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Welcome to the CPC Outreach Journal. As part of USAF Counterproliferation Center's mission to counter weapons of mass destruction through education and research, we're providing our government and civilian community a source for timely counterproliferation information. This information includes articles, papers and other documents addressing issues pertinent to US military response options for dealing with nuclear, biological and chemical threats and attacks. It's our hope this information resource will help enhance your counterproliferation issue awareness.

Established here at the Air War College in 1998, the USAF/CPC provides education and research to present and future leaders of the Air Force, as well as to members of other branches of the armed services and Department of Defense. Our purpose is to help those agencies better prepare to counter the threat from weapons of mass destruction. Please feel free to visit our web site at www.au.af.mil/au/awc/awcgate/awc-cps.htm *for in-depth information and specific points of contact. Please direct any questions or comments on CPC Outreach Journal to Lt Col Michael W. Ritz, ANG Special Assistant to Director of CPC or Jo Ann Eddy, CPC Outreach Editor, at (334) 953-7538 or DSN 493-7538. To subscribe, change e-mail address, or unsubscribe to this journal or to request inclusion on the mailing list for CPC publications, please contact Mrs. Eddy.*

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Germany: Police search apartment of Sudanese national for explosives

BBC Monitoring Service - United Kingdom; Dec 30, 2001

Text of report by German news agency ddp
Hamburg: Officers of the Hamburg Office of Criminal Investigation searched the apartment of a 33-year-old Sudanese citizen in Hamburg on Sunday [30 December]. The apartment had been stormed by members of the Mobile Task Force (MEK) after an anonymous tip-off, a police spokeswoman announced. According to the tip-off, the Sudanese is allegedly producing explosives and biological weapons in his apartment. Unknown material was found there and removed amid tight security measures after the police operation. Some 50 officers were involved in the raid, the police stated.
Source: ddp news agency, Berlin, in German 1855 gmt 30 Dec 01
/BBC Monitoring/
http://globalarchive.ft.com/globalarchive/article.html?id=011230002162

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Defense Daily
January 4, 2002
Pg. 1

Nuke Review To Remain Classified For Now, Pentagon Considers Public Release

By Hunter Keeter
The Pentagon's nuclear forces posture review, which was submitted to Congress Dec. 31, outlines "significant change" to U.S. strategic capabilities, the details of which are to remain classified for now, according to Defense Secretary Donald Rumsfeld.
"We are releasing it [the nuclear forces posture review] to the Congress and it is classified," Rumsfeld yesterday told reporters during a briefing at the Pentagon. "I have asked our folks to see if we can take that classified version and declassify it, find some way to do what we have to do to it so that it is available...I think [the review] is an important document, it is a significant change in U.S. offensive nuclear weapon approach, and it is a different strategy. Because of its importance and because of the new direction it takes, I think it belongs in the public in some form. We are working on that."
He offered no further details as to when an unclassified version of the report could be prepared.
Predictions about the contents of the review include expectations that more strategic weapons would be cut by the administration beyond those weapons cut in existing treaties with the former Soviet Union. According to Under Secretary of Defense for Policy Douglas Feith, the United States is likely to authorize further unilateral reductions in its offensive nuclear force structure as a result of the nuclear forces posture review (Defense Daily, Sept. 5).
Rumsfeld yesterday emphasized that the nuclear forces posture review included "deep reductions" to strategic forces. According to Feith, further cuts to strategic forces would be in addition to unilateral proposals already on the table to retire the Peacekeeper ICBM force, to reduce and consolidate the Boeing [BA] B-1 bomber fleet and to cut from the Navy's Trident ballistic missile submarine force.
Changes to the strategic weapons policy could have an impact on a number of firms, such as TRW [TRW], Lockheed Martin [LMT] and others who play key roles in the development and maintenance of weapons, as well as the management of the fire control and tracking networks that govern the use of the stockpile.
Among the military programs that could be influenced by the nuclear forces posture review is the Navy's plan for the conversion of up to four Trident ballistic missile-carrying submarines into SSGN-guided missile boats.
While the conversions would cost several billion dollars, they provide a new lease on life for assets that otherwise would be scrapped as a result of existing weapons treaties, according to the Navy.
The Navy has money in its budget to convert two Ohio-class submarines to the SSGN configuration but wants more to add the last two boats to that schedule.

The Navy is expected later this month to make a decision on the combat system that it will buy to replace the one currently managing the Lockheed Martin-built Trident missiles now on board.
SSGN's fire control and combat system would have to be reconfigured to handle the launch of multiple conventional missiles, such as Raytheon's [RTN] Tomahawk cruise missile, for strike missions. Lockheed Martin, Northrop Grumman [NOC] and General Dynamics [GD] are vying for the combat system award.

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Washington Times
January 4, 2002
Pg. 9

Inside The Ring

By Bill Gertz and Rowan Scarborough

Failed DF-31 test

China's military yesterday carried out an unsuccessful launch test of a re-entry vehicle for its newest long-range missile, the Dong Feng-31, according to U.S. officials.
The test was monitored from the missile and space launch center in central China to its planned impact at the remote Lop Nur test range in northwestern China. The launch took place at 7:15 p.m. Chinese time yesterday (7:15 a.m. EST)
It is not known what data the Chinese military obtained from the test of the new re-entry vehicle, the last stage of a long-range missile, because the booster blew up in midflight, the officials said.
"It got off the ground, but there was a midflight explosion," said one official. "They were testing a re-entry vehicle and used a space launcher [as the booster]. Obviously, this was a setback for them."
The DF-31 is a road-mobile intercontinental ballistic missile in the late stages of development. The weapon is believed to contain U.S. missile technology and warhead secrets obtained through illegal technology transfer and espionage.
The Justice Department is still investigating two U.S. satellite makers, Loral and Hughes, on suspicion of illegally providing sensitive U.S. missile technology for China's Long March space launcher. It could not be learned if the booster used in yesterday's re-entry vehicle was a Long March rocket.
The DF-31 has been successfully flight-tested several times and is part of China's aggressive strategic nuclear-modernization program. The missile has a range of up to 6,000 miles, and a longer-range variant, the DF-41, also is being developed.
The missile test comes at a time of heightened tension between India and Pakistan, China's ally. In the past, Beijing has used missile tests to send political signals to foes.

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Christian Science Monitor
January 4, 2002

Russia Remains Skeptical Of Paperless Disarmament

Moscow hopes for a new document this year to replace the discarded ABM Treaty.

By Fred Weir, Special to The Christian Science Monitor

MOSCOW - Russia's relations with the US are warmer than at any time since World War II, but experts here are warning that the new partnership could easily founder upon a piece of paper - or the lack of one.
As Washington sketches out its terms for a new world security order, Kremlin leaders are anxiously waiting to see where Russia fits in. President Vladimir Putin has signaled to George W. Bush that he may be prepared to accept America's leadership and even much of its global agenda. But everything hinges on an as-yet unresolved debate. Russia expects to receive a seat at the Western table, one rooted in solid documentation, whereas the US has indicated a preference for ad hoc relations unencumbered by the ponderous legal protocol of the past.

“So far there are just two presidents who have talked pleasantly together, which is a very good thing,” says Oleg Naumov, a member of the foreign affairs commission of the state Duma, the lower house of parliament. “But presidents come and go. Treaties last. Today there is a legal vacuum in the world, and it must soon be filled with something reliable.”

Late last year, the US announced its unilateral withdrawal from the 1972 Anti-Ballistic Missile Treaty, which Russia has always regarded as the keystone of nuclear stability. Mr. Bush has argued that the accord was a “cold war relic” binding America’s hands in a time when terror threats underscore the need for missile defense.

In general, the Republican administration believes that arms-control treaties are unnecessary impediments between friendly nations.

Kremlin view

Instead of an anticipated storm of displeasure from Moscow, Mr. Putin reacted calmly to the US announcement, calling it “a mistake” but agreeing that it does not immediately compromise Russia’s security. “Putin is very flexible, and he reflects a willingness to come to a whole new deal,” says Alexander Kaladin, an expert with the semi-official Center for Disarmament Issues in Moscow. “But the bottom line is that we expect the ABM Treaty to be replaced with something that is suited to the new times. Russia is waiting.”

The Kremlin hopes to nail down at least two new treaties this year, experts say: First, the verbal deal between Putin and Bush to slash strategic nuclear missile forces to about 2,000 warheads should be codified as a set of mutual legal obligations, complete with a mechanism for verification. Second, the Kremlin wants a new document regulating the relationship between offensive and defensive weapons, to replace the ABM treaty, perhaps by the time of Bush’s planned mid-2002 visit to Russia.

“If the old treaties were outdated, then let’s replace them with relevant ones,” says Mr. Naumov. “But we must have firm controls on the number of strategic weapons, and that must be clearly balanced with the development of antimissile weapons. You cannot assure global stability just on the basis of a handshake.”

Many Russian experts recall an earlier period of flux in big power relations in the mid-1980s, when Soviet leader Mikhail Gorbachev was calling for sweeping reductions in nuclear arsenals and an end to the 40-year cold war standoff. At the time, US President Ronald Reagan rebuffed Soviet disarmament fervor by citing the old Russian proverb, “Doveryai no proveryai” - trust, but verify.”

