Building & Enhancing Interorganizational Relationships for Disaster Preparedness and Response Capacity: a Study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless

By

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ABSTRACT

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Background: Despite significant resources allocated to disaster preparedness and response capabilities nationally, preparedness and response for vulnerable and special needs populations is still largely lacking. Public health agencies could not possibly meet the disaster preparedness and response needs of all vulnerable and special needs populations especially in inner cities where populations are often quite diverse. As a result, increased attention has been given to innovative and unique approaches to strengthen community-based organizations' (CBOs) capacities as partners in emergency preparedness, response and recovery. Just as preparedness and response strategies play key roles in agencies responding to public health emergencies and natural disasters, CBOs must have enough capacity for disaster preparedness and response that allows them to continue operations before, during and after crises and disasters. Capacity for disaster preparedness and response is rarely within the scope of most struggling nonprofit organizations; however, the relationships they have formed to meet the needs of their vulnerable clients may contribute to this capacity. ***Purpose:*** This study explored the relationship between the number and types of interorganizational relationships that CBOs use to serve clients, their disaster preparedness and response capacities. How these relationships may be leveraged is also explored as part of the strategy of enhancing the overall level of an organizations capacity for preparedness and response. ***Methods:*** Mixed methods were employed to investigate the potential number and type of interorganizational relationships, organizational capacities and communication mechanisms associated with and influencing the disaster preparedness and response capacities of CBOs serving the homeless. The percent potential leverage, an organization's potential for using interorganizational relationships for disaster preparedness and response related activities, is determined for each organization. ***Findings:*** Factors that contributed to disaster preparedness and response capacity for CBOs serving the homeless included: types of organizations CBOs had relationships with, leadership at the organization, evidence of a culture of preparedness, working with/support from external organizations, a tendency of continual improvement and proximity of collaborators and resources. A summary of survey results is provided. ***Conclusions:*** In the struggle to incorporate disaster preparedness and response activities into the organizational structure and functioning of CBOs serving vulnerable populations, CBOs may find it useful to look at their interorganizational relationships more

closely to determine which ones may also be used for disaster preparedness and response activities. The results of this study offer opportunities for public health to build relationships with CBOs serving vulnerable populations before, during and after crises and likewise for CBOs to tap into many of the services provided by public health to build relationships that are more meaningful.

DEDICATION

~ to my family

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ACRONYMS

211	Eden Information & Referral (Eden I&R), Alameda County, CA
ACPHD	Alameda County Public Health Department
ARC	American Red Cross
BOSS	Building Opportunities for Self Sufficiency
CalPan	CalPanFlu.org site developed by California Department of Public Health to order and track the use of H1N1 vaccine
CARD	Collaborating Agencies Responding to Disasters
CBO	Community-based Organization
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CERT	Community Emergency Response Team
CIDER	Center for Infectious Diseases & Emergency Readiness
CORE	Citizens of Oakland Respond to Emergencies
DOC	Department Operations Center
DPR	Disaster Preparedness and Response
EOC	Emergency Operations Center
FBO	Faith-based Organization
FD	Fire Department
FESCO	Family Emergency Shelter Coalition
H1N1	refers to the 2009 H1N1Influenza pandemic
HCH	Health Care for the Homeless
ICS	Incident Command System
IOR	Interorganizational Relationships
JIC	Joint Information Center
KingCo. PH	Seattle & King County Public Health Department
MOU	Memorandum/Memoranda of Understanding
MRC	Medial Reserve Corps
OES	Office of Emergency Services
PD	Police Department
PERRC	Preparedness and Emergency Response Research Center
PH	Public Health
SFCARD	San Francisco Community Agencies Responding to Disaster
WHO	World Health Organization

PREFACE

Public health and other agencies that respond to natural disasters, infectious disease threats and potential acts of terrorism, face a daunting challenge in meeting the needs of vulnerable populations. General preparedness instructions are often not feasible for lower income people and people with special needs [1]. Furthermore, specific recommendations from state and local government regarding emergency preparedness and response are frequently non-specific for inner city residents which generally include vulnerable populations. Integration of factors such as language, culture and race into risk communication, public health training, coordination and policy are still largely lacking [2]. Public disaster response agencies may better meet the needs of vulnerable populations by collaborating with community-based organizations (CBOs) that have direct ties to these vulnerable populations. However, CBOs may lack basic crisis preparedness and response capacity. In order to increase their capacity for disaster preparedness and response, CBOs may need to a) build new or improve and/or enhance their relationships with other CBOs, b) build, improve and/or enhance their relationships with response organizations[1] such as public health so that they can receive and send information in a timely manner during crises, and c) leverage[2] their current relationships. A more explicit partnership between disaster response organizations and CBOs would improve the reach of public health agencies to vulnerable populations during a disaster.

While the goals of CBOs is to provide the best possible services to their clients, many are under financial strain and meeting the basic day to day needs of their clients is often a struggle. In addition, disaster preparedness and response is generally not viewed as part of their mission. However, the day-to-day work of CBOs with other CBOs may be enhanced and/or leveraged for increased disaster preparedness and response capacity. Similarly CBOs may increase their disaster preparedness and response capacity by working with response organizations. The number and types of interorganizational relationships may be an important factor influencing their disaster preparedness and response capacity. Theories of organizations indicate that organizations with greater numbers or interorganizational relationships are more socially connected and, therefore, better able to manage their environments. Given this, we might expect that CBOs with greater interorganizational relationships, or those whose partners have more capacity, would be the more likely to partner effectively with a variety of organizations to meet the needs of their clients during a crisis. This is the relationship that this dissertation will address: the extent to which interorganizational relationships predict or even drive the capacity of community-based organizations to engage in disaster preparedness and response activities.

This dissertation was inspired in part by previous work I conducted with CBOs serving vulnerable populations. In a pilot study, completed August 2009, of the disaster communication of community-based organizations serving special needs and vulnerable populations funded by

[1] Although many organizations respond in a disaster, response organizations in this study were primarily public health, county information and referral (211 system), fire department, Collaborating Agencies Responding to Disasters (CARD), the American Red Cross (ARC), the police department, Community Emergency Response Teams (CERTs), Office of Emergency Services (OES), the Medical Reserve Corps (MRC). Participants had an option to enter the name of 'other' organizations that played or would play a role in their preparedness and response activities.

[2] Use relationships for purposes other than they are intended such as disaster preparedness and response related activities that will augment the disaster preparedness and response capacity of both organizations involved.

the CDC, I identified five vulnerable populations in collaboration with partnering agencies as priority groups in Alameda County. The study [3] identified communication strategies, gaps and vulnerabilities and provided a glimpse into some of the service needs and collaborative relationships of community-based organizations that serve vulnerable and special needs populations in Alameda County. This pilot assessment followed steps suggested in CDC's draft *Public Health Workbook to Define, Locate and Reach Special, Vulnerable and At-Risk Populations in an Emergency* [4]. Five vulnerable groups were identified through consultation with various county stakeholders[1]:

1) Undocumented immigrants
2) The homeless
3) The blind/visually impaired
4) The deaf/hard of hearing
5) The frail elderly.

The final report provided the background and impetus for this dissertation. Six key indicators of preparedness were investigated:

- CBO-CBO Relationships
- CBO-Response Agency Relationships
- Transportation Capabilities
- Resources for Clients
- Communication Infrastructure
- Disaster Preparedness and Response Capacities

This study retained many of the same indicators, focusing on only one vulnerable population, the homeless. The pilot study consisted primarily of a survey while the current research expanded well beyond, including both quantitative and qualitative elements, a community forum and several products beyond the main dissertation[2].

Given the considerable money that has been devoted to disaster preparedness and response through the Centers for Public Health Preparedness (CDC funded) and directly to public health departments, substantial resources were developed at local levels in the forms of organizations, materials and trainings. Knowing this first hand and having taken part in some of the development and dissemination of these resources, I found it necessary and important to extend the dissertation beyond data collections and analysis. Given the resources available in the community, it was important to me to combine some of the preliminary research results[3] and work with an advisory committee to move the research into action through a venue to which both participants and non-participants would be invited a well as stakeholders and county response organizations. The community forum was a method to engage homeless service providers and

[1] The final report is available for review upon request or can be accessed through the UC Berkeley Center for infectious Diseases and Emergency Readiness.

[2] A Reference Guide intended for emergency planners and managers, and public health practitioners working to include CBOs serving vulnerable populations in their programs is found in Appendix L and a manuscript of the research translation process is in progress.

[3] Part of the research collected baseline information on the levels of preparedness and response capacity among CBOs serving the homeless in Alameda County, CA. This information allowed targeting of needs for the community forum. Data collected with respect to the influence of the number and types of interorganizational relationships on an organization's disaster preparedness and response capacity were collected and analyzed as pilot data for future research.

connect them to each other, county response agencies and other stakeholders for a day to build and enhance relationships and discuss capacity building strategies. My intention form the beginning was to involve the community and exercise all the connections I had made working on various projects in the county. I wanted to increase CBOs' awareness about disaster preparedness and response issues, increase their awareness about what it means to be prepared and how they can become more prepared. Thus, part of this project was specifically funded to translate some of the preliminary research knowledge into actionable steps for the community of homeless service providers[1]. Appendix M provides an overview of preparing for the community forum and some of the activities that took place. A manuscript detailing the knowledge translation process including a chart of key knowledge translation factors is currently in progress.

[1] "Building, Enhancing & Leveraging Interorganizational Relationships for Disaster Preparedness and Response; a Study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless" and "Translating Research into Action: Promoting a Culture of Preparedness and Response through Interorganizational Relationships and Effective Communication with Community-based Organizations Serving the Homeless in Alameda County" were supported by a Preparedness and Emergency Response Research Center (PERRC) grant from the Centers for Disease Control and Prevention, under FOA RFA-TP-08-001, to the University of California at Berkeley (grant number 5P01TP000295). The report contents are solely the responsibility of the authors and do not represent the official views of the University of California at Berkeley or the Centers for Disease Control and Prevention.

Chapter 1 – Setting the Stage for Building Capacity

In this chapter, the central argument about the role that CBOs serving vulnerable populations might play in disaster preparedness and response. First, community-based organizations (CBOs) serving vulnerable populations are presented. Next, the potential relationship between interorganizational relationships and disaster preparedness and response capacity is considered. This discussion is followed by my review of relevant literature.

Community-based Organizations and Vulnerable Populations: A Focus on the Homeless

Community-based Organizations

Community-based organizations[1] (CBOs) are usually nonprofit service organizations that operate within a specific geographic location serving a particular segment of the community by providing a variety of human social services. They are usually not affiliated with larger national nonprofit organizations. CBOs may be local faith-based organizations (FBOs) preparing meals and providing clothing and shelter, organizations that provide specific services only such as shelter and food, year round shelters for women, children or families, or ones that specifically serve a segment of the population such as youth, low income elderly or homeless but provide additional services to the community such as child care, daily meals, health services, transportation, and/or rehabilitation. CBOs can provide critical services to their clients and may be better able to access communities that government officials may not be able to reach and often also use local volunteers that are familiar with particular neighborhoods to deliver vital information. Thus, the diversity of clients and services pose a particular challenge for response agencies in times of crises. It may in fact be impossible to include every special needs group and vulnerable population in disaster planning, but connecting with the CBOs that serve them may significantly bridge the gap. Important advantages that many CBOs have as part of the response network are tailored services to their population, language and cultural sensitivity, neighborhood connections, the trust of the community as well as the ability to assist the community is assisting those with accessibility issues [5]. However, even in a disaster situation, populations with special needs may require additional support that may not even be met by their service CBOs. For example, transportation to specialized medical facilities or assistance with translating specific post-disaster instructions may require that additional interorganizational relationships be utilized to assist those with specific needs.

Vulnerable Populations

While individuals and communities are working to build up their disaster preparedness and response capabilities, local government agencies are ultimately responsible for assisting their

[1] In this dissertation I use community-based organizations (CBOs), service organizations and nonprofit organizations to primarily refer to the CBOs that provide homeless services. Although nonprofit organizations such as Card and the American Red Cross (ARC) are also nonprofit organizations, in the context of this dissertation, they are referred to as disaster response or response organizations. Two exceptions are the Health Care for the Homeless (HCH) and Homeless Families programs, small subdivisions of the Alameda County Public Health Department that provide mobile health services to the homeless and housing options for homeless families respectively. These organizations were included as CBOs in this study.

communities and citizens in the event of disaster. Public health and other response agencies should plan **for** special needs individuals; however preparing **with** organizations that represent special needs individuals makes more sense and allows for a more in depth understanding of some of the real issues faced by individuals with specific needs. Table 1 provides an example of some potentially vulnerable individuals in a community. Although collaborating with CBOs is not a global solution to connect with vulnerable individuals, many with special needs or situations seek support from others like themselves or seek support services from organizations that understand their needs and advocate on their behalf. Connecting with a CBO may serve as an essential lifeline to the outside world.

Table 1.[1] Potential Vulnerable Populations in a Disaster

Non-institutionalized Individuals		**Institutionalized Individuals**
Disabled	Frail Elderly	Hospitals
Blind/Visually Impaired	Non-English Speakers	Half-way Houses
Deaf/Hard of Hearing	Children	Jails
Mobility Impaired	Developmentally Disabled	Prisons
Mentally Ill	Resource Poor	Mental Health Facilities
Medically Dependent	Homeless	Nursing Homes
Pet Owners	Chronically Ill	Schools
Marginalized		Long-term Care Facilities
Religious Affiliation	Ex-Convicts	Adult Day Care Centers
Sexual Orientation	Culturally Isolated	Child Care Centers
Homebound	Chemically Dependent[2]	Homeless Shelters

Homeless Populations

With respect to the homeless, CBOs are a direct link to services and information. Homeless individuals have basic needs that must be met to survive on a daily basis and are most likely to be met through a supportive community-based organization. Homeless populations are not the only type of vulnerable population that need to be considered (Table 1); however, these are among the most vulnerable during a disaster. They are unique in that each geographic location may have a different makeup of individuals encompassing the disabled, chronically ill, frail elderly, mentally ill, youth, and families among others. An estimate from the Alameda County Continuum of Care Council from the winter of 2003, documented a one night count throughout the county of 6,215 homeless, 1,755 of whom were children [6]. Since then the numbers have decreased (2009 count estimated at 4341homeless 994 of whom were children), but the number of hidden homeless has increased. There is also a large number of homeless with mental health issues as well as homeless veterans. The diversity and changing composition of the homeless leads to the growth of various organizations to meet their needs. Thus, the array of needs of homeless populations have also frequently caused the community based-organizations serving them to rely upon other service organizations to assist in meeting specific needs of their clients: public health departments may offer flu shots, food banks and food service organizations may provide food service, and health care services often provide services through local community clinics. Recent increases in homeless populations nationally have required organizations to cultivate existing relationships and foster new ones [7-12]. For example during the current economic crisis, the Contra Costa County Office of Education has teamed up with Shelter, Inc. to

[1] This table does not include all potentially vulnerable individuals in any given community and is meant to serve as an example only.

[2] Dependent on a number of substances such as alcohol and drugs.

give tutoring to homeless students. In Massachusetts, two organizations serving the homeless have merged to tackle and reduce homelessness through a variety of short to permanent housing options as well as job training, childcare and alcohol and drug counseling among others. The recent economic downturn in the U.S. has increased the diversity of homeless populations in most cities. High foreclosure rates, particularly in California, have led to an increase of homeless families [13, 14]. Organizations are no longer confined to four walls; they have operated out of gated car parks and tent cities which have sprung up in many cities such as Reno, Nevada, Santa Barbara, San Diego, Los Angeles, Fresno, Seattle and Ohio [15-17]. Furthermore, children are especially affected by homelessness as they are often displaced from their surroundings and illegally forced from the schools they had attended [17]. Thus, many organizations are taking on nontraditional roles working to provide and link these new homeless to local services as well as advocate on their behalf. In addition to these new roles that extend the capacity of CBOs to meet client needs, local examples indicate that interorganizational relationships span a variety of service sectors including public health.

Local Examples of CBO Interorganizational Relationships

In the context of the homeless service providers, CBOs engage in a number of partnerships with external actors to meet client needs. The dependence on these outside relationships may vary as the composition and needs of clients change. For example homeless service providers many have a large number of relationships with other organizations that they have built over the years based on changing client needs. Saint Mary's Center in Oakland, CA has relationships with medical and mental health providers, local food service providers, shelters, counseling, education, transportation, rehabilitation, job training, housing placement, child care and public health and the local fire department among others. In the event of an emergency or local crisis these multiple relationships provide the organization with a range of options to manage their clients better. For example since St. Mary's Center serves a population of vulnerable older adults, during flu season it called upon public health to provide on-site training. Specific types of relationships may also provide us with some insight into the disaster preparedness and response capacity of CBOs. For instance, Health Care for the Homeless, in Alameda County, CA, an organization that provides medical services to the homeless year-round, leveraged its relationship with the public health department using its expertise to craft and provide specific instructions for homeless shelters during the initial phase of the 2009 H1N1 epidemic which were then made available on the public health website (HCH, personal communication, April 2010). Another example, Collaborating Agencies Responding to Disasters (CARD), a small CBO in Alameda County, CA demonstrated that through leveraging the expertise of public health and working with local CBOs serving vulnerable populations, they tailored and created H1N1 pocket cards for distribution to a wide service population (CARD, personal communication, May 2010).

These examples illustrate the ways in which CBOs strive to extend their capacity to meet client needs. They also suggest a mechanism by which public health agencies might do the same. One approach would be for public health agencies to partner with a large number of nonprofit organizations serving vulnerable populations. However, it may be difficult for public health agencies to manage so many partnerships, especially during a public health emergency.

Alternatively, they might partner with organizations such as Collaborating Agencies Responding to Disasters (CARD) that are specifically positioned to work with the nonprofit sector. Although numbers or relationships may play a role in organizations increasing their services and thus their potential disaster preparedness and response capacity, the type of organization that has the most potential to extend public health capacity may be equally important. Public health and other response agencies may be more effective if they target CBOs and CBO networks that are attempting to increase their disaster preparedness and response capacity through a variety of interorganizational relationships, as well as particular CBOs that can act on behalf of the community in getting out critical public health messages in times of crises. Consequently, the overall public health system may be strengthened by linking to these CBOs.

Recent Collaborative Efforts - Innovative Solutions to Prepare CBOs for Disasters: CBOs Helping CBOs

The concept of partnering with CBOs to achieve preparedness and response goals is not new. Some community-based organizations have specific missions to help prepare other CBOs for disaster. Local examples include the American Red Cross, CARD, the Fritz Institute, and SF CARD [18-21]. The innovative approach used by CARD focuses on preparing community based organizations rather than using fear-based messaging to reach vulnerable and special needs populations. CARD was developed after the 1989 Loma Prieta Earthquake when it became evident that traditional responders were unable to meet the needs of vulnerable populations in the community. The need to deal with the preparedness and response needs of organizations providing services to vulnerable populations in a diverse community became quickly evident. The placed-based and population-based strategy of delivering tailored and timely preparedness activities and communication through CBOs, keeps pace with the ever-changing needs and composition of vulnerable groups.

Similar to CARD, SFCARD established in 1994, serves San Francisco organizations with a goal of assisting organizations in becoming disaster resilient through their trainings and consultations. The Fritz Institute's BayPrep program brings together local government, corporate, nonprofit and philanthropic leaders in the San Francisco Bay Area [20]. This collaborative effort aims to identify gaps in disaster preparedness and develops ways to assess and advance preparedness and response capabilities in the region. In working with traditional first responders, city and state in infrastructure, this program's goal is to model the effective partnerships for disaster preparedness between CBOs and FBOs nationally.

Organizations such as CARD work with the public health system as a whole, including the Office of Emergency Services (OES), public health departments and other response partners[1] to extend the reach of information and often transcribe and translate information to be more culturally appropriate. They also complement response agencies as they teach and employ the Incident Command System (ICS) in their operations and to their clients. This fosters use of a common language in a coordinated county-wide response where all agencies have some familiarity with the ICS approach to managing disasters. As a result, agencies and CBOs may

[1] Other response agencies may include United Way, American Red Cross, Salvation Army, Medical Reserve Corps and Community Emergency Response Teams among others.

play and increased and active role in the response and recovery picture. For example, organizations such as the Office of Emergency Services (OES), fire department and other response agencies use the ICS as a disaster response coordination approach. However, CARD has leveraged the expertise of the OES by making the ICS tool more user-friendly to CBOs allowing them to use it in their own daily settings. Leveraging the insider knowledge of OES personnel, who would neither be able to sustain the outreach nor deliver such specific trainings to CBOs serving vulnerable populations, is a key concept which deserves further investigation. In a county-wide crises or disaster situations, CBOs such as CARD and CERT representatives may have positions in the County Emergency Operations Center (EOC) in order to get information directly from CBOs in the community as well as to relay important information back. Such a coordinated and inclusive response may increase the effectiveness of a public health system response. At the same time, CBOs receiving this critical information may attempt to increase their response capacity accordingly by leveraging their interorganizational relationships to better serve their clients in the response.

Innovations in disaster preparedness such as the use of ICS to coordinate decision-making across agencies involved in response, and the concept of "all hazards" preparedness which tries to create a response framework that is applicable across any number of crises (natural disasters, disease outbreaks, terrorist attacks, etc.), are vital components of disaster preparedness and response. However, much of this work has been done without recognition of the difficult challenge posed vulnerable populations who often do not have access to normal channels of information or resources that decrease their vulnerability during a disaster. Unless the efforts to create disaster preparedness take into consideration the crucial role that CBOs can play, vital information will be unavailable in a timely manner to affect the disaster response. Thus, incorporation of a network of CBOs, who will deliver critical information to their clients through working with other organizations, into the disaster response framework and public health system as a whole, is imperative.

Given the backdrop of CBOs serving vulnerable populations and local examples of homeless service providers that may have latent capacity for disaster preparedness and response through their interorganizational relationships, an understanding of how CBOs fit into the public health system is in order.

Public Health and its Role in Disaster Management

The public health system has a key role in the management of disasters, particularly those with public health implications—which is true of the vast majority of disasters. During the anthrax attacks of 2001, public health agencies, primarily the CDC, took part in the laboratory investigations, environmental assessments, prophylaxis and clinical care among other efforts [22]. These efforts were conducted alongside law enforcement, emergency response personnel throughout the country to prevent further illnesses among those exposed. The experience triggered changes in procedures and systems to heighten awareness and detect initial cases should such a threat recur.

As residents began returning to their ravaged communities following Hurricane Katrina in 2005, public health entities conducted response activities such as monitoring illness and death,

assessing health needs in shelters and in other community organizations [23]. Public health agencies also established multiple clinics within communities to assist with medical needs. All these efforts required [coordination with multiple agencies at various levels of government that frequently reach communities through CBOs.

When the public health system responds to a local crisis, the type of response depends on the severity and number of people affected. A Department Operations Center (DOC) may be initially established to communicate within the public health department to mobilize resources such as nurses, laboratory personnel and epidemiologists. As a result, normal public health operations may be temporarily altered to follow the incident command system (ICS[1]) allowing for a more effective flow of operations centered on the crisis. In a public health emergency, the Health Officer generally acts as the incident commander, and if needed, declares an emergency in order to free up funds in support of the relief effort. While the Health Officer[2] authorizes activation of the DOC, he or she may subsequently authorize an Emergency Operations Center (EOC) if necessary. The EOC at the city and/or county level(s) coordinates allocation of resources and constant communication with the mayor, governor, and County Office of Emergency Services (OES). The Health Officer is also responsible for ensuring communication to the media is accurate and may identify consultants such as the national Centers for Disease Control and Prevention (CDC) assistance or mutual aid from nearby jurisdictions and counties to support an effective response [24]. During some public health emergencies, law enforcement works hand in hand with public health agencies to assist in mandatory quarantine [25]. Should resources become exhausted and public health capabilities exceeded, or if the event is anticipated to worsen, a county EOC is activated. Establishing an EOC enlists the assistance of other county agencies to collaborate in a joint effort to communicate and coordinate the most effective response. An EOC may contain CBO representatives to coordinate resources where they are needed most and would be housed under the operations section of the ICS structure. Additionally, a Joint Information Center (JIC) allows for information to flow into communities through varying levels of government. In the Bay Area, the Association of Bay Area Health Officials allows 12 San Francisco Bay Area cities and counties to come together to deliver clear, concise and uniform communications to be publicized in the event of crises and disasters. With the new strategy of public health as a system rather than an entity [26, 27], public health practitioners are charged with engaging in nontraditional relationships, e.g. CBOs as more active participants within the community and the public health system as a whole. This new approach may strengthen the overall public health infrastructure [28-35].

[1] The Incident Command System (ICS) is a response framework that was designed after the devastating California's wildfires in the 1970s with functionality for all entities involved in a response, with an ability to expand and contract as needed based on the circumstances and available resources. The key sections of the ICS allow for an incident commander to direct and coordinate *Planning*, *Operations*, *Logistic* and *Administrative* functions. For more information, go to http://www.fema.gov/emergency/nims/IncidentCommandSystem.shtm#item1.

[2] Health Officers are positioned within a health department at city, county and state levels. Few cities have public health departments; however in Alameda County, CA, the city of Berkeley has its own health department. In a local emergency the City of Berkeley would activate its DOC to coordinate efforts with its partner agencies such as law enforcement, the fire department, UC Berkeley and community partners such as CBOs, FBOs, hospital and community clinics as necessary and depending on the nature of the disaster.

Testing Interorganizational Relationships: H1N1 Response in Alameda County, CA

In the absence of disasters, interorganizational relationships related to disaster preparedness and responses are difficult to measure. However, the H1N1 pandemic offers a chance to test the extent to which interorganizational relationships, either number or type, were associated with the response capacity that CBOs displayed during the outbreak. Conclusions from both current relationships and the H1N1 situation may be applicable to other disasters by gaining a better understanding of what interorganizational relationships were utilized and worked well and what challenges organizations faced in meeting the needs of their clients. Thus, the results from this study may serve as an impetus for organizations to build bridges to increase their resources and capacities for times of crises.

Alameda County is a good model because it has been progressive. With a mission to work in partnership with communities, the leadership of the Alameda County Public Health Department has forged new relationships in areas such as youth development, maternal and child health as well as disaster preparedness and response. It collaborates with other county departments, medical service providers across the county, a variety of other organizations such as schools, volunteer groups, faith-based and community-based organizations to work towards a healthy community. Furthermore, Alameda County Public Health has embarked upon a 5-year county-wide Medical and Health Preparedness Strategic Visioning focused on mastering crisis communication, expanding and enhancing ongoing communications, increasing disaster plan effectiveness and leveraging leadership through collaborative engagement. This endeavor involves a public health system strengthening aimed at not only major facilities providing clinical and mental health care, but also communities and community-based organizations that serve a multitude of vulnerable populations in the county.

This overview of community-based organizations serving the homeless and local examples of interorganizational relationships sets the stage for examining the number and/or type of interorganizational relationships that CBOs build and routinely use that can increase disaster preparedness and response capacity. Additionally, other factors that may contribute to the disaster preparedness and response capacity of CBOs, and are thus potentially hypothesis generating, can be discovered.

Chapter 2 –Literature Review & Theoretical Framework

With recent disasters spurring national preparedness and response strategies, preparedness and response for and with vulnerable populations requires additional attention at local levels. Community-based organizations (CBOs) serve as an extension of resources for vulnerable populations. Leveraging between a number and variety of organizations may increase preparedness capacity and result in a better response. This issue is explored focusing on community based organizations serving the homeless. Several theoretical perspectives including interorganizational relationships, resource dependence and exchange, collaboration and leveraging existing relationships for disaster preparedness and response are reviewed. These perspectives are combined to provide a model that may explain how CBOs leverage interorganizational relationships for disaster preparedness and response capacity. How CBOs fit into public health disaster response provides an understanding of the importance of CBOs capacity and their inclusion into the broader response system. Recent collaborative efforts are highlighted in the wake of disasters using Alameda County as a backdrop for the current investigation.

Statement of the Problem

Since the World Trade Center attacks in September 2001, significant resources have been allocated to building national disaster preparedness and response capacities [34, 36-38]; most directed to public health agencies, hospitals and emergency medical services. These efforts primarily benefit the general population, though preparedness for vulnerable and special needs populations are still generally lacking [2, 39-42]. Public health agencies and other responders could not possibly meet the disaster preparedness and response needs of **all** vulnerable and special needs groups especially in inner cities where populations are often quite diverse. Furthermore, we know that vulnerable populations are more likely to suffer during disasters [43-49]. However, community-based organizations (CBOs) play a vital role in the daily lives of a diverse array of individuals within a community; they are trusted sources of support and information and often serve as direct links to some of the most vulnerable individuals in our society. They share a common language and have a deep understanding of the needs of their clients. While CBOs have yet to be fully incorporated into the public health disaster management and response framework, some evidence indicates that CBOs have played increasing roles in disaster preparedness and response albeit limited and often with little experience [50-54].

While current research is sparse, we know that CBOs do provide services during disasters. After Hurricane Katrina, community organizations played important roles in assisting disaster victims in the absence of government support [45, 55-59]; much of the shelter support came from faith-based organizations (FBOs), many of which also provided some health care. While some relationships were slowly and painstakingly formed, other pre-established relationships were better positioned to respond to the needs of evacuees immediately [57]. This was primarily due to trust and legitimacy which had been established among members. Some organizations played "a central role in the community through preexisting networks and relationships with private, city, and nonprofit partners". During periods of non-crisis, CBOs from a range of service sectors

such as education, nursing, and clinical service sectors, strive to meet the diverse needs of their growing client base by building a variety of interorganizational relationships (IORs) [18, 60-70]. Public health agencies have also forged new relationships to increase their service delivery reach [28, 30, 33, 71-74]. This construction of new interorganizational relationships indicates that organizations are dependent on each other's resources, and need to work with a number and variety of partners to function more effectively.

The field of disaster preparedness and response is quite diverse with many different actors participating both before and after a disaster. The premise for this research is that CBOs that the number and types of interorganizational relationships held by CBOs before a disaster improve its level of preparedness and response and are better able to extend the reach of public health agencies. To examine this premise, both the number and types of interorganizational relationships that CBOs have during normal operations and how they can be used for disaster preparedness and response related activities are considered. An investigation of the number and types of relationships CBOs had and made use of during H1N1 is also included.

Interorganizational Relationships

According to Barringer and Harrison, six leading paradigms describe the creation of interorganizational relationships; transaction costs economics, resource dependence, strategic choice, stakeholder theory, organizational learning, and institutional theory [75]. As part of, their review they consider the type of interorganizational relationships (IORs) most commonly found. Most of these theories are more applicable to the corporate world, resource dependence theory, and networks[1] are particularly relevant to disaster planning and therefor, are central. Several types of IORs are specifically relevant to the development of organizational capacity.

Interorganizational relationships (IORs) may vary in nature from informal to formal (e.g. memoranda of understanding (MOUs) to contractual relations). They may involve active or passive participation and transfer of information spelling out an organization's deliverables. Interorganizational relationships may take on many forms. In the business world, typical IORs include joint ventures, networks, consortia, alliances, trade associations, interlocking directorates and partnerships [71, 76, 77]. With respect to natural or man-made disasters, informal interorganizational relationships may span public, private and nonprofit sectors that permit the mutual leveraging of resources [78]. The Merriam-Webster's Online Dictionary defines the prefix inter- as "occurring between or shared by" and relationship as "a state of affairs existing between those having relations or dealings". Thus, IORs can involve exchange of resources such as goods, services, space, equipment, supplies, clients or information and may be delivered through a variety of methods without any formal agreements in place. Having a wide variety of interorganizational relationships that provide an extensive array of resources, thus, suggests that organizations have a greater choice regarding which to work with to best serve its clientele. Extending this to study disaster preparedness and response capacity, the number and type of choices may enhance an organization's ability to make appropriate decisions regarding which resource to pull from when needed. Such as a wide variety of health-sector related relationships: for example a hospital working with local diabetes management providers, or a homeless service provider working with another homeless provider to bridge the gap in services such as shelter and food, or with a network of providers such as a network of cancer service providers. These

[1] Networks in the context of this research refer to CBO-CBO and CBO-response organization relationships.

wide-ranging relationships can provide continuity of services to clients in need and increase organizational capacity.

