Bioterrorism:
America Still Unprepared

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Prepared by the Democratic Staff of the
House Select Committee on Homeland Security
Jim Turner, ranking member

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Executive Summary

The federal government's principle response to the anthrax attacks of 2001 and the threat of future bioterror attacks has been to stockpile large quantities of drugs and vaccines to treat or immunize victims or potential victims. But these medicines are useless unless there is a reliable system in place to rapidly deliver and dispense them to the affected populations in time for the drugs to be effective. Unfortunately, we do not have this robust, capable system in place today in the United States. At the end of 2003, only two states were reported by Trust for America's Health as being at the "highest preparedness level." In light of this report, Democratic Staff of the Select Committee on Homeland Security launched an investigation into the nation's stockpiles of bioterror countermeasures and the capabilities of state and local agencies to deliver them to the public in time to save their lives. The findings presented here indicate that despite large national expenditures on drugs and vaccines, our nation remains woefully unprepared for a bioterrorism attack.

Based on surveys and interviews of with over a 100 state and local public health officials, this investigation has concluded that our nation is not prepared to distribute federally supplied vaccines and medicines quickly enough to respond successfully to a bioterror threat or other public health emergency, such as pandemic flu.

Survey results from 41 states demonstrate that preparedness to deliver the stockpiled drugs and vaccines has improved marginally since 2003. Although three states have now achieved green status, four of the states surveyed have actually been downgraded since last year. Fifteen states reported improvements while 16 showed no change in status.

In the first ever examination of bioterrorism preparedness at the local level, preparedness appears weak. A survey of 63 city and county health departments around the country revealed that only 21% reported they could deliver antibiotics to the entire community within 48 hours, a timeframe necessary to save lives after an anthrax or plague attack, or a pandemic flu outbreak. Only 23% reported the ability to vaccinate their populations against smallpox within 96 hours of a release.

Despite the importance of state and local programs to deliver and dispense vaccines and drugs during a public health emergency, federal funding has declined by 18 percent since fiscal year 2003, with another 11 percent cut proposed by the President for fiscal year 2005.

At the state and local level, survey respondents reported funding restrictions as the primary cause of poor preparedness. Most local health departments described funding as insufficient to build or maintain adequate preparedness. Only 32% of respondents reported that they have conducted functional medicine distribution drills. In addition, localities reported a lack of funding to hire staff or recruit volunteers to man mass antibiotic dispensing or vaccination clinics, as well as a dearth of guidance and training support from the federal government. The Administration's efforts to eliminate the Metropolitan Medical Response System program, and the substantial deployment of National Guard troops overseas (upon whom 29% of local agencies plan to rely for vaccine distribution efforts) have also adversely affected local preparedness.

The Administration's effort to address these inadequacies by targeting preparedness funding to 21 high risk cities through the Cities Readiness Initiative is

inadequate. It pays for this initiative by reducing funding to state and local efforts and, as a centerpiece, promotes a plan to have postal workers distribute medicines in these areas that is unworkable.

Based on the findings in this report, we conclude the United States is not yet as prepared as it needs to be in light of the threat of bioterrorism or a naturally occurring public health emergency. In order to achieve adequate preparedness, strong and sustained funding, of at least the $1 billion per year, should be provided to state and local health agencies to ensure they build and maintain vaccine and drug distribution capabilities. The Administration must also immediately develop a coherent and comprehensive national biodefense strategy to reach consensus on what biological threats we face and how we should prepare. State and local governments, who have a crucial role in response, must be included in establishing benchmarks and timetables for achieving full preparedness. Finally, the National Guard should take a more prominent role in homeland security by building a specialized capacity to respond to a bioterror attack or public health emergency.

Bioterrorism:
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"Bottom Line: we need more financial support at the local level to be able to deliver what is expected of us" - *a community bioterrorism emergency planner*

The federal government's principle response to the anthrax attacks of 2001 and the threat of future bioterror attacks has been to stockpile large quantities of drugs and vaccines to treat or immunize victims or potential victims. But these medicines are useless unless there is a reliable system in place to rapidly deliver and dispense them to the affected populations in time for the drugs to be effective. Unfortunately, we do not have this robust, capable system in place today in the United States. In December 2003, the Trust for America's Health, a non-partisan public health advocacy organization, surveyed all 50 states and reported that only two, Florida and Illinois, "are at the highest preparedness level required to provide emergency vaccines and antidotes."[1] In light of this report, Democratic Staff of the Select Committee on Homeland Security launched an investigation into the nation's stockpiles of bioterror countermeasures and the capabilities of state and local agencies to deliver them to the public in time to save their lives. The findings presented here indicate that a serious lack of preparedness exists, particularly at the local level where actual patient care would take place. Thus, despite our large national expenditures on drugs and vaccines, our nation remains woefully unprepared for a bioterrorism attack

The Biological Threat

The danger from biological weapons is very real. U.S. officials believe that al Qaeda is pursuing sophisticated biological weapons[2] and a United Nations panel has declared it is "just a matter of time" before al Qaeda attempts a biological or chemical attack.[3] Anthrax is one of the top concerns. In the fall of 2001, weapons grade anthrax was dispersed through the U.S. mail, killing seven people, infecting 22 others, and leading to the evacuation and closure of postal facilities and a Senate office building for several months. These attacks demonstrated that terrorists have the ability to weaponize anthrax, and our intelligence agencies have assessed that a large-scale aerosol release of anthrax is well within the technical capability of al Qaeda and other foreign or domestic terrorist organizations.[4] According to the Department of Health and Human Services (HHS), terrorists could manufacture anthrax "using only conventional microbiological

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[1] Trust for America's Health, *Ready or Not? Protecting the Public's Health in the Age of Bioterrorism*, December, 2003, p. 16.
[2] (a) Katherine Pfleger Shrader, "Official: al Qaeda Seeks Chemical Strike," *Associated Press*, May 19, 2004; (b) Chris Logan, "Tenet Warns al Qaeda Planning Attacks with Poison, Anthrax," *Congressional Quarterly-Homeland Security*, February 24, 2004.
[3] Vivienne Foley, "U. N. Details al Qaeda Threat," CNN.com, November 20, 2003.
[4] Dr. William Raub, Principal Deputy Assistant Secretary for Public Health Emergency Preparedness, Department of Health and Human Services, "Threat and Vulnerability," Executive Briefing on the Cities Readiness Initiative, June 24, 2004.

techniques," and could release it in the air above a city or town using "commercially available spraying equipment."[5] Plague was converted into a biological weapon by the Japanese during World War II and by the Soviet Union.[6] If released, smallpox would likely be devastating, with estimates ranging from thousands to millions of deaths.[7] While the only known samples of the virus are highly secured in two laboratories, some have speculated that the virus is not confined to them and may be accessible to terrorists.[8]

The threat to the nation's health from pathogens is not limited to bioterrorism. For example, many experts believe a flu pandemic is inevitable and may occur soon.[9,10] A pandemic would involve an outbreak of a deadly form of flu that is easily transmitted and against which few people are naturally immune. In 1918, 20 percent of the world's population became infected and as many as 40 million people were killed, including 675,000 in the United States.[11] The Centers for Disease Control and Prevention (CDC) estimates that the next pandemic could kill over 200,000 Americans.[12] Such pandemics can start virtually anywhere, as the flu arises from birds and pigs. Some experts believe the 1918 pandemic originated in Kansas. Today, extensive and rapid travel and large population densities would cause a pandemic to spread very rapidly.[13]

The current influenza vaccine shortage demonstrates the devastating impact a major public health emergency would have on the health system. Insufficient stockpiles have left the nation with low supplies of vaccine.[14] The result is large-scale rationing. At the local level, where vaccines are actually delivered to the people who need them, the shortage has revealed inefficient distribution systems, long lines, worried and angry citizens, and a state and local health infrastructure struggling to deal with a sudden crisis.[15] Hospitals are warning of an overwhelming surge of unvaccinated patients sick

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[5] "Mass Antibiotic Dispensing: A Primer," Centers for Disease Control Webcast, June 24, 2004, http://www.phppo.cdc.gov/phtn/antibiotic/default.asp.

[6] Ken Alibek, *Biohazard*: *The Chilling True Story of the Largest Covert Biological Weapons Program in the World*, (New York: Random House Inc. 1999): 166.

[7] Martin I. Meltzer, Inger Damon, James W. LeDuc, and J. Donald Millar. "Modeling Potential Responses to Smallpox as a Bioterrorist Weapon," *Emerging Infectious Disease*, 7, no. 6 (2001): 959-969.

[8] (a) "Smallpox: United States Fingers Four Countries with Covert Stockpiles" *Global Security Newswire*, November 5, 2002; (b) Scott Shane, "Smallpox Fears Renewed," *Baltimore Sun*, June 15, 2002; (c) Ken Alibek, Testimony before the Committee on Government Reform, Subcommittee on National Security, Veterans Affairs, and International Relations, October 12, 2001.

[9] M.A.J. McKenna. "Flu Threatens World, Experts Say; Pandemic Risk at 30 Year High, Scientists Report," *Atlanta Journal-Constitution*, March 2, 2004, 3A.

[10] Influenza could be used as a bioterror agent, especially if genetically-engineered. See, Mohammed Madjid and others, "Influenza as a Bioweapon," *Journal of the Royal Society of Medicine*, 96, no. 7 (2003): 345-6.