“That was just straight wisdom, which applies at all times,” says Sergei Kazyonnov, an analyst with the Institute of National Security, an independent Moscow think tank. “People in Moscow are sure the U.S. will reassess its own interests, and we will get a new process of arms control.”

Russian leaders fear that once the international war on terrorism winds down, the US may lose interest in negotiating with Russia. But an even bigger worry is that Russia’s military brass, political elite and public will turn against Putin’s Westward-tilting policies if they see no solid results.

“Russian propaganda and diplomacy have been shouting for years that the ABM treaty was untouchable,” says Andrei Piont-kovsky, an independent political analyst. “Putin has made a brave U-turn and taken a new course. But to the people it looks like a betrayal of Russia’s national interests and values, because that’s what they’ve always been told.”

Ties with the West

In the long run, Putin hopes that by drawing Russia into the Western system, it will become linked by a million threads of commerce, investment, shared perceptions, political cooperation, and personal relations. But his policies may need help to survive in the short haul.

“Bush always makes the point that the US needs no arms control treaties with Britain, or France, because they are friends. But this argument cannot work when we’re talking about Russia,” says Alexander Konovalov, director of the Institute of Strategic Assessments, an independent think tank. “For Russia, the strategic relationship is not just a cold war relic. It remains the basic way we define our position in the world. Without giving it a reliable new legal shape, we’ll continue to have trouble integrating with the West in every other way.”

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New York Times
January 4, 2002

Profile Of A Killer

By Nicholas D. Kristof

I think I know who sent out the anthrax last fall.

He is an American insider, a man working in the military bio-weapons field. He's a skilled microbiologist who did not aim to kill anybody or even to disrupt the postal system. Rather, he wanted to sow terror. Like many in the bio-warfare field, he felt that the government was not sufficiently attuned to the risks of anthrax, so he seized upon the opportunity presented by Sept. 11 to get more attention and funding for bio-terror programs like those that have been his career.

How do I know all this? Well, I don't exactly. But talk to the people in the spooky world of bio-terror awhile, sop up the gossip and theories, and as you put the clues together -- as bio-terror experts and F.B.I. officials are now doing -- a hazy picture seems to come into focus. It's not a certainty but an educated guess, circulating among many who know their business.

"I think there are on the order of 100 people who could have done it, who have the access to the spores and the technical expertise to have done it," says one man with long experience in the shadows of the United States bio-defense program. "I've got to admit that I could be a suspect. I've been interviewed by the F.B.I."

The emerging image of the killer that many of the experts see (but not all; anthrax experts agree about as much as economists do) is precisely the opposite of the perpetrator whom we initially imagined. Our first impulse when catastrophes happen is to look for foreigners to round up, as we did after the Oklahoma City bombing and after the crash of Flight 800. The Bush administration tried hard to find evidence to pin the anthrax attacks on Iraq.

In fact, many experts believe that the killer is tied to the American bio-weapons program because the anthrax he sent out is genetically identical to the anthrax kept by the United States Army. A microbiologist named Paul Keim is helping the authorities compare the genetic fingerprint of the mailed anthrax, and every indication is that it derives at least indirectly from the mother lode of the military strain, kept at Fort Detrick, Md.

The mailed anthrax is also astonishingly pure and equivalent (in spore size and concentration) to the best the American Army ever achieved. Making anthrax in a dry powdered form of this quality is difficult, and beginning in 1959 took 900 workers in the "hot" area of Fort Detrick years of effort (and two accidental deaths, including that of an unlucky electrician who changed light bulbs at the wrong time). Thus it seems that the murderer had access not only to the American military germs but also to some knowledge of the American military method of preparing it in its dry form.

Why do specialists agree that the murderer was not trying to kill anybody? Because he taped the envelopes tightly, and as of September nobody expected that the spores could leak through envelopes. Moreover, each of the letters that has been recovered announced that the substance was anthrax and advised the recipient to take antibiotics.

"I don't think that he was trying to kill anybody," said Barbara Hatch Rosenberg, a microbiologist who has studied the attacks for the Federation of American Scientists. "I think the motive was to create public fear, to raise the profile of biological warfare."

The F.B.I. may already have talked to the killer. There are not that many people with the access to germs, the knowledge and an anthrax vaccine booster shot in the last year. But the murderer showed a knowledge of forensics (apparently not licking a stamp or envelope, for example, to avoid leaving DNA), and it may be very difficult to move from suspicions to sufficient proof for an arrest.

Washington has been pressing Russia, Pakistan and other countries, quite rightly, to improve their control of germs, chemicals and nuclear weapons. But one of the lessons of the anthrax investigation is that the first thing we need to do to feel safer is put our own house in order. It is appalling that we cannot even determine which labs have exchanged anthrax with Fort Detrick.

Terrorism and laxity, it seems, afflict not only foreigners with different complexions and religions, but --in exceptional cases -- perhaps also those with white lab coats and military haircuts.

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Christian Science Monitor
January 4, 2002
Pg. 1

A Big Test Of Nuclear Deterrence

Atomic arsenals defuse S. Asia tensions - so far.

By Peter Grier, Staff Writer of The Christian Science Monitor

WASHINGTON - The current crisis in South Asia has been profoundly affected by the mere presence of India's and Pakistan's nuclear arsenals.

Fighting may yet erupt over the disputed territory of Kashmir, despite the specter of possible escalation to atomic war. Indian officials, in particular, have vowed that their large conventional forces will not remain paralyzed by the threat of Pakistan's cache of nuclear bombs.

But to this point, the fact that the two adversaries are now nuclear-capable appears to have to slowed down events, as leaders in New Delhi and Islamabad gauge each other's response.

"Both sides now show great cognizance that there are nuclear dangers and that they have to be extremely careful," says George Perkovich, author of a study of India's nuclear program and fellow at the Carnegie Endowment for International Peace.

If not for the knowledge of the nuclear dangers, Indian forces on the border might have already crossed into Pakistani-controlled Kashmir, judge other experts.

Thus, for Pakistan, nuclear deterrence has worked, at least for the short term. Whether that continues, and what happens if it does not, remains to be seen.

"I know it goes against all nonproliferation theory, but I believe the presence of nuclear weapons [in the region] has actually made things better, for now," says Sumit Ganguly, a South Asia expert at the University of Texas at Austin.

The possibility of an uncontrolled India-Pakistan war over Kashmir has long been a nightmare scenario for Western non-proliferation experts. It represents the most likely set of circumstances they can think of that could lead to the use of a nuclear weapon in anger.

The human toll of such an attack would be unthinkable. India has more than 1 billion people, and Pakistan nearly 150 million. Just one weapon detonated over Bombay could cause 850,000 casualties, according to a recent study.

And in recent years, India and Pakistan have engaged in worrisome rounds of nuclear bluster.

In May, 1998, India conducted what it described as five nuclear tests in the northwestern desert state of Rajasthan. The tests were India's first since 1974, and ended a careful stance of ambiguity regarding the nation's possession of nuclear weapons.

Three weeks later, Pakistan conducted six nuclear tests in its southwestern region. The point: we can do it, too.

The United States and the Soviet Union also engaged in such nuclear showmanship, particularly at the beginning of the cold war. But the superpowers' capitals were not three or four minutes of missile flight time apart, as are New Delhi and Islamabad.

Nor did superpowers' troops ever fire directly on each other in an extensive hot war. India and Pakistan now have tens of thousands of troops facing each other across their mutual border, mobilized since a Dec. 12 attack on the Indian Parliament, which India blamed on Pakistan-based Kashmiri terrorist groups.

Tensions have eased a bit in recent days, as both sides have suggested diplomacy could end the crisis.

"War is not a must," said Indian Prime Minister Atal Behari Vajpayee prior to leaving for a regional summit yesterday in Nepal.

India's nuclear-weapons program began in earnest after its defeat in a 1962 border war with China. Since then, much of its arsenal has been developed as a counterweight to Beijing, as much as a deterrent to Islamabad.

Today, India has a small stockpile of nuclear-weapon components, as opposed to assembled, at-the-ready weapons, according to the CIA. It could assemble and deploy them within a few days or a few weeks.

"The most likely delivery platforms are fighter-bomber aircraft," writes Anthony Cordesman, a military expert at the Center for Strategic and International Studies, in a recent report. "New Delhi also is developing ballistic missiles that will be capable of delivering a nuclear payload in the future."

India has declared that it will not be the first to use nuclear weapons in the region. It has also expressed interest in obtaining a US-style triad of nuclear-capable aircraft, missiles, and submarines.

Pakistan's program, by contrast, is directed solely at deterring India. Its roots lie in the frustration of Pakistani officials at their defeat in a 1965 India war. Then-Foreign Minister Zulfikhar Ali Bhutto famously declared that Pakistan would match India's nuclear progress "even if we have to eat grass or leaves."

Experts estimate that today, Pakistan has anywhere from 24 to 48 nuclear weapons. US-made F-16s are the likely mode of delivery, although in 1998 it flight-tested a single-stage Ghauri-1 missile that is thought to be nuclear capable.

In 1990, amid tensions in Kashmir not dissimilar to those of today, US satellites detected a convoy of trucks leaving a Pakistani nuclear site and heading toward an air base, according to a New Yorker magazine article by the investigative journalist Seymour Hersh. American diplomats informed India of this development, and India pulled back its troops, according to the article.

Since then, Western experts have cast much doubt on this report. But it has become an article of faith among Pakistani hawks that their nuclear arsenal has provided useful deterrence against India.