Interorganizational Relationships in the Context of Networks

Networks are usually thought of as interorganizational relationships with a central, usually larger organization, guiding and working with other organizations in an integrated effort, often connected socially rather than through binding contracts [75]. Networks however, have played a role in the nonprofit world by providing a more efficient way to deliver services to a particular population, e.g. cancer or diabetes patients, of for a particular cause, e.g. tobacco control or post disaster service delivery [55, 66, 78-90]. These nonprofit networks are most relevant in that they usually work within a common problem domain and work collaboratively to secure the resources each needs to deliver services. According to Barringer and Harrison, "resource dependence is a primary motivator of the creation of stakeholder networks". Resource dependence theory maintain that although organizations prefer operational autonomy, they will work with external organizations to obtain needed resources [77]. As the need for resources influences interorganizational relationships and organizational networks, we might expect to see organizations seeking out many relationships to fill all the needs they have. Having many relationships to choose from, in times of disaster, an organization may be able to leverage certain relationships for a more effective disaster response. Alternatively, organizations that have many relationships from which to choose, may not be dependent on any one particular organization; i.e. they are no longer resource dependent but rather participate in exchange relationships which are more symmetrical.

Resource Exchange & Dependence

Resource Exchange

Levine and White's work [91] supports the concept of interdependencies through exchanges of resources whether clients, services or goods. "Exchange" as a conceptual framework has been used to explain the relationships between organizations. Levine and White indicate that "Organizational exchange is any voluntary activity between two organizations which has consequences, actual or anticipated for the realization of their respective goals or objectives." Levine and White focus on three conditions of exchange; accessibility to resources, objectives and functions to which an organization allocates the resources it controls, and the level of domain consensus among the organizations as part of the interdependence of the exchange system in which organizations take part. By domain consensus, Levine and White mean "the claims that an organization stakes out for itself in terms of diseases covered, population served and services rendered." Thus, exchange relationships are based on a common domain and domain consensus must exist for interorganizational exchange to take place. With a vast array of individuals and complex issues, interorganizational relationships and "mutual acknowledgement of the issues that join them" are required. This study focuses on the problem domain of homelessness. Although each sector has specific organizational goals (i.e public health pushing its preparedness and response agenda and homeless service provider's focus on meeting immediate needs of the homeless) the ultimate goal of both is to maintain a continuity of services and not let the most vulnerable individuals in our communities fall through the cracks, especially in a disaster. Christine Oliver's review of the determinants of interorganizational relationships stated "that the greater the degree of domain consensus among or between public sector or social

service sector organizations, the higher the probability that these organizations will establish relations" [92]. In order to attain its goals, an agency must have resources of some kind to allocate, receive or share. For example an effort to build community capacity around chronic disease services [93] or interorganizational relations to increase coordination among HIV/AIDS service providers [83]. With respect to increasing the disaster preparedness and response capacity of homeless service providers, leveraging a number of and specific types of cross-sector relationships may mean benefitting from resources, knowledge, space, connections that one would otherwise not consider. In other words, thinking of traditional exchange relationships in a new way for purposes other than what they are originally intended. Disaster preparedness and response is one such instance.

Resource Dependence

Resource dependence is a concept that centers on the acquisition of resources by one organization that is dependent on another. It is a motivating factor for why organizations become involved in interorganizational relationships to manage uncertainties in their operating environment and obtain the resources necessary for survival [77]. According to Pfeffer and Salancik, an organization generally prefers autonomy but collaborates when it depends on resources external to its immediate environment. Furthermore, within this context, an organization with any amount of dependency, must work collaboratively to attain the resources needed. Gray indicates that "Needs and interests are not defined by a single organization but in terms of interdependencies." [94] However, there is generally a power imbalance that can influence the relationship. A greater dependence exists when there is only one source of the needed resource, but if there are multiple sources, less dependence may affect how both organizations behave. This power imbalance may influence the organization possessing the resource to exert its power and influence. However, this may only be true if a relationship with that source has been established. For example, if a relationship with local response agencies has not been formed, outside sources may be sought, thus reducing the influence of the local source. With a larger pool of sources, however, the power and dependence of any one source is reduced. In an environment rich with the potential for exchange relationships, leveraging certain relationships for increased capacity seems promising. On the other hand, an organization with higher capacity may not need to depend on such a variety of resources and may choose to have relationships with a specific few. In the context of disaster preparedness and response resources, exchange relationships are important because as mentioned earlier, CBOs may be a valuable extension of public health agencies to vulnerable populations that are usually difficult to reach. The few response agencies that exist may need to provide its resources to the multiple homeless service providers.

Guo and Acar's examination of resource dependence, networks and collaboration among nonprofit organizations shed some light on why collaborations take place [95]. They found that older organizations with larger budgets, received government funding, had more board linkages with other nonprofit organizations and were not operating in the education, research and social service sectors were more likely to develop formal interorganizational relationships. Smaller organizations were, thus, less likely to develop formal relationships with other organizations. Resource dependence in the context of nonprofit organizations such as those studied by Guo and Acar, take on a slightly different perspective as these organizations are not driven purely by cost benefit or to gain market power such as those primarily studied by Pfeffer and Salancik. Nonprofit organizations may be dependent on certain resources for their survival, but with

respect to disaster preparedness and response capacity, a variety of informal interorganizational relationships may play a larger role in building capacity, than formal relationships focused on the main mission of an organization. This line of reasoning can extend to the number of interorganizational relationships an organization is involved in with respect to disaster preparedness and response capacity. If more IORs are an indication of low internal capacity, the CBOs with fewer IORs may have more internal capacity to deal with crises. Perhaps as Pfeffer and Salancik point out, while organizations prefer to remain autonomous, they may require outside resources early in their existence, but the drive to remain self-sufficient slowly allows them to build up their internal capacity as the organization ages, thus eventually requiring less dependence on external resources, hence, fewer relationships.

While resource exchange and dependence are discussed in a variety of contexts from health to the corporate world including joint ventures, board of directors, political action and executive succession, political action and merger [94], and from the health agency perspective in terms of its various types of exchanges, no discussions in the context of nonprofit disaster preparedness and response capacity exist. With little research evidence to guide nonprofits, and more specifically, CBO disaster preparedness and response capacity during disasters, in addition to the main hypotheses and research questions, several questions may help to understand the contribution of IORs with respect to resource exchange and dependence. What roles can CBOs play? What resources do CBOs have? What resources do CBOs need to increase their disaster preparedness and response capacity? How can they use their current relationships to augment their capacity to prepare for and respond in times of crises or during a disaster? What organizational factors contribute to an organization's disaster preparedness and response capacity?

Organizational Capacity

An organization's capacity to deliver resources varies widely. A study of organizations providing supportive cancer care found that the capacity to provide services was supported through a network of community organizations and agencies [79]. Capacity can be measured by combining the abilities of individuals to work together collaboratively or through leadership, knowledge, skills and experience [93]. While collaboration capacity is an elusive concept, difficult to assess, consisting of a wide variety of activities both subjective and objective, an alternative may be to measure an organization's capacity more concretely. Examples of organizational capacity of disaster response include such functions as debris removal, warning, evacuation, damage assessment, referral, information, counseling and transportation among others identified by Banerjee, Gillespie and Streeter [96-98]. In their studies of response agencies, organizational response capacity was a positive predictor of disaster preparedness, e.g. having a disaster plan that includes transportation and evacuation procedures, training of personnel and communication mechanisms. Although their results were ascertained in the absence of a disaster, they were analyzed in a model with disaster experience as a factor. Wenger and Drabek noted that the size of a community and presence of local disaster events are factors that influence local response capability [99]. Furthermore, much of the literature on disaster preparedness and response is based on research of response agencies themselves [31, 32, 96, 97, 100-103], consequently, we must often rely upon objective measures of preparedness in place prior to a disaster as well as an organization's experience to help inform the preparedness and potential response capacity. Therefore, this research focused on a variety of disaster preparedness and response capacities CBOs had in place at the time of the survey.

Gaining capacity for disaster preparedness and response through a variety of interorganizational relationships must be facilitated by collaborations and communication. Accordingly, to complete the theoretical framework and conceptual model (Figure 1) of a resource dependent organization building capacity through a number of varying interorganizational relationships, two process components, collaboration and communication, are briefly considered.

Collaboration and Communication[1]

Collaboration

Collaboration, an intimate partner and facilitator of interorganizational relationships is defined as "to work jointly with others or together especially in an intellectual endeavor", or "to cooperate with an agency or instrumentality with which one is not immediately connected" (Merriam-Webster's Online Dictionary). Mattessich, Murray-Close and Monsey reviewed literature on successful collaborations, identifying specific factors influencing organizational collaboration related to the environment, organizational membership characteristics, process and structure, communication, purpose and resources [104]. With numerous working definitions, collaboration is often used interchangeably with terms such as partnership, coalition and alliance [28, 72, 73, 105-107]. Mattessich and his colleagues defined collaboration as "a mutually beneficial and well-defined relationship entered into by two or more organizations to achieve common goals", and Bardach [108] as "any joint activity by two or more agencies that is intended to increase public value by their working together rather than independently." "Collaboration as an interorganizational phenomenon designed to achieve desired ends that no single organization can achieve acting unilaterally" is the definition employed by Wood and Gray [109]. Each of these definitions employs important concepts that apply to this study; 'mutually beneficial', 'increasing the public value', and 'no single organization can achieve unilaterally'. Organizations are more likely to enter into a relationship when there is some benefit such as offering information, providing direct services (such as counseling) or taking in new clients to provide specific services to, this in turn increases the value of the organization to its clients. Between these exchanges is a collaborative process that facilitates the relationships. Bardach talks about the potential to partake in collaborative activities as the focus of collaboration, which he calls the interagency collaborative capacity (ICC) (page 21). While objective components may include formal agreements, personnel, and physical space, Bardach, in examining his collaborative relationships, explains that **"**Literature is concerned mainly with the question of whether collaboration exists, and on what scale, but not with whether the "collaboration is productive." In his investigation, Bardach takes a more in depth look at "productive quality", but further concedes (page 23) that with respect to his idea of an ICC as a "state of minds", an outside observer may find it difficult to "know what is in such minds" as it may be constantly changing (page 23). Collaboration nonetheless exists, often producing increased capabilities for the organizations involved and also increasing its value to consumers.

[1] An extensive review of collaboration and communication literature is not within the scope of this dissertation and is therefore not discussed in the theoretical framework and conceptual model. Theory and literature on collaboration and communication are quite extensive, each with its own set of measurements and conceptualization. However, as some data were collected for this research project on communication mechanisms utilized by participating CBOs, one table is included in the results section to summarize the findings without further discussion in Chapter 6. Their inclusion here is to highlight the importance of each as facilitators of interorganizational relationships.

Collaboration and Domain Consensus

Another important aspect of collaboration, particularly for community-based organizations, is a commitment to their service population. Collaborative relationships are based on meeting the needs of clients as well as on the issues that are jointly and collaboratively confronted. Gray [94] focused on the interorganizational collaboration problem domain rather than on an individual entity (CBO, an agency or department within). Wood and Gray [110] also examined collaboration in the context of the problem domain, focusing on relationships within interorganizational systems rather than on specific organizations. Within the problem domain of homelessness, more organizations and dedicated individuals may result in productive relationships that adapt as conditions change and needs arise [94]. With a variety of organizations focusing on a similar population they are more likely to understand each other's needs and inform each other about potential resources from which each can benefit. Since most homeless individuals are transient, collaboration among homeless service providers would ultimately benefit by collaborating as this would provide continuity in care for the client.

Communication

Communication is a process that takes place between a sender and receiver and may be transmitted through a variety of strategies. Austin presents subjective measures such as trust, respect, whether communication is constructive, how communication is managed and by whom, internal and external communication mechanisms, publicity of the partnership and coordinated external communication plan(s) [111]. Many of these factors provide valuable insight into the quality of communication. Mattessich also identified key factors of interorganizational collaboration such as open and frequent communication, established informal relationships and communication links [104]. Bardach emphasizes "trust, experience, availability and competence'; subjective measures which are equally important in IORs. Similarly important are the communication mechanisms used. During crises and disasters, communication is crucial and failures can seriously hinder disaster relief efforts [47, 112]. Gray and Hebert reported on hospitals after hurricane Katrina noting that communication systems were disrupted because of power failures, and destruction of cell phone and radio repeater towers hindered restocking of essentials such as drugs, blood, linens, and food. Hospital personnel felt forgotten because all communication with the outside world had been severed; "the failure of communication modes exacerbated all the hospitals' other problems". Communication systems and strategies may also play key roles in organizations and government agencies responding to public health emergencies and may be a key link between vulnerable populations and the CBOs that serve them. For example communication in the context of trust was also discussed by Longstaff and Yang [113]; information received may not always be followed if a trust relationship is not established beforehand. Additionally, Milleti and colleagues, referenced in Blanchard-Boehm's work [114], proposed several characteristics of messages 1) content and style, 2) aspects of the channels through which messages are conveyed 3) attributes of the frequency with which messages are given and 4) traits associated with individuals as well as organizations (i.e. source credibility from which the message arises. Although all of these are important factors, source credibility is specifically relevant to CBO-CBO and CBO-response agency relationships. For collaborative relationships to exist, all entities must communicate, and while mechanisms vary, what is used on a daily basis is also then relied upon during a crisis.

This brief mention of the importance of collaboration and communication in carrying out interorganizational relationships comes from an extensive literature that can be investigated; each rightfully deserving its own focus and depth of understanding. Both are important in the mechanics of IORs and are noted as factors facilitating the relationships in the conceptual model for this research. It is however, beyond the scope of this research to explicate their importance in the conceptual framework.

Building Capacity through Existing Interorganizational Relationships: Leveraging Interorganizational Relationships for Disaster Preparedness and Response

In the light of examining the interorganizational relationships of nonprofit homeless service providers in resource dependent environments where a variety of exchanges take place, an in-depth understanding of leveraging in the context of disaster preparedness and response capacity is in order. In the event of a disaster, additional capacities needed may fall outside of the jurisdiction of any single CBO. For example, individuals with chronic illnesses may need additional assistance with medical support, homebound elderly may require transportation services to evacuation centers and non-English speaking immigrants may need assistance to link them to health services. Not all of these services are likely provided by one CBO or a CBO partnered with a public response organization. Disaster related activities may require a number of varying interorganizational relationships. Earlier examples from the aftermath of Hurricane Katrina, provided some insight. For example better connected organizations that have built up trust have a pre-established relationships are better able to partner in response to victims' needs in the aftermath of a disaster [57]. While there is no evidence that these collaborations were 'pre-exercised', (i.e. had discussed disaster plans ahead of time, thought jointly about evacuation routes, pooled resources for a disaster response) they were able to work together to care for victims through their knowledge of each other and of each other's resources. Leveraging interorganizational relationships before a disaster for increased disaster preparedness and response is, thus, an important concept. For example, a large local homeless shelter that receives meals from a local food service provider may be able to leverage that relationship to distribute announcements for a flu vaccine clinic hosted on the shelter's premises. The food service provider may be able to reach the other organizations it serves such as low income senior residences and other homeless care providers in the area. With the resources of public health entities, the space of the shelter and the span of clients, the value of each of these organizations to its clients and the community as a whole has increased. This feature of an organization to be flexible as needed to increase its value to its clients is termed adaptive capacity [115].

Interorganizational Relationships as Malleable and Adaptive

Collaborative capacity i.e. the ability to form interorganizational relationships, has been noted as having the quality of being malleable or expandable [108]. Mattessich and his colleagues similarly identified flexibility as an important factor contributing to collaborative work; remaining open to different ways of operating to accomplish tasks. Adaptability was also noted as an important feature; conditions in the environment may require a change in goals. The concept of adaptive capacities [115] is key to making the most of each interorganizational relationship. These important features allow the concept of leveraging interorganizational

relationships and thus potentially increasing an organization's capacity, to be considered the key component in the conceptual model of this research. Thus, a useful definition combines and summarizes key components of the theories and concepts above that help guide this study of interorganizational relationships and organizational capacities within the problem domain of homelessness: ***Interorganizational relationships are exchanges of resources facilitated through collaboration and communication with other organizations, that may be leveraged to better meet the needs of clients within a shared problem domain, potentially increasing the capacity and thus the value of the organization to its clients.***

Despite this hypothetical increase in value to clients, leveraging of relationships is difficult to measure objectively. Its essence in practice is captured through specific examples seldom seen in literature. The concept of leveraging relationships has been a term used in a variety of contexts. However, rarely is the term explicitly defined in whatever context it is used; the term is typically used as a "common knowledge term"-not as something to be measured. Leveraging relationships should therefore seem quite straight forward, but what does it really mean? The Merriam-Webster Online Dictionary defines leverage as "the action of a lever or the mechanical ***advantage gained by it***". As discussed earlier, the advantages gained by leveraging a relationship would indicate that there is some benefit or improvement. In the context of disaster preparedness and response, leveraging relationships however, may take on a slightly different meaning, such as the ***potential*** for increasing capacity. Accordingly, it means utilizing resources; knowledge or skills that one entity has that can be augmented for a greater purpose in conjunction with the resources, skills and/or knowledge of another entity.

Although the concept of leveraging is often used in the context of disaster preparedness and response, it is rarely used consistently. The American Red Cross talks about leveraging relationships but does not explain what that actually looks like in practice[1]. The word is mostly used in the sense of utility, i.e. using a relationship in the context of its intended purpose. One example refers to leveraging relationships "so that they [leveraged relationships] result in additional diverse volunteers, donors, partners, vendors and customers", which sounds more like a recruitment effort [116]. CARD also talks about leveraging relationships and indeed they are truly trying to make the word come across the way it is intended; the use of one organization's unique capabilities in conjunction with the capabilities of another to amplify the outcome. One of the examples provided earlier was CARD's ability to use the knowledge and expertise of the public health department. This not only increased the capacity of public health efforts to convey information, but also increased the capacity of the CBO who was in turn able to turn the information into action at the client level. The concept of leveraging has also been noted by Stewart, Kolluru and Smith in their examination of public and private partnerships [105]. They talk about "leveraging the inherent adaptive capabilities of the public and private sectors to impact community resilience", but do not go into detail or provide specific examples of what the benefit of the leveraging is. Thus, without clarity around the meaning of leveraging relationships, organizations who do not consider their overall capacity may not realize the potential to enhance and/or leverage the relationships in which they are involved. Let's say an organization may have various relationships; with public and private agencies, small organized groups within a community, faith-based organizations or those supported by local government

[1] This observation is based on literature found on the internet.

such as Community Emergency Response Teams (CERTs)[1]. These relationships could act as rich sources of information and collaborative activities. Each one needs to be explored in detail. Made aware of this potential, organizations may realize their lack of capacity and thus, attempt to enhance their relationships or depend more on a variety of these types of relationships to increase their capacity.

Thus, leveraging in the context of increasing capacity for disaster preparedness and response, may mean taking ***advantage*** of resources, knowledge, space, connections that one would otherwise not consider. In other words, using relationships in a new way for purposes other than what they are originally intended. Using an organization's space for gathering or for an event that both organizations have in common is one thing, but then thinking about using that space in an emergency for shelter or as a vaccination site for the community is quite different. Not only does the CBO's clientele benefit from this 'out of the ordinary' use of space, but so does the community in which it is embedded. Similarly, leveraging a planned event to gain access to a greater number of potential clients or partners to work with could possibly fit the definition of leveraging as an advantage "being gained". What about using relationships in a different setting like pre-disaster planning/preparedness activities or post-disaster response support and coordination? Would this be considered leveraging? I would certainly consider this at least in the realm of true leveraging. One could also think about leveraging relationships in a 'pre-use' sense, e.g. utilizing pre-established relationships with response agencies and organizations through pre planning and connecting with each other to gain 'easier access' and 'credibility'. In times of crises, 'pre-use' is in essence leveraged to the effect of greater influence on specific populations when recommendations are provided to the public.

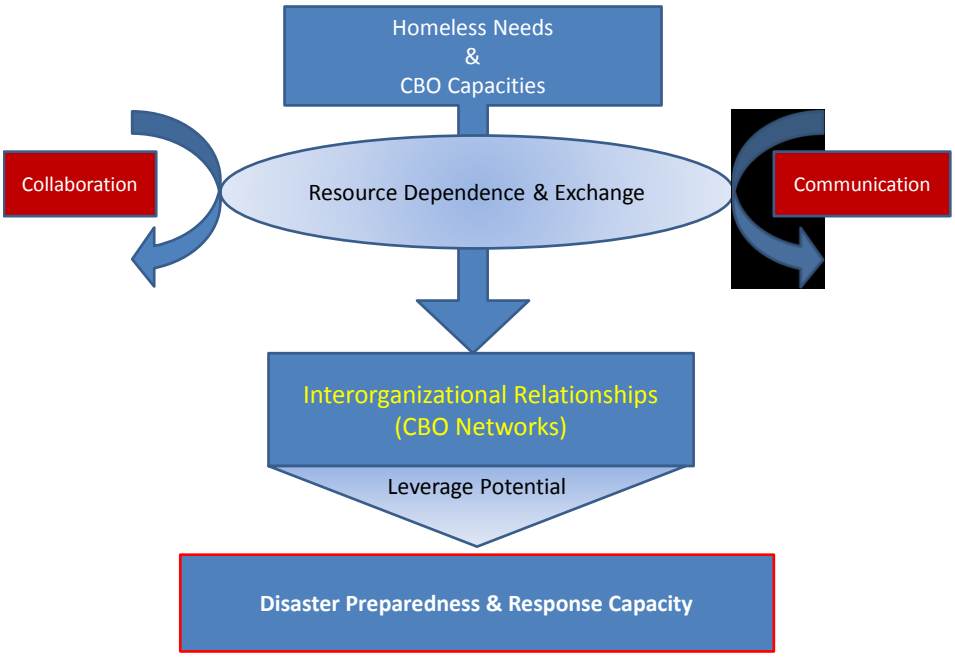
Leveraging relationships at various levels within an organization is also important. Typically, management participates in and has access to relationships and knowledge that can change the culture of an organization, but rarely does this knowledge get diffused throughout the organization. In addition, management may have different levels of relationships such as executive relationships, community relationships and relationships with staff and clients. On the other hand, ground level staff often have more in-depth knowledge of staff and clients. Each of these different relationships has the potential to be leveraged to enhance disaster preparedness and response capacity. Good leadership for example can augment the productivity and hidden skills of staff to attain something beyond the mission of an organization. Building leadership capacity requires either the existing leadership to be enhanced or new leadership to be developed [93, 117].

Theoretical Framework & Conceptual Model

Elements of the above theories and concepts are incorporated into the study's conceptual model (Figure 1) that support the idea of interorganizational relationships being driven by resource dependence through the exchange of resources for increased capacity.

[1] Community Emergency Response Teams (CERTs) are teams trained through the local fire department or other local sponsoring agency. They are charged with caring for the immediate needs of their families, neighbors and community in the event of a disaster. They are able to perform first aid, shut off gas and electricity, suppress small fires, perform light search and rescue operations and organize themselves into functional teams. Go to http://www.citizencorps.gov/cert/ for more information.

Figure 1. Theoretical Framework and Conceptual Model



The homeless are vulnerable individuals with specific needs, many of which are met through the capacities of community-based organizations serving them. Respectively, CBO capacities reflect many of the needs of their clients. However, any one CBO cannot meet all of the diverse needs encountered by this vulnerable population. Symmetrical exchanges between organizations and asymmetrical relationships in which resource dependence occurs, result in the formation of IORs facilitated by collaboration and communication[1], to meet these needs. A specific type of interorganizational relationship that was relevant in the literature review, a network, indicated that more connected CBOs, can choose from their current relationships to better meet client needs and potentially also make better response partners during a disaster. An organization's interorganizational relationships may also be used to increase its capacity for disaster preparedness and response. This additional use, or leveraging, of an organization's relationships may act therefore, as a moderator of organizational capacity for disaster preparedness and response. An organization's leverage potential therefore reflects the potential the organization has to use its relationships to build disaster preparedness and response capacity.

In summary, despite the lack of literature on leveraging interorganizational relationships for disaster preparedness and response capacity, the use of literature and theories of organizations support the development of the model guiding this investigation. Community-based organizations serve as a key link between vulnerable populations and response organizations during a disaster. Linkages between these organizations can serve as leverage points for

[1] This dissertation focuses on the blue sections of the model. Although collaboration and communication are important concepts, they are outside of the scope of this dissertation.

increasing disaster preparedness and response capacity. Organizations with more linkages may have greater capacity. Organizations with more linkages may have greater capacity. Alternatively, organizations may partner with response organizations that can provide the relevant services providing less reason to partner with a large number of organizations. Consequently, the two main hypotheses provide alternative and contradictory explanations for the role of interorganizational relationships. One maintains that more IORs might be associated with disaster preparedness and response (DPR) capacity in that the number of interorganizational relationships (IORs) might allow for greater leverage on the part of CBOs during a disaster. And the other from Pfeffer and Salancik's resource dependence theory, might anticipate that, to the extent that IORs indicate more dependence, we might assume that high capacity CBOs will have fewer IORs and display greater capacity in a response. In addition to these two main hypotheses, additional factors that may contribute to disaster and response capacity are explored.

Research Hypotheses

The hypotheses below are derived from resource dependence theory which might lead us to believe that more interorganizational relationships lead to more organizational capacity. However, there is also the potential that high capacity organizations will have fewer interorganizational relationships as they have more internal resources. Thus, these two hypotheses allow the exploration of contradictory explanations.

Resource dependence theory [77] holds that while organizations prefer to maintain their autonomy and independence, conditions in its operating environment force it to work with other organizations to attain the resources it needs and, to the extent possible, reduce its dependence on other organizations. Thus in the context of disaster preparedness and response capacity, additional interorganizational relationships would likely indicate additional capacity. Furthermore from Gray [94], we know that organizations are defined by their interdependencies in that resources whether clients, services or goods are exchanged [91] and likely to occur with a problem domain [92]. However, organizational interdependencies may not necessarily indicate more relationships, but rather a few specific relationships that are purposely meaningful to build a particular capacity. In addition, organizations may consider their relationships outside of their normal context and include capacity building strategies that include disaster preparedness and response related activities. The concept of adaptive capacities [115] is key to making the most of each interorganizational relationship, as organizations will remain open to operating in different ways to meet a variety or organizational needs. This first set of hypotheses thus allows the exploration of the relationship between number and types of interorganizational relationships.

1. ***There is a positive relationship between the number of interorganizational relationships (IORs) and an organization's capacity for disaster preparedness and response.***

   Null Hypothesis 1
   There is no relationship between an organization's number of IORs and their disaster preparedness and response capacity.

Alternative Hypothesis 1.1
An organization with few interorganizational relationships has more disaster preparedness and response capacity.

Alternative Hypothesis 1.2
An organization with many interorganizational relationships may leverage interorganizational relationships for increased disaster preparedness and response capacity.

Building on the above and using resource dependence theory as the motivation for resource poor organizations to obtain outside resources through interorganizational relationships, an organization with high general internal capacity may also have internal capacity for disaster preparedness and response. Thus, an increase in internal capacity may lead organizations to engage in fewer interorganizational relationships. Interorganizational relationships, therefore, may therefore be inversely proportional to capacity as high-capacity organizations might serve clients using mostly internal resources. This second set of hypotheses allows the exploration of the relationship between an organization's general capacity and its capacity for disaster preparedness and response.

2. ***There is a positive relationship between an organization's general capacity to serve its clients to its disaster preparedness and response capacity.***

   Null Hypothesis 2
   There is no relationship between an organization's general capacity and its disaster preparedness and response capacity.

   Alternative Hypothesis 2.1
   CBOs with high organizational capacity also have high levels of disaster preparedness and response capacity.

   Alternative Hypothesis 2.2
   CBOs with high organizational capacity also have high levels of disaster preparedness and response capacity and thus fewer interorganizational relationships.

Additional & H1N1 Related Questions

3. Do organizations with many interorganizational relationships have relationships that can be leveraged for disaster preparedness and response?

4. How can CBOs build, enhance and/or leverage interorganizational relationships for disaster preparedness and response activities?

5. Do CBOs with more interorganizational relationships also have a higher H1N1capacity?

6. Do CBOs with more interorganizational relationships with public response agencies have an increased level of H1N1 capacity?
7. What does the potential leverage score indicate and what is its utility?

Chapter 3 - Research[1] Methods

Mixed methods techniques were employed to carry out the three distinct components of the dissertation: a literature review and stakeholder interviews with partner organizations which informed the metrics and survey questions, a cross sectional survey and in-depth follow-up in depth interviews. A priority sequence model was applied where quantitative methods preceded qualitative methods [118]. This model allowed for the quantitative work to be the initial method of inquiry and the qualitative work to inform and complement the quantitative data collected. Qualitative data helped to interpret survey results as well as gain a more in depth understanding of CBOs' interorganizational relationships.

I. Cross-sectional Survey of CBOs

A cross-sectional survey was conducted among CBOs serving the homeless in Alameda County (n=102). As mentioned earlier, this population is quite diverse with high resource needs[2]. As a result, CBOs serving them are equally likely to be quite diverse in the services they provide. The interorganizational relationships they exercise to provide services are used as an estimate of their organizational capacity at a single point in time. CBOs were the primary unit of analysis and were defined as organizations providing direct services to homeless individuals in Alameda County, CA, including sub-units of government agencies, other public, private, nonprofit, and voluntary organizations and groups and faith-based organizations. The purpose of the survey was to explore and identify the influence of IORs on an organization's disaster preparedness and response capacity while also investigating other potential factors such as an organization's general capacity, number of years in operation, annual expenses, number of relationships with disaster response organizations and communication mechanisms utilized. A database in Excel of CBOs serving the homeless in Alameda County, CA served as the source for participant recruitment.

Recruitment: Connecting with Community-based Organizations

All CBOs serving the homeless in the database were invited by telephone using a recruitment script (Appendix B) to participate in the research study followed by an email explaining the study in more detail. Recruitment occurred from August 31, 2010 through May 31, 2011. An attempt was made to contact every CBO on the list to be invited to participate in the survey. For organizations where no person answered, a message was left with a call back number. Contacts were tracked on a CBO Survey Log Sheet (Appendix C). CBOs agreeing to participate in the study completed the survey by the method of their choice: mail or email, over the telephone or in person. Questionnaires were preceded by a letter of introduction (Appendix D) explaining who is conducting the survey, the purpose of the survey and the benefits anticipated. The approximate time to complete the questionnaire was 30 minutes. Each organization was contacted up to 8 times by phone or email. Organizations agreeing to participate received up to 4

[1] This research was approved by the Committee for the Protection of Human Subjects at the University of California, Berkeley number 2010-03-1041.
[2] See section on Community-based Organizations and Vulnerable Populations.

follow-up calls or emails reminding them to send in their survey responses. Several organizations preferred a questionnaire mailed to them rather than emailed. Several other organizations preferred to answer the survey in person. A few organizations that were not reachable by phone were contacted directly at their site.

Survey Sample Sources

To find CBOs providing services to the homeless in Alameda County, a variety of sources were used. First, the Alameda County 211 information and referral service[1] [119] was contacted that lists organizations serving a large variety of needs. The service is available 24 hours per day and 365 days per year. Information is available online through a search engine that accesses a large database, in-print or by phone by dialing 211. In addition, larger county-level organizations[2] that specifically serve the homeless were contacted to identify smaller CBOs that serve these groups. An internet search was also conducted to locate additional organizations that serve the homeless using the key words HOMELESS, SERVICE ORGANIZATIONS THAT SERVE HOMELESS, and ALAMEDA COUNTY SERVICES FOR THE HOMELESS as noted here and in a variety of other combinations. A database of 326 organizations was initially developed from these combined sources. Once each listing was verified and cleaned to remove duplicates and organizations that do not serve homeless, a resulting sample[3] of 102 organizations was available for the study.

