

# Successes in Delivering and Recommendations for Improving Emergency and Disaster Preparedness Education for Seattle's Vulnerable Populations



*Community meeting at the To Dinh Viet Nam Organization in Seattle following storm flooding, March 2009. Photo courtesy of FEMA*

A Report Prepared by:  
Rudy Owens

Research Conducted in  
Fulfillment of Master of  
Public Health Degree  
Requirements for the  
University of Washington  
School of Public Health

Submitted:  
January 18, 2012

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## Background

This report was prepared to accompany an analysis of findings derived from surveys taken between September and November 2011 at the City of Seattle Office of Emergency Management (OEM) courses. (See “An Evaluation of Select Seattle Emergency and Disaster Preparedness Education Programs.”) Data in this report is drawn from the researcher’s interviews with eight key informants. This group consisted of communications experts and public health specialists who work in the field of emergency and disaster preparedness communications and education with vulnerable groups. They included managers who specialize in working with vulnerable populations, preparedness planners, and safety educators. Overall, this group promotes emergency and disaster preparedness communications to community-based organizations (CBOs), to vulnerable populations, and to the public in Seattle and the King County area. (See appendix A for a list of groups considered vulnerable.) The eight key informants were interviewed in September and October 2011—seven in person and one by telephone. Permission to conduct the interviews, as part of the researcher’s degree work at the University of Washington School of Health, was provided by the university’s Human Subjects Division in August 2011.

The researcher asked each key informant 30 questions, which were developed to gather qualitative data that could be compared against results from the questionnaires that were administered to subjects at the public meetings organized by the OEM. (See summary of findings in appendix A.) The questions focused on:

- 1)** The key informants’ assessments of the general knowledge and awareness of vulnerable populations of emergency and disaster preparedness communications;
- 2)** How well prepared the key informants believed vulnerable populations were for emergencies and/or disasters; and
- 3)** The key informants’ assessments of how effective emergency and disaster preparedness communications were for vulnerable populations, as well as for the general public.

The qualitative data provided perspectives on subpopulations in Seattle, particularly large groups of vulnerable individuals, who the researcher could not access because of the fiscal and time restraints of this project. The interview results also allowed the researcher to validate, refute, and test the information he had gathered from the surveys and from a literature review of the research topic. In addition, the qualitative data complemented research the researcher gathered from a comprehensive literature review of the field of

emergency and disaster preparedness communications for vulnerable populations and information published about the City of Seattle's emergency preparedness planning.

Based upon the quantitative and qualitative data and published research, the researcher identified six successes and recommendations for the OEM, in its effort to educate the public, particularly Seattle's sizable population of vulnerable residents. By contrast, the implications and recommendations included in the researcher's report on the surveys taken at OEM classes, "An Evaluation of Select Seattle Emergency and Disaster Preparedness Education Programs," are mostly specific to the survey's findings and the broader audience for those classes—the general public.

## Successes and Recommendations:

### 1. Increase Opportunities for Inclusion of Vulnerable Populations in All Planning Processes:

Research has consistently shown that including vulnerable populations in emergency and disaster planning ensures their concerns are addressed and helps build greater trust in those communities.<sup>1,2</sup> Vulnerable populations can include residents with disabilities, children, the elderly, persons incarcerated, ethnic minorities, people with language barriers, and the poor, and together the number nearly a fifth of all Seattle's residents.<sup>3,4</sup> (See table 1 and appendix A.) The OEM's outreach indicates its organization is committed to this goal of, what it calls, "planning with the community rather than for the community."<sup>5</sup> The OEM's preparedness classes reached more than 3,500 vulnerable residents in 2011.<sup>6</sup> The OEM, in December 2011, sent a note to its network encouraging public participation at two meetings in January 2012 to provide input on Seattle's Disaster Readiness and Response Plan.<sup>5</sup> The OEM also is providing an online survey for residents who cannot attend either of the meetings. That announcement notes, "If not built from the bottom up, city efforts to respond in the aftermath of a major disaster will be unsuccessful."<sup>5</sup>