Lending credence to their belief were Indian actions during the 1995 fighting centered in the Kargil area of Kashmir, in which Indian warplanes were careful never to cross into Pakistani-controlled territory.

This perception does not sit well in India. In the current crisis, Indian officials such as defense minister George Fernandes have gone out of their way to state that they believe Pakistan would not respond to a conventional attack with a nuclear one, as subsequent retaliation would be too devastating.
Says Mr. Perkovich of the Carnegie Endowment: “Some of the determination now in India is to show that they’re not afraid of war.”

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THE TIMES OF INDIA
SATURDAY, JANUARY 05, 2002

Anthrax scare in Mumbai post office

Packet with white powder sent for tests

MUMBAI: The city’s post office had an anthrax scare on New Year’s eve when two workers complained of giddiness, uneasiness and chest pain after handling a packet containing a pouch with white powder and a photo of Osama Bin Laden, police said on Wednesday.

The suspected anthrax powder pouch was on Tuesday sent to the Haffkine Institute for analysis. The preliminary results were expected on Thursday, sources at the institute said.

The two postmen were admitted to a hospital here. The postmen, identified as Abdul Aziz Maldaar (36), a resident of Vikhroli, and G K Wadekar (46), a resident of Dindoshi, were working at Camballa Hill post office and were admitted to the Nair hospital on December 31, hospital sources said, adding both of them were under observation.

Police said that a female postal worker came across a packet from which a photo of international terrorist Osama Bin Laden, and the pouch, were recovered.

She informed the two postmen about this, who tried to examine the packet, and in the process, a little amount of the powder spilled, police added.

Meanwhile, details of the addressee on the envelope were being investigated, they added.

However, Usha Baweja, Director of the National Institute of Communicable Diseases, told Times New Network that there was no information as yet about it. Of the 300-plus samples of white powder received earlier at the peak of the anthrax scare, all had tested negative, she added.

She also said though anthrax was an endemic disease in many parts of the country, there have been no reported cases of inhalation anthrax, which is the most deadly form of the disease.(TIMES NEWS NETWORK & AGENCIES)
http://www.timesofindia.com/Articleshow.asp?art_id=329856955

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U.S. Says It Bought Radiation Drug

1.6 Million Doses Are On Hand; Stockpile to Be Increased
By Justin Gillis
Washington Post Staff Writer
Thursday, January 3, 2002; Page A05
The federal government recently bought 1.6 million doses of a drug that protects against certain kinds of radioactive fallout and will buy at least 6 million additional doses in the coming year to create a large national stockpile, the Department of Health and Human Services said yesterday.

HHS had not announced its purchase of potassium iodide but did so yesterday after an article appeared in The Washington Post earlier this week in which some experts lamented the lack of a stockpile to deal with a possible terrorist attack on a nuclear power plant.
HHS received some deliveries of the drug last month and plans to buy more this year, said William Pierce, a spokesman for the agency. For security reasons, he said, the agency will not disclose where it plans to store the drug or how quickly it could be made available in the event of a nuclear attack.
“We are intentionally, for security reasons, trying to be as nonspecific as we can be about all this,” Pierce said. “This is part of our strategy of being as ready as possible to respond to any contingency.”
The HHS move comes as activists press state and local governments to create their own stockpiles. The drug is useful if taken within a few hours of exposure to radioactive iodine, one of the products of a nuclear reactor. The drug floods the thyroid gland, the most radiation-sensitive part of the body, with a safe form of iodine and prevents absorption of the radioactive kind.
The Nuclear Regulatory Commission has agreed to pay for state stockpiles, but many state experts remain skeptical about their value, saying evacuation and sheltering people would be better responses to a nuclear attack.
The HHS move will mean, however, that there’s a large national stockpile available somewhere in the country that could be deployed in an emergency, fulfilling a pledge the federal government made 22 years ago, after the Three Mile Island nuclear accident.
“Anything that gets us closer to having it available is a good thing,” said David Becker, an expert with the American Thyroid Association.
The HHS action follows repeated focus on the issue in Congress recently. Lawmakers such as Rep. Edward J. Markey (D-Mass.), a longtime proponent of the drug, won legislation in the House that would encourage the creation of stockpiles near nuclear plants.
http://www.washingtonpost.com/wp-dyn/articles/A53971-2002Jan2.html

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THE TIMES OF INDIA
TUESDAY, JANUARY 08, 2002

Preliminary tests negative for anthrax

PTI [THURSDAY, JANUARY 03, 2002 5:08:33 PM]
MUMBAI: Preliminary tests at Haffkine Institute have shown that spores contained in an envelope found at Cumballa Hill post office here were not that of dreaded anthrax, the institute director Dr S M Sapatnekar said on Thursday.

“Preliminary tests have convincingly showed that spores are unlikely to be that of anthrax,” Sapatnekar said after conducting tests on the powder, which after being inhaled by two postmen, had caused giddiness, uneasiness and chest pain to them.

“The anthrax germs do not consume blood, but when these spores were cultured there was a bacterial growth eating away the blood part,” Sapatnekar said.

“It is by deduction formula that we are ruling out presence of any anthrax spores from the envelope,” he said, adding, that confirmed results would be known only by Friday evening.

The postmen, Abdul Aziz Maldar (36) and G K Wadekar (46), who were admitted to Nair Hospital for medical treatment on Monday, have been discharged, hospital sources said.

Sources at Cumballa Hill post office said the incident occurred when the mysterious pouch was discovered by a colleague, who was sorting out mail on December 31.

She brought it to the notice of other employees, who began to examine the pouch when a photograph resembling Saudi fugitive Osama Bin Laden suddenly fell out along with the powder, which the duo inhaled, sources said.
http://www.timesofindia.com/Articleshow.asp?art_id=1705869734

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Bioterror fears prod warning systems

January 6, 2002 Posted: 10:36 AM EST (1536 GMT)

NEW YORK (AP) -- Nowadays, hospital workers tracking disease outbreaks send data over a system cobbled from a jumble of telephones, faxes and computers that can't talk to each other.

With the anthrax mailings jolting experts to the inefficiency of these methods, movements are afoot to try to establish a single nationwide early-warning network.

"In some cases we're talking about installing computers in places for the first time. They're still reporting by paper and pencil," said Elin Gursky of the Center for Civilian Biodefense Strategies at Johns Hopkins University.

At the moment, the United States has no single nationwide system to alert health and emergency officials of a fast-moving epidemic or biological attack.

The release of a pathogen -- such as pneumonic plague or anthrax -- might go unnoticed until hospital patients start showing similar symptoms that could resemble common flu.

If such an agent were released at, say, a professional convention, delegates could fly home before falling ill. With victims spread across the country, tying them to a common event could take days, said Ben Venzke, chief executive of Virginia-based IntelCenter, a private firm focused on terrorism.

"They all get symptoms. But only one or two present them at the same hospital," Venzke said. "It's going to be very hard to understand that it's a big problem. There isn't a good system to share that kind of information."

In Colorado in 2000, participants in a bioterrorism response drill found their biggest problems dealt with sharing information about a mock plague epidemic that "killed" more than 400 virtual victims.

'21st century technology' needed

For now, the focus is on improving networking technology in the 3,000 federal, state and local public health offices and labs, linchpins of testing and information dissemination. The labs have been notoriously underfunded, experts say. Some even lack computers and send disease reports by mail.

"We have hospitals doing hand-tallies of rashes and unexplained fevers. A lot of this is done on paper," Gursky said. "We're talking about basic processes that we have to expose to 21st century technology."

Experts who toil at the intersection of health and information technology say the answer should be a universal network linking hospital computers that store patient data with machines at state health department offices, as well as the federal Centers for Disease Control and Prevention -- and perhaps police, emergency responders and even the military.

The network should include the capability to trigger automatic warnings of events that appear related to a biological attack. This could mean a leap in respiratory illness in a city, a spate of flu symptoms, or even a run on Pepto Bismol.

A few existing warning and surveillance networks are being built, but none yet has the nationwide reach needed to serve as an official national emergency channel, similar to the U.S. Civil Defense radio broadcast channel used in the 1950s and 1960s.

The CDC's Health Alert Network, a communications backbone linking public health departments in 37 states to CDC headquarters in Atlanta, is being expanded nationwide. But the system, still in its early stages, does not link to individual hospitals -- or link hospitals to each other. Nor does it contain a real-time database or automated alert system.

The CDC network aims to ensure that all health departments have the Internet access required to send and receive alerts on disease outbreaks and other information.

"It isn't direct or fast enough," Gursky said. "If you really want to alert a community, you need to build not just vertical, but horizontal information flows."

Gursky and others say the CDC is also slowed by its dependent relationship with state health departments.

The CDC is also building out its National Electronic Disease Surveillance System, an Internet-linked database network. The system, which is not yet functioning, is supposed to track emerging outbreaks by allowing analysts to search and map disease reports and lab results provided by state and local health departments.

The CDC has funds to connect all states to the surveillance system in 2002, said Dr. Claire Broome, a CDC information systems adviser.

Reporting not always a priority

Another system, overseen by the Air Force, is already in place in some two dozen military and civilian hospitals. That network, called the Lightweight Epidemiology Advanced Detection and Emergency Response System -- better known as LEADERS -- can send fast, automated alerts by scanning electronic records for clues to a disease outbreak. Emergency responders get alert messages on pagers, cell phones or e-mail accounts.