Project Partners

I enlisted the assistance of a few project partners who were interested in increasing the disaster preparedness and response capacities of CBOs serving vulnerable populations in the county.
Given my previous work in the county through various projects such as with the Alameda County Strategic Visioning Committee, the Center for Infectious Diseases and Emergency Readiness (CIDER) and various disaster preparedness and response exercises and events with the Alameda County Public Health Department, I learned about key stakeholders in the county interested in engaging CBOs serving vulnerable populations. As I approached potential project partners, I also requested recommendations for additional stakeholders. Project partners were asked to become familiar with the study, provide recommendations about what CBO representatives to engage with, and to take part in the community forum. Project partners were recruited between June 2010 and January 2011. My main project partner was Collaborating Agencies Responding to Disasters (CARD) that was available through the duration of the project. Project partners also provided input and recommendations into the design of the survey instrument, recommended who at the CBO to interview, and provided project endorsement during recruitment. The final list of project partners included:

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[1] Eden I&R (211) is a free non-emergency service that is confidential and provides access to hundreds of community services in Alameda County, CA by dialing 211. In the event of an emergency or disaster 211 will connect callers to recovery and relief resources. Go to http://www.211alamedacounty.org/ for more information.

[2] The Alameda County Homeless Action Center. http://homelessactioncenter.org/, Alameda County Public Health Department. Homeless - Health Care for the Homeless Program (HCHP), EveryOne Home, a local housing advocacy organization to end homelessness. http://www.acphd.org/user/services/AtoZ_PrgDtls.asp?PrgId=49

[3] Although all of the organizations in this list were contacted, it is still considered a sample as there are many other organizations in the county that provide services to the homeless that may not be listed on the internet, in the 211 system or may be faith-based organizations that are not formally registered nonprofit organizations.

- ***CIDER/Cal PREPARE***
  Center for Infectious Diseases & Emergency Readiness, UC Berkeley
- ***CARD***
  Collaborating Agencies Responding to Disasters
- ***FESCO***
  Family Emergency Shelter Coalition
- ***EveryOne Home***
  Alameda County's Regional Advocate to End Homelessness
- ***Eden I&R***
  Alameda County's Information & Referral Service
- ***ACPHD***
  Alameda County Public Health Department
- ***City of Berkeley Health Services Department, Public Health Division***

The recruitment and utility of project partners is discussed in more detail in Appendix M.

II. Survey Design

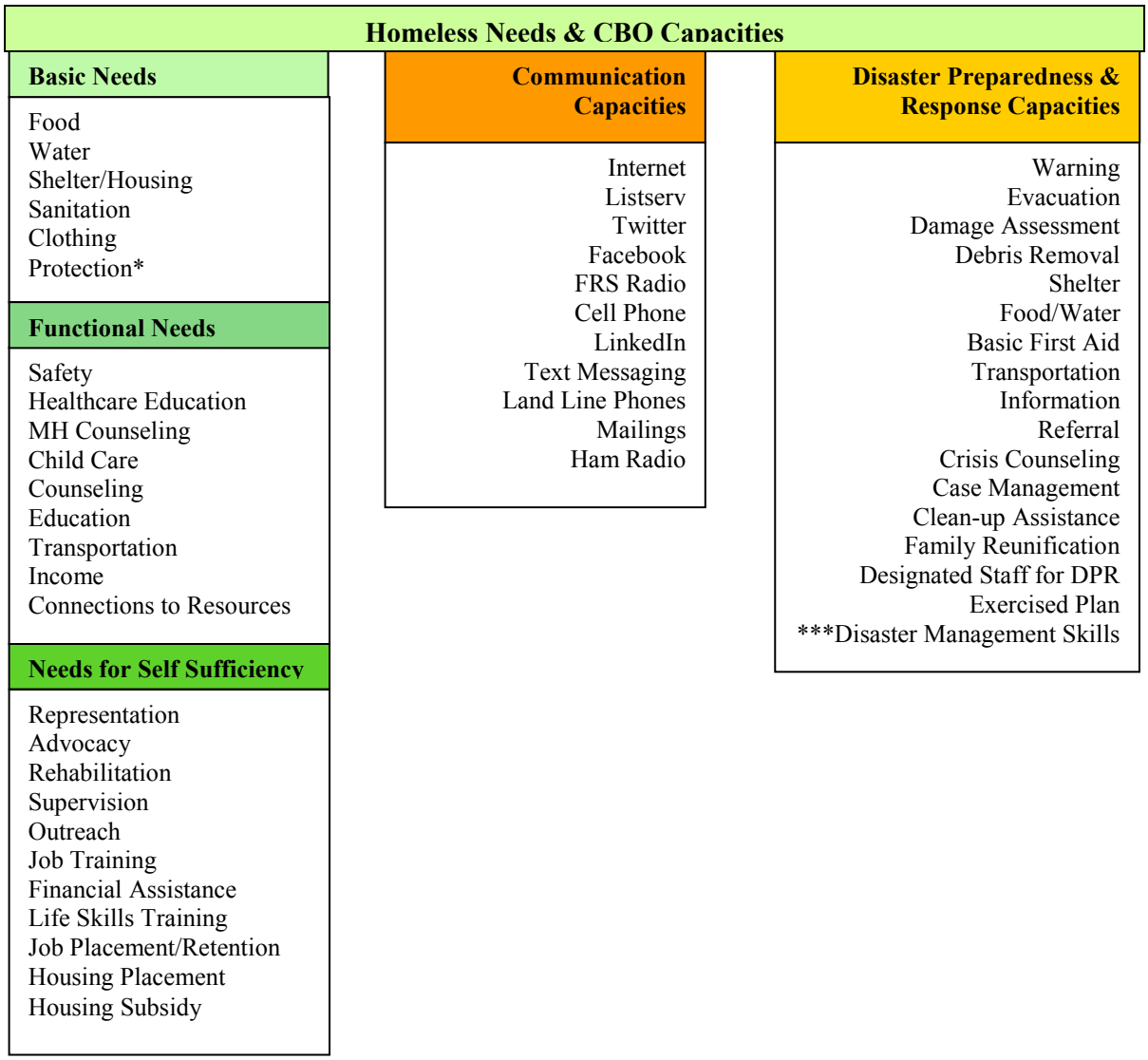
Through existing literature and Alameda County stakeholder interviews, key general organizational capacities and those needed for disaster preparedness and response were identified. A preliminary list (Figure 2) was developed. I assessed measurements of IORs, resilience, organizational capacity and disaster preparedness and response capacity. From the literature review, an appropriate survey tool was developed. It measured capacities, relevant communication mechanisms, interorganizational relationships of CBOs and disaster preparedness and response activities, all concepts in the theoretical framework.

Survey Instrument & Data Collection

The survey instrument (Appendix A) was created using elements and results from the previously mentioned pilot study[1], concepts from Zahner [30], Banjeree and Gillespie [96, 97], Gillespie and Streeter [98], and more recent guidance on disaster preparedness concepts [120] as well as various other publications with input from various county stakeholders[2]. The main domains included general organizational capacities, disaster preparedness, the number of interorganizational relationships, relationships with response agencies and communication mechanisms used. The instrument also included general organizational information such as size of the organization, number of staff and volunteers, location, types of clients, number of clients served annually, and number of years in operation. General organizational capacity, disaster preparedness and response capacity and a potential leverage score were calculated from the data collected. Scenarios incorporated into the questionnaire placed the respondent in a more realistic situation in response to questions. Questions pertaining to H1N1 Influenza events up to the day of response were used to determine the relationship of an organization's capacity with respect to the 2009 H1N1 epidemic.

[1] See Introduction, page ix.
[2] CARD, EDEN I&R, ACPHD, BOSS, FESCO

Figure 2[1]



*Protection here means protection from the environment/elements such as extreme heat, extreme cold, etc.
** Safety here is differentiated form Protection under Basic Needs as a feeling of trust and working with individuals who care to attain functional needs.
*** For example, clear thinking about what needs to happen, what resources are available, and how to organize them in preparedness and in disaster situation.

Measures of Interest

Outcome (dependent), predictor (independent) and other variables are listed in Figure 3 with corresponding measurements in Appendix E. Variables used in regression analyses are in bold and are explained in further detail below. A copy of the survey can be found in Appendix A.

[1] **Basic Needs:** needs that are required to survive from day to day. **Functional Needs:** needs that are required to functional "normally" in society and begin to make a transition to self-sufficiency. **Needs for Self Sufficiency:** needs that are required to become self sufficient.

Outcome Variable - Disaster Preparedness & Response Capacity
Disaster preparedness and response (DPR) capacity was calculated by adding the total number of reported DPR capacities in place at the time of the survey ('in place now') and checked off by the respondent on the *General Disaster Preparedness and Response Capacities* table. This table consisted of a 35 item checklist with items such as, off-site documentation backup, exercised written plans, evacuation of personnel, budgeting for disaster preparedness (see Appendix A). For organizations that did not check off any capacities, the capacity variable was designated zero (0).

H1N1 Capacity
H1N1 capacity was calculated by adding the number of H1N1 capacities checked off by the respondent on the *CBO H1N1 Capacities* table, such as, water and other fluids for hydration, alcohol-based hand rubs, bed linens/blankets, information regarding the flu. For organizations that did not check off any H1N1 capacities, the capacity variable was designated zero (0).

General Organizational Capacity
General organizational capacity (No. General CBO Caps.) was calculated by adding the number of general CBO capacities checked off and/or added to the 'open response' boxes (education, counseling, classes, other) on the *CBO Capacities* table in Column 1 under Basic Needs (e.g. food, water, shelter, hot meals), Functional Needs (e.g. health care, financial assistance transportation) and /or Self Sufficiency Needs (e.g. safety/protection, advocacy/representation, job training, life skills training). Participants were asked to check the box of a corresponding capacity only if they have a 'medium' to 'high' capacity defined by, for example, having exercised the capacity, having the materials on site, or having a formal agreement in place.

Interorganizational Relationships
Interorganizational relationships were calculated by adding the number of relationships (*Corresponding Number of Relationships*) corresponding to each capacity checked off. For example if the organization checked off the food/water box, and they work with Safeway, Bay Area Food Services, Starbucks, and McDonald's and two local volunteer organizations, the number 6 would be written in Column 2 corresponding to the Food/Water capacity checked off in Column 1. Interorganizational relationships (IORs) for this study were defined as exchanges occurring between or shared with other organizations. These include goods, services, space, equipment, supplies, clients or information delivered through a variety of methods that benefit the service population in the specified problem domain. Services may be provided directly or indirectly through activities that enhance the capacity of the organization to serve its clients. This broad operational definition allowed for a variety of exchanges to qualify as IORs and may thus vary in nature from informal to very formal and structured, may involve active or passive relationships or participation, and transfer of information that directly benefits clients. Furthermore, organizations were asked how many of their IORs include MOUs or other documentation that formalizes a relationship. IORs that were included represent government agencies, other public, private, nonprofit, and voluntary agencies and groups as well as residents in the community who volunteer goods or services. In the event that no IORs were listed, the IOR variable was defined as zero (0).

Capturing both general organizational capacity and the number of interorganizational relationships allowed both vertical and horizontal dimensions of capacity to be captured, i.e. the types and number of service provided by CBOs. Additionally, IORs related to disaster preparedness and response activities were examined to identify what the relationships are additionally used for (*What is Provided or Shared* on the *CBO Capacities* table). These results were used to determine relationships that may be leveraged and/or enhanced, and to inform the focus of the community forum.

Annual Expenses and Years in Operation

Annual expenses were collected from a checklist stratified by 1) less than $100,000, 2) between $100,000 and $250,000, 3) between $250,000 and $500,000, 4) between $500,000 and $750,000, 5) between $750,000 and $1,000,000 and 6) greater than 1,000,000. Number of years in operation was self-reported. For organizations that provided a range of years in operation, the upper limit was used for data analysis.

Number of Relationships with Response Organizations

Number of relationships with response organizations (Response Org. No.) was calculated by adding the number of unique response agencies checked off on the CBO *Disaster Preparedness and Response Capacities* checklist under *Relationships with Public Response Organizations*. These included for example public health, fire department, and CERTs as well as an 'other' response option.

Percent Potential Leverage

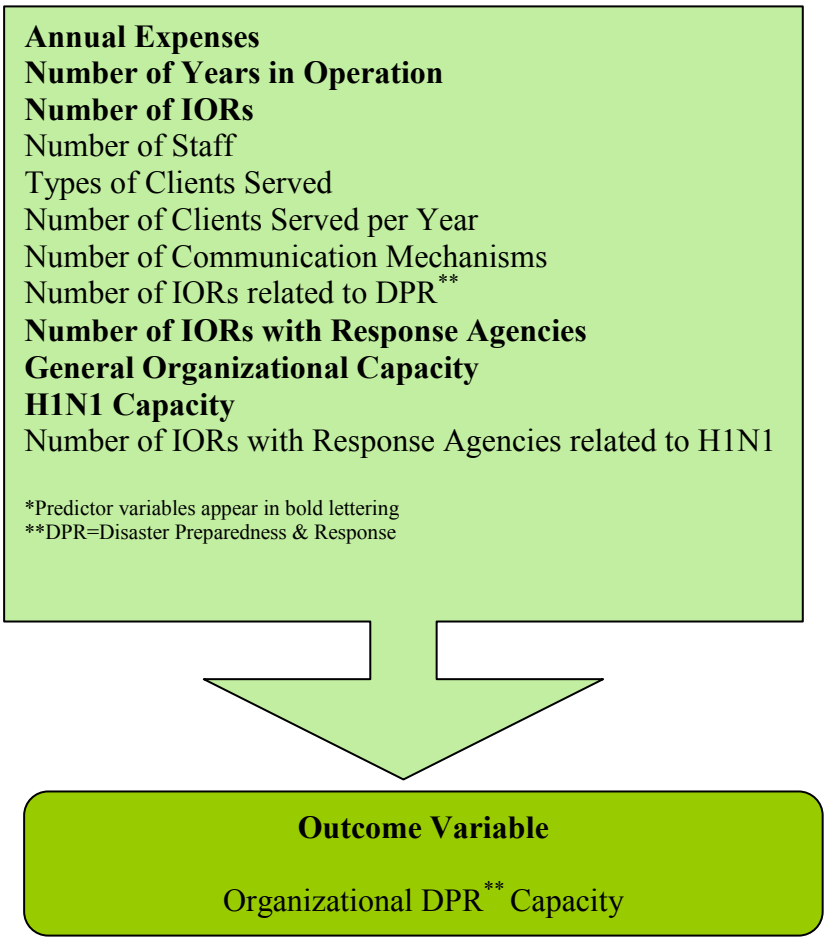
The potential leverage reflects the *potential* of IORs that can increase an organization's capacity for disaster preparedness and response activities[1]. The potential leverage is based on the number of IORs that are not already used for disaster preparedness and response activities but may be leveraged to enhance those activities[2]. The percent potential leverage is calculated using the total number of IORs an organization has with respect to its general organizational capacities minus the number of relationships that are used for disaster preparedness and response activities divided by the total number of relationships multiplied by 100 to give a percentage.

$$\frac{\text{Total IORs - IORs utilized for DPR activities}}{\text{Total IORs}} \times 100\%$$

[1] Disaster preparedness and response activities with respect to CBOs refer to activities conducted between organizations in addition to the normal operations (services that the organization is expected to provide) that augment their disaster preparedness and response capacity. Some of these activities may include sharing and discussing disaster plans, discussing resources in the context of a disaster response, discussion of how to use each other's space in the event of a disaster, conducting joint trainings such as first aid and ICS provided by CARD, conducting joint preparedness/safety meetings periodically, understanding the unique capabilities each organization has with respect to a disaster response, working together to stockpile supplies such as food, water, medical supplies on site or at a shared off-site location, discuss communication strategies and providing space for public health as a vaccination or distribution site.

[2] The survey did not measure or determine which IORs could be leveraged for disaster preparedness and response activities. In-depth interviews and open ended H1N1 questions however provided some insight.

Figure 3. Predictor Variables* & Measures of Interest



Data Input and Analysis

Data were entered into Qualtrics® summarized then exported into Excel for data cleaning and organizational. Variables of interest for hypotheses testing were exported into STATA 12.1. Basic descriptive analyses were conducted using Excel. Linear regression analyses were conducted using STATA 12.1. Outcome (dependent), predictor (independent) and other variables are listed in Figure 3 with corresponding measurements in (Appendix E). Multiple linear regression analyses were conducted with the dependent variable disaster preparedness and response capacity and the independent variables number of IORs, annual expenses and years in operation. Independent variables were selected based on literature and the predictor of interest (see section on organizational capacity). The equation being $y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$, where y is the dependent variable and X_1, X_2 and X_3 are the independent variables; ε is the random error variable of the model. Similar models were constructed for the independent variables related to the number of general CBO capacities (No. General CBO Caps.) and for the number of response organizations (Response Org. No.). A model with H1N1 capacity as the dependent variable was also run with the number of general CBOs capacities, annual expenses and years on operation as independent variables.

Due to the small sample size, the number of independent variables that could be placed into the model was limited. The general rule is 1 independent variable for each 10 observations; with 37 observations, 3 independent variables were selected. Additionally, given the small sample size, the p-value was set to $p < 0.05$ as the criterion for statistical significance.

III. Qualitative Interviews

Interviews were conducted with CBOs that showed relatively higher disaster preparedness and response capacity in the quantitative survey. Organizations were selected based on 1) the number of general *CBO Disaster Preparedness Capacities* (a 35 item checklist on the survey) had in place at the time the survey was filled out by the respondent. 'More prepared' organizations were those with having 10 or more DPR capacities checked off. Qualitative interviews served as an opportunity to gain in depth understanding of the organization's relationships as well as to gain insight into strengths and unique capabilities as well as vulnerabilities. Interviews were semi-structured to allow for respondent narration within a known context.

Interview Guide & Data Collection

CBO representatives were interviewed in person using a semi-structured interview as a guide (Appendix F) and responses and were taped for later transcription. Follow-up interviews were conducted between December 2010 and July 2011. The interview guide was derived after review of the quantitative survey responses. It was intended to elucidate key factors and details of interorganizational relationships that influence more prepared organizations. The five main domains included: 1) general questions related to the interviewee and the organization, 2) organizational disaster preparedness, 3) organizational disaster response, 4) interorganizational relationships and 5) organizational capacity. For example, questions regarding organizational disaster preparedness included "When your organization thinks about disaster preparedness what are your references?", and "Is there something specific that put disaster preparedness and response on your organization's list of priorities?". Questions regarding **organizational disaster response included "**What would your organization be able to do after a disaster?", "What activities would you perform?" and "What would your interorganizational relationships look like in disaster response mode?". See Appendix for completed questionnaire.

Participant Selection & Recruitment

Organizations were selected based on 1) the organization was 'more prepared' based on their survey results in the section on general disaster preparedness and response capacity 2) their willingness to participate in a follow-up interview and on their availability. The 35 item DPR capacities checklist was divided into quartiles, with the lowest quartile representing CBOs that were 'less prepared' (DRP capacities less than or equal to 10) and the top three quartiles representing CBOs that were 'more prepared' (DPR capacities greater than ten). Nineteen CBOs had more than ten DPR capacities in place. Thirteen of these were willing to participate in follow up interviews and eight were selected based on their availability. The eight follow-up interviews were conducted in person.

Data Analysis

Digitally recorded interviews were transcribed; in addition, notes were taken during the interview to highlight key points. Data from interviews were summarized into narrative form. Qualitative data were then analyzed manually via vertical analysis using the key domains mentioned above and horizontal analysis to identify key themes within each domain across interviews. Domain-level codes were derived a priori using the five main domains in which questions were categorized, e.g., general questions about CBOs, organizational preparedness, organizational response, interorganizational relationships, and organizational capacity. Within each of these domains, responses were summarized. For example an interviewee responded *"We work with a lot of external organizations for support"* or *"CARD helps with disaster preparedness and personal preparedness"* received a code of 'Work with/support from external organizations' which was designated as a key theme through horizontal analysis (see Appendix N for coding scheme).

Chapter 4 - Research Findings

This chapter presents the research findings in three sections. Section one includes the participant characteristics and survey results that answer the main research questions, section two answers the additional and H1N1 related questions and the final section focuses on the qualitative phase of the study presenting key themes that emerged.

I. Survey Results

Response Rate and Participant Characteristics

More than one hundred organizations provide services to the homeless in Alameda County, California. Many of the organizations in the original database were excluded for various reasons, the top three being: 1) not specifically serving the homeless, 2) no longer in service and 3) organization is outside of the study area. The total number of organizations in the database that was included in the study was 102 organizations (Table 2). As Shown in Table 2 the response rate was 44% which was calculated using the 37 CBOs participating in the study out of 84 of which 16[1] were nonresponding, 19[2] nonparticipating and 12[3] CBOs that did not respond after several attempts; 18 CBOs were non direct homeless service providers or did not serve the homeless.

Table 2. Number of Organizations Contacted

Response Rate	44%
Total CBOs in the Database	102
CBOs Contacted	102
Respondents	37
Nonresponding CBOs	16
Nonparticipating Organizations	19
Organizations I was unable to connect with[4]	12
Non-direct Homeless Service Providers/Do not Serve Homeless	18

General Characteristics of Participating CBOs

Table 3 presents the characteristics of CBOs serving the homeless in this study. Eighty one percent of participating organizations were multi-service organizations. This means they provided multiple services such as food services, shelter, counseling and referrals. There were four organizations that identified themselves as providing one of the following only, food services, shelter, long term housing and one was a faith-based organization. Three organizations

[1] Organizations that had been sent a survey, but did not return it.
[2] Organizations that specifically indicated they would not participate.
[3] Organizations that were contacted but for which it was not possible to get approval from someone in charge to make decision whether or not to participate in the study. In these cases, messages were left either on answering machines or with administrative assistants. Most of these CBOs did not receive a survey because there was no one in particular to address.
[4] Left messages

Table 3. Characteristics of Participating CBOs Serving the Homeless (n=37)

Variable	Frequency	Percent of Total
Organization Type		
Multi-service	30	81%
Food service	1	2.7%
Shelter	1	2.7%
Long-term housing	1	2.7%
Faith-based	1	2.7%
Sub-units of government organizations	3	8.1%
Clients Served Per Year	50 - >80,000	NA
Mean	7,238	NA
Years in Operation	9 – 120	NA
Mean	29	
Number of Staff	0 - 165[1]	NA
Mean	28	
Annual Expenses		
< 100K	8	22%
100 – 250K	3	8%
250K – 500K	3	8%
500 – 750K	5	13%
750 – 1000K	5	13%
>1000K	13	35%
Types of Clients Served		
Adult Men	30	83%
Families	25	69%
Children	24	67%
Seniors	22	61%
Battered Women	22	61%
Veterans	18	50%
Adult Women	9	25%
Other	16	43%
Organization Maintains List of Clients Served		
Yes	34	89%
No	3	11%
Organization Currently Assists Clients in Preparing for Disaster		
Yes	13	35%
No	24	65%
Organization Currently Provides Clients Information about Disaster Preparedness and Response		
Yes	15	42%
No	21	58%
Organization Able to Reach Clients within 24-48 hrs.		
Strongly Agree	12	33%
Agree	11	31%
Undecided	4	11%
Disagree	8	22%
Strongly Disagree	1	3%

[1] This number includes volunteers

were sub-units of government organizations. Two were small units of the Alameda County Public Health Department and one was a sub-unit of the Berkeley Health and Human Services, all providing direct homeless services[1]. Organizations served anywhere from 50 to over 80,000 clients per year with a mean of 7,238 clients served. Organizations were in operation from 9 to 120 years. The number of staff CBOs maintained varied greatly from 0-165 with some organizations being primarily volunteer driven with no paid staff at all. Annual expenses ranged from less than $100,000 per year (8 organizations) to over $1,000,000 per year (13 organizations).

Adult men were the most common type of client served as indicated by thirty (83%) of participating organizations followed by families (69%), children (67%), seniors (61%) and battered women. Veterans were specified by only 25% of participating CBOs. The 'other' category was specified by sixteen (43%) participants who provided 31 responses which comprised a variety of other individuals with special needs listed in Table 4. Some of these were combined as they were mentioned several times by respondents. These other special needs provided a range of specific needs that homeless service providers need to deal with.

Eighty nine percent of CBOs maintained a list of the clients they served and thirty five percent assisted their clients with preparing for a disaster. Less than half of the CBOs (42%) provided their clients with information about disaster preparedness and response. Sixty four percent either agreed or strongly agreed (33% and 31%) that they would be able to reach their clients within 24-48 hours with important information.

Table 4. Other Client Needs Mentioned by Participating CBOs (n=16)

Cal Works – disabled
Developmental delays
Foster youth
Homeless adults with minor children in their Legal/Physical Custody
Homeless youth 18-25 years old
Immigrant day laborers
Immigrants
Many are first time homeless of any family configuration
Men & women on parole-drug court-mental health homeless service
Mental health issues
People who are in need of food
People who come to the park for a meal
People who live on the streets, in cars or in encampments
Poverty level income
Predominantly disabled
Probation youth
Severe emotional disturbance
Spanish-speaking immigrants (youth, families, workers) and the largest programs serve immigrant day laborers, those who seek short term jobs on the street
Substance abusers
Teens with development delays and severe emotional disturbance
Victims of domestic violence
Women and children that are homeless

[1] These organizations were included as CBOs because they act independently from the health department and work in the community with CBOs and act more like CBOs, drawing for the most part from the same resource pool.

Working poor
Youth
Zero income

Organizational Factors Related to Interorganizational Relationships

Other characteristics of the participating homeless service providers included relationships with other organizations and relationships with their clients (Table 5). Overall, CBOs had many interorganizational relationships (IORs) that provided support in serving their clients. The cut off of 24 IORs was used as it was the median of the group with 18 (49%) of CBOs having less that 24 IORs and 51% having more than 24 IORs. Fourteen organizations used some of their IORs for Disaster Preparedness and Response (DPR) activities; the activities these CBOs indicated are listed in Table 6. Nine of the CBOs that used their IORs for DPR had more than 24 IORs while five of the CBOs that used their IORs for DPR activities had less than 24 IORs.

Table 5. Organizational Factors Related to Number of Interorganizational Relationships

Organizational Factors	**IORs > 24** (n=18)	**IORs < = 24** (n=19)
Average Number of IORs	45.8	12.6
Average number of Clients Served per Year	6,876	7,619
Number of CBOs Assisting Clients in Preparing for Disaster	8 (44%)	5 (26%)
Number of CBOs Providing Clients with Disaster Preparedness Information	10 (56%)	5 (26%)
Annual Expenses greater than $500,000	12 (67%)	10 (56 %)
Average Number of Years in Operation	29.2	28.2
Average Number of General CBO Capacities (Number of Services Provided)	5.2	0.8
Average Number of DPR Capacities	14.4	8.5
Number of CBOs Using IORs for DPR	9 (47%)	5 (28%)
Average Number of IORs used for Disaster Preparedness and Response Activities	5.4	0.3
Average Number of Disaster Response Organizations CBO has a Relationships with	2.6	2.5
Average Number of H1N1 Capacities	11.7	4.6
Average Number of IORs Related to H1N1 Capacities	7.9	1.6
Average Number of Relationships with Disaster Response Organizations with Respect to H1N1 Capacities	2.3	0.7
Average Number of General Communication Mechanisms Utilized by CBOs	11.1	6.6

The average number of IORs used for disaster preparedness and response activities was greater for the group with more IORs, 5.4 IORs used versus 0.3 used for the group with fewer than 24 IORs. The average number of disaster response organizations each group had relationships with did not vary much. However, the average number of H1N1 capacities, number of IORs and average number of relationships with disaster response organizations related to H1N1 capacities were all greater in the group with more IORs compared to the group with fewer IORs (11.7, 7.9, 2.3 compared to 4.6, 1.6, 0.7 respectively).

Using Interorganizational Relationships for Disaster Preparedness and Response Activities

Organizations used some of their IORs for DPR related activities; primarily in support of the medical and mental health of their clients. Nine organizations indicated they share and discuss resources and eight CBOs planned for the transportation of people to shelters and/or medical facilities in the event of an emergency, share ideas and share disaster plans. Seven CBOs discuss issues and six indicated they work together to stockpile supplies, share information and discuss communication strategies (Table 6).

Table 6. What Disaster Preparedness and Response Related Activities CBOs Use their Interorganizational Relationships For (n=16)

Activity	Number of CBOs
Medical/mental health services	10
Share/discuss resources	9
Transportation of people to shelters/medical care facilities in an emergency Share ideas Share disaster plans	8
Discuss Issues	7
Work together to stockpile supplies such as water, food, medical supplies Share information Discuss communication strategies	6
Share information on evacuation routes Transportation to evacuate staff and/or clients in an emergency	4
Provide space for food bank	1

Organizational Factors Related to Disaster Preparedness & Response Capacity

Table 7 compares the dependent variable, disaster preparedness and response (DPR) capacity to other organizational factors. Based on the 35 item capacities checklist on the survey related to disaster preparedness and response capacities, participants checked off each item they 'have in place now'; items that would allow organizations to continue operations during a crisis. The checklist was divided into quartiles, with the lowest quartile representing CBOs that were 'less prepared' (DRP capacities < =10) and the top three quartiles representing CBOs that were 'more prepared' (DPR capacities > 10). Organizations with less than or equal to ten DPR capacities were compared to CBOs with more than 10 DPR capacities to identify potential factors that play a role in being 'more prepared'. Nineteen CBOs had more than 10 DPR capacities in place with an average of 19.7 capacities and eighteen CBOs had less than 10 DPR capacities in place with an average of 2.7 capacities.

Organizations that were more prepared were also more likely to assist their clients in preparing for a disaster (63%). Similarly, more prepared organizations were more likely to provide their clients with information about disaster preparedness (74%).

Table 7. Organizational Factors Related to Disaster Preparedness & Response Capacity

Organizational Factors	**DPR Capacity >= 10** (n=19)	**DPR Capacity < 10** (n=18)
Average Number of General DPR Capacities	19.7	2.7
Average number of Clients Served per Year	7,951	6,391
Number of CBOs Assisting Clients in Preparing for Disaster	12 (63%)	1 (6%)
Number of CBOs Providing Clients with Disaster Preparedness Information	14 (74%)	1 (6%)
Annual Expenses greater than $500,000	18 (95%)	5 (28%)
Average Number of Years in Operation	37.4	19.5
Average Number of General CBO Capacities (Number of Services Provided)	16.2	9.1
Average Number of IORs	36.4	19.2
Number of CBOs Using IORs for Disaster Preparedness and Response Activities	9 (47%)	5 (28%)
Average Number of IORs used for Disaster Preparedness and Response Activities	5.4	0.3
Average Number of Disaster Response Organizations CBO has a Relationships with	3.4	1.6
Average Number of H1N1 Capacities	11.9	3.9
Average Number of IORs Related to H1N1 Capacities	7.7	1.4
Average Number of Relationships with Disaster Response Organizations with Respect to H1N1 Capacities	2.7	0.2
Average Number of General Communication Mechanisms Utilized by CBOs	11.9	5.4

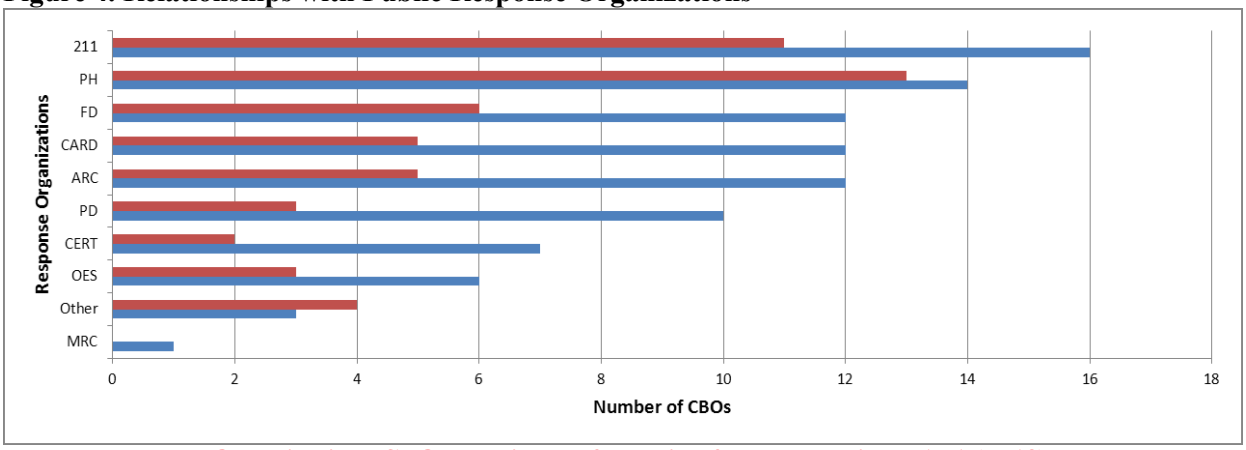
Ninety five percent (95%) of more prepared CBOs had annual expenses over $500,000 compared to only 28% of less prepared CBOs. The average number of interorganizational relationships of more prepared CBOs was 36.4 compared to 19.2 for less prepared CBOs. Nine (47%) of the more prepared CBOs used some of their IORs for disaster preparedness and response activities with an average of 5.4 IORs used, compared to 5 less prepared CBOs using their IORs also for DPR activities with an average of 0.3 IORs used for DPR activities. More prepared CBOs had a greater average number of relationships with disaster response organizations at 3.4 versus 1.6

relationships for less prepared CBOs and more prepared CBOs generally utilized more communication mechanisms compared to less prepared CBOs.