### 2. Engage Community-Based Organizations:

Outreach models that have been developed by the OEM, to partner with CBOs, should continue. Klaiman and colleagues call this framework the community-based organization outreach model.<sup>1</sup> The OEM and Public Health-Seattle and King County's Vulnerable Populations Action Team (VPAT), which works with CBOs to ensure that no one group is more impacted than others in emergencies, have been successful in sharing disaster preparedness information, in partnership with CBOs, in up to 19 languages.<sup>7,8</sup> CBOs are the groups most known to vulnerable populations, and they are often the most trusted sources of information and likely the first point of contacts for vulnerable populations in the event of a disaster.<sup>1</sup> OEM staff work with VPAT, which has reported training and funding more than 150 CBOs to

**Table 1: Public Health-Seattle and King County's list of groups considered "vulnerable populations" (see appendix A for definitions of each group).**

- Blind
- Chemically dependent
- Children
- Clients of the criminal justice System
- Deaf, deaf-blind, hard of hearing
- Developmentally disabled
- Emerging or transient special needs
- Homeless and shelter dependent
- Immigrant communities
- Impoverished
- Limited English or non-English proficient
- Medically dependent, medically compromised
- Mentally ill
- Physically disabled
- Seniors
- Undocumented persons

develop agency emergency plans as of 2009.<sup>9</sup> VPAT, through its Advanced Practice Center program, also has developed an online training module to help agencies connect better with communities they serve.<sup>10</sup> The Vulnerable Populations System Coordination Steering Committee will continue to promote collaboration between Seattle and its local government planning partners.

### **3. Conduct More Research on Disaster Preparedness Model and Disaster Readiness:**

Key informants indicated there was a lack of research to gauge how prepared Seattle and King County residents, including vulnerable populations, were for disasters. As one informant said, “We all want to figure out that question.” Key informants also were skeptical that Federal Emergency Management Agency’s (FEMA) primary disaster planning message for the public, encouraging all persons to make a plan, build a kit, and get involved, or similar messaging by the Seattle Neighborhoods Activity Prepare (SNAP) program or the American Red Cross, did not match the concerns and needs of local vulnerable populations.<sup>11</sup> One said, “I would be curious if [three days, three ways is] meaningful at all to a community. [I’m] not sure if there is adequate research people know what three days, three ways meant in the English speaking community. Hard to know what that means in another cultural context.” Informants also reported that the nearly universal message to all groups that every resident have a disaster kit or supplies may not resonate with many vulnerable residents. As one planner commented, “Putting together a kit is a whole another level of organization people don’t have.”

The OEM may also wish to conduct a Seattle-wide telephone survey, similar to the 2004 King County survey conducted by Hebert Research<sup>12</sup> on disaster and emergency preparedness. Such a survey could measure the effectiveness of current general population messaging (three days, three ways) promoted by SNAP courses and the OEM web site and materials. Findings could also help the OEM determine which messengers may be most trusted to deliver preparedness communications were a multi-media public messaging campaign be developed through funding sources. A survey could also test the public’s level of concern with the nearly 20 most likely hazards—earthquakes, storms, terrorism, disease outbreak, and more—and residents’ views on the effectiveness of current messaging activities by federal, state, and local emergency planners.

### **4. Use Visual Information and Materials in Multiple Languages:**

Key informants interviewed for this research agreed that communications through DVDs and videos and printed information that was pictorially based were the most effective means of disseminating preparedness information to non-English speakers and vulnerable

populations. Research by James and colleagues notes that placing information on web sites, even translated information, was not adequate to reach many vulnerable populations—groups that needed to be reached by other means.<sup>13</sup> James and colleagues found that Hispanics and African Americans prefer concisely written information in single-page documents. They also report that such concisely written documents should be geared for low-literate audiences and translated into as many languages as possible for dissemination to vulnerable populations.<sup>13</sup> Preparedness documents by the OEM for general populations and non-English-speaking and vulnerable populations, in 19 languages, strive toward conciseness and rely strongly on visual imagery.<sup>14</sup> The OEM will need to continue funneling its information to vulnerable populations through trusted partners with whom it already works. Much of what the OEM does already is considered consistent with best practices through what Klaiman and colleagues call the vulnerable populations and CBO outreach models.<sup>1</sup>

