

***Communication under Uncertainty:***  
**Communication behaviors of diverse audiences during the A(H1N1)  
incidence of Spring and Summer 2009**

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**Dana-Farber Cancer Institute  
Harvard School of Public Health  
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**This report was prepared by:**

*K. "Vish" Viswanath, PhD*  
Associate Professor  
Harvard School of Public Health  
Dana-Farber Cancer Institute  
Director, Health Communication Core  
Dana-Farber/ Harvard Cancer Center (DFHCC)  
44 Binney Street  
Boston, MA 02155  
P: 617-582-7733  
F: 617-582-8728  
Email: vish\_viswanath@dfci.harvard.edu

*Sara Minsky, MPH*  
Assistant Director  
Center for Community-Based Research  
Department of Medical Oncology  
Dana-Farber Cancer Institute  
Email: sara\_minsky@dfci.harvard.edu

*Divya Ramamurthi, MS*  
Research Assistant  
Center for Community-Based Research  
Department of Medical Oncology  
Dana-Farber Cancer Institute  
Email: divya\_ramamurthi@dfci.harvard.edu

*Emily Z. Kontos, ScM*  
Research Assistant  
Center for Community-Based Research  
Department of Medical Oncology  
Dana-Farber Cancer Institute  
Email: emily\_kontos@dfci.harvard.edu

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*Michael A. Stoto, PhD*  
Professor of Health Services Administration and Population Health  
Georgetown University School of Nursing & Health Studies  
Director, Evaluation Core of the Center for Public Health Preparedness  
Harvard School of Public Health  
Email: stotom@georgetown.edu

*Elena Savoia, MD, MPH*  
Acting Director, Center for Public Health Preparedness  
Harvard School of Public Health  
Email: esavoia@hsph.harvard.edu

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## KEY FINDINGS

### Primary sources and general exposure to A(H1N1) information:

- Overwhelming majority of focus group participants first heard about the A(H1N1) from **local television news** followed by local newspapers.
- There was an array of outlets where people were exposed to messages about A(H1N1).

### Information seeking patterns for A(H1N1):

- Most participants **did not actively look** for more information about the A(H1N1) after their initial exposure to information about the outbreak.
- Some who did look for additional information, sought information on how to protect themselves against the flu and how to take care of individuals with the flu.

### Trusted sources for A(H1N1) information:

- **Doctors** were viewed as highly credible sources of information.
- Though fewer participants indicated television as a trusted source of information, it was cited as a primary source of information.

### Knowledge about A(H1N1):

- **Origin:** Participants felt that A(H1N1) started as the regular flu and evolved into something more serious. A few believed that it came from pigs or the “bacteria” surrounding pigs.
- **Transmission:** Many were aware that it was airborne and could be transmitted by contact.
- **Precautions:** “Wash your hands” was the message that resonated with a majority of the participants.
- **Vulnerability:** Participants heard that it affected the elderly and children. However, they were unclear about the age parameters for at-risk children.
- **Symptoms:** Majority of participants referred to “flu-like” symptoms and some were able to list such symptoms as fever, coughing, sneezing and weakness.
- **Vaccine/Treatments:** Majority knew there was no vaccine as yet available.

### Behavior change due to media coverage of A(H1N1):

- Participants **washed their hands** more frequently.
- A few cancelled trips as a result of A(H1N1).

### Risk perceptions of A(H1N1):

- Participants were **not worried** about contracting A(H1N1)

### Perceptions of media coverage and affect on attention to A(H1N1) information:

- Many participants did not feel there was full, accurate, or clear reporting of A(H1N1).
- Many participants cited information “**overload**” and media “**hype**” in relation to A(H1N1) coverage and as a result their attention to media diminished overtime as did their concern for the flu.
- Some participants cited a desire for **one source of information** and did not want to sift through all the available information.
- **Reaction to virus name:** Participants did not like the name swine flu and Spanish participants felt renaming the flu as A(H1N1) did not change their preconceptions about the virus.

### Preferred content and channels for future information on A(H1N1):

- Participants wanted to know how to **protect oneself** from a future outbreak of A(H1N1).
- Participants would like to have **information mailed** to them.

### General emergency preparedness behaviors:

- Majority of participants have **taken some emergency preparedness measures**.

### Regional and ethnic differences in responses to emergency preparedness issues:

- There were regional and ethnic differences in **channels used to seek** A(H1N1) information.
- There were ethnic differences in overall **attitudes** towards emergency preparedness.

## **Introduction**

A national investment of millions of dollars has been made into the public health system, to prevent, detect and respond to emergencies (Nelson, 2007). Although progress has been made in some sectors, concerns persist as there is no clear picture of the nation's preparedness. This is in part owing to a lack of agreement between different agencies about what measures should be aimed for assessing preparedness, how they should be interpreted, and a weak system of accountability for producing results (Lurie, 2006). As a recent report by Institute of Medicine (IOM) summarized, "It is difficult to measure objectively the progress that has been made and the preparedness gaps. A critical need exists for validated criteria and metrics that enable public health systems to achieve continuous improvement and to demonstrate the value of society's investment" (Institute of Medicine, 2008).

To this end, the Centers for Disease Control and Prevention (CDC) funded the Harvard Center for LAMPS (Linking Assessment and Measurement to Performance in PHEP Systems) to develop a research center to develop criteria and metrics for assessing public health system emergency preparedness. An important project within this center aims to develop and validate measures of preparedness communications given the vital role communication plays under conditions of uncertainty and prior to, during and after an emergency. This report will focus on communication behaviors of citizens during the first wave of the A(H1N1) outbreak in the United States.

## **Communication Inequalities and PHEP**

Communications is a critical component in PHEP for helping individuals prepare for, respond to, and recover from emergencies (Wingate, 2007). Literature has shown that the consequences of disaster and emergencies are suffered disproportionately by members of racial/ ethnic minority, and underserved groups. The reasons for this are varied and complex. They include several factors such as socio-economic position, culture and language barriers, lower perceived personal risk from emergencies, distrust of warning messengers, lack of preparation and protective action, and reliance on informal sources of information (Andrulis, 2007; Blendon, 2007). We further argue that there are profound inequalities in communication that, in turn, contribute to disproportionate burden faced by those with limited resources and lower socioeconomic position. (Viswanath, 2006; Taylor-Clark, Viswanath and Blendon, in press.)

