

The Public's Response to Biological Terrorism:
A Possible Scenario Involving the Release of Anthrax in an Unidentified Location
Wave III

Executive Summary of Polling Results

Overview and Purpose

This poll was conducted by researchers at the Harvard Opinion Research Program in order to provide public health officials with critical information that could support emergency planning and communications regarding biological terrorism. It is the third in a series that addresses key questions about the public's response to a scenario involving the purposeful release of anthrax at an unknown site within a city or town. The results shed light on the public's response to public health officials' recommendations that they go to nearby "point of dispensing" sites (PODs) to obtain and take prophylactic antibiotics, including possible sources of resistance.

This third wave expands our understanding of the issues in four key ways. This wave:

1. Provides a richer baseline understanding of public knowledge by including an assessment of public awareness of prophylactic treatment and vaccine for anthrax.
2. Expands our understanding of public response to a possible anthrax attack by assessing public likelihood of evacuation at the point where they hear news of confirmed cases of inhalation anthrax and the suspicion of a bioterrorist attack in their city or town.
3. Expands our understanding of the public's ability to follow public health recommendations to take antibiotic prophylaxis by assessing swallowing challenges. It asks adults to predict their swallowing ability, and also asks parents to predict the swallowing abilities of children who would be of sufficient weight (90 pounds) to be able to take the pill-based regimen, as compared to crushed pills or suspension (compounded).
4. Enhances our understanding of public perceptions of operations by evaluating their perceptions of closed PODs in terms of fairness and efficiency.

Finally, by tracking the public's response over time, results allow us to assess whether the public's views are stable, and if there are changes in the public health, policy or political arenas, how the public is likely to respond. In this way, advice for emergency communications and provisions stays up-to-date.

Key Results

The findings suggest that, after seeing media reports about anthrax cases in their city or town, the majority of the public would be worried about getting ill. Further, nearly four in ten would likely leave the city or town, primarily to avoid coming into contact with leftover anthrax on buildings and surfaces, for example, or people sick with inhalation anthrax. Addressing evacuation directly may be critical in early communications with the public.

If they did stay, most people would follow public health officials' recommendations to go pick up prophylactic antibiotic pills for themselves and for their children at PODs set up in convenient locations. However, results from this poll suggest there may be several issues that could present challenges to getting people to the PODs:

- There is considerable mis-information or lack of awareness about the contagiousness of inhalation anthrax that could trigger more widespread concern about being near people who may have been exposed and could also translate to resistance to going to PODs.
- People who may be less likely to go to the PODs (including those who were unlikely or only "somewhat likely" to go) had sizable safety concerns. Top reasons for their decision included concerns about the safety of the pills, possible problems in crowd control, and the risk of exposure to anthrax from people who were sick or from leftover anthrax.

Providing clear information about illness contagiousness as well as messages that address safety concerns head on may help encourage people to go to the PODs.

Poll findings also revealed a potential challenge in encouraging the public to consume the pills once they pick them up at the PODs. More than a quarter said they would hold onto the pills "for the foreseeable future", with most of those saying they would only use the pills if they or their child had symptoms or they knew that they/their child had been in a location where anthrax was released. Thus, messages about the importance of starting to take antibiotic pills quickly after exposure must be clear in an actual attack in order to maximize the effectiveness of dispensing efforts.

Results from the poll also reinforce the need to plan for people who need a suspension formulation or pill-crushing instructions. According to the poll, approximately a tenth of adults and 15 percent of children who are above the 90-pound threshold thought they would need a liquid form of medication. Notably African Americans and Hispanics are more likely than whites to predict this for themselves and their children. It may therefore be especially important to address related concerns at PODs that serve racial/ethnic minority communities.

Finally, there is a sizable share of the public, particularly among African Americans and Hispanics, who do not think closed PODs, as currently described, would be fair. Concerns could rise if closed PODs were only located in a very select number of sites or there was reason to believe they were not speeding dispensing efforts to a broad set of people. To stem concerns, it may be important to reassure the public, through messaging and operations design, that all people will get quick access to prophylaxis regardless of which POD they go to.

Overall, there were few changes in the total public's response to questions standardized across waves, suggesting that responses have been stable in this period.

Results and Analysis

1. How knowledgeable is the public about “inhalation anthrax” and prevention after exposure?

Although a majority of the public (62%) say they are familiar with the term “inhalation anthrax,” this leaves more than a third of the public (37%) who admits they are not familiar with it. Even among those who say they are familiar with the term, more than a quarter (29%) mistakenly believe that inhalation anthrax is contagious, or can be “passed from person to person,” with another 17% saying they don’t know if it is. This means that, looking at the population as a whole, 18% of Americans are “not at all familiar” with the term ‘inhalation anthrax’, an additional 23% hold the mistaken belief that inhalation anthrax is contagious, and 14% do not know whether or not it is contagious. In other words, a majority of Americans (56%) have missing or mis-information that could compromise their willingness to follow emergency instructions meant to protect them against this biological agent. For example, the contagiousness misperception could result in public resistance to going to PODs to get prophylactic treatment out of a concern of getting anthrax from other people in the process. These factors could also make the public vulnerable to misinformation at the time of an attack.