Relationships with Response Organizations

Figure 4 reflects the relationships CBOs had with disaster response organizations. The lower blue bar shows the relationships CBOs have with disaster response organizations to build their disaster preparedness and response capacity while the upper red bar depicts the disaster response organizations CBOs received information from during H1N1. Generally, CBOs work with a variety of preparedness and response organizations; public health and the 211 information and referral service taking the lead followed by the fire department, CARD and the American Red Cross. Although the 211 system and public health remained highly accessed organizations for information during H1N1, the fire department, CARD, the American Red Cross, the police department, CERT and OES did not play as prominent a role during H1N1. Other resources were accessed more for H1N1 information than for increasing disaster response capacity.

Figure 4. Relationships with Public Response Organizations



- **Response Organizations CBOs Received Information from Regarding H1N1 (n=18), upper bar**
- **Response Organizations CBOs Work with to Build DPR Capacity (n=27), lower bar**

Communication Mechanisms

Participating CBOs were asked to provide information regarding the communication mechanisms they would use to reach their clients in a crisis, emergency or disaster to provide important information and in general to receive and deliver information. Thirty five CBOs indicated in-person as the most common mechanism used for reaching clients during crises followed by verbal communication (28 CBOs), fliers (27 CBOs), cell phone and notices displayed in the community (19 CBOs). To receive and deliver information on a day-to-day basis, organizations were more likely to use email (30 CBOs), the internet (28 CBOs), followed by on-site fliers/poster (27 CBOs), in-person (26 CBOs) and landline phones and fact sheets (25 CBOs). The column on the left highlights the top five communication mechanisms utilized during the H1N1 pandemic while the column on the right highlights where those top five fall on the list of communication mechanisms used to receive and deliver information on a day-to-day basis.

Table 8. Communication Mechanisms Utilized by CBOs

- to Reach Clients in a Crisis, Emergency or Disaster to Provide Important Information	Number of CBOs (%)	- to Receive and Deliver Information	Number of CBOs (%)
In-person	35 (95)	Email	30 (81)
Verbally	28 (76)	Internet	28 (76)
Fliers	27 (73)	On-site fliers/poster	27 (73)
Cell Phone	22 (59)	In-person	26 (70)
Notices displayed in the community	19 (51)	Landline phones	25 (68)
Fact sheets	17 (46)	Fact sheets	25 (68)
Outreach workers	16 (43)	Mailings	24 (65)
Landline phone	16 (43)	Cell phone	23 (62)
Classes	13 (35)	Fliers/posters displayed in the community	23 (62)
Email	12 (32)	Fax	21 (57)
Facebook	10 (27)	Outreach Workers	17 (46)
Website	10 (27)	Website	16 (43)
		Text Messaging	16 (43)
		Facebook	11 (30)

Organizational Disaster Preparedness and Response Capacities

Table 9 lists the general disaster preparedness and response capacities[1] CBOs had in place at the time of the survey. Most organizations (84%) had grant writing experience. Twenty nine (78%) CBOs indicated that they were aware of local natural hazards, followed by 28 having contact lists with emails and phone numbers, basic first aid and staff dedicated to preparedness and response capacities. Disaster supplies for employees, exercise written plans and training for disaster preparedness and response were all fairly high on the list, while budgeting for disaster preparedness fell lower on the list with 54% of CBOs having this in place. Response related question fell even lower in the list such as having thought about or prepared talking points or key messages, post disaster services, information for staff and/or clients regarding for example road closures and evacuation routes.

Table 9. Disaster Preparedness Capacities CBOs Have in Place Now

Capacity	Number of CBOs (%)
Grant writing experience	31 (84)
Awareness of local natural hazards	29 (78)
Contact lists with emails, phone numbers, etc. Basic first aid Staff dedicated to preparedness and response activities	28 (76)
Disaster supplies for employees	27 (73)
Food Exercised written plans Training for preparedness and response	26 (70)
More interorganizational relationships	25 (68)

[1] Listed on the 35 item disaster preparedness and response capacities checklist of the survey.

Clothing Evacuation of personnel Disaster supplies for clients Exercises or drills with staff Phone scripts	24 (65)
Concept of preparedness & response is part of organizational culture	23 (62)
Shelter Information for staff regarding evacuation routes Information for staff regarding emergency shelter locations Off-site documentation backup Formal agreements in place (e.g. MOUs with other organizations providing essential services)	22 (59)
Disaster evacuation routes Information for clients regarding emergency shelter location	21 (57)
Budgeting for disaster preparedness Press release templates	20 (54)
Talking points or key messages	19 (51)
Transportation/evacuation services Information for clients regarding/evacuation routes Post disaster services	18 (49)
Information for staff regarding situation status Budgeting (securing funds) for disaster response services	17 (46)
Information for clients regarding situation status	16 (43)
Information for staff regarding routes/road closures	11 (30)
Information for clients regarding road closures	10 (27)
Other	3 (8)

Regression Analyses of Disaster Preparedness and Response Capacity

The effect of independent variables, interorganizational relationships (IORs), number of general CBO capacities (No. General CBO Caps.) and the number of response organizations CBOs had relationships with (Response Org. No.), on the dependent variable, disaster preparedness and response capacity (DPR Capacity), were analyzed using linear regression. Multivariate regression analyses included independent variables, annual expenses and years in operation.

The proportion of variance in DPR capacity that can be explained by the independent variable IORs, was indicated by an R-squared (R^2)[1] value of 0.089. This means that only 8.9% of the variance in the model was accounted for by IORs. IORs were not a significant predictor of DPR capacity ($p = 0.078$).

Multivariable linear regression of a model including the variables, IORs, years in operations and annual expenses, showed that the number of IORs again was not a significant predictor of DPR capacity ($p = 0.773$) but annual expenses and years in operation were significant predictors ($p = 0.000$ and $p = 0.039$ respectively). The proportion of variance in DPR capacity that can be explained by the independent variable(s) in the multivariate model was indicated by $R^2 = 0.583$; 58% of the variance in the model was accounted for by the independent variables. This overall

[1] R-squared (R^2) is a value that reflects the proportion of variance in the dependent variable that can be explained by the independent variable(s), in the model. A value of 1 would indicate a perfect fit of the model.

measure of the strength of association does not reflect the extent to which any particular variable is associated with the dependent variable.

The multivariate models of the variables No. General CBO Caps. (number of general capacities an organization has), and the variable Response Org. No. (the number of response organizations the CBO had relationships with), reflected higher associations with R^2 values of 0.624 and 0.637 respectively. The variable, No. General CBO Caps., showed significance in predicting DPR capacity for participating organizations (p = 0.002) alone, but not in the multivariate model (p = 0.085). A significant association was also seen between DPR capacity and the variable Response Org. No. (p = 0.010) as well as in the multivariate model (p = 0.042) with annual expenses and years in operation.

Table 10. Linear Regression Analyses of Independent Variables on General Disaster Preparedness and Response Capacity (n=37)

Variable	p-value*	R-squared
IORs**	0.078	0.089
No. General CBO Caps.	0.002	0.242
Response Org. No.	0.010	0.175
Multiple Linear Regression Analysis		
IORs	0.773	0.583
Annual Expenses	0.000	NA
Years in Operation	0.039	NA
No. General CBO Caps.	0.085	0.624
Annual Expenses	0.000	NA
Years in Operation	0.030	NA
Response Org. No.	0.042	0.637
Annual Expenses	0.000	NA
Years in Operation	0.052	NA

* p-values < 0.05 were considered significant for this study.
**n=36 (removal of an outlier of over 100 IORs)

In Table 11, regression analyses of the independent variables No. General CBO Caps. (the number of general capacities a CBOs has), annual expenses and years in operation, on H1N1 capacity indicate R^2 values of 0.225 for the single variable regression and 0.326 for the multivariate regression. Twenty two percent of the variance was accounted for by the number of general CBO capacities in the simple linear regression against the dependent variable H1N1 capacity. In the multivariate model, 33% of the variance was accounted for by the independent variables number of general CBO capacities, annual expenses and years in operation. The variable, No. General CBO Caps., showed significance in the single variable model (p = 0.003) but not in the multivariate model (p = 0.055).

Table 11. Linear Regression Analyses of Independent Variables on H1N1 Capacity (n=37)

Variable	p-value	R-squared
No. General CBO Caps.	0.003	0.225
Multiple Linear Regression Analysis		
No. General CBO Caps.	0.055	0.326
Annual Expenses	0.042	NA
Years in Operation	0.878	NA

* p-values < 0.05 were considered significant for this study.

Leverage Potential

The logic behind the leverage potential is for CBOs to examine their interorganizational relationships in the context of disaster preparedness and response activities. As described in Chapter 3, the percent leverage potential of CBOs with respect to disaster preparedness and response capacities is calculated using the total number of IORs an organization has with respect to its general organizational capacities minus the number of relationships used for disaster preparedness and response activities divided by the total number of relationships multiplied by 100.

$$\frac{\text{Total IORs - IORs utilized for DPR activities}}{\text{Total IORs}} \times 100\%$$

Out of the 37 participating organizations, 16 organizations used their IORs for DPR related activities (Table 6). Overall, fifty nine percent of CBOs had a 100% leverage potential, thirty percent had a leverage potential greater than 75% followed by 2 CBOs with a 50% -75% leverage potential and one CBO with 6% leverage potential (Table 12). These data suggest that very few organizations utilize their interorganizational relationships for disaster preparedness and response related activities; twenty two organizations had the potential to leverage their IORs with respect to disaster preparedness and response activities, but did not[1].

Table 12. Leverage Potential of Organizations

Percent Leverage Potential	Number of CBOs	Percent of CBOs
100%	22	59
>= 75%	11	30
50-74%	2	5
25-49%	0	0
0-24%	1	3
no response	1	3

[1] There was no indication of leveraging relationships for disaster preparedness and response based on the self-reported responses of participants.

II. The H1N1 Crisis: A Perspective of Homeless Service Providers

In addition to the main response sections of the survey, participants were asked to answer questions pertaining to their organization's experience during the 2009 H1N1 Influenza Pandemic. Although this H1N1 was officially classified as a pandemic by the World Health Organization (WHO) on June 11, 2009, there was no clear indication of how this particular influenza strain would roll out across the country with many bracing for a possible pandemic like the 1918 Spanish Flu Pandemic which killed approximately 20 – 50 million people throughout the world and nearly 700,000 in the United States alone.

The H1N1 crisis was a unique opportunity to determine the state of preparedness and response for many organizations and agencies involved. Many studies were conducted during and after the crisis to better understand the response of public health departments and other disaster response agencies and to capture challenges and opportunities to improve the current level of preparedness and response with respect to pandemic influenza. Community-based organizations also needed to respond, particularly those providing essential social services and human services such as food, clothing, shelter and medical care. In an attempt to learn more about how homeless service providers fared during the H1N1 crisis, the survey included open ended questions of homeless service providers. Their challenges and successes provide some indication of where preparedness efforts worked well and which did not. The former can serve as examples for others to follow.

Seven out of the 37 participating organizations did not respond to any of the H1N1 questions at the end of the survey. Out of the 30 respondents, some answered only some of the questions. The number of respondents is indicated for each question. Questions from the survey are slightly modified to reflect response headings which are italicized below (see appendix A for H1N1 questions). While most CBOs had some 'H1N1 experience' not all CBOs had clients that contracted H1N1 although they had anticipated some illness, while other CBOs had no 'H1N1 experience' at all (see Appendix A for complete interview guide).

Initial Organizational Relationships

During the initial phases of the H1N1 outbreak and the ensuing pandemic, organization's various relationships helped increase their capacity (services provided) to respond to the needs of their clients. *(21 CBOs responded)*

H1N1 vaccine was obtained from multiple sources such as the county, City of Berkeley, Cal Pan Flu, Life Long Medical/West Berkeley Family Practice (WBFP) clinic, Healthcare for the Homeless, Public Health Community Health Division, and community health clinics. A variety of information was sought by CBOs such as information about H1N1, where and when to get flu shots. Fliers to post at their facilities were also received from a variety of sources such as local hospitals, county and city health departments, internet sites and listservs. The following 21 key relationships were mentioned.

- LifeLong Medical Care (2)

- Alameda County Healthcare for the Homeless (3)
- Oakland Children's Hospital
- Cal Pan Flu
- Advocacy with county pandemic planning
- Local hospital
- Area Agency on Aging Roundtable Listserv
- U.S. Health Department
- West Berkeley Family Practice (WBFP) Clinic
- Community student nurses,
- Public health department's resources
- City of Berkeley Public Health Division (3)
- Alameda Public Health Department
- Public Health Community Health Division
- Community Health Clinics
- Tri-City Health Center
- Kaiser Permanente
- Department of Social Services Community Licensing
- Suitcase Clinic and other clinics
- Samuel Merritt nurses
- CARD – Collaborating Agencies Responding to Disasters
- Our organization's headquarters

Verbatim comments included the following:

> *"We utilized the resources of our partners' healthcare agencies, most notably Lifelong Medical Care, Alameda County Healthcare for the Homeless, Oakland Children's Hospital."*
>
> *"We held a community education workshop with medical staff from West Berkeley Family Practice at the height of the scare for about 100 day laborers gathered at our weekly meal."*
>
> *"The county sent out nurses to do shots."*

CBOs commented on how relationships were beneficial to them and their clients.
(n=16)

Most organizations received printed posters and/or fliers to post at their facility, which was an important communication tool for CBOs with their staff and clients. Some organizations worked with Spanish speaking populations and had access to information printed in Spanish. Some agencies were able to provide on-site education and information to CBOs, directions to community clinics and healthcare for specific clients. In one case, nurses were able to work individually with clients and children as well as provide training on prevention to groups of

clients. They also reinforced the need to get immunizations.

"We didn't have new relationships, but the ones we had were strengthened and this was a great benefit to our clients."

"The population we worked with had access to a Spanish-speaking doctor and his explanation of H1N1 causes, prevention, and treatment. This was important given rumors true and untrue circulating about 'swine flu'. We also were a key venue for clinics to offer flu and H1N1 vaccines."

"LifeLong Medical, and Healthcare for the Homeless provided our clients with H1N1 immunizations on-site, plus provided a training to our case managers."

Emergency response organizations CBOs got information from to manage the H1N1crisis (n=23)

Most CBOs that responded were receiving information from local public health departments (Figure 5), followed by Alameda County's Information and Referral Service (211), and the American Red Cross. Several CBOs accessed information put out by King County Public Health Department in Washington State and the Centers for Disease Control and Prevention in addition to other sources listed in Table 13.

Figure 5.
Emergency Response Organizations from which CBOs Received H1N1 Information (n=23)

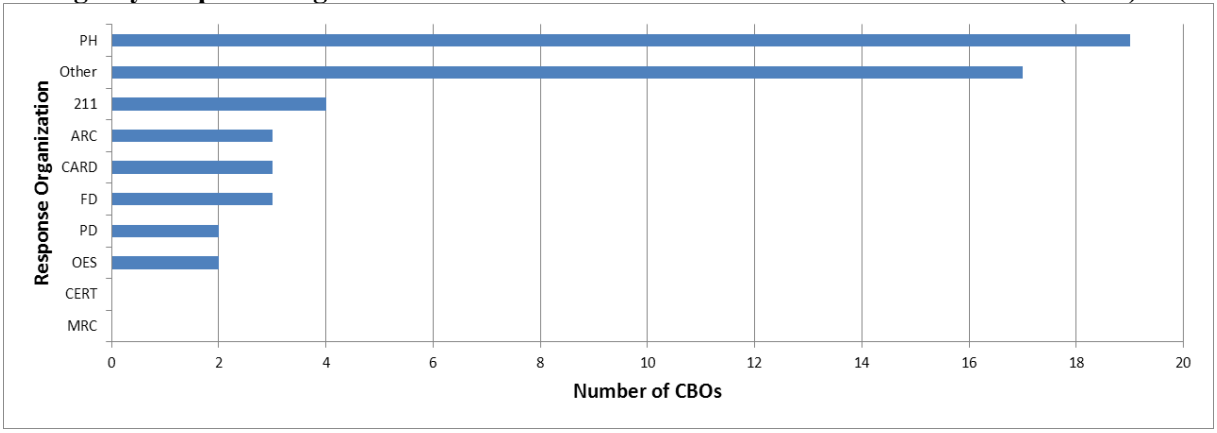


Table 13.
Other Response Organizations from which CBOs Received H1N1 Information

California Department of Public Health
Seattle King County Public Health Department (2)
Centers for Disease Control and Prevention (2)
National Healthcare for the Homeless Network
Ravenswood Family Health Center
Highland Hospital

Samuel Merritt University School of Nursing
Local hospital
Abode Services
Alameda County Health Care for the Homeless Program
LifeLong Medical
Internet Site: WebMD
Tri-City Health Center
The Doctor on Staff at our Corporate Office
Office of AIDS Administration
Children's Hospital Oakland
Kaiser
Television
Walgreens

Information CBOs received *(n=24)*

Most organizations received[1] fact sheets about the flu, fliers and/or brochures from their sources mostly regarding flu shot information such as sites clinic locations and times. Some of the information organizations received are listed below.

- Clarification on what H1N1 was and how to assist clients.
- Pandemic planning guides and templates, posters, list of immunizations clinic dates, information on caring for sick patients, how to manage a homeless shelter in an epidemic, checklist of items, global surveillance updates.
- Specifically homeless shelter-related information and protocols.
- CDC fliers in Spanish and other basic summaries of prevention and treatment of H1N1.
- Updates on H1N1 consistently, precautions and procedures to deal with someone ill, isolation and when to get medical attention from public health.
- How shelters should prepare. Masks and washing and isolation
- Information about prevention tips and symptoms/treatment recommendations, as well as vaccination information later on.
- Proper coughing technique. Hand Hygiene, watching out for certain symptoms

"We reviewed information on how to isolate and support clients who became ill, how to decrease spread of H1N1, how to protect staff and how to encourage staff to stay home when ill!"

Usefulness of information to serving clients; e.g. organization was immediately able to implement the information, or the information was directly beneficial to clients.
(n=17)

Most of the information CBOs received helped many CBOs respond appropriately (as self-reported), implement as many precautions as possible, helped determine symptoms that needed immediate attention, and provided the locations to receive flu vaccines which were also posted on-site in addition to announcements being made. The information also encouraged clients to

[1] It was not clear for all respondents which ones requested information from other organizations such as public health and which ones simply obtained information passively through for example websites and listservs.

get a flu shot and the information provided an opportunity for CBOs to discuss why the flu vaccine was a good idea. Some CBOs conducted staff and client trainings, while several organizations did not feel the information was that useful.

"We developed and distributed and implemented H1N1 preparation protocol for shelters."

"It primarily reassured us that seniors were not susceptible and encouraged a lot of people who otherwise would not have; to get a flu shot."

"Written information was not sufficient because of literacy levels and the fact that many people don't best absorb information via the written word. However, partnered with an informational workshop, handouts are more effective. The media frenzy around H1N1 had the unfortunate consequence of fomenting distrust among the population we serve; because no serious (notable) epidemic was perceived, many individuals would be less inclined to take due precautions if/when another epidemic is announced. This is the classic dilemma of public health, the more tragedy is averted, the more prevention efforts are deemed to be unnecessary."

"We largely ignored most advice, considering it wildly over-hyped.

"H1N1 had no impact on our organization."

"It helped us know if we needed to close. We decided to stay open."

"Very helpful in giving clients clear information and reinforcing techniques for reducing transmission (hand washing, cough into sleeve, get flu shots)"

"We isolated clients as much as possible and generally cared for those who seemed to be most impacted."

Special needs of clients that were better met through the interorganizational relationships CBOs had with public response agencies during the initial phases of the H1N1 outbreak and the ensuing pandemic. *(n=22)*

Interorganizational relationships aided CBOs in meeting specific needs of their clients. For example, clients were less panicked and concerned about the potential effects on themselves and their children through the information that was provided. The needs of homeless people were met through a variety of sources such as county nurse who were able to provide the vaccine on-site, some organizations received supplies for their clients such as hand sanitizers, shelter protocols tailored to homeless shelters and clear factual information. One organization indicated that they were invited to assist in pandemic planning.

"LifeLong Medical, and Healthcare for the Homeless provided our clients with H1N1 immunizations on-site, plus provided a training to our case managers."

Additional services CBOs needed that were not met
(n=14, 9 CBOs indicated that no additional services were needed)

Some organizations indicated that supplies were scarce and at times they could have used more supplies such as gloves, masks and alcohol, or even knowing where to get such supplies. One CBO indicated that their organization had very few collaborative relationships with community partners that they could draw on during the crisis. One CBO indicated that it would have been useful to have their funding expanded for extension of shelter hours and additional beds for respite.

Although some CBOs were able to get flu-shots at their facility, other CBOs did not which would have been very welcome.

One CBO was concerned because the homeless population has a high rate of tuberculosis, while another organization needed information on where to send clients in need of medical care.

On-site training and evaluation of facilities by public health professionals was another need mentioned by CBOs. Although one organization mentioned having attended a training, they did not feel that after one training they were an authority on the matter and would have welcomed additional trainings, had the public health department had the capacity to conduct them.

One CBO indicated that they should have had announcements and warnings regarding H1N1 in colorful poster format posted for clients to see.

Other needs organization's clients had that could have been met through collaborating with another agency or organization and additional organizations that would have potentially been beneficial to work with. *(n=22)*

Most collaborations needed were specifically related to serving their clients better, e.g. to make it convenient for clients; having a collaborating agency work on-site so that clients would not have to visit various agencies to receive services, sponsoring of a flu clinic on-site and on-site education to staff and clients by public health and knowing where to send ill individuals, where people should go when they have to leave the facility at 5am and where to send the uninsured. Specific additional relationships that were mentioned included:

- Clinics for more treatment
- Mental health services
- Medical services
- Public health for trainings and on-site vaccinations

"Should have had more shelter/homeless involvement in pandemic response planning."

"Most needed was a place where sick homeless clients could sleep during the day. Our agency does not have beds or space."

Challenges CBOs faced in trying to get more resources and information for their clients. *(n=21)*

For the most part, organizations did not face major challenges with some not facing any as everything they needed was readily available, with one organization specifically indicating that they felt much supported by collaborative partners with respect to H1N1 and another felt sufficiently supported by their staff doctor, however; there were a range of responses and concerns:

- Financial resources
- Shelters as place of high risk/fear for patients and staff
- Ignorance of the roles of shelters/needs of the homeless and of homeless issues in H1N1 pandemic planning
- Staff organization, need to do more research to be prepared
- Having information and resources available in a timely manner
- Clients' suspicions about vaccinations and medical providers in general
- Waits for medical services
- Dealing with misinformation
- Public health department had limited personnel to come on-site and did not have H1N1 flu vaccine until late in the season
- Information in Spanish
- Lack of formal agreements with the medical community
- Conflicting information about seriousness
- No dedicated budget or funds to order basic supplies like hand sanitizing equipment

"We basically had to elbow our way into pandemic planning and response and advocate for homeless."

"Not being able to anticipate what each agency will have the capacity to provide in an emergency. Will Lifelong be able to continue providing on-site care to our clients? We hope!"

"We spent a disproportionate amount of time making contact and advocating with organizations on behalf of homeless populations they wouldn't contact/include us."

Key communication mechanisms organizations used during H1N1 that were/were not effective at keeping organizations up to date on the situation. *(n=11)*

Organizations used a variety of communication mechanisms during the H1N1 crisis, some more useful than others. The internet, email and listservs were the most useful mechanism for most organizations to receive H1N1 health related information. Emails were primarily used internally to send information to all staff at one or multiple sites. One organization indicated that just using the phone would have been more efficient. Another specified that they used emails and meetings to communicate with staff while staff communicated with clients in person or by phone. Several organizations were in touch with the public health department receiving briefings and other

information. One CBO felt the information helped them make the right decision not to close. Other communication mechanisms are mentioned below.

- Federal Department of Public Health Website
- The Senior Registry through the Oakland Fire Department
- Dr. Oz (TV medical advisor)
- Kaiser
- Television
- Fax

Chapter 5 - In-Depth Interviews of 'More Prepared' CBOs

In-depth interviews provided important insight into factors that have influenced CBOs to be more prepared. Below are some highlights from the interviews. Important themes that emerged from the transcripts are highlighted first followed by a summary of key responses under the five domain-level codes. Headings under domains represent specific questions that were asked of participants.

Eight organizations participated in the qualitative interviews. These CBO respondents were specifically selected for their higher level of preparedness and response capacity to provide some insight into what factors drive them to be more prepared compared to other survey participants. These organizations served a variety of homeless including seniors, youth, families, women and men many of which have additional special needs such as chronic illnesses, medical and mental health needs. Interviewees had worked in their organization from three to 16 years and included the following positions:

- Community Associate
- Building Manager
- Director
- Division Director
- Human Resource Office Manager
- Executive Director
- Program Director
- Program Director of Outreach & Advocacy
- Shelter Director

Key themes emerged from coded interview transcripts and are highlighted below. See Appendix N for coding scheme.

1. Nature of Organization/Services

The nature of the organization and the associated requirements (e.g. providing essential services, meeting primary needs, dependency of clientele on the organization and its facilities) seem to heighten the organization's understanding of the need to be prepared. Interviewees reported a need to have facilities functioning well and the organization prepared to adequately meet the needs of the clientele. And this "need to be prepared" applies to disaster preparedness and response as well.

Several of the organizations provide emergency shelter which in itself denotes the organization as a 'crisis response' type organization.

> *"The nature of our organizations and the fact that we provide 24 hour service and we are responsible for clients; they depend on us and they depend on us for food and shelter and in the event of a disaster they will be more dependent on us to provide those services."*
>
> - **Office Manager**

"It is part of their mission in their role to help support frail and vulnerable seniors in the community."

- **Program Director of Outreach and Advocacy**

2. Work with/Support from External Organizations

Organizations mentioned that working with outside organizations from which they may receive support is a contributing factor to their disaster preparedness and response capacity. This includes being part of the San Francisco Foundation efforts[1], and for example, being connected with the City of Oakland, which has provided funding.

"We work with a lot of external organizations for support which is clearly a big big part of how we make things work here."

- **Program Director**

"I think being part of the San Francisco Foundation, their endeavor to join us together and make sure that we are better prepared is actually one of the good pluses that we have."

- **Community Associate**

"It's important to bring in the organizations because a lot of times when you are talking about something like disaster preparedness training you need new faces and new voices because they sort of saturate on the old voices."

- **Executive Director**

3. Organizational Leadership/Culture of Preparedness

Interviewees stated that their organization's leadership has been instrumental in improving disaster preparedness and response capacity at the organization. All organizations indicated that preparedness has become part of their organizational culture. This culture leads to staff-wide training and in some instances inclusion of clients in drills, and may also include external organizations that have influenced levels of preparedness such as CERT and CARD. Six out of the eight organizations interviewed had staff that were CPR and first-aid trained which is not always a specific requirement for the organization.

"Our executive director has always been adamant and interested in making sure that the families are safe and we don't want to be caught unprepared for it so we have gone to such lengths as preparing disaster preparedness sheds with supplies in it. So each site

[1] The San Francisco Foundation's efforts include work conducted in conjunction with the Fritz Institute's BayPrep program which brought together local government, corporate, nonprofit and philanthropic leaders in the San Francisco Bay Area. This collaborative efforts of the San Francisco Foundation's Disaster Preparedness Project were conducted from 2007-2010. Their efforts included trainings in neighborhoods, MOUs signed with Bay Area nonprofit organizations, building capacity of disaster intermediaries, building relationships among disaster response and recovery partners among others.

has its own area is outfitted with its own disaster preparedness area and is outfitted with what it would need in case there was something."

- **Community Associate**

"We really try to impress upon staff too that…. an ad-hoc approach to disaster preparedness that you go with the staff you have at hand because you can't completely plan out your response to a disaster and say this person is going to have this role and this person will have this role. The person that's assigned to that role might be on vacation or not in the office, so you have to assign the role to the staff you have on hand. So, everyone needs to be familiar with everything."

- **Director of Outreach and Advocacy**

"Being involved in the process and just knowing the importance of having a plan and being prepared and being ready. - and the fabulous leadership from our HR Department."

- **Office Manager**

"In addition the organization also has an agency-wide safety committee that talks about disaster preparedness and other safety issues who monitors the adherence to a drill and maintains drills schedules and things like that."

- **Division Director**

"It's really important to have fun with it [disaster preparedness and response activities]. We didn't look at what everyone else was doing. We just do what we thought we needed…but we also revisited from time to time and updated you know and change things. Everything is on a schedule; the water is there 6 months, the big water barrel, we empty it out we put it back into the earth, feed our gardens, refill it again. You have to revisit it, think of it as fun, and not just, you know a job. Over time do it."

- **Program Director**

4. Level of Importance

All of the interviewees either stated or implied that their organization places a high level of importance on disaster preparedness and response activities. One organization mentioned the importance of having/hiring staff that make clients' safety and welfare their mission and priority.

"What makes us think about it is fear – the fear that something would happen and we would not be prepared."

- **Executive Director**

"I think it's important that we get our folks trained and that we're all of one consensus that it is something important to do. We're working on that of course. We can make it a priority, but then always follow-through and follow-up is difficult when we're so bombarded with all the other stuff, daily stuff that we have to do."

- **Community Associate**

"…we have to make sure that the clients are taken care of so it's [preparedness] very important to us."

- **Office Manager**

5. Obligations to Funders

Some organizations indicated that disaster preparedness fulfills funder obligations and protocols. These obligations are often required by licensing agencies. Four out of the eight CBO representatives interviewed had taken part in the San Francisco Foundation work which began in 2009 in an effort to increase the disaster capacity of human service organizations in the Bay Area with the requirement that organizations produce a disaster plan to be eligible to receive funds in the event of a disaster to support response and recovery work.

"As I mentioned we do have a certain obligation to the people who license us."

- **Building Manager**

"Externally, we have an obligation to our funding source to ensure we have disaster preparedness plans."

- **Shelter Director**

"The SFF they provide with us with a grant in case of a disaster… to assist individuals. It is set aside we don't already have it."

- **Office Manager**

"Well, the county of Alameda provides us grant money every year and within the contract we're expected to have an emergency preparedness reviewed annually and updated annually."

- **Executive Director**

"Our funding with CalEMA requires it."

- **Shelter Director**

"Being connected with the City of Oakland; they are a funder and they have invested in our building."

- **Executive Director**

6. Proximity of Collaboration/Collaborators and Resources

When responding to questions regarding resources and collaboration, half of the organizations mentioned collaboration with nearby organizations or people from the community, and spoke in terms of "immediate area", "neighborhood", "local", "just down the street".

"We have a relationship with a local hotel because in the past we had flooding here and we had to get all the clients out of here and get them to a place that was dry."

- **Shelter Director**

"For instance, the YMCA is right up the street and they know us, we know them. So, they have kind of space too, they have a big gym. So again, if our communities collapsed or something, we would take everyone over there. So, there's a shared interest in taking care of our own, in the community."

