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Emergency Managers' Views on Improving Defense Support/Military Assistance to Civil Authorities (DSCA/MACA) Education Programs

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Emergency Managers' Views on Improving Defense Support/Military Assistance to Civil Authorities (DSCA/MACA) Education Programs*

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Abstract

The purpose of the Defense Support to Civil Authorities (DSCA) (formerly titled Military Assistance to Civil Authorities, or MACA) process is to provide local and State civil authorities with access to federal military assets in response to major terrorist attacks or natural disasters. Local civilian emergency managers (EMs) play an important role in effective DSCA processes.

This paper reports the results of an exploratory study of local EMs' views of the education they have received on the DSCA process and their suggestions on how the process can be improved. The survey and interviews indicate that a majority of EMs do not believe that they have received effective DSCA education and that interpersonal methods (course/training involving federal or civil authorities) were most positively related to having received effective DSCA education. It was recommended that future education on DSCA should be provided in a more clear and concise manner and focuses on topics such as the organizations and process involved in DSCA, types of assistance and time required by the military in their response, and how EMs can better articulate their needs in DSCA requests. A number of recommendations on future research directions on DSCA are also provided.

KEYWORDS: emergency managers, defense support for civil authorities (DSCA), military assistance to civil authorities (MACA), education, training

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INTRODUCTION

Defense Support to Civil Authorities (DSCA), which prior to 2005 was titled Military Assistance to Civil Authorities or MACA, is a process used when U.S. military personnel are formally requested and deployed to assist local, state, and federal agencies in response to major emergencies (Lawlor, 2000). For instance, in 1992 more than 22,000 federal troops were deployed to South Florida in response to Hurricane Andrew and in 1994 almost 400 soldiers helped state and local authorities following the Oklahoma City bombing (Lawlor, 2000). While the DSCA process has been generally successful, it has experienced a number of problems in communication and coordination between the different agencies involved in disaster response (Defense Science Board, 2003; Riley, 2003). Recently, interagency communication and coordination problems contributed to poor performance in the response to Hurricane Katrina (Ripley, 2005).

The U.S. Air Force Northern Command (NORTHCOM) plays a central role in the DSCA process by providing direction for the deployment of U.S. military forces in disaster responses (Haskell, 2002, *Homeland Defense Journal*, 2002). A Defense Science Board (2003) study found that one of the problems in past DSCA implementations involved the coordination between military authorities and key local and state civil authorities, including emergency managers (EMs). In response to these concerns, an exploratory study funded by a federal grant was initiated through the Network Information and Space Security Center (NISSC) at the University of Colorado at Colorado Springs. The results of this study were presented to officials at NORTHCOM.

This is the second paper based on this exploratory study. The first paper, which focused on local EM knowledge of the DSCA program and their perceptions of how well the military would work with EMs during a DSCA triggered response, was published in Vol. 3, Issue 1 of this journal <http://www.bepress.com/jhsem/vol3/iss1/2/>. The purpose of this paper is to report the results on the second phase of the study, which focused on EMs' views of the existing DSCA outreach and education programs and the development of recommendations for improving DSCA information and educational outreach efforts. Since the timeframe in which the interview and survey data was collected (the second half of 2004) the then existing term MACA was changed to DSCA. Given that the change to the new title did not significantly alter the process of requesting military assets or the role of state or local EMs in disaster responses, this paper primarily uses the current DSCA terminology. The exceptions will be that the MACA term will be used in the Research Methods and Results sections to reflect the terminology actually employed during the study.

This paper is organized in four major sections. First, a brief review of the issues involved with DSCA education and the key research questions guiding this study are presented. Second, the interview and survey research methodology for this exploratory study are discussed. Third, the results regarding the EMs' views of existing DSCA education and their suggestions for improvement of future DSCA education and training programs are summarized. Finally, the research team's suggestions for future research directions as well as improvement of future DSCA education and information programs are presented.

LITERATURE REVIEW AND RESEARCH QUESTIONS

A more thorough description of the DSCA process and some of the issues involved in its implementation were discussed in the first paper published in Vol. 3, Issue 1 of this journal. Briefly, DSCA is guided by a number of DoD directives (e.g. such as DoD Directives 3025.1 and 3025.15) designed to ensure compliance with existing Federal statutes and Constitutional constraints. Despite the positive contributions of the DSCA process in a number of disasters, a number of problems have been reported. These include difficulties in creating a unified, quick response to a major disaster among the large number of responding agencies (Powers, 2003; Riley, 2003). These agencies often have different expectations (Jasak et al, 2002), objectives (Keating, 2001) and communication styles (Lawlor, 2000), which can lead to problems in information sharing and coordination (Defense Science Board, 2003).

