

Ability and Willingness to Report to Work During a Disaster

A report on a survey of home health care employees

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** Emergency Response System

Background - Agency

- Visiting Nurse Service of New York
 - Home health care services to patients in the five boroughs of NYC, Nassau and Westchester County
 - ◆ 2006: avg daily census – 26,000 patients
 - ◆ 2006: 2.2 million visits
 - 3,500 clinicians
 - 2,100 office-based staff
 - 16 different facilities throughout the city

Background - Study

◆ Pandemic Flu Planning

- Staffing concerns

◆ Columbia University Study – “Barriers to Healthcare Workers Ability and Willingness to Report to Duty During Catastrophic Disasters” (Journal of Urban Health 2005)

◆ VNSNY Survey Design & Implementation

- Survey designed, pre-tested and modified in May 2006
- June 15, 2006: email link sent to VNSNY staff re: web-based survey
- Clinical staff given paper survey – data entered manually
- Several reminders sent to staff during 2006.
- HHA survey data excluded in the results – separate report in 2007
- Analysis based on 1523 Respondents.

Respondent Profile (N=1523)

Demographic Variables	Number	Percentage
<u>Age</u>		
35 and under	361	23.6
36-45	387	25.3
46-55	503	32.9
55 and over	278	28.2
<u>Gender</u>		
Male	299	19.6
Female	1230	80.4
<u>Have Spouse/Partner?</u>		
Yes	1014	66.3
No	515	33.7

Employment Variables	Number	Percentage
Employment Status		
Full time staff	1402	91.7
<u>Region (work)</u>		
Manhattan	814	53.2
Brooklyn	142	9.3
Bronx	240	15.7
Queens	252	16.6
Staten Island, Westchester, Nassau	79	4.2
<u>Type of Work</u>		
Patient Care	684	44.7
Non-Patient	845	55.3
Geographic variables		
<u>Region (Residence)</u>		
Manhattan	215	14.9
Brooklyn	261	18.1
Bronx	219	15.2
Queens	317	22.0
Staten Island, Westchester, Nassau	289	20.0
New Jersey	143	9.9
<u>Work/Home</u>		
Lives & works in same region (stayer)	881	57.8
Lives & work in different regions (mover)	642	42.2

Caregiving Variables	Number	Percentage
<u>Minor Children?</u>		
Yes	595	38.9
No	934	61.1
<u>Responsible for Elders?</u>		
Yes	283	18.5
No	1246	81.5
<u>Sandwich (Both child & elder obligations)</u>		
Yes	122	8.0
No	1407	92.0
<u>Care plan in place for Children in event of emergency?</u>		
Yes	439	28.7
No	222	14.5
NA	868	56.8
<u>Care plan in place for Elder in case of emergency?</u>		
Yes	194	12.7
No	164	10.7
NA	1171	76.6

Ability and willingness to report to work: First Approach

Respondent were asked to rate their ability and willingness to report to work in the event of six different disaster/emergency scenarios:

- ◆ **Snowstorm where you live**
- ◆ **Outbreak of Smallpox in Queens**
- ◆ **Sarin gas attack in Penn Station**
- ◆ **Fire in Staten Island**
- ◆ **Explosion at Grand Central Station**
- ◆ **Avian Flu in NYC**

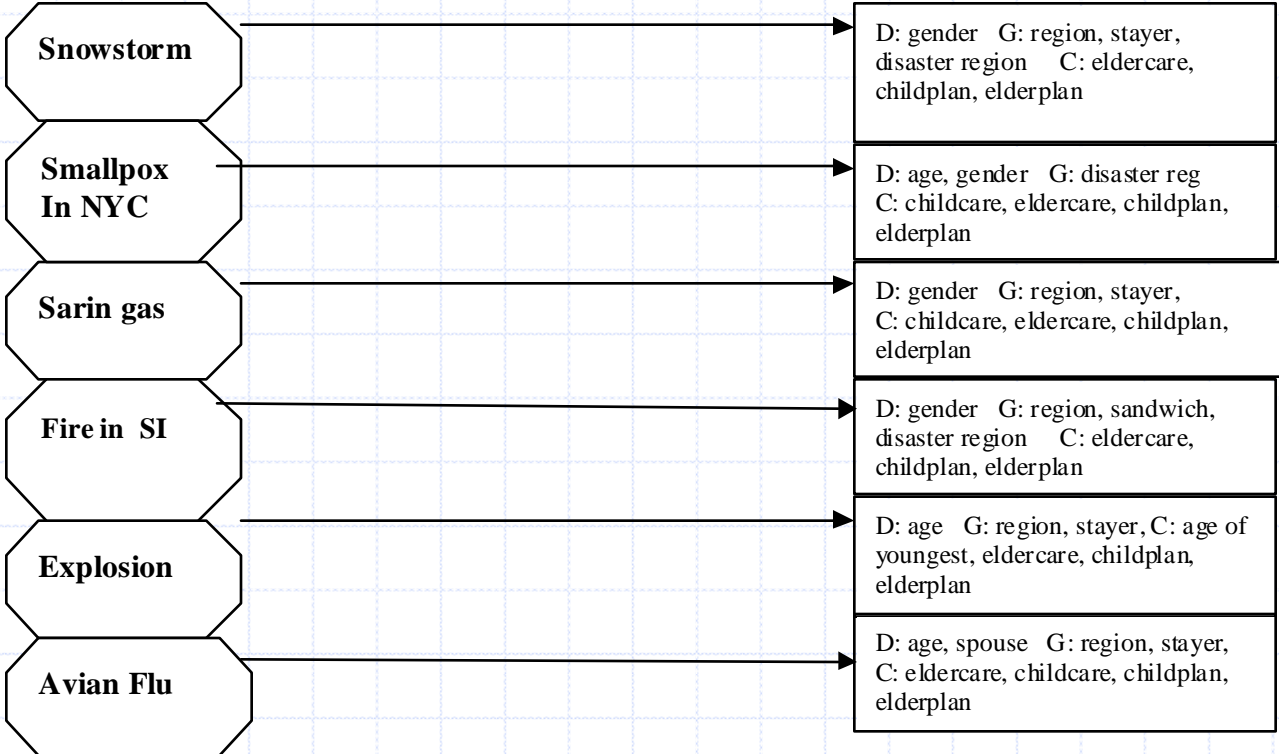
Comparison of Willingness and Ability to Report to work under six scenarios (ranked)

