

Poll: Hypothetical anthrax attack and antibiotics

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In a national poll aimed at helping with planning efforts for a public health response to a possible bioterrorism attack, researchers at the Harvard School of Public Health (HSPH) have found that, in response to a fictional scenario describing a significant anthrax attack in their city or town, most Americans (89%) will likely follow public health recommendations to obtain prophylactic antibiotics. However, a significant minority of those likely to pick up antibiotics (39%) will hold on to them rather than take them right away, which public health experts believe may put them at greater risk of serious illness.

Further, 21% of Americans are "not at all familiar" with the term 'inhalation anthrax', and an additional 25% hold the mistaken belief that inhalation anthrax is contagious - two factors that could compromise their following emergency instructions meant to protect them against this biological agent. Anthrax has been identified by government planners as a likely agent should there be a future bioterrorist attack, and "inhalation anthrax" is a potentially lethal illness that can be contracted when spores containing anthrax are inhaled. [Public health](#) experts believe [antibiotics](#) that are started quickly - possibly even before a person is certain they have been exposed to anthrax spores or before symptoms of the illness appear - may have the greatest likelihood of successful treatment.

The poll was conducted December 9-28, 2009 among a national sample, as well as people living in areas that actually experienced anthrax attacks in 2001: Washington, DC , Trenton/Mercer County, NJ and New York City. The poll was conducted as part of an ongoing series by the Harvard

Opinion Research Program at HSPH. The polls are aimed at helping federal, state and local governments better understand the general public's needs and beliefs in the event of a traumatic public health emergency, including biological threats and natural disasters, and to formulate plans for the best delivery of countermeasures. The Harvard researchers have no knowledge of an impending biological attack using anthrax in the United States.

"Publicizing key information - such as where to get antibiotics and that inhalation anthrax is not contagious - would be vital to helping people protect themselves effectively in the case of a significant attack," said Professor Robert Blendon, Director of the Harvard Opinion Research Program and an expert in understanding the public response to emergencies that involve health threats. "As these results show, clear communication with the public, in the context of what could be a frightening and catastrophic event, should be a critical priority."

The poll examined the public's reaction to a possible, significant anthrax attack in their city or town and their likelihood of responding effectively to public health recommendations to 1) go to local antibiotic dispensing sites and 2) take prophylactic antibiotics.

Given this fictional scenario, more than 80% of adults said they would be worried about becoming seriously ill or dying, including about half (46%) of adults who said they would be "very worried" and 36% who said they would be "somewhat worried." In addition, if they heard about this attack on the news, most adults (64%) would expect the event to be part of a series of attacks, and only 27% said they would expect it to be an isolated incident.

The poll found that a majority of adults (89%) said they would likely follow public health officials' initial recommendations to go get antibiotics from a dispensing site after an anthrax attack. Among

parents, 91% said they would be likely to go get the antibiotics for their children. Of adults who said they would be "very likely" to go to the sites, the vast majority said they'd go even if they knew they had to wait in line for two hours (94%).

However, the poll also finds that a sizeable minority of adults may not follow through on the public health recommendations. Of adults who said they were likely to go to the sites, only a little more than half (57%) said they would start taking the antibiotics right away. Thirty-nine percent said they would hold on to the pills and either wait to take them until they found out if they were truly exposed to anthrax (35%) or for the foreseeable future (4%). The responses of parents intending to get the pills paralleled these results, with 60% of those who were likely to go to the dispensing site saying they would start giving their children the pills right away, while 38% saying they would hold on to the pills and either wait to see if their child was truly exposed (36%) or for the foreseeable future (2%).

"It's concerning that some people will not take the antibiotics after picking them up at the dispensing site because such 'wait and see' behavior could put those who were exposed at greater risk for serious illness or even death in the event of this kind of anthrax attack," said Gillian SteelFisher, research scientist in the HSPH Department of Health Policy and Management and assistant director of the Harvard Opinion Research Program. "Experts believe that antibiotics have the greatest effect when started quickly — before any clinical signs of disease — and this may be before people are certain they have been exposed."