NORTHCOM determined, based on field experience, that one source of inter-agency problems during previous DSCA deployments was the coordination of activities, responsibilities and operations between EMs and military authorities. The NISSC research team's phase one study results supported these views, reporting them from the perspective of local EMs. The team concluded that a majority of the local EMs that participated in the exploratory study did not have an in-depth understanding of the DSCA process and purpose, were not confident about how effectively DSCA will be implemented in the future, and were concerned about the effectiveness of their communication with the military and the timeliness of the military response under the DSCA process. Phase two of this study focused on ways to improve the education and training programs for local EMs on the DSCA process. Accordingly, the specific exploratory research questions below were developed for this study. Since the MACA term was used during the research study we will now use the MACA terminology in place of DSCA for the next two sections of the paper.

1. What are the primary ways that local EMs have learned about MACA?
2. What are the local EMs' views of the effectiveness of the MACA education and information they have received?
3. What factors are related to local EMs' view of the effectiveness of the MACA education they have received?
4. What are EMs (local and state) recommendations on how future MACA education and training programs can be improved?

RESEARCH METHODS

The first phase of this exploratory research study involved conducting initial interviews with EMs to determine their knowledge of the MACA process (DSCA as was named at the time) and to begin the cataloguing of the issues involved with the MACA educational and training programs. These interviews (individual and group) were conducted with 14 state EMs and 8 local civil authorities involved with emergency response (3 county and city EMs, 3 from the Fire Department and 1 from the Police Department). In addition, 2 officials from the National Guard participated in the interviews. These officials came from 3 states, California, Colorado, and Virginia. The interviews captured a number of

EM recommendations on how future MACA education and training programs can be improved, which are reported later in this paper.

The responses from these officials were also used to develop a survey of local EMs. The results of the questions on one portion of the survey (13 Likert scaled questions) concerning EM views of the MACA process, implementation, and working with the military were reported in the first study as previously discussed. A copy of the full survey is included in the first paper on the phase one study (see Volume 3, Issue 1 of this journal). The second phase of this study investigated is the subject of this paper and was focused on MACA education and outreach. Both the current study and the previous one used the following questions: 5 demographic EM questions, 2 questions on whether the EMs had participated in a MACA related drill/exercise or actual emergency, and 2 open-ended questions for qualitative response on how the government can better educate civilian authorities on MACA and to elicit any other EM comments on MACA in general.

The second phase of the study on MACA education also included six “Yes/No” questions on the different sources of EM learning about MACA, one write-in question for explaining the “Other” category on the source of EM learning about MACA, and one Likert scaled item which concerned whether the EMs had received effective education and information on MACA. This item was scaled on a 7-point continuum from 1 = Strongly Disagree to 4 = Neither Agree/Nor Disagree to 7 = Strongly Agree.

The survey was administered through a MS Word file sent to the target population via e-mail. Lists of those responsible for emergency management duties (mainly county, but some city) were provided by state EMs in California, Colorado, and Virginia. In addition, county EM e-mail contact information was obtained from FEMA websites in 2 states; Kansas and Pennsylvania. A net total of 361 surveys were e-mailed and 72 were returned for a response rate of 20%.

Almost all of the respondents (98.6%) worked at the local level with one EM having both joint local and state job functions. Most of the respondents worked directly in Emergency Management departments (73.2%), with a smaller portion being employed in Police (7.0%), and Fire (5.6%) departments. Just over 14% of the EMs marked the “Other” category, which the research team surmised from the initial interviews likely included EMs who worked in multiple departments in smaller districts. The local EM sample had an average of 9.64 years in their current job and an average total emergency management work experience of 14.23 years. Finally, 41.7% of the local EMs indicated they had participated in a drill or exercise involving MACA and 33.8% said they had been involved in an actual emergency involving MACA.

This last data point brings up the first important limitation of this study. It was recognized during the data analysis phase (e.g. via written survey comments) that some of the respondents did not clearly distinguish between working with the U.S. military during MACA (Title 10) versus working with the National Guard under state authorization (i.e. as in Title 32) in response to a disaster. Thus, it can only be surmised in the data that 33.8% of the local EMs had some type of experience with the military (Titles 10 or 32) in an emergency and that 41.7% had some type of exposure to a drill or exercise related to some type of military deployment. We will discuss study limitation in more detail in the Discussion section.

