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Bioterrorism: Improving Preparedness and Response

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Government and healthcare businesses explored innovative ideas and practical solutions to bioterrorism in a “wargame,” conducted on December 17-18, 2001, in Washington, DC. Designed to proactively mobilize the participants to improve our nation’s preparedness and response to bioterrorism, it was sponsored by Booz Allen Hamilton and The Council for Excellence in Government. The wargame highlighted the need for a new kind of public/private partnership in the pursuit of homeland security.

Wargaming is a powerful process for thinking about the future that challenges conventional wisdom and allows participants to break with “known truths” and past assumptions. Top leaders from medical products companies, healthcare providers, insurers and government agencies dealt with choices, dilemmas and consequences of their actions, and identified next steps to improve real world coordination, cooperation and capabilities.

The Scenario

When the unthinkable becomes real, we need new ways of thinking. In the post-September 11 world, more powerful strategic tools must supplement traditional scenario planning, if we are to imagine, and prepare for, the unimaginable.

Imagine this: aerosolized pneumonic plague bacteria are released simultaneously in two major cities in a coordinated terrorist attack. Although initial symptoms resemble flu, plague is nearly 100 percent fatal if not treated early with powerful antibiotics, and, unlike anthrax or West Nile Disease, it is highly contagious. The simulated epidemic is unleashed in Detroit, MI and Norfolk, VA.

This was the scenario posed to 75 government and healthcare professionals in a wargame conducted on December 17 and 18, 2001, in Washington D.C. Sponsored by Booz Allen Hamilton and The Council for Excellence in Government, the wargame highlighted the need for a new kind of public/private partnership in the pursuit of homeland security.

The bioterrorism wargame brought together senior policymakers in the Department of Health and Human Services, the Federal Emergency Management Agency, the Department of Defense, the Department of Veterans Affairs, state and local government, with business participants, including CEO’s and senior executives in medical products companies, including pharmaceuticals and biotechnology, healthcare providers, including hospitals, HMO’s and physicians, insurers, and health industry associations.

Booz Allen Hamilton was uniquely positioned to host this exercise, because of our long history of work for both commercial and government clients; our many engagements in government security, and our broad experience in staging wargames for government and corporate clients.

Participants learned that communicable bioterrorism is not like natural disasters or epidemics, because it spreads so much more rapidly, and because it can be launched simultaneously in multiple locations. The “worried well” quickly overload the healthcare system, and widespread panic stresses law enforcement and other social services to the breaking point. And while the immediate responders are all local, decision-making, on such issues as where to distribute drugs and how much, how to educate the public, and when to close borders or airports, quickly becomes national.

This means that the levels of preparation and response in place in our country today are not adequate, but they can be leveraged. The nation can cope with such an attack, but only if we are ready with a response that is quick, coordinated across business and government, well prepared, and thought-out ahead of time.

The basic assumption is that the old rules don't apply any more.

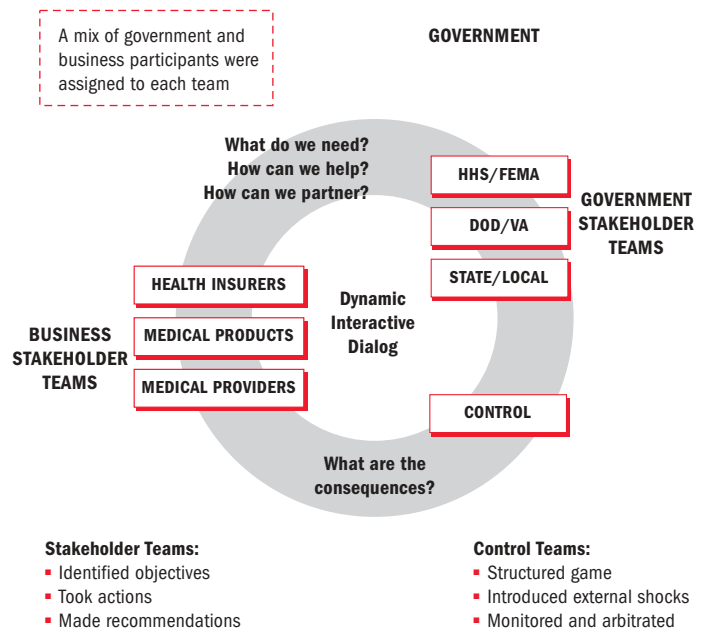
Traditionally, neither private industry, nor many government agencies, has played an active role in homeland security, which has been almost exclusively the domain of the Department of Defense. But a potential bioterrorist attack would require government agencies, in particular the Department of Health and Human Services, and healthcare businesses to play a new national security role.

