides a critical component of the primary response competency, representing a specific knowledge element, skill, or ability. Supporting competencies are in the preparedness or the response/recovery context.

Competencies

See attached pdf for the Response and Recovery Competencies

APPENDIX B

Survey Respondents Self-Reported Position Titles

Survey Respondents' Self-Reported Position Titles	
Acting Associate Director Administration and Admin. Director of Safety and Corp. Risk	Director, VA Healthcare System
Area Emergency Manager	Emergency Management Coordinator
Area Emergency Manager	Emergency Management Coordinator
Area Emergency Manager	Emergency Management Coordinator, Office of the Emergency Manager
Area Emergency Manager	Emergency Manager
Area Emergency Manager	Emergency Manager
Area Emergency Manager	Emergency Manager
Area Emergency Manager	Emergency Manager
Area Emergency Manager	Emergency Medical Preparedness Planning Specialist; Area Emergency Manager
Area Emergency Manager	Emergency Preparedness Coordinator
Area Emergency Manager	Executive Vice President
Area Emergency Manager	Facility Planner
Area Emergency Manager	Family practice physician in a TRICARE/CHAMPUS-VA clinic
Area Emergency Manager	Global war on Terrorism Clinical Coordinator
Area Emergency Manager	Hospital Epidemiologist, Medical Director of Infection Control, Board Certified Infectious Disease Physician
Area Emergency Manager	Health Systems Specialist – External Affairs
Area Emergency Manager	Industrial Hygienist/Safety Manager
Area Emergency Manager	Infection Control Nurse
Area Emergency Manager	Inpatient Pharmacist
Are Emergency Manager	Licensed Practical nurse
Area Emergency Manager	Licensed Practical Nurse in the outpatient department
Area Emergency Manager	Licensed Practical nurse
Area Emergency Manager	Medical director for emergency preparedness; emergency physician
Area Emergency Manager (Emergency Management Specialist)	Medical Director, Poison Control Center and Professor of Pediatrics and Emergency Medicine
Associate Chief Nurse Operations	Netrwork Director
Associate Director	Network Program Safety Manager
Associate Director	Network Industrial Hygienist
Associate Director	Network Patient Safety Officer
Associate Director	Network Pharmacy Benefit Manager
Associate Director	Nurse Liaison – Ambulatory Care
Bioterrorism and Emergency Management Program Manager -Statewide Primary Health Care Assoc.	Nurse Manager, Ambulatory Care
Chaplain	Primary Care Coordinator, Nurse Practitioner
Chief Engineer	Professor and Chair, Emergency Medicine; Director, Department of Emergency Medicine
Chief Facilities Management – Supervisory Engineer	Professor of Clinical Emergency Medicine, Director of Public Health Preparedness
Chief of Organizational Performance Improvement	Program Support Assistant
Chief of Staff	Program Support Assistant/OA.
Clinical Program Coordinator, Infectious Diseases Program	Readjustment Counseling Therapist
Clinical psychologist	Registered nurse, project manager
Clinical Specialist in Adult Psychiatric and Mental health Nursing	Registered Nurse in Cardiac Catheterization Lab
Consulting	Registered Nurse, Intensive Care Unit
Dental Chief, VA Medical Center	Safety Manager
Director	Service Chief
Director- Health Systems Program	Staff nurse
Director Institute for Public Health Emergency Readiness - civilian tertiary care Medical Center	Staff Registered Nurse, Relief Nursing Coordinator, Travel Registered Nurse
Director of Critical Care; Emergency Management Coordinator	Unit Manager
Director of Network Support	

APPENDIX C

Data analysis tables

=

Mean and Standard Deviation of the Criticality Ratings for All Employees Competencies by demographic groups