#### **5. Practice Continuous Evaluation:**

Klaiman and colleagues' model for engaging vulnerable populations recommends preparedness planners work closely with CBOs and vulnerable groups to evaluate the effectiveness of the educational materials, the quality of programs, and the usefulness of message mechanisms.<sup>1</sup> As OEM's budget allows, it should plan for focus groups, a survey tool similar to one developed for the SNAP and disaster supply kit classes surveyed for this research, and formal feedback from vulnerable populations. Data from the survey tool used for this research did not capture enough information from lower-income and minority groups concerning their level of trust for preparedness messengers. Such feedback could help planners develop an appropriate public-service campaign based on trust levels some populations have with messengers, to encourage individuals to adopt planning behaviors to prepare for disasters. However, tailoring a survey instrument for specific groups who have cognitive disabilities, visual impairments, low or no literacy, or limited or no English speaking skills may not be a practical use of limited resources.

#### **6. Implement Existing Research Findings For Seattle Disaster Preparedness Outreach:**

Results gathered in 2010 by VPAT on H1N1 vaccine outreach to vulnerable communities in King County provides detailed research on communicating public health information to such communities in Seattle and King County.<sup>15</sup> Though the research was specific to H1N1 communications, the findings provide a broad framework that can be adapted to other forms of risk communications. Despite great diversity in the communities engaged during the focus groups—African Americans, Africans, Ukrainians, Native Americans, disabled persons—some consistent themes emerged. Television and radio were the primary means for many groups to gather information on health issues. CBOs were also widely used by

many groups to gather primary information.<sup>15</sup> Key informants also valued face-to-face communication through community meetings and working with community leaders to disseminate information and connect community members with services.<sup>15</sup> Preparedness communications strategies should implement suggested methods and channels identified by VPAT's research.

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## Appendix A:

**Thematic analysis of key informant interviews: The variables highlighted were mentioned frequently by key informants during the interviews and/or because research on emergency preparedness communications to vulnerable populations has identified the variables as relevant for improving messaging among these groups.**

| <b>Theme 1: The Disaster Preparedness Planning Model</b> |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Variables</b>                                         | <b>Summary of Findings</b>                                                                                                                                                                                                                                                    | <b>Key Quotations</b>                                                                                                                                                                                                                                                                                                                                                                                   |
| <i>Kits</i>                                              | The current primary message (“Have a kit,” “Have a plan,” “Be informed”) does not match the realities and needs of many vulnerable populations, and kits were not seen as a priority among vulnerable populations.                                                            | <p>“I never thought all these worked, even with myself.”</p> <p>“This barely addresses my reality, with resources. This list reflects a perspective that we’re all middle class.”</p> <p>“People don’t even keep their dinner in the house. It’s so out of synch with the way people live.”</p> <p>“If I can’t put food on my table tonight, the last thing I’m concerned about is building a kit.”</p> |
| <i>SNAP Model</i>                                        | SNAP classes were encouraged for some vulnerable populations, but some were critical the model didn’t match many groups’ circumstances.                                                                                                                                       | <p>“SNAP is great; it can be 2 people starting together. They can create SNAP into what they want it to be.”</p> <p>“That ideal of this mobilized, close-knit community doesn’t reflect a lot of communities.”</p>                                                                                                                                                                                      |
| <b>Theme 2: The Readiness of Vulnerable Populations</b>  |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Variables</b>                                         | <b>Summary of Findings</b>                                                                                                                                                                                                                                                    | <b>Key Quotations</b>                                                                                                                                                                                                                                                                                                                                                                                   |
| <i>Earthquakes</i>                                       | Many vulnerable residents do not focus on this potential risk.                                                                                                                                                                                                                | “I think [earthquakes are] low on the list of concerns people may have.”                                                                                                                                                                                                                                                                                                                                |
| <i>Medications</i>                                       | The general population and particularly vulnerable populations likely will not have enough medications in case of a disaster/emergency. This poses a greater risk for seniors and individuals with mental health issues, who are dependent on behavior modifying medications. | “Many people we serve don’t have access to medications they need anyway. ... Nobody would be able to have an extra’s month’s supply on hand. Having the medication is such a huge challenge [cost issue].”                                                                                                                                                                                              |
| <i>Readiness</i>                                         | Preparing vulnerable populations for one disaster                                                                                                                                                                                                                             | “Why are [emergency planners] asking about an emergency. Why don’t you ask us what we need in                                                                                                                                                                                                                                                                                                           |