- **Program Director of Outreach & Advocacy**

"Transportation, we work with a local cab company and with other shelters in this area…"

- **Shelter Director**

"We do have some good relationships with other nonprofits in the immediate area, like Healthy Oakland, Saint Vincent de Paul, Saint Mary's. I imagine we would be partnering with them to make sure that the residents in the area can have resources and be looked after. We do have a relationship with the city and county too."

- **Building Manager**

7. Sense of Responsibility to Clients

The sense of responsibility that members of an organization have towards their clients plays a role for all of the organizations in their level of disaster preparedness and response capacity. They know that their clients depend on them and/or have certain expectations of them, such as being prepared and providing leadership during emergency situations. The members of the organization do not want to let their clients down as they are largely dependent on the organization under normal conditions and probably even more so in a disaster situation. Many clients are vulnerable on a daily basis due to lack of housing, chronic illness, mental health issues, lack of resources among many others. The type of population organizations worked with was one of the biggest factors.

"…they may come in a vulnerable state and have immediate needs; they come in a place of crises."

- **Program Director of Outreach & Advocacy**

"We would absolutely die if anyone that we were serving did not make it out safely in order to continue their own stability plan."

- **Executive Director**

"We provide 24 hour service and we are responsible for clients; they depend on us and they depend on us for food and shelter and in the event of a disaster they will be more dependent on us to provide those services."

- ***Human Resource Office Manager***

8. Continual Improvement

All organizations are consistently working towards improving and enhancing their existing capacities, through regular reviews of their plans and procedures or by increased training at their organization.

> *"We have always had disaster preparedness on our agenda to make sure that our sites are prepared and function accordingly, so we have had some level of disaster preparedness at all of our sites."*
>
> - **Director**

> *"You always want to get in there and tweak it [the disaster response plan] and make sure that it's relevant, make sure that it has current information. "*
>
> - **Community Associate**

> *"Being persistent and thinking constantly how to improve, what, where and how and how to include all staff and clients."*
>
> - **Executive Director**

9. Staff Inclusion

All organizations mentioned the importance of including staff in disaster preparedness and response related activities and efforts, not merely by sending them through training or to workshops. Staff frequently exercise their knowledge and as a results are more confident to act to the best of their abilities in emergency situations. Seven out of the eight organizations mention involvement, provision and need for drills, training, workshops and classes to enhance disaster preparedness and response capacity within the organization, among the staff and/or clients.

> *"We really have tried to include all staff and make it part of our culture - it was really driven by our executive director and it's a conversation we started about 4-5 years ago."*
>
> - **Program Director**

> *"One of the things we are doing is we are preparing our own emergency response video and we will have people demonstrating stuff like stop, drop and roll, we are going to have children in there doing that and we will place that up on our website, and it's for our employees to go back to and reference as well, every other month. They have to look at it and check off that they are aware of what we are asking them to do in case of an emergency."*
>
> - **Building Manager**

> *"Focus on making sure every single staff member is knowledgeable about our emergency preparedness procedures."*
>
> - ***Division Director***

> *"Being persistent and thinking constantly how we can and improve, what, where and how and how to include all staff and clients."*
>
> - **Executive Director**

10. Regularity of Meetings, Practice and Facility Assessments

Some organizations conduct certain disaster preparedness and response related activities on a regular basis. Some organizations for example, have set schedules for meetings, skills practice or drills, and also regular facility assessments to ensure that everything is available and ready in case of an emergency.

"An agency-wide safety committee that talks about disaster preparedness and other safety issues who monitors the adherence to a drill and maintains drills schedules and things like that."

- **Program Director**

"Practice and role playing really does help people sort of build their confidence around that [disaster response capacity]."

- **Executive Director**

"We hold regular informational meetings."

- **Community Associate**

"Rotate drills monthly like fire, earthquake, evacuation at both of our sites, all the programs are supposed to do that."

- **Division Director**

"Every month we have an employee here that works part time and he goes through and does an inspection , he does a safety inspection monthly, and if our supply kits are low on anything then he makes sure it gets updated. We do monthly evacuation drills; fire evacuation … to make sure clients know how to get out of here if necessary."

- **Shelter Director**

11. Disaster Experience

All organizations mentioned having had experience with previous disasters or other emergency-related experiences which they found to be influential in preparedness. This experience has provided incentives and enhanced awareness for the necessity to be prepared, should similar types of events ever directly impact the organization.

"We were a responder in Loma Prieta and were instrumental in helping re-house folks. We learned from that experience."

- **Community Builder**

"One other reference is fire stuff. That is probably the thing we are at highest risk for."

- **Division Director**

"We had major flooding a few years ago and housed our women and children at a hotel."

- **Shelter Director**

General Organizational Factors

The next sections were coded *a priori* into five domains; key responses are summarized under each domain. Each heading represents a specific question that was asked of participants.

Factors That Made Organizations Think About Disaster Preparedness and Response

- History of events, being part of Loma Prieta Earthquake
- A county contract that requires an emergency preparedness plan be in place and reviewed and updated annually
- Thinking about their welfare of residents housed onsite and in the community
- Obligation to funders who provide licensure to have a disaster response plan, Fire Department City of Oakland wants a fire plan
- Living in a particular part of the country that could be susceptible to things, earthquakes, fires, situations that would disable the facilities
- Type of clients being served
- Being housed in a new building was an important factor for one organization and functionality of the new building (e.g. alarm system, security, flow of personnel and clients); ensuring that everybody is covered and accounted for and critical items such as the log book which indicates who is currently being housed on-site are covered.

Key Internal and External Influences Guiding Organizational Preparedness and Response Capacity

Internal Influences

- *"Personal interest"*
- CARD, Disaster Response Committee
- *"Our Executive Director's direction to work with San Francisco Foundation"*
- Interest in emergency preparedness for communities
- *"Our Executive Director is the main internal driving factor"*
- The leadership of the organization is one of the internal influences; *"we are concerned about the client's safety"* and an assigned person who is in charge of it at the sites.
- A disaster safety committee that is made up of people from all locations within the agency
- *"The leadership body is our Safety Committee; part of continuous our quality improvement."*
- Receiving City of Berkeley funding[1], being on public health listservs to receive public health and emergency preparedness information

External Influences

- San Francisco Foundation was mentioned three times (preparedness and response events)
- CARD was mentioned four times and in particular its director who has been quite influential in providing guidance and training with respect to disaster preparedness and response capacity
- City of Berkeley and the organization's Safety Committee

[1] This funding was specifically for a specific program.

- City of Oakland
- City of Oakland Fire Department

External Entities Requiring Preparedness
Only one organization indicated they do not have an external entity that requires preparedness. Four out of the eight were required to produce a disaster plan as being part of obtaining a grant from the San Francisco Foundation. In addition, 4 organizations were required to have some emergency plans in place and one organization indicated that requiring preparedness as part of a contract is beginning to emerge.

- County of Alameda – tied to grant money
- Community Care Licensing - regulatory body
- County auditing bodies
- Cal EMA funding

Interorganizational Relationships

Number and Types of Interorganizational Relationships Most Important to Capacity for Disaster Preparedness and Response
Most respondents mentioned organizations that are local to them and ones that they have some connections to already. Although it is important to note that these CBOs indicated on their surveys that they had few or no MOUs with any of the organizations that they routinely work with. In a disaster scenario – many individuals and organizations will try to draw upon the same resources. It is important for community members and organizations to realize that these resources that may be readily available on a day-to-day basis, but may be less available or completely unavailable in a disaster. The most important relationships that were mentioned for disaster preparedness and response capacity:

- Emergency placement for the families is a relationship that is critical to maintain
- For information; the CDC, public health department.
- CARD, Red Cross
- Alternate site for shelter and mental health and health care, food and water
- Good communication, CARD, Disaster trainings/workshop

In addition, organizations indicated primarily that the type, the quality and capacity of other organizations were most important to them.

> *"I would say types cause … sheer number… it's the knowing someone and knowing enough about them to know who will return your call or be responsive to you…"*
>
> - **Division Director**

> *"The type of relationships; I mean you can have 50 relationships and none of them really give you what you need, so it's more about honing in on the specific need and finding an agency that can supply that for you."*
>
> - **Program Director**

"Both, if one can't help then we have another to go to as far as food and shelter."

- **Program Director of Outreach & Advocacy**

"So the fire department comes when someone is sick, but we have now begun to get better relationships – because you know they have helped us understand our electronics [security system] because they are complicated. So we built a better relationship with them around that and we think that strengthening that relationships is going to be most instrumental in increasing our level of proficiency or efficiency around disaster planning…"

- **Executive Director**

"At this point it's the types of relationships and the quality of each one that we have. I think 3 -5 good relationships with outside organizations and 3 good relationships with like the fire department and the Red Cross, CARD, those are what we need, in my opinion …. the quality of those relationships is what will get us through, not more relationships."

- **Program Director**

Common relationships that were important included:

- Food Bank
- Fire Department, local fire station
- American Red Cross and local faith-based organizations
- HPRP Program (a housing subsidy program)
- Employment coordination
- Building Opportunities for Self Sufficiency (BOSS)
- Abode Services[1]
- City of Berkeley Housing Department
- Public Health and 211 for housing and homeless resources

The Nature of Interorganizational Relationships[2]

Organizations talked about the nature of their relationships with other organizations which vary from formal to informal having a variety of functions.

- *Collaborative*

- Abodes' HPRP program; their housing team to assists in finding housing for clients
- BOSS assists in finding housing for clients
- Funders often network/link CBOs into important preparedness activities and joint drills
- East Bay Community Law Center for legal help and advice that is distributed to clients
- Bringing in the faith-based institutions
- Sharing a building; combined safety drills provides evacuation practice and accounting for people

[1] Abode Services is a multi-service organization in Alameda County that provides a safety net for homeless people and families.

[2] Various types of relationships were defined in for interviewees in the qualitative follow-up interviews: Collaborative - pool resources such as money, space, equipment, information, share goals and build consensus; Consultative - advisory function; Information Exchange - sharing information that benefits the organizations and/or its clients; formal partnerships – interorganizational relationships that have a formal component such as a MOU; Advocacy – Speak, act and actively support an organization and it mission.

- Pooled resources which led to further partnerships
- Very good relationship with local organizations and community members, people living in the area who will be a good resource

> *"The only way that I can think of it is to – maybe having 2 or 3 organizations get together and jointly do things and then pull in a third and fourth organization, because then it starts as a team and it's a team that's growing."*
>
> - **Executive Director**

- *Consultative/Information Exchange*
  - Public health comes to talk about nutrition, STDs, to promote health and safety for clients
  - ARC, CARD help with disaster preparedness and personal preparedness
  - Public Health's senior injury prevention program provides information on fall prevention, safety, medication awareness and toxicity
  - Nurses from the public health department provide flu shots for free
  - Nurses from Cal State East Bay

- *Formal Partnerships*
  - Partnership, MOU in place, with the Acton Women's Center
  - Partnership with the Samuel Merit Nurses who work directly with consumers through the drop in center, offering health information and one-on-one medical counseling
  - Recent grant proposal with Saint Vincent de Paul Society

- *Advocacy*
  - Advocacy - Connecting with many other nonprofits to make sure that the voice of consumers is heard at policy making tables
  - East Bay Community Law Center to fight for humane systems and social services, etc.

> *"Advocacy - We connect with many other nonprofits and try to make sure that the voice of our consumers is heard at the policy making tables."*

Important Drivers of CBOs' Preparedness and Response Capacity

- CARD (4)
- Yearly updated ICS; involves staff and includes IC staff list
- The San Francisco Foundation (3); brought in community people, like YMCA, Attitudinal Healing, helped CBOs produce written disaster plans written
- The Fire Department (2)
- 211 (Eden Information & Referral)
- Public Health Department (2)
- American Red Cross
- Funders
- Police Department
- Board of Directors

Almost all organizations agreed that more assistance for CBOs from an organization like CARD would be really helpful in creating more preparedness and response capacity. The American Red Cross and United Way trainings were also mentioned.

Organizational Disaster Preparedness

Experiences That Get Organizations to Think About Disaster Preparedness
Interviewees indicated that other organizations and recent events such as the San Bruno fire and even further back, the Loma Prieta Earthquake, help them remember to keep disaster preparedness at the top of their activities and on their minds. Keeping in mind that this is earthquake country is also important. One of the CBOs had residents who had come from Hurricane Katrina, another from Haiti and another resident was worried about the tsunami asking if life preservers were available on-site; these small instances served as reminders that disasters are on the residents' minds. In addition, response to the safety and fears of residents, *"our intent to be able to reassure and empower and educate our residents as well as small hazards that residents may encounter daily like fire, smoking, gas, boiler explosion"* were recent references.
One organization goes through potential disaster scenarios with their Safety Committee which has a medical director; a good resource if advice is needed like in an epidemic.

Organizational Disaster Response

CBOs' Interorganizational Relationships in Disaster Response Mode
In a disaster response mode, CBOs' had different expectations of their staff and organization as a whole. Various ideas surfaced about what their interorganizational relationships would entail.

One organization indicated that they would collaborate with their local police station and the local people in their community. In addition they work with other organizations such as the West Oakland Senior Center, the San Pablo Coalition Committee that are all inter-related in terms of making West Oakland better. In addition they work with local merchants. Their director is *"really big on collaborating"*.

Another organization planned to have partnerships established beforehand. If needed, they would contact the Red Cross to relocate families if their building would be damaged. "*Staff are already in place to arrive at the different locations and everyone has their codes that if you get a call you show up, so we would be prepared"*. "Our partner, ESP, they have always retained some slots for us, so we could put some families there as well."

Another CBOs indicated that they would collaborate with the City of Oakland, specifically the fire department, police department, public health department and Healthcare for the Homeless because they already have a strong relationship. Another CBO indicated that they would work with other organizations, the church for one and are currently trying to get some additional MOUs with other faith based agencies that have large halls that could provide additional capacity. Also, other agencies that provide homeless services like BOSS. Although this CBOs was part of the San Francisco Foundation effort to get CBOs working together to get them as ready as possible in the event of a disaster.

Organizational Capacity

Factors Increasing CBOs' Preparedness and Response Capacity Compared to Other CBOs Serving the Homeless

Each organization had specific reasons they felt contributed to their increased levels of preparedness compared to other homeless service providers.

- Being located in a high crime area
- Being in crisis response mode; practicing how to diffuse an angry client
- Being a tight knit group and communicating about everything
- Leadership within the CBO
- Staff being involved in the process of preparing[1]
- Combined Safety and Disaster Teams
- Having regular meetings and keeping up with new information and incorporating it into disaster plans
- Internal structures that promote an ongoing consciousness about preparedness
- Responsibility for youth and children
- Making it part of the organizational culture
- A sense of commitment to the surrounding community

CBO Actions in Disaster Response Mode

Organizations indicated that they would continue to provide services to their clients and make sure that their staff and clients are taken care of first, for example shelter, food and connections to services. Another organization said they would close one of their shelters and would relocate to another one of their shelters. Another organization described that their internal help system would come into place first, so that they would not be a burden to external community organizations. All organizations had emergency supplies stored for their staff and clients. Most organizations had staff trained on first aid and CPR and some had staff trained on how to respond to various scenarios like how to shut off gas after an earthquake. Some organizations had overflow capacity so if people in the community were in need of immediate shelter they would accommodate as possible. The safety of clients and staff is constantly on the top of the minds of these organizations. Other examples provided by CBOs included:

- Having clients' phone number on hand to check in on them
- Using counselors who can provide assistance for response to trauma during a disaster
- Using nurses that are present at the time
- Every staff member has The Easy Access (pages of categorized services locally)
- Being ready to take care of the frail elderly in need
- ICS Staff List of who's going to be doing what in a crisis mode; practiced yearly
- Wind-up and battery lanterns
- Existing relationships with other shelters for space if needed
- Relationships with ARC

[1] Staff are more involved in the overall process of preparing and take part in preparedness and response related activities as opposed to these activities and preparations occurring inly at the management levels.

Communication & Communication Plans

Communication will be important during a disaster. Organizations had a variety of way that they planned to communicate with staff, other organizations and with their clients. Some had a communication procedure they would follow while other CBOs would email staff within and between facilities. One organization would like to develop an internal page on their website that's set to go with language that says: "*our site is down right now; with contact information and where to get assistance and whatever other important information we want to share*." Another CBO imagined having an established phone tree with people on the ground that have Ham Radios to communicate with each other in a disaster. **"***But, if we were strategic as a county, then we would have them at different points and develop a phone tree that, would we all go down, I could still call so and so, who's over there."*

Additional communication plans and procedures included:

- Making sure that staff can care for themselves and their own families and making sure that clients are cared for
- Off-site staff would check-in to see if there is something that is needed
- FRS[1] radios for internal use and the city sets up neighborhood groups with FRS radios to be able to talk to the groups from city hall
- Staff who live close within walking distance to work would assist with needed resources
- On-site vehicles
- Communicate using the same email tree regularly used
- You Tube channel
- Facebook and a Twitter accounts
- Maps for the closest payphones in the neighborhood to know where to send someone to try to get a message out
- Stored bicycles to use if all communications are down
- Communication procedure
- Text messaging, social media sites
- Handwritten fliers on colored paper with markers to post in the community
- Walking to someone within the facility or close by in the community to communicate

Activities Conducted with Staff and/or Clients to Exercise Preparedness Plans

- Quarterly drills, so staff are following the minimal guidelines and conducting themselves in a safe manner
- Regular informational meetings with staff and clients
- Leaders in the community that would take a more active role under facility management
- A safety committee or group that makes sure that the consumers are safe who would patrol the area, make sure doors are locked, etc.
- Exercise plans for disaster response once per year
- Being able to conduct triage for clients' needs
- CPR and First Aid training/certification

[1] Family Radio Service (FRS) radios are improved versions of walkie talkies that are authorized in the U.S. using ultra high frequency channels to communicate. They have less interference and have a range of several miles when the line of sight is not blocked by building or tress for example.

- Rotate different types of drills monthly like fire, earthquake, evacuation, etc.
- OSHA safety training
- Monthly safety inspection, review and updating of safety kits and emergency supplies
- Monthly evacuation drills
- Produced an emergency response video for staff and clients to review as a refresher

CBOs Increasing Their Capacity for Disaster Preparedness and Response

Every organization had specific things that they wanted to do to increase their capacity for disaster preparedness and response. Several organizations were primarily concerned about relocation of their clients in the event their building would be deemed unstable and insecure. They wanted a facility that was just ready to receive people in need. Many organizations wanted to pursue building new relationships with organizations to increase their capacity and/or enhance existing relationships. Even those organizations that were well established and had the capacity to provide most of their client services internally, wanted to reach out into the community to increase their connectedness. In some instances, organizations that already had relationships with other organizations and realized the potential of these relationships, indicated they would like to improve and expand them knowing that they will be very useful in a disaster or crisis situation.

> *"The ability to have some space, and maybe cooking; they [FBOs] might have kitchens where we could cook food for folks, chairs, stuff like that."*
>
> - **Community Associate**

> *"I'd actually like to see them [residents] take some of the free CERT classes through the City of Berkeley and maybe sending staff…and disease prevention [training]…I think it would be helpful for us to strengthen out linkages there [City of Berkeley Public Health]."*
>
> - **Director**

More specific needs included:

- Reviewing the organization's disaster plan more than once a year, communicating with people [externally] about plan more frequently
- Additional classes for staff and/or clients, continued training or refresher training from CARD, the ARC, CERT, CORE, CPR training, more life skills classes for our residents
- Break down ICS Staff assignments more, e.g. categorize certain things, who's going to call the fire department, who's going to suppress, who's going to check for small fires; so people know what to expect
- A location where there are beds for clients
- Better tracking of preparedness, e.g. tracking the frequency and quality of trainings, ensuring that there is a dual tracking of staff and clients
- Fresh faces that emphasize and conduct preparedness training on site
- Actually doing the drills
- Continue to take care of clients; being able to continue operations without being completely displaced
- Continuous training and continuously talking about preparedness
- Communication systems

- Increased staff capacity, more help to actually get preparedness done
- More hours to devote to preparedness
- A training tree; one person that can train others and then those folks train others
- Beginning conversations about preparedness with safety on people's minds during staff meetings and events

Barriers/Challenges that Have Kept CBOs from Reaching Desired Level of Preparedness and Response Capacity

- The amount of work per person
- Keeping people who are involved inside the organization focused on this
- Financial resources
- Time and money
- Immediate needs that seem more important than working on preparedness
- Periodical updating of emergency management plan
- Funding for supplies
- Staff time to pull something like a business recovery plan together

"I think most of them [other CBOs] are like us in that we have to focus internally first and join hands by inviting…"

- Executive Director

Differences in Organizational Preparedness

Differences in organizational preparedness for the CBOs participating in in-depth follow-up interviews are presented in Table 14. Out of the eight organizations interviewed, half of the organizations were involved with the San Francisco Foundation effort. The mean number of general CBO capacities was not much different for the two groups. The percent potential leverage was lower (more IORs were being used for disaster preparedness and response activities) for the group not participating in with the San Francisco Foundation, but slightly higher when OFD was removed. There was little overall difference between the two groups.

Table 14. Differences in Organizational Preparedness

Organization	SBB	PBC	2PER	CST		PER	GGO	OFD	3PEA		without OFD
Part of San Francisco Foundation Effort	Y	Y	Y	Y		N	N	N	N		
Number of General CBO Capacities	22	10	12	24	**Mean 17**	14	11	20	27	**Mean 18**	**Mean 17**
Percent Leverage Potential	100	100	87	72	**Mean 89.75**	100	97	6	78	**Mean 70.25**	**Mean 91.67**

Ranking of CBOs

To compare the characteristic of 'more prepared' CBOs, organizations are first listed in order of their general disaster preparedness and response capacity. The most prepared CBO was SBB and the least prepared OFD. Looking at the number of IORs reported by these CBOs, the ranking on the number of IORs did not correlate well with the DPR rankings. The percent potential leverage of these CBOs was highest (100%) for the two CBOs that had the highest DPR capacity; these organizations did not use any of their IORs for disaster preparedness and response activities, which were based on self-reported use of relationships for disaster preparedness and response activities. The organization (OFD) that ranked lowest on the other three characteristics had the lowest percent leverage potential (i.e. it used 94% of its IORs also for disaster preparedness and response related activities).

Table 15. Agreement in Ranking of CBOs

General DPR Capacity*	CBO	Ranking Based on Number of IORs	% Leverage Potential
More Prepared 35**			
27	SBB	3	100
24	PER	6	100
23	2PER	2	87
22	3PEA	8	78
21	CST	1	72
21	GGO	7	97
18	PBC	4	100
14	OFD	5	6
Less Prepared < 10			

* Disaster Preparedness & Response Capacity based on 35 Item Survey
**Highest possible score on survey

Leveraging IORs for Disaster Preparedness and Response

One respondent, a Community Associate, presented unprompted ideas on how to "leverage" relationships for disaster preparedness and response.

> *"I think that when we bring nonprofits and faith-based institutions in, this is not a new idea; you're actually exploding your capacity because they are in all little corners of our community."*

Another unique example of sharing ideas included working with a local nonprofit that rebuilds and donates computers. The CBO had been thinking about collaborating with this nonprofit in getting operating systems and computers back up and running in the event of a disaster; i.e. their plan was to incorporate the nonprofit into their business recovery plan.

"So you know, maybe putting aside fifty systems, storing them away just for disaster preparedness. So there are some ideas for moving forward. But their expertise is doing that. So, how could they participate in being a responder in a tragedy. There you go. And so, you can have that conversation with each of the nonprofits that only do this. And then they'll say, well, how can I help and just have that dialogue. It should be interesting."

Additionally this respondent said-

"The other collaborator that I would bring in is actually the big chain grocery stores and make them part of the community… so, having conversations with the local stores, so that they can participate."

Chapter 6 – Discussion of Results & Conclusions

This study sought to contribute to the understating of organizational disaster preparedness and response (DPR) capacity through 1) determining whether the number and/or types of interorganizational relationships (IORs) influence an organizations' capacity for disaster preparedness and response, 2) what factors contribute to increased levels of preparedness and 3) how can CBOs build and strengthen interorganizational relationships for disaster preparedness and response activities?. A theoretical framework based on resource dependence and exchange was used to conceptualize IORs being facilitated by collaboration and communication to increase an organization's capacity for disaster preparedness and response. This study is unique in the literature assessed to investigate homeless service providers in depth in the context of DPR capacity influenced by the formation of IORs. It also explored factors that contribute to DPR capacity. Although vulnerable populations have been the focus of many recent disaster preparedness and response efforts, CBOs serving the homeless have not been studied in detail and may provide a glimpse of factors that may assist other CBOs serving vulnerable populations.

I. The Influence of Interorganizational Relationships

The first hypothesis states that a positive relationship exists between the number of interorganizational relationships and an organization's capacity for disaster preparedness and response. Contrary to this expectation, the number of IORs was not a significant factor in predicting disaster preparedness and response capacity (Table 10). An explanation for this may be that the type of IOR may be more important as an influence of DPR capacity. Evidence that the type of IOR is an important factor in PR capacity came from the in-depth interviews. When asked about whether the number or the type of relationships matter, respondents unanimously declared that the type and quality of a relationship are very important. It may also be that many IORs may lead to fewer real IORs, i.e. the type and quality of IORs, especially those related to DPR capacity, are more important than the number of IORs. Furthermore, those CBOs that have been around for a long time, have eliminates the IORs that are not important to them. Instead, they maintain work arrangements with organizations that really affect their overall performance. This may take place over time. Indeed, organizations with more DPR capacity had been in operation longer than organizations with less DPR capacity (Table 7). However CBOs with more than 24 IORs, had the same average years in operation as did organizations with fewer than 24 IORs (Table 5). One CBO specifically indicated that it is very important to *"know who you are dealing with"*, another stated that types of organizations were more important because *"you need to know enough about an organization to know who will be responsive to you and return a call"*. This study did not tease out specific characteristics of 'types of organizations', i.e. whether human characteristics or organizational characteristics influenced their choice in the type of organization with which to work. These characteristics may play important roles and should be further investigated in future studies.

The second hypothesis predicts a positive relationship between an organization's general capacity to serve its clients to its disaster preparedness and response capacity. There was a significant relationship between an organization's general capacity and its disaster preparedness

and response capacity (Table 10). Although this was somewhat expected from the extension of Pfeffer and Salancik's resource dependence theory, organizations with higher general capacity also had a higher average number of IORs. However, these IORs may not all translate into disaster preparedness and response capacity. In fact, there was very little evidence that CBOs used all their current relationships for disaster preparedness and response related activities. Only 16 out of the 37 reported that their relationships are being used for additional purposes (Table 6). It would be useful to gain an in-depth understanding of the nature of some of these relationships.

Interorganizational Relationships with Disaster Response Organizations

Although IORs were not a factor in predicting DPR capacity, IORs with response organizations was a significant factor in predicting DPR capacity (Table 10). The average number of disaster response organizations with whom CBOs had relationships was greater for CBOs with more than 10 DPR capacities (Table 7). This again provides some evidence that the type of relationship is an important influence on organizational disaster preparedness and response capacity. With respect to the number of IORs, the average number of response organizations CBOs had relationships with was the same (Table 5). Organizations with more IORs, however, did have a higher average self-reported H1N1 capacity, a higher average number of IORs related to their H1N1 capacity as well as a higher average number of relationships with disaster response organizations with respect to H1N1. This may be an indication that the CBOs with more IORs and well established relationships with response organizations relied more on those relationships during times of crisis. The CBOs with fewer IORs may have not exercised their relationships with disaster response organizations as readily or their relationships may not have been established long enough to readily access information and resources. It is also possible that CBOs with fewer IORs used established relationships with healthcare agencies to provide the necessary resources.

The experiences of CBOs during H1N1 suggests that IORs during the H1N1 crisis varied from working with community student nurses to consulting local community clinics and hospitals to provide advice and education (Table 13). Thus, during a crisis response such as H1N1, CBOs may be more dependent on outside resources. However, CBOs that had more IORs with disaster response organizations were 'more prepared' category, which also showed significance in the regression analysis (Table 10). So IORs with disaster response organizations may be beneficial to overall preparedness. This does not mean that in a crisis these relationships are sufficiently established. CBOs also turn to a few trusted relationships; thus, the type or specific outside organizational relationships may be more important to an organization's disaster response capacity than trying to access information from many sources.

It is not clear whether CBO-public health relationships or CBO-response agency relationships had been in place prior to the H1N1 crisis and whether CBOs and public health were able to partner effectively without a prior relationship. In Table 13, 19 organizations had received information from public health. However, it is unclear whether these relationships were efficient or effective and which ones were in existence prior to the outbreak. It is not clear what the capacity of public health actors was to make use of CBOs during the H1N1 crisis. We have no information from the data about whether or not partnerships occurred more often, more effectively, or more efficiently when relationships existed prior to the outbreak. Thus, a more in-

depth examination of whether the quality, effectiveness and prior existence of relationships made a difference is needed.

Related to the potential evidence that organizations with more IORs also have more capacity, came from the theme, ***work with/support from external organizations***, another reason CBOs had increased DPR capacity. CBOs mention that working with outside organizations from which they may receive support is important; this includes being part of the San Francisco Foundation, and for example, and being connected with the City of Oakland which has provided funding.

Although the number of IORs does not directly predict organizational disaster preparedness and response capacity, IORs may contribute to a CBO's DPR capacity in that the organization has more relationships to choose from, and thus the type of relationship they chose seemed to make a bigger difference as voiced by interviewees. It was not one or two relationships that really stood out, but rather the nature of those relationships that made a difference. Aside from the in-depth interviewees, very few CBOs had relationships with their local fire departments, but the ones that did had very strong relationships.

Organizational Capacity and IORs

In addition to looking at the number of IORs as an indicator of DPR capacity, although survey results revealed organizations that were 'more prepared' based on the number of disaster preparedness and response capacities, some of the 'less prepared' CBOs may have had more internal capacity than the CBOs that ranked higher. As we saw in Table 15, the higher ranking CBOs had the most leverage potential (more IORs that could potentially be leveraged for increased DPR capacity) while the lowest ranking CBO has the least leverage potential (fewer relationships to leverage). An explanation for this may be that as resource dependence influenced CBOs with less capacity requiring more IORs (an external measurement) with respect to disaster preparedness and response capacity, internal capacity was not directly captured and not directly measured by the survey. As Pfeffer and Salancik [77] point out, organizations prefer to maintain their autonomy; therefore it may be that as an organization becomes more equipped over time to manage and take on new tasks that it previously relied on other organizations for, it regains some of its autonomy. Rather than spending time working to build external relationships for disaster preparedness and response (which means their number of IORs, would be lower), over time they may built up their own capacity in this area. The number of interorganizational relationships an organization has would then be reduced as the organization has developed capacity to deal with this internally. This could be considered a reversal of resource dependence. Thus to fully capture the true capacity for an organization, we would need to examine external factors, internal factors and the quality of the external relationships. We did see from the in-depth interviews that all organizations place a high value on the quality of their relationships and noted specific relationships that were very important to them. Additionally, all organizations from the in-depth interviews indicated that the leadership and the culture of the organization are factors in their disaster preparedness and response capacity which was a factor not directly measured in the survey. Consequently, a culture of preparedness overtime may build more internal capacity.

II. Leveraging Relationships for Disaster Preparedness and Response

One of the alternative hypotheses predicted that an organization with many interorganizational relationships may leverage those relationships for increased disaster preparedness and response capacity. Leveraging of a relationship is difficult to measure objectively. Specific evidence of leveraging relationships for disaster preparedness and response were sparse. The few novel ideas however that were expressed by one CBO, spoke of exploding its capacity by collaborating with local nonprofits and FBOs in the community. Another idea was in regard to a local nonprofit that rebuilds and donates computers. The expertise of this local nonprofit could be leveraged to assist CBOs in getting up and running again after a disaster. These ideas demonstrate the possibility of leveraging the skills and resources of local non-profit and for-profits to benefit human service organizations that need to be up and running quickly in the event of a disaster. Thus the "adaptive capabilities" that are characteristic of the public and private sectors can be leveraged to "impact community resilience" [105]. The behaviors and actions of local organizations may therefore augment the capabilities, and thus, the recovery of a community.