For instance, a study by Tierney showed that some individuals with low literacy might not be able to interpret written messages (Tierney, 2001). Thus, these groups may not be able to access and use some of the resources offered in emergency preparedness, planning, response, and recovery. Other studies have shown that, knowledge about hazards alone is not enough to get people to act during times of emergency, for even when information about probable danger is available it is difficult to effectively warn large populations that cannot directly perceive the danger associated with a disaster. In one study, we showed that vulnerability stemming from differential socioeconomic status manifests in the form of inequitable access and exposure to relevant information, which may directly or indirectly influence health related outcomes, including risk perception (Taylor-Clark, Koh, and Viswanath, 2007). Eisenman et al. in their study of African American evacuees of Hurricane Katrina found that the collective memory of past hurricanes combined with a distrust of authorities led to minimization of perceived risk (Eisenman, 2007). In another study of Hurricane Katrina victims by Brodie et al, authors found that some victims did not evacuate their homes in time because they did not receive sufficient information, from a trusted source, before the hurricane hit. In this study, residents of low-income households needed more specific information in the face of hazards, especially if they did not have access to transportation or financial resources (Brodie, 2006).

Qualitative studies also show ethnic and socioeconomic differences in minority communities' abilities to act on disaster warnings, and differences in preferred disaster message forms. A study found that Mexican Americans often had delayed responses to natural emergencies because they spent time trying to communicate with the extended family and get everyone together (R.W., 1979). Another study found that hearing impairments may leave older people more vulnerable to information processing barriers, such as difficulty understanding evacuation orders (Fernandez, 2002).

Thus, in order for people to be ready to act in times of emergencies and heed recommended safety guidelines, they need to have come in contact with the messages, understood them, and have had the capacity to act on them (Viswanath, 2006).

### **Evaluation of PHEP Communication**

Given the sharp and disturbing inequalities in public health outcomes and health communications, reliable metrics for assessment of PHEP communication are critical. Evaluation of effects of PHEP communication requires valid and reliable assessment tools that can relate communication antecedents: exposure and attention to PHEP communications, determinants that influence processing all the information, such as credibility of that source, and the intended outcomes. The measures also need to take into account the changing ethnic and racial make-up of the United States.

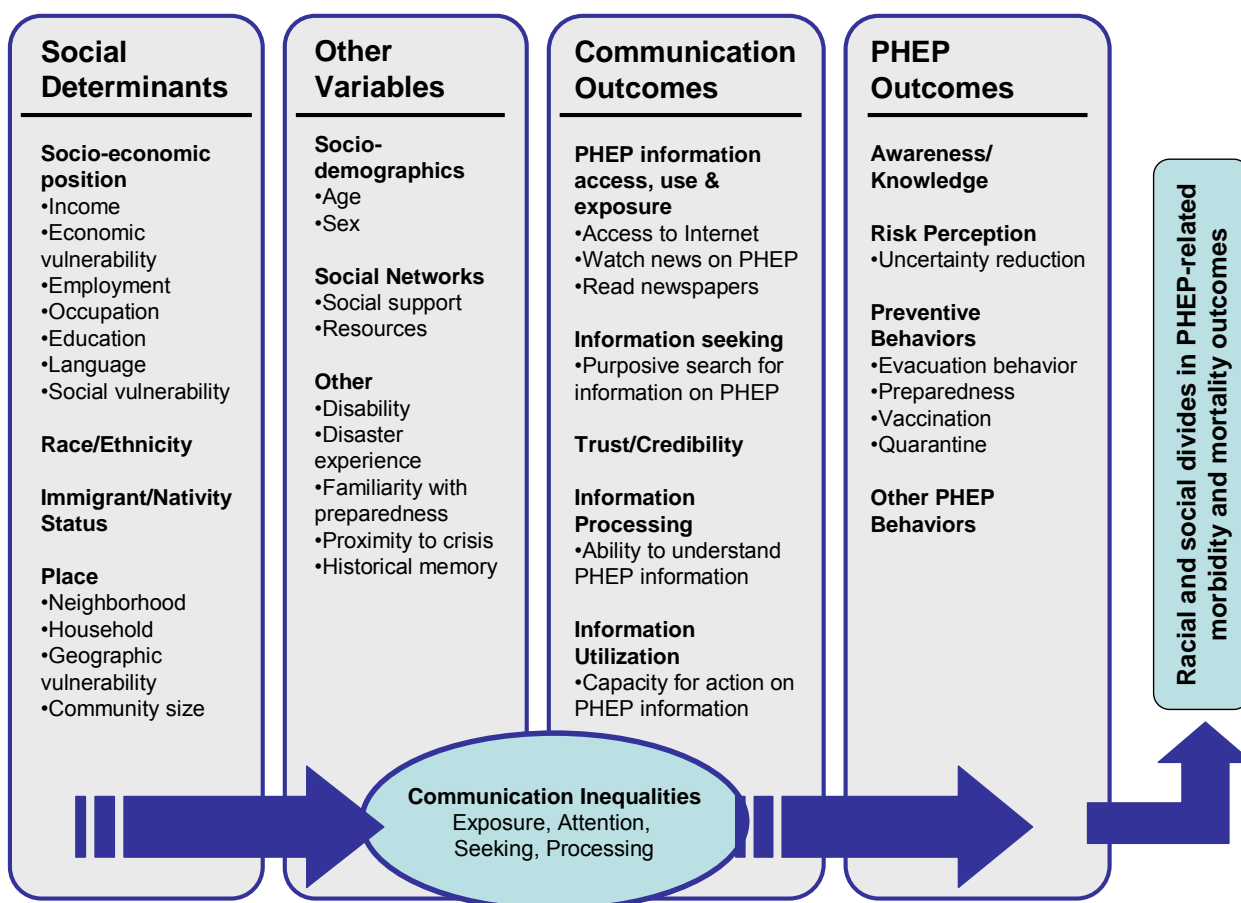
Linking Assessment and Measurement to Performance (LAMPS) in PHEP Communications, one of the four projects that addresses criteria and metrics for various subsystems of PHEP, has the following aims:

1. Investigate the sources of information on PHEP communications among groups of different ethnic, racial and SES composition. These sources may include mass media channels such as television, radio, and newspapers; interpersonal channels such as friends, family, and members of social networks; and local agencies and websites.
2. Investigate how people in diverse ethnic, racial, and SES groups are exposed to messages about PHEP.
3. Following the Measurement Development Cycle to develop a set of valid and reliable measures of PHEP communications that include: (a) exposure to PHEP messages in different media; (b) attention to PHEP messages; (c) measures, such as credibility and trust, that influence processing; and (d) PHEP message effects including perceived susceptibility to threat at individual and group level, PHEP knowledge, capacity to act in case of a threat, and behaviors (e.g., preparation).

