

Global Progress on Biosecurity: U.S. Vision and International Efforts

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Developing Options for Global Biosecurity: Assessing Progress and Evaluating New Mechanisms

Introduction

Good morning. It's a pleasure to be here today to talk about global progress on biodefense and, in particular, about the big picture of U.S. international efforts.

It's probably worth beginning with a brief mention of terminology – and some of the concerns about the term “biosecurity” that bring us together today. As many know, this term often translates very poorly into other languages; in Spanish, French, Arabic, and Mandarin, for example, the terms “biosecurity” and “biosafety” (and their shades of meaning) conflate into only one word in translation. To add another level of complexity to the linguistic confusion, “biosecurity” has many different meanings in different areas of specialization. For instance, to an agricultural specialist, biosecurity could mean measures to reduce transmission of disease among animals. For some scientists, biosecurity could refer to the challenge of “dual use” technology or research. In the corporate world, biosecurity can mean prevention of intellectual property theft. In other contexts, some define it broadly to refer to any measures taken to prevent the malicious use of pathogens against humans, animals, and plants. And for others, the term biosecurity is a specific reference to pathogen security, attempts to keep dangerous pathogens out of terrorist hands.

Pathogen security is a part of U.S. and international efforts in this arena and has been useful in opening dialogues with other governments and the scientific community regarding the importance of working together to counter bioterrorism. However, pathogen security is sometimes seen as the only strategy needed to combat bioterrorism. Asserting that materials, technologies, and expertise for bioterrorism are available worldwide, and that terrorist groups are increasingly able to obtain and disseminate infectious disease agents, pathogen security advocates contend that such systems and practices (often “guns, guards, and gates” – typically derived from several decades of work as part of nuclear nonproliferation strategies) are central to reducing bioterrorism's threat. Despite the ability to accomplish enhanced security for particular pathogen facilities and stimulate international engagement, there are also limits because virtually all pathogens exist in nature, technology is readily accessible, and scientific expertise is broadly distributed. As such, effective international policy strategies to combat bioterrorism must be substantially broader,

comprehensive, and multi-sectoral – with pathogen security as one of many components which I shall now describe.

The U.S. Vision for International Collaboration on Biodefense

Thus, an effective strategy to combat bioterrorism and agroterrorism, to strengthen biodefense, and, yes, to lead us to global biosecurity must be both intersectoral and international. The U.S. believes that the four essential pillars of effective and cooperative global and multi-sectoral efforts are:

- Threat Awareness – including bioterror-specific intelligence, timely assessments, and strategies for anticipating future threats.
- Prevention and Protection – including proactive prevention activities and counterproliferation efforts, along with critical infrastructure protection.
- Surveillance and Detection – including early detection and attack warning; disease diagnosis, identification, and the ability to discern unusual patterns of disease; epidemiological investigation to determine the extent and cause of the outbreak; laboratory testing to confirm the disease agent; provision of information regarding the outbreak to key stakeholders; attribution, and interdiction.
- Response and Recovery – including response planning, provision of treatment and the ability to contain the outbreak through focused public health intervention, mass casualty care, risk communication, medical countermeasure development (drugs and vaccines) and distribution, decontamination, and recovery from the immediate and long-term effects of the outbreak.

Each of these elements is critical in a comprehensive approach to both national and international biodefense – and the successful combination of the elements requires input, skill, and guidance from a range of sectors including military, law enforcement, intelligence, public health, security, agriculture, transportation, trade, environment, and science. And, to be truly effective, all of these elements require intense and sustained international collaboration.

U.S. Approaches to International Engagement on Biodefense

Because of the inherently international nature of bioterrorism and agroterrorism preparedness and response, it is vital that countries coordinate across both national and organizational borders to create international relationships as well as inter-sectoral relationships. The U.S. uses many diplomatic fora and strategies to help foster and build these relationships. In venues such as the G-8 Bioterrorism Experts Group (BTEX), the Global Health Security Action Group (GHSAG), collaboration with Interpol's Bioterrorism Program, and Asia-Pacific Economic Cooperation (APEC), we work collaboratively to raise awareness of the need to combat bioterrorism and strengthen biodefense. The U.S. lead counterterrorism initiative in APEC in 2006, for example, was a groundbreaking bioterrorism-related collaboration among 21 APEC economies to mitigate the terrorist threat to the APEC food supply. And through the G8, in mid-March, Germany, the UK, and the U.S. will be co-sponsoring the first-ever G8 program on Forensic Epidemiology – to stimulate and enhance cooperation between law enforcement and public health between and among G8

nations in investigating suspected bioterrorism.

The U.S. also works with foreign governments through bilateral, multilateral, and regional cooperation to build similar relationships to combat bioterrorism and agroterrorism. Examples of this collaborative bioterrorism-related work include that conducted under the U.S.-Russia Counterterrorism Working Group, the U.S.-India Joint Counterterrorism Working Group (which had its most recent meeting only last week in New Delhi), the Australia-Japan-U.S. Trilateral Counterterrorism Dialogue, and research and development (R&D) activities to develop enhanced detection, protection, response and recovery equipment conducted both nationally and internationally under the National Combating Terrorism R&D Program administered by the Technical Support Working Group (TSWG).

Additionally, as has been described, the U.S. is a strong supporter of the work programs of the Biological Weapons Convention focused on pathogen security, national legislation, disease surveillance, and scientific codes of conduct. And, as you've heard, the U.S. has also developed and enhanced activities to limit the international proliferation of bioweapons expertise and material.

