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Explaining the pre-disaster integration of Community Emergency Response Teams (CERTs)

John Carr · Jessica Jensen

Abstract This study explored the pre-disaster integration of Community Emergency Response Teams (CERTs) within local emergency management systems through semi-structured telephone interviews with 21 CERT program coordinators. It was found that the integration of CERTs varied significantly from not integrated at all to highly integrated. This paper reports the findings related to why this variation occurred. Specifically, it was found that integration seemed to covary with the resources available to the team, the opportunity within the local emergency management system for the CERT to play a role, the team's leadership, the formality of the team's structure, and the acceptance of CERT within the local emergency management system.

Keywords Disaster volunteers · Preparedness · Disaster response · Community response · Citizen preparedness programs · Community Emergency Response Team

1 Introduction

Since World War II local governments have been interested in creating organizations to better prepare citizens, their families, and their neighborhoods for potential threats (Simpson 2001). In more recent history, this effort has manifested itself in the form of Community Emergency Response Teams (CERTs). The number of CERTs, and programs that develop them, had been steadily increasing during the 1990s (Simpson 2001), but, in the post-September 11, 2001, terrorist attack era the number exploded (Brennan and Flint

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2007; Flint and Stevenson 2010). There are approximately 2,420 CERT teams spread throughout all fifty states in the USA, as well as the territories of Guam, the Northern Mariana Islands, and Puerto Rico (Citizen Corp 2013; Citizen Corps n. d.).

The purpose of the CERT program is to "train people to be better prepared to respond to emergency situations in their communities" (Ready 2012). Training is facilitated by certified trainers in six specific modules: The program includes six basic training modules: (1) disaster preparedness, (2) disaster fire suppression, (3) disaster medical, (4) light search and rescue, (5) disaster psychology, and (6) a disaster simulation exercise (Federal Emergency Management Agency 2012). Subject matter experts are brought into assist with training delivery as appropriate. Trainers have the flexibility, and are even encouraged, to situate the training material within the context of their community by using local photographs and past hazard events and providing supplementary information from local utility companies and first responder organizations (National CERT Program 2011b).

After this training, the community organization coordinating the CERT program dictates what roles the CERT team will have pre-disaster and in disaster response in conjunction with individuals in the surrounding local emergency management system (National CERT Program 2011b). Local emergency management systems are "the combination of organizations, structures, processes, and activities in operation at the local level to address hazards, vulnerabilities, and the consequences of their interaction" (Jensen and Carr 2015). Post-training most CERTs are to (1) respond as individuals (i.e., address issues in their home and with their family), (2) assist individuals in the surrounding area, and then (3) meet the rest of their team at a pre-defined staging area (National CERT Program 2011b). Whether the CERT member is acting alone or as part of the team, they are supposed to go about doing what they were trained to do, i.e., "fan out within their assigned areas, extinguishing small fires, turning off natural gas at damaged homes, performing light search and rescue, and rendering basic medical treatment" (National CERT Program 2011b, p. 5).

Beyond this general role, CERTs have been leveraged to accomplish a variety of tasks in the emergency and/or post-disaster environment (National CERT Program 2011b; Simpson 2001). Neither the instructor manual nor CERT train-the-trainer manual recommends or stipulates exactly what CERTs should be doing day-to-day or post-disaster. The manuals also do not suggest that how CERTs ought to be integrated within their local emergency management system (National CERT Program 2011a, b). The responsibilities and functions of each team can be tailored to the locale (Simpson 2001). All teams are charged with responding to a hazard event in keeping with their training, but any further responsibilities or team goals are set by the community and sponsoring organizations (Federal Emergency Management Agency 2012). Thus, the specific pre- and post-disaster roles of each CERT team within a local emergency management system and the extent to which each team is integrated within that system pre-disaster are likely to vary system-to-system.

As the literature review demonstrates, the disaster literature suggests that the CERT program has incredible potential. Specifically, the CERT program provides training to individuals that may very well have spontaneously become engaged in response activities after a disaster and affiliates them with a group. The CERT teams that result may maximize the benefits and limit some of the negative side effects that are sometimes associated with volunteer involvement post-disaster. Yet, the literature reviewed also suggests that the teams have to be integrated within the surrounding local emergency management system pre-disaster to be most helpful. For the purposes of this study, integration will be understood to be an entity being a part of the formal local emergency management system.

Integration will be recognized subjectively by the extent to which the entities in the local emergency management system believe CERT to be a part of the formal system and objectively by the extent to which the team has a documented role in Emergency Operations Plans, is engaged in the system on an ongoing basis, and allowed to participate in jurisdictional planning, training, and exercises. Little research has examined the extent to which variance in CERT integration exists or the factors that might explain any variation observed. This paper reports findings of empirical research intended to address this gap in the research.

2 Literature review

It is normal for people to engage in helping behavior post-disaster (Barton 1970; Destro and Holguin-Veras 2011; Dynes and Quarantelli 1980; Fernandez et al. 2006a, b; Lowe and Fothergill 2003; O'Brien and Mileti 1992; Perry and Lindell 2003). Citizens undertake important tasks and that their involvement contributes to more effective and efficient response efforts (Auf der Heide 1989; Barton 1970; Brennan et al. 2005; Drabek and McEntire 2002, 2003; Dynes 1994a, b; Dynes and Quarantelli 1980; Fritz 1996; Mileti 1989; Stallings and Quarantelli 1985). As Wachtendorf and Kendra (2004) note, citizen responders

> …may already be close enough to damaged areas to provide immediate assistance; and they may provide for the flexibility that is needed when organizations confront rapidly changing conditions (p. 2).

