

Center for Biosecurity of UPMC

ANNUAL REPORT 2009-2010

Mission



UPMC SUPPORT

The Center's work would not have been possible without the leadership and generosity of UPMC.

UPMC's commitment to the Center has allowed us to be independent, innovative, and able to meet new and unexpected challenges with strength and expertise. We are deeply grateful for that support.

Our Mission

The Center for Biosecurity is an independent, nonprofit organization of UPMC. Our mission is to strengthen national security by reducing the risks posed by biological attacks, epidemics, and other destabilizing events, and to improve the nation's resilience in the face of such events.

To improve government policy and practice, our staff of experts in medicine, public health, national security, law, government, anthropology, and the biological sciences conducts innovative research and delivers reliable analyses that:

- assess the threats and challenges posed by biological weapon attacks, large-scale epidemics, and other large disasters;
- identify key barriers and solutions to prevention, preparedness, response, and recovery across the public and private sectors;
- advance the development of new technologies, medicines, and vaccines to deal with these challenges; and
- improve global public health and security.



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THIS WAS A REMARKABLE YEAR FOR THE CENTER FOR BIOSECURITY OF UPMC.

We had important transitions in leadership. The President nominated and the U.S. Senate confirmed Dr. Tara O'Toole as Undersecretary for Science and Technology at the U.S. Department of Homeland Security. Dr. O'Toole was the Center's Director from 2001 until the time of her confirmation in November 2009.

I was deeply honored to be named CEO and Director of the Center, and I am proud to follow in Dr. O'Toole's footsteps. As Director, I am building upon the many substantial accomplishments made by the Center under her leadership. This year, we also welcomed Anita Cicero as Chief Operating Officer and Deputy Director. Ms. Cicero has nearly 2 decades of experience as an attorney for the federal government and the private sector and brings noteworthy expertise in biosecurity policy and public-private partnerships.

During this time of transition — both in the Center and in the Administration — we invigorated our efforts to speak to key policymakers and promote necessary and sensible ideas to improve U.S. national security. We convened a series of major national conferences that gathered top leaders in Washington, DC, to address: strategies to counter or prevent biological threats; plans to increase community

resilience in the face of biological attacks; and implications of the government's H1N1 pandemic response for future infectious disease emergencies. The meetings gathered leaders in the policymaking community and galvanized discussion of new approaches to complex problems.

The Center also broke new ground this year by leveraging our expertise in emergency and community preparedness to engage on issues associated with preparing to cope with nuclear threats. We had the largest substantive national conference in recent memory on reducing the number of lives lost after a terrorist nuclear detonation. In the coming year, we will be launching a pilot public education project to inform Americans about ways to minimize potentially lethal radiation exposure and illness after such a catastrophe.

We have increased our work with various entities of the U.S. government, which are increasingly seeking the Center's analysis and counsel on a range of priority topics. Our reports on U.S. healthcare system preparedness and community resilience, requested by the Department of Health and Human Services, were reflected in the new guidance issued to American hospitals regarding disaster preparedness. Our report on U.S. government biothreat assessments was circulated widely on Capitol Hill and

among members of the Obama Administration. At the request of the U.S. Department of Defense, we examined the U.S. government's international disease surveillance programs and made recommendations to improve those systems; the results of that project have been briefed to top government officials. We were also asked to advise political and health leaders in the midst of the H1N1 crisis, and we published briefings and reports on H1N1 issues related to vaccine use, antiviral distribution, border control, and school closure.


The importance of these issues — biological threats, nuclear threats, and global health security — becomes increasingly clear with time. The congressionally mandated WMD Commission called bioweapons the most likely WMD threat to the country. The President noted that biological weapons “could place at risk the lives of hundreds of thousands of people” and that “the economic cost could exceed one trillion dollars for each such incident.” President Obama also called nuclear terrorism “one of the greatest threats to global security — to our collective security.”