Domestically, in recognition of the dual use potential of certain areas of life sciences research, the U.S. has called for the development of new practices and procedures for minimizing the likelihood that information, techniques, or material from life sciences research will be misused. Towards this end, in 2004 the U.S. established the National Science Advisory Board for Biosecurity (NSABB) to recommend strategies for the identification and effective oversight of dual use life sciences research, taking into account both the importance of advancing science and addressing national security concerns. Among its key responsibilities, the NSABB has been charged with providing advice and guidance to the USG in the following areas: 1) the criteria for identifying dual use research; 2) guidelines for the oversight of dual use research; 3) a code of conduct to raise awareness of dual use research issues and to foster a culture of responsibility among life scientists; 4) programs for education and training of life scientists on dual use research concerns and procedures; 5) principles, procedures, and tools for the responsible communication of dual use research; 6) strategies for fostering international collaboration on the oversight of dual use life science research; and 7) the potential biosecurity concerns raised by the ability to synthesize dangerous pathogens *de novo*. Last week, NSABB concluded its first-ever International Roundtable – involving scientists, experts, and policymakers from around the world in a thought-provoking discussion about the international implications of both dual use research itself and efforts to enhance international awareness. The International Roundtable grew out of U.S. recognition that an effective *global* dialogue on concerns regarding dual use life sciences research is key to achieving the appropriate balance between public health priorities and national security concerns.

Perhaps our international bioterrorism/biodefense exercises have been among our most interesting efforts to stimulate global dialogue and collaboration. The U.S. has sponsored or been a participant in many international bioterrorism exercises such as *Silent Twilight* (conducted at the U.S. and Swiss co-sponsored 2004 Eurasian Counterterrorism Conference), TOPOFF 3 (an exercise engaging top officials from the U.S., the United Kingdom, and Canada and incorporating a central element involving a simulated bioterrorism attack), and *Global Mercury* (a 2003 health ministers' exercise involving eight nations which ran continuously for 54 hours). Through interactive and compelling scenarios, each of these exercises enhanced international as well as inter-sectoral

coordination and cooperation.

And, most recently, in an unprecedented initiative to enhance international organizations' preparedness for and response to bioterrorism, in September 2006, the United States and Switzerland co-hosted **Black ICE** (Bioterrorism International Coordination Exercise), a bioterrorism tabletop exercise in Montreux, Switzerland. With high-level officials leading delegations from a dozen international organizations, **Black ICE** successfully catalyzed top-level dialogue between organizations on vital bioterrorism-related cooperation, including:

- International response coordination authority;
- The challenges of competing international health, investigative, humanitarian, and security priorities;
- Sharing resources (financial, technical, logistical) between and among organizations;
- The need to coordinate response and recovery with national governments and regional entities.

Black ICE participating organizations included the International Civil Aviation Organization (ICAO), International Federation of Red Cross and Red Crescent Societies (IFRC), International Maritime Organization (IMO), International Organization for Migration (IOM), Interpol, NATO, Organization for Security and Co-operation in Europe (OSCE), UN Department for Disarmament Affairs (UNDDA), World Customs Organization (WCO), World Food Program (WFP), and World Health Organization (WHO).

The Lessons of Black ICE

Based on the experiences in Black ICE, we recommend that:

- Because of finite resources among international organizations, nations increase their own capacity to prevent and respond to bioterrorism;
- Nations establish mechanisms for sharing medical countermeasures internationally and support international organizations' efforts to develop and sustain an effective system for the apportionment of medical countermeasures;
- International organizations work, with the support of national governments and other organizations, to clarify the coordinating authority of a response by international organizations to bioterrorism;
- International organizations and individual nations acknowledge and emphasize the multi-sectoral nature of preparation for and response to bioterrorism; and
- International organizations evaluate their bioterrorism response capabilities and systems to pinpoint potential areas for creative collaboration with other organizations.

You will note that almost all of these recommendations have their foundation in the crucial role *national* governments play in improving our collective ability to prevent and respond to bioterrorism. In addition to directly supporting the work of international organizations, all of our nations can strengthen internal (including state and local), national, and regional abilities to counter bioterrorism by increasing our individual and collective capabilities, and enhancing collaboration and partnership

with neighboring nations to provide for mutual support to complement or supplement possible support from international organizations.

Moving Forward

Finally, I'd like to leave you with three sets of questions for your consideration in this workshop's discussions.

First, in addition to the kinds of initiatives we're discussing today, what are other ways to help motivate and develop truly international collaboration on bioterrorism, agroterrorism, and biodefense issues? Where are the natural synergies between nations – areas where cooperation is not only good security but good sense? What are the obstacles to enhanced global cooperation, and what should we collectively be doing to address those obstacles? What are the roles of both nations and international organizations in leading and modeling these efforts?

Second, what are the best ways to involve the private sector in the ongoing discussion? What are some of the lessons we may learn from similar endeavors in the past, from other security practices, or from collaboration with other industries?

And, finally, what are the implications of bioterrorism/biodefense strategies for international relations, global trade, and international scientific collaboration and progress? There are clear linkages -- and potential impacts. How do we best ensure that enhanced biodefense and biosecurity do not interfere with continued and growing global commerce and scientific exchange? What are the ways to make these efforts complementary and not conflicting? It's been a pleasure to be here today. Thank you again for this opportunity to talk about the U.S. vision for international cooperation on bioterrorism and biodefense.