Their involvement in basic tasks can free first responders to do the response tasks for which they have been trained (Fernandez et al. 2006a, b; Lowe and Fothergill 2003). In doing so, their efforts have also been suggested to save the taxpayers money (Fernandez et al. 2006a). Additionally, those who become involved tend to be "locals" and have local knowledge they can draw upon when assisting (Brennan et al. 2005; Brennan and Flint 2007; Fernandez et al. 2006a; Kendra and Wachtendorf 2001). In addition, a variety of negative aspects of their involvement have been noted in the literature.

Citizens, whether engaging as spontaneous volunteers or members of emergent groups, are often not ready to undertake the tasks they do—they lack appropriate equipment, safety gear, education, training, and experience (Barky et al. 2007; Fernandez et al. 2006a, b; Kendra and Wachtendorf 2001). Those who become engaged in response activity post-disaster may not have the expertise necessary to handle certain situations appropriately, e.g., being sensitive to the cultural needs of disaster victims (Drabek and McEntire 2003; Katayama 1992). Writing about volunteers in the aftermath of September 11, 2001, Kendra and Wachtendorf (2001) noted,

> They wanted to help… but it was their lack of identifiable, relevant capabilities, lack of legitimacy or connection to an organization from which they could borrow legitimacy, and probable lack of familiarity with emergency operations which rendered problematic their ties to the response milieu (p. 9).

As a result, these individuals have been found to sometimes make damages worse (Holland 1989) or become victims themselves (Fernandez et al. 2006a; Holland 1989). Their participation has been said to add to congestion at the disaster site and create logistical problems for those responsible for coordinating response efforts (Destro and Holguin-Veras 2011; Drabek and McEntire 2003; Dynes 1994a, b; Kendra and Wachtendorf 2001;

Neal 1990; Wenger 1991; Wenger et al. 1987). Their involvement has also been found to overwhelm and frustrate professional responding organizations who believe that volunteers and emergent groups interfere with the more "formal response" being mounted by the surrounding local emergency management system (Auf der Heide 1989; Drabek 1985; Drabek and McEntire 2002, 2003; Fernandez et al. 2006a; Quarantelli 1986; Scawthorn and Wenger 1990; Stephens 1997).

Local emergency management systems have historically not prepared pre-disaster to integrate emergent groups and volunteers into response systems and coordinate with them (Dynes 1994a, b; Fernandez et al. 2006a, b; Holland 1989; Wenger 1991); to the extent that there is a post-disaster attempt to do so, it is typically piecemeal and ineffective (Fernandez et al. 2006a, b; Wenger 1991). Thus, as Fernandez et al. (2006a) state, "individuals seek to perform services using only their own judgment and narrow view of the incident" (p. 2).

Part of the reason that local systems have not prepared to coordinate with volunteers and emergent groups is that they are often perceived by first responder and emergency management organizations as "problems that must be controlled" (Wenger 1991, p. 12). Rampant concerns regarding "legitimacy, utility, and liability" associated with individuals and emergent groups that volunteer post-disaster have been noted (Barky et al. 2007, p. 505). Recent research has even found that many practitioners prefer spontaneous volunteers and emergent groups not be involved in the response at all—that the costs associated with their involvement outweigh the benefits (Barky et al. 2007; Dynes 1994a, b; Kendra and Wachtendorf 2001).

Despite practitioner feelings about citizen responders, the research strongly suggests that citizen involvement is normal, needed, and ultimately beneficial. A critical issue that needs to be addressed is not how to ward off citizen responders when disasters occur, but instead how to ensure that citizens are ready to respond in a way that complements the ongoing efforts of the surrounding formal local emergency management system. The literature suggests that this latter issue ought not to be addressed post-disaster alone—it must also be addressed pre-disaster. Specifically, the literature would suggest the way to maximize the good associated with citizen response post-disaster while limiting the bad is to engage citizens pre-disaster so that they might undertake response activity safely and as an integrated part of the overall response effort post-disaster.

CERT is one possible means of identifying and training citizens for response pre-disaster. The potential exists to develop "quasi-professionals" through the CERT program (Barky et al. 2007, p. 503). As Holland (1989) argued,

> the most desirable situation is to have trained people in the community who are not part of the formal response system but could take immediate action in the post-event period…who were trained in some basic light search and rescue techniques not requiring more than common household items and yard tools…These individuals could also receive training in basic first aid and means for recognizing signs of more deeply buried victims…enable[ing] them to provide not only better care for victims but also provide the professionals, when they arrive on the scene, with valuable information on where live victims might be buried (pp. 328–329).

Yet, simply identifying groups of citizens and providing them a one-time training in these skills will not alone lead to more effective responses where the groups would contribute to a decrease in the negative consequences associated with emergence and convergence.

There is a recognized period before and after events where humans engage in activity to ready themselves for a disaster—the disaster literature widely refers to this as the pre-paredness phase. A number of activities should be undertaken within local emergency

management systems to prepare for disasters including design and implementation of inter-organizational management structures and processes related to how information (Celik and Corbacioglu 2009; Comfort et al. 2004a, b; Fisher and Kingma 2001; McEntire 2002; Wenger et al. 1989), communications (Comfort and Haase 2006; Dynes and Quarantelli 1976; Garnett and Kouzmin 2007; Kapucu 2006; McEntire 2002; Quarantelli 1987; Stallings 1971), and resources will be managed (Auf der Heide 1989; Holguin-Veras and Jaller 2012), planning related to organizational roles and responsibilities and accomplishment of common response activities (Dynes 1983; Gillespie and Banerjee 1993; Kartez and Lindell 1987; Lindell 1994), and training and exercising community members and organizations regarding hazards and plans for addressing disasters (Daines 1991; Drabek 2005; Dynes 1994a, b; Peterson and Perry 1999; Perry 2004).