### **Structural Influence Model and PHEP Communication**

This project draws on the Structural Influence Model of Communication (SIM) to examine the relationship between social determinants, communication processes, and PHEP outcomes (see Figure 1) (Kontos, 2007; Viswanath, Ramanadhan and Kontos, 2007). The model is based on the premise that control of information is power and that whoever has the capacity to generate, access, use and distribute information enjoys social power and advantages that accrue from it.

**Figure 1. Structural Influence Model of Communication in PHEP**



This study will be conducted in two waves: Wave 1 will use the pandemic flu, A(H1N1) as an exemplar topic for developing PHEP communication measures; Wave 2 will then expand the focus by taking an “all hazards” approach. The research will be conducted in diverse populations including low SES groups, African Americans, Latinos, and Hispanics from urban and rural areas of Massachusetts.

As a first step to developing valid measures of PHEP communications, we conducted a series of focus groups to understand the sources of information, perceived trust in different sources, and perceptions and knowledge about PHEP particularly in the context of the recent A(H1N1) spread within the United States. This step allowed us to broadly canvass the information exposure, seeking, needs and related perceptions of our target audience, While this report draws from all the respondents, we had a particular interest in people from groups who suffer disproportionately from public health disasters –minority racial and ethnic groups and those from lower SES.

### Methods

The focus group method is an optimal research method for exploring people’s knowledge and experiences in their own language (Morgan, 1998). It can be used to examine not only what people think but also why they think in that particular manner. The open conversation between the moderators and respondents in a group setting allows for extensive probing, follow-up

questions, discussion and observation of emotional reactions (Kruger, 1998).

The topic of our focus groups included three broad categories of questions concerning: (a) information sources, knowledge and attitudes about the A(H1N1) flu, (b) additional information desired in the event of a future outbreak as well as communication channels to receive this information, and (c) general personal preparedness in the event of a public health emergency.

### Data Collection

Participants for the focus groups were recruited through newspaper advertisements, flyers and from rosters of other Dana-Farber Cancer Institute projects within Massachusetts. Our goal was to recruit 8-10 participants, ages 25+, from diverse ethnic, racial and SEP groups in urban and rural Massachusetts locations: Boston, Lawrence, Lancaster and Salisbury (Table 1).

A total of 46 participants were recruited (Table 2). We conducted five focus groups, with an even representation of both rural and urban residents. *Additionally, a large proportion of the participants was from low-SEP and underserved population groups.* A Spanish focus group was conducted in Lawrence, MA, where almost 60 percent of Lawrence residents are Hispanic/Latinos (see Table 1). Participants' ages ranged from 26 to 72 years old and had educational levels from 4<sup>th</sup> grade to a Bachelor's degree (see Table 2).

**Table 1 . Demographic characteristics of cities/towns of focus groups participants\***

	<b>Boston</b>	<b>Lancaster</b>	<b>Lawrence</b>	<b>Salisbury</b>
<b>Population</b>				
	600,980	7,380	72,043	7,827
<b>Race/Ethnicity</b>				
White	56%	85%	49%	98%
Black	24%	11%	5%	.4%
Hispanic	16%	7%	60%	1.2%
<b>Education</b>				
≥HS	84%	82%	58%	84%
≥College	27%	31%	10%	17%
<b>Income</b>				
Median HH income	\$48,729	\$60,752	\$27,983	49,310
Families < poverty level	17%	4%	21%	4.5%
Individuals < poverty level	21%	4%	24%	6.8%

\*2000 and 2005-2007 US Census data

**Table 2. Demographic characteristics of focus group participants**

	<b>Boston</b>	<b>Lancaster</b>	<b>Lawrence</b>	<b>Salisbury</b>	<b>Total</b>
<b># of Participants</b>	16	9	10	11	<b>46</b>
<b>Gender</b>					
Female	9	6	6	8	<b>63%</b>
Male	7	3	4	3	<b>37%</b>
<b>Age</b>					
Range	27-61yrs	32-70yrs	26-65yrs	47-72yrs	<b>26-72yrs</b>
Mean	45yrs	53yrs	45yrs	61yrs	<b>51yrs</b>
<b>Race/Ethnicity</b>					
White	1	8	x	10	<b>41%</b>
Black	13	x	x	x	<b>28%</b>
Hispanic	2	1	10	x	<b>28%</b>
Other	x	x	x	1	<b>3%</b>
<b>Education</b>					
<HS	7	x	x	x	<b>15%</b>
HS	7	1	8	5	<b>50%</b>
≥College	1	8	2	6	<b>35%</b>
<b>Income</b>					
HH below federal poverty level	8	1	2	5	<b>35%</b>

The focus groups were approximately 90 minutes in length and were held at locations that were easily accessible to participants. Following standard focus group protocol, participants were welcomed to the discussion by investigators, an overview of the topic including the purpose of the research was provided and ground rules for participation, including the importance of respecting and listening to others, were established. Participants were given a consent form and briefed about the recording of the session (Stewart, 2007). Each participant was paid an incentive for his or her participation. The focus groups were audio-taped and transcribed.

The English focus groups were conducted by Mr. Josh Gagne, a cultural anthropologist at Dana-Farber Cancer Institute (DFCI). Mr. Gagne has extensive experience in conducting focus groups with community leaders. The Spanish focus group was conducted by Ms. Brenda Rodriguez, an experienced Spanish-speaking moderator.

### **Data Analysis**

The transcribed qualitative data were analyzed according to a standard comprehensive qualitative analysis method, which comprised of a two stage coding process: Level 1 structural coding and Level 2 thematic coding. Structural coding follows the structure of the focus group guide; hence every question in the guide received a structural code that was applied to the appropriate text. Thematic coding is based on themes that arise from the structural coding, and was applied in a second reading of the data from the structural coding stage. These methods were enhanced by the use of a state-of-the-art ethnographic data management software program, N'Vivo (QSR International). The program uses an organizer indexing system for coding, categorizing, searching, retrieving, attaching analytical memos, and creating conceptual relationship networks in textual data that has been taxonomically

coded. Once coding was completed, the output reports from N'Vivo were further analyzed and summarized into a comprehensive qualitative findings report. The focus group data and the emerging themes will be used to inform the development of a survey instrument that will facilitate a more systematic exploration of communication around pandemic flu. The questionnaire will be further refined through cognitive testing with five Boston residents from diverse backgrounds.