It is also important to acknowledge other limitations and the overall context of this study. First, this study is clearly an exploratory one with a limited sample population (72 survey participants and 24 interview subjects from 5 states) that utilized single item survey questions. Second, the response rate for the survey was 20%. While this is not an unusually low response rate for an e-mail-based survey, the level of response does need to be considered regarding whether the sample is truly representative of the overall local EM population.

RESEARCH RESULTS

SOURCES OF LOCAL EM LEARNING ABOUT MACA

Table 1 below shows local EMs' responses to six "Yes/No" questions concerning how the respondents learned about MACA (as DSCA was named at the time). Note that the respondents were instructed to check all of those answers that apply and many indicated multiple sources of learning. As Table 1 indicates, the specific responses which received the highest scores were for interpersonal based methods (from other civilian authorities, training/course, and federal government/military). The highest scored item was actually "Other" with 41%. This category appears to include a variety of responses as a number of respondents indicated answers such as "State EMs" in the write-in space associated with the "Other" question. This is a response the research team thought would have been included in the "Other Civilian Authorities." Thus, it is not completely clear what the "Other" category meant to the survey respondents. It should also be noted that extremely low responses were received for learning from a website and from brochures/pamphlets.

Table 1

<i>Sources of Local EM Learning About MACA*</i>	<i>Percent "Yes"</i>
Training or Course	33%
Brochures or Pamphlets	0%
Website	5%
Other Civilian Authorities	36%
Someone in a Federal Government or Military Position	29%
Other	41%

*The sample size was 68 for all of these questions.

EMs' VIEWS OF THE EFFECTIVENESS OF MACA EDUCATION

Table 2 provides a summary of both the the mean scores and the consolidated percentage responses for the local EMs on the 7-point Likert scale item, "I have received effective education/information on the purpose and process of MACA." The mean score was 2.65 and 69.4% of the respondents had some type of "Disagree" response (e.g. 1 through 3 responses). Less than one in five (19.5%) had some type of "Agree" response (e.g. 5 through 7 responses) to this question.

Table 2
Descriptive Statistics on Local EM Views' of MACA Education/Information

<i>Question</i>	<i>Number</i>	<i>Mean</i>	<i>Standard Deviation</i>
Received effective education or information on the purpose/process of MACA	72	2.65	1.75

<i>Question</i>	<i>1-3 Disagree</i>	<i>4 = Neither Agree nor Disagree</i>	<i>5-7 Agree</i>
Received effective education or information on the purpose/process of MACA	69.4%	11.1%	19.5%

A number of the respondents provided written comments regarding MACA education on the two qualitative questions on the survey. A few sample quotes from EMs' comments are provided below. Together, these qualitative and quantitative data sets indicate that most of the local EM respondents do not believe they have received effective education and information on MACA.

- “Educate all Emergency Managers on what is available from MACA and how to access it.”
- “We have only had one briefing in the five years that I have been Public Safety Director for my County that explained MACA and the resources, capabilities, etc. that the military overall can provide. I would urge a more visible and detailed informational briefings to emergency managers.”
- “Today, very few county officials know about or can access the MACA process. Emergency managers should be provided with specific information regarding the program and how to access the system.”
- “Need to continue to develop working relationships throughout the year between localities and MACA representatives so when a large event occurs localities will already be familiar with the MACA system and its representatives before the crisis occurs.”
- “If I have received information on MACA, it was overlooked so I am not sure of what benefits MACA would have for my community...”
- “TELL US WHAT RESOURCES THEY HAVE AND HOW TO BEST ACCESS THEM.” (Caps by the survey respondent).

FACTORS RELATED TO EMs' VIEWS OF MACA EDUCATION

The research team sought to determine if there were demographic characteristics of the EMs or their sources of learning about MACA that were related to EM perceptions of having received effective education or information on MACA. Table 3 illustrates zero-

order correlations between EM demographic items and the source of EM learning questions with the “Have received effective education/information on the purpose and process of MACA” Likert scaled item. The data indicates that the number of years the EMs have been in their current job, their total number of years of work experience in emergency management, and participation in a MACA related drill or actual emergency were not related to having received effective MACA education. Note again that the research limitation associated with this latter finding will be discussed in more detail in the Discussion section.

Table 3 also indicates that in terms of sources of learning about MACA, only learning about MACA from “Other Civilian Authorities,” “Federal/Military Authorities,” and “Training/Course” were significantly related to having received effective MACA education. In contrast, the “Other” source of learning about MACA item was not significantly correlated with having received effective MACA education.

