**Emergency Management Institute (EMI)**

**Emergency Management Higher Education Program**

**Research Standards Focus Group**

**September 26-27, 2012**

**Participants**:

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**Preface**:

The Federal Emergency Management Agency’s (FEMA) Emergency Management Higher Education Program convened a focus group at the Emergency Management Institute (EMI) September 26-27, 2012 to discuss a set of basic research standards for the emerging discipline of emergency management (EM). The charge of the group included discussion and debate related to what the research and publishing standards should be for students and faculty, research standards for conducting research including methodological approaches, research standards for publishing research including primary outlets for dissemination of EM research, and ethical guidelines for EM research.

Over the course of two days of meetings, the group achieved consensus around a core set of standards for conducting and publishing emergency management research. The group also explored a variety of additional emergency management higher education (EMHIED) community needs related to research and how they might be met with the support of the FEMA Higher Education Program. The following short report presents an overview of the group’s discussion about research standards as well as a discussion of how the additional research needs of the EMHIED community might be met. The standards developed by the group are presented as an addendum to the report.

**Report**:

If EM is to be an academic discipline, then there are certain characteristics it must display. For instance, the discipline must have an identified disciplinary purview and core research questions; research standards for how new knowledge is produced and recognized in the discipline; and, a common body of knowledge; among other characteristics.

Determination of the discipline’s research standards for how new knowledge is produced in the discipline is a particularly important task for the EMHIED community to undertake since the academic discipline is just beginning to formalize; there is a significant need for EM research; and, there are an increasing number of individuals conducting EM research (e.g., students, faculty, practitioners).

Research standards are also important to determine at this juncture because the EM research being published is of varying quality. At times, the methodology used, data collection methods, descriptions of results, and interpretation of findings is out-of-step with generally accepted scientific standards. This observation is true of some of the work that is being published under the auspices of EM research centers and educational institutions (e.g., research reports, completed theses and dissertations) and in journals that are related to EM.

Recognition of this situation led the FEMA Higher Education Program to convene a group of EMHIED representatives at the Emergency Management Institute (EMI) to discuss and review research standards for EM.

The focus group began its discussion with the topic of the development of EM in higher education and its current disciplinary status. There was consensus among the group that EM is in the process of becoming an academic discipline in its own right. The group reviewed the *EM Disciplinary Purview Report* (Jensen, 2012[[1]](#footnote-1)) and unanimously supported the purview of the EM discipline (and the role of research within it) outlined in the report. For example, the group agreed that the academic discipline of emergency management studies “how humans and their institutions interact and cope with hazards, vulnerabilities, and resulting events (i.e., emergencies, disasters, catastrophes, and complex humanitarian crises), particularly through activities related to preparedness, response, recovery, and mitigation”. Moreover, the group agreed that research ought to have a central role within the discipline including research being the basis for educating students and being the means by which the EM body of knowledge is created and recognized.

There was group consensus that as the discipline of EM evolves, its sustainability, credibility, and value will be increased through an increased understanding of and emphasis on using and conducting research.

A variety of possible, partial explanations for why research does not currently play as significant a role as it should in EMHIED were explored. The varying emphasis placed on research, differences of opinion as to what constitutes research, variable knowledge about research methods and research standards within and across EMHIED, and difficulties associated with identifying and accessing relevant EM research were among the possible explanations discussed.

It was an early point of consensus in the group’s discussion that an initial, draft set of research standards were needed and needed now if EM is to develop effectively as an academic discipline.

This discussion led the group to begin the activity of outlining a basic set of initial research standards for anyone who chooses to participate in the academic discipline of EM including scholars, faculty, students, and practitioners. The group conversed about what the process of conducting and publishing research includes and the areas in which standards are both relevant and necessary. Consensus regarding the research process in each stage and relevant standards came easily and quickly amongst the group. The standards drafted by the group are included as an addendum to this report.

From the outset the group recognized that the standards being developed were but a draft. Prior to official publication of the standards, the wider EMHIED community needs to have a chance to review the document and provide feedback. Toward this end, the standards are available for review through the FEMA Higher Education website; and, the group welcomes feedback from the wider EMHIED community on an immediate and ongoing basis. Please contact Jessica Jensen, Assistant Professor in the Department of Emergency Management at North Dakota State University ([ja.jensen@ndsu.edu](mailto:ja.jensen@ndsu.edu) or 701-131-5886) with feedback or concerns related to this report and/or the attached research standards document.