	Sample Number	AEC-1	AEC-2	AEC-3	AEC-4	AEC-5	AEC-6	AEC-7	AEC-8	AEC-9	AEC-10	AEC-11	AEC-12	AEC-13	AEC-14	AEC-15	
TOTAL responses for AE	92	4.500	4.495	4.484	3.670	3.989	4.200	3.956	4.418	4.728	4.543	4.385	4.533	4.402	4.022	4.099	mean
		0.638	0.705	0.584	0.907	0.925	0.753	1.038	0.598	0.494	0.543	0.646	0.640	0.664	0.789	0.761	stdev
VA	76	4.500	4.461	4.467	3.747	4.053	4.149	3.905	4.440	4.763	4.592	4.440	4.581	4.382	4.040	4.120	mean
		0.600	0.682	0.577	0.946	0.943	0.753	1.062	0.575	0.428	0.521	0.663	0.597	0.632	0.813	0.788	stdev
Non VA	16	4.500	4.667	4.563	3.313	3.688	4.438	4.188	4.313	4.563	4.313	4.125	4.313	4.500	3.938	4.000	mean
		0.816	0.816	0.629	0.602	0.793	0.727	0.911	0.704	0.727	0.602	0.500	0.793	0.816	0.680	0.632	stdev
Expert	42	4.619	4.659	4.524	3.714	3.881	4.268	4.000	4.452	4.667	4.524	4.317	4.537	4.405	4.024	4.146	mean
		0.623	0.530	0.594	0.944	0.968	0.742	0.975	0.593	0.477	0.552	0.610	0.674	0.665	0.758	0.727	stdev
Non Expert	50	4.400	4.360	4.449	3.633	4.082	4.143	3.918	4.388	4.780	4.560	4.440	4.531	4.400	4.020	4.060	mean
		0.639	0.802	0.580	0.883	0.886	0.764	1.096	0.606	0.507	0.541	0.675	0.616	0.670	0.820	0.793	stdev
PCP	22	4.455	4.238	4.571	3.762	4.238	4.286	4.143	4.381	4.773	4.500	4.409	4.571	4.636	4.227	4.182	mean
		0.510	0.831	0.507	0.889	0.700	0.784	1.014	0.498	0.429	0.512	0.666	0.598	0.581	0.685	0.664	stdev
FL	17	4.250	4.438	4.563	3.625	4.000	3.813	3.438	4.313	4.750	4.438	4.250	4.500	4.313	3.563	3.625	mean
		0.683	0.629	0.512	0.885	1.155	0.911	1.315	0.602	0.447	0.512	0.775	0.730	0.704	0.964	1.088	stdev
PM	40	4.675	4.650	4.400	3.675	3.850	4.282	4.000	4.400	4.700	4.525	4.462	4.513	4.350	4.075	4.231	mean
		0.572	0.533	0.632	0.997	0.975	0.647	0.889	0.632	0.516	0.554	0.555	0.601	0.622	0.730	0.627	stdev

Column headers:
- AEC-1: Utilizing ICS/NIMS Principles
- AEC-2: Recognizing job-related triggers for EOP activation
- AEC-3: Participating in facility mobilization
- AEC-4: Applying the VHA core mission to response
- AEC-5: Applying the VHA Code of Ethics in response
- AEC-6: Personal/family preparedness plans
- AEC-7: Maintaining a personal "go-kit"
- AEC-8: Following the Facility Emergency Plan (FEP)
- AEC-9: Performing assigned EOP roles and responsibilities
- AEC-10: Following reporting requirements and communication plan
- AEC-11: Following VHA safety rules and plan
- AEC-12: Following the EOP security measures
- AEC-13: Utilizing equipment, supplies and personnel
- AEC-14: Following demobilization procedures
- AEC-15: Following facility recovery procedures

**Mean and Standard Deviation of the Criticality Ratings for
Patient Care Providers Competencies by demographic groups**

	Sample Number	Recognizing patient care triggers for EOP activation (PCP-1)	Participating in patient care area mobilization (PCP-2)	Executing the FEP clinical area actions (PCP-3)	Performing the EOP clinical care duties (PCP-4)	Providing clinical care surge capacity (PCP-5)	Providing surge capability specialty needs (PCP-6)	Processing clinical care area Information (PCP-7)	Minimizing the psychological impact (PCP-8)	Incorporating safety practices and procedures (PCP-9)	Integrating new resources into the clinical area (PCP-10)	Following clinical area demobilization procedures (PCP-11)	Following clinical area recovery procedures (PCP-12)	
TOTAL responses for PCP	22	4.682	4.727	4.727	4.591	4.545	4.591	4.286	4.364	4.727	4.545	4.273	4.136	mean
		0.568	0.456	0.456	0.503	0.596	0.503	0.561	0.727	0.456	0.510	0.703	0.640	stdev
VA	16	4.625	4.688	4.688	4.563	4.375	4.500	4.333	4.375	4.688	4.625	4.313	4.063	mean
		0.619	0.479	0.479	0.512	0.619	0.516	0.617	0.719	0.479	0.500	0.602	0.443	stdev
Non VA	6	4.833	4.833	4.833	4.667	5.000	4.833	4.167	4.333	4.833	4.333	4.167	4.333	mean
		0.408	0.408	0.408	0.516		0.408	0.408	0.816	0.408	0.516	0.983	1.033	stdev
Expert	6	4.833	4.833	4.833	4.500	5.000	4.833	4.200	4.500	4.833	4.500	4.500	4.500	mean
		0.408	0.408	0.408	0.548		0.408	0.447	0.548	0.408	0.548	0.837	0.837	stdev
Non Expert	16	4.625	4.688	4.688	4.625	4.375	4.500	4.313	4.313	4.688	4.563	4.188	4.000	mean
		0.619	0.479	0.479	0.500	0.619	0.516	0.602	0.793	0.479	0.512	0.655	0.516	stdev