While H1N1 proved far less lethal than originally feared, the experience with that pandemic illustrated that even mild epidemics have serious consequences for the country. The H5N1 avian influenza virus still circulating

in birds continues to offer a glimpse of the potential severity of a highly lethal flu virus.

Given the national and global significance of biological, nuclear, and global health threats, and the many possibilities for reducing them, my colleagues and I will work with even greater dedication, skill, and initiative in the coming year.

The Center's work would not be possible without the generosity of UPMC and the Alfred P. Sloan Foundation, as well as the personal commitment of Jeffrey Romoff, CEO of UPMC, to these efforts. Working to address these great challenges is for us a serious responsibility and an honor.

A handwritten signature in black ink, appearing to read 'Tom Inglesby', with a stylized, flowing script.

Thomas V. Inglesby, MD
CEO and Director



STAFF OF THE CENTER FOR BIOSECURITY 2009-2010

The Center's success depends entirely on the many talented professionals who are dedicated to advancing our mission with their work throughout the year.

Executive Officers

Thomas V. Inglesby, MD, Director
and Chief Executive Officer

Anita Cicero, JD, Deputy Director
and Chief Operating Officer

Senior Associates & Associates

Gigi Kwik Gronvall, PhD, Senior Associate

Ann Norwood, MD, COL, USA, MC (Ret),
Senior Associate

Monica Schoch-Spana, PhD, Senior Associate

Brad Smith, PhD, Senior Associate

Eric Toner, MD, Senior Associate

Brooke Courtney, JD, MPH, Associate

Jennifer Nuzzo, SM, Associate

Analysts

Crystal Franco, MPH, Senior Analyst

Nidhi Bouri, Analyst

Kunal Rambhia, Analyst

Tara Kirk Sell, MA, Analyst

Matthew Watson, Analyst

Samuel Wollner, Analyst

Distinguished Scholars

D. A. Henderson, MD, MPH

Richard E. Waldhorn, MD

Administrative Officers

Bruce Campbell, Chief Financial Officer and
Senior Administrator

Mary Beth Hansen, MA, Chief Information and
Administrative Officer

Publications, Communications & Events Staff

Jackie Fox, Senior Science Writer; Director of
Publications and Communications

Davia Lilly, Director of Design and Production

Molly D'Esopo, Senior Communications
Specialist

Price Tyson, Technology Services and Systems
Manager

Joanna Engstrom-Brown, Events Coordinator

Richard Messick, Web, Print, and Multimedia
Technician

Administrative Support Staff

Maria Jasen, Executive Assistant

Tasha King, Finance & Administration Associate

Kim Biasucci, Senior Administrative Assistant

Elaine Hughes, Senior Administrative Assistant

Tanna Liggins, Senior Administrative Assistant

Darcell Vinson, Senior Administrative Assistant

Interns

Alexis Oetting

Lauren Smith

Ryan Morhard

Yuliya Seldina

Center for Biosecurity

THE CENTER'S WORK, 2009-2010

With the goal of reducing biological dangers and other extraordinary threats to national security, we convene leading professionals to analyze complex problems and develop pragmatic recommendations to solve them.

We seek to strengthen national and local policy and to improve institutional capacity and professional practice, all essential components for coping with the challenges posed by bioterrorism, nuclear terrorism, and other catastrophic events.

We undertake research and analysis with rigor and the perspectives of a range of professional disciplines.

Our work is nonpartisan, independent, and dedicated to fostering constructive change.

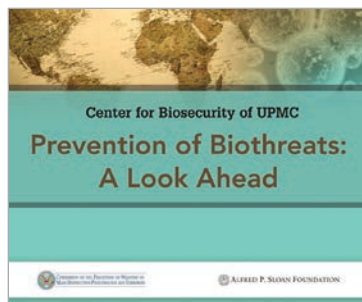


ROW 1, FROM LEFT: GIGI KWIK GRONVALL, *Senior Associate, Center for Biosecurity* • CAROL LINDEN, *Principal Deputy Director, BARDA, Office of the Assistant Secretary for Preparedness and Response, HHS* •