The Wargame

The goal of the wargame was to proactively mobilize government and healthcare businesses to explore innovative ideas and practical solutions to improve our nation's preparedness and response to bioterrorism. Participants had to deal with choices, dilemmas, and the consequences of their actions, as well as identify next steps to improve real world coordination and capabilities in response to a bioterrorism scenario.

Although healthcare executives have discussed the possibility of a bioterrorist attack with government agencies, even before September 11, the wargame was an unprecedented meeting of top leaders in these groups in a simultaneous dialog. Participants were organized into teams representing key business and government sectors, with a mix of government and business people assigned to each team. The mixed groups gave individuals a rapid education in how other organizations think and act, as well as providing a first check on ideas and suggestions.

Participants were organized into teams representing key business and government sectors



Source: Booz Allen Hamilton

The purpose was not to predict the future, and the simulation was staged with the fervent hope that a bioterrorist attack will never occur. Nor was the intent to assess the preparedness or responsiveness of specific groups, but rather to raise the level of awareness across all participants so that all will be more prepared to respond should a real disaster occur.

The goal was to answer pressing questions for the nation and for their individual organizations:

- How should we better prepare for or respond in the event of a future bioterrorist attack?
- How can I bring the unique capabilities of my organization and my sector to bear on the challenges of a bioterrorism attack?
- What is in the minds of other players involved in the response? How does government think about this issue/how do businesses think about this issue?
- What do other players have to offer that will help me respond? What are the implications of the actions of others on my ability to respond and on the overall goals of my organization?
- What are alternative public/private partnership models to enhance our preparedness and response?

Teams observed that a lack of appropriate in-place mechanisms made it difficult to respond to the attack.

Teams discovered that massive, immediate action was required, but they also found that the lack of a common language between government and industry, and the lack of a single point of contact between these groups stymied the rapid movement needed. Participants agreed that new thinking is needed, but many groups at first fell back on established practices and processes that slowed everyone's response.

“We thought we should save for a rainy day, but now we realize that this is the rainy day.”

– DoD/VA Team Wargame Participant

Government and business teams initially followed a conservative, measured approach, as they struggled to define their roles and understand who to go to for information, direction and resources. No mechanisms were in place to enable quick coordination across agencies and businesses to mobilize the resources available. Teams concluded that the government alone cannot protect the American people from bioterrorism, so it is essential to mobilize business resources.

Coordination and cooperation across businesses, many of which are competitors, is also required to address the scale of the problem.

Key Learnings

Teams faced several dilemmas in responding to the bioterrorism attack. Clearly the extreme contagiousness of plague, and the lack of a vaccine, called for both quarantine (or “protective isolation”) and the rapid and extensive prophylactic treatment of uninfected individuals with antibiotics. But quarantining massive portions of the population raised civil liberties and law enforcement issues with no easy answers, while widespread prophylaxis would strain drug supplies and leave the country vulnerable to new attacks or naturally occurring epidemics. Simple logistics issues, like how to deliver drugs to millions of people, raised seemingly insurmountable obstacles.

Although a myriad of issues presented themselves, they boiled down to four paradoxes:

1. To react quickly, industry needs a single point of contact with the government, but statutes, policies, and programs for dealing with terrorism create multiple points of entry at the interagency and inter-governmental levels.
2. Aggressive containment and prophylaxis can limit the spread of the disease, but moving too quickly might consume reserve capacity needed for future contingencies.
3. Response plans normally focus efforts at the local level, but bioterrorism quickly becomes a national problem, requiring coordination across local, state, and federal governments as well as healthcare businesses.
4. Suspending legal, regulatory, and procedural constraints may be necessary to meet immediate needs, but such steps can create serious downstream consequences for public health and business viability.