[11] J. M. Barry, *The Great Influenza: The Epic Story of the Deadliest Plague in History*, (New York: Viking Press, 2004).

[12] Janet Heinrich, Director of Health Care, Government Accountability Office, Testimony before the Senate Special Committee on Aging, September 28, 2004.

[13] Martin Enserink, "Looking the Pandemic in the Eye," *Science*, October 15, 2004, 392-4.

[14] Denise Grady, "With Few Supplier of Flu Shots, Shortage Was Long in Making,' *The* Jocelyn Kaiser, "Facing Down Pandemic Flu, the World's Defenses Are Weak," *Science New York Times*, October 16, 2004, A1.

[15] Susan Levine, "Flu Vaccine Allocation in Area Haphazard, *The Washington Post*, October 16, 2004, A1.

with flu.[16] In the event of bioterrorism or a rapidly spreading natural epidemic, state and local public health systems will be under far more pressure.

Protecting the Population During a Public Health Emergency: The Strategic National Stockpile Program

Established in 1999, the Strategic National Stockpile (SNS) program maintains drugs, vaccines and other medical supplies to provide for the emergency health security of the United States.[17] The program, administered by the Department of Homeland Security from March 2003 to July 2004 and now run by the CDC,[18] is designed to provide a surge of supplies to supplement state and local response to a mass incident. The centerpiece of the program is a group of massive supply "push-packs," each one large enough to fill a 747 jet or seven 18-wheeler trucks.[19] They are strategically positioned to reach any state in the United States within 12 hours. In addition, supplies of certain drugs for specific pathogens are available at warehouses and can arrive by courier to a location within 24 to 36 hours. The stockpile is currently loaded with antibiotics to protect against anthrax and plague, as well as vaccine against smallpox, among other medicines and medical equipment. Although flu vaccine would be scare during a pandemic, large quantities of antiviral medications to counter the disease have been stockpiled.[20]

While successful in creating large stockpiles of countermeasures for certain (but not all) pathogens,[21] the program places enormous logistical burdens on the state and local responders who must actually receive, dispense, and distribute them to the community.[22] After delivery of the "push-pack" to a pre-determined location, such as an airport, the federal government's responsibility ends (Figure 1). It is then up to state and local public health agencies to breakdown the packs and actually get the SNS supplies to the people who need them.[23] This enormous task involves identifying, staffing, and supplying dozens or hundreds of points of distribution within a community and moving the population through them in a quick and orderly manner. Difficulties include not only

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[16] Robert Davis, "Doctors Warn of Flu's Effects on ERs," *USA Today*, October 19, 2004.
[17] Section 121 of the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002*, Public Law 107-188.
[18] Authority for the SNS was transferred from CDC to DHS under the Homeland Security Act of 2002, but transferred back to CDC under the Project Bioshield Act of 2004.
[19] Centers for Disease Control, *Receiving, Distributing, and Dispensing the National Pharmaceutical Stockpile: A Guide for Planners – Version 9*, April 2002.
[20] Anita Manning, "U.S. to Get More Flu Vaccine in January," *USA Today*, October 19, 2004; (b) Jocelyn Kaiser, "Facing Down Pandemic Flu, the World's Defenses Are Weak," *Science*, October 15, 2004, 394-7.
[21] Another program, Project Bioshield, is intended to spur the development of new drugs and vaccines for the stockpile. However, experts have indicated this program is unlikely to work in its present form. See, Paul Elias, "U.S. Bioterror Plans Frustrate Industry," *Associated Press*, October 15, 2004.
[22] S. D. Prior, *Who You Gonna Call? Responding to a Medical Emergency with the Strategic National Stockpile*, Center for Technology and National Security Policy, National Defense University, Defense and Technology Paper 2, June 2004.
[23] Debraelee Esbitt, "The Strategic National Stockpile: Roles and Responsibilities of Health Care Professionals for Receiving the Stockpile Assets," *Disaster Management and Response*, 1, no. 3 (2003): 68-70.

the physical challenges of transportation and distribution, but also Food and Drug Administration requirements for labeling drugs properly and obtaining "informed consent" and patient-tracking information for any experimental drugs being used.[24] In addition, there are varying State requirements to ensure staff are trained and qualified to dispense certain supplies, such as vaccines. Thus, delivering life-saving medicines over the "last mile" to those exposed to deadly pathogens is, in many ways, a far greater challenge than simply stockpiling supplies. It is the state and local institutions, and the professionals and volunteers they employ, that occupy the true frontlines in the war against bioterrorism.

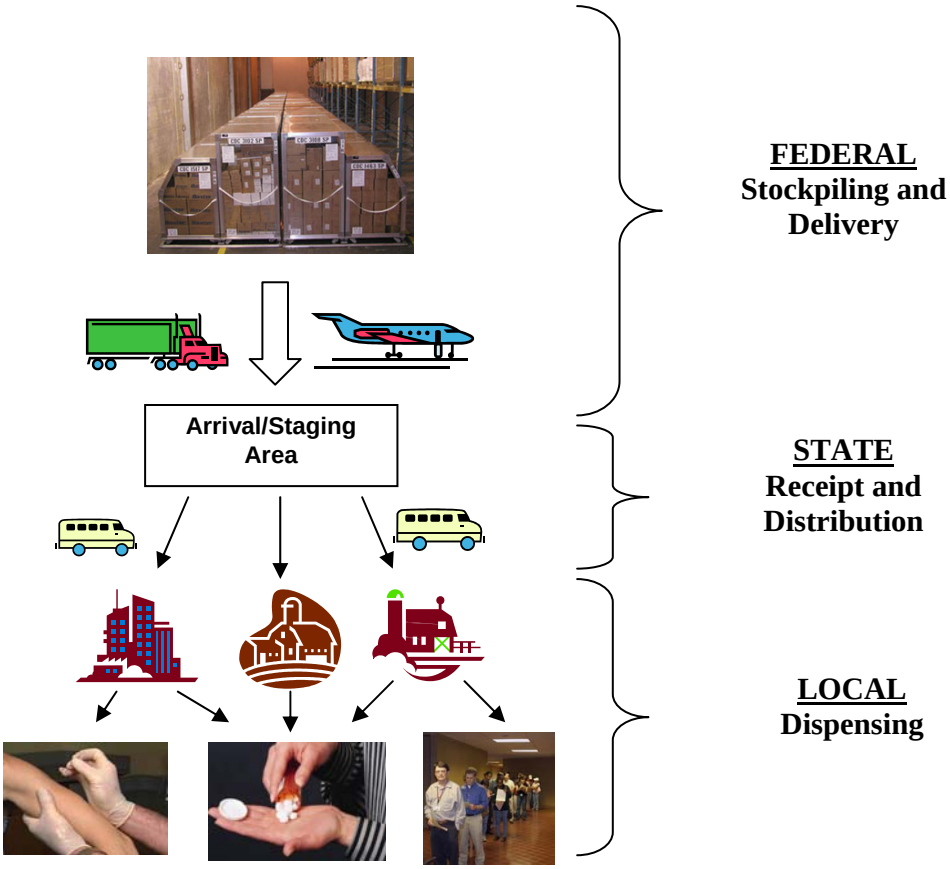


Figure 1. Federal, state, and local roles in the Strategic National Stockpile Program

State Level Readiness: Slow Improvement Leaves Most of America Unprepared

As part of the Strategic National Stockpile program, every state must develop a plan and build the infrastructure to receive stockpile supplies and distribute them to local or regional health departments. The CDC periodically sends representatives from its SNS program office to check on each state's planning and readiness. As a result of these

[24] Federal labeling requirements require the name of the recipient as well as the prescribing ohysician to be placed on the bottle. Experimental drugs would include not only FDA unapproved drugs, but also approved drugs being dispensed for unlabelled indications (e.g. Ciprofloxacin for plague).

reviews, each state is given a rating on a green-amber- red scale to indicate its SNS preparedness.

Despite repeated requests, CDC and the Department of Homeland Security have refused to provide information to the Committee on any aspect of the SNS assessment process. Consequently, the Democratic Staff conducted a survey of each state's SNS status and expenditures and received information from 41 states.[25] The aggregated data is shown in Table 1.[26] California, Colorado, Indiana, Illinois, Maryland, New Mexico, New York, Nevada and South Dakota did not provide information.

Table 1. Aggregated SNS Program Status for 41 States

	SNS Status 2004	SNS Status 2003
Green	2	0
Green Minus	1	2
Amber Plus	16	14
Amber	10	17
Amber Minus	2	6
Red Plus	3	0
Red	1	2
Not Rated/Pending	6	0

Of the responding states, three reported having achieved a "green" status, defined by CDC as most prepared for SNS receipt and distribution. This result does not include Illinois (which did not provide information to this survey) and Florida (which indicated it had "no rating"), the two "green states" reported in the December 2003 Trust for America's Health report. Thirty-three states reported either an amber or red status, with four in the later category. Only two states were red in 2003. Four states indicated they had lost ground, including two falling from amber into red status. In all, fifteen states said their status in 2004 had improved over 2003. Sixteen states did not change status, while five were awaiting results of recent CDC reviews and one had no rating. This partial review of state status continues to show that the majority of America is not prepared to receive and distribute SNS resources. Reasons for this persistent lack of preparedness are discussed later in this report.

