Using Short-term Surveys to Improve Communications during a Biological Threat

Catherine DesRoches

Harvard School of Public Health
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<th>1. REPORT DATE</th>
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Standard Form 298 (Rev. 8-98)  
Prescribed by ANSI Std Z39-18
What Do Public Health Officials Need to Know about the Public?

- How concerned are they about the problem?
- How do they believe the disease is transmitted?
- Are they familiar with any recommended precautions and are they taking them?
- How many people do they believe have the disease and how many have died?
- Do they think there is a vaccine or a treatment?
- Where would they go for information and care?
- Do they believe certain groups are discriminated against in treatment?
- Who do they trust as a spokesperson?
- Do they support public policy measures (i.e. quarantine, vaccination policy)
How Concerned Is the Public about the Problem?

Gauging the level of public concern will be important to public health officials because:

- It provides a general measure of salience.
- A more concerned public is more likely to pay attention to public health officials than a disinterested one.
Public Concern about a Terrorist Attack Using Smallpox

Percent of the public saying they were very or somewhat concerned about a terrorist attack using smallpox in the next 12 months

May 2003: 28% *
December 2002: 51% **

*HSPH/ICR survey, May 2003
**HSPH/RWJ/ICR survey, December 2002
How Does the Public Believe the Disease Is Transmitted?

Gauging the public’s level of knowledge about disease transmission is important because:

• If the public believes that the disease is easily transmitted, they may be more willing to take precautions.

• Understanding the public’s level of knowledge about transmission can help shape public health education campaigns.

• Often, the beliefs held by the public about transmission are wrong. The public makes decisions based on these beliefs.
Beliefs about West Nile Virus Transmission

Percent of the public who believe virus can be transmitted by...

- Mosquito bites: 92%
- Blood transfusions: 72%
- Organ transplants: 56%
- Being in the same room as someone with an active case of WNV: 53%
- Drinking infected water: 50%
- Contact with dead birds: 12%
- Shaking hands with someone who has an active case of WNV: 11%

HSPH/ICR Survey, November 2002
Harvard School of Public Health Program on Biological Security and the Public
Is the Public Familiar With Any Recommended Precautions and Are They Taking Them?

Public health campaigns often include a list of precautions people can take to reduce their risk of infection. Understanding the public’s knowledge of these precautions and any that they may be taking can:

• Give public health officials a measure of the success of their education campaign and where they may need to target resources.

• Let officials know if the public is engaging in behaviors that are counter productive or harmful.

• Give officials a reality check against media stories about the mass purchase of gasmasks and duct tape.

These results can look very different when affected areas are surveyed.
Precautions Americans Have Taken Against Possible Bioterrorism

- Taking precautions when opening mail: 37%
- Emergency supplies of food, water or clothing: 25%
- Avoided public events: 12%
- Consulted website for info on how to protect yourself: 12%
- Talked to your doctor about bioterrorism: 6%
- Gotten a prescription for or purchased antibiotics: 5%
- Called health pro. to get info about anthrax vaccine: 4%
- Called health pro. to get info about smallpox vaccine: 3%
- Purchased a weapon: 3%
- Purchased a gas mask or protective clothing: 1%

HSPH/RWJF/ICR survey, October 2001
Harvard School of Public Health Program on Biological Security and the Public
Sheltering In Place

- Heard the term "shelter in place" and knew what it meant: 24%
- Have duct tape and plastic sheeting: 28%
- Have an interior windowless room in their home: 37%

HSPH/ICR survey, March 2003

Harvard School of Public Health Program on Biological Security and the Public
Got a Prescription or Antibiotics as a Precaution Against Anthrax

Nationally 4%

Affected 12%

Unaffected 3%

Affected 10%

Unaffected 2%

HSPH/RWJF/ICR survey, December 2001
Harvard School of Public Health Program on Biological Security and the Public
How Many People Does the Public Believe Have the Disease and How Many Have Died?

Understanding how much the public knows about the severity of the outbreak is important because:

• The deadlier the public believes the disease to be, the more likely they are to be concerned about it.

• Both over and underestimating the mortality rate could have serious implications. If the public underestimates it, they may not take public health messages seriously. If the public overestimate it, they may take unnecessary or counter-productive precautions.
## Facts from CDC vs. Beliefs of the General Public

<table>
<thead>
<tr>
<th>Facts</th>
<th>Public’s Beliefs</th>
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<tr>
<td>Last case of smallpox reported...</td>
<td>Cases of smallpox during past 5 years</td>
</tr>
<tr>
<td>In U.S. in 1949</td>
<td>In U.S.</td>
</tr>
<tr>
<td>In world in 1977</td>
<td>In world</td>
</tr>
<tr>
<td></td>
<td>30%</td>
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<td></td>
<td>63%</td>
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Source - Facts: CDC; Public’s Beliefs: Harvard School of Public Health survey, as published online in New England Journal of Medicine, December 19, 2002.
Does the Public Believe There is a Vaccine or a Treatment?