Distribution of the responses for the Level of Proficiency by demographic groups

Column competencies (AEC-1 … AEC-15):
- AEC-1: Utilizing ICS/IMS Principles
- AEC-2: Recognizing job-related triggers for EOP activation
- AEC-3: Participating in facility mobilization
- AEC-4: Applying the VHA core mission to response
- AEC-5: Applying the VHA Code of Ethics in response
- AEC-6: Personal/family Preparedness plans
- AEC-7: Maintaining a personal "go-kit"
- AEC-8: Following the Facility Emergency Plan (FEP)
- AEC-9: Performing assigned EOP roles and responsibilities
- AEC-10: Following reporting requirements and communication plan
- AEC-11: Following VHA safety rules and plan
- AEC-12: Following the EOP security measures
- AEC-13: Utilizing equipment, supplies and personnel
- AEC-14: Following demobilization procedures
- AEC-15: Following facility recovery procedures

Group		AEC-1	AEC-2	AEC-3	AEC-4	AEC-5	AEC-6	AEC-7	AEC-8	AEC-9	AEC-10	AEC-11	AEC-12	AEC-13	AEC-14	AEC-15	Default *
Default		O	O	O	O	O	E	E	O	O	O	O	O	O	O	O	
TOTAL responses for AE	A	8.7%	5.4%	8.7%	8.7%	15.2%	4.3%	9.8%	7.6%	4.3%	5.4%	6.5%	7.6%	2.2%	5.4%	7.6%	
	O	70.7%	73.9%	75.0%	80.4%	72.8%	21.7%	21.7%	79.3%	69.6%	80.4%	79.3%	80.4%	81.5%	87.0%	81.5%	
	E	20.7%	20.7%	16.3%	10.9%	12.0%	73.9%	68.5%	13.0%	26.1%	14.1%	14.1%	12.0%	16.3%	7.6%	10.9%	
VA	A	9.2%	5.3%	7.9%	7.9%	14.5%	5.3%	10.5%	7.9%	5.3%	6.6%	6.6%	7.9%	1.3%	6.6%	9.2%	
	O	69.7%	75.0%	75.0%	80.3%	71.1%	23.7%	25.0%	77.6%	67.1%	77.6%	76.3%	78.9%	80.3%	84.2%	78.9%	
	E	21.1%	19.7%	17.1%	11.8%	14.5%	71.1%	64.5%	14.5%	27.6%	15.8%	17.1%	13.2%	18.4%	9.2%	11.8%	
Non VA	A	6.3%	6.3%	12.5%	12.5%	18.8%	0.0%	6.3%	6.3%	0.0%	0.0%	6.3%	6.3%	6.3%	0.0%	0.0%	
	O	75.0%	68.8%	75.0%	81.3%	81.3%	12.5%	6.3%	87.5%	81.3%	93.8%	93.8%	87.5%	87.5%	100%	94%	
	E	18.8%	25.0%	12.5%	6.3%	0.0%	87.5%	87.5%	6.3%	18.8%	6.3%	0.0%	6.3%	6.3%	0.0%	6.3%	
Expert	A	0.0%	0.0%	0.0%	7.1%	11.9%	2.4%	2.4%	2.4%	0.0%	2.4%	2.4%	4.8%	0.0%	4.8%	4.8%	
	O	64.3%	69.0%	76.2%	76.2%	73.8%	16.7%	21.4%	76.2%	64.3%	71.4%	73.8%	73.8%	76.2%	81.0%	76.2%	