### Major Findings by Themes

The findings are organized along major themes that emerged during the five focus discussions:

<b>Theme 1:</b>	Primary sources and general exposure to A(H1N1) information
<b>Theme 2:</b>	Information seeking patterns for A(H1N1)
<b>Theme 3:</b>	Trusted sources for A(H1N1) information
<b>Theme 4:</b>	Knowledge about A(H1N1)
<b>Theme 5:</b>	Behavior change due to media coverage of A(H1N1)
<b>Theme 6:</b>	Risk perceptions of A(H1N1)
<b>Theme 7:</b>	Perceptions of media coverage and affect on attention to A(H1N1) information
<b>Theme 8:</b>	Preferred content and channels for future information on A(H1N1)
<b>Theme 9:</b>	General emergency preparedness behaviors
<b>Theme 10:</b>	Regional and ethnic differences in responses to emergency preparedness issues

#### Theme 1: Primary sources and general exposure to A(H1N1) information

Theme 1 focuses on the primary sources of information that participants turned to during the A(H1N1) outbreak, what they heard, and their initial thoughts about the flu.

- There was an array of outlets where people were exposed to messages about A (H1N1). The gamut of information sources included television, radio, Internet, newspapers, schools, healthcare professionals, hospitals, work and grocery stores.
- Among the different sources of information, the overwhelming majority of participants said they **first** heard about A(H1N1) from **local television news**.
- Some participants from one of the urban focus groups said they first heard about the flu from **CNN** (a cable television channel). Radio came up as a source of information only in one of the rural focus groups. The Internet was rarely mentioned as an initial source of information about A(H1N1).

*"I think I saw it probably on one of the local news stations that, you know, they had... "Breaking News," or something like that. Then the first thing you do is you turn to CNN... CNN has the most up to date coverage of whatever."*

- Participants across all groups said A(H1N1) came from Mexico.

#### Theme 2: Information seeking patterns for A(H1N1)

Theme 2 addresses the information seeking patterns of participants beyond their first exposure to messages on A(H1N1).

- Many participants said that they did **not actively look** for more information about A(H1N1) after they first heard about the outbreak. The main reason for this was that participants felt that enough information about the flu was being pushed at them and therefore they did not have to actively seek it.

*"I didn't feel a need to actively look. I felt like I was being kind of bombarded with it."*

- Among those who after their initial exposure to news about the outbreak, sought more information, the majority said they turned to the **Internet**. Some of the websites mentioned by the participants include Click to Connect (a Dana-Farber/Harvard Cancer Center's low-literacy health webportal for a research project), Google, Healthnet, Wikipedia, Yahoo and the Centers for Disease Control and Prevention.

*"I like the Internet, I mean, more so because... click and find out."*

- Some participants from the urban focus groups (both English and Spanish) mentioned turning to the **newspapers** for more information.
- Participants who actively sought information looked for information on how to **protect themselves** against A(H1N1) and also **how to take care of individuals** with the flu.

### **Theme 3: Trusted sources for A(H1N1) information**

Theme 3 identifies the most trusted communication sources for information about A(H1N1) as voiced by the focus group participants.

- The majority of respondents felt that **doctors** would be able to give the most reliable and credible information about A(H1N1).

*"It seems like a medical physician would have the updates on everything."  
"Your doctor. Yeah. That's who you'd talk to, definitely."*

- As noted in Theme 7, a portion of participants seemed confused by the multiple number of doctors reporting information on local television stations. They voiced a concern over what information to trust.

*"But it was like each station had like their own little doctor expert. I don't know if we have a Surgeon General, because it used to be like, if there was a real emergency, the Surgeon General would come on and tell you, 'You have to watch out for this stuff.' But it was like Channel 7 had this person, 4 had that person, and 5 had another person. You didn't know who to believe, you know, so it was like who do you trust?"*

- While most participants first heard about A(H1N1) from television, they did not rate it as a highly trusted source.
  - However when they were asked to identify the most trustworthy television news channel, Spanish-speaking participants identified **Univision** and urban English-speaking participants identified **CNN** as the most trusted TV news source.
- Only participants from the Spanish-speaking focus group cited local newspapers as a trusted source of information. Though other groups did mention relying on newspapers for flu information.

*"Yes because that is the news from here and what is close to us and that is what one is interested in knowing."*

- Participants' trust of information on the **Internet depended on specific sites**. Some of the trusted sites mentioned were WebMD, Wikipedia, Yahoo and Newswire.

*"I, trust Wikipedia a lot because when they put something there it has already been researched. My children use it to do homework. And we find information. And it is easier than reading it in a book. I like it because of the ease in finding information."*

- Some participants said they were cautious about information that was on the Internet

*"I know you have bloggers and stuff on the computer. They can easily slap some information in there and you've really got some stuff that is not correct...so I would have to go to my doctor for the truth."*

#### **Theme 4: Knowledge about A(H1N1)**

Theme 4 focuses on participants' knowledge about A(H1N1) including transmission, precautions, symptoms and treatments.

##### **Origin:**

- Some participants felt that A(H1N1) started as the regular flu and **progressed into something more serious.**
- A few participants were worried that the **virus would mutate.**

*"People seem to think that it's all gone away. It hasn't. It's still there, it's still alive it's still out there in the atmosphere, and, when the conditions get right for it to start reproducing and be happy again, it'll be back...And that will be in the fall."*

- Some participants believed that it came from all the "**bacteria around pigs**" and a few believed that it came from pigs itself.

*"...the pigs that is where it comes from or in other words, they were blaming the illness on a town that has a pig farm in Mexico...."*

##### **Transmission:**

- Many participants said that the virus and could be **transmitted by contact and that it was airborne.** Participants did not mention what the thought to be transmission is: via respiratory droplets.

##### **Precautions:**

- "**Wash your hands**" was the message that resonated with majority of the participants. A few suggested using hotter water.
- Additionally, some participants said they heard that **hand sanitizers** were recommended.
- A lot of participants were **confused about whether to wear a mask or not.** Some said that they heard that it worked while others had heard information to the contrary.
- Participants were exposed to various precautionary **measures around touching** – some specifically said: avoid shaking hands, don't touch tissues other people have used, avoid kissing, and to wipe down your grocery cart before you touch it.
- Participants heard several **precautions specifically for children** - if the child is sick, or has a sniffle/sneeze/runny nose (or any flu-like symptoms), they should stay home from school. Some also heard that they should keep kids away from other sick kids.
- Other precautions discussed were **sneezing into your sleeves**, following common hygiene practices and following basic flu precautions.