Only a small share of the public (22%) is currently aware that there is prophylactic treatment for anthrax (defined as “medicine – aside from a vaccine – that could prevent a person from getting seriously ill or dying if they were exposed to anthrax”). Four in ten say no such medicine exists (40%) while an additional 38% don’t know if it exists. These findings suggest the concept of prophylactic treatment may be new to the public and there may be a credibility gap at the outset of an announcement about PODs, particularly among the share of the public that currently believes such medicine does not exist. Results further suggest that African Americans and Whites are more likely than Hispanics to believe there is no medicine (44% and 44% vs. 25%).

A small fraction of the public (22%) believes there is a vaccine, four in ten (42%) say there is not, and an additional third (36%) don’t know. African Americans are more likely than Hispanics to say there is a vaccine (30% vs. 12%). These numbers suggest demand for a vaccine may not be high initially, though it may not be long before the public becomes aware of the vaccine more widely. Thus, a rise in awareness may nonetheless be an important consideration for communications and planning.

2. How is the public likely to react initially to news of a possible anthrax attack in their city or town?

The public is likely to be worried about their own safety if they received news of a possible anthrax attack in an unknown location in their city or town. More than four out of five adults (83%) said they would be worried about becoming seriously ill or dying if they heard about cases of inhalation anthrax in the news, including about half of adults (49%) who said they would be “very worried” and 34% who said they would be “somewhat worried” about those possibilities. Only 16% of respondents said they would not be worried after hearing this news.

A sizable fraction of the public (40%) said they would leave their city or town if they heard news of a possible anthrax attack, including 21% who said they would “definitely” leave. African

Americans and Hispanics were more likely than whites to say they would definitely leave (35% and 33% vs. 16%).

3. *Would the public believe statements by public health officials that the antibiotic pills used to treat exposure to anthrax are safe and effective?*

A majority of the public believes that the antibiotic pills would be safe and effective for them to take, but these beliefs are not deeply held and could become challenges for communications during an attack. While most adults say that they would believe the antibiotic pills were safe to take (82%), this is made up of 48% of the public saying the pills would be “somewhat” safe and only 34% saying “very safe.” Nearly the same breakdown exists in regard to effectiveness. Eighty-three percent say they would believe it was effective in preventing them from becoming seriously ill or dying, but 57% say “somewhat effective” and only 25% say “very effective.”

4. *How confident is the public in the government’s ability to deliver antibiotic pills?*

While a majority of the public said they were confident in the government’s ability to deliver antibiotic pills quickly to everyone in their city or town, it is notable that a sizeable minority did not agree. Over two-thirds (69%) were confident that there would be a sufficient supply of the antibiotics for everyone in their city or town who wanted them, but 30% were not. A similar divide exists with respect to confidence in their *local or state public health agency’s* ability to deliver the pills to the public; two-thirds (67%) were confident their local or state public health agency would be effective in getting the pills to those in the public who want them, but a third (32%) were not. A slightly narrower majority of the public (64%) was confident that *federal* public health agencies would be able to deliver these antibiotic pills in time to their local or state public health agency, while 36% were not.

5. *Is the public likely to follow public health officials’ initial recommendations to go pick up antibiotic pills?*

The vast majority of the public would follow public health officials’ initial recommendation to go get antibiotic pills from the PODs after an anthrax attack for themselves (90%) or for their children (93% of parents). Just more than two-thirds of adults (69%) said they would be “very likely” to go get the first round of antibiotic pills being distributed by public health officials for themselves after an anthrax attack and 21% said “somewhat likely.” Among parents, 78% said they would be “very likely” to go get the antibiotic pills for their children, and 15% said “somewhat likely.”

6. *Why might people be less likely to follow public health officials’ initial recommendation to go get antibiotic pills after an anthrax attack?*

There are a cluster of reasons that may make the public hesitant to go get antibiotic pills from the PODs after an attack such as this. Analyzing the reasoning among those who said they were not likely or only “somewhat likely” to go get antibiotic pills at these dispensing sites (for themselves or for their children) suggests that safety concerns related to both the process of getting the antibiotic pills and the pills themselves play a role. Further, confusion about the

contagiousness of anthrax was also a contributing factor. Adults who were not likely or only somewhat likely to go to the PODs to get the antibiotic pills most often cited worries about officials controlling crowds (49%) and worry about the safety of the antibiotic pills (49%) as “major reasons” for their decision. Other major reasons were that they would: worry about being exposed to anthrax from other people while going to PODs (48%); worry about getting exposed to anthrax left on buildings, people or transportation (46%); and worry that there would not be enough antibiotic pills (42%). A nearly equal percentage (38%) would wait to get antibiotic pills until they were sure they had been exposed to anthrax. A slightly smaller share, but still more than a third, would worry about having an allergic reaction to the antibiotic pills (36%); or felt they would be able to get antibiotics from their own doctor rather than go to the POD (36%). About a quarter said a major reason for being unlikely or only somewhat likely to go was their belief that the pills would not be effective (26%); their worry about a second attack (25%); the difficulty in getting there and back (25%); or their belief the government would be overblowing the situation (24%). Just under a fifth (19%) said they would think it would be unlikely that they or their child would get sick.