The focus group will also offer a presentation related to research issues in EM and the research standards developed by the group at the 2013 FEMA Higher Education Conference; it is the group’s hope that additional feedback will be provided that can be incorporated into the current draft.

Following the feedback period and conference presentation, it is the group’s hope that individual EMHIED programs and EM related scholarly journals will formally indicate their support for the Research Standards for the Academic Discipline of Emergency Management as revised and advocate that the scholars, faculty, students, and practitioners with whom they are associated meet the standards in their research.

The group believes that any standards adopted by the EMHIED community will need to be periodically revisited for refinement and/or expansion.

**Next Steps**:

The focus group was pleased with the progress it was able to make over the course of its two days of discussion; yet, much remains to be done if we are to see an increase in evidence-based education within EM programs and an increase in the amount and quality of EM research.

Toward that end, the FEMA Higher Education Program can support the work of the EMHIED community to bring about these changes in several areas including: using research in EM education, educating students in how to analyze and conduct research, and implementation of the standards.

*Using Research in EM Education and Research*

* The body of knowledge related to EM is vast. Contributors to the body of knowledge come from dozens of academic disciplines and disseminate their work in hundreds of journals, books, edited volumes and monographs, etcetera. Tens of thousands of pieces of literature related to hazards and disasters await collection, analysis, integration, and synthesis. These pieces lay waiting to be read by students and educators in EM. Yet, finding the body of knowledge is difficult, to say the least. Challenges such as a lack of knowledge about hazards and disaster specific journals, the diversity of other outlets where EM relevant work is published, search engines that do not recognize common EM keywords, and a lack of familiarity with how to locate the literature leave both students and faculty frustrated. The FEMA Higher Education Program could support the efforts of the higher education community to address this issue by sponsoring a focus group to discuss 1) the development of a short training course designed for both students and faculty as to what constitutes the emergency management body of knowledge and how to find it; and, 2) what should be included/will be required to build a database for emergency management specific literature.
* Most academic disciplines rely on a combination of large databases (e.g., EBSCO, Project Muse, ProQuest, Sage, Web of Science, and the like) and disciplinary specific databases to provide significant citations/articles in response to queries. As previously mentioned, the large databases do not respond well to common EM keywords and there are no discipline specific databases to support the development of the EM discipline. Development of such a database would require significant financial, technical, and logistical support. The FEMA Higher Education Program could sponsor an effort to engage academics, FEMA EMI Learning Resource Center representatives/library specialists, and IT specialists to explore what would be required to develop such a database and to what extent such a database might be developed in the near future.
* Most established academic disciplines have research conferences wherein new research findings or data from research underway are shared. This sharing creates the opportunity for researchers to receive feedback on their work; new knowledge to be disseminated amongst scholars; and, for the scholars to in turn build on this new knowledge through their own research and/or share the new knowledge with students in higher education programs. This sharing also provides the opportunity for those conducting EM research to receive peer feedback on their work, offer presentations that are meaningful for achieving tenure, and develop synergies that will enhance scholarship in the field.

Emergency management has no such research conference. There are opportunities for those who consider themselves EM scholars to present in multidisciplinary scholarly venues (e.g., Natural Hazards Conference at Boulder) or at other disciplinary conferences (e.g., Midwest Sociological Society Conference). Yet, no conference is designed for an audience comprised of self-identified EM scholars/educators to share research and discuss issues related to its application emergency management as a unique academic discipline. While a critical opportunity for our community to interact and discuss issues related to higher education program and curriculum related issues, the FEMA Higher Education Conference has not historically, nor should it exclusively, focus on research.

The FEMA Higher Education Conference could support EMHIED by sponsoring a one-day research conference on the day before the annual FEMA Higher Education Conference begins. EMHIED could manage the application process and scheduling of presentations for such a conference and initially offer the conference within one room at EMI. Thus, the FEMA Higher Education Conference could address this issue on behalf of EMHIED instantly, at no additional cost, and with minimal effort on the part of its staff.