JOHN VITKO, *former Director of Biological and Chemical Countermeasures, Science and Technology Directorate, DHS.*

ROW 2, FROM LEFT: DAVID FRANZ, *former Commander, USAMRIID; Member, National Science Advisory Board for Biosecurity* • LAURA HOLGATE, *Senior Director for Weapons of Mass Destruction Terrorism and Threat Reduction, National Security Council* • RICHARD DANZIG, *Chairman of the Board, Center for a New American Security.*

ROW 3: LAWRENCE KERR, *Deputy Director for Countering Biological Threats, Office of the Director of National Intelligence.*



National Meeting on U.S. Policy for Preventing Biological Threats

Preventing Biological Threats: A Look Ahead (October 2009, Washington, DC) was the first national meeting to convene leading experts and officials to examine all of the major components of U.S. bioprevention policy, including the status of the Biological Weapons Convention and International Health Regulations; UN Security Council resolutions to prevent unlawful acquisition of materials, equipment, and information; deterrence strategy; forensics; and laboratory security.

More than 150 professionals in the Washington, DC, policy community attended, including White House officials, Congressional staff, members of the national media, representatives from leading NGOs, and scientific and technical experts.

Among other key discussions of the day, a White House official offered the first public presentation of elements of President Obama's November 2009 "Countering Biological Threats" strategy, which outlines new directions for U.S. bioprevention policy.



Recommendations to Improve U.S. Laboratory Security

The Center played a critical role in shaping deliberations and legislative debate on U.S. lab security. Center experts provided scientific counsel to members of the congressionally mandated Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism (WMD Commission), which was influential in steering new legislative proposals on laboratory security.

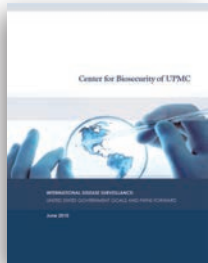
We also led a coalition of nationally recognized scientific research organizations and institutions in providing science-based and pragmatic recommendations for improving laboratory security. In addition, the Center communicated concerns and proposals to members of the U.S. Senate and House as legislation evolved in both chambers.

Taken together, our efforts helped shape the legislative process on laboratory security and provided analytic support for President Obama's July 2010 Executive Order *Optimizing the Security of Biological Select Agents and Toxins in the United States*, which established pragmatic new directions for U.S. laboratory security.

*“We will continue to face new and emerging
biological threats that will require the coordinated
and concerted efforts of a broad range of
domestic and international partners.”*

President Barack Obama. National Strategy for Countering
Biological Threats, National Security Council,
November 23, 2009.





Strategy to Improve U.S. Government International Disease Surveillance

At the request of the U.S. Department of Defense, Defense Threat Reduction Agency, the Center analyzed the status and objectives of the major international disease surveillance programs across the U.S. government. We gathered judgments of leading national experts, the World Health Organization, and other international organizations to examine the direction, coordination, and technical requirements for these programs.

The first assessment of its kind, this effort identified the U.S. government's substantial financial commitment to international disease surveillance across federal agencies, as well as potential areas where different government programs have common surveillance goals and could profit from working in close collaboration. The Center's report also provided practical organizational and technical recommendations for leaders of U.S. government surveillance programs.

The Center has been invited to brief its report and recommendations to officials in the Obama Administration.



THE CELESTIAL SPHERE. PALACE OF NATIONS, GENEVA SWITZERLAND.

Biological Weapons Convention Project

Over the course of the year, the Center engaged in a number of efforts related to invigorating or shaping the Biological Weapons Convention (BWC). The BWC is the international forum for participating countries to improve biological weapons prevention by, for example, strengthening oversight of pathogens, establishing codes of conduct, and developing confidence-building measures.

Center staff delivered an invited statement before the international BWC delegation and made a presentation titled “Biosurveillance and Response Systems and Forms of Prevention Engagement” at the August 2009 BWC meeting in Geneva, Switzerland.