7. *If people went to the site, would they take the pills or hold on to them? If they would not take the pills, why not?*

Among those who would be likely to go the dispensing site, a quarter say they would not actually take the pills and would instead “hold on to them for the foreseeable future” (26%), and the same fraction of parents (26%) say they would hold on to the pills rather than give them to their children right away. Most of those who would hold onto the pills said their “major reasons” for doing so would be that they would only use the pills if they or their children had symptoms (72%) or if they knew anthrax had been released in a place where they/their child had been (64%). More than 4 in 10 (45%) said they would hold onto the pills in case there was a second anthrax attack. Thus, in order to maximize the effectiveness of the dispensing programs, communication needs to make clear that people need to take prophylactic antibiotics before they have symptoms and before they can be certain of their exposure. These findings are consistent with studies of people involved in the 2001 anthrax attacks, as many Congressional staffers reported that they received antibiotic pills but did not take them.

8. *If people get antibiotics, would they or their children have trouble swallowing the pill form?*

Most adults (91%) report that they could take the pill form, which was described as an uncoated, aspirin-sized pill they would need to take at least twice a day for 10 days. Less than a tenth (8%) said they would need the liquid form and another 1% were not sure. African American and Hispanic adults were more likely to report that they would need the liquid form (17% and 14% vs. 4%).

The poll also asked parents about their children’s swallowing abilities. Of all children, 36% qualified, meaning they weighed at least 90 pounds.¹ Of children who weigh 90 pounds, 85% could swallow the pill, 14% would need a liquid form and 1% had parents who were not sure whether they could swallow the pill. As a fraction of all children, this means 30% are 90 pounds

¹ We included children whose parents were not sure whether they weighed more or less than 90 pounds.

and could swallow the pill, while 70% would need the liquid form either because they are under 90 pounds or because they are over 90 pounds and need the liquid form.

9. *Do parents have a scale at home in order to weigh children in order to give them the liquid form or crushed pills as needed?*

More than half of parents (60%) say they have a scale at home to weigh their children, but four in ten (39%) do not. This suggests parents may need alternative ways to approximate their children's weight in order to provide crushed pills or suspension medication.

10. *Would the public perceive closed PODs as fair and efficient, or not?*

Closed PODs were described as occurring when “state and local government could give some antibiotic pills to large employers, such as companies, government agencies, hospitals, or universities, and these employers would then be responsible for dispensing pills only to their employees or students.” A majority of the public (64%) of the public would believe closed PODs are fair, but a sizable minority – nearly a third (31%) – would not. Racial/ethnic minorities were more likely to say they were not fair; 39% of African Americans or Hispanics believe they are not fair compared to 27% of whites. It was explained that the premise of these closed PODs was to get everyone pills more quickly, and 70% of the public agreed that closed PODs would do that, but a quarter (26%) said they would not.

These findings suggest that there is notable concern among the public, particularly among racial/ethnic minorities, about closed PODs. Concerns could rise if key aspects of closed PODs were different than what was described in the poll. First, as the poll's description of closed PODs implies there will be a number of closed PODs in a variety of employer settings, concerns could rise if there were only a very select number of closed PODs. Second, concerns could rise if closed PODs were not, in fact, helping speed dispensing for a broad range of people. To stem these concerns, it may be important to reassure the public, through messaging and operations design, that all people will get quick access to prophylaxis regardless of which POD they go to.

11. *How concerned is the public about an anthrax attack in the next 12 months?*

According to this poll, concern about terrorist attacks has decreased in recent years, and results now show less than a majority (48%) are concerned about an attack occurring in the next 12 months, including only 15% who are very concerned. This is down from 63% and 61% in 2009 and 2011 respectively. Concern about anthrax attacks specifically is also down a bit since 2009, with 40% reporting that they are concerned about an attack in the next 12 months, compared to 50% in 2009.

Methods Summary

This telephone poll was conducted among a randomized national sample of 1509 adults December 17, 2012, to January 11, 2013. The poll had an oversample of 676 parents, including 158 Hispanic and 171 African American parents. In addition, there was a follow-up poll to ask parents about the availability of a scale in the home to weigh their children. This was conducted February 2, 2013, to February 26, 2013, among 622 parents.

A note about the pill-swallowing questions: Because only children weighing 90 pounds or more would be eligible to take the pill form (according to FDA-approved instructions), the poll focused on children in this weight range in order to ask about swallowing problems. To identify these “eligible children,” all parents of children who were at least 8 years old were asked about each of those children’s weight. (The poll did not ask about children under age 8 because virtually all children under age 8 weight <90 pounds – see: 2000 CDC Growth Charts for the United States: Methods and Development; <http://www.cdc.gov/growthcharts/2000growthchart-us.pdf>).