But LEADERS has its drawbacks.

It requires health officials to fill out an additional form, rather than sucking data directly from an existing computerized system.

"Getting health care providers to report is a difficult thing to do. If there's a doctor dealing with people bleeding and dying, it isn't something they make a priority," said Dr. Tracee Treadwell, an epidemiologist who heads the CDC's bioterrorism surveillance efforts.

And although its proponents say LEADERS is the ideal platform for a nationwide alert system, Treadwell said it is more useful for "drop-in surveillance" -- monitoring an event for evidence of a bioterrorist attack.

It saw use in New York City after the September 11 terrorist attack, as well as at last year's Super Bowl in Tampa and the 2001 World Series games in Phoenix. The system will be used to monitor health data during the 2002 Olympics in Salt Lake City, said Oracle Corp.'s Brian Jones, who oversaw creation of its database.

Since October, military think-tank RAND has hosted talks aimed at creating a national bioterror warning system that would go far beyond current networks. The system would enable communication among disparate health care computer systems that currently don't talk to each other. It would also tie them to law enforcers, emergency workers and even the military.

The recent anthrax mailings prompted a flurry of federal funds aimed at bioterror preparedness and upgrading the country's early warning system. Last month, Congress passed a $3 billion bioterrorism bill with about half its funding earmarked for public health labs and the CDC.

"It would be difficult and pompous for me to say that we are well prepared," said the CDC's Treadwell. "Do I think that if something happens we'll know about it tomorrow? Maybe. Probably."

http://www.cnn.com/2002/HEALTH/01/06/warning.bioterror.ap/index.html

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More Counterterrorism Training Sought

The Associated Press, Fri 4 Jan 2002

WASHINGTON (AP) — Attacks using deadly chemicals occur almost daily at an old Alabama fort. Large quantities of hazardous materials spill regularly at the Nevada site where nuclear weapons once were tested.

These workshops of horror and others like them in Louisiana, New Mexico and Texas are the nation's principal training grounds for responding to chemical, biological and other terrorist attacks on U.S. soil. But they train just a small fraction of the police, fire and other emergency workers who would be the first to respond if disaster strikes.

Congress has voted to triple the budgets of the five training centers that form the Justice Department's National Domestic Preparedness Consortium, up to $145 million, said David Hess, a Justice Department spokesman. And the Bush administration plans to ask for more money next year to train "first responders," said Gordon Johndroe, spokesman for Homeland Security chief Tom Ridge.

Nevada officials are pressing to have a much larger mission for the center at the Nevada Test Site, where nearly 1,000 nuclear weapons were detonated before such tests were banned in 1992. They say the existing barracks and other buildings at the vast site, coupled with its remoteness, make it an ideal place for large-scale training.

"The goal is that every community across the country has the ability to respond to terrorist attacks and knows what to do," said Nathan Naylor, spokesman for Sen. Harry Reid, D-Nev. "A lot of firefighters, police and medics are

right now only bravely prepared to step into harm's way without having the tools or skills to survive."

The Bush administration is so far noncommittal, but interested. Two Cabinet members — Ridge and Energy Secretary Spencer Abraham — will visit the site separately next week.

Abraham's visit could be double-edged for Nevada, since the government also is considering using another portion of the site, Yucca Mountain, as the burial place for 77,000 tons of spent nuclear fuel. Abraham's recommendation to President Bush is imminent, and Nevada officials who uniformly oppose the proposal are bracing for the worst.

The Center for Domestic Preparedness in Anniston, Ala., is the only facility where drills can be held using actual deadly chemicals. With the budget increase, the center will be able to accommodate its capacity of 10,000 participants a year. A nearby mock hospital, run by the U.S. Public Health Service on the site of the former Fort McClellan hospital, also trains doctors, nurses and hospital officials to respond to attacks.

The other centers are at Louisiana State University, the New Mexico Institute of Mining and Technology and Texas A&M University.

While some of the training involves mock disaster drills, other programs are less exciting classroom sessions. Since 1998, 77,000 "first responders" from 1,355 communities across the country have received some training, Assistant Attorney General Deborah J. Daniels told a Senate committee in October. That's a tiny fraction of the nation's 11 million police, fire and emergency workers.

In addition to the training run by the Justice Department, State Department officials are seeking money to open a counterterrorism training school for foreign law-enforcement officers and diplomatic security workers. It would be at the Aberdeen Proving Ground in Aberdeen, Md.

Sen. Robert Byrd, D-W.Va., meanwhile, was able to set aside $2 million in seed money to begin work on a training center for homeland security and bioterrorism at a West Virginia National Guard facility.

But for any large-scale programs, Naylor said, the Nevada Test Site is the most economical solution, a point Reid has been making regularly with administration officials.

"Unless you want to spend millions on buildings and everything else you'd need, there's no other place in the country ready to go," Naylor said.
http://www.worldnews.com/?action=display&article=11223054&template=worldnews/search.txt&index=recent

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A Biodefense Boondoggle

As pharmaceutical companies line up for multimillion-dollar contracts to make bioterrorism vaccines, some question whether the industry is up to the job.
by Bill Hogan January/February 2002

On October 17, 2001, almost two weeks after Robert Stevens died of pulmonary anthrax at a hospital in West Palm Beach, Florida, the Bush administration unveiled its plans to build up, in a big way, the National Pharmaceutical Stockpile—the drugs, vaccines, chemical antidotes, antitoxins, and other medical supplies that are kept at the ready to respond to large-scale bioterrorist attacks. The White House asked Congress for more than $1.1 billion in emergency funds to expand the two-year-old program, and some lawmakers were soon talking of increasing that amount to as much as $10 billion. Little wonder that many of the nation's pharmaceutical companies, aided by their Washington lobbyists, have been angling for seats aboard what one industry critic calls "another gravy train to cash in on some big government contracts."

But the pedal-to-the-metal push to stockpile vaccines has left some lawmakers and public-health advocates questioning whether Washington may be throwing good money after bad. Exhibit A in the debate has been BioPort Corporation, the nation's sole manufacturer of anthrax vaccine. Since 1998 the Defense Department has pumped more than $130 million into BioPort, a small, privately held company in Lansing, Michigan, in hopes of stockpiling enough vaccine to protect all 2.4 million U.S. soldiers and reservists against anthrax. The Pentagon has continued paying BioPort even though the company repeatedly failed Food and Drug Administration inspections and, as a result, was prohibited from shipping any vaccine.

One reason for the Pentagon's reluctance to cut BioPort loose may be the company's most prominent shareholder, retired Admiral William J. Crowe, who served as chairman of the Joint Chiefs of Staff in the Reagan and Bush administrations. Crowe received a 12.5 percent stake in the company, according to his spokesman, for lending his name and expertise. BioPort's CEO, Fuad El-Hibri, is a German-born businessman who has founded and operated a dizzying array of companies, including a Panama-based franchise operation called BurgerLand International. Last year El-Hibri and his wife each made $1,000 contributions to George Bush's presidential campaign, a gesture that was matched on the same day by three other BioPort executives. El-Hibri did not return calls for this article.

Late last year, Defense Secretary Donald Rumsfeld said the Pentagon was trying to help BioPort stay in business, but added that the contract "may not be savable." The department is now banking on a 10-year, $343-million contract with DynPort, a joint venture of defense contractor DynCorp and Britain's Porton International Ltd., to procure a variety of new vaccines for diseases including anthrax and smallpox.

On the civilian side, the vaccine stockpiling effort is overseen by the Department of Health and Human Services, which contracts with pharmaceutical companies. Industry officials have said they will need substantial subsidies to develop and produce vaccines. The first case of sticker shock for the department came in October, when several large drug companies submitted bids to make smallpox vaccine, with price tags up to four times higher than what the department had estimated.

Some critics warn that the industry simply may not be able to fulfill national security needs. In recent years, manufacturing problems at some companies and unexpected withdrawals from the market by others have led to shortages of vaccines for influenza, tetanus, pneumonia, and childhood meningitis. In November, a federal antiterrorism commission headed by Governor James Gilmore of Virginia called for the creation of a government-owned facility to develop and produce vaccines for certain dangerous diseases. "The private sector is unlikely to be the answer to some of the more difficult vaccine issues," the commission said in its report. Just days later, citing "the inability of the private sector to meet the country's needs for vaccines," the National Academy of Sciences' Institute of Medicine renewed its call for the creation of a federal agency to oversee the vaccine supply.

In the wake of last fall's anthrax attacks, such proposals have been gaining support on Capitol Hill. "The idea of saying, 'Let's contract with a private firm and let them do it,' that's misguided," Senator Tim Hutchinson (R-Ark.) said during a Senate hearing on bioterrorism in October. "There are certain things only government can do, and, in this case, the private sector has failed us terribly."

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Inside The Army
January 7, 2002
Pg. 1

Missile Defense Overhaul Complete; BMDO Made A Defense Agency

Defense Secretary Donald Rumsfeld last week approved a major restructuring of the Ballistic Missile Defense Organization that includes a name change and creates a leaner process for developing and fielding the Defense Department's missile defense programs.

The organization's new name is the Missile Defense Agency. DOD announced the management changes Friday (Jan. 4).