In July 2010, at the request of the U.S. Department of State, the Center convened major nongovernmental organizations and the U.S. delegation to examine the status of the BWC, consider priorities going forward, and develop options for the U.S. agenda for the upcoming BWC review conference to be held Geneva in 2011.

Professional Activities

Publication

Meeting Report. Prevention of Biothreats: A Look Ahead. Gronvall G, Bouri N, Rambhia K, Franco C, Watson M. *Biosecurity and Bioterrorism*. 2009;7(4).

Selected Advisory Board, Scientific Committee, and Task Force Memberships

American Association for the Advancement of Science (AAAS) Committee on Scientific Freedom and Responsibility.

Global Health Governance: The Scholarly Journal for the New Health Security Paradigm. Editorial Board.

U.S. Department of Health and Human Services. National Biosurveillance Advisory Subcommittee.

World Health Organization. International Health Regulations.

Selected Presentations

2010 Biosecurity Conference — Advancing Bioscience and Global Security. Chicago, IL. "The Convergence of Emerging Technologies."

AAAS Improving Global Capacity for Disease Surveillance. Washington, DC. "The International Health Regulations and the 2009 BWC Intercessional Process."

Biological Weapons Convention Meeting of Experts. Geneva, Switzerland. "Biosurveillance and Response."

Inter-American Committee Against Terrorism of the Organization of American States (OAS/CICTE). New Threats and Challenges for the 21st Century Meeting. Washington, DC. "International Cooperation in the Fight Against Terrorism."

U.S. Army CHPPM Seminar. Washington, DC. "Laboratory Security Measures and Countermeasure Development."

U.S. National Academies, the Royal Society, and the Organization for Economic Cooperation and Development (OECD). Washington, DC. "Symposium on Opportunities and Challenges in the Emerging Field of Synthetic Biology."

Interviews and Background for Major Media Outlets

Associated Press. "Documents Show Vast Cleanup of Plum Island Land." June 26, 2010.

Federal News Radio *Science and National Security*. "Biosecurity Struggles Between Safe and Secure." June 14, 2010.

Global Security Newswire. "Biological Weapons Convention Must Be Fixed, Experts Say." October 8, 2009.

Global Security Newswire. "New Legislation Would Make U.S. Leader on Biosecurity, Lieberman Says." September 9, 2009.

Government Health IT. "The Fire Next Time." April 20, 2010.

National Defense Magazine. "Growing Public Interest in Genetic Science Sparks Some Bio-security Concerns." May 17, 2010.

National Review Online. "Immunity Challenge: Let Americans Have the Smallpox and Anthrax Vaccines." December 3, 2009.

USA Today. "Synthetic Biology's Promise." August 31, 2009.



ROW 1, FROM LEFT: ERIC TONER, *Senior Associate, Center for Biosecurity* • RICHARD WALDHORN, *Distinguished Scholar, Center for Biosecurity* • NICOLE LURIE, *HHS Assistant Secretary for Preparedness & Response*.

ROW 2, FROM LEFT: RICHARD BESSER, *Senior Health and Medical Editor, ABC News; former Acting Director, CDC* • D. A. HENDERSON, *Distinguished Scholar, Center for Biosecurity, with Anita Cicero, COO and Deputy Director, Center for Biosecurity* • THOMAS FRIEDEN, *Director, CDC*.

ROW 3: JENNIFER NUZZO, *Associate, Center for Biosecurity*.



National Meeting on H1N1 Pandemic and Infectious Disease Emergency Policy and Response

In March 2010, the Center convened a national conference, *The 2009 H1N1 Experience: Policy Implications for Future Infectious Disease Emergencies* (Washington, DC), to examine U.S. policies and programs that had been put in place in response to the 2009 H1N1 pandemic and to consider the implications of those efforts for future national infectious disease emergencies.

With approximately 150 attendees from the Obama Administration, Capitol Hill, state and local government, academia, and the national news media, this was one of the first public meetings to review U.S. policy related to the H1N1 pandemic.