Percent most willing (ranked)		Percent most able (ranked)		Simple Kappa	
Fire in SI	(75.6)	Fire in SI	(70.6)	Fire in SI	.61*
Smallpox Qns	(66.6)	Smallpox Qns	(67.3)	Smallpox Qns	.59*
Explosion-GSC	(61.7)	Explosion-GSC	(59.8)	Explosion-GSC	.66*
Snowstorm	(59.8)	Sarin Gas Pa St	(53.0)	Snowstorm	.60*
Sarin Gas-Pa St	(52.3)	Avian Flu- NYC	(45.1)	Sarin Gas Pa St	.62*
Avian Flu-NYC	(41.3)	Snowstorm	(43.3)	Avian Flu- NYC	.60*

* statistically significant at $p = <.001$

**MODEL: FACTORS
PREDICTING WILLINGNESS
BY DISASTER TYPE**

**Statistically
Significant
Associations**



C = Caregiving D = Demographic G = Geographic

Factors Associated with Willingness and Ability: Approach One

- Employment Factors not significantly associated with Willingness/Ability in any scenario
- Commonality across disaster scenarios: caregiving, geographic variables (I.e. disaster region, home region, "stayer") and some demographic variables

A Second Approach

Do Factors Affecting Willingness/Ability
Vary When Disaster is characterized as:

Naturally Occurring Health Emergency

Or

Terrorist, Nuclear, or Chemical Event

Factors Affecting Ability and Willingness During a Naturally Occurring Health Emergency

<u>Affects Ability</u>	<u>Personal Safety</u>	<u>Elder Care</u>	<u>Child Care</u>	<u>Transportation</u>	<u>Pet Care</u>
Mean score (1-5)	3.3	1.8*/3.3**	2.4*/3.8**	2.9	1.7
<u>Affects Willingness</u>					
Mean score (1-5)	3.3	1.8*/3.2**	2.4*/3.7**	2.8	1.7

* All respondents

** Those with children/ elders

Factors Affecting Ability and Willingness During a Terrorist, Nuclear or Chemical Event

<u>Affects Ability</u>	<u>Personal Safety</u>	<u>Elder Care</u>	<u>Child Care</u>	<u>Transportation</u>	<u>Pet Care</u>
Mean score (1-5)	3.9	1.0*/3.6**	2.6*/4.2**	3.4	1.8
<u>Affects Willingness</u>					
Mean score (1-5)	3.9	2.0*/3.5**	2.6*/4.1**	3.3	1.8

* All respondents

** Those with children/ elders

Factors Associated with Willingness and Ability: Approach Two

- Little difference between willingness and ability
- For those with dependent children or elders, caring responsibilities trump personal safety in either type of disaster
- Transportation important consideration in terrorist, chemical or nuclear event

Discussion of Key Findings

- ◆ ***Ability and willingness are interchangeable:***
There is no significant difference between respondents willingness and ability to report to work regardless of the way the disasters are presented: either in the six scenarios or simply categorizing the disaster as naturally- occurring or terrorist/nuclear/chemical.

Discussion Continued...

◆ *Snowstorms are different.*

This may be due to the fact that, compared to the other scenarios, VNSNY employees have actual experience with snowstorms and perhaps have a better appreciation of circumstances that may hamper their ability to report to work, though they may be willing to do so. Snowstorms, then, may be the best data for realistic planning.

Discussion Continued...

- ◆ ***Caregivers have special needs:*** Caregivers are less willing to report to work under any type of disaster, and childcare has an even stronger impact than eldercare. Compared to the other respondents, caregiving trumps personal safety as the most important factor influencing willingness.
- ◆ However, there is strong evidence that ***having a plan in place*** in the event of an emergency increases an individual's willingness to report to work under many scenarios. Here too, there are opportunities to help develop care plans for VNSNY employees with caregiving obligations.

Discussion Continued...

- ◆ ***Where you live and work matters:***
There are provocative findings that region of residence, region of work and whether a respondent lives in the region in which a disaster occurs are all factors in willingness to report to work. This may be related to concern over transportation or fear of leaving their homes unattended or other reasons.

Limitations

- ◆ There is evidence that the respondents do not reflect the VNSNY population on type of position and residence.
- ◆ Though transportation issues are relevant in any disaster or emergency, respondents were not asked to indicate how they get to work (by mass transit, carpool, individual car, etc). We cannot adequately explore the relationships without additional data on transportation, commuting and other travel issues.
- ◆ The survey questions are subjective in nature. There is really no way to predict whether respondents will act as they say they will.

Application of Findings

- ❁ "Work in Region of Residence"
 - Redeployment of clinical staff
 - Telework as a business continuity option
- ❁ "Have a Plan in Place" & Caregiver Concerns
 - Employee preparedness initiatives