In November, sister publication Inside the Pentagon printed a draft copy of the memorandum Rumsfeld signed Jan. 2, which makes the changes official. According to a DOD statement, transforming BMDO into an agency "recognizes the national priority and mission emphasis on missile defense."

Jacques Gansler, the Pentagon's top acquisition official during the Clinton administration, told ITP in November that bestowing agency status on BMDO would give it "institutional permanence" within DOD. "I think this would be an elevation," Gansler said.
According to Rumsfeld's memo, other changes include shortening the amount of time decisions regarding missile defense programs are made, the establishment of a Senior Executive Council to provide oversight and fielding recommendations, and the using research and development assets operationally in certain emergency cases.
The draft memo placed a 10-day limit for management decisions on missile defense programs. In the memo Rumsfeld approved last week, that language is tempered; it now calls for making those decisions "as rapid as possible."
In their fiscal year 2002 conference report, House and Senate appropriators said they support DOD efforts to devise new management plans to integrate the various missile defense programs but cautioned against "implementing a management structure and related decision-making that limit adequate oversight of the program by the Pentagon's operational testing, financial and programmatic review groups."
-- Thomas Duffy

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Chemical & Engineering News
January 7, 2002
Odor Warfare

Stinky Bombs

The task of forcing the terrorist Osama bin Laden and members of his inner circle from the caves of eastern Afghanistan might have been easier had U.S. forces used bombs with odor power in addition to firepower. If a conventional bomb misses its target, that's it. Odors, on the other hand, permeate to areas distant from the source.
The idea is not far-fetched. The U.S. military already has asked the Monell Chemical Senses Center to formulate bad smells for potential application in dispersing crowds and in preventing entry to designated spaces. The odors are nonlethal. They are due to compounds that can be detected by humans at levels way below the concentration at which the compounds become irritants or health hazards.
The U.S. military is studying how to make weapons out of stinky odors that have been formulated at Monell. Tests carried out by Monell associate member Pamela Dalton show that these odors are potent in making people want to flee in disgust.
"People really hated these odors," Dalton tells C&EN. "As they smelled the odor, their heads would jerk back, and you could see the revulsion on their faces." Physiological monitoring shows that the odors induce shallow breathing, increased heart rate, and increased stomach motility, which is an early indicator of nausea.
In designing the bad-odor mixtures, Dalton says, "we homed in on biological odors because we thought those had the best chance of being recognized universally." Among them are the smell of rotting garbage, human waste, and burnt hair. Common ingredients of the mixtures are skatole and mercaptoacetic acid.

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Korea Herald
January 7, 2002

IAEA Officials To Visit Nuclear Laboratory In North Korea

By Hwang Jang-jin, Staff reporter
A delegation of the International Atomic Energy Agency (IAEA) will begin a week-long visit to North Korea Saturday to discuss Pyongyang's implementation of nuclear safeguard obligations, a Seoul official said yesterday.
Officials of the U.N. nuclear watchdog will visit an isotope production laboratory in the North's Yongbyon nuclear complex. They will also discuss measures to inspect other nuclear facilities, a South Korean Foreign Ministry official said.
The North offered to open the laboratory to IAEA inspectors during talks in Vienna early November.

Oli Heinonen, director of the safeguards department of the IAEA, will lead the delegation.
The U.N. officials are expected to discuss wider inspections of the communist country's key nuclear facilities, the official said.
The United States and the IAEA urged the North to allow inspections of used fuel rods from a 5-megawatt reactor and reprocessing facilities that could show whether North Korea has developed nuclear weapons.
The IAEA demanded that the North allow an early inspection of its past nuclear activities, which will last at least three to four years.
The North rejected the demand, insisting that it is only required to admit inspectors when a significant portion of a nuclear reactor construction project is completed, as defined in the 1994 Agreed Framework agreement.
The North froze its suspected nuclear weapons program under the 1994 accord with the United States in exchange for nuclear reactors producing less weapons-grade plutonium.
The $4.6 billion project was to be completed by 2003, but delays have pushed back the finish until at least 2008.

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Bloomberg.com
January 6, 2002

Satellite System For U.S. Missile Defense Delayed By Two Years

By Tony Capaccio
Washington -- The first early warning satellites for a U.S. missile defense will be launched two years later than planned, according to documents and defense officials.
The satellites are intended to be the eyes of the anti- missile system. Their full development was to start later this year, with the first of 30 satellites scheduled for launch in late 2005.
Edward Aldridge, the undersecretary of defense for acquisition, decided the timetable isn't compatible with developing "a credible missile defense system," his office said in a statement. The first launch now is set for late 2007.
The decision puts a roadblock in President George W. Bush's race to field an effective ground-based missile defense system by the end of his first term or early in a possible second term, said Steve Hildreth, a missile defense analyst for the non-partisan Congressional Research Service.
The satellites are supposed to detect, track and target enemy ballistic missiles from launch to descent and discriminate real missiles from decoys. "I don't see how they can deploy" an anti- missile shield without them, Hildreth said.
The system -- called SBIRS-Low, for Space Based Infrared System-Low -- "is critical to effective missile defense, especially for more sophisticated threats," said Jack Spencer, a missile defense analyst for the Heritage Foundation, a policy research group that supports building the system.
"One way or another it has to be integrated into the overall system -- but this should not put off the deployment of missile defense," he said.

'A Rudimentary System'

"A rudimentary system that gives the United States, its allies and its overseas troops some protection against missiles is better than none at all," Spencer said.
That rudimentary system is under development. It has ground- based radar, communications systems, missile interceptors and orbiting 1970s-era early warning satellites. It's had two consecutive intercepts in tests against simple targets -- and three successes in five attempts since October 1999.
While the Raytheon Co. ground-based X-band radar is designed to track missiles in mid-course and to distinguish decoys in some locations, it doesn't give the global coverage that the SBIRS-Low constellation provides. It also depends on radar in the U.S., the U.K. and Greenland that hasn't been upgraded for the job.

Nothing's Perfect

Hildreth predicted the administration would settle for this as a first step. "This is certainly consistent with what Defense Secretary Donald Rumsfeld has been saying, that the system doesn't have to be 'perfect'," he said.

Members of Congress who've been critical of plans for an anti- missile shield in the past may object, said Loren Thompson, a missile defense advocate and an analyst for the Lexington Institute, a Washington, D.C. research institute.
"SBIRS-Low is a core element of the administration's missile defense architecture, so if you delay it, then you delay missile defense," he said.
The two-year delay to get the technology on track "suggests some pretty fundamental problems," he said.
The Defense Department's Aldridge said in his statement "that the program is not executable to its current schedule under its current configuration. There are lots of factors that contribute to his conclusion."

Congress Cut Program

The U.S. Congress already has slowed down the SBIRS-Low program.
The Senate and House approved cutting $250 million from the $385 million requested for SBIRS-Low research in fiscal 2002.
The House Appropriations Committee recommended scaling back, saying current plans "represent a potential rush to failure which could take the country down a path of maximum cost and risk with marginal payoff."
The program's estimated final cost has grown to $23 billion from $10 billion in the last year. Aspects of that growth such as growing weight estimates for satellites and ballooning software code raise questions about the soundness of designs.
Representative Jerry Lewis, a California Republican who chairs the appropriations defense panel, said the low-orbit program might be canceled if no progress is shown.

Industry Stake

Two industry teams are competing in a preliminary design contest. The winner was supposed to be picked by December. TRW Inc.'s Space and Electronics unit is teamed with Raytheon Co. Motorola Inc. and Honeywell International Inc. The current preliminary design phase will likely continue through 2005 with the first launches delayed until 2007.
Spectrum Astro, of Gilbert, Arizona heads a team of Northrop Grumman, Lockheed Martin Corp. and Boeing Co.'s Missile Defense and Space Control Division.
Mike Greenwood, a Spectrum Astro spokesman and TRW spokesman Jack Prichett said they had no comment on Aldridge's decision.
The SBIRS-Low system is to have a companion constellation of six high-orbiting satellites that would detect a missile's infrared heat as it launches. Development of those devices also has "significant" problems that have complicated the SBIRS-Low project, Aldridge told lawmakers last month.
Managed by Lockheed Martin Corp., the so-called Space-Based Infrared-High program was supposed to launch its first satellites in 2006; it's now three years behind schedule and its cost has grown over 77 percent to nearly $4.6 billion from $2.6 billion.

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New York Times
January 6, 2002
Pg. 1

Anthrax Missteps Offer Guide To Fight Next Bioterror Battle

By Lawrence K. Altman and Gina Kolata

On Saturday, Sept. 8, employees of Inova Fairfax Hospital in Northern Virginia rehearsed their response to a mock terrorist attack that would overwhelm the medical system with hundreds or thousands of victims. The drill went well.
"You say, 'Here's the scenario: We have 160 victims, how do we triage them, where will they go, how will they be handled?' " said Dr. Thom Mayer, the chairman of the hospital's emergency department.
But just a month later, Inova Fairfax treated real victims of bioterrorism — two postal workers with inhalation anthrax, who showed up in its emergency room a day apart. Only then, Dr. Mayer said, did the staff discover that no part of the elaborate rehearsal had resembled a real attack.

Now, with no new cases since mid-November, health officials inside and outside the federal government have begun an autopsy of the anthrax outbreak that killed 5 people, infected at least 13 more and terrified large segments of the population over two months. What did health officials do right? What went wrong? What was a matter of luck? And how can they learn from the luck?