Forthright discussions and new proposals were offered regarding the best approaches for identifying priority groups for vaccination, evaluating actions such as school and border closures, and preparing the U.S. healthcare system for future infectious disease emergencies.

2009-2010 Center Publications on H1N1

Peer-Reviewed Articles

Original Antigenic Sin and Pandemic (H1N1) 2009. Adalja AA, Henderson DA. *Emerging Infectious Diseases*.

Public Health and Medical Responses to the 1957-58 Influenza Pandemic. Henderson DA, Courtney B, Inglesby TV, Toner E, Nuzzo JB. *Biosecurity and Bioterrorism*. 2009;7(3).

Conference Report

Conference Report — The 2009 H1N1 Experience: Policy Implications for Future Infectious Disease Emergencies. Watson M. *Biosecurity and Bioterrorism*. 2010;8(2).

Issue Briefs

International Progress in Vaccine Development and Distribution. Rambhia K, Nuzzo J. Dec. 17, 2009.

Preliminary Findings: Study of the Impact of the 2009 H1N1 Influenza Pandemic on Latino Migrant Farm Workers in the U.S. Schoch-Spana M, Bouri N, Norwood A, Rambhia K. Nov. 23, 2009.

Licensure, Evaluation, and Adverse Event Monitoring of the 2009 H1N1 Influenza Vaccine. Watson M, Nuzzo J. Nov. 13, 2009.

Where Does H1N1 Influenza Information Come From? An Overview of Influenza Surveillance in the United States. Sell TK, Nuzzo J, Toner E. Nov. 2, 2009.

Pandemic Flu Preparedness: Lessons from the Frontlines. Levi J, Inglesby TV, Segal LM, Vinter S. Trust for America's Health. June 2009.

CBN Report Updates

The Evidence for ECMO Use in Severe Influenza. June 11, 2010.

Universal Vaccines: Hope for the Future. May 28, 2010.

1976 Swine Flu Vaccination and 2009 H1N1. April 30, 2010.

The 2009 H1N1 Experience: Conference Report. March 30, 2010.

ACIP Endorses Universal Flu Vaccination. March 3, 2010.

Hospital Response to the 2009 Influenza Pandemic: A Survey of U.S. Hospital Epidemiologists. Feb. 19, 2010.

H5N1 Remains a Pandemic Threat. Feb. 5, 2010.

Will the D225G Mutation Herald More Severe Illness in 2009 H1N1 Patients? Dec. 11, 2009.

Antigenic Drift Is Not the Sole Factor Driving Evolution of the Influenza Virus. Oct. 30, 2009.

2009 H1N1 Influenza Update: Cases, Hospitalizations, and Mortality. Oct. 22, 2009.

Critical Care of H1N1 Influenza A Patients. Oct. 16, 2009.

Clinical Aspects of H1N1 Influenza A Infection. Oct. 14, 2009.

Single-Dose Vaccination for the 2009 H1N1 Influenza A Virus. Sept. 15, 2009.

H1N1 Dual Infections. Sept. 4, 2009.

Zanamivir Resistance in Influenza. August 14, 2009.

A Novel H3N2 Influenza A Variant Emerges. July 31, 2009.

2009 H1N1 Influenza A: Clinical Details, Antiviral Resistance, and Other Mutations. July 17, 2009.

The Center's Response to the H1N1 Pandemic

From the earliest days of the H1N1 influenza outbreak, the Center helped to shape and inform the response to the pandemic. Dr. Inglesby was asked to serve on the CDC's "Team-B," a group of nongovernment scientists, physicians, public health practitioners, and academic experts tapped to advise CDC leaders on H1N1 response strategy and policies. CDC leadership repeatedly cited the team's value as the agency worked through complex and challenging policy issues. Dr. Inglesby also served on Maryland Governor Martin O'Malley's H1N1 Advisory Board.

