

The New York Times , Op-Ed Contributor

http://www.nytimes.com/2008/10/13/opinion/13wein.html?_r=1&scp=2&sq=Anthrax&st=nyt&oref=slogin

Neither Snow, Nor Rain, Nor Anthrax ...



By LAWRENCE M. WEIN

Published: October 12, 2008

IMPORTANT planning for responding to a future anthrax attack has quietly been under way since the last attacks seven years ago. A key part of this effort has been figuring out how best to deliver prophylactic antibiotics quickly to the people living in the city that is attacked.

This is at least as difficult and complicated as it might seem. First, an attack must be detected, either by one of the BioWatch air monitors that have been placed in many cities or by finding symptoms of anthrax poisoning in a victim. Either way, this can take at least 12 to 30 hours. Next, an adequate supply of antibiotics must be sent from the Strategic National Stockpile (held at 12 sites around the country) to the affected city, ideally within 12 hours.

Finally, the city must get the drugs out to its population. This third step is potentially the most time-consuming of all. But it can be speeded up — and made twice as effective in preventing deaths — by strategically involving the United States Postal Service and by greatly increasing the amount of medicine initially sent out to the affected city.

The Centers for Disease Control and Prevention has directed 72 major American cities to devise plans to distribute anthrax antibiotics to all their residents within 48 hours of receiving them. So far, few of these cities are able to meet that goal. The traditional approach to dispensing medical supplies to a large population is to place the medicines in schools and other public places and instruct people to pick them up. The main shortcoming of this “PODs” approach (for “points of dispensing”) is labor: there are not enough public health workers to distribute the antibiotics quickly, and cities would have to rely largely on volunteers to perform unfamiliar (albeit simple) tasks in unfamiliar settings.

A better way is to let residents stay home and have mail carriers, escorted by police officers, go door to door delivering antibiotics. This can be done within eight hours, trials in Seattle, Boston and Philadelphia have shown. While the mail carriers (who have already taken antibiotics) distribute pills, public health workers can make bulk deliveries to special populations like universities, nursing homes, detention centers, homeless shelters and large hotels.

After the mail carriers have finished their routes, the next police shift can be assigned to PODs, opened up to serve anyone who may have fallen through the cracks and to supply additional antibiotics so that each citizen can ultimately be given enough for the full 60-day course of treatment.

Besides being faster, the postal approach can reach those people who, surveys suggest, might refuse to go to a dispensing point. It would also require fewer workers, and it would be much better executed — mail carriers cover their routes six days a week through rain, sleet and snow. And the elderly, the handicapped and those without cars could obtain their pills more easily.

So the mail carrier strategy is a great start. But it won't work unless the federal government provides the city with a sufficient supply of antibiotics within 12 hours of the request. The Strategic National Stockpile has the capacity now to immediately send enough medicine to last 1.8 million people for 10 days. (The rest of its supply of antibiotics is in bulk form, not prepackaged, so it cannot be delivered until 24 to 36 hours after the request.) But for many cities, the 10-day supply for 1.8 million people is not enough. The stockpile should at least triple its inventory of antibiotics that are prepackaged so they can be delivered within 12 hours.

Mathematical models suggest that such a well-executed and well-supplied approach to delivering antibiotics would result in half the number of deaths as would occur using the traditional PODs approach.

Finally, it is important that planners take into account the possibility of a campaign of attacks on several cities. After all, producing 10 pounds of anthrax spores may not be much more difficult than making one pound. To address this threat, the Strategic National Stockpile should ultimately be ready to mobilize, according to my calculations, roughly half of its inventory of anthrax antibiotics. Then, soon after sending antibiotics to the city under attack it could also distribute five-day supplies to people in all the other cities (again via mail carriers).

Most people would never need to take the medicine, but they would have it on hand in the event of an attack. This would greatly reduce the level of fear nationwide, and it might also serve as a strong deterrent to people who would consider waging such a series of attacks. It is our responsibility to stay one step ahead of them.

Lawrence M. Wein is a professor of management science at the Stanford Graduate School of Business.