	E	35.7%	31.0%	23.8%	16.7%	14.3%	81.0%	76.2%	21.4%	35.7%	26.2%	23.8%	21.4%	23.8%	14.3%	19.0%	
Non Expert	A	16.0%	10.0%	16.0%	10.0%	18.0%	6.0%	16.0%	12.0%	8.0%	8.0%	10.0%	10.0%	4.0%	6.0%	10.0%	
	O	76.0%	78.0%	74.0%	84.0%	72.0%	26.0%	22.0%	82.0%	74.0%	88.0%	84.0%	86.0%	86.0%	92.0%	86.0%	
	E	8.0%	12.0%	10.0%	6.0%	10.0%	68.0%	62.0%	6.0%	18.0%	4.0%	6.0%	4.0%	10.0%	2.0%	4.0%	
PCP	A	13.6%	13.6%	13.6%	9.1%	13.6%	9.1%	13.6%	13.6%	13.6%	13.6%	4.5%	4.5%	4.5%	4.5%	4.5%	
	O	81.8%	77.3%	72.7%	81.8%	68.2%	31.8%	18.2%	86.4%	59.1%	86.4%	81.8%	86.4%	81.8%	90.9%	90.9%	
	E	4.5%	9.1%	13.6%	9.1%	18.2%	59.1%	68.2%	0.0%	27.3%	0.0%	13.6%	9.1%	13.6%	4.5%	4.5%	
FL	A	12.5%	0.0%	0.0%	0.0%	6.3%	0.0%	12.5%	0.0%	0.0%	6.3%	6.3%	6.3%	0.0%	6.3%	12.5%	
	O	81.3%	75.0%	81.3%	93.8%	87.5%	18.8%	31.3%	87.5%	93.8%	87.5%	93.8%	87.5%	87.5%	93.8%	75.0%	
	E	6.3%	25.0%	18.8%	6.3%	6.3%	81.3%	56.3%	12.5%	6.3%	6.3%	0.0%	6.3%	12.5%	0.0%	12.5%	
PM	A	2.5%	2.5%	2.5%	10.0%	17.5%	2.5%	2.5%	7.5%	0.0%	2.5%	5.0%	7.5%	0.0%	5.0%	7.5%	
	O	62.5%	75.0%	80.0%	77.5%	70.0%	20.0%	25.0%	75.0%	65.0%	72.5%	77.5%	80.0%	80.0%	82.5%	80.0%	
	E	35.0%	22.5%	17.5%	12.5%	12.5%	77.5%	72.5%	17.5%	35.0%	25.0%	17.5%	12.5%	20.0%	12.5%	12.5%	

* The highlighted (yellow) designations were the default choice provided by the project team

Distribution of the responses for the Level of Proficiency by demographic groups

Column headers (PCP-1 … PCP-12):
- PCP-1: Recognizing patient care triggers for EOP activation
- PCP-2: Participating in patient care area mobilization
- PCP-3: Executing the FEP clinical area actions
- PCP-4: Performing the EOP clinical area duties
- PCP-5: Providing clinical care surge capacity
- PCP-6: Providing surge capability specialty needs
- PCP-7: Processing clinical care area Information
- PCP-8: Minimizing the psychological impact
- PCP-9: Incorporating safety practices and procedures
- PCP-10: Integrating new resources into the clinical area
- PCP-11: Following clinical area demobilization procedures
- PCP-12: Following clinical area recovery procedures