While it is too early to glean a set of precise lessons for a future bioterror attack — particularly since no suspect has yet been charged in this one — the officials acknowledge that the handling of the outbreak was marked by a catalog of miscalculations, missteps and misunderstandings about bioterrorism in general and anthrax in particular. Among them were these:

*Medical scientists thought they knew anthrax. But they now say they overestimated the death rate for those infected and had no idea how many spores a person must inhale to develop the disease.

*Procedures for communicating about unfolding events proved inadequate to reassure a frightened public.

*Federal, state and local governments were unprepared for the close collaboration required in an investigation that combined the medical and the criminal.

*Laboratories were unexpectedly swamped with samples that had to be tested for anthrax spores.

Underlying the government's response to the outbreak, experts say, was a misunderstanding of the difference between the goals of terrorism and the goals of warfare.

As Dr. Craig Smith, an infectious disease expert at Phoebe Putney Memorial Hospital in Albany, Ga., put it, warfare seeks to conquer territories and capture cities; terrorism seeks to "hurt a few people and to scare a lot of people in order to make a point."

That is why the terrorism drills, which assumed that the attacks would involve a cloud of anthrax pumped into a building or sprayed over a stadium, turned out to be so far off the mark. Dr. Smith, the only infectious disease expert who accompanied troops in the Persian Gulf war, is a member of the bioterrorism task force at the Infectious Diseases Society of America. He said he and his fellow members were as much to blame as anyone for that misperception.

Another terrorism expert, Jeffrey Hunker, dean of the H. John Heinz III School of Public Policy and Management at Carnegie Mellon University, said: "We're coming out of a cold war mentality that says that the big threat we have to face is the Soviet Union unleashing biological or nuclear weapons. By saying we were preparing for mass attacks, you are saying we were preparing for war."

The goal now is to build a system that can respond quickly, and flexibly, because there is no reason to believe that the next bioterrorism attack will resemble this one. That, experts say, requires careful thought and deliberation, not just throwing money at the problem to correct yesterday's mistakes.

"There is just so much to do that we have not sat down to look at this outbreak day by day and say, 'What did we decide on Day X and what was done and what might have been done, how could you have been doing it earlier?' " said Dr. D. A. Henderson, the director of the Office of Public Health Preparedness and chief adviser on bioterrorism to the health and human services secretary, Tommy G. Thompson. "We plan to do that and sort it out and figure out what we might have done differently."

Communication: 'Baffled' Officials, Mixed Messages

In late September, Secretary Thompson told television viewers that the government was prepared to deal with any kind of bio terrorism attack.

Days later, he announced that Robert Stevens, a photograph editor at a supermarket tabloid published in Boca Raton, Fla., had inhalation anthrax. It was, he said, an isolated case. Anthrax happens naturally, he said, and there was no evidence of terrorism. He hinted that Mr. Stevens might have become infected by drinking water from a stream, although experts said such a means of transmission had never been documented.

Yet the doctor who had just diagnosed inhalation anthrax in Mr. Stevens had a very different view. Dr. Larry M. Bush, an infectious disease expert and chief of staff at J.F.K Memorial Medical Center in Atlantis, Fla., said that when he realized what Mr. Stevens had, he knew immediately what it meant.

Mr. Stevens worked in an office, in a state where no anthrax had been reported in years. And inhalation anthrax was virtually unknown in the United States; almost all of the very few cases had occurred in workers exposed to airborne spores — by working with hides of infected animals, for example. Dr. Bush interviewed Mr. Stevens's wife, who said her husband opened letters all day, and concluded that the anthrax had come through the postal system. Dr. Bush said he told local health officials, the federal Centers for Disease Control and Prevention and the Federal Bureau of Investigation about his suspicions.

When Dr. Bush heard Mr. Thompson suggest that the infection might have occurred naturally, he was thunderstruck. "I thought: 'Wow. His first statement is wrong. Why did he say that?' " Dr. Bush said. "It was a major disservice. He should have said: 'We have a case of anthrax. It is very concerning. I don't have the details, but we will investigate it as potential bioterrorism.' "

Meanwhile, at the Health and Human Services Department in Washington, officials were perplexed by Mr. Stevens's illness. Could he have become infected in some unorthodox way?

Government officials acknowledge that they found it hard to imagine a case in which a terrorist aimed airborne anthrax at just one person. "Everything we knew about the disease just did not fit with what was going on," Dr. Henderson said. "We were totally baffled."

As for health officials' initial response, Dr. Henderson said they often play down the seriousness of an outbreak to avoid frightening the public. But he added that he himself was critical of the practice. "It is not reassuring," he said.

Still, James Adams, a terrorism expert who is a senior associate at the Center for Strategic and International Studies in Washington, said he could sympathize with government officials. "It's the worst political problem," Mr. Adams said. The truth of the matter, he added, is: "We have no solution. Therefore, we can't bear to tell you about it."

But it was soon becoming impossible to play down the events. Reporters clamored for information. The requests "just really buried us in a way that we had not anticipated," Dr. Henderson said.

The Centers for Disease Control and Prevention, the federal agency responsible for investigating diseases, kept silent.

"Early on we were under the Federal Emergency Management Act and the decisions were made that C.D.C. should not be a locus of communications, in part because it was a criminal investigation and we were not really clear what the appropriate message was to put out," said Dr. Julie L. Gerberding, acting deputy at the agency's infectious disease center. "Soon thereafter it became clear that C.D.C. was desperately needed as a spokesperson for this outbreak, but by that time we were in a reactive state."

Mr. Thompson later held news conferences about the anthrax outbreak, assisted by government scientists. But his initial remarks left a lasting impression of overconfidence.

A basic principle of sound public health management is to have scientists inform and interpret what has happened promptly. But when communication was most critical early in the outbreak, no government scientist consistently delivered the clear message many people said was needed.

In describing the general problem, Dr. John F. Eisold, the Capitol physician, said that "the message was clearly a medical message, and you have got to have medical people talking about medical facts and not nonmedical people prescribing antibiotics."

Federal health officials were confused and disorganized. "We felt very strongly about the need to be available and to communicate, and there was just no way in the world you could," Dr. Henderson said. "We were just paralyzed."

Meanwhile, the information vacuum was being filled by "experts" who came forward, some with questionable qualifications.

Another problem was the disease control agency's usual way of working. It "has traditionally been a very deliberative body, scientific in nature, that makes good policy decisions agonizingly over time," said Dr. Georges C. Benjamin, the secretary of the Maryland Health Department and president of the Association of State and Territorial Health Officials.

Ordinarily, once epidemiologists understand the nature of a particular microbe and the way it is transmitted, they can develop effective public health responses. But the rush of new information about anthrax and the postal system meant that the agency had little time to be deliberative. Dr. Benjamin said that meant "a new paradigm" for the agency; Dr. Gerberding of the disease control centers agreed and said the lesson had now been learned.

The Warnings: 'A Weird Disease' and Its Nuances

Anthrax "is a weird disease," Dr. Henderson said.

Before the attacks, he said, he did not appreciate many of its nuances. He and others writing a primer on anthrax in The Journal of the American Medical Association in 1999 relied primarily on reports of 18 patients who developed anthrax in the United States, a limited amount of information on a 1979 outbreak in Sverdlovsk, in the former Soviet Union, and a limited amount of research in the laboratory and with animals.

Scientists knew that anthrax spores could lie dormant in soil for decades and then cause disease. They also knew that inhalation anthrax occurred when spores entered the lungs and were swept into lymph nodes in the mediastinum, in the middle of the chest, where they germinated and pumped out toxins. But scientists still had much to learn.

Few scientists had ever considered how dangerous anthrax spores might be if they were sent through the mail. But in retrospect, it is clear that there were clues.

In Canada, military scientists investigated the question as a result of a hoax — a letter said to contain anthrax that forced the government to close a building in Ottawa last January.

That led Dr. Bill Kournikakis and his team at the Defense Research Establishment in Alberta to conduct an experiment. They used a harmless microbe to mimic how spores might disperse in an office or mailroom if an envelope containing anthrax were opened.

Their conclusion was chilling: a person could inhale a lethal dose of spores within seconds of opening an envelope. Those who remained in an affected room for more than 10 minutes could inhale far more than a lethal dose, depending on their location and the air flow.

In early October, when American epidemiologists linked the spread of anthrax to the postal system, Dr. Kournikakis said he sent the report to the disease control centers. But it went unread in the blizzard of e-mail messages that arrived at the agency, and it was not until three weeks later that officials learned of the study through other channels.

A similar warning had come in 1999, from William C. Patrick III, a government germ warfare expert, in a report for a government contractor exploring what might happen if an anthrax letter was opened. Finely milled spores, he wrote, could easily contaminate an office.

Medical experts also misjudged the difficulty doctors would have in diagnosing inhalation anthrax, assuming that a sophisticated surveillance system was needed to detect an attack. But Dr. Bush, the Florida infectious disease expert, says he knew immediately what was wrong with Mr. Stevens, the first patient with inhalation anthrax. He saw Mr. Stevens on the morning of Oct. 2. By 2 p.m., he was convinced.

"I had four pieces of information, all consistent with anthrax and not consistent with other organisms on my short list," Dr. Bush said. He called the local health department, telling officials there that he thought he had a victim of bioterrorism. And he sent samples of the bacteria to a state reference laboratory for further tests. By 8:30 the next morning, all three tests had come back positive.