*Educating Students in Research Methods*

* Despite having vision and passion, many EMHIED programs do not have enough resources (e.g., dedicated faculty) to offer students the emergency management educational experience they might like (e.g., number of courses, range of courses, quality of courses, etc.). While many EMHIED faculty would agree that is important to educate students in how to analyze and use research and how to conduct research using accepted methods and techniques, the reality is that many programs cannot support the offering of another course. Thus, the FEMA Higher Education Program could help EMHIED by sponsoring the development of online interactive, self-paced undergraduate level AND graduate level research methods classes that would be easily and freely accessible to students in EMHIED programs around the country.
* Some EMHIED programs have sufficient faculty to offer an emergency management research methods class, but cannot find emergency management-focused research methods materials to support course delivery. Thus, the FEMA Higher Education Program could help those programs by sponsoring the development of such materials including sponsoring the revision and expansion of the already existing FEMA Higher Education College Course “Research and Analysis Methods in Emergency Management”.

*Implementing the Standards*

* Scholars, faculty, students, and practitioners will need to become familiar with the final Standards for Emergency Management Research if the standards are to be met through research. The FEMA Higher Education Program could help EMIHIED by sponsoring the development, offering, recording, and permanent availability of one or more webinars to introduce the EMHIED community to the standards once finalized.

DRAFT Research Standards for the Academic Discipline of Emergency Management

September 27, 2012

1. **Preface**

The academic discipline of emergency management studies how humans and their institutions interact and cope with hazards, vulnerabilities, and resulting events (i.e., emergencies, disasters, catastrophes, and complex humanitarian crises), particularly through activities related to preparedness, response, recovery, and mitigation.

Among the disciplinary responsibilities of the emergency management discipline is generation of new knowledge through original research (i.e., basic and applied) and the dissemination of related results. Emergency management research is the systematic process of developing a research design, collecting data, analyzing and interpreting the results, and reporting the findings in a way that meets the established standards for the discovery, verification, and dissemination of knowledge in the discipline.

This document presents the standards for conducting and publishing emergency management research for the discipline.

The standards apply equally to students doing research as part of their masters or doctoral programs of study and faculty in EMHIED programs, scholars who associate themselves with the discipline of emergency management, and EM practitioners conducting research.

When the standards articulate in parts II and III of this document have been met, the discipline of emergency management will recognize the research as contributing new knowledge to the discipline.

1. **Standards for Conducting Emergency Management Research**

The Standards for Conducting Emergency Management Research should be met by emergency management researchers prior to collecting data for any given study.

