

**VHA-EMA CERTIFICATION PROGRAM  
Healthcare Emergency Management Professional Certification  
Program**

**Final Program Recommendations  
Deliverable 9.1<sup>1</sup>**

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<sup>1</sup> Per the Project Statement of Work, Deliverable 9.1 is “Health Care Emergency Management Certification Program for two job groups (leadership and emergency program managers) and EMA competency framework to include emergency response and recovery competencies for two additional job groups...”



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## **Introduction**

The Institute for Crisis Disaster and Risk Management (ICDRM) at George Washington University (GWU) has developed, under contract to the Veterans Health Administration (VHA) Emergency Management Strategic Healthcare Group, materials to support the evolving VHA Emergency Management Academy (VHA-EMA). For more details about this project, please see the ICDRM Web Site at <http://www.gwu.edu/~icdrm>.

This deliverable represents one key product under the current VHA-EMA project: recommendations for a proposed Healthcare Emergency Management Certification Program specifically for healthcare system professionals.

The initial phase of the VHA certification project began in 2004, with the development of core competencies for all healthcare system personnel with specified roles in the Emergency Operations Plan (i.e., “core competencies”), followed by **emergency response and recovery competencies** for specific healthcare system job groups (Healthcare System Leaders, Patient Care Providers, and Emergency Management Program Managers<sup>2</sup>). This body of competencies served as a basis for the creation of the five-volume instructional guide *Emergency Management Principles and Practices for Healthcare Systems*.<sup>3</sup>

Subsequently, **mitigation and preparedness** competencies (i.e., program competencies) were developed for the two healthcare system job groups that are the initial focus of the certification program, the Emergency Management Program Managers and Healthcare System Leaders (see Appendix A for a summary of these competencies). In addition, three additional healthcare system major job groups were identified in healthcare systems (Clinical Support Services, Police and Security Services, and Facilities and Engineering Services) through project research. Emergency response and recovery competencies were developed these job groups (see appendix C for the full compendium of core and job group competencies).

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<sup>2</sup> HEALTHCARE SYSTEM LEADERS (HSL): Hospital and/or healthcare system-wide senior executives (CEO, COO, CFO), hospital-wide managers, department heads, nursing executives, chief of the medical staff, and/or senior managers in large departments or key operating units. It is assumed that members of this job group, due to their everyday organizational positions, would be assigned to serve in the command and general staff positions of an ICS structure during a healthcare system's emergency response.

EMERGENCY MANAGEMENT PROGRAM MANAGERS (EPM): Personnel primarily responsible for developing, implementing and maintaining healthcare facility and system-wide emergency management (EM) programs that include the Emergency Operations Plan (EOP). System level emergency program managers, above the level of individual facilities, (such as VHA Area Emergency Managers or program managers at the level of the VA Emergency Management Strategic Healthcare Group) are also included in this job group. It is assumed that the individuals in this job group will be assigned to a command and general staff ICS position (usually planning section chief) during response, and as such are expected to possess the response and recovery competencies listed under Healthcare System Leaders as well. In some healthcare systems, an EM Program Manager may oversee a more limited position (e.g. program coordinator) with a narrower range of competencies.

<sup>3</sup> Available at: <http://www.va.gov/emshg/page.cfm?pg=122>

At the outset of this initiative, no formalized, structured method existed for consistent evaluation of professional performance in the healthcare emergency management setting. Recent national events such as Hurricane Katrina highlighted the critical need for fully qualified personnel to staff healthcare system emergency management positions. The products of this overall certification program project address this performance evaluation deficiency in healthcare emergency management. This project report provides strategic recommendations for a certification *framework* that structures a Healthcare Emergency Management (HEM) Certification Program. It provides strategic and programmatic recommendations for a Healthcare Emergency Management (HEM) Certification Program, based upon the developed competencies and the five-volume instructional guide. Formal HEM certification could eventually promote greater consistency in healthcare system emergency management as a discipline and as a management science. It may also provide an objective measure for healthcare personnel preparedness. Finally, certification program activities will promote a national understanding on the part of healthcare organizations that healthcare emergency management (including business continuity) should be a primary job responsibility for key personnel within any well managed healthcare system (as opposed to a second or third level job responsibility for an individual). This will benefit healthcare organizations, their patients and visitors, and the healthcare system emergency management professionals themselves. Precedent for this expectation is demonstrated by the similar benefits experienced in the fire service, EMS, emergency medicine, and other professional disciplines after they established certification programs and a national consensus practice model.

This certification program is viewed as a voluntary process where applicants can demonstrate their competence in healthcare emergency management. A successful certification program could, therefore, be utilized to demonstrate to employers that recipients are capable of performing competently in their designated healthcare emergency management area. The predicted result is that both programmatic and emergency response leadership is enhanced by assigning certified personnel to key positions.

This certification program also recognizes that healthcare personnel with significant expertise in emergency management will, in addition to mitigation and preparedness, be significant participants in healthcare system response and recovery. The program competencies, therefore, address *all four phases of Comprehensive Emergency Management (mitigation, preparedness, response and recovery)*. This comprehensive, competency based focus and specificity to healthcare systems distinguishes this program from other emergency management and business continuity certifications.

### **Methodology for Developing the Certification Program Recommendations**

This project followed a careful methodological strategy, delineated at the outset of project planning, to establish recommendations for a Healthcare Emergency Management (HEM) Certification Program. An initial white paper was produced and a peer review workshop (“Stakeholder I meeting”) was conducted April 5, 2007 to obtain expert input.

The proposed certification program was then delineated by the project team with additional outside opinion sought in selected areas, from both the VHA project officer (i.e., the Contracting Officer Technical Representative) as well as from other experts selected by the project team and VHA personnel. Investigators conducted a web-based survey and additional focused interviews. Information from these activities was then incorporated into revised draft recommendations. Controversies identified from the web survey and interviews were highlighted for presentation and discussion in the Stakeholders II conference that was held on September 10, 2007. This meeting provided peer review of the near-final draft recommendations, plus a facilitated discussion on the “way forward” in establishing an HEM Certification Program. Input from the meeting was analyzed and incorporated into this final working draft.

### **Initial Certification Program Stipulations**

Based upon preceding products developed in the VHA-EMA project, the following VHA stipulations were incorporated into the program design:

1. The knowledge, skills and abilities for this certification process have been established by the core competencies and targeted job groups competencies developed earlier in this VHA-EMA project. The content upon which the certification process will draw is contained in the *Emergency Management Principles and Practices for Healthcare Systems* and other relevant, widely available medical emergency management references such as the *Veterans Health Administration Emergency Management Program Guidebook*.<sup>4</sup>
2. The majority of the assessment elements in the certification process will be web-based as a continuation of VHA strategy to employ web-based training and education. Even though the proposed certification program is envisioned to eventually be independent of the VHA, the efficiencies of administering examinations through a web-based format remain an attractive strategy. This delivery mechanism provides greater availability to the intended participants in a cost-effective and flexible manner.
3. Up until the development of final recommendations in this project, the research was not to be constrained by any defined resource limitations for the eventual certification program. The rationale for this was that eventual funding and participant support is dependent in part on the perceived value of the certification. Recommendations for a robust certification program were therefore requested, with the expectation that later considerations would adjust for available funding and interest. The program recommendations in this deliverable were consequently based upon the assumption that sufficient funding and personnel will be committed to administer and maintain the program.

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<sup>4</sup> This Guidebook (version 2005) is available at: <http://www1.va.gov/emshg/page.cfm?pg=114>

4. This certification program is designed to eventually cover all healthcare system job groups. As noted above, the initial focus is specific to Healthcare Systems Leaders and Emergency Program Managers.