The public’s level of concern about a disease could vary based on their beliefs about vaccines and treatment.

• If the public believes that there is no vaccine and no treatment for a disease, their level of concern is likely to rise if the number of cases increases.

• Conversely, if they believe there is a vaccine or treatment, they may be less concerned about the disease. Also, a surge in demand for a vaccine or treatment could place stress on the local health care system.
### Facts from CDC vs. Beliefs of the General Public

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<tr>
<td>No known effective treatment for smallpox once contracted</td>
<td>Once someone contracts smallpox, there is a medical treatment to prevent death/serious consequences 78%</td>
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<td>Vaccine within 2-3 days of exposure to smallpox protects people</td>
<td>Vaccine within a few days of smallpox exposure protects people 42%</td>
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Source - Facts: CDC; Public’s Beliefs: Harvard School of Public Health survey, as published online in New England Journal of Medicine, December 19, 2002.

Harvard School of Public Health Program on Biological Security and the Public
Where Would the Public Go for Information and Care?

Knowing where the public would go for treatment and care is very important for public health officials for several reasons.

- If public health officials know where people would go for information and treatment, they can direct educational resources there in advance.

- If there were an attack, public health officials would need to know where people were going for diagnosis and treatment in order to appropriately direct resources.
Sources of Care

Percent of the public saying they would go to .... for diagnosis or treatment if they thought they had symptoms of smallpox

- Own doctor or medical clinic: 83%
- Hospital ER: 62%
- Hospital outpatient department: 52%
- Public health clinic: 27%

HSPH/RWJF/ICR survey, May 2002

Harvard School of Public Health Program on Biological Security and the Public
Does the Public Believe Certain Groups Will Be Discriminated against in Treatment?

Understanding the public’s beliefs about how they will be treated in terms of access to care, access to vaccines and quarantine is important because:

- Information about the fear or experience of discrimination during a bioterrorist threat can alert public health officials to the problem and help them deal with it. People who expect unfair treatment may be reluctant to seek care or comply with quarantine orders.
Discrimination in Vaccine Distribution

If an outbreak of smallpox occurred and not everyone could get vaccinated quickly, percent of the public saying...

Wealthy and influential people would get vaccinated first
- 72%

Elderly people would be discriminated against
- 43%

African Americans would be discriminated against
- 22%

HSPH/RWJF/ICR survey, December 2002

Harvard School of Public Health Program on Biological Security and the Public
Whom Does the Public Trust as a Spokesperson?

In a public health crisis, the credibility of information sources could be crucial.

- The public may be more likely to ignore information that comes from a source that they do not believe is credible.
- The information sources that the public believes are credible may not be completely informed about the crisis.
Whom Does the Public Trust as a Spokesperson?

In the event of an bioterrorist attack, percent of the public saying they would trust….the most to provide the correct info on how to protect against disease

- Senior scientist from the CDC: 43%
- The head of the Department of Health and Human Services: 16%
- The U.S. Surgeon General: 13%
- Your city or state health commissioner: 9%
- Would not trust any: 7%
- Head of the Office of Homeland Security: 4%
- Head of the FBI: 3%

HSPH/RWJF/ICR survey, May 2002
Harvard School of Public Health Program on Biological Security and the Public
Does the Public Support Public Policy Measures?

Gauging levels of public support for public policy measures (i.e. mass vaccinations, isolation, quarantine) can provide important information to public health officials.

- Many of the recommended policies are controversial.

- Legislators are responsive to public opinion; they will want to know if their constituents are going to be upset by these measures.
Support for Public Policy Measures

Percent of the public favoring

Requiring hospital/health clinics to provide services to people who think they have smallpox
- 87%

Requiring people with smallpox to be isolated with others who have the disease
- 73%

Quarantining people suspected of having been exposed to smallpox
- 57%

Requiring a person to be vaccinated against smallpox
- 41%

HSPH/ICR/RWJF survey, December 2002
Harvard School of Public Health Program on Biological Security and the Public
Lessons Learned

• The news media have no denominator. Neither do public health agencies.

• The importance of teachable moments: Unless there is a major event, the public is not likely to be paying a lot of attention to the issue. Public health agencies should have materials prepared ahead of time in order to capitalize on these teachable moments.

• Public responses are based on what people think they know, regardless of whether these “facts” are true.
Lessons Learned

• Public health agencies should be using physicians as a way to get information to the public.

• In order to avoid panic during an outbreak, there is a need to establish pre-identified local sources of information and advice.

• In any crisis, there are three populations – the national population, those living in the affected areas, and those directly affected by the crisis. These three groups have different information needs.