Preparedness at the Local Level: America's Hometowns Are Vulnerable

Although state public health preparedness has been the subject of many reports, the readiness of the nation's local communities has not received the same attention. Localities, however, are ultimately responsible for protecting Americans by getting life-saving antibiotics or vaccines directly to patients. City, county, and regional

[25] For samples of state and local survey questions, see Appendix C.
[26] The readiness status of specific states is not included here due to security concerns, although this information was provided to Democratic Staff on a non-classified basis..

governments must decide where to locate points of dispensing, how to staff them, and how to move the members of their community through in a quick and orderly manner.

Local public health agencies are on the frontlines of a response to bioterrorism or another public health emergency that requires the mass dispensing of antibiotics to or inoculations of the public. In the event of an attack or outbreak, response must be rapid. Experts have concluded that in the case of an airborne release of anthrax or plague, antibiotics should be distributed to anyone potentially exposed within 48 hours.[27] For these diseases, the longer the delay in early antibiotic intervention, the higher the number of casualties (Figure 2). In the case of smallpox, a devastating, highly contagious disease that kills up to 30 percent of its victims and leaves survivors disfigured and blind, the available vaccine can prevent infection if taken early enough. However, after three days the ability of post-exposure vaccination to prevent disease declines dramatically (Figure 3) and the vaccine should be administered within this time period.[28] In the case of pandemic influenza, when vaccine may not be available for several months, stockpiled antiviral drugs can be used to prevent infections, death, and epidemic spread of the disease. But rapid deployment and dispensing is again crucial to preventing illness and saving lives (Figure 4).

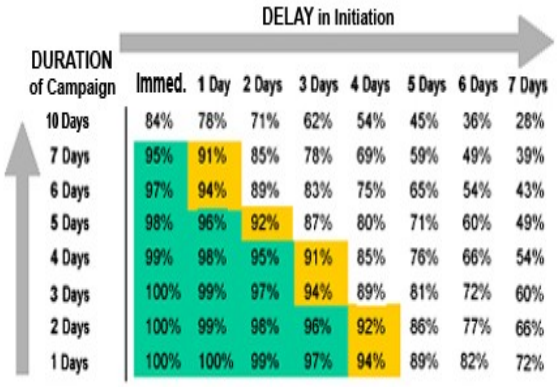


Figure 2. Proportion of population saved after anthrax exposure based on timing and length of prophylaxis campaign.[29]

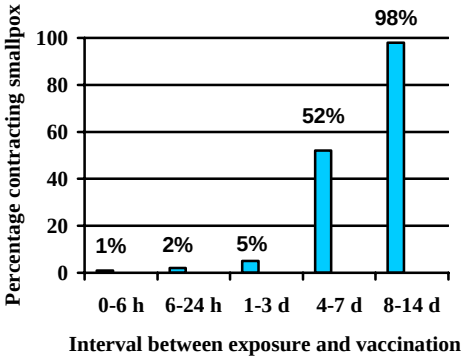


Figure 3. Proportion of population vaccinated after exposure who would develop smallpox.[30]

[27] (a) T.V. Inglesby and others, "Anthrax as a Biological Weapon, 2002," *Journal of the American Medical Association*, 287, (2002):2236-52; (b) T.V. Inglesby and others, "Plague as a Biological Weapon," *Journal of the American Medical Association*, 283, (2000):2281-90.
[28] Richard Danzig, *Catastrophic Bioterrorism-What is to Be Done*, Center for Technology and National Security Policy, National Defense University, 2003.
[29] Dr. William Raub, Principal Deputy Assistant Secretary for Public Health Emergency Preparedness, Department of Health and Human Services, "Threat and Vulnerability," Executive Briefing on the Cities Readiness Initiative, June 24, 2004.
[30] M. S. Massoudi and others, "Effectiveness of Postexposure Vaccination for the Prevention of Smallpox: Results of a Delphi Analysis," *Journal of Infectious Disease*, 188, no. 7 (2003): 973-6.

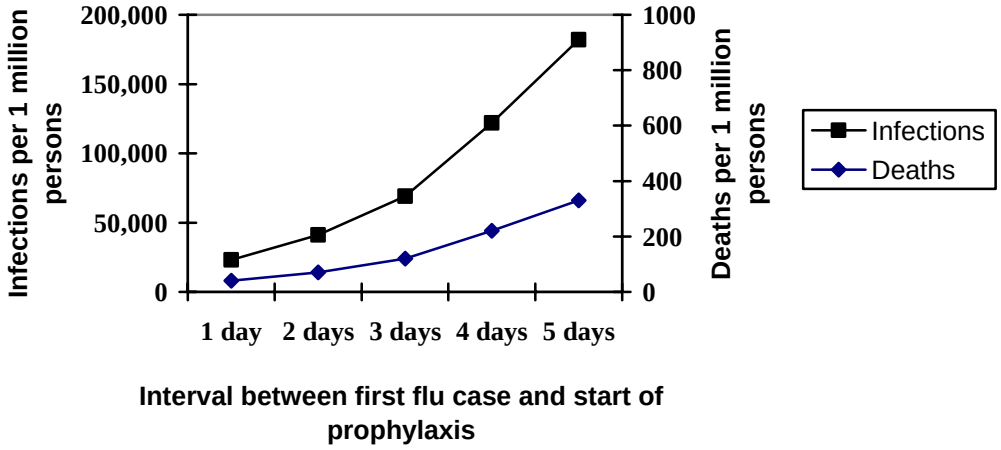


Figure 4. Number of infections and deaths in a population of 1 million prevented by 8 weeks of antiviral prophylaxis during an influenza pandemic outbreak.[31]

Ability to Protect the Community

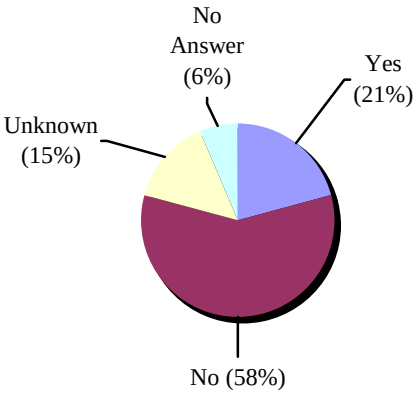
Given the crucial role of local health departments , the Democratic Staff of the Select Committee on Homeland Security contacted departments in both rural and urban regions across the country to determine how prepared we are in the event of a bioterrorist attack or other public health emergency. Surveys were conducted through staff site visits, telephone interviews, or e-mail. Of 104 surveys distributed, 63 were completed, a response rate of 61 percent. According to the Office of Management and Budget's 2003 rural-urban continuum codes, 45 respondents were classified as metropolitan areas and 18 as non-metropolitan.[32]

The survey asked how many dispensing points a community planned to establish and how many people could be processed through these sites in the event of an emergency within a given period of time. Democratic Staff combined these answers with the populations of the given jurisdiction to determine whether a community could provide protection against anthrax or plague within 48 hours or vaccinate their populations against smallpox within 96 hours.

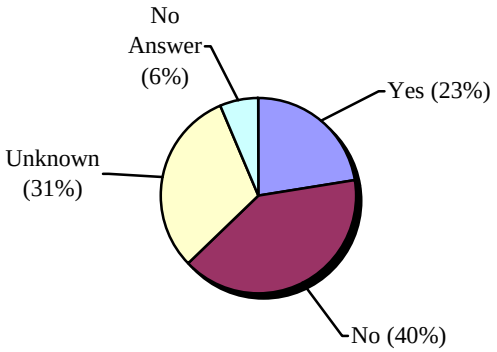
Under conditions such as anthrax or plague, 58 percent of all respondents could not protect their populations in time. A further 15 percent did not know what their capabilities were and could not provide an answer. Only 21 percent reported the ability to dispense antibiotics to the public within 48 hours.

[31] Ira Longini and others, "Containing Pandemic Influenza with Antiviral Agents," *American Journal of Epidemiology*, 159, no. 7 (April 1, 2004): 623-33.
[32] http://www.ers.usda.gov/data/ruralurbancontinuumcodes/.

Able to Provide Antibiotic Prophylaxis to Entire Community within 48 Hours



Able to Vaccinate Entire Community within 96 Hours



For vaccinations, 31 percent of jurisdictions reported they did not known what their vaccination capabilities were and could not provide any estimates. Forty percent could not vaccinate their communities within 96 hours. Notably, metropolitan and non-metropolitan areas reported the existence or lack of a rapid prophylaxis or vaccination capability in roughly the same proportion. For both questions, four respondents did not provide any data.

Trends in Federal Public Health Readiness Funding

The national security implications of the bioterrorist threat combined with the nationwide and international dimensions of a serious infectious disease outbreak have led to the establishment of federal initiatives designed to provide our State and local governments with the capability to protect the public. These relatively new programs provide crucial financial resources, as well as training and guidance, to state and local agencies to build and support their preparedness.