The number of CBOs that actually utilized their relationships for disaster preparedness and response related activities was quite low and examples of leveraging were not readily indicated. Less than half of the thirty seven participating CBOs did so; nine of these CBOs were more prepared and four were less prepared. As shown in Table 6, CBOs used their relationships mostly for mental health services and it's not clear if these relationships were actually used to plan ahead for a disaster. Fourteen out of the thirty seven respondents thought about and took action to utilize their IORs beyond their basic purposes. Although some of the other activities are more in line with DPR capacities such as sharing and discussing resources, ideas and disaster plans, and working together to stockpile supplies. It would be useful to get a more in-depth understanding of the nature of these relationships. An actual examination of how the relationships influence their disaster plan and thus increase their level of DPR capacity would be quite useful. Rather than looking just at individual factors that influence and contribute to increased DPR capacity, such exploration could provide information on actionable strategies; i.e. how to act and implement factors contributing to increased DPR capacity.

Looking at the 'used' IORs in Table 12 in terms of a potential leverage score, 33 out of the 37 participating CBOs had a percent leverage potential of greater that 75% (only 25% of their IORs were being used for DPR related activities) while only one CBO had a percent leverage potential of 6% (96% of their IORs were being used for DPR related activities). This suggests that most organizations may have not yet have considered the potential value of their interorganizational relationships for disaster preparedness and response activities. Although the fact that more IORs did not contribute to increased disaster preparedness and response capacity, most CBOs probably do not consider their relationships for this additional purpose and therefore we do not really have a sense of what portion of unused relationships might be used for increasing DPR capacity. As most CBOs will be in the 'same boat' during a disaster, CBOs should consider all of their IORs to be potentially used for DPR activities in addition to their day-to-day intended purposes. Accordingly, there is a great deal of potential to build organizational capacity with respect to disaster preparedness and response.

On the other hand, many organizations may not have relationships that can be leveraged; these organizations may then want to build new relationships as appropriate. In examining the relationships an organization has, we may find that many of its relationships are already used for disaster preparedness and response, thus, its potential for leveraging these relationships would be low. CBOs with a low potential leverage score may therefore build new relationships if applicable or enhance its relationships through strengthening its communication mechanisms and establishing more formal agreements. On the other hand, an organization that does not use many of its relationships for disaster preparedness and response activities (i.e. has a high leverage potential) may want to explore its relationships to determine whether the relationships actually can be leveraged to increase disaster preparedness and response capacity. Organizations with a high leverage potential may also need to develop new relationships to increase these. We may find some indication of which relationships to begin building or enhancing from the interviews with the 'more prepared' CBOs, but CBOs should explore all of their relationships as possible.

III. Directions for Future Research: Observations from In-depth Interviews

The CBO that provided examples of leveraging had also worked with the San Francisco Foundation, so perhaps the foundation's facilitated sessions on disaster preparedness and response had influenced them to think a bit more strategically and look at their relationships from a different perspective. The relationship with the San Francisco Foundation is an example of who you know that is important; one organization may influence another organization with respect to disaster preparedness and response issues and the right combinations of skills and resources may augment the overall capacity of several organizations. This relationship had an important influence on half of the organizations having a disaster plan. Other organizations had plans in place as a result of being in operation longer and having some disaster experience. Disaster experience has also been shown to be a significant factor in predicting organizational preparedness by Gillespie and Banjaree in their investigation of response organizations [97]. One caveat to having a plan is that it can often be 'shelved', i.e. it can become a product on a shelf that indicates organizational preparedness yet provides false security. Plans need to be exercised to verify capabilities of staff and other organizations mentioned in the plan, and that resources are and will be available in the event of a disaster. ***Thus requiring a plan by a funder should be coupled with periodical follow-up and guidance of both the organization itself and the funding agency.***

Factors to Consider in Measuring Disaster Preparedness and Response Capacity

While the number of IORs was not statistically significant in predicting disaster preparedness and response capacity in this research study, future studies may consider including this as a predictor as it was close to being significant. As this is an exploratory pilot study examining a very complex issue, considering a larger margin of error, a cut-off of $p = 0.10$ as an indication of significance, may capture variables that may be of interest to be considered for inclusion in a larger study. In addition, various other factors might be considered for inclusion in a model predicting organizational disaster preparedness and response capacity which were key themes that emerged from the in-depth interviews of 'more prepared' CBOs. Each of these factors (in

bold italics) can be measured objectively to provide a more complete picture of both internal and external factors.

Although external IORs are not a prominent factor in a CBO's DPR capacity, ***leadership at the organization and having a culture of preparedness were*** cited by all of the 'more prepared' interviewees. CBOs stated that the organization's leader has been instrumental in improving DPR capacity and at many organizations; emergency preparedness has been made part of the culture. According to Gardner, "the process of persuasion or example by which an individual (or leadership team) induces a group to pursue objectives held by the leader or shared by the leader and his or her followers." [117]. This often leads to staff-wide training and in some instances inclusion of clients in drills, and may also include CERT involvement. Many staff have CPR and first-aid training (though this is not always a specific requirement of the CBOs).

When responding to questions regarding resources and collaboration, CBOs mention ***proximity of collaborators and resources,*** collaboration with nearby organizations or people from the community, with terms coming up, such as "immediate area," "neighborhood," "local," "just down the street". Again although resource dependence theory suggests that CBOs prefer to work autonomously unless dependent on external resources [77], two of the 'more prepared' CBOs specifically mentioned that they work with other CBOs close by to collaborate despite the fact that they have internal capacity. Organizations do not like to depend on any one resource and prefer to have multiple suppliers of a needed resource. So looking at collaboration as a facilitator of IORs, geographical location may be a factor in interorganizational collaboration and thus in forming new IORs. Thinking of nonprofit capacity in terms of a sector's capacity as a whole rather than in conjunction with others is, therefore, meaningful [56, 110].

Additional factors that should be considered for inclusion in a future/larger study include factors that can be measured quantitatively and qualitatively. These factors came from the qualitative analysis. For example, it would be interesting to determine which preparedness and response activities an organization is engaged in are ***obligations to funders***. Then follow up by finding which of these activities all staff are involved in and which activities are "window dressing" for funders. A true culture of preparedness within an organization may have a mixture of both, with more ***inclusion of staff*** rather than exclusion. Regularity of meetings, drills and exercises i.e. continual improvement, and conducting facility assessments can all be factors assessed though a checklist and/or tabulation of frequency.

Factors to measure quantitatively:

- *Nature of Organization/Services*
- *Obligations to Funders*
- *Continual Improvement*
- *Staff Inclusion*
- *Regularity of Meetings, Practice and Facility Assessments*

In-depth interviews capture data that cannot be captured through numbers or simple responses on a survey. Understanding intangible concepts such as an interagency collaborative capacity [108] that an organization possesses to easily facilitate important interorganizational relationships, and

productive quality that produces tangible value to clients, are vital to understanding the underpinnings of how organizations achieve various levels of disaster preparedness and response capacity and what factors prevent building capacity.

Qualitative Measurements

- *Organizational Leadership/Culture*
- *Sense of Responsibility to Clients*
- *Level of Importance*

IV. Study Limitations

This study has several limitations. First, the small sample size was not ideal for conducting statistical analyses as the results are not generalizable to the larger population of homeless service providers. In addition, since the population of focus was a subset of vulnerable groups in Alameda County, the results may be less applicable to CBOs serving other vulnerable populations even if they have clients with similar needs to those of the homeless.

Second, since neither reliability nor validity studies have been done on the indicators of disaster preparedness and response capacity for this study the results are more appropriate as indicators for future studies. The metrics of this study need to be applied to a larger population and validated to ensure reproducible results. Furthermore, missing values for the number of IORs and capacities were recorded as zero (0) rather than as missing values. Missing values produce different results than the number zero, and reduce the sample size for the sample calculation being performed. Some organizations may not have taken the time to think about every IOR corresponding to their services and whether or not they used any of the relationships for disaster preparedness and response activities. The person answering the survey may not have known all the answers and left them blank. A survey may need to be conducted in person or over the phone with an incentive for each participant.

Third, selection bias may have played a role as some organizations that agreed to participate may have had more staff to carry out daily functions and could spare an individual or some time to complete the survey. Information regarding the annual expenses and number of staff was not obtained from for nonparticipating organizations to conduct comparisons, however; the geographical distribution of participants versus nonparticipants in the county was similar.

Fourth, as measuring external capacity was the focus of the research, survey metrics were based on the number of services provided by the organization. However, internal capacity (which would reduce the number of IORs) may also play an important role as CBOs learn to increase their disaster preparedness and response capacity which then needs to be taken into account when measuring the overall disaster preparedness and response capacity. As hoped for, this study has generated ideas to refine the theoretical framework to improve future studies, such as an examination and inclusion of the internal DPR capacity of CBOs. Additionally, accounting for leadership and a culture of preparedness for example, key themes that emerged, may be important and should be considered in a revised theoretical framework in future studies.

Although the quality and value of interorganizational relationships did surface in the open-ended questions in relation to the H1N1 crisis and during the in-depth interviews, this contribution of IOR quality was not measured quantitatively. For example, the length of a relationship, the frequency of joint meetings or how each organization increased their disaster preparedness and response capacity were not captured. It may be important to measure the quality of IORs objectively and then weight IORs that have a higher quality, i.e. more likely to contribute to increased capacity, when calculating the overall capacity measure.

Finally, although the percent leverage potential does provide an objective indication of an organization's potential to utilize its relationships for disaster preparedness and response activities, the quality of the relationships and the amount of capacity gained remains unknown. The equation may also need to account for IORs that have already been considered for DPR activities, but for whatever reason, cannot be utilized to that effect. This provides an even more accurate picture of an organizations potential to leverage its relationships. Nonetheless, the percent potential leverage can be a quick way for CBOs to consider their IORs both in the context of meeting the needs of their clients and in the context of building disaster preparedness and response capacity.

V. Recommendations & Implications

Public Health Implications

Recommendations
Public health agencies should increase their outreach to CBOs, especially those whose client needs fit the health services already provided. In time of crises, these pre-established relationships may provide public health workers with an inroad to harder-to-reach populations in their jurisdiction. For example:

-On-site immunizations at shelters during crises
-Implement shelter protocols in organizations serving vulnerable clients
-Conduct on-site trainings

Baseline data, such as that generated in this study can help public health agencies focus their attention on building relationships with CBOs serving vulnerable populations. Specifically, appealing to the CBO's leadership and building up communication channels through listservs and conducting on-site visits may increase capacity for both the COBs and the public health agency. CBO networks may be important to incorporate into public health system functions and may be invited in on conference calls and public health preparedness strategies and activities. Policy recommendations at the organizational level may include incorporating preparedness activities with CBOs into their budget and including preparedness and response training into outreach activities.

Public Health agencies should actively rather than passively[1] incorporate CBOs into preparedness and response activities such as in the development of communication mechanisms

[1] Passive incorporation of CBOs means that they have a place for example in an exercise and are represented in theory but not actual participants (i.e. a representative is not physically present or takes part in an exercise.

and strategies or involvement in an activated emergency operations center. Public health departments could focus their attention on CBOs that are already reaching out to prepare special needs populations and leverage these relationships to pull in additional CBOs. Well-established response partners such as CARD, Eden I&R and the ARC may be well positioned to facilitate such relationships.

A community forum (see Appendixes K & M) is a productive way to utilize resources in the county and convene both response agencies and CBOs serving vulnerable populations. Public health may be better positioned to pull response organizations together and collaborate with an organization such as CARD to pull the CBO community together.

CBO Implications

Community-based organizations should examine their interorganizational relationships more closely to determine which relationships are of most value to them, which may be used for disaster preparedness and response related activities and what potential collaborators are in close proximity have similar populations and goals to increase their capacity.

Internal capacity can be increased by building a culture of preparedness within the organization. For example, CBOs could incorporate safety into staff meetings and include clients in evacuation drills. They can talk about preparedness and response issues with essential service providers as part of normal operations.

Policy Implications

Based on the finding in this study that some CBOs pursue disaster preparedness because of a funding agency requirement, funders should consider requiring various preparedness and/or response capacities. For example:

-Monthly evacuation drills
-First aid training of employees
-Safety/emergency signage on-site
-Time set aside for staff to take on preparedness
-A disaster plan that is exercised periodically

VI. Summary & Conclusions

This study of community-based organizations serving the homeless revealed no relationship between the number of interorganizational relationships and an organization's capacity for disaster preparedness and response, but the types of relationships CBOs cultivate based on their clients' needs seem an important predictor of disaster preparedness. Other important influences of increased CBO disaster preparedness and response capacity were the leadership at the organizations which came from directors and management staff, having a culture of preparedness that includes staff and clients, and the vulnerability of the clients that drives the organizations to prepare to provide continuity of care in the event of a disaster or local crisis. All organizations placed a high level of importance on their preparedness activities and were likely to collaborate and seek support from other organizations in close proximity to them. Although public health departments played a central role during the H1N1 crisis in providing timely information, CBOs

sought information from other trusted sources of reliable, accurate and user-friendly information. Organizations such as CARD, the ARC and the fire department were high on the list for building disaster preparedness and response capacity in this sample of CBOs. Most organizations did not seem to consciously consider their interorganizational relationships in the context of disaster preparedness and response. Those organizations that did were able to leverage such relationships to increase the organization's capacity for disaster preparedness and response related activities.

Mixed methods worked well to look at issues related to interorganizational relationships and disaster preparedness and response capacity from a variety of standpoints. This pilot work will enable building out the theoretical framework and measures more distinctly and holds important implications for future studies.

In the struggle to incorporate disaster preparedness and response activities into the organizational structure and functioning of CBOs serving vulnerable populations, CBOs may find it useful to look at their interorganizational relationships more closely, determine which ones are essential to general operations and which ones may also be used for disaster preparedness and response activities.

Public health agencies need to build relationships with CBOs serving vulnerable populations before a crisis or disaster so that their information, advice and recommendations will be followed. Likewise, CBOs can tap into many of the services provided by public health departments to build relationships that help them increase their capacity in time of crises.

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Appendixes

Appendix A: CBO Survey

Building, Enhancing and Leveraging Interorganizational Relationships for Disaster Preparedness and Response: A study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless

For examples on filling out specific sections please see last 2 pages.
Additional space is also provided for any additional information you wish to provide.

In addition to this survey we may be conducting in-person follow up interviews. These will allow us to get more detailed information regarding how interorganizational relationships influence disaster preparedness and response activities.

Part 1
Section 1 – General Information

1. **Approximately what percentage of the clients your organization serves do you identify as each of the following? Your answers do not have to add up to 100%.**

   ☐ % Families
   ☐ % Children
   ☐ % Adult Men
   ☐ % Battered Women
   ☐ % Seniors
   ☐ % Veterans
   ☐ % Other (Please specify):_____
   ☐ % Other (Please specify):_____
   ☐ % Other (Please specify):_____

2. **What are other special characteristics of your organization's clients as a group?**

   Please specify:_____

3. **Our organization maintains a list of clients that we serve.**

   ☐ Yes ☐ No ☐ Don't Know

If pandemic influenza was confirmed in the Bay Area and you are given special instructions and information by public health and/or other county agencies on how you and your clients can reduce the likelihood of becoming ill, please answer the following:

4. **Our organization would be able to reach the majority of our clients within 24 – 48 hours to provide them with special or important information (Please circle one).**

   ☐ Strongly Agree ☐ Agree ☐ Undecided ☐ Disagree ☐ Strongly Disagree

5. **We would use the following communication mechanisms to reach our clients in a crisis, emergency or disaster to provide important information: (Please check all that your organization would utilize).**

   ☐ Email
   ☐ Listserv
   ☐ In person
   ☐ Fact sheets
   ☐ Notices displayed in the community
   ☐ Outreach workers

- [ ] Radio
- [ ] Website
- [ ] Verbally
- [ ] Flyers
- [ ] Classes
- [ ] Cell Phone
- [ ] Landline Phone
- [ ] Facebook
- [ ] Twitter
- [ ] Other (Please Specify):_____

6. **Other ways we can communicate with our clients include:**
   - [ ] Braille
   - [ ] American Sign Language (ASL)
   - [ ] TTD
   - [ ] Other (Please Specify):_____
   - [ ] No other forms of communication are currently used by our organization

   We translate into (an)other language(s):
   - [ ] Information on services we provide
   - [ ] Health care services information
   - [ ] Disaster preparedness information
   - [ ] Legal services information
   - [ ] Other (Please Specify):_____
   - [ ] Languages:_____
   - [ ] We do not currently translate information

   We transcribe (make the information understandable to your clients):
   - [ ] Information on services we provide
   - [ ] Health care services information
   - [ ] Disaster preparedness information
   - [ ] Legal services information
   - [ ] Other (Please Specify):_____
   - [ ] We do not currently transcribe information

7. **Our total estimated actual annual expenses per year are:**
   - [ ] less than $100,000
   - [ ] between $100,000 and $250,000
   - [ ] between $250,000 and $500,000
   - [ ] between $500,000 and $750,000
   - [ ] between $750,000 and $1,000,000
   - [ ] greater than 1,000,000.

8. **How many full time staff does your organization have (please include volunteer staff)? _____**

9. **How many part time staff does your organization have (please include volunteer staff)? _____**

10. **Approximately how many clients does your organization serve per year? _____**

11. **How many years has your organization been in operation? _____**

Part 1 Section 2 – CBO Capacities & Interorganizational Relationships

In this section, please tell us about the relationships your organization has with other organizations; please also include the number of formal and informal relationships.

12. **In column 1, please mark the capacities (services) your organization has/provides at a medium to high capacity.** Medium to high capacity means your organization is consistently able to make the provision yourself or in collaboration with another organization.

    In Column 2, for each of the capacities that you checked, please indicate <u>the number</u> of organizations that you are working with to meet those capacities. (Please include other CBOs, faith-based organizations FBOs), volunteer organizations or groups, governmental agencies, schools, hospitals.)

CBO Capacities

Organizational Capacities		Corresponding <u>Number</u> of Relationships
Column 1		Column 2
Basic Needs		
	Food/Water	
	Shelter	
	Hot Meals	
	Toilet Facilities	
	Basic Health Care	
	Other (Please Specify)	
	Other (Please Specify)	
Functional Needs		
	Health Care	
	Mental Health Care	
	Child Care	
	Transportation	
	Connections to Appropriate Resources	
	Financial Assistance	
	Education (Please Specify)	
	Education (Please Specify)	
	Counseling (Please Specify)	
	Counseling (Please Specify)	
	Classes (Please Specify)	
	Classes (Please Specify)	
	Other (Please Specify)	
	Other (Please Specify)	
Self Sufficiency Needs		
	Safety/Protection	
	Advocacy/Representation	
	Rehabilitation	
	Supervision	
	Outreach	

<u>Number</u> of Interorganizational Relationships Related to Disaster Preparedness and Response Activities

For each of the organizations you are working with, how many relationships, if any, are also used for disaster preparedness and response activities? (See examples below and example on page11.)

Number: _____

What is Provided or Shared?	
	Transportation of People to Shelters or Medical Care Facilities in the Event of an Emergency
	Share Disaster Plans
	Share Information on Evacuation Routes
	Discuss Communication Strategies
	Share/Discuss Resources
	Share Ideas
	Share Information
	Discuss Issues
	Work Together to Stockpile Supplies Such As Water, Food, Medical Supplies
	Transportation to Evacuate Staff and/or Clients in an Emergency
	Medical/Mental Health Services
	Other (Please Specify)
	Other (Please Specify)

Memoranda of Understanding, Other Formal Agreements, Informal Agreements Funding Requirements

Overall, for each of the organizations you are working with, please indicate the total number of formal agreements such as Memoranda of Understanding (MOU), Other Formal Agreements and/or Informal Agreements and how many of your agreements are Funding Requirements. If your organization has No Agreements, mark **0** in the appropriate space provided below.

	Job Training	
	Financial Assistance	
	Income	
	Life Skills	
	Job Placement Retention	
	Long Term Housing Subsidy	
	Other (Please Specify)	
	Other (Please Specify)	
	Other (Please Specify)	

# of MOUs:_____

# of Other Formal Agreements:_____

# of Informal Agreements:_____

# of Funding Requirements:_____

No Agreements:_____

Part 1 Section 3 – CBO Disaster Preparedness and Response Capacities

The Bay Area is home to several earthquake fault lines including the major Hayward Fault. If an earthquake in the Bay Area were to disrupt the infrastructure in much of Alameda County and public transportation would not be available with many water and power lines disrupted, please think about your organization's disaster preparedness and response capacities and answer the questions in this section.

13. **Does your organization currently assist your clients in preparing for a disaster?**

☐ Yes ☐ No ☐ Don't Know

14. **Does your organization currently provide your clients information about disaster preparedness and response?**

☐ Yes ☐ No ☐ Don't Know

15. **In the left column below, please mark the disaster preparedness and response capacities (services) your organization has or would be able to provide.**

CBO Disaster Preparedness and Response Capacities

	Capacities	No.
	Warning	
	Evacuation	
	Damage Assessment	
	Debris Removal	
	Shelter	
	Food/Water	
	Blankets	
	Basic First Aid	
	Transportation	
	Information to Clients	
	Disaster Kits	
	Referral	
	Crisis Counseling	
	Case Management	
	Clean-up Assistance	
	Family Reunification	
	Staff Trained for Disaster Preparedness and Response	

Corresponding Number of Interorganizational Relationships

For the capacities you checked off on the left, please indicate the number of organizations that your organization works with to meet those capacities in the **No.** column. (Please include other CBOs, faith-based organizations (FBOs), volunteer organizations or groups, governmental agencies, schools, hospitals.)

(If needed, see examples on page 12)

Relationships with Public Response Organizations

Please indicate which of the following, if any, public response agencies or groups you work with to meet the capacities on the left, if any:

☐ PH (Public Health)
☐ OES (Office of Emergency Services)
☐ FD (Fire Department)
☐ PD (Police Department)

	Exercised Disaster Plan	
	Disaster Management Skills*	
	Other (Please Specify)	
	Other (Please Specify)	
	Other (Please Specify)	

* For example, clear thinking about what needs to happen, what resources are available, and how to organize them in disaster preparedness and in a disaster situation.

- ☐ 211 (Alameda County Information & Referral Service)
- ☐ CARD (Collaborating Agencies Responding to Disaster)
- ☐ ARC (American Red Cross)
- ☐ MRC (Medical Reserve Corps)
- ☐ CERT (Community Emergency Response Team)
- ☐ Other please indicate the organization

Memoranda of Understanding, Other Formal Agreements, Informal Agreements Funding Requirements

Overall, for each of the organizations you are working with, please indicate the total number of formal agreements such as Memoranda of Understanding (MOU), Other Formal Agreements and/or Informal Agreements and how many of your agreements are Funding Requirements. If your organization has No Agreements, mark **0** in the appropriate space provided below.

# of MOUs:_____

# of Other Formal Agreements:_____

# of Informal Agreements:_____

# of Funding Requirements:_____

No Agreements:_____

Part 2
Section 1 – CBO Disaster Preparedness and Response Capacities

16. Please mark the general disaster preparedness capacities you organization has in place on the left. Then indicate which your organization plans to have in place on the right; please indicate the appropriate time frame.

General CBO Disaster Preparedness Capacities		Plan to Have Please Check the Time Frame				
Have in Place Now		**3 mo.**	**6 mo.**	**12 mo.**	**12-24 mo.**	**Don't Know**
	Staff dedicated to preparedness and response activities					
	Off-site documentation backup					
	Exercised written plans					
	Disaster supplies for employees					
	Disaster supplies for clients					
	Formal Agreements in place (e.g. MOUs with other organizations providing essential services)					
	More interorganizational relationships					
	Concept of preparedness & response is part of organizational culture					
	Exercises or drills with staff					
	Grant writing experience					
	Evacuation of personnel					
	Awareness of local natural hazards					

	Training for preparedness and response					
	Budgeting for disaster preparedness					
	Budgeting (securing funds) for disaster response services					
	Talking points or key messages					
	Press release templates					
	Phone scripts					
	Disaster evacuation routes					
	Contact lists with emails, phone numbers, etc.					
	Post disaster services					
	Information for Staff Regarding: ☐ Emergency Shelter Locations ☐ Evacuation Routes ☐ Road Closures ☐ Emergency/Disaster Situation Status Information for Clients Regarding: ☐ Emergency Shelter Locations ☐ Evacuation Routes ☐ Road Closures ☐ Emergency/Disaster Situation S					
	Food					
	Shelter					
	Clothing					
	Basic First Aid					
	Transportation/Evacuation Services					
	Other (Please Specify)					
	Other (Please Specify)					

Part 2 Section 2 – CBO Response Capacities to H1N1 Pandemic

17. In the left column below, please mark the disaster capacities (services) your organization had with respect to the H1N1 pandemic.

CBO H1N1 Capacities

	H1N1 Capacities	No.
	Over-the-counter medications to treat symptoms of flu	
	Water and other fluids for hydration	
	Facial tissues	
	Soap	
	Hand washing stations	
	Alcohol-based hand rubs	
	Paper towels	
	Disinfection and cleaning agents and supplies	
	Bed linens/blankets	
	Materials to be used for barriers between cots in separation area(s)	
	Additional Staff (back-up for those who become ill and need to stay home)	
	Additional staff for environmental cleaning	
	Information regarding flu	

Corresponding Number of Interorganizational Relationships

For the capacities you checked off on the left, please indicate the number of organizations that your organization works with to meet those capacities in the **No.** column. (Please include other CBOs, faith-based organizations (FBOs), volunteer organizations or groups, governmental agencies, schools, hospitals.)

Relationships with Public Response Organizations

Please indicate which of the following, if any, public response agencies or groups you work with to meet the capacities on the left:

- ☐ PH (Public Health)
- ☐ OES (Office of Emergency Services)
- ☐ FD (Fire Department)
- ☐ PD (Police Department)
- ☐ 211 (Alameda County Information & Referral Service)
- ☐ CARD (Collaborating Agencies Responding to Disaster)

	Nurses	
	Medical care	
	Additional Shelter	
	Isolation rooms or spaces for sick individuals	
	Masks for the ill to contain respiratory droplets	
	Masks for staff	
	Educating clients	
	Education of staff	
	Screening of clients	
	Other (Please Specify)	
	Other (Please Specify)	
	Other (Please Specify)	
	Other (Please Specify)	
	Other (Please Specify)	

☐ ARC (American Red Cross) ☐ MRC (Medical Reserve Corps) ☐ CERT (Community Emergency Response Team) ☐ Other please indicate the organization:
Memoranda of Understanding, Other Formal Agreements, Informal Agreements Funding Requirements
Overall, for each of the organizations you are working with, please indicate the total number of formal agreements such as Memoranda of Understanding (MOU), Other Formal Agreements and/or Informal Agreements and how many of your agreements are Funding Requirements. If your organization has No Agreements, mark **0** in the appropriate space provided below. (See example on page 12 if needed.) **# of MOUs:**_____ **# of Other Formal Agreements:**_____ **# of Informal Agreements:**_____ **# of Funding Requirements:**_____ **No Agreements:**_____

Part 2 Section 3 – CBO Communication Mechanisms

18. In Column 1, please indicate which of the following communication mechanisms your organization uses on a regular basis. Are there any other communication mechanisms you used? If yes, please indicate them in the spaces provided.

In Column 2 please indicate which communication mechanisms you relied on during the H1N1 pandemic influenza. Are there any other communication mechanisms you used? If yes, please indicate them in the spaces provided.

In Column 3 please indicate which mechanisms worked well consistently during the H1N1 crisis and explain if necessary in the lines provided on page 12.

Communication Mechanisms					
Column 1		**Column 2**		**Column 3**	
We use the following to receive and deliver information:		**We relied on the following during the H1N1 pandemic.**		**The following mechanisms consistently worked well.**	
	Email		Email		Email
	Internet		Internet		Internet
	Listserv		Listserv		Listserv
	Twitter		Twitter		Twitter
	Facebook		Facebook		Facebook
	LinkedIn		LinkedIn		LinkedIn
	FRS Radio		FRS Radio		FRS Radio
	Cell Phone		Cell Phone		Cell Phone
	Text Messaging		Text Messaging		Text Messaging
	Land Line Phones		Land Line Phones		Land Line Phones
	Mailings		Mailings		Mailings
	In person		In person		In person

	Fact sheets		Fact sheets		Fact sheets
	Fax		Fax		Fax
	Flyers/Posters displayed in the community		Flyers/Posters displayed in the community		Flyers/Posters displayed in the community
	Onsite Flyers/Posters		Onsite Flyers/Posters		Onsite Flyers/Posters
	Outreach workers		Outreach workers		Outreach workers
	Television		Television		Television
	Radio		Radio		Radio
	Mailing lists to send information		Mailing lists to send information		Mailing lists to send information
	Media (videos, cassette, CDs, DVDs)		Media (videos, cassette, CDs, DVDs)		Media (videos, cassette, CDs, DVDs)
	Pre-recorded phone messages		Pre-recorded phone messages		Pre-recorded phone messages
	Website		Website		Website
	Other (Please Specify)		Other (Please Specify)		Other (Please Specify)
	Other (Please Specify)		Other (Please Specify)		Other (Please Specify)
	Other (Please Specify)		Other (Please Specify)		Other (Please Specify)

Part 3

Questions Regarding Your Organization's H1N1 Experience
(Please use as much space as you need for your responses.)

1. During the initial phases of the H1N1 outbreak and the ensuing pandemic, what relationships did your organization use/leverage to help increase your capacity (services) to respond to the needs of your organization's clients? (For example, your organization used/leveraged another organization's expertise, connections, resources, space.)

2. Are there any new organizations or groups your organization worked with during H1N1?
   If yes, what were they?

3. How were these relationships beneficial to your organization and its clients?

4. Did your organization get information from Public Health or other emergency response organizations or groups to help you deal with the H1N1 crisis? If yes, what organizations? Please mark all that apply.

	PH (Public Health)
	OES (Office of Emergency Services)
	FD (Fire Department)
	PD (Police Department)
	211 (Alameda County Information & Referral Service)
	CARD (Collaborating Agencies Responding to Disaster)
	ARC (American Red Cross)
	MRC (Medical Reserve Corps)
	CERT (Community Emergency Response Team)
	Other, please indicate the organization(s):
	Other, please indicate the organization(s):

5. What information did your organization receive?

6. Was this information useful to serving your organization's clients?
   (For example, your organization was immediately able to implement the information, or the information was directly beneficial to your clients.)

   Yes/No, please explain.

7. What special needs of clients were better met through the interorganizational relationships your organization had with public response agencies during the initial phases of the H1N1 outbreak and the ensuing pandemic?

8. Were there any additional services your organization needed that were not met?

   Yes/No, please explain.

9. Are there other needs your organization's clients had that could have been met through collaborating with another agency or organization? If yes, what organizations would have potentially been beneficial to work with?

10. What were some of the challenges your organization faced in trying to get more resources and information for your clients with respect to H1N1?

11. Were the key communication mechanisms your organization used during H1N1 effective at keeping you up to date on the situation?

    Yes/No, please explain.

Thank you for taking the time to complete this questionnaire. In addition to this survey we will be conducting in-person follow up interviews with a few organizations. These additional interviews will allow us to get more detailed information regarding interorganizational relationships. These interviews are optional, but will greatly enhance and contribute to our understanding of how interorganizational relationships and communications mechanisms influence organizational capacity. We will also be consulting with various nonprofit agencies in the county on how to enhance and leverage existing relationships for disaster preparedness and response. If you are interested in learning about how your organization might enhance or leverage relationships for increased organizational capacity, please leave your contact information below.

Please provide your name, the name of your organization and your contact information below. Providing us with this information is optional. Your name, the name of your CBO and your contact information will not appear in any final reports.

Please note that we do need your contact information for the gift card raffle.

☐ Yes, I would like to participate in follow up interviews if my organization is selected.
My name and contact information:

☐ If there is another individual that would be able to take your place or someone else you could designate in your place please indicate so below.