As the outbreak unfolded, the Center published regular clinical updates and reports on critical topics in medicine and public health: the formulation, development, distribution, and uptake of vaccine; communication strategies and public response; border control, school closure, and quarantine; and stigmatization of migrant and seasonal farm workers in the U.S. Our brief on stigma during the initial wave of H1N1 was disseminated widely with the help of state and local health officials, the CDC, and the ACLU, to sensitize communities to the public health ramifications of unchecked scapegoating.

These updates and reports reached a national and international audience of government officials and decision makers; leaders in the public, private, healthcare, and academic sectors; and clinical care providers and public health practitioners. We also had extensive interaction with the media throughout the course of the H1N1 response, through which we provided factual information and expert commentary for national news outlets.

After early indications suggested that the 1957 influenza pandemic could be the closest historical analogue to the 2009 H1N1 pandemic, in terms of timing and mortality, the Center analyzed the response to the earlier pandemic to derive lessons that could be applied to the 2009 pandemic response. Our findings, which cautioned that extreme disease containment measures would not be needed or useful, were included in a report to the Director of the CDC.





Landmark Reports on U.S. Healthcare System Preparedness

The Center published 2 major reports on the U.S. Department of Health and Human Services' Hospital Preparedness Program (HPP). The first, *Hospitals Rising to the Challenge: The First Five Years of the U.S. Hospital Preparedness Program and Priorities Going Forward*, presents our assessment of progress made by U.S. hospitals since the 2003 inception of the HPP and documents important changes over that time.

Our second report, *The Next Challenge in Healthcare Preparedness: Catastrophic Health Events*, provides an assessment of what would be required for the U.S. healthcare system to respond to catastrophes on the scale of a biological weapon attack, severe pandemic influenza, or a nuclear detonation. This report makes a series of strategic recommendations to strengthen U.S. healthcare system preparedness for these kinds of disasters.

These 2 reports have been disseminated widely to professionals and leaders in the healthcare preparedness community. The findings have been briefed to senior officials in HHS and the Department of Homeland Security, Congressional staff, the Institute of Medicine's Forum on Medical and Public Health Preparedness for Catastrophic Events, and to a variety of professional meetings around the country. Recommendations from these reports are reflected in the new HHS program priorities of July 2010 that were distributed to states and hospitals.

“To ensure fair, equitable, and consistent provision of limited resources in catastrophic emergencies, practitioners must provide patient care consistent with broader interests of protecting the public’s health. Legal standards of care must also shift. Patient liability claims arising from crisis care should not be assessed solely on what a reasonable practitioner would do in similar circumstances. These claims should be examined based on how a practitioner acts consistent with the need to protect community health in accordance with established national and state crisis standards of care plans or real-time emergency practices.” (p. 362)

Hodge Jr JG, Courtney B. Assessing the Legal Standard of Care in Public Health Emergencies. JAMA. 2010;303(4):361-362.

Legal Preparedness Project

The Center examined major legal challenges related to disaster and public health preparedness. In collaboration with the Public Health Law Center at the University of Arizona, the Center proposed a new approach to addressing healthcare provider liability in the setting of scarce resources and altered standards of care.

We also established a Legal Perspectives column in the journal *Biosecurity and Bioterrorism* to provide a forum for scholars and government attorneys to address important legal issues in preparedness and response. Published assessments have included explications of Emergency Use Authorizations for medicines and vaccines, HHS public health declarations in times of disaster, and the impact of a U.S. Supreme Court case on investigation and prosecution of biological weapons incidents.

Professional Activities

Publications

Environmental Decontamination Following a Large-Scale Bioterrorism Attack. Franco C, Bouri N. *Biosecurity and Bioterrorism*. 2010;8(2).

Public Health Emergencies and Legal Standards of Care Reply. Hodge JG, Courtney B. *JAMA*. 2010;303(18).

Partnership Evaluation Report: Healthcare Facilities Partnerships & Emergency Care Partnerships. Toner E, Waldhorn R, Franco C, Norwood A, Courtney B, Rambhia K, Watson M, Inglesby TV. Baltimore, MD: Center for Biosecurity of UPMC; 2010. Prepared for the U.S. Department of Health and Human Services under Contract No. HHSO100200700038C.2009.