The Strategic National Stockpile program, described above, has focused most of its funding exclusively on building and maintaining stockpile supplies (Table 2). In fiscal

Table 2. Strategic National Stockpile Funding (in millions)

Fiscal Year	**1999**	**2000**	**2001**	**2002***	**2003**	**2004**	***2005*** †
Appropriated to CDC	$51	$52	$52	$1,157	$300	$400	*$400*
Passed Through to States and Local Health Agencies	$0	$0	$0	$0	$65	$0	-

Notes: *Includes funding for a $512 million purchase of smallpox vaccine. † Fiscal year 2005 funding level is that requested by the Administration, but not yet appropriated due to the failure of Congress to pass the relevant Appropriations legislation.

year 2003, $64.5 million in funding from the SNS program was provided to the states to support their programs, although this was not repeated.[33] Typically, states depend on the provision of public health preparedness grants from CDC to support their SNS readiness.

As a result of years of neglect and underfunding, the nation's public health infrastructure was in poor shape when the anthrax attacks occurred in 2001.[34] Subsequently, the Congress authorized[35] and CDC has awarded annual grants to state, territorial, and certain local governments to improve the capacities of their public health agencies to protect the public from dangerous infectious diseases. Because the ability to distribute antibiotics to the public is only one of the many tasks necessary to detect and respond to a bioterrorist event, federal grants for public health preparedness are used to support the public health across several areas, ranging from surveillance and laboratory capacity to preparing public communications during a crisis. Preparedness for SNS distribution is just one of 28 "critical benchmarks" that states must address with their funding.[36] For fiscal year 2005, CDC added pandemic flu preparedness to the requirements for this funding stream as a "cross-cutting critical benchmark," including the ability to deliver stockpiled vaccines and antiviral medicines. Funding for this program appropriated by Congress and passed through to the states is shown in Table 3.

Table 3. Public Health Preparedness Grants (in millions)

Fiscal Year	**2002**	**2003***	**2004**	***2005*** [†]
Appropriated to CDC	$940	$1,040	$934	*$829*
Passed Through to States and Local Health Agencies	$915	$970	$850	-

Notes: *Includes a $100 million supplemental appropriation for the National Smallpox Vaccination Program.[†] Fiscal year 2005 funding level is that requested by the Administration, but not yet appropriated due to the failure of Congress to pass the relevant Appropriations legislation.

Funding provided to state and local agencies through CDC public health preparedness grants has declined since fiscal year 2003.[37] In that year, an emergency supplemental appropriation of $100 million to assist states for costs associated with the National Smallpox Vaccination Program, as well as the $65 million provided by the SNS program, provided a grand total of $1.034 billion sent to state and local health

[33] Despite requests, both DHS and CDC have thus far failed to provide information to the Committee any information on funding trends in the SNS program, or reasons behind allocation decisions.

[34] (a) Senator William Frist, "Public Health and National Security," *Health Affairs*, 21, no. 6 (2002): 119; (b) Government Accountability Office, *Bioterrorism: Public Health Response to Anthrax Incidents of 2001*, GAO-04-152, October 2003; (c) David Heyman, *Lessons from the Anthrax Attacks: Implications for U.S. Bioterrorism Preparedness*, Center for Strategic and International Studies, April 2002, http://www.fas.org/irp/threat/cbw/dtra02.pdf.

[35] Section 131 of the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002*, Public Law 107-188.

[36] State funding is further divided into seven "Focus Areas." SNS is one of four "critical capacities" and six "critical benchmarks" within *Focus Area A-Preparedness Planning and Readiness Assessment*. See, Centers for Disease Control and Prevention, *Continuation Guidance for Cooperative Agreement on Public Health Preparedness and Response for Bioterrorism-Budget Year Five*, Program Announcement 99051, June 14, 2004, http://www.bt.cdc.gov/planning/continuationguidance/index.asp.

[37] A breakdown of this funding by state and grant year is available in Appendix A.

departments. This boost was followed by a dramatic reduction of 18 percent for the next year in funds available for public preparedness activities, including the SNS. For fiscal year 2005, the Bush Administration has proposed reducing CDC public health preparedness funding by a further $105 million, a decline of 11 percent.

Preparedness Funding and the Effect On State's SNS Preparedness

States are highly dependent on federal support for their public health preparedness efforts. Staggering state budget deficits experienced in 2002 and 2003 limited the ability of states to supplement federal funding with their own resources.[38] As a result, cuts in numerous public health services occurred, leaving state and local public health budgets flat despite new bioterrorism funding for federal-level initiatives.[39] Thus, states have used federal funds almost exclusively to plan, hire staff and obtain supplies and services to receive and distribute the SNS.[40]

To explore state-level funding of the SNS program, Democratic Staff asked state SNS directors to report their use of federal public health preparedness funding for SNS programming. The responses are shown in Table 4.[41]

States reported wide variations in SNS program funding over the short life of the program. Between 2003 and 2004, all states, with the exception of Wyoming, reported increases, some of them dramatic. This change reflects the one-time availability of SNS program funds in federal fiscal year 2003. But for the current year, the majority of states report declines in funding. Again, some of these declines are dramatic. South Carolina, Delaware and Utah report 60, 75 and 83 percent reductions in funding, respectively. Some states that maintained or increased funding said that they had decided to do so by reducing support for other activities under their CDC Public Health Preparedness grant. Massachusetts, Missouri, Pennsylvania, Texas, and Washington received significant increases, due to the targeting of funds to high density areas under the new Cities Readiness Initiative (see page 19). While several states report little improvement in preparedness status between 2003 and 2004, funding trends are erratic and, based on a review of state-by-state SNS readiness status, are clearly not targeted to states that need to improve preparedness. For example, three states that lost ground in preparedness status between 2003 and 2004, each reported reductions in funding of 50 percent or greater.

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[38] Trust for America's Health, *Ready or Not? Protecting the Public's Health in the Age of Bioterrorism*, December, 2003, 12-13.

[39] Elin Gursky, *Drafted to Fight Terror: U.S. Public Health on the Front Lines of Biological Defense*, Analytic Service, Inc. (ANSER), August 2004, 35, http://www.homelandsecurity.org/bulletin/drafted_gursky.pdf.

[40] Elin Gursky, *Progress and Peril: Bioterrorism Preparedness Dollars and Health*, (New York: Century Foundation, 2003): 30.

[41] Funding for preparedness is awarded to states near the end of the federal fiscal year, so the money is actually used by awardees in the following year. For example, federal fiscal year 2004 funds, provided to federal agencies for activities between October 2003 and September 2004, are spent by states between October 2004 and September 2005.

Table 4. Federal Funding for SNS Programming in 33 States

States	2002-03 SNS Funding	2003-04 SNS Funding	2004-05 SNS Funding
Alabama	$310,238	$988,156	$1,172,902
Alaska	N/C	$500,000	N/C
Arizona	N/C	$1,181,219	N/C
Arkansas	$564,838	$595,845	$674,187
Connecticut	N/C	$759,450	$729,980
Delaware	$100,000	$176,000	$45,000
Florida	N/C	$3,620,434	$1,934,454
Hawaii	N/C	$462,540	$550,777
Idaho	N/C	$292,005	$268.986
Iowa	$170,250	$671,259	$297,624
Kansas	N/C	$627,121	$211,772
Louisiana	$337,000	$988,478	$818,666
Massachusetts	$900,000	$1,415,411	$1,750,348
Michigan	N/C	$2,200,000	N/C
Minnesota	$200,000	$1,102,169	$569,000
Mississippi	$563,646	$2,350,134	$1,199,114
Missouri	$129,480	$1,254,726	$1,154,171
Montana	$362,541	$200,196	$200,000
Nebraska	N/C	$380,331	$179,373
New Hampshire	$72,700	$278,467	$181,746
North Carolina	N/C	$1,814,515	N/C
North Dakota	$0	$230,828	$139,916
Oklahoma	$0	$767,185	$1,434,032
Oregon	$350,000	$769,721	$554,780
Pennsylvania	$0	$2,621,131	$3,877,304
Rhode Island	$5,000	$150,000	$250,000
South Carolina	$103,564	$898,208	$354,844
Tennessee	$238,000	$1,677,067	$953,251
Texas	N/C	$4,725,503	$4,123,843
Utah	N/C	$503,864	$83,443
Washington	N/C	$1,325,245	$830,000
West Virginia	N/C	$1,212,589	$1,009,253
Wisconsin	$500,000	$1,195,351	$1,195,351
Wyoming	$461,542	$109,178	$302,755

Notes: N/C means the SNS funding level was not calculated separately from other public health preparedness activities under Focus Area A of the CDC grant.

According to those surveyed, states report insufficient resources as the single greatest barrier to improving their SNS preparedness. One state reported that "because of the [SNS budget] cut we are very limited in our ability to perform exercises." Another noted that, "2.2 million dollars specific for SNS were taken from the program but we are required to maintain the same activity level." By cutting exercises and requiring continued levels of performance, it seems assured state SNS preparedness will not improve. As one Midwestern state SNS planner put it:

> "Lack of SNS funding is having a substantial negative impact. State funding was decreased at the same time that new initiatives have been added (i.e. addition of pandemic flu planning, funding for CDC field staff shifted to State Grants). We are very concerned that funding is insufficient to meet all of the grant activities."

Another coordinator from a state losing funds described the impact this way.

> "It will dramatically reduce the efforts in planning, equipment, purchasing, training, and exercising…..Support for related activities including pandemic [flu] planning, all hazards planning, volunteer recruitment, and inter-agency activities would be greatly diminished. Effects would likely occur at both the state and local levels."