1. *Situational Context*
2. EM researchers must critically explore the context of their research topic in the initial design stages. Exploration of this context includes examining the historical, political, economic, social, and/or physical circumstances that provide an explanation for, or understanding of, the research topic as well as a basis from which to evaluate a study’s potential significance to practice, policy, and the discipline (i.e., education and/or research).
3. This context exploration of context must include a review of relevant historical and governmental documents as well as other literature as appropriate given the topic.
4. EM researchers must consider how the context surrounding a research topic of research may influence potential research designs (e.g., research question and goal, methods); and, make their design choices based on this assessment.
5. *Research Question and Goal*
6. EM researchers must clearly articulate one or more research questions that specify who or what will be studied (and toward what end) prior to determining other aspects of the research design.
7. The articulated research question(s) must have been shaped by the researchers exploration of context discussed in Section I, A, 1-3 above.
8. The articulated research question(s) must be answerable through empirical work.
9. The research question(s) articulated by EM researchers must to be feasible given available resources (e.g., cost, time, accessibility issues).
10. EM researchers must also articulate a research goal (i.e., what the researcher hopes to accomplish as a result of the study) prior to determining other aspects of a study’s research design.
11. *Development of a Literature Review*
12. EM researchers must conduct a thorough review of the literature as part of their study.
13. The literature reviewed must be initially directed by the research question(s). Later in the research process, research findings may lead a researcher to review additional literature (particularly related to exploratory studies).
14. The literature reviewed must also include hazard and disaster literature as well as literature related to the topic from other disciplines.
15. The foundational literature for a study must be based on the findings of original, empirical research that has been published in scholarly, peer-reviewed journal articles, peer-reviewed books, and/or book chapters in peer-reviewed books.
16. A secondary type of literature that may be used includes completed and institutionally approved theses and dissertations, preliminary working papers from research centers, final grant project reports from think tanks and/or research centers, and government reports such as those from the Congressional Research Service or Governmental Accountability Office. These sources are best used as contextual material (see Section I, A, 1-3 above) for a study as opposed to a foundation for the researcher’s approach the study. This contextual material can be valuable in generating possible hypotheses, providing a rationale for topic ideas, or use as illustrations/examples but in and of themselves do not constitute what the discipline would normally recognize as a sufficient foundation for research.
17. A tertiary type of literature that may be used includes material from the popular press, media reports, professional magazines, white papers, anecdotal/opinion pieces, and government documents (e.g., legislation, policy documents). Material from these sources can be sensitizing and add dimension to a literature review but in and of themselves do not constitute what the discipline would normally recognize as a sufficient foundation for research. This category does not include online encyclopedias or blogs.
18. EM researchers must present the literature review in writing at one or more points in the process of conducting research.
19. The written literature review must meet the following standards:
20. Present a synthesis of multiple research findings from the empirical hazard and disaster literature as well as literature related to the topic from other disciplines.
21. If literature as discussed in 8a does not exist or is not comprehensive enough to serve as the foundation for the study, then an explanation of this shortcoming must be provided. Following this explanation, a synthesis of literature reviewed from secondary and tertiary sources must still be provided and the author(s) conceptual logic for the study should be articulated.
22. Include an introduction that makes an explicit link between the research question(s) and goal and the literature reviewed;
23. Be organized in a logical and well-structured manner such as historically or thematically;
24. Explain how the literature review informs the methods for the study;
25. Identify consensus and conflict and strengths and weaknesses in the literature (i.e., with respect to research questions, theory used to ground the research, variables explored, populations sampled, methodological approaches, methodological strengths and weaknesses, existing research gaps) in the literature reviewed. While the EM researchers review of these issues does not need to be of equal length, all of the aforementioned issue areas must be addressed in the written literature review;
26. Where possible and appropriate, summary and presentation of the written literature review should be reinforced through graphical or visual displays.
27. *Development of a Research Design*
28. Population and Sampling
29. EM researchers must use sampling techniques that are generally accepted in the social sciences. Accepted techniques include the following:
30. Convenience/availability, purposive, snowball, and quota techniques for *nonprobability* sampling; and,
31. Simple random, systematic random, stratified random, and multistage cluster techniques for *probability* sampling.
32. Before the commencement of data collection, EM researchers must consider the implications of the sampling technique(s) employed for the value of their sample relative to issues of generalizability of the research findings.
33. EM researchers must employ their chosen sampling technique in keeping with a reputable social science methodology textbook.
34. EM researchers must articulate a study’s sampling technique and sample in writing at one or more points in the process of conducting research.
35. The written statement related to sampling must meet the following standards:
36. Identify the social science methodology textbook upon which they relied in implementing the study sampling technique(s);
37. Articulate the process of developing the sample including a rationale for the sampling technique(s) used;
38. Describe any sample that resulted from implementation of a sampling technique(s) with sufficient detail to allow the reader to evaluate the study’s generalizability. In the case of quantitative research, discussion of the study population and sampling frame is expected.
39. Data Collection Approaches
40. It is appropriate to use qualitative and/or quantitative data collection approaches that are generally accepted in the social sciences; *however*, use of the approach(es) must be justifiable in light of both the research question and purpose and the existing literature.
41. Data collection approaches that are generally accepted in the social sciences include:
42. Compiling of existing statistics and other forms of secondary data for analysis using quantitative techniques and collection of original data through structured interviews or surveys (i.e., self or group administered face-to-face, mail, web, phone), experiments, and quasi-experiments for quantitative research; and,
43. Compiling of primary/secondary data for the purposes of comparative/historical research or content analysis and collection of data through questionnaires (i.e., self or group administered face-to-face, mail, web, phone), intensive unstructured or semi-structured interviews, focus groups, and/or observation (i.e., complete observation, mixed participation/observation, complete participation) for qualitative techniques.
44. Before the commencement of data collection, EM researchers must consider the implications of the data collection approach(es) they intend to employ for issues of study quality (e.g., reliability, validity, credibility, transferability) as well as the issues that may be addressed through data analysis, the type of discussion that would flow from the results and analysis, and the types of conclusions that may be drawn based on the research.
45. EM researchers must employ their chosen data collection approach(es) in keeping with a reputable social science research methodology textbook.
46. EM researchers must articulate the data collection approach(es) in writing at one or more points in the process of conducting research.
47. The written articulation of data collection approach(es) must meet the following standards:
48. Identify the methodology textbook upon which they relied in implementing the data collection approach(es);
49. Clearly describe the decisions and reasoning that will guide/ guided the data collection process; and,
50. Be sufficiently explicit to guide full or partial replication of the study.
51. Instruments and Measures
52. EM researchers must be able to defend any qualitative and/or quantitative data collection activities (e.g., open-ended question formats, observational approaches), instruments, and/or measures that they use from the standpoint of the existing literature.
53. EM researchers must consider how they will assess the quality (e.g., reliability, validity, credibility, transferability) of the data collection activities (e.g., open-ended question formats, observational approaches), instruments, and/or measures they plan to use prior to initiating data collection.
54. EM researchers must fully describe the data collection activities (e.g., open-ended question formats, observational approaches), instruments, and/or measures used in a study in writing at one or more points in the process of conducting research.
55. The written description of data collection activities, instruments, and/or measures must meet the following standards:
56. Present the data collection instruments and/or measures in a manner sufficient to allow full or partial replication of the study including a clear statement of any independent and dependent variables, concepts, or themes that will be/were explored/tested/discovered in the study.
57. *Data Analysis*
58. It is acceptable to use qualitative and/or quantitative data analysis techniques that are accepted in the social sciences; *however*, use of the technique(s) must be grounded in a rationale and justifiable based on the study design.
59. Data analysis techniques that are generally accepted in the social sciences include social network analysis, thematic mapping and spatial analysis using geographic information system, statistical analysis, and mathematical modeling for quantitative research. EM researchers must employ their chosen quantitative technique(s) in keeping with a reputable research methodology textbook.
60. Acceptable qualitative analysis technique(s) are recognized as those that have been introduced, critiqued, refined, and repeatedly used within qualitative research in the social sciences. The use of a given qualitative technique must be done in keeping with a reputable qualitative research methodology textbook (e.g., Charmaz, 2006; Creswell, 2012; Glazer, 1978, 1996; Glazer and Strauss, 1967; Ritchie and Lewis, Rubin and Rubin, 2005; Strauss, 1987; Strauss and Corbin, 1998; Taylor and Bogdin, 1998).
61. Before starting data collection, EM researchers must consider the implications of their planned data analysis technique(s) for assessing reliability (for quantitative studies) or rigor (for qualitative studies).
62. EM researchers must articulate the data analysis technique(s) used in a study in writing at one or more points in the process of conducting research.
63. The written description of data analysis technique(s) must meet the following standards:
64. Describe the technique(s) to be used/used and provide a rationale for the use of the technique(s);