The project team believes that the preceding stipulations are valid parameters for shaping the recommendations for the proposed HEM Certification Program.

### **Healthcare Emergency Management (HEM) Certification Program Goal and Objectives**

Project research emphasized the importance of clear goals and objectives in every quality certification program.

The proposed goal of this HEM Certification Program is:

*“The Healthcare Emergency Management Certification process shall be predictive of competent and professional performance in healthcare system emergency management across all four phases of Comprehensive Emergency Management.”*

To accomplish this goal, the proposed certification program objectives are:

- a. Establish and formally recognize a bounded set of competencies essential to healthcare system emergency management that span all four phases of Comprehensive Emergency Management (mitigation, preparedness, response and recovery).
- b. Provide recognition that this technical area is mature and well-enough described to be considered a distinct profession.
- c. Demonstrate that the successful certificant has achieved a required level of proficiency in the targeted emergency management competencies.
- d. Promote a formative process for professional development in healthcare system emergency management.

### **Candidate Assessment in the Certification Program – A Multiple Step Process**

An objective and transparent certification assessment process must be clearly defined in any credible certification program. The following concepts, processes, and procedures describe the proposed assessment strategy for the HEM certification framework.

Consistent with many previously recognized professional certification programs, the assessment element of the HEM certification process is based upon the following three primary steps:

1. Eligibility qualifications: Procedures that assess each candidate to determine if he/she is qualified to enter the formal assessment process. This includes adequate training and experience, evidence of “good character” (using healthcare licensing methods) and others.
2. Formal assessment: Structured, objective assessment, using validated, reliable examination instruments to assess each qualified candidate’s knowledge, skills, and abilities in the defined certification area.
3. Maintenance and Recertification: Procedures to assure maintenance of the qualifications, knowledge, skills, and abilities by the certificant in demonstrated in their initial certification process. This includes maintenance of licenses, continuing education, passing a re-certification exam, and other criteria such as a continual learning process and continuous certification.<sup>5</sup>

### **Progressive Levels of Certification**

To meet the program objective of promoting progressive professional development in healthcare emergency management, the Healthcare Emergency Management Certification Program offers a tiered approach for certification. This acknowledges graded levels of proficiency in healthcare emergency management. It also corresponds with the increased specificity in job group competencies, and the further specificity in function-specific emergency management competencies (see Figure 1.). Three levels of certification are proposed:

- a. Associate HEM Certification: This level of certification is designed to indicate that the applicant understands foundational emergency management principles and concepts, is proficient in Healthcare System Emergency Management Core Competencies, and has attained an awareness level of proficiency in competencies common to all healthcare system job groups. This level of certification is referred to as an Associate HEM Certification and is not considered equivalent to a professional certification. The same ‘associate’ certification process is utilized for all job groups within healthcare emergency management.
- b. Professional HEM Certification: Through a process that is much more rigorous than the Associate HEM Certification, applicants are evaluated for an *operational level of proficiency* in competencies relevant to their respective job group across mitigation, preparedness, response and recovery. This level of certification is referred to as Professional HEM Certification and specifies the

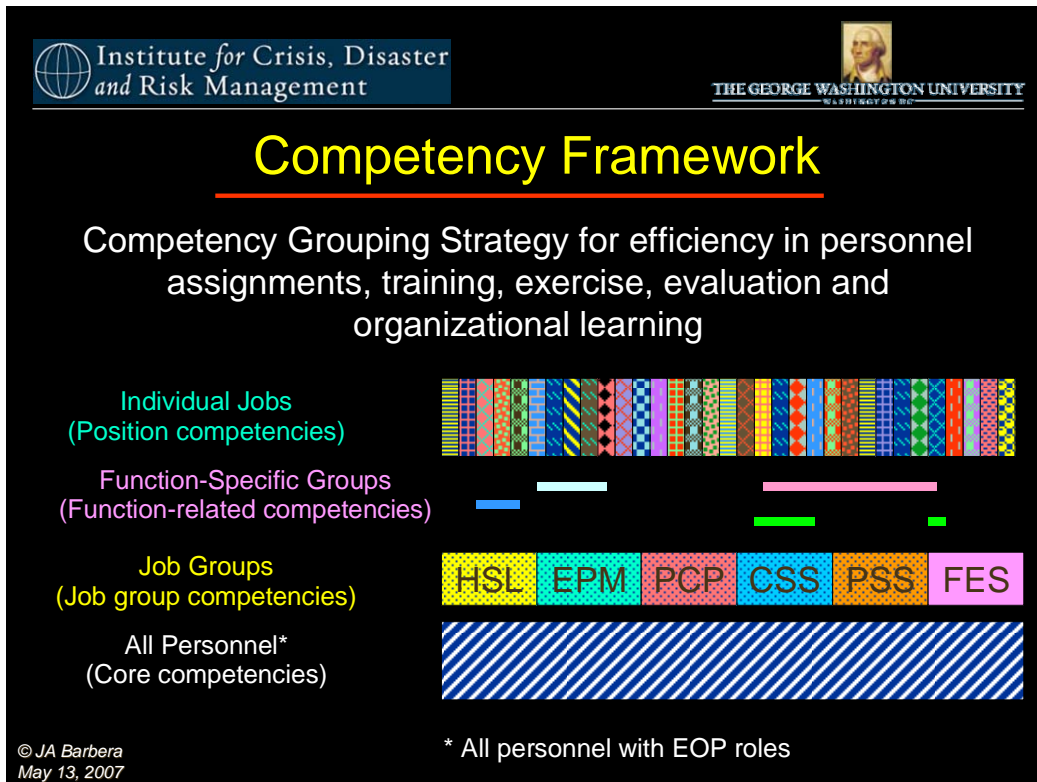
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<sup>5</sup> “Continuous certification” is a process now mandated for medical specialties by the American Board of Medical Specialties. It requires demonstration of regular continuing education by certificants through periodic exams and other methods. A brief description of this is available at: <http://www.em-news.com/pt/pt-core/template-journal/emmednews/media/EMN506blues3.36.pdf>



relevant healthcare system job group. For this initial program, Professional HEM Certification will be developed for the Healthcare System Leader (HSL) and Emergency Program Manager (EPM) job group tracks. In the future, certification in the other major healthcare system job groups will be addressed.

**Figure 1.** Healthcare system competency and job group breakdown – A full certification program will address each of these areas. “Function-specific groups” may include the management of chemical casualties, patient triage team, a hospital EOC team and other functional entities within a healthcare system emergency operations plan. “Individual jobs” are response and recovery positions with individual competencies beyond function-specific and job group competencies, such as Planning Section Chief, Security Operations Group Leader, or other specific position.



- c. Function-specific Qualifications: This is an option for those who successfully achieve Professional HEM Certification. It is designed to measure competency in managing more **specific functional areas** of healthcare system emergency management (for example, the management of chemical casualties, or managing healthcare system exercise programs) or in **specific key positions** such as the healthcare system Planning Section Chief. This level of future certification is designated as “Professional HEM Certification in [“X” job group] with special qualification in [functional group or specific supervisory position]. This designation demonstrates that a certificant has the competencies for the Professional HEM Certification in a specific job group PLUS the competencies to manage and perform within the designated functional area. This qualification is **performance based** and therefore distinguished from the training completion

certificates and curriculum based certificates that are commonly offered upon finishing functional training courses. *Technical* specialists in these areas (HAZMAT, ICS Planning Chief, etc.) are recognized as proficient in the technical subject matter but that expertise alone does not qualify them to sit for this certification. They must first demonstrate healthcare emergency management competency by achieving the professional certification.