While some states were concerned about the effect of funding cuts on their obligations, especially at a time of increasing demands from CDC, it is ultimately the responsibility of the local agencies to provide the public with protection. One large state's SNS director remarked, "this year the locals are required to meet more extensive SNS deliverables." In other words, although funds are declining, communities are under more pressure than ever before to maintain a high preparedness status.

America's Hometowns: Underfunded and Unprepared

Except for Los Angeles, New York City, and Chicago which receive public health preparedness funds directly from the federal government, states are responsible for directing or "passing through" grants to localities to prepare them for getting the life-saving antibiotics or vaccines to patients. Thus, reductions in federal funding directly impact local preparedness.

According to survey respondents, the primary cause of poor preparedness for stockpile distribution was a lack of the resources needed for basic program elements. As one respondent explained, "there is a deficit of funds and overall resources to accomplish these plans (security, transportation, and distribution)." Another described funding as "insufficient. We have received 33 cents per 60,000 residents to date, approximately $20,000 dollars. State informs us we will receive less this year." For many jurisdictions, inadequate funding seemed to affect every aspect of SNS preparedness. As one rural county noted:

> "The [upcoming] exercise will have to be scaled back to match the level of funding available. Moreover, current funds will barely support the preparations for one SNS dispensing clinic.....More funding will be needed to fully stock and maintain preparations for the four planned clinics. Federal funding for planning, exercising, training, staffing, and equipment are minimal, at best."

Several other respondents echoed these feelings:

> "We feel our resources for a real world event are not sufficient."

> "The funding, resources and technical support has not filtered down to the user level, where it is needed."

> "There is not enough funding, resources, support for planning, training, staffing and equipment needs."

Another smaller jurisdiction indicated a lack of resources would undermine the SNS program's objectives:

> "We anticipate difficulty in procuring equipment with the current level of funding. There needs to be more training and technical assistance. Funds have been reduced this year. Next year there will be difficulty in carrying out objectives of the program."

A few officials commented that, while past funding levels have been adequate, the effect of impending cuts in federal funding would undermine local preparedness. According to one respondent:

> "At the present time I think funding is adequate. However, funding has been cut by 22% for fiscal year 2005. This severely limits what can be done to further plan and prepare in the future. We have spent a lot of money but if we can not maintain our present positions and level of preparedness, that money was spent for nothing."

Planning is Widespread, but Few Have Conducted SNS Drills

Although respondents expressed concern that funding cuts would hurt planning, 92 percent of survey respondents reported they already had an SNS plans for their jurisdiction.[42] This is an encouraging statistic because planning is the most important first step towards preparedness for distributing the SNS.

On the other hand, less than half of respondents had actually conducted exercises of these plans. According to guidance from the National Association of County and City Health Officials, exercises and drills ensure that an SNS plan can be carried out effectively.[43] Such an evaluation "is an essential element to preparedness planning to assess response capacity and identify areas for capacity improvement. Exercises also familiarize health care workers, law enforcement, and the community with the dispensing process and help reveal practical problems before an emergency."[44] Moreover, 10 of the 30 jurisdictions that had conducted exercises said they had only been "tabletop" practices that did not involve any actual dispensing. Tabletops are not as effective in

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[42] Five communities described their plans as "minimal," "incomplete," or "drafts."
[43] National Association of County and City Health Officials, *The Strategic National Stockpile: A Reference for Local Planners*, http://www.naccho.org/files/documents/NACCHO-NPS-Guide.pdf.
[44] For examples of lessons learned, see K. Andress, "A Postevent Smallpox Mass Vaccination Clinic Exercise," *Disaster Management and Response*, 1, no. 2 (2003): 54-8.

demonstrating the real-world aspects of SNS dispensing. As one respondent said, "although the SNS tabletops are useful in providing information and helping to establish relationships, I believe the large [functional] exercise planned for 2005 will be most useful in learning what works and what doesn't for our area." Thus, only 32 percent of the local jurisdiction surveyed had conducted a functional exercise of their SNS plans.

Staffing Is a Major Challenge

According to respondents, a common problem affecting SNS preparedness is inadequate staffing. Many officials remarked that, unlike some other emergency response services which utilize expensive equipment, public health's primary resource and tool is trained, professional people. Respondents cited lack of funds, as well as a scarcity of qualified individuals in general, as key reasons for this deficit. One official from a Midwestern city noted:

> "We have received insufficient funds to hire dedicated staff for disaster response activities. The staff issue has been a hindrance in the ability to participate in planning, exercises, and training. We received $18,000, $69,000, and $46,000 at the local level respectively. As you can see, it started very low and has already begun to decline."

The major limitation on capacity to respond cited by local officials was too few workers and volunteers to man the dispensing clinics during an emergency. Staffing at medication distribution centers has been identified as a critical factor in sustaining a 24/7 response in the aftermath of an attack.[45] Indeed, several jurisdictions said they had plans to set up many dispensing clinics, but could only realistically staff a fraction of those during an actual emergency." As one respondent from a medium sized city put it:

> "Staffing is a huge issue, understanding that local resources will be used to the fullest extent to man the distribution sites. We are very concerned that we will not have enough pharmacists and nurses to work all of the shelters. Initially we had planned for 12 primary and 12 alternate distribution sites, but because of staffing issues we have brought that number down to 6 primary and 6 alternate sites for distribution clinics."

Several blamed funding constraints for the problem, including in volunteer recruitment efforts. One Southeastern city official remarked, "we do not have a Medicorps volunteer group in this community. We do not have staff dedicated to volunteer recruitment and training, nor have [bioterrorism] funds been made available to us to do this." Another from a large rural district complained that "volunteer support to run mass clinics is insufficient despite on-going recruiting attempts. There was a one-time allocation of $7,000 to each region to develop a volunteer recruiting program, create a data base of volunteers, and maintain the program."

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[45] R. D. Beaton and others, "Evaluation of the Washington State National Pharmaceutical Stockpile Dispensing Exercise, Part II-Dispensary Site Worker Findings," *Journal of Public Health Management and Practice*, 10, no. 1 (2004): 77-85.

Guidance and Training Are Limited

Another limitation reported by numerous officials was poor access to planning guidance, training and best practices. Some complained that CDC has not offered these resources at all.

> "We have received some funding, but no technical support or additional resources have been provided by the federal government. We could really use some SNS training."

> "We did not receive any technical support from the federal government for planning. Training offered by the federal government was not accessible to the county."

Others praised the availability of CDC training programs for the SNS program targeted to local officials, but complained that too few courses were offered and too few people were able to attend. According to one official from a Northern city:

> "Funding for the training seems to be a huge issue. As of now, one or two representatives from each state are permitted to attend and the CDC has the resources to conduct two or three classes per year. This leaves a huge gap in training.....The gap is in the number of SNS training classes offered."

The lack of CDC guidance, including best-practices information or evaluation methods that states and local health agencies can use to capture and report the results of their exercise, is a recognized problem and some national coalitions have been trying to fill this gap.[46] One respondent, a planner for a sprawling Western metropolitan area, noted that improved SNS planning has been adversely affected by delays in guidance updates.

> "CDC informed us many months ago that Version 10 [of the guide for SNS planners][47] will be out "soon." Because our resources are limited, we opted to wait to revise our plan to reflect the "lessons learned" in our 2004 exercise after new guidance from CDC is available. To date, Version 10 has not been released. Thus, our written SNS plan does not incorporate the lessons learned."

In summary, the vast majority of local health officials reported insufficient resources that for many left them unable to meet the demands of ensuring the public health in the aftermath of a bioterrorist attack or during a health emergency. Others who felt ready now expressed concern that, given lower fiscal year 2004 funds and even lower requested fiscal year 2005 budget levels, reductions in federal support would undermine their hard-worn preparedness status.

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[46] Association of State and Territorial Health Officials, *Exercising the Strategic National Stockpile: Lessons Learned and Tools for Application*, January 2004.
[47] Centers for Disease Control, *Receiving, Distributing, and Dispensing the National Pharmaceutical Stockpile: A Guide for Planners – Version 9*, April 2002.

Weakened SNS Support: The National Guard and the Metropolitan Medical Response System

The substantial logistical and staffing challenges of a response requiring SNS deployment and distribution drives public health planners to look beyond their own departments to find support. While some intend to draw on first responders or other local government resources, more than a quarter of respondents, 29 percent, planned to use the National Guard.[48] Roles for National Guard included transportation and security. However, as one official noted, "our National Guard has been involved in our planning but as of today most of them are overseas." Many localities pointed out that the deployment of guard units to Iraq would leave them without these resources for the successful execution of their plans.[49] Another local health official, whose jurisdiction is located within a state at "green" status according to the CDC, described the state's plan to use National Guard assets in her area as "totally unrealistic."

Another program, the Metropolitan Medical Response System (MMRS), involves consortia of local law enforcement, fire, hazmat teams, emergency medical services (EMS), hospital, public health, and other "first response" personnel in over a hundred cities nationwide. The program, managed by the Department of Homeland Security, is intended to produce more effective planning and response in the first 48 hours of a public health crisis.[50] According to one health official, "MMRS and state health departments are responsible for developing procedures for receipt of the SNS."