Medical textbooks say that inhalation anthrax starts with mild, flulike symptoms that are hard to recognize, and that by the time it progresses to its severe phase, it is easy to diagnose but virtually impossible to cure. But the two postal workers who came to the emergency room at Inova Fairfax in October did not have textbook symptoms. The first patient did not even seem very ill, but a CT scan of his chest showed telltale signs of anthrax. The second patient complained of the worst headache of his life. But he did not have the classic signs of inhalation anthrax — bacteria in his spinal fluid and abnormalities in a chest scan. Doctors learned he had anthrax only when they examined his blood and saw the characteristic boxcar-shaped anthrax bacteria.

Both patients recovered with aggressive treatment — another surprise, considering how deadly the advanced stage of the disease was assumed to be. But that expectation was based on what scientists knew about the 1979 outbreak in Sverdlovsk, which was caused by a plume of spores accidentally released from a bioweapons factory.

Now, Dr. Henderson said, scientists realize they misread scientific papers, never appreciating that many more Soviets may have had the disease and survived. It is unclear how effective antibiotics were in Sverdlovsk, he said, because no one is sure how many people were given antibiotics and for how long they took them.

The anthrax attacks also pointed to another scientific mystery: how many spores does it take to infect someone? Could one spore cause a fatal disease? The two most recent deaths, of two women who were not postal workers — Kathy T. Nguyen in the Bronx and Ottilie W. Lundgren in Oxford, Conn. — raise the question, because no spores were found in their homes and the source of their infection is unknown.

Dr. Henderson and others now say that the outbreak illustrates an important lesson: the temptation to draw firm conclusions from a small database should be resisted, even if it is the only information available.

"There is a lot of feeling that we didn't know what we were doing as scientists in giving advice," he said. "But, sorry, we haven't had a lot of anthrax around to know just how it's going to behave."

The Collaboration: 'Layers and Levels' of Teamwork

Teamwork is essential in any epidemiologic investigation. But, Dr. Gerberding of the disease control agency said, "In retrospect, we were certainly not prepared for layers and levels of collaboration" among a vast array of government agencies and professional organizations "that would be required to be efficient and successful" in the anthrax outbreak.

The agency quickly deployed hundreds of workers and created an operations center, installing banks of telephones so epidemiologists could relay information from colleagues in the field to top officials at its headquarters in Atlanta and then on to the National Security Agency, the Central Intelligence Agency and the White House. Even so, calls from state and local health officials and departments and doctors across the country flooded the lines.

And responsibilities for health matters were fragmented. "We were very much aware that we had no jurisdiction over federal facilities whether it was the V.A. or the post office," said Dr. Matthew L. Cartter, an official of the Connecticut Health Department. He urged local, state and federal agencies to work out a memorandum of understanding to clarify lines of jurisdiction before another outbreak.

In New York City, the Health Department had prepared itself for inhalation anthrax in recent years, building liaisons between hospitals and specialists in infectious disease, pulmonary disease and emergency room care. But health officials overlooked dermatologists and surgeons, who treated the first anthrax cases — the skin form. "Very few dermatologists had ever heard of us or knew how to reach us," said Dr. Marcelle Layton, an assistant commissioner in the department's communicable disease bureau.

Anthrax also challenged health officials and law enforcement agencies to work together. And each group had something to learn. For F.B.I. agents, it was how to obtain evidence without contaminating the scene of a medical investigation. For epidemiologists, it was how to collect specimens without disturbing the chain of custody in a criminal case.

"It's a different mind-set, of using epidemiology to reconstruct the circumstances of the exposure that resulted in disease," said Dr. Bradley A. Perkins, a top anthrax investigator at the federal disease centers. Law enforcement officials "immediately recognized the value of that in prosecuting the criminal case," he said.

The Testing: Samples Deluge the Laboratories

On Oct. 15, a letter stuffed with anthrax spores was opened at the office of Senator Tom Daschle. The next day, 2,500 people who had potentially been exposed lined up for nasal swabs. Many were terrified. "People thought each spore was plutonium," said Dr. Eisold, the Capitol physician.

But although the nasal swabbing continued wherever anthrax spores showed up, epidemiologists soon discovered that it was of little use in detecting illness. Its main role was in helping determine where and how far spores had spread.

Soon officials in every state were hit with an avalanche of samples to test — from nasal swabs, from suspicious letters, from swabs of offices and rooms, from clothing, from soil. "You could never have prepared for the volume that you had to process," said Dr. Lou Turner, the director of the North Carolina Laboratory of Public Health.

The disease control agency regards environmental microbiology as one of its strengths, Dr. Gerberding said, but it soon learned that the discipline had a long way to go when it came to anthrax — in particular, sampling the air for spores, disinfecting an area and monitoring it for spores and particles that might escape when envelopes are put under mechanical pressure.

The agency believed that it was prepared for a real anthrax outbreak. It had created a network of laboratories to aid in rapidly detecting microbes. Although the network worked well, the assumption had been that the labs would mostly test specimens from sick patients. Instead, most tests were for spores in the environment — and for hoaxes. The agency had to expand lab space and open a new lab at its headquarters just to test more than 5,500 specimens for spores.

Some health officials complained about the data coming back from testing labs. Does a negative report mean that the laboratory used only a quick screening test, or that it also performed a culture? Such details are important, particularly for laboratory reports that will be evaluated by law enforcement officials and others who would not understand what tests were done, health officials said.

A new problem has emerged: how to return the variety of items — rugs, envelopes, china, even a 50-gallon drum — that were tested and found not to be contaminated.

"We have to figure out how to get rid of all this, which is still evidence and still in the chain of custody," said Dr. Elizabeth Franko, the director of the Georgia Public Health Laboratory. "Either law enforcement needs to come get it, or they need to sign off and say it is trash and they do not want it back."

The anthrax attack was much less horrific than it might have been. But medical and terrorism experts say that situation is due in large part to luck. Considering the size of the postal system, relatively few people were infected. And unlike smallpox, among other possible terrorist weapons, anthrax is not spread from person to person.

In deconstructing the response, Dr. Hunker, the terrorism expert, said, it will be important to investigate what role luck played, to avoid having to rely on it in the future.

The backbone of the Centers for Disease Control and Prevention's response to health emergencies is a corps of epidemiologists known as the Epidemic Intelligence Service. Forensic epidemiology has not been part of their training. But now it has to be, Dr. Gerberding said.

And experts caution that the anthrax outbreak may not be over.

"We still do not know who put anthrax in the mail, we still do not know if they used all they had, and we still do not know how to make all the mail safe," said Dr. John O. Agwunobi, the Florida secretary of health. "So the question becomes how quickly can we apply what we have learned so far to the next event."

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Baltimore Sun
January 6, 2002

Everyone Has An Anthrax Theory

Bioterrorism riddle, $1.25 million reward stimulate interest

By Scott Shane, Sun Staff

Barbara Hatch Rosenberg, a molecular biologist at the State University of New York, thinks she has figured out a great deal about the person who mailed the anthrax that killed five people last fall.

"He had to be an insider in the U.S. biological defense program," she says. Not only that: He is a microbiologist. He probably lives near Washington. And for those who want details, she has laid her reasoning out on the Internet.

To Richard M. Smith, a computer security expert in Massachusetts, the nine-digit ZIP codes on the anthrax letters could be a crucial clue - as well as the ersatz return address, a made-up elementary school. If the attacker used the Internet to collect his information, Smith says, he might have left an electronic trail.

Orley R. Bourland Jr., a Fort Detrick retiree who once made anthrax for the Army, has hunted the Web to see whether the equipment needed to make the powder is widely available (yes) and consulted with colleagues to judge whether a person working alone could physically have performed the necessary tasks to do so (probably not).

In the absence of visible progress in the three-month FBI hunt for the anthrax-mailing terrorist, an informal army of detectives has joined the quest. Among them are distinguished scientists, eager amateurs, bounty hunters and conspiracy theorists of every stripe. Solving the mystery has become a game that anyone can play.

For encouragement, there's the $1.25 million reward offered jointly by the FBI and U.S. Postal Service for solving the case. Government sources say the prize will soon be upped to $2 million, a possible sign that investigators are stuck.

But the people who have become enthralled by the anthrax whodunit don't seem to have the money first in their minds.

A 'fascinating' mystery

"When this anthrax thing came up, I found it just fascinating," says Ed Lakeof Racine, Wis., a 64-year-old retired computer system designer who writes screenplays. "All these facts were scattered all over the place. But no one was putting them together."

So Lake took on that job himself, putting together an extensive anthrax investigation Web site, which he updates and corrects as new evidence is reported.

"There are so many clues out there - so many odd things," Lake says. "It's 7 o'clock in the morning and I'm getting up, and suddenly an idea will hit me."

Rosenberg, 63, who has headed a biological weapons working group for the Federation of American Scientists since 1989, says she joined the chase partly because of her deep concern about the danger of biological terror.

"If news coverage and public awareness just fade away because they never catch the person responsible, I think that would be regrettable," she says. But that's just part of her motivation: "It really is interesting to try to put the clues together."

Getting the public involved

If there has been an onslaught of unofficial investigation, that might be partly because the FBI encouraged it. From early on, it solicited help from the public, adding a red button labeled "Submit a Tip" to the elaborate Web site it has dedicated to the "Amerithrax" investigation.