Name and contact information:

☐ Yes, I am interested in learning about how our organization might enhance or leverage relationships for increased organizational capacity.

Section Examples

Part 1 Section 1
General Information

Please add any additional comments you wish to share for Part 1 Section 1. (For example, anything unique to your service population that was not captured above.)

_____

_____

Part 1 Section 2 Examples
CBO Capacities & Interorganizational Relationships

Example 1
If your organization provides food and water to your clients on site, you would mark the Food/Water box. If you work with Safeway, Bay Area Food Services, Starbucks, and McDonald's and two local volunteer organizations, write the number 6 in Column 2 corresponding to the Food/Water capacity you checked off in Column 1. If your organization also uses two of these relationships for disaster preparedness and response, for example, Safeway would be able to provide additional water for your staff and clients during a crisis or disaster and Bay Area Food Services would provide emergency food; you would write in the number 2 in the box on the right under **Number of Interorganizational Relationships Related to Disaster Preparedness and Response Activities**. If you have a Memorandum of Understanding with Safeway for the provision of additional water during an emergency and another Formal Agreement with Bay Area Food Services for the provision of emergency food during a crisis or disaster you would write in 1 in the space corresponding to **# of MOUs** and 1 in the **# of Other Formal Agreements** space in the bottom right box. Then under **What is Provided or Shared** box, check off what is being provided or write it in the spaces provided toward the end of the list.

Example 2
If your organization provides mental health care to your clients on site using volunteers from UC San Francisco (UCSF) and through referral to Alameda County Behavioral Health Care Services (BHCS), you would mark the Mental Health Care Capacity box. In Column 2 write in the number 2 for the two organizations you work with corresponding to the mental health care box you checked off. If your organization also uses one of these relationships for disaster preparedness and response, for example, BHCS would be able to provide mental health care to your staff and clients during a crisis or disaster; you would add 1 to the top right box. If you also have a Memorandum of Understanding (MOU) with BHCS, you would add 1 to the bottom right box. If this MOU is required as part of your funding, please also write in **1 in the # of Funding Requirements** space.

After filling out the table, please add any additional comments you wish to share for Part 1 Section 2. (For example anything unique to your service population that was not captured in your responses below.)

_____

Part 1 Section 3 Example
CBO Disaster Preparedness and Response Capacities

If you are working with 2 organizations, Paratransit and A1 Bus Service Company to provide transportation to clients who may need to be transported to a specialized care facility in the event of a disaster and for emergency evacuation of clients to another shelter, you would mark the Transportation box in the column on the left, then write in the number 2 in the column marked **No.** corresponding to the Transportation capacity.

If your organization has a relationship with the Oakland CERT group to assist with evacuations you would mark the CERT box under the **Relationships with Public Response Organizations** column.

If your relationship with A1 Bus Service is a Funding Requirement and requires a Memorandum of Understanding (MOU) and you also have a Memorandum of Understanding (MOU) with Paratransit, you would indicate 1 in the space provided corresponding to the **# of Funding Requirements** and 2 in space provided corresponding to **# of MOUs.**

Please indicate the total number of agreements you have in the space provided with respect to your organizations disaster preparedness and response capacities checked off.

After filling out the table, please add any additional comments you wish to share for this section (Part 1 Section 3). (For example anything unique to your service population that may not be captured in your responses below.)

_____

Part 2 Section 2 Example
CBO Response Capacities to H1N1 Pandemic

For example if you worked with 6 organizations to provide 10 of the services you marked on the left, and you have a Memorandum of Understanding with 2 organizations, an Informal Agreement with 3 and No Agreement with the other, you would indicate 2 in space corresponding to **# of MOUs** and 3 in the **# of Informal Agreements** space. If 1 of the MOUs is a Funding Requirement, also indicate 1 in the **# of Funding Requirements** space provided.

After filling out the table, please add any additional comments you wish to share for this section (Part 2 Section 2).

_____

Appendix B: CBO Recruitment Script

Hello, my name is ___NAME OF CALLER_____. I'm a graduate student at UC Berkeley and working with the Center for Infectious Diseases & Emergency Readiness at the School of Public Health. I am interested in learning more about community-based organizations (CBOs) that serve special needs populations in Alameda County, specifically the homeless. My interest is in disaster preparedness and response and how interorganizational relationships influence this. I have identified you as an organization that provides services to the homeless in Alameda County, is this correct?

If the CBO representative indicates that they do not serve the homeless, ask what populations they serve and make a note for correction in the database. Thank the representative for their time and indicate you are currently recruiting CBOs that serve the homeless. If the representative acknowledges serving the specified population, continue with recruitment.

I would like to invite your organizations to participate in my study. Is there a director that I could speak to?

If CBO representative agrees to participate thank them for their participation.
If CBO representative does not wish to participate thank them for their time.
If the CBO representative is the director continue.

Do you have a couple minutes for me to tell you about my study?

If the individual does not have time, ask if there is a better time to call back.

Since vulnerable and special needs populations are more difficult to reach by large disaster response agencies that often do not provide information that is easy for all individuals in a community to understand or comprehend, I'm interested in taking a closer look at community-based organizations. In the event of a disaster, community-based organizations such as yours may be a vital link to the homeless for information and resources. Also, some of the current communication mechanisms to distribute crucial information may not reach everyone, but community-based organizations that serve specific groups not only know and understand their client's needs, but their clients also trust them as essential sources of information and resources. I am interested in collecting information on the overall capacities, interorganizational relationships and communication mechanisms of CBOs to determine their unique strategies as well as assess gaps and vulnerabilities.

My goal for this project is to connect CBOs that serve the homeless in Alameda County to each other and to public service organizations such as public health. I also plan to hold a community forum that will allow me to share my research findings as well connect various organizations to each other. The results will guide public emergency planners to incorporate these findings into their preparedness activities as well as help identify relationships and communications mechanisms to tap into as a framework that is effective in reaching a diverse group of individuals within our communities. If you take part in the study, your organization will remain anonymous and will only be identified as one of several community-based organizations that provide

services to the homeless unless you indicate otherwise. We will be receiving responses from a variety of organizations within Alameda County that serve the homeless of which your organization will represent one. The survey will take approximately 60 minutes to complete. When I have received all the survey responses, I will randomly select 5 participants to receive Gift Cards of $100.00 each to Safeway, Target or Home Depot. Would you like to participate in my study by completing a survey over the phone or by email?

When would be a good time to conduct the interview?
What email/address should I use to send you the survey?

Note the time, date and contact information for the interview on the Survey Log Sheet.

Appendix C: CBO Survey Log Sheet

CBO Survey Log Sheet			
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	
CBO Name:		**Sub-population Served:**	
Contact Name:		**Date/Time:**	**Callback Date/Time:**
Title:		**Survey Sent:**	**Survey Returned:**
Phone:	**Email:**	**Notes:**	

Appendix D: Letter of introduction to CBOs

April 2011

Participating Community-based Organization Serving the Homeless Alameda County, CA

Regarding Graduate Research Project:
Building, Enhancing and Leveraging Interorganizational Relationships for Disaster Preparedness and Response: A study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless

Dear Community Participant,

Thank you for your interest in this county-wide research project. Your organization's participation in this study would be greatly appreciated and will benefit other community-based organizations, their clients as well as our county response agencies. Your organization will also be recognized as a participant of this study by CARD (Collaborating Agencies Responding to Disaster), unless you prefer not to be.

One of the main goals of this project is to connect organizations to each other as well as to county response agencies. I am planning to hold a community forum at some time after the collection and analyses of my data to provide an outlet for my research as well as to share examples of best practices. I also hope that with the help of my project partners (e.g. CARD, FESCO, Eden I&R, Alameda County Public Health Department, EveryOne Home, Berkeley Public Health) I will provide organizations with information on real-time tools that they can implement immediately to help them work more efficiently, send and receive critical information in a timely manner and connect them to other organizations in the county. I will be holding a raffle for at least 4 $50.00 gift cards to Safeway, Home Depot, or Target for organizations that return a completed survey.

Included are a letter of introduction to my project, the survey and questions regarding your experience with the H1N1 pandemic. The survey is primarily a series of checklists with some questions about the number and types of organizations your organization works with and some open ended questions towards the end. Some of the pages provide examples of answers.

If your organization is able to participate, please return the survey and responses to the H1N1 questions to me at your earliest convenience. A pre-addressed and stamped envelope is included for your convenience.

You may ask other representatives from your organization to assist in filling out the survey. Please contact me anytime it you have any questions or concerns.

Sincere thanks,

Donata Nilsen

Donata C. Nilsen, MPH, DrPH(c)
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dnilsen@berkeley.edu
www.idready.org | www.CalPREPARE.org

Appendix E: Outcome and Predictor Variables

Outcome Variable		Measurement
1	DPR Capacity	**A number** calculated by adding the total number of reported DPR capacities checked off by the respondent in the general disaster preparedness and response capacities table.
Predictor Variables		
2	Organizational Size	Estimated actual expenses reported by respondent 1) less than $100,000 2) between $100,000 and $250,000 3) between $250,000 and $500,000 4) between $500,000 and $750,000 5) between $750,000 and $1,000,000 6) greater than 1,000,000
3	# of Staff	**Number** reported by respondent Includes Full Time Staff, Part Time Staff and Volunteer Staff
5	Types of Clients Served	Categorized based on responses
6	# Clients Served per Year	**Number** reported by respondent
7	# of Years in Operation	**Number** reported by respondent
8	# of IORs*	**Number** calculated by adding the number of self-reported IORs in response to the corresponding general organizational capacitates/service provided
9	# of Communication Mechanisms	**Number** calculated by adding the number self-reported communication mechanisms checked off
10	# IORs related to DPR*	**Number** calculated by adding the number of IORs also being used for disaster preparedness and response activities
11	# IORs with response agencies	**Number** calculated by adding the number of unique response agencies checked off
12	General Organizational Capacity	**Number** calculated by adding the total number of general organizational capacities checked off
13	Percent Potential Leverage Score	**Percentage** calculated using the total number of IORs minus the number of IORs used for disaster preparedness and response activities divided by the total number of relationships multiplied by 100.
14	H1N1Capacity	**Number calculate by adding** the total number of self-reported H1N1 capacities checked off
15	# IORs with Disaster Response Agencies	**Number** calculated by adding the number of unique response agencies checked off

***IOR**= Interorganizational Relationship; **DPR**=Disaster Preparedness and Response

Appendix F Interview Guide for Qualitative Interviews

Center for Infectious Diseases & Emergency Readiness
UC Berkeley School of Public Health

Research Project

Building, Enhancing and Leveraging Interorganizational Relationships for Disaster Preparedness and Response: A study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless

Follow-up Interview Questions for Sharing of Best-Practices

General Questions

1. What is your position at this organization and how many years have you been with this organization? Have you worked with similar organizations in the past? If yes, what type of organization(s) did you work with? If no, what type or organization did you work with?

2. According to your survey results, you are generally more prepared for a crisis or disaster than the average community-based organization. What are some of the factors that have made your organization more prepared?

3. What level of importance does your organization place on disaster preparedness and response? (What makes your organization think about disaster preparedness and response? What makes your organizations act upon these thoughts? For example: media, publicized failures, other organization who care about this, rules attached to grants/gifts they receive?)

4. What internal influences, if any, guide or direct your organization's preparedness and response capacity? (For example is your organization's leadership taking part in preparedness and response events at your organization or off-site? Are there any other internal influences?)

5. What external influences, if any, guide or direct your organization's preparedness and response capacity? (For example is your organization's leadership taking part in preparedness and response events at your organization or off-site? Are there any other external influences?)

6. Does your organization have an external entity that requires preparedness? What is that entity?

Organizational Disaster Preparedness

7. When your organization thinks about disaster preparedness what are your references?

8. Is there something specific that put disaster preparedness and response on your organization's list of priorities? (For example a situation or event, that has occurred in your area, an experience that your organization has had with a prior disaster or event?)

Organizational Disaster Response

9. What would your organization be able to do after a disaster? What activities would you perform? (What additional services would your organization provide?)

10. What would your interorganizational relationships look like in disaster response mode? (How would you communicate with these other organizations?)

Interorganizational Relationships

11. What types of organizational relationships are most important to your organization's capacity for disaster preparedness and response?

12. Your organization has many interorganizational relationships, of which some are specifically used for disaster preparedness and response activities. Do the number of relationships your organization has make your organization more prepared or are the types of relationships more important? Please explain.
(For example what types of organizations are you connected to and how does each type aid in disaster preparedness?)

13. Could you describe some of the relationships/collaborations you have listed in your survey?
(For example Collaborative: pool resources such as money, space, equipment, information, share goals and build consensus, Consultative: Advisory function, Information Exchange: Sharing information that benefits your organizations and/or its clients, or any other description of the nature of your organization's relationship.)

14. What are some important drivers of your organization's preparedness and response capacity?
(For example, a specific organization (CARD-Collaborating Agencies Responding to Disaster, FD-Fire Department, PD-Police Department, PH-Public Health, OES-Office of Emergency Services) that has helped your organization move to a greater level of disaster preparedness and response capacity, prior experience such as floods, earthquakes or fires?)

15. You indicated that you work with ____name of organization(s)_____. Would more assistance from ____name of organization(s)_____ create more preparedness and response capacity for community based organizations?

If the organization has worked with CARD for assistance, have the respondent answer #16.

16. Do you think more CARD type organizations create more preparedness and response capacity for community based organizations or more interaction between public health departments and community based organizations?

Organizational Capacity

17. What increases your organization's preparedness and response capacity compared to other community-based organizations serving the homeless?

18. What does capacity for disaster response mean to your organization at the personal service level?
(What services do you anticipate providing directly to your clients? What will your staff be doing? How will your facility be used? How will you communicate with other organizations during a crisis or disaster?)

19. Has your organization conducted any activities with its staff and/or clients to exercise your preparedness plans for disaster response?
(For example if your staff have been trained to (e.g. evacuate, conduct CPR, direct clients to alternate facilities, use alternate communication systems, etc., have your staff exercised these capacities? What would activation look like?)

20. What can your organization do to increase its capacity for disaster preparedness and response? What are some of the things your organization would like to do to become more prepared?
(For example other organizations that your organization would like to work with locally, classes that your organization would like to have conducted on site, resources such as equipment, space, or personnel that you would like to add to your current organizational structure?)

21. Are there any barriers or challenges that have kept your organization from reaching its desired level of preparedness and response capacity? If so what are they?

22. Is there anything else you would like to share that has made a particular difference in the level of your organization's preparedness and response capacity? If so what?

Appendix G: Project Partner Invitation

Date, 2010

Name
Organization

Project Partner Request
Building, Enhancing and Leveraging Interorganizational Relationships for Disaster Preparedness and Response: A study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless

Dear,

Thank you so much for your interest in my work. The Center for Infectious Diseases & Emergency Readiness at the UC Berkeley School of Public Health is sponsoring a study of community-based organizations (CBOs) that serve special needs populations in Alameda County. Vulnerable and special needs populations are more difficult to reach by large disaster response agencies that often do not provide information that is easy for all individuals in a community to understand or comprehend. In the event of a disaster, interorganizational relationships may be important to access necessary resources as are communication mechanisms to distribute crucial information that may not otherwise reach everyone in the community.

Community-based organizations that serve specific groups of people not only know and understand their client's needs, but their clients also trust them as essential sources of information. We are therefore collecting information on the overall interorganizational relationships and communication mechanisms of CBOs to determine their unique strategies as well as assess gaps and vulnerabilities. The results of the study will be used to better understand the role that interorganizational relationships and communication mechanisms play in organizational capacity and how these can be leveraged for disaster preparedness and response. The results will also guide public health emergency planners to incorporate these findings into their preparedness activities as well as help identify relationships and communications mechanisms to tap into as a framework that is effective in reaching a diverse group of individuals within our communities.

The main goals of my research project are:

- Contribute to understanding the disaster preparedness and response activities for CBOs that serve the homeless.
- Provide CBOs an awareness of disaster preparedness and response capacities and communication mechanisms.
- Provide recommendations on how interorganizational relationships can be leveraged for disaster preparedness and response.
- Contribute to understanding the overall role of CBOs and CBO networks to public health disaster management and public health systems and partnerships.
- Hold a community forum to provide an outlet for research findings and for county CBOs to connect to and learn from each other.

I would like to request your organization be a project partner. Currently my project partners include CARD, FESCO and the Alameda County Public Health Department. Your participation will be very

valuable to this endeavor and especially during CBO recruitment. Having the support from some of the larger county organizations such as yours, would be greatly beneficial to the project.

There are several ways in which you can support my work:

- Provide me with recommendations on what CBO representatives to talk to.
- Understand my project goals and become a project partner.
- Be a part of the community forum which will be the outlet for my research and will include the CBO representatives as well as local agencies such as public health, and other disaster response agencies.

Thank you for your consideration,

Donata C. Nilsen

Donata C. Nilsen

If you have any questions, please feel free to call Donata Nilsen at the Center for Infectious Diseases & Emergency Readiness at (510) 643-4922 or email dnilsen@berkeley.edu.

Appendix H: Advisory Committee Invitation

Date

Name
Organization

Advisory Review & Planning Committee Invitation
Translating Research into Action: Promoting a Culture of Preparedness and Response through Interorganizational Relationships and Effective Communication with Community-based Organizations Serving the Homeless in Alameda County

The Center for Infectious Diseases & Emergency Readiness at the UC Berkeley School of Public Health is sponsoring a study of community-based organizations (CBOs) that serve the homeless in Alameda County to better understand the role of interorganizational relationships and communication mechanisms on organizational capacity and how relationships may be leveraged for disaster preparedness and response activities. Community-based organizations serving vulnerable populations are critical links to resources and information to their clients and key components of the overall public service system in any geographic location. The study *Building, Enhancing and Leveraging Interorganizational Relationships for Disaster Preparedness and Response: A study of Community-based Organizations Serving Vulnerable Populations; a Focus on the Homeless* will assess, describe and summarize general organizational information, unique strategies, gaps and vulnerabilities from surveys and interviews completed and returned by participating organizations.

You are being invited to participate on a review and planning committee that will assist in providing direction and suggestions for a community forum based on the research results of the aforementioned study. The advisory committee will be a link between academia and the community providing realistic application of research findings. The team will meet 2 times within a six month period with additional conference calls as needed to review the research results to direct the agenda and appropriate educational opportunities for the community forum. The advisory committee will reflect the variety of complex connections and interactions in which the practical application of new knowledge is to take place; a multi-disciplinary team with the following proposed representatives:

- CARD
- CBOs Serving the Homeless
- County Public Health
- Cal PREPARE
- Policy
- Funder(s)
- Target Population Advocate
- Eden I&R

The community forum will also guide public health and emergency planners to incorporate research findings and advisory committee suggestions into their preparedness activities as well as help identify relationships and communications mechanisms to tap into as a framework that is more effective in reaching a diverse group of service providers in our communities.

We would like to convene the first meeting of the Advisory Committee sometime in the first two months of 2011. The goal of the meeting will be to introduce advisory committee members, provide an overview of the project and the role of the Advisory Committee and share

any preliminary results. The first meeting may be via teleconference, to be followed by an in-person meeting the following month.

If you have any questions, please feel free to call Donata Nilsen at the Center for Infectious Diseases & Emergency Readiness at (510) 643-4922 or email dnilsen@berkeley.edu.

Thank you for your consideration,

Donata C. Nilsen

Donata C. Nilsen

Appendix I: Speaker Request

April, 2011

Name
Organization

The Center for Infectious Diseases & Emergency Readiness at the UC Berkeley School of Public Health is sponsoring a county-wide study of community-based organizations (CBOs) that serve special needs populations in Alameda County. I am requesting your participation as the Pediatric Disaster Coordinator to provide a brief overview of services and your role in a disaster at our community forum entitled *Promoting a Culture of Preparedness and Response through Interorganizational Relationships* on July 21st, 2011 at the California Endowment in downtown, Oakland.

The focus of the forum is on getting community-based organizations that serve vulnerable populations in our county prepared and better able to respond in the event of a disaster. I am working with community-based organizations in Alameda County that provide services to the homeless. This population in particular is very vulnerable and diverse in that it encompasses children, the elderly, our veterans and entire families among others. I am studying the relationship between interorganizational relationships and an organization's disaster preparedness and response capacity. With help from my project partners, I hope to assist these organizations in increasing their capacity to prepare for and respond to disasters so that they may continue to operate and serve their vulnerable clients. The community forum will allow participating organizations to come together for a day to connect with each other and participate in workshops.

Part of the day will include a "Meet & Greet Your County Representatives" where county representatives from response agencies around the county such as Public Health, Office of Emergency Services, Police Department, American Red Cross, CERT, etc. will have an opportunity to provide information such as a brief overview of their organization, their role in a disaster, limitations during a response, what is expected of community-based organization, etc. This session is scheduled to take place during lunch sometime between 11:30am and 1:00pm, during which time the panel of speakers will provide their brief presentations; we plan to leave enough time to allow participants to meet and speak with the presenters. Over 60 organizations have been invited to attend the forum with an estimated attendance of 50-70 participants.

If you have any questions please call or email Donata Nilsen at the Center for Infectious Diseases & Emergency Readiness at (510) 643-4922 or email dnilsen@berkeley.edu.

Sincere thanks for your consideration.

Donata Nilsen

Donata C. Nilsen

Appendix J: Donation Request

June, 2011

Organization
Address

Dear,

My name is Donata Nilsen; I am a graduate student at UC Berkeley at the School of Public Health. I am conducting a county-wide project involving community-based organizations (CBOs) that serve vulnerable populations in Alameda County through the Center for Infectious Diseases and Emergency Readiness where I work. I am requesting a donation from your store to provide to participants at the forum entitled *Promoting a Culture of Preparedness and Response through Interorganizational Relationships* on July 21st, 2011 at the California Endowment in downtown, Oakland.

The focus of the forum is on getting community-based organizations that serve vulnerable populations in our county prepared and better able to respond in the event of a disaster. We are hoping to provide a few "starter items" as a starting point for organizations to build up their disaster supplies and capacity to respond to a disaster or crisis. A prepared organization will be better able to assist its clients during a disaster as well as keep its staff continuing to operate and serve the county as part of an overall disaster response.

Walgreens has been a key partner in community disaster preparedness and response particularly with regard to providing affordable flu vaccines to the community each year and generously funding many community projects. Walgreens' presence in our communities has been noticed and greatly appreciated. Your contribution will be acknowledged verbally and through printed program materials on July 21st at which approximately 50-70 participants are expected. All donations will be directly provided to nonprofit organizations operating in Alameda County providing services to vulnerable populations such as the homeless. Some of the items will be raffled off (no money will be exchanged) while other donations, depending on quantity received, will be placed into gift bags for the participants.

- Any item your organization could donate would be greatly appreciated with a few suggested items listed below:
- Lightsticks (for gifts bags)
- Flashlights (large for office)
- Emergency Packs with Supplies
- Office Emergency Kits
- Storage Boxes
- FRS Radio Sets
- Hand Sanitizer
- Facial Tissues
- Small AM/FM Radio(s)

The University of California is a public, nonprofit educational institution exempt under Section 510(c)3 of the IRS Tax Code. The University's Tax ID (EIN) # is as follows: **UC Regents** 94-6002123

If you have any questions please call or email Donata Nilsen at the Center for Infectious Diseases & Emergency Readiness at (510) 643-4922 or email dnilsen@berkeley.edu.

Sincere thanks for your consideration.

Donata Nilsen

Donata C. Nilsen

Appendix K: Community Forum Agenda

UC Berkeley Center for Infectious Diseases & Emergency Readiness

Promoting a Culture of Preparedness and Response through Interorganizational Relationships

July 21, 2011 **California Endowment**

In collaboration with Cal PREPARE, CARD, FESCO, EDEN I&R, EveryOne Home, United Way of the Bay Area, Alameda County Public Health Department, Berkeley Public Health Department

8:00 – 8:30 a.m.	**Registration & Light Breakfast**
8:30 – 9:00 a.m.	**Opening Session** • Welcome & Introductions • Project Partners and Advisory Committee Introductions • Opening Address - Dr. Muntu Davis, Alameda County Public Health Officer
9:00 – 9:45 a.m.	**Facilitated Networking Session** *Facilitator: Âna-Marie Jones, Executive Director, CARD - Collaborating Agencies Responding to Disasters*
9:45 – 10:15 a.m.	**Highlight of Research Results & Sharing of Best Practices** *Presenter: Donata Nilsen, UC Berkeley CIDER/Cal PREPARE*
10:20 – 11:05 a.m.	**Find Your Inner Superhero** Make Disaster Preparedness & Response Part of Your Organizational Culture *Facilitator: Cate Steane, Executive Director, Family Emergency Shelter Coalition*
11:05 – 11:20 a.m.	**Lunch Pick-up**
11:20 – 12:55 p.m.	**Meet & Greet Representatives from Your City & County** *Facilitator: Âna-Marie Jones, Executive Director, CARD*
12:55 – 1:10 p.m.	**Networking Opportunity**
	Concurrent Sessions: In-depth Workshops (Laurel & Uptown Rooms)
1:10 – 3:10 p.m.	**Be a NonProfit Power Communicator (Laurel Room)** Learn How to Create a Simple & Complete Communication Plan *Presenter: Dan Cohen, Principal, Full Court Press Communications*
1:10 – 2:10 p.m.	**Start with the Low-Hanging Fruit: High Return-on-Investment Disaster Preparedness Activities (Uptown Room)** For organizations who would like to start preparedness and response activities. *Presenter: Lars Eric Holm, Office Manager & IT Specialist, CARD*
2:10 – 3:10 p.m.	**Disaster Funding Realities: Thinking Ahead (Uptown Room)** Hear About Budgeting & Funding for Disaster Preparedness and Response *Facilitator: Andrea Zussman, Disaster Preparedness Officer, San Francisco Foundation* *Speakers: Âna-Marie Jones, Laura Escobar, Stephanie Rapp, Nancy Sutton, Michael Baldwin*
3:10 – 3:25 p.m.	**Networking Opportunity**
3:25 – 4:15 p.m.	**Leveraging Relationships for Disaster Preparedness & Response** *Presenter: Âna-Marie Jones, Executive Director, CARD*
4:15 – 4:30 p.m.	**Closing Session & Raffle** *Closing Remarks: Elaine de Coligny, Executive Director, EveryOne Home*

Workshop & Session Descriptions

Facilitated Networking Session
Facilitator: Âna-Marie Jones, Executive Director, CARD – Collaborating Agencies Responding to Disasters
This session will allow you to meet your fellow nonprofit colleagues in a way that will allow you to make a deeper connection. Learn about each other outside of the work setting and gain a greater appreciation for each other. This session will set the stage for continued networking throughout the day.

Highlight of Research Results & Sharing of Best Practices
Presenter: Donata Nilsen, UC Berkeley Center for Infectious Diseases & Emergency Readiness/Cal PREPARE
This community forum is the culmination of a study conducted among community-based organizations in Alameda County providing services to the homeless. This session will explain the impetus for the research and provide an overview of research results. Why and how interorganizational relationships are important in increasing the disaster preparedness and response activities and capacities of community-based organizations will be highlighted.

Find Your Inner Superhero: Make Disaster Preparedness & Response Part of Your Organizational Culture
Facilitator: Cate Steane, Executive Director, Family Emergency Shelter Coalition (FESCO)
Organizational culture is simply "how we do things here." Learn how several nonprofits have integrated preparedness into whatever happens regularly within the organization, making it everyone's responsibility, and making it fun.
Panel Speakers:
- Kellie Knox, Project Director ~ Turning Point, Fred Finch Youth Center
- Jay Robertson, Director of Facilities ~ East Bay Community Recovery Project
- Âna-Marie Jones, Executive Director ~ CARD - Collaborating Agencies Responding to Disasters

Meet & Greet Representatives from Your City & County
Facilitator: Âna-Marie Jones, Executive Director, CARD – Collaborating Agencies Responding to Disasters
This working lunch session will allow you to hear from your city and county representatives about the importance of preparedness, the roles their organizations play in a disaster response and the important role that nonprofit organizations play. Several organizations will reflect on their experiences during the H1N1 crisis.

Afternoon Sessions

Be a NonProfit Power Communicator (Laurel Room)
This session will teach you how to create a simple and complete communication plan in 5 steps.
Presenter: Dan Cohen, Principal, Full Court Press Communications

Start with the Low-Hanging Fruit: High Return-on-Investment Disaster Preparedness Activities
Presenter: Lars Eric Holm, Office Manager & IT Specialist, CARD – Collaborating Agencies Responding to Disasters
For organizations who would like to start their preparedness and response activities. This workshop will leave you and your organization more prepared! Learn the easiest, fastest, low budget, most beneficial things you can do to support an on-going culture of preparedness.

Disaster Funding Realities: Thinking Ahead
Facilitator: Andrea Zussman, Disaster Preparedness Officer, The San Francisco Foundation
Learn about the importance of preparedness in the context of your organization's response during a disaster. Start thinking ahead about things you need to have in place when a disaster strikes. Hear from local funders about their funding program. Lean about AB903, a new mechanism for getting reimbursed for extraordinary costs after a disaster.
Panel Speakers:
- Âna-Marie Jones, Executive Director ~ CARD - Collaborating Agencies Responding to Disasters
- Laura Escobar, Director, Safety Net Programs ~ United Way of the Bay Area
- Stephanie Rapp, Senior Program Officer ~ Walter & Elise Haas Fund
- Nancy Sutton, Michael Baldwin ~ California Emergency Management Agency (Cal EMA)

Leveraging Relationships for Disaster Preparedness & Response
Presenter: Âna-Marie Jones, Executive Director, CARD – Collaborating Agencies Responding to Disasters
What do you do with the relationships you have? How can you work better together and leverage each other's strengths to increase your organization's disaster preparedness and response capacity? This session will provide examples and tips on what your organization can do now and in the future to leverage your interorganizational relationships for disaster preparedness and response.

Find Your Inner Superhero: Make Disaster Preparedness & Response Part of Your Organizational Culture

Cate Steane, Executive Director
FESCO – The Family Shelter

Jay Robertson, Director of Facilities
East Bay Community Recovery Project

Kellie Knox, Project Director
Turning Point, a transitional housing program - Fred Finch Youth Center

Ânа-Marie Jones, Executive Director
CARD - Collaborating Agencies Responding to Disasters

Lunch - Meet & Greet Your City and County Representatives

Renee A. Domingo, Director of Emergency Services and Homeland Security
Oakland Fire Department, Office of Emergency Services

Thor Poulsen, Public Education Officer
Emergency Services Office, Hayward Fire Department

Cynthia Frankel, Prehospital Care Coordinator, Pediatric Disaster, EMSC, and HPP EMSA Coordinator
Alameda County EMS – Public Health Department

Beth Meyerson, Director
Berkeley Health Services

Sherri Willis, Public Information Officer
Alameda County Public Health Department

Margaret R. Rivas, Contract Manager
Alameda County Health Care Services Agency/Public Health Department, Healthcare for the Homeless Program

Debra F. Richardson, Program Director
Alameda County Public Health Department, Homeless Families Program

Barbara Morita, Emergency Preparedness Coordinator
Alameda Health Consortium

Gerald Smith, Management Analyst
Alameda County Social Services Agency

Barbara Bernstein, Executive Director
Eden I&R, Inc.