1. Describe how reliability/rigor will be/were assessed;
2. Clearly describe the decisions and reasoning that will guide/ guided the data analysis process;
3. Identify the source(s) upon which they will rely/relied in implementing the data analysis technique(s); and,
4. Be sufficiently explicit to guide full or partial replication of the study.
5. *Ethics*
6. The design and implementation of studies that involve human subjects must be guided by the basic ethical principles of respect for persons, beneficence, and justice and their applications as outlined in the Belmont Report (National Commission, 1978).
7. Prior to initiating data collection, EM researchers associated with higher education institutions (i.e., student and faculty) must go through their institution’s Institutional Review Board (IRB) process and receive institutional approval for their study. EM researchers not associated with higher education institutions (e.g., practitioners) are strongly encouraged to submit their proposed study for review by an independent IRB organization and receive approval for their study before initiating data collection.
8. A variety of potential ethical issues may arise in the process of conducting research that involves human subjects. All EM researchers, regardless of institution, must consider the ethical implications of their study plans with respect to the following aspects of their study:
9. Proposed research topic, study site(s), data collection method(s), and/or procedure(s);
10. Proposed methods of participant recruitment, selection, and compensation/incentives;
11. Plans to address issues of informed consent and confidentiality; and,
12. Potential conflicts of interest involving the researcher or study participants.
13. EM researchers must be aware of the unique ethical issues associated with conducting some types of disaster research and carefully consider additional issues as appropriate to the situation. For instance some issues that may be necessary to consider when conducting post-disaster fieldwork include:
14. the potential for the research and researcher to interfere with ongoing response and/or recovery tasks and activities (see for example: Kelman, 2005);
15. the potential pressure to assist with disaster-related tasks and activities (see for example: Dash, 2002; Drabek, 2002; Quarantelli; 2002, Stallings, 2002; Tierney, 2002);
16. additional human subjects considerations when involving disaster survivors such as their heightened vulnerability, added issues related to confidentiality and privacy, the potential for increased socio-psychological consequences to survivors as a result of their participation, the potential for survivors to be overwhelmed by requests to participate in/actual participation in multiple studies, the setting of the research, etcetera (see for example: Ausbrooks, Barrett, & Martinez-Cosio, 2009; Fleischman & Wood, 2002; Jacobsen & Landau, 203; Levine, 2004; Newman & Kaloupek, 2004; O’Mathuna, 2009; Rosenstein, 2004; Tierney, 2002); and,
17. unique issues associated with humanitarian research (see for example: Black, 2003; Kelman, 2005);
18. **Standards for Publishing Emergency Management Research**
19. *Publications and Outlets for Dissemination*
20. Publication can be understood to be any form of public dissemination of research findings in the form of a working paper, final report, article, book chapter, book, thesis, and dissertation on any website or in any magazine, journal, newspaper, or book.
21. Scholarly and peer-reviewed journals are the preferred methods of disseminating the findings of original emergency management research. This preference is based primarily on two observations related to journals of this type: 1) They are relatively easy for faculty, students, and practitioners to find and access; and, 2) Articles that report the findings of original research go through a known review process to be published.