Table 3

Correlations of Local EM Characteristics to Effective MACA Education

<i>Survey Items</i>	<i>Sample Size</i>	<i>Received Effective Education or Information on MACA</i>
EM number of years in current job	70	.17
EM number of total years of emergency management work experience	69	.12
EM participation in a MACA drill or emergency	70	.05
EM participation in a MACA emergency	69	.21
EM learning about MACA from a training/course	66	.37**
EM learning about MACA from other civilians	66	.45**
EM learning about MACA from Federal or Military officials	66	.35**
EM learning about MACA in other ways	66	.07

** $p \leq .01$ * $p \leq .05$ + $p \leq .10$ (2-tailed test)

Note that correlations with learning from a website or brochure were not conducted since there were so few EMs who had learned from these two methods.

EMs’ SUGGESTIONS FOR IMPROVING MACA EDUCATION

In the initial interviews with the 24 State and local EMs, the research team received a number of suggestions on how the current MACA educational approaches could be improved. In addition, a large number of write-in comments from 2 qualitative questions at the end of the local EM survey concerning MACA education programs were received. The research team presents these suggestions directly from EMs from both the surveys and interviews in three major groupings below: Quantitative analysis on the delivery mode of MACA education, qualitative delivery mode of MACA education, and qualitative content of MACA education.

DELIVERY MODE OF MACA EDUCATION: QUANTITATIVE ASSESSMENT

The research team tabulated the number of write-in comments from the surveys regarding the different types of delivery modes mentioned by the local EMs concerning their preferences for future MACA educational approaches (Note: some EMs made multiple suggestions). The data in Table 4 demonstrates the local EMs' preference for having some type of interpersonal method of MACA education such as meetings (17 comments) or trainings (7 comments). In addition, the data indicates a desire by a number of EMs to have military, federal, or state authorities involved in these meetings or trainings (13 comments). Having these activities and officials included in statewide EM meeting was mentioned frequently in this set of comments. It was also noted by some local EMs that such interactions would foster more personal relationships and direct communication with these various officials.

*Table 4
Number of Times the EMs mentioned a Type of Delivery
Mode of MACA Education*

<i>Description</i>	<i>Number</i>
Meetings/Conferences	17
Trainings/Workshops	7
Request Officials from the Military, Federal, or State Agencies to participate in Meetings/Trainings	13
Information on Web/CD	5
Written (hardcopy) information	4

Some quotes provided by EMs on this subject are as follows:

- “We collectively need to have military representation or participation in our emergency services management and training exercises. This is done on a regular basis (in our) county ...as we have included our resident military installations in our Operational Area Authority.”
- “Have the role of the government/military explained to the emergency management authorities at the local level by the local governmental/military agencies, which would be expected to provide the assistance.”

Although interpersonal based methods were the most preferred education delivery alternative, there were still some EMs who specifically expressed interest in obtaining information through brochures, websites, videos, etc. In some cases this was requested so that local EMs could better educate their own staff members on MACA. Some quotes from EMs on the need for non-verbal means of information on MACA are listed below:

- “I need written and web-based information in order to train my civilian staff members and to include specific information in our Emergency Operations Plan (EOP)”. A measure of pro-activity and outreach is in order.”
- “General information on MACA needs to be provided in written or web-based forms to operational areas...very little if any information has been made available to us... please contact me with any information as to where I can obtain this information.”

Thus, it seems to follow that MACA education and training should be presented in multiple ways to support varying needs through the most cost-effective delivery methods available.

The next two sections contain recommendations from the local EMs in written responses to the survey and from the State/local EMs in the initial interviews on how to improve MACA education and training. The respondents typically mentioned these responses only 1-2 times. However, based on our experience in this research project, we believe these views represent insightful ideas in creating more effective MACA education programs. These recommendations were grouped by the delivery mode (how the information would be delivered) and the content (what is included in the information) of MACA education programs. We list each local or state EM recommendation in a heading and then provide a more detailed explanation of the suggestion. In some instances we include direct quotes from the EMs.

DELIVERY MODE OF MACA EDUCATION: QUALITATIVE SUGGESTIONS

1. Integrate MACA Education with Mainstream Educational Institutions.

This would include providing MACA education within the programs of traditional educational institutions such as the Fire Academy, Police Academies, FEMA programs for EMs, etc.