The poll results also call attention to potential areas of resistance to public health recommendations by examining the reasoning among those who said they were unlikely or only "somewhat likely" to go get antibiotic pills at these dispensing sites (for themselves or for their children); this included roughly a third (34%) of people. This group most

often cited worries about officials being unable to control crowds (45%) as a "major reason" for their decision. Other major reasons were that they would: worry about being exposed to anthrax while going to a dispensing site (41%); worry that there would not be enough antibiotics (40%); worry about the safety of the antibiotics (38%). Some also said that they would wait to get antibiotics until they were sure they truly had been exposed to anthrax (37%).

While a majority of the public said they were confident in the government's ability to deliver antibiotics quickly to everyone in their city or town, it is notable that a sizeable minority did not agree. Nearly two-thirds (63%) were confident that there would be a sufficient supply of the antibiotics for everyone in their city or town who wanted them, but a third (36%) were not confident.

The poll also included people living in areas that actually experienced anthrax attacks in 2001 (Washington DC, Trenton/Mercer County, NJ and New York City). The poll found that people from these areas had similar responses to the nation as a whole, but there are notable differences in responses to two questions. Adults from the DC metro and Trenton/Mercer County regions were less likely than those in New York City or nationally to be "not at all familiar" with the term "inhalation anthrax" (13% and 15% vs. 22% and 21% respectively). In addition, upon hearing the scenario concerning possible anthrax attacks in their city or town, people in the DC metro, Trenton/Mercer County and New York City metro regions were all more likely than people nationally to expect the event to be an isolated incident (40%, 42%, 37% vs. 27%) rather than part of a series of attacks.

Methodology

This poll is part of an on-going series of surveys focused on the public's response to public health emergencies by the Harvard Opinion Research

Program (HORP) at Harvard School of Public Health. It is the second poll focused on anthrax specifically, following a poll conducted in 2001 concerning the worries and behaviors of people in three metropolitan areas following reports of multiple [anthrax](#) attacks in those locations.

This study was designed and analyzed by researchers at the Harvard School of Public Health (HSPH). The project director is Robert J. Blendon of the Harvard School of Public Health. The research team also includes Gillian K. SteelFisher, John M. Benson, Mark M. Bekheit and Robin C. Herman of the Harvard School of Public Health, as well as Melissa J. Herrmann of SSRS/ICR, an independent research company. Interviews were conducted via telephone (including both landline and cell phone) for HORP by SSRS/ICR of Media (PA) December 9 through December 28, 2009 among a nationally representative sample of 2625 respondents age 18 and older. Of those a total of 1092 nationally representative respondents, 517 from the NYC metro area, 509 from the DC metro area and 507 from the Trenton/Mercer County, NJ area.

The margin of error for total respondents is +/-2.44%; National +/-3.64%; NYC +/-5.61%; DC +/-5.74%; Trenton/Mercer +/-5.63% at the 95% confidence level.

Possible sources of non-sampling error include non-response bias, as well as question wording and ordering effects. Non-response in telephone surveys produces some known biases in survey-derived estimates because participation tends to vary for different subgroups of the population. To compensate for these known biases, sample data are weighted to the most recent Census data available from the Current Population Survey for gender, age, race, education, region or state (where relevant), and homeownership. Sample data are also adjusted to National Health Interview Survey estimates of cell phone usage. Other techniques, including random-digit dialing, replicate subsamples, and systematic respondent selection within households, are used to ensure

that the sample is representative.

More information:

Click here for the complete survey:

www.hsph.harvard.edu/news/press-releases/files/anthrax_report_topline_2.18.10.doc

Click here for the charts:

www.hsph.harvard.edu/news/press-releases/files/anthrax_report_press_slides_2.18.10_final.ppt

Provided by Harvard School of Public Health

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