##### **Who it Affects:**

- Participants heard that it affected the **elderly and children.** However, they were unclear about the age parameters for at-risk children.

*“You don’t hear about too many older people gettin’ it. It’s more like the teenagers and the young kids that’s getting’ it.”*

- A few said they heard that it affected individuals with a **low immune system**.

**Symptoms:**

- Majority of participants referred to **“flu-like” symptoms**.
- Some symptoms specifically mentioned by participants include: Coughing, sneezing, diarrhea, head cold, chest cold, vomiting, lightheadedness, weakness, temperature/fever, feels like you have allergies, body aches, sweating, headaches and pain.

**Vaccine/Treatments:**

- Majority of the respondents had heard that there was **no vaccine** as yet available for A(H1N1).
- Participants were **unsure whether regular flu vaccines** would be effective against A(H1N1).

**Theme 5: Behavior change due to media coverage of A(H1N1)**

Theme 5 focuses on behavior changes that participants made following news of the outbreak of A(H1N1).

- Many participants said they **washed their hands more** frequently since the outbreak.
- A few participants said they had **cancelled a trip** as a result of the A(H1N1)/ Flu.
- Some participants said they **stopped “offering a sign of peace”** in church.

*“For one thing, in our church, always, at one point in the Mass... everyone gives a sign of peace. Everyone turns to the person and shakes hands. And they shake hands, and they shake hands. At one point, the priest said, ‘The flu is bad, don’t shake hands. Just bow or say ‘Good wishes,’ or something of that nature.’ For that week, everyone did.”*

- A few participants said they **stopped eating pork**.
- Participants in the Spanish-speaking focus group brought up their **concern about the safety of following certain recommended behaviors** such as keeping your child home if they are sick or have flu-like symptoms. They questioned whether or not this recommendation is “safe” considering that they may have a number of other children within the home that could be put at risk by this recommendation.

*“...you go and isolate yourself with the five children you have. How many are going to get sick? It will be worse.”*

**Theme 6: Risk perceptions of A(H1N1)**

Theme 6 summarizes the participants perceptions about their risk of contracting A(H1N1).

- Many of the participants **did not express any worry** about contracting A(H1N1). The reasons were:
  - Participants felt that it was an **issue in Mexico**. They said that they did not feel that it affected them directly.
  - Some participants felt that they were not at risk for it. They said they had heard that it **affected only the young and the elderly**.
  - A few felt that A(H1N1) was all media hype.

*“Sometime one cannot pay a lot of attention to the news because there is always something.”*

**Theme 7: Perceptions of media coverage and effect on attention to A(H1N1) information**

Theme 7 focuses on the participants’ perceptions of the media coverage of A(H1N1) and the subsequent impact on their attention to the topic.

- As echoed above, a few felt that A(H1N1) was all **media hype**.
- Some participants felt that they had reached a point of “**information overload**” and that it was up to the audience to sort through all of the information. Many participants did not feel there was full, accurate, or clear reporting of A(H1N1).

*“...so I think there’s more energy going into kind of deciphering about what you’re actually going to believe, and you know, what is the truth of the matter. That’s where my energy went.”*

- A few said they found themselves **tuning out the messages** after they found that the media was constantly covering the issue.
- Many participants felt **less concerned** about A(H1N1) as **time passed**.
- Several participants voiced that they would like **one authoritative voice** to convey whatever message needs to be passed along to the public.

*“...there wasn’t one,... authoritative person. I mean you even had the Vice President say, ‘I’m not gettin’ on any...you know, on a plane or anything’. Other people were sayin’, ‘Oh, it’s safe. I’m not gonna worry about it’...so then you’re like, well, who am I supposed to believe?”*

- Related to the desire to have one authoritative voice, **the role of multiple doctors** relating information on television also seemed to confuse a portion of the participants.

*“But it was like each station had like their own little doctor expert. I don’t know if we have a Surgeon General, because it used to be like, if there was a real emergency, the Surgeon General would come on and tell you, ‘You have to watch out for this stuff.’ But it was like Channel 7 had this person, 4 had that person, and 5 had another person. You didn’t know who to believe, you know, so it was like who do you trust?”*

- **Reactions/perceptions to virus name and name change:**
  - Many participants said they **did not like the name**, “Swine Flu” as it was “ugly” and had negative connotations.

*“The swine was really off-putting and disgusting, as a name.”*

- Participants in the Spanish-speaking focus group said the **re-naming flu as A(H1N1) made no difference** in their perceptions of the virus.

*“To me, I don’t believe that it makes a difference if they say H1 or swine. It is the same because what the people understand better is ‘oh people are dying from this illness.’ There they pay attention. You can give it 20,000 names. ‘oh people are dying’..”*

### **Theme 8: Future outbreaks and methods of receiving information**

Theme 8 focuses on what type of information participants would want to receive in the event of a future outbreak and what channels they would like to receive this information from.

- How to **protect oneself from a future outbreak** of A(H1N1) was the biggest concern for a majority of participants.
- Some participants also wanted to get more information on how they should **take care of a sick person**.
- Participants were concerned about receiving information about future outbreaks in a **timely manner**. Most of them said they would prefer to have information **mailed to them as well as posted in hospitals and clinics**.
- Some participants said they would like **healthcare professionals** including doctors and counselors to provide them with the information. Healthcare professionals were also highly trusted sources of information for a majority of respondents.
- When prompted specifically about their trust of government agencies, most participants indicated that they **trust government sources** such as the CDC and other “national defense” agencies to provide them with information about future outbreaks. Some felt that state health departments are a good source of information but others were **unsure about how to approach/access the health department for information**.
- Participants highlighted the importance of wanting preparedness information to be presented in a **dynamic manner** but at the same time for it not to be too sensational.