The following healthcare system job groups are noted in acronym form in Figure 1, and a fully developed certification program will be comprised of certification instruments for each job group.<sup>6</sup>

- Healthcare System Leader (HSL)
- Emergency Management Program Manager (EPM)
- Patient Care Provider (PCP)
- Clinical Support Services (CSS)
- Police and Security Services (PSS)
- Facilities and Engineering Services (FES)

### **The Certifying Body**

The Healthcare Emergency Management certifying process must be conducted by a “certifying organization” established during the program implementation phase. The certifying organization is the entity that develops, implements, and manages the certification process. This includes managing the development of the assessment instruments, administering them to participants, and revising them based upon evolution of the professional field as well as upon evaluation of the experience in the certifying process. The initial phase of HEM Certification Program implementation should focus on establishing the certifying organization or certifying body (see program implementation recommendations on page 21). The perceived credibility of a certifying body reflects upon the credibility of any professional certification program. The eventual certifying body should therefore incorporate the following attributes:

- a. **Independence:** The certifying body will have organizational autonomy to make decisions based solely upon scientific research and professional judgment. It therefore develops evidence-based guidance that avoids any perception of bias or outside influence. Generally, professional certification organizations are administratively independent of government agencies and ideally also stand apart from professional associations and similar organizations.

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<sup>6</sup> Job group definitions are available in the VHA-EMA competency report available through the ICDRM web site <http://www.gwu.edu/~icdrum>. HSL and EPM job group descriptions are provided in footnote 2 above. Applicants must first demonstrate that they are generally qualified in the job group in which they are applying. The certification is that they demonstrate the emergency management competencies that extend beyond the general job group KSAs.

- b. Authoritative: The certifying organization will receive oversight by nationally recognized experts (acting as an advisory board) as it establishes and maintains formal certification processes and procedures. Representation of the relevant disciplines in healthcare emergency management (across the described job groups) is recommended.
- c. Robust administrative capability: The organization will oversee and ensure that the following activities are accomplished:
- Establish and maintain professional administrative standards for the certifying body, including maintaining “board” membership, following bylaws and adhering to formal policies and procedures such as strict conflict of interest disclosures.
  - Maintain ease of access for potential candidates or those already certified (e.g. website).
  - Maintain and revise, as appropriate, objective eligibility criteria for applicants.
  - Maintain a rigorous but fair testing process for candidates, including development of criteria clearly based upon defined competencies, recruiting competent test writers, maintaining security of the testing process, and considering psychometric and other scientific evaluation of the examination instruments.
  - Provide a grievance process for applicants, for those who are denied certification, or for those who have their certification invalidated.
  - Administer the various financial tasks associated with a professional certifying organization.
  - Maintain records and be responsive to appropriate certification inquiries.
  - Establish an internal audit and review system with methods for continuous organizational learning (i.e., corrective and preventive actions) to maintain and/or improve quality.
- d. Sustainable: The certifying organization will receive support and resources sufficient to meet its goals and objectives over an indefinite period of time. The business model for this will be developed during program implementation.

## **Performance Standards**

Performance-based evaluation is a term used broadly across multiple disciplines in academic research, and is accomplished using performance measures.<sup>7</sup> The unifying concept across the literature is that a “performance-based evaluation” uses observable

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<sup>7</sup> Performance measures: The specific data sets, objective observations, or other findings captured during the performance-based evaluation process. Performance measures may address the adequacy of resources applied to the program (inputs), the type, level, and quality of program activities conducted (process), the direct products and services delivered by the program (outputs), or the results of those products and services (outcomes). (*ICDRM/GWU Emergency Management Glossary of Terms* [May 7, 2007] available at [www.gwu.edu/~icdrm](http://www.gwu.edu/~icdrm) )

and measurable performance that reflects the outcome goal and objectives, even in web-based or written tests. “Knowledge” competencies, for example, should be examined through questions that focus on the application of the knowledge rather than on the knowledge itself. Performance-based evaluation contrasts with the more common approach used in test-based evaluation, which primarily assesses the ability to memorize and recall educational material. To be useful, the metrics selected for evaluating performance must be valid predictors of successful performance in the **actual roles and responsibilities** for those being certified.

Properly developed competencies describe observable and measurable performance metrics, against which actual performance can be measured.<sup>8</sup> Establishing proficiency levels (awareness, operational, expert) for each competency allows the appropriate level of expertise to be objectively described for each competency required by a specific job group or individual position (see the Competency Framework used for developing this program’s competencies, Appendix C). The core competencies (“all personnel”) and the specific, relevant “job group” competencies for healthcare system emergency management were developed during an earlier phase of this project and revised/expanded as a current project deliverable (see Appendix C). Each Job Group Certification assessment instrument will use the All Personnel Competencies and the specific job group competencies (both Programmatic as well as the Emergency Response and Recovery competencies) as the basis for evaluation. This in effect creates the performance standards.

Expansion upon the competency concepts is contained within the five-volume *Emergency Management Principles and Practices for Healthcare System (EMP&P)*. This material is consistent with the *Veterans Health Administration Emergency Management Program Guidebook*, which provides extensive forms, management tools, and “hands-on” guidance. These documents, along with the major references included in them, serve as the repository for the competencies and body of knowledge encompassed by the HEM Certification Program. Future additions, subtractions, and amendments to the competencies and associated information may occur under the authority of the certifying body as the HEM Certification Program is implemented.

## **The Healthcare Emergency Management Certification Process**

Based upon the above-described parameters, a Healthcare Emergency Management (HEM) Certification Process was developed, with three defined certification levels (Associate HEM Certification, Professional HEM Certification, and HEM Function-specific or Position-specific Qualifications). The details for the proposed program evolved through multiple exchanges with outside experts, including two stakeholder meetings, the web-based survey, and multiple individual interviews. The following represents a general consensus of opinions, with areas of significant controversy noted

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<sup>8</sup> Barbera JA, Macintyre AG, Shaw GL, et al. *VHA-EMA Emergency Response and Recovery Competencies: Competency Survey, Analysis, and Report* (June 16, 2005), available at <http://www.gwu.edu/~icdrm>.