Along with a flag--draped logo, photos of the anthrax letters and sound files of FBI experts discussing the case, the Web site includes a lengthy handwriting and behavioral analysis of the perpetrator.

The proposed suspect is an adult male loner with scientific training, it says, who "is a non-confrontational person, at least in his public life. He lacks the personal skills necessary to confront others. ... He may hold grudges for a long time, vowing that he will get even with 'them' one day."

Never before has the FBI made public such extensive material on an unsolved case, spokeswoman Tracey Silberling said Friday. That is partly because of the new technical possibilities offered by the Internet, but mostly because of the nature of the anthrax probe, she said.

"In the interest of public safety and educating the public about the threat, we've made as much information as possible available," Silberling said. "We're also seeking the public's assistance by making information available that might ring a bell with someone."

Silberling said the bureau has received "hundreds of tips" from the public, but declined to say whether any have proved useful.

Flawed reporting

If the FBI's lack of evident progress has drawn criticism, so has the media coverage of the case, which has often been erratic.

Even the most respected news organizations have reported details about the mailed anthrax or the investigation that quickly proved unfounded.

On Dec. 19, for instance, ABC's World News Tonight led its broadcast with a story saying the FBI was investigating a scientist who had been fired twice by Battelle Memorial Institute, an Ohio-based government contractor. The story was picked up by wire services and printed in many newspapers, including The Sun.
But the next day the story was denied by U.S. officials, who noted that the accurate part - that a man twice fired by Battelle had made anthrax threats - had been published two months earlier in the Milwaukee Journal Sentinel. The FBI determined that the man had no connection to the mailings, officials said.

ZIP code clues

With the FBI mostly mum and no certainty from the news media, citizens have felt emboldened to do their own work, invariably using the World Wide Web. Some have shown quite a knack.
One such sleuth is Smith, 48, who has earned a reputation in the computer world for helping to track down people who have loosed certain damaging computer viruses on the Internet.
In the anthrax case, in addition to analyzing the nine-digit ZIP codes, he has dissected the return address on the bacteria-laced letters mailed to Sens. Tom Daschle and Patrick J. Leahy: "4th Grade, Greendale School, Franklin Park, NJ 08852."
Smith found that while the school doesn't exist, the elements of the invented address all suggest familiarity with three adjacent small towns in New Jersey.
In addition to his own research, Smith has created "The Anthrax Conspiracy Theories Page," including links to the work of fellow detectives.
Interestingly, the most active unofficial investigators, including Rosenberg, Smith and Lake, have independently reached similar conclusions as to the motive behind the attacks.

'Bioevangelist' theory

They say the perpetrator is most likely someone with experience in the bioweapons arena who believed the U.S. government and public were oblivious to the magnitude of the potential threat from bioterrorists.
The person mailed the letters in the belief that only an actual attack would sound the necessary alarm, they say.
Such a scenario - call it "the bioevangelist theory" - would account for two pieces of evidence: the attacker's expertise about anthrax and the vague notes included in the letters vowing "Death to America" and declaring "Allah is Great."
Some Islamic scholars say that message was most likely written not by a Muslim militant, but by someone trying to sound like a Muslim militant.
That would fit the theory perfectly: A misguided American bioweapons expert trying to arouse the public might want to direct the blame at al-Qaida-style terrorists, who he believes pose the real threat.
"Somebody in the know says, 'This stuff is so dangerous, and we're not treating it with the right amount of concern,'" Smith says. "'So why don't I give a demonstration?'"
Rosenberg says such a notion was occasionally aired jokingly in the small circle of those who worried about biological terror prior to Sept. 11.
"There have been a number of occasions when we've said in frustration, 'What we need is a biological weapons attack to wake the country up,'" she says.
The public evidence - that the mailed anthrax was the Ames strain used in U.S. biodefense research, and that it was prepared with great expertise - points to a U.S. military or government contractor program, Rosenberg says.
"I think it's somebody who's got a screw loose," Rosenberg says. "But I think the existence of the U.S. [biodefense] program made it possible."

A wider conspiracy

Inevitably, among those outside the FBI at work on the anthrax case are some who believe the mailings are only a tiny part of a far, far broader conspiracy.
One vague theory that has been bandied about on the Web links the anthrax attacks to the recent deaths of five microbiologists, including a Harvard scientist who had worked with Ebola and other viruses and a defector from the Soviet biological weapons program.
But the Web postings do not even speculate as to how the deaths might be related.
"The problem is, people connect the dots too easily," says Smith, the ZIP code investigator. "There are maybe 100,000 microbiologists out there, so some of them are dying all the time."
A more detailed conspiracy has been outlined by Dr. Leonard G. Horowitz, a dentist who runs a small publishing company, Tetrahedron Publishing Group, in Sandpoint, Idaho.
Horowitz has bombarded reporters and government officials for weeks with lengthy e-mails that propose a financial motive for the attacks, such as sale of drugs and vaccines.
Among his favored culprits are Battelle, the defense and CIA contractor, and Bayer AG, the maker of Cipro, the antibiotic widely used to treat or prevent anthrax infection. (Both companies deny any connection to the attacks.)

Noting recent media reports discussing Battelle's anthrax research and speculating about a financial motive for the letters, Horowitz believes he is making progress.
"We've gotten a sense in our office that even though no one gives us credit, we are making a huge difference," he says.
Still, reports in what he calls the "slow-as-a-tortoise mainstream news media" have a long way to go to catch up with the spidery plot diagrammed on his Web site, which ties the anthrax as well as "AIDS genocide" and vaccines for smallpox and West Nile virus to a score of government and corporate conspirators.
Horowitz's anthrax theories might have been neglected by the media because he presents them on the same Web site where he hawks software for "computer-generated prayer" and numerous alternative cures, including "Body Oxygen" and "Clustered Water," which it calls "probably the greatest breakthrough in health science produce development this century."
Determined to be heard
But Horowitz, 49, who often notes his Harvard University master's degree in public health, says he will not be deterred until he exposes the "military-pharmaceutical industrialists."
"Even if I hadn't committed my whole life to saving lives through public health, it's my duty as an American," he says.

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Monday January 7 12:37 PM ET

New Info About Nazi Atom Bomb Chief

By THOMAS WAGNER, Associated Press Writer
LONDON (AP) - Werner Heisenberg, the scientific genius behind Adolf Hitler's secret atomic bomb program, revealed its existence in 1941 to Niels Bohr, the Danish scientist who later became part of the Manhattan Project, according to secret documents cited in a London newspaper.
The documents indicate Heisenberg did not express moral doubts to his counterpart during the meeting with Bohr in Nazi-occupied Denmark about building a bomb for Hitler. Neither did Heisenberg hint he might be willing to sabotage the project, the documents reveal.
The information contradicts several historical accounts of the meeting and an award-winning West End and Broadway play, "Copenhagen," in which British playwright Michael Frayn speculated on its significance regarding the eventual failure of the Nazi atomic project.
During the meeting, Heisenberg alerted Bohr, his former mentor, to the existence of Hitler's "uranium club," according to the documents.
Two years later, Bohr went to America to join the Manhattan Project, which built the atomic bombs that were dropped on Japan in 1945 to end World War II.
The new documents, including a letter Bohr wrote but never sent, were reported in The Sunday Times, which quoted Dr. Finn Aaserud, director of the Niels Bohr Archive in Copenhagen.
"Essentially, the letter shows that Heisenberg told Bohr it was possible that the war would be won with atomic weapons, indicating that he was involved in such work," Aaserud told The Associated Press in Copenhagen on Monday.
Early next month, Aaserud said, the archives, which are part of the Niels Bohr Institute, will release 11 documents written or dictated by Bohr before his death in 1962, including his unposted letter to Heisenberg, which was completed in 1958.
They are currently being translated into English and also will be made available on the archive's home page - www.nbi.dk, he said.
The Niels Bohr Institute is one of the four departments of the Niels Bohr Institute for Astronomy, Physics and Geophysics, which is part of University of Copenhagen.
Bohr and Heisenberg, who died in 1962 and 1976 respectively, are considered among the greatest physicists. Bohr was awarded the 1922 Nobel Prize in physics for nuclear research. Heisenberg won the same Nobel Prize in 1932 for the creation of quantum mechanics.
The only other living person besides Aaserud known to have read the letter is Gerald Holton, an emeritus professor of physics and the history of science at Harvard.

In an interview with The AP on Monday, Holton said Bohr's son showed him the letter in 1985 in Denmark and asked him what should be done with it.
"The implication was that since it hadn't been sent, perhaps it should be destroyed," Holton said. "I implored him to not do so, but to put them in the archives of Neils Bohr, which are extensive ... even if it has to be under some restrictions."
Some years later, Holton agreed not to talk about the specifics of the letter until the family released it publicly. They had planned to do so in 2012, the 50th anniversary of Bohr's death.
Scientists and historians have long argued about why Heisenberg never succeeded in building an atomic bomb for Hitler.
The play "Copenhagen," inspired by a book in 1993, "Heisenberg's War: The Secret History of the German Bomb," argued that Heisenberg had sabotaged the project.
According to this theory, Heisenberg went to Copenhagen to make a deal with Bohr that the Germans would not develop the bomb if the Allied scientists didn't either.
http://dailynews.yahoo.com/h/ap/20020107/wl/britain_nazi_documents_2.html

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