2. Provide MACA Education “Before and After Drills.”

The quotes from EMs previously documented indicate that local EM participation in a MACA drill/exercise or emergency was not correlated with having received effective MACA education. A number of comments from the interviews and the write-in questions on the survey also indicated concerns about MACA information in these events. One interview respondent noted, “Information fusion is needed which connects civil authorities and military authorities in a timely manner to others involved in the drills.”

3. Take a Marketing Approach.

One state EM respondent was adamant in the initial interviews that government officials need to take a much more creative approach in presenting information on MACA. He suggested a ‘marketing’ approach (very simple, focused to the EMs’ specific needs, and easy to read) to MACA materials be taken.

4. MACA Education Needs to be On-going.

MACA education needs to be on-going and continuous in all districts. One EM stated, “Need to continue to develop working relationships throughout the year between localities and MACA representatives so when a large event occurs localities will already be familiar with the MACA system and its representatives before the crisis occurs.” The

issue of providing ongoing education is particularly important since turnover may be high in certain EM positions and because some EMs (i.e. especially those in rural areas) do their job part-time or have multiple duties. Another EM stated “There is so much information going back and forth via e-mail as well as requirements ... This makes it tough because it is overwhelming especially for an agency such as mine that is staffed by me on a part time basis, in addition to my full time duties as a deputy.”

5. Provide MACA Education to all Involved in Emergency Response.

A number of EMs noted that MACA education should be provided to not only EMs, but to the other key agencies involved in the response to a major emergency. One EM observed, “Education needs to include County Commissioners, City Council, Sheriff, Police Chief, Fire and Ambulance for more exposure to responding agencies and local government...”

CONTENT OF MACA EDUCATION: QUALITATIVE SUGGESTIONS

A number of comments and suggestions were also provided in the EM surveys and interviews regarding the content of effective MACA education. This data is summarized below:

1. Describe the Agencies and Process Involved in MACA.

There is a need to educate EMs on the different state, federal, and military organizations involved in MACA such as FEMA, other Department of Homeland Security agencies, Department of Defense, etc. This material should cover the agency’s role, purpose, and what they do in emergency situations, etc. There should also be a clear explanation (e.g. with effective diagrams) of the protocol and process of MACA. It was also commented that there is a need to “standardize” the process so that all of the different organizations can work better together.

2. Educate EMs on how to Request Military Assistance.

It was also noted that better information needs to be provided on how to request military assistance and to provide the relevant names/contact information for key state and federal officials. Most importantly, EMs need to be educated to clearly state what their need is and then let the military authorities decide what assets (equipment/resources, etc.) they have that can best meet that need. One respondent stated, “We (EMs) need to state the actual need/purpose and not request what we think will work.” Future MACA trainings should also educate EMs to ask the military authorities if there are any logistical needs (e.g. staging areas) required by them in responding to MACA requests.

3. Educate EMs on what Assistance the Military can Provide.

A complementary suggestion is that the EMs need to be educated on the typical U.S. Military resources and capabilities (e.g. type of equipment, technology, personnel, etc.) that they could make available. One EM commented, “Provide a brief plan listing capabilities, resources, method for activating, logistical needs, staging areas, etc.” MACA education should also specifically include the expected response times of the military and the variables which influence their response times. This is particularly important because the request for military assistance can take some time in the MACA approval process. In addition, it often takes a military commander some time to mobilize troops and equipment for a MACA mission.

4. Address Communication Issues.

The different communication and leadership styles of EMs (unified command of an emergency situation) versus military authorities (hierarchical command) in MACA implementation need to be reviewed and discussions need to be held on how to better integrate these different styles. In addition, differences in language, terminology, and acronyms need to be stated and clarified.

5. Clarify Funding Implications.

Clarify the financial implications for state/local EMs in regards to requesting military support for the state and local levels. For example, in some instances the state or local districts may be expected to pay for the costs of military assistance provided during MACA.

6. Customize MACA Education.

The amount and type of information provided in MACA education should be customized depending on the EM's position, level (i.e. state versus local), and prior knowledge of MACA. For example, there is a need for more general awareness training on MACA for the "Do-ers," (police, fire, and front line EM responders) and their training materials should be different from the more strategic materials required for senior leaders and incident commanders.

DISCUSSION

SUMMARY OF KEY FINDINGS

This exploratory study provides a number of key findings about EMs' views of DSCA (MACA at the time that the study was conducted) education. First, based on the interview data and the one Likert scaled survey question, a clear majority of EMs did not believe that they have received effective information or education on DSCA.