		PCP-1	PCP-2	PCP-3	PCP-4	PCP-5	PCP-6	PCP-7	PCP-8	PCP-9	PCP-10	PCP-11	PCP-12	Default *
		O	O	O	O	O	O	O	O	O	O	O	O	
TOTAL responses for PCP	A		4.5%	4.5%	4.5%	9.1%	9.1%				4.5%	9.1%	9.1%	
	O	81.8%	86.4%	90.9%	81.8%	86.4%	86.4%	95.5%	86.4%	90.9%	81.8%	81.8%	86.4%	
	E	18.2%	9.1%	4.5%	13.6%	4.5%	4.5%	4.5%	13.6%	9.1%	13.6%	9.1%	4.5%	
VA	A		6.3%	6.3%	6.3%	12.5%	12.5%				6.3%	12.5%	12.5%	
	O	75.0%	81.3%	87.5%	75.0%	81.3%	81.3%	93.8%	81.3%	87.5%	75.0%	75.0%	81.3%	
	E	25.0%	12.5%	6.3%	18.8%	6.3%	6.3%	6.3%	18.8%	12.5%	18.8%	12.5%	6.3%	
Non VA	A													
	O	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	E													
Expert	A													
	O	66.7%	83.3%	83.3%	83.3%	100%	100%	100%	100%	66.7%	83.3%	83.3%	83.3%	
	E	33.3%	16.7%	16.7%	16.7%					33.3%	16.7%	16.7%	16.7%	
Non Expert	A		6.3%	6.3%	6.3%	12.5%	12.5%				6.3%	12.5%	12.5%	
	O	87.5%	87.5%	93.8%	81.3%	81.3%	81.3%	93.8%	81.3%	100%	81.3%	81.3%	87.5%	
	E	12.5%	6.3%		12.5%	6.3%	6.3%	6.3%	18.8%		12.5%	6.3%		

* The highlighted (yellow) designations were the default choice provided by the project team

Mean and Standard Deviation of the Criticality Ratings for Facility Leaders Competencies by demographic groups

	Sample Number	FL-1	FL-2	FL-3	FL-4	FL-5	FL-6	FL-7	FL-8	FL-9	FL-10	FL-11	FL-12	FL-13	
TOTAL responses for FL	17	4.824	4.529	4.588	4.529	4.471	4.412	4.375	4.529	3.941	4.235	4.000	3.882	4.176	mean
		0.393	0.514	0.507	0.514	0.624	0.618	0.806	0.624	0.748	0.752	0.707	0.697	0.809	stdev
VA	15	4.800	4.533	4.533	4.467	4.400	4.400	4.429	4.467	3.933	4.267	4.000	3.867	4.200	mean
		0.414	0.516	0.516	0.516	0.632	0.632	0.852	0.640	0.799	0.704	0.756	0.743	0.862	stdev
Non VA	2	5.000	4.500	5.000	5.000	5.000	4.500	4.000	5.000	4.000	4.000	4.000	4.000	4.000	mean
			0.707				0.707				1.414				stdev
Expert	5	5.000	4.600	4.600	4.400	4.800	4.600	4.400	4.800	4.200	4.400	4.000	4.000	4.600	mean
			0.548	0.548	0.548	0.447	0.548	0.548	0.447	0.447	0.548	0.707		0.548	stdev
Non Expert	12	4.750	4.500	4.583	4.583	4.333	4.333	4.364	4.417	3.833	4.167	4.000	3.833	4.000	mean
		0.452	0.522	0.515	0.515	0.651	0.651	0.924	0.669	0.835	0.835	0.739	0.835	0.853	stdev

Distribution of the responses for the Level of Proficiency by demographic groups

		FL-1	FL-2	FL-3	FL-4	FL-5	FL-6	FL-7	FL-8	FL-9	FL-10	FL-11	FL-12	FL-13	
		E	O	O	O	E	E	O	O	O	O	O	O	O	Default *
TOTAL responses for FL	A				11.8%	11.8%	5.9%			5.9%	5.9%	5.9%	5.9%	5.9%	
	O	17.6%	88.2%	82.4%	70.6%	11.8%	17.6%	94.1%	94.1%	94.1%	82.4%	88.2%	94.1%	94.1%	
	E	82.4%	11.8%	17.6%	17.6%	76.5%	76.5%	5.9%	5.9%		11.8%	5.9%			
VA	A				13.3%	13.3%	6.7%			6.7%	6.7%	6.7%	6.7%	6.7%	
	O	20.0%	93.3%	86.7%	80.0%	13.3%	20.0%	93.3%	100%	93.3%	86.7%	86.7%	93.3%	93.3%	
	E	80.0%	6.7%	13.3%	6.7%	73.3%	73.3%	6.7%			6.7%	6.7%			
Non VA	A														
	O		50.0%	50.0%				100%	50.0%	100%	50.0%	100%	100%	100%	
	E	100%	50.0%	50.0%	100%	100%	100%		50.0%		50.0%				
Expert	A														
	O		100%	100%	80.0%			100%	100%	100%	80.0%	80.0%	100%	100%	
	E	100%			20.0%	100%	100%				20.0%	20.0%			
Non Expert	A				16.7%	16.7%	8.3%			8.3%	8.3%	8.3%	8.3%	8.3%	
	O	25.0%	83.3%	75.0%	66.7%	16.7%	25.0%	91.7%	91.7%	91.7%	83.3%	91.7%	91.7%	91.7%	
	E	75.0%	16.7%	25.0%	16.7%	66.7%	66.7%	8.3%	8.3%		8.3%				