*“And sometimes the – pardon me – the CDC can be very dry in their presentation of the facts, to the point of, you know, you feel like you’re sitting in a lecture hall. You know? So, there’s... there’s that, obviously that line where I think you’ll get more people interested in hearing what to do.”*

*“I grew up in a hurricane world. I mean, I grew up in the South and in Latin America, and ... it’s a lot more fun and interesting to watch the weather guy, talkin’ about the hurricane with his mask and everything than goin’ to the National Hurricane Center, and they have a great Website; it gives you the same information, but it’s not as, you know... not as cool. You know? It’s not 3D, it’s not, you know, in color.”*

*“You know, if I see something on the TV, I’m probably not gonna spend my time paying attention, I mean I look at the sensation behind it and all that.”*

### **Theme 9: General emergency preparedness behaviors**

Theme 9 focuses on general emergency preparedness of participants in the face of any hazard, how they have prepared for it and what they plan to do.

- Majority of participants have **taken some action** to be prepared for emergencies. Most of them keep items such as flashlights, candles, food, water, batteries, and radios (some mentioned hand-cranked specifically) on hand.

*“Well, we have lots of food because we buy things when they’re cheap and freeze ‘em, that type of thing? And we have a good amount of canned goods around all the time, just generally. We have, uh, a supply of water that we use in case the electricity goes out, because we have a, uh a well with an electric pump. Um, and we’ve got flashlights, of course, you know, in case of the electricity, and candles...”*

- Some participants also kept **emergency kits/** bags, fire extinguishers, generators, glowsticks and extra blankets.
- Many participants in the **Spanish-speaking** focus group said that they **do not do anything to prepare for emergencies.**

*“One prepares oneself according to one’s ability because there are times that you don’t have money to prepare yourself for an eventuality. You grab and buy the things most necessary.”*

- Participants in the **Spanish-speaking** focus group said they felt protected by and **rely on God** in emergency situations.

*“Well because I always think that there is a special protection over me that comes from the father (God).”*

### **Theme 10: Regional and ethnic differences in responses to emergency preparedness issues**

Theme 10 highlights important regional and ethnic differences in participant responses to key questions.

- Local TV news was unilaterally the primary source of A(H1N1) information for all groups. However, there were specific regional and ethnic differences in channels used to seek A(H1N1) information that are of note.
  - Rural participants were more likely to cite hearing about A(H1N1) on the radio as well as relying on the radio for information compared to their urban counterparts. Urban participants were more likely to report hearing about A(H1N1) from the cable television channel CNN than their rural peers.
  - Spanish-speaking participants were more likely to report having heard about the flu and desiring additional information via Spanish television channels Univision and Telemundo. They were also more likely to cite reliance on local newspapers for information. English-speaking participants were more likely to rely on CNN as a trusted news source.
- There were ethnic differences in overall attitudes towards emergency preparedness.
  - Spanish-speaking participants were more likely not to have taken any emergency preparedness measures than English-speaking participants.

### **Discussion and Dissemination**

The goal of the focus groups was to develop a better understanding of PHEP constructs that were important to our particular target audience. As with any qualitative research, the conclusions from our focus groups cannot be generalized to those outside of the discussions. However, the information obtained from the focus groups will assist in the development of a quantitative survey questionnaire. The project team will then conduct a probability-based sample survey with an oversampling of minorities and low SES groups to more systematically explore themes that emerged from the focus groups. The survey questionnaire will explore the following themes/findings that emerged from the focus group discussions:

#### **Primary sources and general exposure to A(H1N1) information**

- Local television news was reported as the primary source of flu information for participants. Followed by local newspapers. The survey questionnaire will attempt to elicit primary characteristics of local news which draw audience attention to A(H1N1) information (i.e. immediacy, locality). The paradox of television as an untrustworthy source

yet a heavily relied on source of information will also be examined. For example, are there specific characteristics of local television news that outweigh citizens' concern about trust?

#### Information seeking patterns for A(H1N1)

- A majority of participants did not actively seek out information regarding A(H1N1), but of those that did they went to the Internet for more information. Questions to be explored include: What type of Internet sites draw the majority of information seekers? What are the primary characteristics of these sites that draw seekers attention? Do seekers find the information available hard or easy to understand?

#### Trusted sources for A(H1N1) information

- The most trusted source for A(H1N1) information reported by participants was healthcare professionals including doctors and nurses. Questions to be explored include: If an individual's healthcare provider is unable to provide immediate information regarding A(H1N1) or another health emergency, what source would people trust as a proxy: Health department? Federal government? These institutions were only discussed by participants after they were probed to specifically speak about them, but when they were discussed participants did convey trust in them. Why aren't government agencies thought of immediately as a trusted source for emergency preparedness information?
- Again, the paradox of television as an untrustworthy source yet used a primary source of information was discussed. This issue will be further explored in the survey questionnaire.

#### Knowledge about A(H1N1)

- There were some inaccuracies cited by a few participants but overwhelmingly participants knew of the origin, transmission, precautions, symptoms and treatments of A(H1N1). This speaks well of the information that was communicated to citizens during the outbreak. There was desire to know more specific surrounding exactly what age groups were most at risk since participants could only recall that the virus affected the young and old.
- Questions pertaining to recall of information will be explored in the survey questionnaire.

#### Behavior change due to media coverage of A(H1N1)

- Participants reported desirable behavior change with a majority citing an increase in hand washing.
- Questions pertaining to reasons behind exact behavior changes will be explored, such as link between recommended behavior change and individuals' capacity to act on that change. For example, hand washing is a low cost, low effort recommended change. Some emergencies situations require much more effort such as evacuation from a hurricane or quarantine. These differences need further examination.

#### Risk perceptions of A(H1N1)

- Participants reported low risk to A(H1N1). The focus group data is limited in that the research team cannot adequately assess an individual participant's flu risk to determine whether or not their perceptions of risk are appropriate. A survey which included questions about medical history would better allow the research team to compare actual risk with perceived risk to assess the success of targeted communication efforts. Similar to seasonal flu communication efforts, at-risk populations should receive appropriately tailored information regarding the importance of vaccination and precautionary measures; while at the same time, the general population should receive information that does not incite panic or an overestimation of risk.

### Perceptions of media coverage and affect on attention to A(H1N1) information

- Many participants discussed “information overload” and voiced concern over “media hype”. The survey questionnaire will focus on establishing an appropriate level of information delivery to citizens and assess the potential deleterious effects that over saturation of information may have on emergency preparedness behaviors.