The Next Challenge in Healthcare Preparedness: Catastrophic Health Events. Toner E, Waldhorn R, Franco C, Norwood A, Courtney B, Rambhia K, Watson M, Inglesby TV. Baltimore, MD: Center for Biosecurity of UPMC; 2010. Prepared for the U.S. Department of Health and Human Services under Contract No. HHSO100200700038C. 2009.

Assessing the Legal Standard of Care in Public Health Emergencies. Hodge JG Jr, Courtney B. *JAMA*. 2010;303(4):361-362.

Influenza Vaccine Production for the U.S. Market. Smith LM, Gronvall G. *Biosecurity and Bioterrorism*. 2009;7(3).

Healthcare Coalitions: The New Foundation for National Healthcare Preparedness and Response for Catastrophic Health Emergencies. Courtney B, Toner E, Waldhorn R, Franco C, Rambhia K, Norwood A, Inglesby TV, O'Toole T. *Biosecurity and Bioterrorism*. 2009;7(2).

International Progress in Vaccine Development and Distribution. Rambhia K, Nuzzo JB. (Issue Brief, 12-17-09).

Antibiotic Resistance. Rambhia K, Gronvall G. *Biosecurity and Bioterrorism*. 2009;7(4).

E.R.'s may be the first victims, by Eric Toner. *New York Times*. August 2, 2009.

Selected Advisory Board, Scientific Committee, and Task Force Memberships

Centers for Disease Control and Prevention. Emergency Mass Critical Care in Pediatrics Working Group.

Institute of Medicine. Forum on Medical and Public Health Preparedness for Catastrophic Events.

Institute of Medicine. Committee on Guidance for Establishing Standards of Care for Use in Disaster Situations.

National Academy of Sciences. National Research Council Committee on Animal Models for Assessing Countermeasures to Bioterrorism Agents.

University of Pittsburgh's Preparedness and Emergency Response Research Center. Advisory Group to Public Health Adaptive Systems Studies (PHASYS).

Presentation

Pan American Health Organization. Swearing-in of new Deputy Director and Assistant Director. Washington, DC. "The Pan-American Health Organization's Contributions to Global Immunization."

Interviews and Background for Major Media Outlets

ABC News Medical Unit. "Drastic Measure? Officials Consider Early Roll-Out of Swine Flu Vaccine." August 25, 2009.

Canadian Press. "Misunderstanding of 1918 May Lead to Faulty Assumptions for Swine Flu Experts." August 13, 2009.

Christian Science Monitor. "In a Flu Pandemic, What Can the Government Do to You?" August 25, 2009.

Emergency Department Management. "HHS Unveils Strategy for Disaster Response." April 1, 2010.

Emergency Medicine Reports. "Pandemic Paralysis: H1N1 Influenza Underscores Barriers to Timely Research." August 1, 2009.

Federal News Radio Science and National Security. "Bioterror Countermeasures Should Be Local." June 21, 2010.

Hospital Infection Control. "Plan Expert: CDC Made 'Serious Mistake' on N95s." April 1, 2010.

Hospital Infection Control. "H1N1 Pandemic Legacy May Be Mandatory Flu Shots for Healthcare Workers." April 1, 2010.

Investor's Business Daily. "Bioshield Financing Pays Off for Some." October 30, 2009.

National Journal. "Flu Causes Aches and Pains at White House. . ." November 7, 2009.

National Public Radio Marketplace Report. "Swine Flu Threatens Hospital Business." October 21, 2009.

Pittsburgh Post-Gazette. "Medical Advice Is the Last Thing We Want To Be Unsure About." November 29, 2009.

Politico. "Obama Team Mulls New Quarantine Regs." August 5, 2009.

Reuters. "Analysis: US Government Faces No-Win Fight with Flu." October 28, 2009.