* The highlighted (yellow) designations were the default choice provided by the project team

Mean and Standard Deviation of the Criticality Ratings for Program Managers Competencies by demographic groups

	Sample Number	PM-1	PM-2	PM-3	PM-4	PM-5	PM-6	PM-7	PM-8	PM-9	PM-10	
TOTAL responses for PM	49	4.592	4.571	4.429	4.563	4.542	4.429	4.500	4.000	4.041	4.469	mean
		0.705	0.791	0.612	0.649	0.683	0.791	0.652	0.866	0.935	0.844	stdev
VA	44	4.545	4.568	4.432	4.558	4.512	4.386	4.488	4.000	4.023	4.432	mean
		0.730	0.818	0.625	0.666	0.703	0.813	0.668	0.915	0.976	0.873	stdev
Non VA	5	5.000	4.600	4.400	4.600	4.800	4.800	4.600	4.000	4.200	4.800	mean
			0.548	0.548	0.548	0.447	0.447	0.548		0.447	0.447	stdev
Expert	29	4.724	4.655	4.448	4.714	4.643	4.448	4.464	4.000	4.069	4.552	mean
		0.455	0.484	0.506	0.460	0.559	0.632	0.576	0.756	0.961	0.632	stdev
Non Expert	20	4.400	4.450	4.400	4.350	4.400	4.400	4.550	4.000	4.000	4.350	mean
		0.940	1.099	0.754	0.813	0.821	0.995	0.759	1.026	0.918	1.089	stdev

Column competencies: PM-1 Recognizing jurisdiction-wide triggers for EOP activation; PM-2 Providing guidance for incident management; PM-3 Assisting with facility mobilization; PM-4 Assuring execution of the facility EOP; PM-5 Functioning as the facility's IMS Plans Chief; PM-6 Performing as the facility's senior liaison; PM-7 Coordinating with jurisdictional response; PM-8 Participating in network-wide demobilization; PM-9 Participating in facility recovery procedures; PM-10 Managing After-Action & organizational learning

Distribution of the responses for the Level of Proficiency by demographic groups

		PM-1	PM-2	PM-3	PM-4	PM-5	PM-6	PM-7	PM-8	PM-9	PM-10	
	Default	E	E	O	E	E	O	O	O	O	E	*
TOTAL responses for PM	A	2.0%	2.0%	2.0%	4.1%	6.1%	2.0%	2.0%	4.1%	8.2%	4.1%	
	O	12.2%	6.1%	79.6%	8.2%	6.1%	75.5%	71.4%	81.6%	81.6%	2.0%	
	E	85.7%	91.8%	18.4%	87.8%	87.8%	22.4%	26.5%	14.3%	10.2%	93.9%	
VA	A	2.3%	2.3%	2.3%	4.5%	6.8%	2.3%	2.3%	4.5%	9.1%	4.5%	
	O	13.6%	6.8%	79.5%	9.1%	6.8%	77.3%	70.5%	79.5%	79.5%	2.3%	
	E	84.1%	90.9%	18.2%	86.4%	86.4%	20.5%	27.3%	15.9%	11.4%	93.2%	
Non VA	A											
	O			80.0%			60.0%	80.0%	100%	100%		
	E	100%	100%	20.0%	100%	100%	40.0%	20.0%			100%	
Expert	A				3.4%	6.9%			3.4%	6.9%	3.4%	
	O	10.3%	3.4%	75.9%	6.9%	3.4%	75.9%	69.0%	75.9%	75.9%		
	E	89.7%	96.6%	24.1%	89.7%	89.7%	24.1%	31.0%	20.7%	17.2%	96.6%	
Non Expert	A	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	10.0%	5.0%	
	O	15.0%	10.0%	85.0%	10.0%	10.0%	75.0%	75.0%	90.0%	90.0%	5.0%	
	E	80.0%	85.0%	10.0%	85.0%	85.0%	20.0%	20.0%	5.0%		90.0%	

* The highlighted (yellow) designations were the default choice provided by the project team