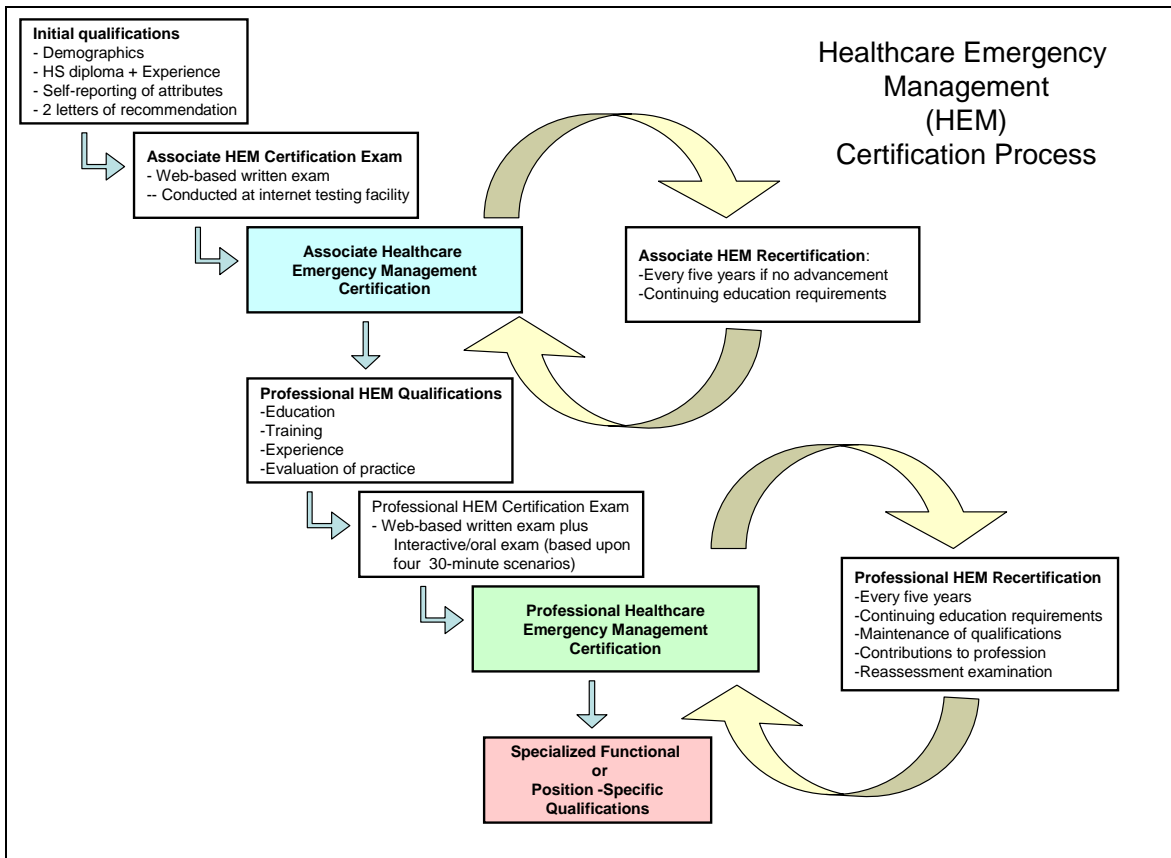
for future consideration. The proposed HEM Certification Process is summarized in Figure 2.

### Initial Qualification for the Associate HEM Certification

The following qualifications must be demonstrated by applicants seeking admission to the Associate HEM Certification Examination:

- a. Demographic information: Sufficient data for registering and exam admission, as well as for tracking candidates and for conducting psychometric assessments of the examination instruments.
- b. Minimum education and experience: A high school diploma or GED is required, with an employment or volunteer position with a defined role in healthcare emergency management. The certifying body will establish the parameters for what may be considered “a position with a defined role in emergency management.” The minimum experience for this requirement was controversial in both the survey respondents and the stakeholder II meeting.

**Figure 2.** A relational summary of certification assessment steps recommended for the Healthcare Emergency Management (HEM) Certification Program.



c. Character and management attributes:

- Self-reporting that discloses criminal history, substance abuse, or physical, mental, or psychiatric impairment.<sup>9</sup> This self-certification may follow the approach used in applications for licensure in the health professions (see Figure 3 for an example). Applicants should be informed that any intentional misrepresentation on this self-reporting process could be grounds for permanent disqualification from the certification process.
  - Any self-reporting of a condition of concern would be referred to a special board from the certifying body. This group would review the condition to ensure that the reported condition does not compromise the integrity of the Certification's reputation by certifying the involved applicant. Details of this process must be developed by the certifying body, once established.
- Assessment of character and general management abilities through two letters of recommendation from current or past employers and/or supervisors.

**Figure 3.** Example from a State medical licensure application form demonstrating self-certification by the applicant. This practice is common in most healthcare licensing processes, and may be adapted for the HEM Certification Program qualifying steps.

<b>Have you in the last five (5) years, in any jurisdiction:</b>	
13. <b>**been addicted to, or received treatment for the use or misuse of, prescription drugs and/or illegal chemical substances, or been dependent upon alcohol or received treatment for alcohol dependency?.....</b>	_____
14. <b>had any interruption in your practice of medicine which might reasonably be expected by an objective person to currently impair your ability to carry out the duties and responsibilities of the medical profession in a manner consistent with standards of conduct for the medical profession?.....</b>	_____
15. <b>had anything occur which might reasonably be expected by an objective person to currently impair your ability to carry out the duties and responsibilities of the medical profession in a manner consistent with the standards of conduct for the medical profession?.....</b>	_____
Physician's Signature: _____	Date: _____ / _____ / _____
<b>IMPORTANT INFORMATION</b>	
If you answered "YES" to any of the above questions, you MUST furnish full details on an 8½ x 11 sheet of paper which MUST be attached to this application. On attachment, please include your name and the page number of the application.	
†If you answered "YES" to Question 2 and/or 3, you MUST cause to be submitted directly to this office from the court all court documents pertaining to your answer.	
††If you answered "YES" to Question 6, you MUST cause to be submitted directly to this office from the facility all information pertaining to your answer.	
*If you answered "YES" to Question 12, for each judgment or settlement you MUST complete Appendix A, which is attached to this application. If more than one judgment or settlement, you may make copies of Appendix A.	
**If you answered "YES" to Question 13 and have gone through a rehabilitation program, you MUST have that program furnish this Board a report of your treatment and progress.	
Revised 3/07	

<sup>9</sup> Character attributes (or abilities under KSAs) have been generally addressed in the medical, nursing, and allied health certification programs by requiring an active professional license. The licensing requirement assumes that a professional licensure process has screened for negative attributes through the certifications made to obtain the license. In other certification programs, where a professional license is not required, this issue has been addressed by requiring the applicant to provide professional letters of recommendation that vouch for character attributes.



### Associate Healthcare Emergency Management Certification Examination

- a. Study guidance: Relevant sections of the following would serve as study guidance for the Associate certification:
  - Applicable National Incident Management System (NIMS) training materials.
  - Emergency Management Principles and Practices for Healthcare Systems (EM Principles and Practices).
  - Veterans Health Administration Emergency Management Guidebook.
  - Relevant references from the Guidebook and EM Principles and Practices.
  - Appropriate future education and training references as they are developed and evaluated by the certifying body.
  
- b. Exam instrument format and administration
  - The evaluative instrument consists of multiple choice and other “scan sheet” type questions.
  - The web-based exam is administered at an Internet testing facility (closed book).
  - The exam procedures allow two hours for completion of the exam by the average examinee, with established procedures that adjust for disabilities. The length of this examination was controversial in both the web-based survey responses and stakeholder meetings.
  - The questions are structured to demonstrate proficiency in the core competencies and the application of emergency management knowledge, as opposed to only answering knowledge-based questions straight from an instructional curriculum. As an example, some questions may ask for the applicant to interpret a particular situation and select a proposed course of action from a list.
  
- c. Exam technical development.
  - Professional examination preparation services will be employed to:
    - Develop a balanced, clear, psychometrically sound examination instrument that addresses disability and cultural considerations.
    - Develop, pilot, review and maintain a bank of questions for the exam.
  - Oversight of examination content and rigor is maintained by the certifying body’s advisory board.

Participants who successfully pass the examination are designated as “Associate Healthcare Emergency Management (HEM) Certified.”

### Associate Healthcare Emergency Management Certification Maintenance and Recertification

In order to ensure maintenance of necessary Emergency Management competencies, Associate HEM Certification maintenance and recertification requirements are established. The recertification process includes both a demonstration of eligibility

requirements as well as demonstration of competency through a formal assessment instrument.

- a. Term: Recertification is necessary every five years unless the certificant has achieved a higher level of certification (i.e. Advanced HEM Certification).
- b. Qualifications: Eligibility qualifications necessary to sit for the recertification exam are the same criteria used for initial Associate Certification eligibility qualifications plus:
  - A minimum total of 100 continuing education actual contact hours (20 hours/year average over a 5 year period) in emergency management-related courses that are formally accredited as continuing education by widely recognized, regular healthcare system professions (medicine, nursing, healthcare executive, etc.).
- c. Assessment: Achieving a passing score on a Recertification Examination is required. The Recertification Examination contains different question items than the Associate HEM Certification Examination, with updated concepts included in the exam items. The format and administration remains the same (multiple choice and other “scan sheet” type questions). This exam will also be web-based and conducted at an Internet testing facility.