### Preferred content and channels for future information on A(H1N1)

- Participants were specifically interested in knowing more about how to protect themselves and other from a future outbreak. This information is important to consider since it would involve communicating risk **before** a future outbreak occurs. Participants also wanted directed steps to take in order to care for someone who may be sick.
- Participants highlighted the importance of recognizing the line between sensationalism and reporting facts in a dynamic manner that attracts attention. Exploration into how to best to achieve that balance will be included in future research.
- A new channel emerged from the discussions when participants were asked specifically about what and how they would like future information delivered to them. Participants reported that they would like to receive information via mail. This insight may help to explain the television paradox in that participants do not trust information via the television but perhaps local cable news was the only source/channel providing them with information. Differences between television and mail as information delivery sources will be explored in the survey questionnaire.

### General emergency preparedness behaviors

- Most participants have taken the recommended emergency preparedness measures. Additional investigation into the barriers to preparedness and individuals’ capacity to act on recommendations will be addressed in the survey questionnaire.

### Regional and ethnic differences in responses to emergency preparedness issues

- There were urban and rural differences in information sources with more rural residents citing a reliance on radio for communication.
- There were ethnic differences in information sources with many Hispanic participants citing a reliance on ethnic media such as newspapers and television channels for information.
- There were ethnic differences in general attitudes towards emergency preparedness with Hispanic participants voicing a fatalistic attitude in that they felt that there was little they could do to prepare themselves in case of an emergency and that if a situation were to occur they would rely on God’s help.
- The survey questionnaire will collect specific socio-demographic information as to better delineate specific attitudes and responses by subpopulation. For example, is the fatalistic attitude expressed by some Hispanic participants attributed to a particular faith or country of origin?
- In addition, we will explore differences between higher and lower SES groups on various PHEP related communications with a focus on A(H1N1) in the survey.

## References

1. Andrulis, N. J. (2007). Preparing Racially And Ethnically Diverse Communities For Public Health Emergencies. *26* (5), 1269-1279.
2. Blendon, J. B.-D. (2007). The Public's Preparedness for Hurricanes in Four Affected Regions . *Public Health Reports* , 122, 167-176.
3. Brodie, M. W. (2006). Experiences of Hurricane Katrina Evacuees in Houston Shelters: Implications for Future Planning. *American Journal of Public Health* , 96 (8), 1402-1408.
4. Eisenman, D. C. (2007). Disaster Planning and Risk Communication With Vulnerable Communities: Lessons From Hurricane Katrina. *American Journal of Public Health* , 97 (S1), S109-S115.
5. Fernandez, L. B. (2002). Frail elderly as disaster victims: Emergency management strategies. *Prehospital Disaster Management* , 17 (2), 67-74.
6. Institute of Medicine. (2008). *The Future of the Public's health in the 21st century*. Washington DC: The National Academic Press.
7. Kontos, E. Z., Bennett, G. G., & Viswanath, K. (2007). Barriers and facilitators to home computer and Internet use among urban novice computer users of low socioeconomic position. *Journal of Medical Internet Research*, 9(4).
8. Kruger, R. (1998). *The focus group guidebook*.
9. Lurie N, W. J. (2006). Public health emergency preparedness: evolution or revolution? *Health Affairs* , 25 (5), 953-954.
10. Meredith, L. R. (2008). Analysis of Risk Communication Strategies and Approaches with At- Risk Populations to Enhance Emergency Preparedness, Response, and Recovery. Rand Publication. Rand.
11. Morgan DL. *The Focus Group Guidebook*. Thousand Oaks, CA: Sage Publication; 1998.
12. Nelson, C. (2007). Assessing Public Health Emergency Preparedness: Concepts, Tools, and Challenges. *Annual Review of Public Health* , 28, 1-18.
13. Nelson, C. (2007). Conceptualizing and Defining Public Health Emergency Preparedness. *American Journal of Public Health* , 97 (S1), s9-s12.
14. Perry, R. M. (1986). *Minority Citizens in Disasters*. Athens, Georgia: Georgia University Press.
15. R.W., P. (1979). Evacuation decision-making in natural disasters. *Journal of Mass Emergencies and Disasters* , 4, 25-38.
16. Stewart, D. S. (2007). *Focus groups: Theory and practice* (second edition ed.). Sage Publications.
17. Taylor-Clark K., Koh, H., Viswanath, K. Perceptions of environmental health risks and communication barriers among low-SEP and racial/ethnic minority communities. *Journal of Healthcare for the Poor and Underserved*. 2007;18(4 Suppl):165-83.
18. Taylor-Clark K., Viswanath K., Blendon R. (In Press). Communication Inequalities during Public Health Disasters: Katrina's Wake. *Health Communication*.
19. Tierney, K. L. (2001). *Facing the unexpected: Disaster preparedness and response in the United States* (4th edition ed.). Washington , D.C.: Joseph Henry Press.
20. Viswanath, K. (2006). Public communications and its role in reducing and eliminating health disparities. In G. E. Thomson, F. Mitchell & M. B. Williams (Eds.), *Examining the Health Disparities Research Plan of the National Institutes of Health: Unfinished Business* (pp. 215-253). Washington, D.C.: Institute of Medicine.
21. Viswanath, K., Ramanadhan, S. R., & Kontos, E. Z. (2007). Mass Media and Population Health: A Macrosocial View. In S. Galea (Ed.), *Macrosocial Determinants of Population Health* (pp. 275-294): Springer.
22. Wingate, M. P. (2007). Identifying and protecting vulnerable populations in public health emergencies: Addressing Gaps in Education and Training. *Public Health Reports* , 122 (3), 422-426.

# ***We want to hear from you!***

Researchers from the Harvard School of Public Health in collaboration with the Centers for Disease Control and Prevention (CDC) are interested in learning about how and where people get information in times of public health emergencies (For example, the Swine Flu).

To be considered for participation you must be:

- Between 25-74 years old
- Live in Salisbury, Massachusetts

What happens if you are eligible and decide to participate?