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|                                                                                   | helps to prepare them for all scenarios, though vulnerable populations' daily worries trump any concerns for these risks.                                         | <p>an everyday sort of way. It was so ridiculous to them for us to be spending all this efforts asking them about something that might happen, when they were struggling so much on a regular basis. ... If you don't have food to feed your kid right now, why are you going to worry about a three-day supply."</p> <p>"If you're prepared for one, you're preparing for all. That's the philosophy. If we can prepare for [winter weather], we can prepare for all."</p> <p>"It's probably possible to be prepared for our usual snowstorms, windstorms, adverse weather events. It's probably possible to be prepared for minor earthquakes."</p> |
| <i>Terrorism</i>                                                                  | Professional planners do not talk much about this risk, though they acknowledge terrorism-preparedness funding supports general preparedness planning activities. | "[Immigrant communities] don't want to talk about terrorism. They feel very often there is the assumption they did something wrong. ... It creates hatred and misunderstanding."                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Theme 3: Communications Strategies and Messages for Vulnerable Populations</b> |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Variables</b>                                                                  | <b>Summary of Findings</b>                                                                                                                                        | <b>Key Quotations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <i>Messaging</i>                                                                  | Planners said they had adapted disaster messaging for diverse groups they served, but some noted not enough adaptation was being done.                            | <p>"[We are] tweaking our messages so they are relatable and doable for different communities."</p> <p>"We know what we want people to do. We just keep plugging along, if we tell them often enough, they'll get it."</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <i>Television</i>                                                                 | Television is considered a trusted communication source for limited English proficiency (LEP) groups.                                                             | "Depends on the population group ... many LEPs do trust TV."                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <i>Trust</i>                                                                      | Trusted messengers are essential for communications to be effective among vulnerable populations.                                                                 | <p>"The best tool is going to be someone trusted, someone who is communicating on a regular basis. That's their job. Right now it's real limited."</p> <p>"It really takes a lot of time to get to know communities well enough to establish a level of trust and engagement that would be required to get us further down the road on this."</p> <p>"We tend to operate in the United states we wish we existed; that's not the reality."</p>                                                                                                                                                                                                        |

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| <i>Visual Communications</i>                                                    | Planners found videos and DVDs to be effective tools for communicating disaster and emergency preparedness information.                                                       | “Having the visuals [video] is so important. We have some translated materials. It’s really supplementary material. Even our activity is pictures.”                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Theme 4: Successes and Shortcomings Planning With Vulnerable Populations</b> |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Variables</b>                                                                | <b>Summary of Findings</b>                                                                                                                                                    | <b>Key Quotations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <i>Communities (Awareness, Involvement)</i>                                     | Community involvement is considered crucial to the success of preparing vulnerable populations for disasters; the process was described as “planning with, not planning for.” | <p>“We want to have people at the table that can shape what the campaign is going to look like. With limited funds that’s more challenging.”</p> <p>“Even when we say we want to work with the community, the government is still in control. Now we’re in this mode of, we want you to be prepared, because we can’t help you; we don’t want you to be mad at us. It still feels less about wanting to do what’s right for these communities and more about the not wanting to admit the inadequacy of what we’re doing.”</p> |
| <i>Planning</i>                                                                 | Concerns exist that methods to improve delivery to vulnerable populations are well-known but not fully implemented.                                                           | <p>“My worry is we keep reverting to our standard way of doing things.”</p> <p>“We have a set of things we want people to do. I don’t think we’ve ever actually attempted to design them with what values or needs in that culture or within that community could these measures address.”</p>                                                                                                                                                                                                                                 |
| <i>Population Variation</i>                                                     | Planners face preparedness education challenges because of the size of and diversity of vulnerable populations in Seattle.                                                    | “[We are] working with all these groups in the magnitude of thousands of individuals. Just 4,000 in elderly and cognitive arena alone... racial and ethnic, a couple thousand people there ... a large immigrant population.”                                                                                                                                                                                                                                                                                                  |
| <i>Train the Trainer</i>                                                        | The model of having persons from groups to educate their own groups, in their own languages, was uniformly praised.                                                           | “When the trainees show up at an event, they have the dress. We trust folks to do the work. From what they tell me people are listening and they want the information and having it come in their language is helpful.”                                                                                                                                                                                                                                                                                                        |
| <b>Theme 5: Problems With Emergency and Disaster Preparedness Activities</b>    |                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Variables</b>                                                                | <b>Summary of Findings</b>                                                                                                                                                    | <b>Key Quotations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <i>Fear</i>                                                                     | The use of fear as an organizational and motivational device was criticized.                                                                                                  | “We are fear-based focused. That is overwhelming. ... How do you make it doable, how do you make it what the recovery is looking like. That is a huge barrier for us nationwide.”                                                                                                                                                                                                                                                                                                                                              |

