



Connecticut, November 15, 2001.

The Logic behind CDC and NIOSH Recommendations for Postal Workers

It is obvious that the authorities are uncertain about what to say and what to do about the biological attack on America. It is a balance between responsible reporting to avoid panic and appropriate precautions to protect the public.

As we all know, anthrax has been found in the postal system, exposing postal workers. The recommendations for protecting those workers are as follows: CDC recommends the compulsory use of N95 respirators for all workers handling the mail, as long as no anthrax has been identified or where there are no machines generating oil mist.

As soon as anthrax or any other biological contaminant is identified, all personnel in the area have to switch to full face mask with P100 filters as well as start taking antibiotics.

In other words, as long as there is no need to wear respirators, you have to use disposable paper masks. Then, when you *know* that respirators are needed, disposable masks are no longer any good. Even if an N95 could provide adequate protection (which it cannot, as all filters are velocity-dependent, a factor that will in particular affect the performance of electrostatic filters — which disposable half masks usually are), no half mask can handle the problem with contamination through the eyes.

The focus at this point is on anthrax, but anthrax is by no means the only potential biological threat. It is at this stage the only biological agent we have positively identified, but here in the USA we have this weekend started to vaccinate physicians (140) against smallpox. The reason for this is, of course, that smallpox is a conceivable threat and, if it were to be used by terrorists, we would be in a much worse situation than with anthrax. The particle size of smallpox is typically 0.2-0.3 micron. The particle size of measles is typically 0.2 micron. Both are viruses and both are contagious. (This information comes from FOI, the Swedish Defence Research Agency.)

In another document, CDC states the following:

*“Biological agents are infectious through one or more of the following mechanisms of exposure, depending upon the particular type of agent: inhalation, with infection through respiratory mucosa or lung tissues; ingestion; **contact with the mucous membranes of the eyes**, or nasal tissues; or penetration of the skin through open cuts (even very small cuts and abrasions of which employees might be unaware).”*

(Source: <http://www.bt.cdc.gov/ShowAllNewsItems.asp>)

I don't understand this logic, in particular when you start considering how likely it is that you will survive if you are exposed to and inhale anthrax. According to an interview with Betsy McCaughey PhD at Health Policy Fellow, Hudson Institute:

“And it's the nature of this disease that it's imperative that people are medicated before any symptoms appear. The incubation period is about 16 days on average, but that means some people could develop symptoms much earlier than the 16th day. And once you develop symptoms, you are untreatable. Ninety percent of the people who develop symptoms die of anthrax.”

(The whole interview can be found at:
<http://www.foxnews.com/story/0,2933,37176,00.html>)

I recently communicated with TNO in Holland about some of the research they are conducting into biological threats. They spontaneously said that they could not recommend half masks for any of the biological agents. Their recommendation would be at least full face masks or positive pressure respirators.

Then, of course, we have the problem of training and fit-testing, according to OSHA regulation:

“The U.S. Postal Service has bought millions of protective masks for its 700,000 mail handlers to wear, but workers can't use them, at least not yet. The Washington Times says the Occupational Safe and Health Administration requires workers to undergo hours of instruction and pass a so-called fit test before they may use the masks.”

(Source: <http://www.foxnews.com/story/0,2933,38076,00.html>)

Further, we have the problem with antibiotics. There is no data supporting the use of long-term courses, for example taking tablets for 60 days:

“SPERRY: Yes. Cipro is safe in the -- in -- relatively safe, I mean, for the most part, for a seven- to 14-day course of treatment, but there's no studies on a 60-day therapy. I mean, there has been no clinical studies for anthrax for 60 days, and we've basically got -- 20,000 Americans are running around like -- basically 20,000 guinea pigs right now. We don't -- really don't know what the side effects, the reaction, to being on a 60-day dosage is going to be.”

(Source: <http://www.foxnews.com/story/0,2933,37626,00.html>)

I am currently reading a book entitled “Biological Weapons and America’s secret War GERMS”, in which William Capers Patrick III, former head of research at Fort Detrick, Maryland, says the following:

“The natural defences of the human respiratory tract, ranging from hairs in the nose to cilia along the windpipe, easily block large particulars. But small ones zip right by. Inside the lung, multiplying in moist tissues, a single invader could produce millions of offspring.”

To me, this means that we need the highest possible level of protection we can get. This in turn means that we really need SE400AT with P4 filters if we want to be absolutely sure that we will not get any biological contaminants into our airways and lungs.

As we can see, it looks like a lot of guesswork and, of course, this entire situation is a new experience for everyone involved. I am sure that there are lots of politicians and policymakers today who are regretting the lax attitude towards the threat of weapons of mass

destruction (WMD). The long-term benefit for the respiratory protective equipment society is that now there is a lot of focusing on this, and we need to ensure that we advise our customers objectively, responsibly and — above all — correctly. We must not recommend protection unless we are certain that we are giving the correct advice.

Regards,

Goran Berndtsson