The literature suggests that when these activities are undertaken in local emergency management systems more effective community response efforts result (Auf der Heide 1989; Drabek 1986; National Research Council 2006; Tierney et al. 2001); yet, there are at least three caveats that are important to note here. First, the value of these activities is directly related to whether they include the range of relevant stakeholders in the community (Brennan et al. 2005; Brennan and Flint 2007; Drabek 1987; Drabek et al. 1981; Dynes 1978; Gillespie et al. 1993; Gillespie and Streeter 1987; Neff 1977; Quarantelli 1984; Wenger 1972; Wenger et al. 1980). The National Research Council (2006) identified inclusion of "the diversity of organizations and community sectors" during the preparedness phase as one of the key "indicators of improved capacity" to manage emergence and convergence (p. 143). Second, stakeholders in the community either before, or by virtue of the preparedness activities, need to have relationships with one another based on trust (Cook 2009; Dynes 1970; Forest 1970; Kearney 1972; Kiefer and Montjoy 2006; Kueneman 1973; McEntire 1998, 1999, 2002; Phillips 1984; Stallings and Schepart 1987; Stephens 1997; Sutton 2001). Finally, the extent to which these activities lead to a more effective response is tied not just to whether they include relevant stakeholders and that they have trust-based relationships with one another, but also whether the activities are done on an ongoing basis (Drabek and Hoetmer 1991; Dynes 1983; Fisher 1978; Gillespie and Streeter 1987; Perry 1979; Quarantelli 1981, 1993). Thus, according to the literature, simply training CERT teams in some basic skill areas is not enough to reduce the negative aspects of volunteers who emerge and converge post-disaster. If teams of citizen responders are to contribute positively, the literature suggests that teams must (a) be involved in a range of community-level preparedness activities, (b) develop trust-based relationships with other emergency management relevant organizations, and (c) be involved in community preparedness efforts on an ongoing basis. In short, the teams would need to be integrated within the local emergency management system.

The negative consequences associated with citizen involvement, whether as spontaneous volunteers or members of emergent groups, will not be eliminated even if CERT teams were to be developed in every jurisdiction across the country and integrated on an ongoing basis into preparedness activities and through their relationships with other organizations. The local emergency management system could work to actively integrate the teams but face, as Holland (1989) points out, a "problem of maintaining an ongoing group of people with a commitment to training and drilling for infrequent events with unpredictable recurrence rates" (p. 326). And, as Fernandez et al. (2006a) put it, "[CERT] is very important; however, having a relatively small number of pre-trained citizens [relative to the total number of citizens in disaster-impacted areas] would likely not minimize the disruption to the responder community, nor provide for the safety of large numbers of untrained spontaneous volunteers" (p. 143). Therefore, in addition to developing CERT

teams and ensuring they are integrated within local emergency management systems, "response networks must…be able to accommodate a process of self-organization—that is, organized action by volunteers and emergent groups (National Research Council 2006, p. 143). Nevertheless, the potential of CERT teams seems high based on a review of the disaster literature, even while the potential is contingent on their integration within local emergency management systems pre-disaster. Yet, much about CERT teams is unknown including the extent to which CERT teams are integrated within local emergency management systems pre-disaster.

Despite the potential of CERT teams to help reduce the extent to which emergence and convergence occur and the negative consequences associated with the phenomena, the CERT program and CERT teams have not been the focus of much empirical research. The researchers could locate only 3 empirical studies examining the roles of CERT teams, and of these, only one study explored CERT teams pre-disaster (Flint and Stevenson 2010; Franke and Simpson 2004; Gonzalez 2005). The findings of these three studies suggest that CERT teams are not integrated within local emergency management systems pre-disaster and that this issue needs further examination.

3 Methods

Qualitative, semi-structured, telephone interviews were used to collect data in keeping with the Rubin and Rubin (2004) Responsive Interviewing Model. The following open-ended questions, complemented by follow-ups and probes, were asked: (1) Tell me a little bit about your CERT team; tell me about the history of your CERT team in [jurisdiction name]; (2) what explains the history of your CERT team; (3) describe your CERT team's roles and responsibilities within [jurisdiction name]; and (4) describe your interactions with the surrounding groups and the local emergency management system, for instance the fire department, police department, emergency medical services.

Purposive sampling of CERT team coordinators was pursued. Convenience sampling was used to narrow the population of CERT term coordinators to just those active in Iowa, Kansas, Missouri, and Nebraska (i.e., FEMA Region VII). The Citizen Corps (n. d.) Web site identified 173 total coordinators in these states and provided their contact information. All 173 coordinators were invited to participate in an interview following receipt of Institutional Review Board (IRB) approval. While there were 4 bounce-backs to the original invitation email, current email addresses for CERT coordinators in those areas were found and the invitation email resent. The contact email addresses were also found to be inaccurate for 2 CERT coordinators; however, the individual who received the invitation email at those addresses forwarded the email to the appropriate person. The response rate for the study was ultimately 14 %. A total of 24 replies were received by the researchers; 21 resulted in full interviews with CERT coordinators. A follow-up email was sent to the 149 coordinators that did not reply to the original invitation, but there were no replies to the follow-up email.

Of the 21 CERT coordinators interviewed, 4 were from Iowa, 6 from Kansas, 10 from Missouri, and 1 Nebraska. Twenty-nine percent of the participants were female, and 71 % were male. And, their average age was 40 years. The majority of coordinators worked in the local or county emergency management office ($n = 11$); however, 3 worked in the fire department, 6 the police department, and 1 a local healthcare group. Sixty-seven percent of the coordinators ($n = 14$) had been the coordinator of the program since its inception. The experience of those coordinators who had worked with the team since its inception ranged

from 3 to 10 years, with most having more than 6 years of experience. Coordinators not with the program since its inception ranged in their experience as CERT coordinators from 2 months to 6 years, yet most had less than 1 year of experience.