The preferred scholarly, peer-reviewed journals for the publication and dissemination of emergency management research findings include the following:

*Disasters  
Disaster Management Response  
Disaster Prevention and Management  
Environmental Hazards  
Environmental Management  
International Journal of Disaster Resilience in the Built Environment*

*International Journal of Disaster Risk Reduction  
International Journal of Emergency Management  
International Journal of Mass Emergencies and Disasters  
Journal of Crisis and Contingencies Management  
Journal of Disaster Research  
Journal of Emergency Management  
Journal of Hazardous Materials  
Journal of Homeland Security and Emergency Management  
Journal of Natural Disaster Science  
Natural Hazards  
Natural Hazards Review  
Risk, Hazards, & Crisis in Public Policy*

1. Manuscripts may be submitted to no more than one publication outlet at a time. Submission to more than one outlet or previous publication of a manuscript will often disqualify a manuscript for publication and may lead to copyright issues.
2. Books and monographs that provide extended, detailed discussion of a study and related findings would be a good second choice for the publication and dissemination of emergency management research provided that the book/monograph has been peer-reviewed and published with a research-oriented publisher.
3. Researchers often seek an intermediate point between data collection and analysis and publication. Accordingly, a variety of conferences might be appropriate outlets to share initial findings and analysis and receive feedback.
4. Whenever possible, emergency management researchers ought to disseminate research findings in forms, forums, and formats that are both accessible to and frequently accessed by emergency management professionals. Relevant examples of practitioner-oriented conferences include those sponsored by states/state emergency management offices, state emergency management associations, voluntary organizations active in disaster at the national, state, and/or local level, professional organizations (e.g., International Association of Emergency Managers, International Emergency Management Society, Association of Contingency Planners), and conferences sponsored by professional magazines (e.g., Disaster Recovery Journal Conference), among others (e.g., East/West Contingency Planning and Management Conference). And, relevant examples of practitioner-oriented publications that meet these criteria include Disaster Recovery Journal, Emergency Management Magazine, and IAEM Bulletin.
5. Emergency management researchers should also take advantage of all opportunities to share the findings of their research that have policy implications with representatives of local, state, and federal agencies/departments and legislative bodies.
6. *General Standards*
7. Emergency management publications must demonstrate that a study has met the Standards for Conducting Emergency Management Research as the study transitions from data analysis to publication of the research findings. Thus, publications should evidence a statement of context, research question, research goal, and literature review that meets the standards as well as the use of accepted data collection methods and data analysis techniques.
8. Emergency management researchers are responsible both as scientists and contributors to write to the audience and author guidelines of the outlet to which they submit their work. In seeking to submit a piece that demonstrates a goodness-of-fit with the intended outlet, emergency management researchers may be required to abbreviate the presentation of how they conducted their study (i.e., statement of context, research question and purpose, literature review, and methods) and the study’s findings (i.e., results, discussion/ conclusion). Nevertheless, each researcher is responsible ensuring that abbreviation does not result in failure to demonstrate the standards articulated in this document.
9. An important dimension of ethics includes the appropriate use of the work and/or research of others. Misuse is typically referred to as plagiarism. Simply stated, plagiarism is taking the work of another and presenting it as your own. Emergency management researchers are responsible for educating themselves about the types and degrees of plagiarism and how it can be avoided and ensuring that their published work is free of any type or degree of plagiarism.
10. Any published emergency management research must provide a complete list of references. References need to be prepared in the format required by the outlet to which they submit their work or the institution with which they are associated (e.g., university/college, research center, think tank). Where a format is not required, both the reference list and in-text citations must be in the current citation format of the *American Psychological Association* (APA).
11. Additionally, emergency management publications must meet the Standards for Publishing Emergency Management Research in the following areas: general standards, standards for minimal disclosure of methods (i.e., population and sampling, data collection, and data analysis), standards for the presentation of results and discussion/conclusions.
12. *Standards for Minimal Disclosure of Methods*
13. All emergency management publications must disclose who conducted the study (i.e., the names of the individuals, consulting group, research group, and/or think tank) and who, or what entity, sponsored and/or funded the study.
14. Emergency management publications that report the findings of a qualitative study must disclose the following:

* the study’s design including study participants/content;
* how participants/content were selected (i.e., sampling technique, sampling process, and underlying rationale);
* time frame in which data was collected, any instruments used to collect data (e.g., interview questions/guide, coding schema);
* how standards for conducting ethical research were met;
* data analysis techniques used (including a rationale for the techniques and reference to the author and/or texts that guided the use of the techniques); and,
* limitations that characterize the research design they selected and implications for the results.

1. Emergency management publications that report the findings of a quantitative study must disclose the following:

* “The exact wording and presentation of questions and responses whose results are reported”(AAPOR, 2010);
* “A definition of the population under study, its geographic location, and a description of the sampling frame used to identify this population. If the sampling frame was provided by a third party, the supplier shall be named. If no frame or list was utilized, this shall be indicated” (AAPOR, 2010);
* “A description of the sample design, giving a clear indication of the method by which the respondents were selected (or self-selected) and recruited, along with any quotas or additional sample selection criteria applied within the survey instrument or post-fielding. The description of the sampling frame and sample design should include sufficient detail to determine whether the respondents were selected using probability or non-probability methods” (AAPOR, 2010);
* “Sample sizes and a discussion of the precision of the findings, including estimates of sampling error for probability samples and a description of the variables used in any weighting or estimating procedures. The discussion of the precision of the findings should state whether or not the reported margins of sampling error or statistical analyses have been adjusted for the design effect due to clustering and weighting, if any” (AAPOR, 2010);
* “Which results are based on parts of the sample, rather than on the total sample, and the size of such parts” (AAPOR, 2010);
* “Method and dates of data collection” (AAPOR, 2010);
* Method(s) of data analysis; and,
* Limitations that characterize the research design they selected and implications for the results.

1. *Presentation of Results*
2. All results reported must be consistent with the study’s research design (i.e., sampling techniques, data collection techniques, and data analysis techniques).
3. Presentation of the study’s results must be accurate and truthful.
4. The data collected for the study must be comprehensively reported in keeping with standards in the field for the research design used.
5. Evidence in the form of data must be provided as support for any results presented.
6. The presentation of the results must be presented as a descriptive review of the results—free of any interpretation of their significance.
7. *Presentation of Discussion and Conclusions*
8. Emergency management research publications must discuss: 1) the implications of study results with respect to the study’s research question and goal; 2) the fit of the study’s results with the literature reviewed in the publication (e.g., how the research findings support, add to, or contradict the pre-existing literature); and, 3) broader theoretical and/or applied implications of the study.
9. The researcher must situate any discussion of study results within the context described in the publication’s introductory material.
10. Any discussion must be consistent with the presented research design and results.
11. Publications must provide suggestions for future research related to the study’s topic.
12. Any conclusions drawn must be consistent with the research design, methods, and results presented in the publication.

**References**

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1. Jessica Jensen drafted the *EM Disciplinary Purview Report* on behalf of the focus group that met at the EMI Campus in Emmitsburg, MD in September 2012. The report is available for review and download on the FEMA Higher Education website. [↑](#footnote-ref-1)