In its fiscal year 2004 and 2005 budget requests, the Administration has sought to eliminate the MMRS program, claiming that other programs within HHS carry out similar functions.[51] However, 37 percent of those surveyed use MMRS to support their SNS response capabilities.[52] Many praised the program as unique, one noting it "has been a catalyst in the coordination of planning" and "has also facilitated numerous exercises, and provided funding for the initial biologic and chemical caches, N95 respirators, and cots needed to meet patient surges here if a public health emergency occurs." Others also found the rather modest funding of the program ($50 million annually for the entire nation) a useful supplement to deficiencies in SNS grants.

> "Through the MMRS funding, we have purchased Mark 1 [chemical agent antidote] kits for our first responders agencies, and this year, realizing after our SNS exercise we needed additional assets, and not having the funding in the [fiscal year] 05 CDC Bio-Terrorism grant, requested funding through this year's MMRS grant."

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[48] Seven respondents did not answer this question.
[49] "Governors Say War Is Draining States: Guard Call-Up Hurts Emergency Resources," *Seattle Post-Intelligencer*, July 20, 2004.
[50] Metropolitan Medical Response System, http://mmrs.fema.gov/.
[51] Congress has thus far blocked Administration efforts to eliminate the program.
[52] Three respondents did not answer this question.

Another respondent also found MMRS useful "to help purchase a small medication stash for the first 24-48 hours, until the SNS would be certain to arrive."

An official from a county located within a large metropolitan area praised the flexibility of the program.

> "I would say that the MMRS has been useful for its role in encouraging and supporting broader emergency planning from a health and medical perspective. Other federal funds and mandates have been too narrow – SNS, smallpox, flu, SARS, etc. The MMRS has allowed us to bring people together around more generic planning."

Thus, over one-third of respondents indicated that reductions in funding or termination of the MMRS program will further undercut SNS preparedness among other emergency preparedness activities.

An Inadequate Response: The Cities Readiness Initiative

Until fiscal year 2004, funding for public health preparedness had been distributed based on the population of a state or city. Recently, the CDC announced a new program, the Cities Readiness Initiative (CRI), focused on boosting SNS preparedness in a few select cities. The program targets the nation's most vulnerable cities with funding in order to provide them with the capability to deliver medicines "within a timeframe that will make an appreciable health difference in the event of a bioterrorism attack."[53] The initiative removes $55 million of the fiscal year 2004 state and local public health preparedness grants.[54] A total of $27 million is sent directly to 21 specific cities.[55] In addition, $12 million is channeled to the United States Postal Service to prepare volunteer postal workers to deliver antibiotics in targeted cities. A further $16 million is moved to other CDC programs.

Targeting homeland security funds to those areas most at risk makes sense. But the Administration erred by funding this initiative by cutting $55 million in state oublic health preparedness grants. According to the Association of State and Territorial Health Directors, an organization representing every state health department in the U.S., this reduction in funding "could weaken the very public health system the Administration has sought to strengthen."[56]

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[53] Centers for Disease Control and Prevention, "Cities Readiness Initiative," June 14, 2004, http://www.bt.cdc.gov/cri/.

[54] The Honorable Tommy Thompson, Secretary of the Department of Health and Human Services, Letter to House and Senate Appropriators, May 19, 2004.

[55] The 21 cities are Atlanta, Boston, Chicago, Cleveland, Dallas, Denver, Detroit, Houston, Las Vegas, Los Angeles, Miami, Minneapolis, New York, Philadelphia, Phoenix, Pittsburgh, St. Louis, San Diego, San Francisco, Seattle, and Washington, D.C.

[56] Association of State and Territorial Health Officials, "ASTHO Opposes Plan to Divert Bioterrorism Funds," *Press Release*, May 21, 2004.

Two major flaws in the program will minimize the CRI's benefit to the nation's biodefense. First, enhancing preparedness of cities at the expense of other areas fails to take into account that contagious diseases, such as plague, smallpox, and pandemic flu, may originate in one or a few locations, but could quickly spread throughout the population. Previously, preparedness funds for smallpox and pandemic flu were directed to all states not because each was at equal risk, but because an equal response may be required regardless of where the disease occurs.[57] Plague, too, is unlikely to remain contained in a single place but will soon appear elsewhere depending on the population movements. Anyone coming within 6 feet of an infected person will need to be placed on antibiotics.[58] Thus, while cities are most vulnerable to large airborne releases and need to be targeted with funds, preparedness elsewhere should not be allowed to slip further. Reductions in funding enacted this year and requested next year will only aggravate this decline.

The Cities Readiness Initiative also suffers from an unrealistic plan to provide the population with medicines. The initiative enlists volunteer United States Postal Service (USPS) employees to deliver anti-anthrax antibiotics to residences, rather than requiring people to travel to distribution points. In theory, this approach could minimize the exposure of the public to spores lingering outdoors while antibiotic-protected and respirator-equipped postal workers deliver drugs instead of letters along their usual routes. However, according to current agreements between the key agencies "USPS employees will require security escorts during the delivery of the items to help ensure safe and orderly distribution of the material."[59] Postal workers have expressed concern about their safety during a public health emergency where they are on the streets delivering life-saving, but scarce medications. Without the assurance of adequate security personnel and resources, the agreement indicates USPS will not provide the distribution service. Importantly, the provision of these resources rests on local law enforcement which "shall be expected to provide the appropriate security force for however many USPS volunteers and post offices are needed to meet the dispensing needs of the incident, up to and including direct delivery to the entire residential community."[60]

According to jurisdictions impacted by the program, the requirement to provide postal workers security during distribution makes the CRI plan "unworkable." One official in a metropolitan region said he was "flabbergasted at the prospect" of having to rely on local law enforcement to provide security for the deliveries. Officers will be so

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[57] (a) Department of Health and Human Services, *Pandemic Influenza Response and Preparedness Plan (Draft)*, released August 26, 2004, http://www.hhs.gov/nvpo/pandemicplan/. (b) Elizabeth Halloran and others, "Containing Bioterrorist Smallpox," *Science*, 298, (2002): 1428–32; (c) Edward H. Kaplan and others, "Emergency Response to a Smallpox Attack: The Case for Mass Vaccination," *Proceedings of the National Academy of Sciences*, 99, no. 16 (2002): 10935-40.

[58] Centers for Disease Control and Prevention, "Prevention of Plague: Recommendations of the Advisory Committee on Immunization Practices," *Morbidity and Mortality Weekly Report*, 45, no. RR-14 (1996).

[59] *Memorandum of Agreement Among the Departments of Health and Human Services and Homeland Security and the United States Postal Service for the Delivery of Antibiotics During a Catastrophic Incident*, February 18, 2004, p. 4.

[60] *Memorandum of Understanding Between the Department of Health and Human Services and the United States Postal Service for the Use of Funds to Prepare for Medical Countermeasures Delivery During a Bioterrorism Incident*, September 3, 2004, p. 4.

engaged with other duties during such a crises that, "to the degree [CRI] requires local resources, it can't be done." Another simply described the idea as "nutcakes."

Other problems with the postal delivery program exist. According to officials from the National Association of Letter Carriers, the union representing the 211,000 urban postal delivery employees, no personnel protective equipment has been provided for postal workers delivering antibiotics to contaminated areas.

Future Challenges for Community SNS Response: The Anthrax Vaccine

As additional countermeasures are added to the Strategic National Stockpile, state and local public health agencies will have to update their SNS plans and run new exercises to ensure the new drug or vaccine can be delivered effectively to the community. The challenges posed to these responders by a new countermeasure must be considered as public health preparedness and the SNS program evolve. But it is not clear HHS or CDC officials are taking their state and local partners into consideration.

In March 2004, the Department of Health and Human Services (HHS) announced a plan to add a new countermeasure, an anthrax vaccine, to the Strategic National Stockpile.[61] According to its procurement plan, the first to be executed under the new Project Bioshield program, HHS intends to add at least 75 million doses of the vaccine, known as recombinant Protective Antigen, or rPA, to the stockpile as early as next year.[62] But what remains unclear is how the SNS program will use this vaccine in the event of an anthrax attack. This question is important because deploying the vaccine effectively after an anthrax attack will likely involve significant new burdens for state and local health agencies while providing only minimal new protections to public health.

Anthrax is not contagious and vaccine is not needed to prevent spread of the disease. However, vaccinated individuals are protected from contracting anthrax if exposed to the pathogen's spores. Unless an exposed area is fully decontaminated, anthrax spores may linger, possibly for years. Additionally, if antibiotics are discontinued too early, anthrax can still occur up to 100 days after exposure.[63] Vaccinated individuals would be protected from both of these possibilities without having to take further antibiotics. But, according to the vaccine's makers, the immunization process requires a series of three shots over several weeks and immunity is not established until a month after the first injection.[64] As a result, a community exposed to anthrax will still require antibiotic protection within 48 hours, continuing over the course of at least a month. At the same time, local public health agencies will also be required to vaccinate individuals and keep track of each to ensure they return for all

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[61] Justin Gillis, "U.S. to Buy Anthrax Vaccine," *The Washington Post*, March 12, 2004.
[62] Notably, a different anthrax vaccine, known as AVA, currently used by the military, has been available for decades but has not been stockpiled.
[63] Arthur Friedlander and others, "Postexposure Prophylaxis Against Experimental Inhalation Anthrax," *Journal of Infectious Disease*, 167, no.5 (1993):1239-43.
[64] Keyserling HL, Gorse GJ, Keitel W, et al. "Ascending Dose Safety and Immunogenicity Study of a recombinant Protective Antigen (PA) Anthrax Vaccine (rPA102).," Slide Session No. 57 at the International Conference on Emerging Infectious Diseases (ICEID), Atlanta, Georgia, March 2, 2004.

subsequent shots. Thus, the new anthrax vaccine is likely to add significantly to the challenge of protecting a community from anthrax.