Data analysis was conducted in keeping with the Rubin and Rubin (2004) Responsive Interviewing Model and the researchers' methodological training in constant comparative analysis. Thus, data were analyzed during data collection, during the transcribing process, and following without reliance on coding software and through the use of line-by-line, in vivo, and focused coding, memos, concept maps, and diagrams.

The use of purposive and convenience sampling techniques alone limit the generalizability of this study's findings and limit the contribution of this study. Furthermore, convenience sampling led to the authors' use of the CERT Web site to identify the number of CERT coordinators in the USA and the number of contact information for CERT coordinators in FEMA Region VII, and the accuracy of the numbers provided through the Web site and their geographic distribution is an open question. Also limiting this study's contribution is the low response rate and low sample size associated with it. These issues suggest that sample bias could be present. Sample bias may also exist due to unique characteristics associated with CERT teams and/or CERT coordinators represented in this study; yet, the extent to which the study sample is representative of CERT teams and coordinators in the USA is unknown. The authors were unable to locate national- or regional-level information about CERT teams and coordinators from which to make such a comparison.

4 Results

4.1 Varying integration

This study sought to explore whether CERTs are equally integrated within local emergency management systems and, should this not be the case, explore the factors that might be related to their integration into these systems pre-disaster. It was found that CERTs are not equally integrated within their respective local emergency management systems. Three CERT programs "piggybacked" CERT with other existing organizations; i.e., the CERT program provided citizens CERT training and then linked them as volunteer for another organization like the Red Cross. When "piggybacking" was done, CERTs were not entities and, hence, were not integrated in the surrounding system at all. Jensen and Carr (2015) elaborate on this phenomenon. The remaining 18 CERTs were found to be located at various points on an integration continuum, with one end of this continuum being the Least Integrated Teams and the other Highly Integrated Teams. Only 3 of the 21 teams represented in this study were found to be Highly Integrated; 10 were found to be Somewhat Integrated Teams, and 5 were found to be Least Integrated Teams. Table 1 is a summary table that outlines the integration of Least, Somewhat, and Highly Integrated Teams using the criteria by which it was recognized (stipulated in the introduction to this paper and the literature review).

An extended discussion of each of these types of teams is available in Jensen and Carr (2015).

Data analysis revealed five categories of factors related to the varied integration of teams including (1) resources, (2) opportunity, (3) leadership, (4) formalization, and (5) acceptance. The researchers are not sure whether all of these factors are necessary for CERTs to be wholly integrated into the local emergency management system. It would seem that the most integrated would demonstrate all of the factors discussed in this chapter.

Table 1 Dimensions along which the pre-disaster integration of CERTs vary

Criteria	Piggybacked (n = 3)	Least integrated (n = 5)	Somewhat integrated (n = 10)	Highly integrated (n = 3)
Believed to be a part of the formal system by other entities within it	NA	Low	Medium to High	High
Documented roles for team	NA	Usually none, but occasionally listed a source of volunteer workers	Listed as a volunteer organization in the local plans and typically responsible for one very general role, such as directing traffic or performing wellness checks following a major event	Documented in local plans for a specific, highly specialized role(s) in response such as rough terrain search and rescue or structural damage assessments
Engagement	Typically only one time	Typically only one time	Periodic	Ongoing
Jurisdictional exercise involvement	NA	None	Varied, when involved usually participating as scenario victims as opposed to as a response entity	Often involved and participating to test their capacity and capability relative to their role in the plan
Jurisdictional training involvement	NA	Basic CERT course required and occasionally refresher courses	Basic CERT course required, special offerings courses optional, and occasionally trainings offered by other organizations	Basic CERT course and additional training required, special offerings courses optional, often train with local emergency management system groups

Certainly, the Highly Integrated Teams (n = 3) discussed in this study have all of the above factors, but there were so few Highly Integrated Teams represented in this study that it is impossible to be certain that all of the factors are necessary to be highly integrated. Somewhat Integrated Teams were observed to have some, but not all, of the factors identified, and the Least Integrated Teams demonstrated few if any of the factors. These observations suggest that more is better where these factors are concerned if integration of the team within the local emergency management system is intended.

4.2 Resources

Many coordinators mentioned that funding sources were important to the functioning of their team. These sources of funding included grants (from government entities and businesses), funding from coalitions or regional bodies (such as healthcare coalitions or community development groups), budget line items from their coordinating jurisdiction, fundraising by the CERT team as a group, and team members paying for their own expenses.

Of these, the most commonly used source was grants. Large amounts of grants were available to fund volunteer organizations such as CERT following the September 11 terrorist attacks. Over time, however, all forms of grant funding to support CERTs have significantly decreased. As one coordinator stated, "Now a lot of those [funding sources] have dried up so there are CERTs falling all over the United States, failing now because they have no money…" and another "There are no future grants that we know of right now, that are going to help us sustain [our team]" and another "I have already told the chief and assistant chief I know the money is going to run out…I am one of the few in the [state] that has actually… kept CERT alive…"

As grant funding has dried up, CERT teams have been forced to look elsewhere for funding. While many teams were able to piecemeal together a minimal amount of funding from multiple sources, most have not been able to match the levels of funding they had previously through federally sponsored grant programs. These funds are not only fundamental to starting and sustaining a CERT team, but also key to the integrated functioning of a team within the local emergency management system. Without funding, the data suggest that teams are undersupplied and undertrained and not positioned to have or fulfill a response role or participate as an entity in jurisdictional preparedness activities.

The unique skills or expertise of team members themselves was also shown to be a resource to the organization that seemed related to integration. Program coordinators reported recognizing and leveraging these skills as needed including to train/educate other team members in that skill, ultimately building up the roles a team is capable of fulfilling. For example, a team member experienced in working with radio technologies was able to train others, thereby enabling the team to supplement the jurisdiction's communications plans. Skill sets such as first responder experience, leadership, engineering, medical, and many others proved beneficial to teams.