### Professional Healthcare Emergency Management Certification Qualifications

The following qualifications must be demonstrated by applicants seeking admission to the Professional HEM Certification Examination:

- a. Formal education. Documentation of:
  - Two years of college if at least 6 credits in a management discipline, or
  - A four-year college degree if no management courses. Under a “grandfather clause” in the implementation plan for the certification program (see final section of this report), this formal education requirement may be waived for applicants with substantive experience during the initial program implementation period. This formal education requirement as very controversial in both the web-based survey and when discussed in stakeholder meetings.
- b. Training. Documentation of:
  - Courses required for NIMS compliance appropriate to the applicant’s organization and position.
  - Accredited courses<sup>10</sup> that cover the relevant core and job group competencies at the defined levels of proficiency. This education and training will be developed as an element of the certification program implementation plan,

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<sup>10</sup> These education and training courses will be accredited by the certifying organization or another accrediting organization stipulated by the certifying body.



since it does not currently exist. The length, content, and qualifications of the instructors will be established by the certifying body, as will the accreditation standards for organizations providing the instruction.

- c. Character and management attributes.
  - Self-reporting that discloses criminal history, substance abuse, or physical, mental, or psychiatric impairment.<sup>11</sup>
  - Assessment of character and general management abilities through two letters of recommendation from current or past employers and/or supervisors.
  
- d. Experience. Documentation of:
  - At least two years of “active” cumulative experience in the healthcare system emergency management job group where certification is sought (i.e., 4 years if 50% of the job, etc.). No more than one half of one year of the requirement can be met in EM experience outside of a healthcare system.<sup>12</sup>
  - A valid Associate HEM Certification.
  
- e. Objective evaluation of the applicant’s practice:<sup>13</sup> This can be achieved by examining emergency management work products that were developed or significantly revised by the applicant in the relevant job group position for which they are seeking certification. The products are evaluated for format, content, and adequate operational detail.<sup>14</sup>
  - Certification by a supervisor that the documents are a substantive or sole effort of the applicant.
  - Presentation of a work product from mitigation or preparedness (e.g. a component of the EOP, or a mitigation plan) for which the applicant was primarily responsible.
  - Presentation of a work product from response and/or recovery for which the applicant was primarily responsible (e.g. an Incident Action Planning document, After Action Report).

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<sup>11</sup> See discussion of this issue under the “Initial Qualifications for Associate HEM Certification” section.

<sup>12</sup> This assessment is generally intended to assure that an applicant has applied education and training to real-world situations within the professional area that the certification covers. Ideally, this experience requirement should cover the full range of emergency management programmatic areas (mitigation, preparedness, response and recovery) specific to the relevant job group. While this is a very widely used metric, it is important to avoid some of the pitfalls that may limit its usefulness. In accepting activities for meeting the experience criteria, it is important for the certifying body to avoid unsubstantiated assumptions in developing experiential qualifications. Examples include experience in “homeland security,” general DoD career roles, and intelligence or security services. Experience in some of these disciplines has, in many instances, been assumed to translate directly to emergency management (“A career in the military, law enforcement, intelligence, etc.... indicates expertise in emergency management even though the jobs were only distantly related”). While activities may have similarity, the “management” component of emergency management and the specifics of healthcare are distinctly important experiential components. The appropriate use of competencies in defining acceptable experience should effectively address this issue.

<sup>13</sup> This procedure can provide several benefits: 1) restricting applicants to those who have actually produced “work products;” 2) “raising the bar” by having the candidate’s work products to directly evaluate.

<sup>14</sup> Objective tools for this purpose must be developed and accepted by the certifying body.

### Professional Healthcare Emergency Management Certification Examination

The evaluative tools for the Professional HEM Certification Examination include both a written and an “oral” or interactive examination, administered sequentially and usually at different times. The exam instruments will have specific attributes in the following areas:

- a. Written and interactive examination content.
  - Specific to the designated job group in which the participants are certifying.
  - Evaluates mastery of healthcare system emergency management core competencies and the competencies for the specific job group at the specified level of proficiency.<sup>15</sup>
  - Evaluates the competencies across the four phases of the emergency management program, not just emergency response and recovery.<sup>16</sup>
  - A rigorous level of questioning with the preponderance of exam questions requiring the application of knowledge, skills and abilities (KSAs) for the appropriate job group.
  
- b. Written examination instrument format and administration.
  - This examination must be successfully “passed” before qualifying for the interactive/oral examination.
  - The evaluative instrument consists of multiple choice and other “scan sheet” type questions.
  - The web-based exam is administered at an internet testing facility (closed book).
  - The exam procedures allow three hours for completion of the exam by the average examinee.
  - The questions are structured to prompt the participant to demonstrate proficiency in the specified competencies through scenario-based responses.
  
- c. Interactive/oral examination format and administration.
  - The evaluative instrument consists of orally and visually presented case scenarios with the participant interacting with the examiner.
  - The exam is administered at a physical location with enough small rooms for the participants to be individually tested while maintaining privacy for the participants and security for the scenario information.
  - The oral/interactive exam consists of four thirty minute case scenarios, with 10 minutes between each session, and with the participants rotating rooms for each scenario (one examiner presents the same case to each participant to maintain consistency, and examinees rotate among examiners to promote fairness in grading).
  - Scenarios are presented and participants are queried on their intended actions, situation assessments, and other ideas pertinent to the scenario.

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<sup>15</sup> These competencies will be available at <http://www.gwu.edu/~icdrm>

<sup>16</sup> These competencies will be available at <http://www.gwu.edu/~icdrm>

- The scenario details, including complexity and urgency, are structured to demonstrate the ability to address emergency management issues under the expected stress encountered in healthcare system emergency management.
- d. Written and interactive/oral exam study guidance. This consists of relevant sections of the following educational and training materials for the specific job group and its competencies.
  - Applicable NIMS training materials.
  - Emergency Management Principles and Practices for Healthcare Systems (EM Principles and Practices).
  - Veterans Health Administration Emergency Management Guidebook.
  - Relevant references from the Guidebook and EM Principles and Practices.
  - Appropriate future education and training references as they are developed and evaluated by the certifying body.
- e. Written and interactive/oral exam technical development.
  - Professional examination preparation services will be employed to:
    - Develop a balanced, clear, psychometrically sound examination instrument.
    - Develop, pilot, review and maintain a bank of questions for the exam.
  - Oversight of examination content and rigor is maintained by the certifying body's advisory board.

Participants who successfully pass both sections of the exam are designated as “Certified in Professional Healthcare Emergency Management – [‘X’ Job Group]” or “Professional HEM Certification – [‘X’ Job Group]”.

### Professional Healthcare Emergency Management Certification Maintenance and Recertification

In order to ensure maintenance of necessary competencies, Professional HEM Certification maintenance and recertification requirements are established.<sup>17</sup>

- a. Term: Recertification must be achieved every 5 years. The recertification process includes both a demonstration of eligibility requirements as well as demonstration of competency through a formal assessment process.
- b. Qualifications: Eligibility qualifications necessary to sit for the recertification exam are the same qualifying criteria for the Professional HEM Certification Examination, plus:

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<sup>17</sup> This maintenance process should promote activities that assist the certificant in maintaining his/her certified competencies, plus incorporates a recertifying examination instrument/s at specified intervals to assure that the certificant remains competent. The certification maintenance process is also intended to promote expansion and refinement of the healthcare emergency management profession.