Although HHS intends to purchase an estimated $800 million worth of rPA, the Department has apparently not attempted to work with state and local health departments to determine their capability to actually dispense the vaccine. Few of the officials contacted by staff were aware of the purchase and none could see how it could benefit their communities. According to one health official, "anthrax vaccine makes no sense. I don't see how you can come up with a scenario where you need that stuff."

Conclusions

The federal government has responded to the threat of bioterrorism by stockpiling large quantities of medicines and vaccines. But, according to the data collected for this report, it has failed in its equally important role of preparing state and local governments to distribute and dispense these medicines in the event of a public health emergency. An inability to provide potentially life-saving drugs and vaccines quickly could cause unacceptable levels of casualties in America's communities if bioterrorism scenarios, such as anthrax or plague attack, or a natural outbreak, such as pandemic flu, occur. Funding has been erratic and, by most accounts, insufficient. Grant awards are declining and supporting resources are less and less available. But enormous gaps in preparedness remain at the state and local level in all types of communities across America. Recognizing these failures in preparedness, the Administration has established the Cities Readiness Initiative to redirect increasingly limited funds to populous cities. While at first glance this seems a wise application of the recommendations of the 9/11 Commission and other groups to target homeland security funds on the basis of risk, it ignores the ability of contagious infectious disease to start anywhere and spread throughout a population. It also relies on an innovative, but ultimately unworkable plan to employ postal workers in the effort to deliver drugs. Finally, while decreasing support, Administration officials plan to bring even larger burdens on state and local officials by adding new countermeasures to the stockpile without considering dispensing requirements.

The nation has made progress, but we are not yet as safe as we need to be. This is especially true with regard to protection from weapons of mass destruction, such as biological weapons. The evidence presented here shows that in our states, cities, towns, and neighborhoods, many casualties would be suffered if an attack occurred. In previous reports, the Democratic Members of the Select Committee on Homeland Security have pointed to serious problems with the Administrations approach to biodefense.[65] These problems continue, and many of the same recommendations offered previously have only become more necessary.

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[65] (a) Rep. Jim Turner, Ranking Member of the Select Committee on Homeland Security, *Winning the War on Terror*, April 2004, 32, 50-51; (b) Democratic Members of the Select Committee on Homeland Security, *America at Risk: Closing the Security Gap*, February 2004, 20-35. Available at http://www.house.gov/hsc/democrats/index.htm.

Provide Strong and Consistent Support to Public Health Agencies Nationwide

According to Joseph Henderson, former Associate Director for Terrorism Preparedness and Response at the CDC, neither "our public health system, nor any public health system in the world, is prepared for a significant bioterror event."[66] The problem, according to Mr. Henderson and the evidence presented in this report, is resources. "A billion seems like a lot, but we need more." However, despite the evidence and the advice of its own experts, the Administration has reduced funding. This trend should be stopped. Strong and consistent support of at least $1 billion per year over several years is needed to prepare our nation's states and localities to respond effectively in a public health crisis. To do less would not only leave much of America unprepared, but also undermine our past investments. As one local health official put it, "we have spent a lot of money but if we can not maintain our present positions and level of preparedness, that money was spent for nothing."

Develop a Comprehensive Biodefense Preparedness and Response Strategy

It is increasingly obvious that the Administration does not have a unified and comprehensive strategy to deal with bioterrorism or other infectious disease threats. The CRI initiative is only the latest change in course in the short life of the federal biodefense program. Pandemic flu planning has recently been added to the demands of state and local public health planners. In early 2003, the National Smallpox Vaccination Program was a major priority, only to be later downgraded in importance by Administration officials.[67] In proposing reductions in public health preparedness funding for fiscal year 2005, the Administration indicated a new "Biosurveillance Initiative" would be the next priority.[68] Most recently, the shortage of flu vaccine has shifted the Administration's attention back to weakness in drug and vaccine supply for biodefense.[69] Experts have characterized Administration attempts to define a biodefense strategy, such as Homeland Security Presidential Directive-10 released in April 2004,[70] as insufficient.[71]

A comprehensive strategy should determine what the biological threats are to the nation, and how they are best addressed. Based on these threats and consensus strategies for response, coherent metrics and goals can then be developed to measure progress

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[66] Caitlin Harrington, "Joe Henderson, CDC's Anti-Terrorism Chief, Gets Paid to Worry," *CQ-Homeland Security*, January 20, 2004.
[67] David McGlinchey, "The Smallpox Shuffle," *Government Executive*, April 1, 2004, 18-19.
[68] (a) Department o Health and Human Services, "President's Budget Includes $274 Million To Further Improve Nation's Bio-Surveillance Capabilities," *Press Release*, January 29, 2004; (b) Dana Milbank and Dan Morgan, "Some Pet Programs Are Targeted for Cuts," *The Washington Post*, February 4, 2004, A11.
[69] Andrew Pollack. "Washington Considers Purchasing Flu Vaccine," *The New York Times*, October 14, 2004.
[70] *Biodefense for the 21st Century*, April 28, 2004, http://www.whitehouse.gov/homeland/20040430.html.
[71] (a) John Mintz, "Bioterrorism Procedures Are Outlined," *The Washington Post*, April 29, 2004, A23; (b) David Heyman, Director of Homeland Security Programs, Center for Strategic and International Studies, "America's Patchwork of Preparedness in Biodefense Reflects a Failure of Leadership," *Homeland Security*, June 2004, p. 46; (c) Dr. Anna Johnson-Winegar, former Deputy Assistant Secretary of Defense for Chemical and Biological Defense, Testimony before the House Select Committee on Homeland Security, June 3, 2004.

towards preparedness. State and local public health agencies are crucial stakeholders and should be involved in defining the essential capabilities they need for response.

Strengthen National Guard Capabilities for Biodefense

At present, the Army National Guard is primarily organized and equipped to conduct sustained combat overseas, with only a very small percentage is dedicated to homeland security function in the United States. But the Guard, when stationed at home, can play a highly effective role in supporting civil authorities in preparing for and responding to catastrophic attacks, including bioterrorism. Unfortunately, the Guard is presently neither available nor trained to play a vital and needed role in homeland security. As a result, CDC warns state and local agencies not to rely on guard resources for response.

Homeland security should become a core mission of the Guard. These units have the organizational, logistical and security training essential to supporting a full SNS response. Guard strength should be pooled into regional rapid response teams whose members have greater initial response capability and can be deployed within a short period of time. Capable of responding to a biological or other attack within 4 hours, the teams should be provided with diagnostic expertise and the training and ability to support SNS deployment and distribution, public health and first responders. Guard units should also be incorporated into state and local SNS training exercises. If the Guard takes on this homeland security role, additional troop strength may be needed in the regular Army to meet overseas deployment commitments.

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Bioterrorism and infectious disease threats will be with us for the foreseeable future. The threat is real and dangerous today, and is likely to grow as biotechnology and improves and spreads, and new diseases emerge. The nation must build a comprehensive, robust and effective system for defeating bioterror and infectious disease threats. It must be done strategically and in a way that engages and respects every player who shares responsibility in defending the United States and its people.