> Multiple people on our search unit are actively involved in our other volunteer groups such as the storm spotter team, the amateur ham radio operator team, and then there are a few others that are in their day-to-day lives and their normal jobs that they have, they're involved in the medical field. That kind of brings something else to the table for us.

These unique skill sets can add greatly to the utility of a team, giving them a chance to fill in the gaps left by other groups in the local emergency management system. As this potential is recognized by entities within the system, they are further integrated and in turn further develop these roles.

While expertise allows CERT teams to potentially fulfill a role, without the proper resources, the team still may not be integrated to the fullest extent. Coordinators suggest that a team that is trained to work with communications technologies will not be valued as much within a local emergency management system if they do not have the equipment to go with them nor will a team trained in light search and rescue be valued as much if they do not have the safety gear and tools required for that responsibility. If a team has the proper materials, supplies, equipment, and facilities, the data suggest that such teams are more likely to be integrated.

CERT team coordination at the local or county level is often managed by a single person, and it is rare they have any support staff. The CERT coordinator title is typically a responsibility added to their position, not their primary responsibility or focus and certainly not the focus of any support staff associated with the office. Yet, when support staff (e.g., volunteer manager, administrative assistant) were available, it facilitated the development of a more integrated program. As one coordinator stated, "I'm also fortunate enough to

have hired a part time person and her title is just volunteer coordinator where her job is to assist all four of my volunteer groups." With the opportunity to delegate responsibilities to support staff, the coordinator can focus on developing teams.

4.3 Opportunity

In order for a CERT team to be integrated into the local emergency management system, the data suggest that there must be conditions favorable to the development of a CERT team as an entity. Much of this environment is out of the team's control and exists long before the CERT program is developed in a jurisdiction. Although there are many examples, one powerful one related to this category was opportunity as relates to rural and urban environments. Coordinators described rural emergency management systems as typified by a small number of paid, full-time law enforcement staff, and, possibly, a small number of paid fire department and emergency medical staff (although the vast majority are volunteers). These areas have a small amount of funding for emergency management and a small amount of personnel, both of which are often spread thin across a jurisdiction. There are many unmet needs within these areas that are addressed by the ad hoc improvisations of volunteers. The existence of these needs creates opportunities for organizations of trained volunteers like CERTs. Unlike rural areas, urban environments are often typified by large populations of people, larger budgets, more personnel, and a greater amount of organizations supporting emergency management functions. Coordinators both perceived themselves, and reported the perception on the part of others, that there was rarely a need for any assistance. As two coordinators noted:

> We have very strong, both police and fire, mutual aid. So, we're going to be able to handle an awful lot of things before we run out of resources as compared to if we were in the middle of [the state], somewhere in…or our next closest resources are 30 or 45 min away. I mean, I can see where it's going to make a…Your whole way you would structure your team would be different.
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> With living in [state], and we're smack dab right in the middle of [state] between two major interstate highways, we have a larger population than a lot of our surrounding counties, so our surrounding counties that would train their CERT teams, they would train their members as to how to set up shelters, how to do evacuations, that kind of stuff. And here in my county, we wouldn't teach our people that, because we have those resources right here at our fingertips. The Red Cross is right here to set up shelters. We have the regional search and rescue team.

The extent to which opportunity exists, or is perceived to exist, was found to significantly influence the extent to which CERTs were integrated into their surrounding local emergency management system.

4.4 Leadership

After the idea of a CERT team has circulated within a jurisdiction, it is often placed in the hands of an organization designated to develop and coordinate the CERT program. At this stage, the coordinator had a choice with regard to how much they will support development. Coordinating a training program of an entire platoon of volunteers is a large undertaking and can sometimes be daunting. For those that choose to make this a priority and advocate on behalf of the team, it seems to lead to integration.

Many times this act of advocacy is the catalyst that a program needs to begin. More often than not, other organizations in the local emergency management system are initially cautious and want to learn more about CERT before welcoming the program into their jurisdiction. Politicians want to know what it will add to their community; other volunteer/ nonprofit groups want to know how it will fit into the system; the sponsoring agency—out of which the coordinator will work—wants to know its responsibilities. Advocates lay the groundwork of the organization, coordinate plans, discuss these plans with government officials, and spread awareness of what the organization can offer the community. It is the coordinator's job to keep all these people informed, engaged, and supportive as the team is created. Without this groundwork, the idea might not be taken seriously and will quickly lose momentum.

Following inception, the motivation of the advocate often changes from proposing an idea to managing the reputation and relationships of the team within the community. The support coming from community and officials is very important, as they can potentially call up CERT when their services are needed. As one coordinator stated:

> We've got our police chief in a couple of cities are very helpful to make sure that if they have something up they call and say can you give me some CERT folks and can they help me out and we'll get that out for them and get them some help out there.

This support is not always easy to get. Roughly half of the coordinators said that they had experienced opposition from individuals within the local emergency management system. When faced with this opposition, coordinators advocated to build, maintain, and support for their team as best they can. When no one is actively advocating for CERT and maintaining the functioning of the team, the program can fall apart and eventually lie dormant. "In all honesty, our CERT program has really kind of fallen on the back burner, and the reason for it is that there's just other priorities that had to take precedence over trying to start from scratch." Advocacy was seen to affect the extent to which a team is integrated within the local emergency management system. If leaders actively advocate for the integration of a program, it seems more likely that integration will be achieved than if leaders take a passive approach.