Laura Escobar, Director, Safety Net Programs
United Way of the Bay Area

Alexandrea Alphonso, External Relations Specialist, East Bay
American Red Cross Bay Area Chapter

Ânа-Marie Jones, Executive Director
CARD - Collaborating Agencies Responding to Disasters

Disaster Funding Realities: Thinking Ahead

Andrea Zussman, Disaster Preparedness Officer
The San Francisco Foundation

Ânа-Marie Jones, Executive Director
CARD - Collaborating Agencies Responding to Disasters

Laura Escobar, Director, Safety Net Programs
United Way of the Bay Area

Stephanie Rapp, Senior Program Officer, Jewish Life and Special Projects
Walter & Elise Haas Fund

Nancy Sutton, Senior Hazardous Materials Specialist
Recovery Division, Cal Emergency Management Agency (Cal EMA)

Sincere Thanks to the following Organizations for their Generous Donations

- **Home Depot**
  Hayward, Tiffany Hale
  Emeryville, George Onana, Charlie Fiscus
  Oakland, Christian Borges

- **Walgreens**
  Downtown Berkeley, Olufemi Oyemakinde

- **Costco**
  Richmond, Ursula
  San Leandro, Maricel Esposo

- **United Way of the Bay Area**
  Laura Escobar

- **Your Safety Place**
  Dublin, Shirley Schultheis

- **ReadyCare/FRIO**
  Lisa Katzki

- **UC Berkeley CIDER/Cal PREPARE**

- **CARD - Collaborating Agencies Responding to Disasters**

- **Eden I&R**

- **California Endowment**

- **Project Partners & Advisory Committee**
  Âna-Marie Jones, Executive Director
  CARD – Collaborating Agencies Responding to Disasters

  Cate Steane, Executive Director
  Family Emergency Shelter Coalition (FESCO)

  Ollie Arnold, Housing Outreach Coordinator
  EDEN Information & Referral, Inc.

  Lauren Baranco
  EveryOne Home

  Laura Escobar, Director, Safety Net Programs
  United Way of the Bay Area

  Jeannie Yee Balido, Education and Training Program Manager
  CIDER/Cal PREPARE

  Alameda County Public Health Department

  Berkeley Public Health Department

Appendix L: Reference Guide for Public Health Practitioners

Engaging Community-Based Organizations Serving Vulnerable Populations: A Focus on the Homeless

Why Engage CBOs Serving the Homeless?

In the event of a disaster, large response agencies may not be able to immediately reach all people in need with supplies and services; however, Community-Based Organizations (CBOs) may be better positioned to pass along important information and serve as critical connections to homeless populations. CBOs serving the homeless face particular challenges as their clients often face a multitude of vulnerabilities often making their interorganizational relationships more extensive and thus important networks for continued operations. During crises, these networks may be key links for response agencies to tap into.

This reference guide provides a method to reach and engage CBOs serving the homeless. It was derived through a CDC-funded pilot research project that conducted a survey of 37 homeless service providers in Alameda County, California, to determine the influence of interorganizational relationships on disaster preparedness and response capacity. The main goal of the project was to improve disaster preparedness and response capacities of CBOs serving the homeless by translating research into actionable steps through the support and engagement of various stakeholders in the county. The target audience for this guide includes emergency planners and managers, and public health practitioners working to include CBOs in their programs. Key elements that provided a successful support structure for this endeavor are outlined in this reference guide.

Process Overview

1. **Identify & Recruit County & City Representatives**
2. **Convene an Advisory Committee**
3. **Determine Essential Advisory Committee Roles**
4. **Connect with CBOs**
5. **Conduct a Community Forum**
6. **Link CBOs to Resources**
7. **Connect Responders to CBOs**

1. Identify and Recruit County & City Representatives: A Checklist

Think about which county and city representatives should be included in the process of engaging and working with CBOs. Think about the services provided and how these would be impacted in a disaster. Will they be a part of the disaster response; if so, in what capacity? What are their limitations? What do they want CBOs to know about them during normal operations and during a county-wide crisis? If you are already familiar with various individuals responsible for and working in the area of county and city preparedness and response, reconnect with them and discuss your objectives. The list below is not exhaustive as other organizations may play major roles in a disaster response. Each county will have a unique makeup of resources and responders. Examples of resources include preparedness and response trainers and materials, preparedness and response/continuity of operations plan templates, funding sources, communications/social networking experts, well prepared CBOs as leaders/role models, disaster supply lists and sources, preparedness and response groups and committees.

Primary Response Agencies/Organizations

- ☐ Fire Department
- ☐ Law Enforcement
- ☐ Office of Emergency Services
- ☐ Social Services
- ☐ Community Clinics
- ☐ County Emergency Medical Services
- ☐ Hospitals
- ☐ Behavioral Healthcare Services
- ☐ Mental Health Services
- ☐ Public Health Services
- ☐ County Information & Referral Agency
- ☐ Disaster Agencies/Organizations (United Way, American Red Cross, Salvation Army)
- ☐ Community Emergency Response Teams (CERTs)
- ☐ Local Medical Reserve Corps (MRCs)

Other Potential Response Organizations

- ☐ Homeless Service Organizations
- ☐ Homeless Shelters
- ☐ Food Bank
- ☐ Faith-Based Organizations (FBOs)
- ☐ Homeless Advocacy Organizations
- ☐ Local Health Consortium
- ☐ Utility Companies
- ☐ Coast Guard
- ☐ Highway Patrol
- ☐ Civil Air Patrol
- ☐ Port Authorities
- ☐ School Districts
- ☐ Park Districts
- ☐ Other _____

2. Convening an Advisory Committee

To determine who should be included in your advisory committee, think about the populations you are trying to reach. Is there a local or regional homeless advocacy organization? What stakeholders would be important in bridging gaps and bringing groups together? What expertise will provide a broad range of perspectives? Several key committee members are listed below, but the committee composition will vary depending on your objectives. Keep the committee manageable but also large enough to receive relevant input and assistance with the decision-making process.

- Project facilitator
- Vulnerable population/public health-community liaison
- Homeless population advocates
- Representatives from CBOs serving the population
- Public health representatives (e.g. community outreach, preparedness or emergency manager)
- Policy representative
- Target issue funder (e.g. foundation, governmental, and nongovernmental organizations)
- County information and referral services

Project Facilitator

The project facilitator has a key role in the overall process. This individual typically has some familiarity with the organizations involved or will have enough time to understand the roles each organization plays and their contribution to the overall goal. In addition, the facilitator should be available to visit organizations in person to engage and build relationships.

Timeline

Below is a sample timeline for a facilitator who already has established county contacts with response agencies. A minimum of 2 years may be needed to build relationships with CBOs, conduct a baseline survey, connect with response partners, convene and facilitate an advisory committee and plan a community forum.

Sample Advisory Committee Meetings & Forum Timeline*

Activity	Timeline to Complete Activity	Timeline Prior to Community Forum
Convene an Advisory Committee	2 - 3 months	18 months
Involve CBOs	6 - 9 months	24 - 12 months

Conduct a Baseline Survey	2 - 3 months	18 - 9 months
Plan a Community Forum	9 - 12 months	12 - 2 months
Link CBOs to Resources	Continuous	At forum & throughout process
Connect Responders to CBOs	Continuous	At forum & throughout process

*These times will vary depending on the number of individuals working on the project and the amount of time (e.g. part time or full time).

Convene an Advisory Committee
Convening an advisory committee takes time, particularly deciding which organizations are relevant and important to move your work forward.

Involve CBOs
Project partners and/or advisory committee members who have existing contacts with homeless organizations may save time and help considerably in connecting with CBOs**.**

Conduct a Baseline Survey
Online surveys take the least amount of time (e.g., Survey Monkey, Google Forms); however, phone or in-person surveys may be more effective in gathering the data needed.

Plan a Community Forum
The community forum may take up to a year to organize. In a large county, two community forums may be needed in order to reach as many CBOs as possible.

Link CBOs to Resources
Once you have identified city/county resources and other online and outside resources, review them with your advisory committee. It may take time to prepare materials that are Ready-to-Use/implement.

Connect Responders to CBOs
Compile a list of preparedness and response contacts that can be shared as a handout at the forum. Connect these responders to CBOs at the community forum and throughout the process.

3. Determine Essential Advisory Committee Roles

The advisory committee's specific purpose is to 1) review survey results, 2) direct the community forum agenda, and 3) review appropriate and available resources and educational opportunities for the forum. Below are additional key functions:

- Act as liaison between public health practice and the community by providing a specific perspective (homeless community concerns, needs, culture).
- Advise on community forum agenda, speakers, topics.
- Promote a culture of disaster preparedness and response.
- Provide support and guidance, resources, leadership buy-in, project endorsement[1].
- Assist in translating survey results into actionable steps and provide realistic applications of survey findings.
- Identify, assess, and incorporate resources/strategies
- Facilitate the process of knowledge exchange, increasing the uptake of information.
- Maintain the momentum of project goals, follow-up and maintenance of change, obtaining, reviewing and applying participant feedback.

[1] This is particularly critical and should be established early in the process to enhance participant recruitment and CBO participation in the forum.

4. Connect with Community-Based Organizations

The project facilitator acts as the main contact for all entities involved, maintains relationships with community representatives, governmental and nongovernmental representatives, builds bridges and connects individuals, organizations and agencies. The project facilitator takes the time to understand participant roles and expertise in the community and the resources each has to offer.

This will be important in building a culture of preparedness and response, facilitating conversations around leveraging resources, and identifying unique capabilities of various partners. Start with a baseline survey of CBOs to determine areas of focus for the community forum.

Survey Questions to Achieve a Baseline of Knowledge of CBOs Serving the Homeless

- What would the organization do in the event of a disaster (e.g. services provided, continuity of operations plans)
- Does the organization assist its clients in preparing for disasters or provide information about disaster preparedness and response?
- What disaster response and/or relief organizations does the organization have relationships with?
- What are characteristics of the clients?
- Does the organization maintain a list of its clients?
- What communication mechanisms does the organization utilize?
- Would the organization be able to reach its clients within 24-48 hours with important information?
- What types of services does the organization provide? (helps to identify similar service organizations to discuss similar issues)

The answers to these questions will help you identify areas that require attention. Determine what resources are in your county/community to address some of the gaps in preparedness and response capacity. Then look outside of your county for additional resources or online.

You may not be able to confront all of the potential gaps and needs in one community forum, but it provides a starting point and a foundation to build upon with your project partners and advisory committee members.

5. Conduct a Community Forum

The community forum is an ideal venue for connecting responders, CBOs and other organizations that should take part in disaster preparedness and response activities and conversations. It provides an outlet to distribute survey results to a larger community of homeless service providers. The theme and title should reflect the promotion of a culture of preparedness and response through interorganizational relationships and communication.

The community forum may also provide an opportunity for CBO representatives to learn from each other, enhance interorganizational relationships, and improve effective communication mechanisms. The community forum should include county, city, and community representatives.

Through the assistance of the advisory committee and project partners, the forum should promote awareness of disaster preparedness and response issues, provide educational opportunities, and recommend actionable preparedness and response strategies to forum participants.

Use a public facility that can easily accommodate the number of people you anticipate and is closest to the most difficult to reach organizations.

Sample Goals and Objectives

- Bring about awareness of the current state of disaster preparedness and response capacity among participating CBOs from survey results.
- Identify actionable messages from the knowledge brought about from the survey.
- Provide action oriented activities and resources.
- Involve credible messengers in presenting knowledge to CBOs in Ready-to-Use formats.
- Include trusted community messenger(s) and a vulnerable populations-public health liaison.
- Provide capacity-building to CBOs to help build their skills to acquiring, adapting and applying emergency preparedness and response resources and strategies.

Potential Workshop Topic Ideas

- Networking activities to connect CBOs
- Facilitate connections between public health and CBOs
- Promotion of a continuity of operations plan
- Promotion of a culture of preparedness and response
- Knowledge of available post disaster funding assistance
- Awareness of disaster preparedness and response activities and issues

6. Link CBOs to Resources

In addition to the list of organizations in Section 1, below are examples of other resources that help CBOs increase their preparedness and response levels. These organizations provide specific tools on their websites that can be downloaded, easily adapted, and immediately implemented within an organization. Check your region for other disaster emergency preparedness and response organizations that serve the local populations with a focus on local hazards.

- **Citizen Corps** Website: www.citizencorps.gov
- **PrepareNow**: www.preparenow.org
- **CARD**, Collaborating Agencies Responding to Disasters: www.firstvictims.org

7. Connect Responders to CBOs

Traditional first responders may not have the resources to reach out to every vulnerable group or community in a county or city. A community forum will help make connections among homeless service providers and allow responders to provide an overview of services and preparedness and response activities in each community. Distribute a contact list of community liaisons who can be easily contacted and who will share important information about disaster preparedness and response.

Key Factors & Next Steps

Key Factors to Increase & Maintain Current Disaster Preparedness and Response Activities

CBOs that have developed trusted relationships with response organizations are more likely to use messages and follow information provided in times of crises. The process of engaging CBOs and agencies with resources is a continuous and cyclical process. An evaluation of organizational capacity will need to continue periodically.

Growth & Maintenance Cycle for Disaster Preparedness & Response Activities

Key Factors Include:

- Include and incorporate new organizations and partners into the response system.
- Evaluate and incorporate new and existing resources and relevant trainings.
- Incorporate newly developed strategies.
- Network with partners (CBOs and responders) and leverage unique capabilities and resources to increase disaster preparedness and response capacities.
- Assess response capabilities through countywide or citywide exercises and drills.

Evaluation - Feedback - Feedback Loop

- ☐ Evaluate community forum objectives.
- ☐ Use the feedback to follow up with CBOs and partners to plan next steps.
- ☐ Get CBOs to assist in next steps for sustainability.
- ☐ Assist interested CBOs in forming local preparedness and response committees or task forces that can be incorporated into the broader response system.
- ☐ Periodically follow up with workgroups to move preparedness forward.

Suggested Next Steps

- ☐ Incorporate participant feedback from the community forum to increase participation in countywide preparedness and response activities.
- ☐ Conduct regional training with CBOs.
- ☐ Incorporate CBOs into broader response plans.
- ☐ Maintain momentum through the support of your advisory committee and project partners.
- ☐ Link into CBO networks.
- ☐ Utilize your new network of response partners through communication exercises and events.
- ☐ Continue to engage other special needs groups.

***Cal* PREPARE / UC Berkeley CIDER**
www.calprepare.org

***Cal* PREPARE** is a CDC Preparedness & Emergency Response Research Center (PERRC) based at the UC Berkeley Center for Infectious Diseases & Emergency Readiness (CIDER). CIDER builds upon its tradition of partnering with local and state health departments and continuing its emphasis on serving vulnerable populations. Cal PREPARE's CDC research priority theme is "to create and maintain sustainable preparedness and response systems".

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Appendix M: Providing an Outlet for Research Results: Preparing for the Community Forum

In order to provide an outlet for research results and to provide participants with a way to engage with the research and take part in the bigger picture as well as have an opportunity to meet with and talk to other homeless service providers as well as response organizations, I and my partners added an extra step to this study to engage with stakeholders to develop and implement a community forum to disseminate the research results and consider actions to apply the findings for improve disaster preparedness and response.

I. Engaging Homeless Service Providers in the Community through Project Partners & an Advisory Committee

Project Partners

Given the work that I had done in the county through various other projects such as with the Alameda County Strategic Visioning Committee, with the Center for Infectious Diseases and Emergency Readiness (CIDER)[1] for example to capture the county's public health response to the H1N1 pandemic, and with CARD, I was well positioned to engage many of the response organizations in the county. The first important step was to enlist the assistance of organizations, project partners that would support the project, think about the implications of its findings, lend their name during recruitment, and potentially participate such as on an advisory committee. Project partners were asked to become familiar with the study, provide recommendations about what CBO representatives to engage with, and to take part in the community forum. An invitation was provided to each of the potential project partners to explain their role (Appendix G). The following main requests were included in the invitation:

- Input and recommendations into the survey instrument
- Recommendations on what CBO representatives to interview
- Interest in project and understanding of research project goals
- Participation in a community forum which will be the outlet for research
- Use of organization's name during recruitment to enhance recruitment and response

Initial buy-in from these project partners who were already engaged in some way in disaster preparedness and response activities bolstered recruitment efforts and provided credibility to the research project. CIDER/Cal PREPARE was the sponsoring organization of the research and also provided logistical support and a representative familiar with nonprofit organizations. Although CIDER alone had already established solid relationships with response organizations and the public health community in the Bay Area, new partners included organizations that were additionally engaged in disaster preparedness and response for and with vulnerable populations.

The final list of project partners included:

[1] The Center for Infectious Disease and Emergency Readiness at the UC Berkeley School of Public Health is one of 27 former CDC Centers for Public Health Preparedness established in 2000. Positioned within schools of public health across the nation, they were charged with strengthening emergency and terrorism preparedness by linking academic expertise to state and local health agency needs. For more information, go to http://emergency.cdc.gov/cdcpreparedness/cphp/index.asp. CIDER is now one of nine CDC Preparedness and Emergency Response Research Centers (PERRC) conducting public health systems research. Go to http://www.cdc.gov/phpr/science/erp_PERRCs.htm for more information.

- ***CIDER/Cal PREPARE***
  Center for Infectious Diseases & Emergency Readiness, UC Berkeley
- ***CARD***
  Collaborating Agencies Responding to Disasters
- ***FESCO***
  Family Emergency Shelter Coalition
- ***EveryOne Home***
  Alameda County's Regional Advocate to End Homelessness
- ***Eden I&R***
  Alameda County's Information & Referral Service
- ***ACPHD***
  Alameda County Public Health Department
- ***City of Berkeley Health Services Department, Public Health Division***

During the recruitment phase, these project partners were mentioned as well as the proposal to hold a community forum for participants and responders, providing increased credibility to the project and thus generating more interested from potential participants. In addition, recruitment was incentivized through the announcement of a raffle of five $100 gift cards for the organization to a retailer of their choice such as Home Depot, Target or Safeway.

Convening an Advisory Committee

The next step in planning for the community forum was to convene an *Advisory Review and Planning Committee* hereafter referred to as the Committee. The Committee was charged with providing direction, support and guidance for a community forum based on the research results. The following points summarize its key roles:

- Provided a link between academia and the community
- Assisted in reviewing research results to direct the agenda and appropriate educational opportunities and actionable steps for CBOs
- Advised on shaping forum
- Represented specific perspectives (e.g. community concerns & culture)
- Provided resources
- Provided project endorsement
- Participated in the forum
- Assisted in advertising the forum
- Reflected the variety of complex connections and interactions in which the practical application of new knowledge is to take place

Potential committee members were formally invited (Appendix H) and scheduled to meet via teleconference 5 times within a six-to-eight month period. The advisory committee was intended to reflect the variety of complex issues, connections and interactions in which the practical application of new knowledge was to take place; a multi-disciplinary team with the following proposed representatives:

- CARD
- CBOs Serving the Homeless
- Policy
- Funder(s)

- County & City Public Health
- Cal PREPARE
- Target Population Advocate
- Eden I&R

The first meeting of the committee occurred in February 2011. The goal of the first meeting was to introduce committee members to each other, provide an overview of the project and the role of the committee and share any preliminary results. For each teleconference committee members were provided an announcement, a detailed agenda in advance of the meeting, and detailed post-meeting notes of action items, suggestions made and additional needs that required further attention.

Enhancing Relationships: Engaging the Response Community

Because the community forum was also meant to engage response organizations in the county, a variety of response organizations were invited to participate in the community forum (Appendix I). The research results were to also guide public health departments and emergency planners to incorporate research findings and advisory committee suggestions into their preparedness activities, as well as to connect with participating homeless service providers. Representatives from the following organizations/agencies were invited to attend:

- Fire Department
- Law Enforcement
- Office of Emergency Services
- Social Services
- Community Clinics
- County Emergency Medical Services
- Hospitals
- Behavioral Healthcare Services
- Mental Health Services
- Public Health Services
- County Information & Referral Agency
- Disaster Response/Relief Agencies/Organizations (e.g. United Way, American Red Cross, Salvation Army)
- Community Emergency Response Teams (CERTs)
- Local Medical Reserve Corps (MRCs)
- Food Bank
- Homeless Advocacy Organizations
- Local Health Consortium

II. The Community Forum

Subsequent advisory committee meetings allowed members to review research results, review a preliminary community forum agenda, discuss the results to drive forum activities and discuss potential speakers and workshops. As meetings progressed towards the community forum, more attention was given to refining the agenda for the forum. In addition, committee members provided donations for forum participants such as tote bags and preparedness kits and provided recommendations on what organizations to solicit additional support from. Donations were also

solicited from various local organizations (Appendix J). Additional meetings and/or teleconferences were planned and facilitated by committee members to discuss workshops and sessions in greater detail with the speakers. The final agenda included variety of sessions and workshops tailored to the promote disaster preparedness and response activities and connect participants to each other and to invited response agency representatives (Appendix K). The community forum took place in July 21, 2011 at the California Endowment (a major California foundation) in downtown, Oakland, CA. Key sessions included:

- Highlight of Research Results & Sharing of Best Practices
- Make Disaster Preparedness & Response Part of the Organizational Culture
- Meet & Greet County and City Representatives
- Networking Opportunities
- Workshops on
    - How to Create a Simple & Complete Communication Plan
    - Return-on-Investment Disaster Preparedness Activities
    - Budgeting & Funding for Disaster Preparedness and Response
- Leveraging Relationships for Disaster Preparedness & Response

There were forty-seven participants who attended the community forum representing thirty-four nonprofit and response organizations in the county; sixteen of the thirty seven organizations that participated in the research project attended.

Reflections on the community Forum

The advisory committee was a key factor in the success of the community forum. Following the forum, several debriefings with project partners and advisory committee members provided feedback and a list of suggestions. Important recommendations were made regarding improvements for future similar community forum events:

- Increased attendance/participation by CBOs and increased representation of FBOs
- More breakout sessions to increase networking and skill building
- Sessions specific to CBO geography (e.g. splitting participants into the cities they represent and provide services in)
- Also include CBOs serving other vulnerable groups
- Include board members, share plans with board of directors, include funding entities in discussion
- Contact participants for additional comments and feedback

Additional concerns and comments reflected the broader public health system response. For example:

- How can we get CBOs integrated into the broader system (e.g. let participants know when and how they can get communications, not on an individual basis but probably through an intermediary organization such as CARD)?
- Discussion on how to plug CBOs into preparedness and response exercises and get public health departments to utilize their expertise; possibly facilitated through the 211 system.
- Think about how CBOs can get linked into response system (primarily to the 211 phone system and to CARD).

- Increase response capability by educating service sectors (e.g. food, shelter, health care) but then also actually linking these organizations into the response system.
- The 211 phone number will be key[1] in a response to assist in determining if CBOs are functional or not. The Public Health Department would then look to 211 to search its database and provide a status to get a big picture of what's happening in county.
- An exercise or protocol to get status information from and to CBOs would be useful (e.g available space or space needed).

In addition, participants, project partners and advisory committee members provided positive feedback on the community forum. Selected comments include:

- Each part of the conference was valuable; no matter in which 2-hour session someone was able to participate in, they were offered something essential to increase their preparedness and response capacities
- Conference was very meaningful to this particular nonprofit sector (homeless service providers)
- Nice display of preparedness and response stuff for people to see
- Very meaningful to this sector of service providers
- Definition of collaboration – working together rather than separately was well covered
- The diversity of the speakers was great – funders, CBOs, emergency managers, public health, vendors, CEOs of homeless service nonprofits
- Great range of levels[2] of engagement
- There were many tools and resources for participants
- The environment was supportive at all levels
- Participants were treated with dignity and respect and were valued and viewed as important members of the community

Particularly useful to participants were the following community forum activities:

- Networking activities
- Preparedness & Response Flash Cards[3] provided to each participant
- Resource packet[4]
- Sessions on Disaster Planning, Funding and Communication Strategies
- Familiarizing participants with county resources and representatives
- Display of emergency supplies

[1] During a crisis or during a disaster, the 211 system will be collecting information from organizations in the county both passively (the organizations would report to 211) and actively (211 would connect with the organization to obtain information) to get a clear picture of services and resources available. The 211 system will then both inform public health of where attention is needed as well as refer callers to resources (e.g. vaccination sites, food distribution sites, health services, etc.).

[2] The levels of engagement at the community forum included for example individual level interactions, learning about the research conducted, hearing from speakers in the community as well as response agency managers and directors who discussed the role of the CBOs in a disaster response.

[3] Flash cards consisted of 30 laminated cards held together with a binder ring. Each card contained an emergency preparedness or response question. These cards were intended for use during staff meetings to increase awareness of all staff regarding for example locations of emergency exists, gas shut-off valves, first aid kits, fire extinguishers, where to find shelter, who to call during a variety of crises, how to use a fire extinguisher and knowledge about local hazards.

[4] The resource packets provided at the forum included a CERT training schedule for the county of Alameda, Participant and Speakers List with contact information, an answer key to the flash cards, suggested emergency supplies lists, and a handout with information on Assembly Bill 903 detailing post-disaster reimbursement for nonprofits.

Recommendations from participants included:

- More time needed to identify resources and unique capabilities of each organization
- More focus needed on preparedness efforts in community in addition to organizational preparedness
- Include more faith-based organization
- More interactive exercises would be useful
- A greater focus on the specifics of disaster planning and less generalities about the importance of disaster planning
- More representation needed from nonprofits serving target populations like the handicapped, disabled and those with limited English proficiency

Conclusion

The community forum was a successful event that brought together homeless service providers for a day of disaster preparedness and response capacity building activities, networking workshops and communication building. It provided a "return-on-investment" for organizations who participated in the research portion of the project and engaged CBOs serving the homeless to connected to county resources and response agencies as well as to each other. They learned strategies to incorporate into their preparedness and response efforts and formed new communication networks with each other. Workshops, handouts and preparedness and response items provided at the community forum were immediately implemented into the workplace by many organizations. As a result of the forum two CBOs, FESCO and CARD, are now jointly working on a grant proposal for funding to develop and present a curriculum of in-depth preparedness training for shelter staff. In addition, one participating faith-based organization connected with its network of faith-based partners and organizations which includes over 122 churches in the county to plan a training day that would help prepare their community to be ready for a disaster and to be a place of refuge and assistance. This event occurred in November, 2011. The connections and resources provided at the community forum were instrumental in assisting this faith-based origination to reach out to his network.

The community forum also provided a venue for county response representatives to speak such as the public health officer, fire department and office of emergency services on their response capabilities, their limitations and what they expect from CBOs serving the community in the event of a county-wide disaster. Participants were able to make face-to-face connections and understand their role as well as the bigger picture of a county response.

Appendix N: Coding Scheme for In-depth Interviews

Digitally recorded interviews were transcribed; in addition, notes were taken during the interview to highlight key points. Data from interviews were summarized into narrative form. Qualitative data were then analyzed manually via vertical analysis using the key domains mentioned above and horizontal analysis to identify key themes within each domain across interviews. Domain-level codes were derived a priori using the five main domains in which questions were categorized, e.g., general questions about CBOs, organizational preparedness, organizational response, interorganizational relationships, and organizational capacity. Within each of these domains, responses were summarized. For example an interviewee responded *"We work with a lot of external organizations for support"* or *"CARD helps with disaster preparedness and personal preparedness"* received a code of 'Work with/support from external organizations' which was designated as a key theme through horizontal analysis (see Appendix N for coding scheme).

Code	Code Description	Frequency
ONS	(1) Nature of organization/services	21
SEO	(2) Work with/support from external organizations	45
OL	(3) Organizational leadership	15
HI	(4) High level of importance	7
OF	(5) Obligations to funders	14
PROX	(6) Proximity of collaboration and resources	8
CV	(7) Client vulnerability	2
SRCl	(8) Sense of responsibility to clients	17
IC	(9) Internal capacity	14
ODPRC	(10) Institutional DPRC	7
CI	(11) Continual improvement	23
SI	(12) Staff inclusion	11
HK	(13) Knowledge of hazards/experience	7
F	(14) Fear of not being prepared	4

PI	(15) Personal interest	2
SRCo	(16) Sense of responsibility to community	3
POP	(17) Type of population	3
OC	(18) Organizational culture	15
CINV	(19) Client involvement	4
LT	(20) Long-term establishment	4
MI	(21) Mission statement of the organization	3
DTWC	(22) Drills, training, workshops, classes	15
COM	(23) Established modes of communication	10
REG	(24) Regularity of meetings, practice, facility assessment	10
DIS	(25) Disaster Experience	10

Code Explanations

1. Nature of organization/services (ONS)
The nature of the organization and its associated requirements, e.g. providing essential services, meeting primary needs, dependency of clientele on the organization and its facilities.
2. Work with/support from external organizations (SEO)
Mention of working with a variety of outside organizations from which they may receive support.
3. Organizational leadership (OL)
Organization's leadership is instrumental in improving disaster preparedness and response capacity at the organization. The executive director is either directly involved in preparedness with staff and/or clients or other management level staff play a large role in leading the organizations in disaster preparedness and response related activities.
4. Level of importance (HI)
Respondents stated or implied that their organization places a high level of importance on disaster preparedness and response activities.
5. Obligations to funders (OF)
Disaster preparedness fulfills funder obligations and protocols. These obligations are often required by licensing agencies.
6. Proximity of collaboration/collaborators and resources (PROX)
Mention of collaboration with nearby organizations or people from the community, and spoke in terms of "immediate area", "neighborhood", "local", "just down the street".
7. Client vulnerability (CV)

Clientele is largely dependent on the organization under normal conditions and probably even more so in a disaster situation.

8. Sense of responsibility to clients (SRCI)

Mention a sense of responsibility that members of an organization have towards their clients as a factor in their capacity for disaster preparedness and response. Mention for example that clients depend on them, have certain expectations, e.g. being prepared, providing leadership during emergency situations and they do not want to let their clients down.

9. Internal capacity (IC)

Organization is self-sufficient in a certain aspects and does not need to rely on outside support or resources, e.g. food, water, shelter, staff with existing disaster preparedness knowledge, CPR and First Aid trained staff, internal training resources.

10. Institutional disaster preparedness and/or response capacity (ODPRC)

Organizations have actual committees that are dedicated to DPR activities and organization, so that in addition to things like organizational leadership and the culture, they have created institutional structures to ensure DPR gets implemented and practiced in an organized fashion, e.g. Disaster Response Committee and Disaster Safety Committee.

11. Continual improvement (CI)

Consistent work towards improving and enhancing their existing capacities, including regular reviews of their plans and procedures and/or aim to increase training at their organization.

12. Staff inclusion (SI)

Mention of the importance of including staff in DPR and related efforts, not merely sending them through training or to workshops, e.g. "getting DPR on everyone's mind." Staff make DPR part of their daily routine at work and at home. Organizations are more confident in their abilities to act to the best of their abilities in emergency situations.

13. Knowledge of hazards (HK)

Knowledge of nearby hazards that could create emergency situations as influential in levels of preparedness, e.g. local active fault line.

14. Fear of not being prepared (F)

Fear of not being prepared in the event of an emergency as a motivating factor to prepare, e.g. not being able to continue to provide for clients.

15. Personal interest (PI)

Respondents specifically stated disaster preparedness as personally interesting to them outside of work and they take that on as part of their lives.

16. Sense of responsibility to community (SRCO)

As an organization, feeling a responsibility to the immediate community to be prepared to assist in whatever way they can in the event of a disaster.

17. Type of population (POP)

Type of population served is a factor in disaster preparedness and response capacity.

18. Organizational culture/culture of preparedness (OC)

Preparedness has become part of their organizational culture rather than a necessary effort, e.g. staff-wide training, inclusion of clients in drills.

19. Client involvement (CINV)

Involve clients in disaster preparedness and response related activities, e.g. trainings and drills provided by the organization, encouragement of clients to become more engaged and aware.

20. Long-term establishment (LT)

Respondents indicated that organization has been around for a long time and as a result are overall better established, have a longer history in serving vulnerable populations and therefore have an increased DPR awareness and capacity.

21. Mission statement of the organization (MI)

Organization's mission statement is a factor that guides the actions in the organization and organizations stated that DPR related activities are consistent with their mission statement.

22. Drills, training, workshops, classes (DTWC)

Mentioned involvement, provision and need for drills, training, workshops and classes to enhance DPR within the organization, among the staff and/or clients.

23. Established modes of communication (COM)

Mentioned of pre-established modes of communication, established specific communication strategies, so that they are confident in their ability to stay in communication in the event of an emergency; mention of having radios and/or cellphones ready for their staff, websites and email communication, etc.

24. Regularity of meetings, practice, facility assessment (REG)

Conduct certain DPR-related activities on a regular schedule, e.g. set schedules for meetings, regular skills practice or drills, regular facility assessments to ensure that everything is available and ready in the case of an emergency.

25. Disaster experience (DIS)

Experience from previous disaster events or other disaster-related experiences as influential in preparedness provides incentives and enhanced awareness for the necessity to be prepared, should this type of event ever directly impact the organization again.