- You will take part in a 2-hour focus group discussion
- You will be in a group with 8-10 other participants
- You will be paid \$35 in appreciation for your time
- We will provide you with dinner

**WHEN:**

Wednesday, July 1  
5:30pm - 7:30pm

**WHERE:**

Hilton Senior Center  
47 Lafayette Road

*Please call Sara Minsky at 617-582-7735 if you are interested!*

## Appendix II: Focus Group Script

### Focus Group Script Introduction

*Hi and thanks for coming to speak with us. The Harvard School of Public Health in collaboration with the Centers for Disease Control and Prevention (CDC), is investigating how and where people get information in times of public health emergencies.*

*I want to be sure that you understand that being part of this group is voluntary. You may leave at any time you wish. There will be no penalty or punishment for doing so.*

*I'd like to start by introducing myself. I'm XXX and this is YYY. I'll be leading the group and YYY will be assisting with recording and note taking during the discussion. As was mentioned when you first heard about this discussion, we will audiotape this session. We are doing this because we want to make sure that we have good notes on everything that you say. Your comments are really important to us.*

*Everything that you say is private and will not be shared with anyone other than our research staff. Please remember that information shared during these discussions is confidential and should not leave this room.*

*I want to encourage you to speak openly about your ideas. There are no right or wrong answers. But there are a lot of opinions, and I'd like to hear from all of you. Please feel free to speak up even if you disagree with some one else here. The goal of this group meeting is not to reach agreement on anything, but to hear as many different views as possible. Also, please speak one at a time – everything that you all have to say is important, and we want to be sure that everyone is heard.*

*We have a lot to cover in the next 2 hours, so for the sake of time, I may have to jump ahead to the next topic, but please stop me if you want to add anything.*

*Also, so that we can give each other our full attention, I ask that everyone please turn off their cell phones and pagers. Now we'd like everyone to get to know each other a little bit.*

#### **Icebreaker:**

*Let's go around the room and introduce ourselves – please tell me your first name and how long you have lived in the area.*

## FLU OUTBREAK

*The following questions refer to the recent outbreak of the swine flu/H1N1.*

- Where did you first hear about the swine flu/H1N1?
  - When was this?
  - How did you feel about this?
- Since then, have you actively looked for more information about the swine flu/H1N1? If so, where? (USE PROBE LIST)
- Where else have you been exposed to messages/stories/news/information about the swine flu/H1N1? (USE PROBE LIST)
- We are interested in hearing about what you heard about the swine flu/H1N1. What have you heard about:
  - The swine flu in general (what it is, how serious/dangerous it is, where it came from)
  - How the swine flu is transmitted
  - How to protect yourself from/prevent catching the swine flu
  - Swine flu vaccinations
- What sources of information have you trusted most in regards to information about the swine flu? Why?
- Did you change any of your normal behaviors or routines (ex: stop eating pork, not sending children to school) as a result of hearing about the swine flu/H1N1)?
- How have your thinking or feelings about the swine flu changed from when you first heard about it until now? Do you feel that it is more or less of a danger to you or your family?
- How do you think you or others would have reacted if this flu was called H1N1 from the beginning?
  - Do you think media coverage would have been any different?

*This next set of questions refer to a future scenario:*

- Suppose in the future there was a really bad outbreak of the flu in your area that put people's lives at risk. How do you think you'd find out about the outbreak? (SEE PROBE SHEET)
- What kind of information would you want before such an outbreak hit your area? How about during or after the outbreak?
- Where would you search for more information about preparing/protecting yourself from the flu? (SEE PROBE SHEET)
- How would you prefer to receive information about a flu outbreak? Why? From whom would you like to receive this information (doctor, government agency, newscaster, etc).
  - Would you consult your state or local health department at all?

- What sources of information about a flu outbreak would you trust most? Why?
  - Would you trust information provided by your state or local health department?
- Who would you want to communicate with concerning this outbreak? How would you contact them? When? Why?
- Do you have friends or family you can trust in an emergency like a flu outbreak?
- Is there any information that you would want to actively avoid hearing about concerning a flu outbreak? What? Why?

### **EMERGENCY PREPAREDNESS**

- Experts recommend you should be prepared for emergencies. Do you know what to do in case of an emergency? Do you feel prepared?
  - How did you find out what to do?
  - Do you know where to go to obtain this kind of “preparedness” information?
- Do you or your family do anything to prepare for emergencies at this time (store flashlights, batteries, food, etc?) What do you do? Why?
- Is there anything that we haven’t discussed in regards to emergency preparedness that you feel is important?

### **EMERGENCY COMMUNICATIONS**

*(IF THERE IS TIME)*

*We are interested in learning about is how people communicate in public health emergency situations. These include natural disasters such as hurricanes, floods or earthquakes or human-made disasters such as fires, chemical spills or accidents. We are interested in how you hear about such things, and how you communicate with other people about it. This set of questions will address this topic.*

Have you ever been in any other public or community emergency situation? (natural disaster, weather emergency, chemical spill, etc?)

#### **IF YES:**

- What type of situation was it? Where/When/How many people were involved?
- Did you receive any advance warning? How? (TV, radio, etc. – SEE PROBE SHEET)
  - Did you actively look for more information on how to prepare for the situation? How? Where did you look? What types of information did you look for?
- Did you actively look for information during or after the emergency? How? Where did you look? What types of information did you look for?
- Did you have any difficulty getting information (before, during, or after the emergency)?

- Did you get information from your state or local health department at anytime during the emergency? How did you feel about the information you got from them?
- Was the information you received about the situation easy to understand/did it make sense to you? (NOTE: probe for comprehension of the information and also that it seemed reasonable to them)
- Did the information you received help you decide what to do?
  - Were you able to use the information to act, say evacuate or take action to protect yourself or your family?
- How did you use/act on any of the information that you received about the situation? How so?
- Were there any suggested actions you did not follow? Why didn't you follow them?
- How would you prefer to receive emergency communications? (SEE PROBE SHEET)
- When it comes to emergencies, a lot of rumors float around and people talk a lot. Do you have some people or communications methods/media that you trust more than others for reliable information? Who/why?
- Who did you communicate with during this time (friends/family/co-workers/emergency relief workers)? When? How?
- Is there any information any information that you actively avoided hearing, or wished you hadn't heard during this emergency? What was it? Why?
  - Are there any information sources that you actively avoided? Which? Why?
- Would you handle anything differently in an emergency situation now?

**PROBE SHEET  
COMMUNICATIONS METHODS/CHANNELS**

**TV** – Which stations, specific programs – and why?

**Radio** – Which stations, specific programs – and why?

**Internet** – Any specific sites - why?

**Newspaper** – Which and why?

**Magazines** – Which and why?

**Books** – Which and why?

**Brochures** – From where? Why?

**Video's/DVD** – Which, from where, why?

**Cell phone/PDA** – how (internet/text/etc? – from whom?)

**Friends/Family** – how would you contact them?

**Doctors/Hospitals** – how would you contact them?

**Employer** – Who would you contact there? How would you contact them?

**Schools** – Who would you contact there? How would you contact them?

**Government Agency** – How would you contact them? Who would you contact?

**Groups/Associations?** (i.e. Red Cross, Medical Reserve Corp)