Appendix A

Federal Public Health Preparedness Funding to States, Territories and Localities

State[i]	FY 2002[ii]	FY 2003[iii]	FY2003 Smallpox Supplemental[iv]	FY 2003 SNS[iv]	FY 2004[v]	FY 2004 Cities Readiness Initiative[vi]
Alabama	$14,900,443	$14,056,645	$1,542,147	$994,685	$12,910,651	
Alaska	$6,395,720	$6,284,107	$218,655	$141,033	$5,205,459	
American Samoa	$994,227	$646,463	$23,150	$70,000	$444,499	
Arizona	$16,422,170	$15,755,035	$1,831,346	$1,181,219	$15,190,314	$1,280,000
Arkansas	$10,951,709	$10,461,043	$929,895	$599,783	$9,339,265	
California	$60,816,245	$55,589,662	$8,614,305	$5,556,229	$57,159,441	$2,160,000
Chicago	$11,447,312	$10,450,197	$928,049	$598,592	$10,413,491	$2,150,000
Colorado	$14,575,766	$13,979,790	$1,529,060	$986,245	$12,834,314	$820,000
Connecticut	$12,581,705	$11,960,524	$1,185,224	$764,470	$10,828,647	
Delaware	$6,744,505	$6,614,378	$274,893	$177,306	$5,518,506	
District of Columbia	$11,273,558	$11,162,901	$198,016	$127,721	$11,155,069	$830,000
Florida	$40,581,081	$38,181,999	$5,650,163	$3,644,356	$36,163,527	$710,000
Georgia	$23,225,251	$22,034,847	$2,900,659	$1,870,926	$20,835,121	$740,000
Guam	$777,788	$799,585	$54,370	$120,000	$515,976	
Hawaii	$7,697,208	$7,486,672	$423,426	$273,110	$6,384,925	
Idaho	$7,880,688	$7,676,282	$455,712	$293,934	$6,588,258	
Illinois	$26,201,381	$24,923,148	$3,392,473	$2,188,146	$23,718,971	
Indiana	$18,536,799	$17,416,386	$2,114,237	$1,363,684	$16,262,765	
Iowa	$11,514,786	$10,941,890	$1,011,773	$652,594	$9,816,873	
Kansas	$10,985,143	$10,476,095	$932,458	$601,436	$9,354,215	
Kentucky	$13,998,067	$13,245,815	$1,404,081	$905,632	$12,105,282	
Los Angeles	$24,591,171	$24,531,232	$3,325,739	$2,145,103	$24,057,011	$2,670,000
Louisiana	$14,949,145	$14,059,595	$1,542,650	$995,009	$12,913,581	
Maine	$7,838,322	$7,603,092	$443,249	$285,896	$6,600,682	
Maryland	$16,791,405	$15,915,365	$1,858,646	$1,198,827	$14,756,853	
Massachusetts	$19,134,801	$17,972,524	$2,208,935	$1,424,764	$16,800,158	$840,000
Michigan	$27,125,655	$25,278,581	$3,452,996	$2,227,183	$25,866,854	$1,030,000
Minnesota	$15,952,086	$15,101,600	$1,720,080	$1,109,452	$13,991,780	$710,000
Mississippi	$11,332,975	$10,795,501	$986,846	$636,516	$9,671,470	
Missouri	$17,456,448	$16,424,504	$1,945,341	$1,254,746	$15,262,563	$690,000
Montana	$7,008,529	$6,834,837	$312,432	$201,519	$5,775,627	
N.Marianas Islands	$501,782	$655,043	$25,747	$70,000	$450,446	
Nebraska	$8,809,733	$8,485,811	$593,557	$382,844	$7,377,335	
Nevada	$9,448,659	$9,251,219	$723,889	$466,909	$8,137,588	$790,000
New Hampshire	$7,751,193	$7,552,202	$434,584	$280,307	$6,465,014	
New Jersey	$23,732,611	$22,248,528	$2,937,044	$1,894,395	$21,047,364	
New Mexico	$9,049,686	$8,710,551	$631,825	$407,527	$8,803,295	
New York City	$22,828,585	$20,881,716	$2,704,306	$1,744,279	$20,744,757	$5,100,000
New York	$29,418,122	$27,794,404	$3,881,385	$2,503,495	$28,493,781	
North Carolina	$22,919,940	$21,630,396	$2,831,790	$1,826,506	$20,433,395	

North Dakota	$6,429,710	$6,290,025	$219,663	$141,683	$5,223,458	
Ohio	$30,275,150	$28,082,405	$3,930,425	$2,535,126	$26,856,951	$770,000
Oklahoma	$12,682,086	$12,031,404	$1,197,293	$772,255	$10,899,049	
Oregon	$12,616,956	$12,039,235	$1,198,627	$773,115	$10,906,827	
Pennsylvania	$32,340,936	$29,933,326	$4,245,596	$2,738,410	$28,695,407	$2,040,000
Puerto Rico	$13,478,992	$12,778,777	$1,324,554	$854,338	$11,641,389	
Rhode Island	$7,333,840	$7,147,493	$365,671	$235,858	$6,048,030	
South Carolina	$13,931,820	$13,232,255	$1,401,772	$904,143	$12,091,813	
South Dakota	$6,680,486	$6,536,811	$261,685	$168,787	$5,441,461	
Tennessee	$17,665,877	$16,651,663	$1,984,021	$1,279,695	$15,488,192	
Texas	$51,421,771	$48,310,184	$7,374,770	$4,756,728	$48,963,533	$2,840,000
Utah	$9,971,636	$9,618,011	$786,346	$507,193	$8,501,910	
Vermont	$6,355,413	$6,242,254	$211,528	$136,436	$5,198,685	
Virgin Islands	$726,203	$597,124	$42,173	$120,000	$488,051	
Virginia	$20,758,682	$19,584,849	$2,483,479	$1,601,845	$19,924,893	
Washington	$18,121,901	$17,146,134	$2,068,219	$1,334,002	$16,148,969	$830,000
West Virginia	$9,025,861	$8,649,835	$621,486	$400,859	$7,540,254	
Wisconsin	$16,940,986	$15,955,629	$1,865,502	$1,203,250	$14,811,846	
Wyoming	$6,099,294	$6,000,636	$170,386	$109,899	$4,908,897	

[i] Not shown are CDC awards to Marshall Islands, Micronesia, and Palau.
[ii] Source: Trust for America's Health, *Ready or Not? Protecting the Public's Health in the Age of Bioterrorism*, December, 2003, 32.
[iii] Source: United States Department of Health and Human Services, "HHS Provides $1.4 Billion More to States and Hospitals for Terrorism Preparedness," *Press Release*, September 2, 2003.
[iv] Source: Association of State and Territorial Health Officials.
[v] Source: United States Department of Health and Human Services, "HHS Awards $849 Million to Improve Public Health Preparedness," *Press Release*, June 17, 2004.
[vi] Source: Centers for Disease Control and Prevention, "Cities Readiness Initiative," June 14, 2004, http://www.bt.cdc.gov/cri/.

Appendix B

Local and Regional Health Departments Surveyed

Alexandria, Virginia
Allen County, Indiana
Anchorage, Alaska
Angelina County, Texas
Arlington County, Virginia
Baltimore, Maryland
Bell County, Texas
Bernalillo County, New Mexico
Bethlehem, Pennsylvania
Birmingham, Alabama
Boone County, West Virginia
Bradley County, Arkansas
Brown County, Wisconsin
Bucks County, Pennsylvania
Camden County, New Jersey
Central Shenandoah Health District, Virginia
Charleston, South Carolina
Charlestown, Rhode Island
Cincinnati, Ohio
Clark County, Nevada
Columbia, South Carolina
Coos County, Oregon
Custer District, North Dakota
Douglas County, Nebraska
Duchess County, New York
East Hampton, Connecticut
East Public Health District, Georgia
Erie County, New York
Fairfax County, Virginia
Framingham, Massachusetts
Franklin County, Kansas
Franklin County, Kentucky
Franklin County, Missouri
Fremont County, Wyoming
Glenn County, California
Harris County, Texas
Hawaii County, Hawaii
Honolulu, Hawaii
Idaho Falls, Idaho
Itasca County, Minnesota
Jefferson, Missouri
Johnson County, Iowa
Kansas City, Kansas
Kansas City, Missouri
Kauai County, Hawaii
Knox County, Illinois
Knox County, Tennessee
Lane County, Oregon
Long Beach, California
Los Angeles, California
Madison County, Illinois
Manchester, New Hampshire
Maui County, Hawaii
McHenry County, Illinois
Medford, Massachusetts
Miami, Florida
Midland, Michigan
Minneapolis-St. Paul, Minnesota
Mobile, Alabama
Modoc County, California
Monmouth County, New Jersey
Monroe County, Illinois
Montgomery County, Maryland
Nassau County, New York
New Bedford, Massachusetts
New Orleans, Louisiana
New York City, New York
North Georgia Public Health District, Georgia
Northern Kentucky Independent District Health Region, Kentucky
Oklahoma City, Oklahoma
Orange County, California
Pasadena, California
Passaic County, New Jersey
Pensacola, Florida
Pima County, Arizona
Richmond County, North Carolina
Rockland County, New York
Rutland County, Vermont
Saginaw County, Michigan
Salt Lake Valley, Utah
San Juan Basin, Colorado

Santa Clara County, California
Seattle/King County, Washington
Shasta County, California
Sierra County, California
Sioux Falls, South Dakota
Siskiyou County, California
Southeastern Ohio Health District, Ohio
Southern Region, Maine
St. Charles, Missouri
St. Clair County, Illinois
St. Louis City, Missouri
St. Louis County, Missouri
Sussex County, Delaware
Tacoma-Pierce, Washington
Tarrant County, Texas
Taunton, Massachusetts
Teton County, Wyoming
Three Rivers District Health Department, Kentucky
Trinity County, California
Virgin Islands
Waltham, Massachusetts
Western Mississippi Health District, Mississippi
Yuba County, California

Appendix C

Survey Questions

State

1) Has a statewide exercise with CDC's "TED" stockpile simulator been conducted?

2) Today, what is the state's CDC-rated SNS status on the red-yellow-green scale? What was this status one year ago?

3) For Fiscal Year 02, 03, 04, and 05, can you provide information on funding levels you received from CDC/DHS specifically for the SNS program?

4) For Fiscal Year 02, 03, 04, and 05, can you provide information on funding levels for SNS programming that was taken from CDC Public Health Preparedness Focus Area A grants?

5) If funds that were directly available for the SNS for FY04 are no longer available, how will this affect the program in your state over the next fiscal year?

Local

1) Does your jurisdiction have an SNS distribution plan? How large is the jurisdiction to be served by this plan?

2) Has your jurisdiction conducted an SNS exercise?

3) How would you describe the sufficiency of funds, resources and technical support received from the Federal government for planning, exercising, training, staffing, and equipment needs for SNS distribution? Can you provide information on trends in this funding for your jurisdiction?

4) How many clinics do you plan to set up for your area? For oral antibiotic prophylaxis, how many people do you estimate you can process in an 8 hour period through each clinic? For vaccinations?

5) What role does the Metropolitan Medical Response System and/or the National Guard play in your stockpile distribution plans and capacities?