- Continuing education: A minimum total of 100 continuing education actual contact hours (20 hour/year average over a 5 year period) in emergency management-related courses that are formally accredited as continuing education by widely recognized, regular healthcare system professions (medicine, nursing, healthcare executive, etc.).<sup>18</sup>
  - Maintenance of job-related qualifications and licenses.
  - Contributions to the profession<sup>19</sup> – either one of the following:
    - The mentoring of one novice through the Associate HEM and Professional HEM Certification processes, or
    - The acceptance of a healthcare system emergency management article for publication in a professional peer reviewed journal.
  - Evaluation of candidate’s emergency management practice:
    - Two EM work products are submitted and evaluated per the procedures used for eligibility for the initial Professional HEM certification exam.
- c. Recertification Assessment:<sup>20</sup> Achieving a passing score on a Recertification Examination is required. The Recertification Examination contains different question items than the Professional HEM Certification Examination, but the format and administration is similar (multiple choice and other “scan sheet” type questions). This exam will also be web-based and conducted at an Internet testing facility. Alternatively, a “continuous certification process” with more frequent exams on narrower topics (based upon identified journal article or other readings) may be implemented. This process may serve as a vehicle for disseminating new practice or competency essentials as HEM evolves (see “continuous certification” footnote on Page 6).

### Functional-specific Qualifications

This in the certification framework provides a means for recognizing additional mastery of competencies at the HEM functional group and/or specific supervisory

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<sup>18</sup> This requirement is intended to keep the certificant current with new developments in the field, and therefore proficient in the related competencies. The educational requirements are almost universally general in nature across all certification programs, and primarily serve the purpose of promoting life-long learning.

<sup>19</sup> An objective tool must be developed to assist in the determination of appropriate activities that fulfill this requirement.

<sup>20</sup> Because of the evolving science and practice in healthcare emergency management, the project team recommends a formal examination to assure up-to-date competency by those with continued certification.

position levels (see Figure 1).<sup>21</sup> An applicant for these certifications must hold a valid Professional HEM Certification.

- a. Competency basis: The examination process is based upon competencies developed specifically for the emergency management functional group and/or for the specific supervisory positions<sup>22</sup> in the emergency management program or incident management team. These certifications reflect a performance evaluation and so are clearly distinguished from the "completion certificates" obtained at the conclusion of many training courses.<sup>23</sup> The actual functional groups and key positions for which this qualification step may be available should be determined by the certifying organization. Potential examples include:
  - Healthcare System Management of Chemical Casualties (a response functional group).
  - Healthcare System Planning Section Chief (a specific response supervisory position).
  - Exercise master certification (a preparedness functional group).
  - Training master certification, including training development, conduct, admin, and improvement (a preparedness functional group).
  
- b. Qualifications and assessment: These additional certifications are awarded after successful completion of defined eligibility and assessment activities, which would include:
  - Valid Professional HEM Certification.
  - Examination of work products specific to the area of expertise.
  - Passing a written exam (web-based exam at an internet testing site) that demonstrates proficiency in the specialty area's competencies. The exam format and administration is modeled after the Professional HEM Certification written examination instrument.
  - Further detail for this future level of certification is deferred to the HEM certifying organization.

*A candidate who successfully completes any of these specialty examinations will be deemed "Professional HEM Certified – [‘X’ Job Group], with additional qualification in [functional or position-specific designation]."*

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<sup>21</sup> The VHA-EMA project did not provide funding for developing these additional competencies or position/function descriptions. This material is therefore provided as a "placeholder" in the certification framework so that a comprehensive, fully tiered certification framework and program may be described.

<sup>22</sup> These positions and functional groups may eventually be aligned, where appropriate, with those developed in the ongoing HHS/DHS credentialing project.

<sup>23</sup> This certification level fits within the generally accepted NIMS approach that could establish an eventual "red card" system for deploying healthcare system EM professionals. Unlike the red card, however, it may include functional & job qualifications beyond just emergency response & recovery positions. The "red card" system is used in wildland fire response. It is a qualifications record that indicates the persons officially designated performance qualifications as defined by the Incident Qualification and Certification System (IQCS). A red card is necessary to qualify to fight fire with a federal agency or on federal land.

## **Outcome Measures**

Outcome measures are the actual final results of the system performance under the circumstances in which the system is being used. The outcomes are commonly some defined endpoint or result. Outcome metrics in an emergency management program are defined by the overall system's goals and objectives, and the outcome measures can be assessed against these objective and measurable endpoints.<sup>24</sup> Based upon the goals for this certification program, the following metrics are provided for the development of outcome measures.

Proposed outcome measures for the Healthcare Emergency Management Certification Program include:

- a. The recommendations in this proposed certification program have been compared against the evolving NIMS compliance guidance, and are consistent with current NIMS guidance.
- b. A future study demonstrating that certificants from this program performs satisfactorily or in a superior fashion in their emergency management roles.
- c. A future study demonstrating that certificants have advanced the profession through published articles and books, lectures and research, and through mentoring of future certificants with successful completion of the certifying process.
- d. A future study demonstrating that healthcare emergency management is widely recognized as an important element in any successful healthcare system, reflected by healthcare emergency management being a primary job responsibility within most robust healthcare organizations.

## **HEM Certification Program Implementation Issues Requiring Priority Action**

These are implementation issues that, subject to further analysis and determination, should be considered for detailed courses of action by funding authorities, the established HEM certifying organization, and other key participating organizations. Some of these were identified by survey respondents, while others were developed by the project team during the research phase of this project. A more comprehensive listing of steps for program implementation and sustainment is provided in Appendix B.

- Establish the certifying body: This is a critical first step for the certification program, and includes establishing the certifying body's structure, administrative and operational personnel, the structure of the advisory board or other oversight body, the

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<sup>24</sup> Outcome measures explanation adapted from ICDRM/GWU Emergency Management Glossary of Terms [May 7, 2007] available at [www.gwu.edu/~icdrm](http://www.gwu.edu/~icdrm)

advisory board members' selection and credentials, how the organization will be financially supported, and related issues.

- Determine methods for accrediting any future training experience required for HEM Professional Certification: Operational level proficiency training (to be distinguished from the usual 'merit badge' courses) will need to be established. The body that accredits training programs should ideally be associated with but independent from certifying body.
- Develop formal rules and guidance to implement the certification program and assessment process recommendations.
- Market the HEM Certification Program to obtain widespread recognition and support. Employers, healthcare system administrators, regulatory bodies, and other entities should be targeted to educate that personnel with HEM certification add clear value to the organization by minimizing enterprise risk from adverse incidents and maximizing the ability to respond and recover.
- Market to potential certification applicants, emphasizing that HEM Certification confers substantial benefits upon successful applicants. This initiative should also develop easy-to-access-and-use guidance material for entering and completing the certification process.
- Establish (through a "grandfather clause") the qualifications and methods for providing "certified status" early in the program to recognized, established experts. As with any new certification process, "qualified" personnel will be required to develop the certification process and instruments, conduct the oral/interactive examinations, establish training parameters, and complete other early program activities that require "already certified" personnel. This may be accomplished by allowing a period of time where applicants with extensive experience and demonstrated expertise do not need to meet all of the qualifying requirements, such as formal education or accredited training. The grandfather clause may be limited in duration to the time period for establishing an accredited education/training program and assuring its availability to applicants.



## **Appendix A**

### **Summary of Competencies for Emergency Management Program Managers (EPM) and Healthcare System Leaders (HSL)**

The certification recommendations provided in this project are focused upon two specific job groups: Emergency Management Program Managers (EPM) and Healthcare System Leaders (HSL).