It seems that keeping coordinators in their position over time is important to integration as well. While a coordinator's years of experience in a community does not always mean a team will be integrated, it does serve as a proxy for more important attributes that might be underestimated at first glance. Coordinators have time to become familiar with the culture of the system, culture of the community, history of what has worked and what has not, and to attain a depth of knowledge about CERT from their experience in the program. Additionally, experienced coordinators have more of a chance to cultivate relationships and partnerships that are advantageous to the program. Rapport with the community and local emergency management system that has been developed over time is an important resource that can be taken for granted. It is difficult to pass on these relationships when there is a change of staff. It is especially difficulty when the change happens without notice or time to prepare. A coordinator described this difficulty:

> Unfortunately, the Deputy Director passed away unexpectedly, and so all of his knowledge, expertise, relationships that he had built, programs that he had built, kind of really had to taper off just a little bit, because really it was information that he had in his head, or programs that he had developed in his head, or processes that he had developed that he didn't share with other people. Unfortunately, it was just one of those things. When I was hired, that's one thing that really came to the forefront was

trying to rebuild our CERT teams, and unfortunate as it is, just because of the chain of events that have occurred with a brand new director, a brand new deputy director, and not having the knowledge and expertise of the previous gentlemen, it became kind of a challenge… Because of the newness of our director and the newness of myself, we were still trying to even build relationships, let alone trying to get them to get the buy in into a CERT team program.

The loss of a seasoned coordinator leaves a large gap in the program that is difficult to address. For many coordinators, their memory is a significant resource. Even when the coordinator has documented what they have learned or done, those documents may be of little use to the next person without the contextual knowledge of how best to use them.

With a prolonged tenure spent coordinating a program come many important factors leading to the integration of a team. These include such things as knowledge of the community politics, relationships within the local emergency management system, and experience working with the CERT team itself. While the continued leadership is not the best measure of human capital and experience, it is a proxy for these more important variables.

4.5 Formalization

The extent to which a CERT was formally, internally organized was found to be a contributing factor to team integration. The most common model of a team observed in this study included a coordinator, a steering committee of some sort, and the volunteers. Steering committees can be made up of local emergency management and first responder leadership, volunteer members, or some combination thereof depending on the coordinator's strategy. Beyond the steering committee, CERTs were found to add committees, boards, officers, and other entities as needed.

For Highly and Somewhat Integrated Teams, the structuring of boards and committees turned what used to be a screw driver into a Swiss Army knife. Teams with no further organization beyond a coordinator and volunteers had little capacity to coordinate more than one thing at a time; but, when volunteers were divided into subunits and tasked with different objectives, coordinators reported that teams were able to accomplish more. Within the local emergency management system, their ability to be productive and make progress toward multiple goals resulted in doors being opened for the team to participate and facilitated the development of a positive reputation.

Not only does this structuring have external implications for the team, but the team is also better able to manage and develop internally. Boards and committees allow for the delegation of tasks that can make the operations of the team more efficient. Activities such as trainings, community outreach programs, and fundraising are now a shared responsibility, rather than something the coordinator organizes with the support of the most eager of team volunteers. Those teams that are more formally organized seem to be able to delegate responsibilities and manage tasks effectively.

Data analysis revealed that there is often a small subset of individuals associated with some of the Somewhat Integrated Teams and all of Highly Integrated Teams that are depended on to show up consistently. These groups typically do the essential labor that makes the team operate as planned. This core group facilitates overall team stability, a characteristic expected of entities within the emergency management system.

In order for the team to maintain the interest of this core group, as well as all the volunteers outside of it, the team must stay engaged with the system through regular

activity. This activity could be through actual responses, although most coordinators said that response is probably the least common activity in which their team participates. From most common to least, activities to involve CERT members included service hours or community outreach, social events, advanced or refresher trainings, exercises, and responses. Many coordinators believed that engagement was important. Comments such as "There has to be activity and there has to be different opportunities… there has to be activity for them to stay involved and interested," "You got to deploy them. You got to let them do what they do" were common. Regular activity was said to support organizational stability and increase team potential to be accepted by entities within the local emergency management system.

While activity is important, it is a proxy for something deeper. When these groups are able to stay active, they build a team where members are not only dedicated as individuals helping to meet the team's goals, but also as team members working to accomplish a common goal. With this emotional investment comes a more stable team, as individuals are more dedicated and can be counted on to show up. Interviews within Least Integrated Teams shed light on this topic, as the coordinator associated with these teams said they never knew who was going to show up. For the Highly Integrated Teams, this was not the case. These teams had participated as a team in multiple trainings and sometimes multiple responses. These teams, and the local emergency management system entities with which they worked, knew they could be depended on.

In addition to the formal organization of the team are the expectations and requirements of each team member. Some teams require nothing but completion of the basic CERT curriculum, but others require participation in a host of activities and adherence to a set of rules. These documents, commonly called standard operating procedures (SOPs) or standard operating guidelines (SOGs) outline behavior vis-à-vis other members and external organizations, as well as the expectations for participation with regard to activities of the team and training. The most common requirements of members are the completion of the basic CERT curriculum, a background check of the volunteer for the coordinating jurisdiction's records, and a signed agreement of the team's standard operating guidelines.

Once again, these measures are proxies for the stability of the team. When a team has clearly outlined and communicated requirements and expectations of the team, it was reported to be viewed externally as a more demanding and dedicated group by coordinators. Those interested in volunteering with the group already assume that they will have to put more energy into this group because of the heightened expectations. These volunteers are not only dedicated, but they must go through the rites of passage of completing the trainings and service hours required by the team. The converse is also true, as teams with low requirements and expectations were found to be viewed as a liability within the local emergency management system, rather than a respected entity.