Second, the three most reported sources of learning on DSCA (from civilian authorities, trainings and federal/military authorities) were moderately related to having received effective education and information on DSCA. However, the results indicated that none of the demographic variables (the number of EM years in their current job or in the EM field and experience in a DSCA related drill or emergency) were related to having received effective education or information on DSCA. As mentioned earlier, it is important to recognize that the survey write-in comments indicated that some of the respondents did not clearly differentiate between the use of military forces under Title 10 (Federal control) versus Title 32 (State control). In addition, the survey did not specifically indicate whether DSCA drills or exercises were conducted under state or federal control. For these reasons, this last set of findings should only be seen as participation in some type of DSCA drill/exercises (state or federal) was not related to any EM views on DSCA or the military and that participation in some type of military involvement in an emergency (Title 10 or 32) was not positively related to EM understanding of the DSCA process.

Third, EMs (local and state) provided a number of recommendations on how future DSCA education programs can be improved. Two education methods that most of the local EMs expressed a preference for were training and meetings, particularly if key

state, federal, and military authorities could attend. However, a number of the EMs also requested that information be provided through a website and written materials.

Fourth, qualitative comments on the delivery mode of DSCA education included the need to provide education on an on-going basis, use mainstream educational institutions, and to take more of a marketing approach to presenting the information. Some of the most important points on the content of DSCA education concerned providing information on the following: The organizations and process involved in DSCA, how EMs can better articulate their needs in DSCA requests, what types of assistance and time is required by the military in their response, and the need for DSCA education to be customized to the type and level of EMs. In stating these findings and recommendations it is important to consider the limitations mentioned earlier as well as the exploratory nature of this study.

RESEARCH DIRECTIONS ON DSCA EDUCATION

Due in part to the study limitations stated earlier, we recommend a number of future research directions on DSCA education. One, future research should include a more in-depth and extensive empirical assessment of EMs' views of the preferred delivery modes of information (e.g. meetings, website, etc.) for improving DSCA awareness.

Two, research should determine which of these delivery modes of DSCA education are more effective in promoting EM knowledge and ability to work effectively with DSCA. To this end there is a need to develop more specific standards regarding the effectiveness of future DSCA education and training programs (e.g. knowledge, ability to initiate the appropriate actions, skill in communicating effectively with other state and federal officials, etc.). These different delivery modes should also be assessed on a cost-benefit basis.

Three, it is important to conduct follow-up studies on these initial DSCA education efforts to ensure that their effectiveness in promoting EM knowledge and ability to work in DSCA "sticks" not just with EM officials, but also at an institutional level. This is particularly important given the concerns about EM turnover expressed by some participants in our study. Such research also needs to recognize that each state has its own unique culture and context in terms of the likely events that would trigger DSCA. Thus, future studies need to evaluate whether any Federal based education programs on DSCA will interface effectively within these different contexts.

Finally, our research on EMs in DSCA education, suggests that it may be important to determine the views of personnel in other government agencies (e.g. state EMs, other civilian authorities at the local or state level, FEMA, etc.) on DSCA education. Expanding the scope of the DSCA education research in this way would help to ensure that future catastrophic events involving DSCA will trigger more effective and coordinated responses from each agency involved.

Specifically, a number of participants in this research study indicated that not only should EMs learn more about the military in DSCA, but military authorities should be provided with a greater understanding of EM responsibilities, needs, and communication. For example, some EMs in our study noted a need to develop a military asset tracking system and to train military authorities on the necessity of communicating

to and providing feedback to civilian authorities while the request for military assistance is going through the various official channels. This could help ensure a military response that is more focused on the EMs needs and can also allay the concerns of EMs after the formal request for military assistance has been made and while they are waiting for the military response. It was also suggested by one EM that the military consider providing some general awareness training on DSCA to frontline soldiers so that they better understand the process and what is expected of them.

In conclusion, this study provides a number of insights about the limitations of current DSCA education efforts and suggests a comprehensive strategy is needed to improve future DSCA education programs. As such, this study supports the views of Pize (2004) that future education for EMs requires a partnership approach involving a diverse set of public, private, and non-profit agencies involved with the emergency management process. In addition, as advocated by Hardenbrook (2005), future DSCA education should include not just better disaster response, but also better planning and preparation for disasters. Clearly, a more extensive and research-based education approach is needed if EMs are to fully understand the DSCA process and interact more effectively with the military and other federal officials during DSCA implementation and planning.

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