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Notes	
Publ as	

Possible scenarios

(in theory.)
Virtually any infectious organism could be used as a biological weapon by those intent on conducting terrorist activities. Very few organisms, however, are sufficiently ^{virulent and} easy to and distribute)

produce in large quantity so as result in an epidemic which could overwhelm our medical and public health resources, ~~and even the integrity of our administration.~~
(Even fewer have the potential to cause a city-wide or even a national catastrophe.)

The fact is that there is a ^{reasonably} ~~surprisingly~~ high level of tolerance of disease in ^{our} the populations.

^{a few years ago,} For example, the city of Milwaukee experienced ^{a diarrhea} epidemic caused by Cryptosporidia in the drinking

water. Some 400 000 cases are estimated to have occurred but the epidemic was not even suspected

until the pharmacies experienced an acute shortage of a popular anti-diarrhea drug. Likewise, epidemic

influenza can result in hundreds of thousands of cases in a city over a short period of time but, except for

a higher than usual degree of absenteeism, the business of the city continues, usually without interruption.

Indeed, food borne outbreaks involving ^{as many as} hundreds of persons ^{are} often ~~usually~~ discovered only by chance and ^{can} ~~are~~

^{largely} be and undoubtedly are undetected.

The question as to what organisms ^{might be utilized} ~~are used~~ is as to cause an epidemic of such severity that

it ^{warrants} ~~warrants~~ ^{making} ~~making~~ advanced preparations in ^{planning, i.e.} training, and in creating special stockpiles of drugs and vaccines.

In 1994, one such list was provided by a group of Russian bio weapons scientists to

a committee of our National Academy of Science - leading the list was smallpox, followed by anthrax

and plague. Each of these organisms is now known to have been ^{weaponized and} produced in the Soviet Union in multi-ton quantities.

A more recent review by a Working Group convened at our Johns Hopkins Biodefense Center and involving expertise from

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across government and academic identifies 5 organisms and a diagnostic class ^{of special significance} each of ~~which~~ ^{these} has the

potential to produce a catastrophe of unprecedented proportions. The two most serious are smallpox

and anthrax.

What might be the scenarios following release of either of these ^{as biological} weapons ^{as} a fine particle aerosol? ^{naturally occurring}

With smallpox, we can ~~only~~ ^{only} surmise what might occur based on [epidemic experience]; with anthrax, there

was an accidental release in Russia in 1979 which is instructive. ~~What follows then~~ I will review briefly

^{with you} Two smallpox outbreaks and the anthrax ~~was~~ epidemic in illustration of the problems we might face.

First - what is the nature of the disease, smallpox

① ② ③ ④ →

Meschede

⑤ ⑥ ⑦

Yugoslavia

⑧ ⑨

Epidemic scenarios - involving just 50 cases.

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- Spread of disease
 - Immunity
 - Suspect cases
 - Isolation.
 - Vaccine

Airwrap

(11) (12) (13)
~~(11)~~ ~~(12)~~

Prevention: Antibiotics; vaccine.

www.hopkins - bio defense.org.

SUMMARY

U.S. - we identify as our most important initiative the development of an integrated public health and medical plan capable of ^{the earliest possible} ~~early~~ detection and diagnosis of the problem; plans to respond appropriately to drugs/vaccines/care of those who are ill / a research program devoted to better prevention, therapy, diagnostics. ~~that the past 20 years the~~ ^{the} medical and public health community has ~~not~~ been almost totally uninformed and uninvolved. That has changed significantly but still inadequately.

1st Natl. Conf. on Prot. for medical & public health community in Feb. this year. - published in Emerging Infectious Diseases on the WEB SITE.

Budget for HHS $\$11 \times 10^6 \rightarrow \$150 \times 10^6 \rightarrow 230 \times 10^6$.

EDC / NIH

The preparation makes practical good sense for other reasons.

If we are well-prepared for a bioterrorist event, we will be far better able to deal with the challenge of new and emerging infections which ^{was} ~~has~~ so prominently featured in the conference last week.

Steps in prevention
 what resolution

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SLIDE

SLIDE

There is much to be done if we are to deal with these two diseases let alone the others of greatest concern. As we looked at the problem we saw to be ~~the~~ ^{first, an analysis of the threat posed by different agents to identify those}

What ~~has been~~ needed as an initial step was ~~the identification of the effects~~ ^{of primary concern} and to ~~the~~ shape

an appropriate strategy in response. Beginning one year ago, a Working Group comprised of experts both

within and outside government convened at our ~~Johns Hopkins~~ ^{Johns Hopkins} Center for Civilian Preparedness and proceeded to develop

consensus documents pertaining to each of the major agents ^{so identified}. These represent, if you will, the basic foundation

stones for crafting ~~both~~ an appropriate response. The papers are being published in the Journal of the A-M-R ^{and one on WSA 672}

(which goes to some 400,000 persons) and is available on its Web ^{site} ~~site~~. ^{authors} The paper on ~~anthrax~~ was published in May; as

an on-line paper in June; the one on plague will be available early next month - to be followed by bot tox,

hemorrhagic fever and hantavirus.