Like many organizations, CERT teams have recognized the need for partnerships within their area. Coordinators and teams regionalize at various levels including city, county, and metropolitan areas to support and strengthen the various participating teams. These regional groups were supporting the majority of the CERTs involved in this study. They allow for programs to share. As one coordinator put it:

> We are part of a cooperative or a coalition…Basically, it's about 25 organizations that teach CERT. We basically get together and meet every other month and it's just, "Who's got classes going on?" and, "Who needs help?"…If you're teaching a class and you all of a sudden get called away to, I don't know, for training or something else, you're unavailable, you can put out a request and say, "Hey. I need somebody

to teach Search and Rescue next Tuesday night," and somebody steps up and does it for you.

Many teams have used these coalitions to lobby as a group and seek funding that would have been difficult for a smaller program to access on its own. For example, a variety grants are available to organizations like CERT that seek to develop capacity and resilience within a community, but because teams can be so small, the grants may go to a larger organization with similar goals. Coordinators reported that funding is more easily acquired when grants are pursued on behalf of multiple teams through a regional structure. And, as previously discussed, resources lead to a more stable organization that is more likely to be accepted and valued by entities within the local emergency management system.

4.6 Acceptance

In order for the team to be accepted, the individuals and organizations within the emergency management system need to first become familiar with the organization. Groups such as fire departments, law enforcement, and emergency medical services normally have high expectations of themselves and each other. The groups need to learn of CERT and determine how it fits with their norms. "Initially, they're pretty standoffish because they really don't… you know, in an emergency they're used to being in charge and I understand their reluctance to outsiders messing around" or "When we first started this it was kind of like who are they, what are they doing and we don't need you here." From the first time an individual hears of, or interacts with the team, they begin to develop their opinion as to whether this group should be included in the local emergency management system. A coordinator described how this process unfolded in his area:

> It's not as widely known as, you know, what the heck's a CERT? You know? But it is becoming more known…I have had some CERT members show up to certain things and flash their CERT card at a Police Department roadblock and they've gone through, so PD is starting to know what's going on as they are seeing it. I've had, shown up to disaster scenes, and there are people with their CERT uniform on and then people go "oh that's the CERT!" So I think it is starting to get more well-known than it was a dozen years ago when nobody knew what that green helmet or vest was.

As familiarity increases (in the positive sense), entities in the local emergency management system are more and more trusting and allow a greater amount of responsibility to be placed in the team's hands. Familiarity on its own, however, is not enough to lead to acceptance of the team. The team will ideally not only allow others to become familiar with CERT, but also prove themselves capable.

Entities in the local emergency management system take notice of CERT and evaluate the team from the team's inception. Those that have and continue to have successes build a positive reputation within the local emergency management system are those that, once sustained for a period of time, may be able to weather a few bumps. On the other hand, one mantra shared by a number of coordinators was "one aww shit ruins ten atta-boys." A single botched response could make *the* critical difference in leading to entities within the local emergency management system ostracizing previously accepted teams. One coordinator provided this example:

> The Police Department in the past, it's been a huge struggle. The reason being is that we have a tornado that hit [neighboring town]…when is that? 2006, I think that's right. Anyways, a couple of our CERT team members from our county responded

down there to assist with the recovery, and clean up, and everything. There was a lot of bad blood that came back from that. A lot of our same responders from our county were there with them, and it was just… our group was not well organized. They just went off and did their own things. They created a little more of a hindrance than a help, and so when they came back to our county it was just like, "Well, we saw what you did in [neighboring town]. We don't want you helping out with our stuff here."… Getting the buy in from those first responders from the law enforcement side has proven to be very difficult because of that incident. It's hard for them to get over that when they've had such a bad experience.

These failures are difficult to atone for and can be associated with the team for years to come. Referring to the reputation of their team, one coordinator said, "It's not as bad as it was but CERT was portrayed, I guess, I'm going to say, wrong in the past and we just have to fix the wrongs that were done."

The first responders in the local emergency management system continue to have interactions with the team, not only in the developmental stages of the group, but also throughout the life span of the team. With every success of the team, their acceptance grows, increasing the likelihood that they will be called upon to help out in the future. As one coordinator noted:

The relationship [with first responders] is solid—very solid—and has solidified even more over the years with the police department, because we have found when they've called us out for things—for people or evidence—we found it.

5 Discussion and Conclusion

Emergency management operates in a high-performance and high-stakes environment. Entities within the local emergency management system are expected to show up quickly, respond, and meet the needs associated with the incident soon; there is little margin for error. Entities within the local emergency management system are expected to be stable, having enough appropriately trained and capable staff and sufficient resources to address any problem that falls under the responsibility of the organization. Our data showed that if CERT is to be wholly integrated, like these other organizations, CERT must be consistently functioning and consistently resourced. This functioning and supply of resources signal that the team is stable and predictable enough that they will perform well and not be a liability during response. While on the surface this level of organizational stability (i.e., consistent functioning and resources) may seem like a simple feat to achieve, the findings from this study would suggest that a number of factors need to be present and in alignment at any given time.

There needs to be an opportunity for a team to contribute within the local emergency management system in some unique way. A team must have a skilled, dependable, and active group of volunteers as well as a strong internal organizational structure to enable a higher level of organizational functioning. In addition, the team needs the resources to support this activity including funding, training, and materials, not once, but consistently, to support any role they are supposed to fulfill. They need to also prove themselves capable of executing their responsibility effectively. At this point, CERTs may be perceived to be stable enough to be accepted into the local emergency management system as an entity on par with others in the system.

Teams do not achieve this easily. Should there be a desire to facilitate the development of stable and integrated teams, a number of things can be done. The leadership behind a program facilitates many of the bureaucratic processes that must occur for a team to become stable. A coordinator is able to help the team identify sources of funding and lobby on behalf of the team to receive those funds. A coordinator is also able to facilitate the creation and maintenance of a formal organizational structure, enabling an even higher level of operation within the team. A coordinator can act as an advocate, working to build relationships and alliances within the local emergency management system that allow for the team to carve out a role and integrate into the system.