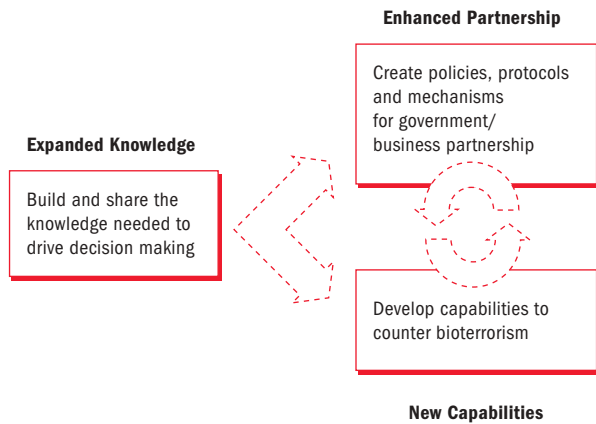
Lacking pre-arranged, in-place mechanisms hindered the groups' abilities to cope with these issues. One key learning was that prior planning and practice enables rapid response, which is critical in containing the damage. Mechanisms are needed to collect and share information on pharmaceutical and equipment stockpiles before and during crises. Preparedness will require new levels of communication and cooperation across public/private, local/national, and military/civilian boundaries.

Team Recommendations for Action

At the end of each session, or move, team leaders reported their findings and shared their experiences with other groups. To enable massive immediate action, it is essential that we build and share the knowledge needed to make decisions. Policies, protocols, and mechanisms are needed to coordinate government and business response.

Teams found that the difference between a controlled outbreak and a massive epidemic ultimately hinged on a few key factors. Leadership: Confusion about “who's in charge” in just the first days of the attack had major consequences during the following weeks. Knowledge: Participants agreed that thousands of lives depended on ready information about pharmaceutical and medical equipment stockpiles throughout the nation. Coordination: Individual companies and local governments responded well, but what ultimately mattered was immediate and quick coordination between companies, across agencies and among states.

Teams suggested three major priorities for “their” new national security roles



Source: Booz Allen Hamilton

Building and sharing knowledge means assessing potential actions and their impact. Epidemiological models need to be developed of the top agents, looking at the impact of actions such as quarantine and prophylaxis. Public health readiness can be measured, and a national inventory of medical supplies and other essential materials established. Above all, the information must be shared across government and industry.

“It is better to innovate around a plan, than to invent a plan on the fly.” – Wargame Participant

This unprecedented sharing requires new policies, protocols, and mechanisms to coordinate government and business response. Response policies must be integrated across federal, state, and local government, and among healthcare businesses in order to clarify roles and responsibilities, and to identify the key points of contact and authority. Healthcare leaders in government and industry must establish and communicate medical protocols for bioterrorism response. We need new mechanisms for communication, rapid decision making, and coordination of response. These could include the creation of integrated public/private bodies, like the NSTAC/NCS/NCC system for emergency telecommunications.

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Clearly, government and business organizations need new capabilities to execute their new roles. Individual companies and agencies could create response plans linked to the overall national plan. Health and Human Services’ capability to perform its new national security mission could be enhanced by establishing a crisis action communication system that would link key government and industry players. The government should develop and disseminate a public health threat and response program, in effect, reinventing the old Civil Defense System. Finally, the public health infrastructure must be strengthened at all levels to enable it to execute against homeland security policy.

Conclusion

For the first time ever, the top leaders of government and industry came together in a wargame focused on bioterrorism, and perhaps the most salient lesson of the two days was that the public and private sectors must continue to work together to meet this threat.

Public/private partnerships can improve bioterrorism preparation and response by identifying and involving relevant participants; establishing agreed-upon roles and responsibilities; sharing information on stockpiles and surge capacities; pre-defining economic, legal, and liability parameters and limits; and by coordinating public awareness and education efforts.

Since September 11, security has become a strategic imperative for businesses and organizations of all kinds. Bioterrorism presents unique challenges, in terms of early detection, containment, escalation, response, and recovery.

We believe our December 17-18 wargame provided government and industry with a powerful tool to examine and address those challenges. We look forward to continuing the dialog, and together, to strengthening our nation’s security.

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