|                 |                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Research</i> | The lack of research to measure levels of preparedness in Seattle was cited as a shortcoming in planning. | <p>“It’s like the golden question. How prepared is our community? We all want to figure out that question.”</p> <p>“I would be curious if [three days, three ways is] meaningful at all to a community. [I’m] not sure if there is adequate research people know what three days, three ways meant in the English speaking community. Hard to know what that means in another cultural context.”</p>                                                                                                                 |
| <i>Risk</i>     | Thinking about future risk is challenging for all groups, particularly for vulnerable populations.        | <p>“If you’re living day by day, you’re not going to be thinking about future risks; you’re not going to be thinking about future plans. If you’re living day to day, you’re not going to be thinking of your kit. Are you going to feed your kids?”</p> <p>“Most people don’t prepare for disasters; our psychology blocks us from thinking about future risk. If you can teach yourself to objectively think about risk, all of a sudden all of the challenges about disaster preparedness are easy to solve.”</p> |

## Appendix B:

### **Vulnerable populations definitions used by Seattle and King County Public Health and emergency preparedness specialists.<sup>3</sup>**

**Blind:** Persons whose range of vision includes low vision, night blindness, color blindness, impaired depth perception, etc.

**Chemically Dependent:** Persons who are substance abusers, who would experience withdrawal, sickness, or other symptoms due to lack of access—i.e., methadone users.

**Children:** Persons who are below age of the majority and separated from parents/guardians—in childcare; in Head Start; in before- and after-school programs; latchkey kids; and those in school, foster care, truancy, and the juvenile justice system.

**Clients of the Criminal Justice System:** Persons who are ex-convicts, parolees, people under house arrest, and registered sex offenders.

**Deaf, Deaf-Blind, Hard of Hearing:** Persons who are latent deaf or who experience situational loss of hearing or limited-range hearing.

**Developmentally Disabled:** Persons who are unable to safely survive independently or attend to personal care.

**Emerging or Transient Special Needs:** Persons who have needs and conditions created by an emergency or temporary conditions—i.e., loss of glasses, broken leg, tourists and visitors needing care.

**Homeless and Shelter Dependent:** Persons who are in shelters, on the streets, or temporarily housed—in transitional housing or in safe houses for women and minors.

**Immigrant Communities:** Persons who may have difficulty accessing information or services because of cultural differences.

**Impoverished:** Persons who have extremely low income and those without resources or political voice, limited access to services, and limited ability to address own needs.

**Limited English or Non-English Proficient:** Persons who have limited ability to speak, read, write or fully understand English.

**Medically Dependent, Medically Compromised:** Persons who are dependent on medications to sustain life or control conditions for quality of life—i.e., diabetic; weakened immune systems, those who cannot be in or use public accommodations.

**Mentally Ill:** Persons who have serious and persistent illness; includes being a danger to themselves or others.

**Physically Disabled:** Persons for whom full-time attendant care is required for activities of daily living and/or instrumental activities of daily living.

**Seniors:** Persons who are the frail elderly and people who have age-related limitations and needs, including those in nursing home or assisted-living care or who are living alone and not connected socially or to service providers.

**Undocumented Persons:** Persons who distrust authorities, political dissidents, and others who will not use government or other traditional service providers.

## About the Author:

Rudy Owens is a second-year master of public health (MPH) graduate student at the University of Washington School of Public Health (UW SPH). Owens has an MA in journalism from the University of North Carolina at Chapel Hill and a BA from Reed College. He will complete his MPH degree at the UW SPH in June 2012.