The volunteers themselves are also responsible for the integration of the team. Where integrated teams are desired, the team members must be willing to dedicate substantial time to CERT—staying active within the group, sharing work associated with the team, developing and maintaining their skills through training, exercises, and response activity (where possible). Moreover, each time a team member interacts with entities in the local emergency management system they have the chance to contribute positively or negatively to the team's integration as a whole. Thus, they must operate within the bounds of the teams operating procedures and carry out their tasks well. These expectations of team members—who are volunteers and for whom participation in CERT is not a paid, or full-time job—are extraordinarily high.

Some of the things that would facilitate CERT integration are outside of the direct influence of the team and its coordinator. For instance, this research suggests that the opportunity for a CERT to have a planned response role is largely outside of coordinator or team control. And, decisions to provide and maintain the provision of resources needed to sustain a team are ultimately controlled by individuals outside of the team/coordinator. Additionally, the other entities within the local emergency management system have a large impact on the integration of these teams. Each individual within these entities can choose to accept or reject CERTs, and their opinions can be a deciding factor in how much a team is allowed to participate in planning, training, and exercises as well as whether the team ever is given a response responsibility that warrants identification in formal juris-dictional documents (e.g., Emergency Operations Plans, Memorandums of Understanding). Inclusion or exclusion in these areas makes the difference as far as where the team ends up on the integration continuum.

Bringing about all of these factors at any given time, not to mention sustaining them over time, will be challenging for many CERTs and the jurisdictions in which they are located. Certainly, all of the factors were not present for all of the teams represented in this study. This study found that CERT stability (i.e., consistent functioning and resources), and the factors making up this stability, varied widely.

This situation is likely to continue. There will not always be an opportunity for CERTs to take on significant roles in the localities where they exist. Funding associated with CERT has been a challenge. Their internal organizational structures vary. There are issues with continuity of leadership on the teams. Not all volunteers are willing to stay active or dedicate the amount of time that would be required for their team to be a Highly Integrated Team. It would appear likely that the presence and absence of these, and the other factors identified in this study, will continue to vary across time and jurisdiction-to-jurisdiction.

Furthermore, the existence of Somewhat Integrated Teams and Least Integrated Teams was not determined by default; i.e., certain factors were not in place and as a result the team was less than highly integrated. The existence of these other types of least integrated teams was at times chosen and then purposefully pursued in light of missing factors (i.e., no opportunity exists) or their belief that a less than highly integrated team was all that

their jurisdiction needed. It would seem that the desire to see integration occur will also continue to vary across time and jurisdiction-to-jurisdiction. For these reasons, Highly Integrated Teams are likely to continue to make up a small proportion of the total number of CERTs.

This study offers insight with regard to what pieces need to be in place in order for a CERT team to be fully integrated into the local emergency management system. While it was clear that there is not always a desire to have a Highly Integrated CERT Team, there will likely be jurisdictions that need Highly Integrated CERT Teams to supplement a weak emergency management system consistent with the argument of Brennan and Flint (2007). Not only do these areas need these teams, but they also need the resources to bring these teams to a higher level of integration and capability within the jurisdiction. Taking into consideration this difference in need, policy makers at a national level should consider a way to prioritize the allocation of resources to those teams with greater need in addition to ensuring that a base level of funding is available to support the development and maintenance of CERT teams where jurisdictions desire and need them.

Currently, there is insufficient support available to support the development of CERT coordinators. Many new coordinators complete the Train-the Trainer course and are thrown into their position. While FEMA made a Program Manager Course available to be offered by state departments of emergency management, few coordinators represented in this study have taken it because they either had not heard of it or were unable to attend due to its infrequent offering in their state. And, while a quick Internet search reveals resources written by CERT coordinators and volunteers that address various aspects of CERT that might be used by CERT coordinators, they are of varying quality; they are not comprehensive in their coverage of program management issues, and many are specifically designed for a particular community. Moreover, neither the FEMA Program Manager Course nor the Internet resources seem to discuss what has been found in this study and implications for CERT program coordination. Training materials could be revisited and revised at the national level to help coordinators learn about options for structuring CERT in their community including informing them of the different formats of CERTs this study discovered, the potential benefits to a local emergency management system of each, and the factors that need to be in place for the different team formats to be successful. Training could also address what a coordinator might do to help bring those factors about. And, perhaps, moving the FEMA training course from a face-to-face offering through state departments to online would allow more CERT coordinators to benefit from the training.

Given that achievement of Highly Integrated Teams is not always desired or likely, there is still an opportunity to address both citizen preparedness and overall community preparedness by integrating those who participate in CERT (whatever its form) within the local emergency management system by helping them learn about the local emergency management system itself and how it is supposed to function. Those individuals who receive this CERT training and are then left on their own during response would be better positioned to contribute positively to community response efforts than those without such training.

This study began to explore important issues with respect to CERT but more remains to be done. This study identified the varying pre-disaster integration of CERT teams, yet it falls to future research to determine what benefits and costs are associated with Least, Somewhat, and Highly Integrated Teams *vis a vis* the goals of the jurisdictions and organizations that coordinate them. This research has outlined key factors that were found to be related to the integration of CERT teams, with the general understanding that the presence of more of these factors leads to higher levels of integration and the presence of

less factors leads to lower levels of integration. Future research should seek to reaffirm and clarify these initial factors, as well as discuss other potential factors that may not have surfaced within this study. The need for future research is particularly critical given the relatively small sample size of this study. Not only could the number of respondents be increased, but the geographic scope should also be expanded. The factors discussed within this study seem as though they would be applicable to all CERT teams within the USA regardless of the locale, but future research must explore this issue.

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