Certification programs provide a mechanism for the evaluation of an individual's capability to perform in a specified role. Central to this concept are pre-established competencies that can be utilized as metrics for that evaluation. The "performance standards" for each job group's assessment instruments, therefore, are based upon the core healthcare emergency management competencies ("all personnel") and the competencies for the relevant job group.

Competencies for the EPM and HSL job groups have been established and outline the requisite knowledge, skills, and abilities for individuals to participate in and manage healthcare system activities across the phases of Comprehensive Emergency Management (mitigation, preparedness, response, recovery).

These competencies are presented as a primary competency that is further explained through supporting competencies. In addition, a proposed level of proficiency (awareness, operations, expert) that an individual should obtain for each competency is described. For more information on the framework used to establish the competencies and a complete list of the competencies, please see Appendix C or <http://www.gwu.edu/~icdrm/index.html>.

A brief summary of the EPM and HSL competencies used as performance standards is provided below.

#### **Emergency Management Program Managers (EPM)**

Personnel primarily responsible for developing, implementing and maintaining healthcare facility and system-wide emergency management (EM) programs that include the Emergency Operations Plan (EOP). System level emergency program managers, above the level of individual facilities, (such as VHA Area Emergency Managers or program managers at the level of the VA Emergency Management Strategic Healthcare Group) are also included in this job group. ***It is assumed that the individuals in this job group will be assigned to a command & general staff ICS position (usually planning section***



*chief) during response, and so are expected to possess the response and recovery competencies listed under Healthcare System Leaders as well.*<sup>25</sup>

Mitigation and preparedness (“program competencies”)

EPM program competencies provide objective criteria that personnel may be evaluated on to ensure they are capable of managing a well-run Emergency Management Program (EMP). An initial primary competency focuses on the knowledge and skills necessary to employ a ‘systems-based’ approach to program development, implementation, and maintenance. In addition, personnel are expected to possess and be able to apply foundational Emergency Management principles to their work. Other program competencies focus on the following capabilities:

- Administrative planning including the development of strategic administrative planning for the EMP and the incorporation of appropriate legal considerations.
- Developing and maintaining the Emergency Management Committee (EMC) to support the efforts of the program.
- Developing and maintaining the Hazards Vulnerability Analysis for the organization to include prioritization of risks and grouping of common vulnerabilities (to then be used as inputs into the EMP).
- Comprehensive mitigation planning to include standardized templates for documentation of these plans and regular reviews/revisions of these plans.
- Preparedness planning including the development of comprehensive Emergency Operations Plans (EOP) based upon standardized templates and incorporating the Incident Command System (ICS) and the National Incident Management System (NIMS) principles.
- Continuity planning to ensure the resiliency of the organization.
- Developing, implementing, and maintaining comprehensive instructional materials (education, training, etc.) that permit the EMP and EOP to function adequately for the organization.
- Managing and conducting exercises of the EOP or elements of the EOP for the purpose of evaluating its adequacy.
- Conducting performance based program evaluation based upon conducted exercises or responses to actual events.

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<sup>25</sup> In some healthcare systems, an EM Program Manager may oversee a more limited position (e.g. program coordinator) with a narrower range of competencies.

- Ensuring findings from evaluations are incorporated into both the EOP and EMP consistent with the principles of a learning organization.

### Response and recovery competencies

The EPM response and recovery competencies focus on personnel requirements to assist with the management of incident response within any healthcare facility. Consistency with NIMS and ICS are a major focus of these competencies. For the purposes of this project, EPM personnel are assumed to usually respond in the role of the Planning Section Chief. In addition, EPM personnel are expected to possess the response and recovery competencies of the HSL as well (See below). Capabilities described within this group of competencies include:

- Recognizing within the individual's scope of practice any anomaly that may constitute an "incident" for the healthcare system.
- Providing guidance to healthcare system leaders on the need and utility of activating the EOP.
- Assisting healthcare system leaders in the rapid mobilization of their respective organizations.
- Assisting healthcare system leaders to ensure proper execution of processes and procedures contained within the EOP.
- Fulfilling the role of the Plans Section Chief for the healthcare system including managing the incident action planning for the organization.
- Assisting with the senior liaison function to ensure adequate information flow with relevant agency executives or similar parties.
- Participating in the demobilization of the healthcare system to ensure return to readiness.
- Participating in recovery processes including assisting the transition of management from the incident action planning process.
- Managing the After Action Report process for the healthcare system.

### **Healthcare System Leaders (HSL)**

Hospital and/or healthcare system-wide senior executives (CEO, COO, CFO), hospital-wide managers, department heads, and/or senior managers in large departments or key

operating units, including nursing executives and medical chief of staff. It is assumed that members of this job group, due to their everyday organizational positions, would be assigned to serve in the command and general staff positions of an Incident Management Team (IMT) during a healthcare system's emergency response.

Mitigation and preparedness (“program competencies”)

HSL program competencies provide objective criteria that personnel may be evaluated on to ensure they are capable of contributing to a well-run Emergency Management Program (EMP) at a senior level. Though similar to EPM program competencies, there are differences in the level of proficiencies or in the level of necessary detail. As with EPM, HSLs are expected to apply foundational Emergency Management principles in their assigned roles. Other program competencies focus on the following capabilities:

- Providing leadership and administrative support to the EMP including contributions that ensure regulatory adherence (e.g. Joint Commission standards and public health regulations).
- Participating in the HVA process including contributions relevant to the individual’s day-to-day position.
- Participating in the mitigation planning process including analysis of cost-benefit ratios of particular mitigation solutions.
- Participating in preparedness planning process including incorporating business continuity principles.
- Utilizing the EOP to perform preparedness activities such as instruction or exercises for the healthcare system.
- Participating in performance based systems evaluation of both the EMP and EOP and working to ensure implementation of accepted changes.

Response and recovery competencies

HSL response and recovery competencies are focused upon the role HSLs will serve in which is assumed to be a part of Command and General staff for the healthcare system. Again, some similarities exist with EPM response and recovery competencies but important distinctions remain. Capabilities include:

- Identifying specific criteria that could constitute an incident for the healthcare system including possessing an understanding of the impact of EOP activation on the system.

- Activating the EOP for the healthcare system including utilizing standard notification processes.
- Managing mobilization of the healthcare system to a response stance.
- Executing appropriate Occupant Emergency Procedures (OEP) to ensure the safety and well being of staff, patients, and visitors located within the healthcare system's facilities.
- Utilizing a pro-active methodology (management by objectives) to ensure efficient conduct of EOP activities.
- Managing continuous incident action planning through an iterative process of re-evaluating healthcare system objectives and developing consistent strategies to achieve them.
- Managing efficient information processing including appropriate internal and external dissemination of response related information.
- Ensuring adequate public information on response activities is made available to patients, patients' families, staff families, media, and other relevant parties.
- Providing support to the healthcare system's functional areas as needed through the allocation of specific resources or through procedural mechanisms.
- Employing appropriate mechanisms for the tracking and documentation of costs associated with response and recovery.
- Managing response and recovery so that efforts are consistent with standards and regulations (or seek relief as indicated).
- Incorporating business continuity principles into the incident action planning process utilized to manage response and recovery.
- Overseeing the development and implementation of specific safety guidance for healthcare system personnel including a Safety Message, as appropriate.
- Managing effective and rapid demobilization of the healthcare system
- Managing recovery of the healthcare system including the capture of important information for evaluation of performance.

## **Appendix B**

### **Candidate Certification Program Implementation Plan**

Using literature research and analysis during the development of the certification program recommendations, the project team captured common actions necessary to fully implement and sustain a certification program. It is recognized that these proposed steps may be changed significantly as the program is implemented. They are intended as a “straw man” for the implementing organization to use in beginning its work.

1. Establish the goals and objectives of the certification program (see candidate goal statements in the recommendations).
2. Establish the body of competencies upon which the certification is based (see appendix C for the competency framework and compendium of core and job group competencies).
  - a. Define the body of competencies (knowledge, skills and abilities that assist the organization in achieving its objectives)) that is distinct for emergency management and specific to the success of a healthcare system
  - b. Establishing and maintaining the body of competencies is recognized as a dynamic process in this evolving field; periodic revision of the competencies will be required, with subsequent revision of competency examination items.
3. Market the program to attain acceptance by healthcare organization administrators as an important credential for predicting success at key positions that contribute to the success of the organization.
4. Establish the certifying organization.
  - a. Define the organization’s structure and the administrative and operational positions.
  - b. Define the structure, makeup, and function of the advisory board or other oversight body (the “board”).
    - i. Independent and authoritative, with balanced representation with potential inclusion of other stakeholders such as Fire, EMS, or Law Enforcement.
    - ii. Demonstrated organizational autonomy: independent with no perceived political, monetary or other bias.
    - iii. Professionally established bylaws, processes, and procedures.
  - c. Develop robust administrative capability to manage the range of certifying activities, including:
    - i. Following established bylaws, policies and procedures, including generally accepted financial accountability and record keeping.

- ii. Maintaining ease of access to potential candidates or those already certified (e.g., website, advertising, and other methods)
    - iii. Maintaining and revising eligibility criteria for potential candidates
    - iv. Maintaining the testing process of candidates including developing criteria that match competencies, recruiting test writers, maintaining security of the testing process, and considering psychometric evaluation of tests.
    - v. Maintenance of application and certification records.
    - vi. Establishing an internal audit and review system with methods for continuous organizational learning (i.e., corrective and preventive actions) to maintain and/or improve quality.
    - vii. Consider seeking accreditation by the National Commission for Certifying Agencies<sup>26</sup> or the American National Standards Institute.<sup>27</sup>
  - d. Establish the business model and strategic business plan for sustaining the certifying organization and the certification program.
5. Confirm (or revise) the eligibility qualifications per the program recommendations. Establish procedures for objectively confirming that an applicant has the presented qualifications.
6. Develop a “Grandfather Clause” for exam eligibility: Define an initially qualified cohort at the outset of the certification program (i.e., persons whose experience qualifications may substitute for other more formal training or education eligibility requirements if achieved during a designated time interval). This provides inclusion for those who learned by experience before a formal instructional/qualifications system was in place. A finite time interval must be defined, after which this lesser pre-exam qualification expires.
7. Develop guidance for candidates in the certification process
  - a. Develop guidance for potential applicants so they can fully appreciate what the certification process will evaluate (e.g., may use the applicable sections of the Emergency Management Principles and Practices for Healthcare Systems)
  - b. Establish a process to provide candidates with detailed information about the examination prior to the test administration (eligibility requirements, application methods, dates for examination, and payment procedures, exam type/s, scoring methods, procedures if fail, etc.).<sup>28</sup>
8. Develop the examination of practice materials and define the process for assessing the candidate’s quality of practice

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<sup>26</sup> National Organization for Competency Assurance, accessed February 5, 2006 at <http://www.noca.org>

<sup>27</sup> American National Standards accessed February 5, 2007 at Institute <http://www.ansi.org>

<sup>28</sup> Web-based example for Certified Infection Control Professionals program available at [http://www.cbic.org/Becoming\\_Certified.asp](http://www.cbic.org/Becoming_Certified.asp)

- a. Select the written documents that can be submitted by candidates for examination to assess the candidate's emergency management practice.
  - b. Develop an objective process for assessing the submitted materials.
9. Develop the formal examination instruments (i.e., the exams) and define the process for administering the formal examinations
- a. Establish qualification for item and scenario writers.
  - b. Develop instructions for item and scenario writers.
  - c. Recruit and train item and scenario writers.
  - d. Develop test items for the written and/or oral examinations that accurately examine each target competency (consider conducting validation studies to assure that inferences made on the basis of test scores are appropriate and justified)
  - e. Develop test items (for both types of exams) that examine skills and abilities as well as knowledge. These may include the development of scenarios where the examinee must indicate understanding of both what must be accomplished and the emergency management methods that should be used to accomplish the indicated action.
  - f. Assure test items cover the full range of target competencies, with appropriate weighting for item representation according to importance.
  - g. Provide methods to develop, test, and validate test items.
  - h. Establish processes for determining the number of items, length of the exam based upon item numbers, how often the examination will be offered, how many exam versions will be used, how often the versions will be rotated, and how often the items will be updated or otherwise revised.
  - i. Establish process for administering the examination (in place or via web)
    - i. Announcement, notification, registration
    - ii. Check-in procedures (identification, confirming registration information, etc.)
    - iii. Efficient, secure exam administration method/s
      - o Number/qualifications of exam supervisor and proctors (administration manual for staff should include policies regarding admission, entry and exit during administration, release of examinees, addressing irregularities, shipment & security of materials, etc.).
      - o Accommodate candidates with disabilities in accordance with the American with Disabilities Act
  - j. Establish qualification for examiners and exam managers.
  - k. Develop instructions for examiners and exam managers.
  - l. Recruit and train examiners and exam managers.
  - m. Establish process for scoring examinations, determining the minimum pass score, item appeals process, etc.
  - n. Provide methods to statistically analyze each exam, for validity, irregularities and research:



- i. Item Analysis includes evaluating item difficulty, item discrimination, and distracter analysis.<sup>29</sup>
    - ii. Overall Exam Analysis includes statistical evaluation of the score to include mean score, score standard question, test reliability, standard error of measurement, and score frequency distribution.
  - o. Establish a process to provide candidates with an individualized candidate report, including results for each category area and final scores.
  - p. Establish an appeal process for candidates/certificants who have been denied access to an examination or renewal of certification or who have had certification revoked (with cause communicated to them). Assure that the process does not discriminate among candidates as to age, gender, race, religion, ethnic origin, disability, marital status, or sexual orientation.
  - q. Establish security measures to maintain the integrity of the certification process (examination, scoring, reporting and records maintenance procedures):
    - i. Item writing and review
    - ii. Item and exam bank maintenance
    - iii. Oral exam scenarios, grading criteria development, review and bank maintenance
    - iv. Ancillary materials
    - v. Test book printing, storing, distributing
    - vi. Storage of information and certification databank
    - vii. Transportation/Transmittal of materials and information
    - viii. Administrative security
  - r. Establish mechanism to address misrepresentation and non-compliance with eligibility criteria or certifying organization's rules by applicants or certificants. This may include a mechanism for reporting cases of misrepresentation to appropriate authorities.
9. Establish the recertification program (or continuous learning process).
10. Address the functional and position specific qualification process – this area should be further investigated by the certifying organization to determine the feasibility of this optional qualification step.<sup>30</sup>

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<sup>29</sup> Classroom Assessment Techniques (CATs), available at:  
[http://www.flaguide.org/cat/multiplechoicetest/multiple\\_choice\\_test4.php](http://www.flaguide.org/cat/multiplechoicetest/multiple_choice_test4.php)

<sup>30</sup> For a parallel example, see the American Board of Nursing Specialties. Promoting Excellence in Nursing Certification Accreditation Standards, accessed February 5, 2007 at  
[http://www.nursingcertification.org/pdf/ac\\_standards\\_short.pdf](http://www.nursingcertification.org/pdf/ac_standards_short.pdf)