Reuters. "Some Measures Won't Help Prevent Flu Pandemic." August 5, 2009.

Thompson Reuters. "U.S. Hospitals Weathering Flu Pandemic So Far." November 5, 2009.

USA Today. "Obama Administration Scraps Quarantine Regulations." April 2, 2010.

USA Today. "Vaccine Video Uses Humor to Ask a Serious Question." November 4, 2009.

USA Today. "H1N1 Flu 'Pushing Hospitals to Their Limit'." October 26, 2009.

Washington Post. "Obama Declares Flu Emergency to Ease Restrictions for Hospitals, Officials Prepare for a Surge in H1N1 Cases." October 25, 2009.

Washington Post. "Disaster Plans Being Revised for Swine Flu: Strains on Emergency System Feared." September 13, 2009.

Washington Post. "Lessons from the Flu of '57; Pandemic Spread Quickly Among Young People." August 25, 2009.

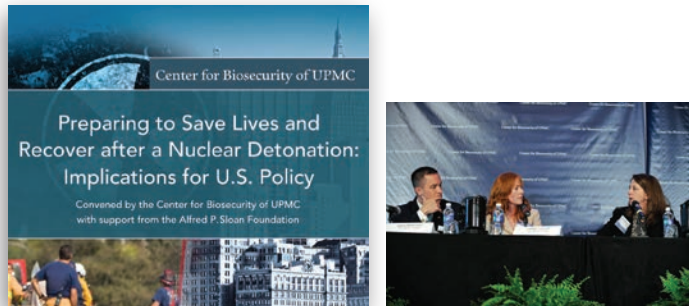
Washington Post. "Preparing for Swine Flu's Return; New Wave Expected after Virus Flourished in Southern Hemisphere." August 10, 2009.



ROW 1, FROM LEFT: ANN NORWOOD, *Senior Associate, Center for Biosecurity* • BROOKE BUDDEMEIER, *Certified Health Physicist, Global Security Directorate, Lawrence Livermore National Laboratory* • JOAN ROHLFING, *President, Nuclear Threat Initiative*.

ROW 2, FROM LEFT: TAMMY TAYLOR, *former Senior Policy Analyst, National Security and International Affairs Division, Office of Science and Technology Policy, Executive Office of the President, The White House* • ANITA CICERO, *COO and Deputy Director, Center for Biosecurity, with* THOMAS INGLESBY, *CEO and Director, Center for Biosecurity, and* JOAN ROHLFING • DAVID HOFFMAN, *Author, The Dead Hand: The Untold Story of the Cold War Arms Race and Its Dangerous Legacy*.

ROW 3: DAVID MARCOZZI, *Director, All-Hazards Medical Preparedness Policy, National Security Council Staff, The White House*



National Meeting on Response to a Nuclear Detonation

The Center's April 2010 national meeting, *Preparing to Save Lives and Recover After a Nuclear Detonation: Implications for U.S. Policy* (Washington, DC), examined interventions that could save tens of thousands of lives and help begin the recovery process following a nuclear detonation.

This first-of-its-kind meeting, designed and moderated by the Center, gathered more than 150 attendees, including officials from the Obama Administration, congressional staff, members of leading think tanks, policy analysts, scholars, members of the national media, and experienced practitioners from medicine, public health, and emergency management.

While at some point terrorists may succeed in detonating a nuclear device in the U.S., the Center's meeting elucidated the steps that can be taken now to protect and save lives. They include planning for reliable delivery of information to and clear communication with the public, swift mobilization of emergency workers, effective medical response, and remedying vulnerabilities that threaten to undermine continuity of the U.S. government. Rapid and effective response will save lives and preserve our democracy in the wake of a catastrophic event.

Professional Activities

Publication

Conference Report — Preparing to Save Lives and Recover After a Nuclear Detonation: Implications for U.S. Policy. http://www.upmc-biosecurity.org/website/events/2010_nuke/index.html. Accessed August 1, 2010.

Selected Advisory Board, Scientific Committee, and Task Force Memberships

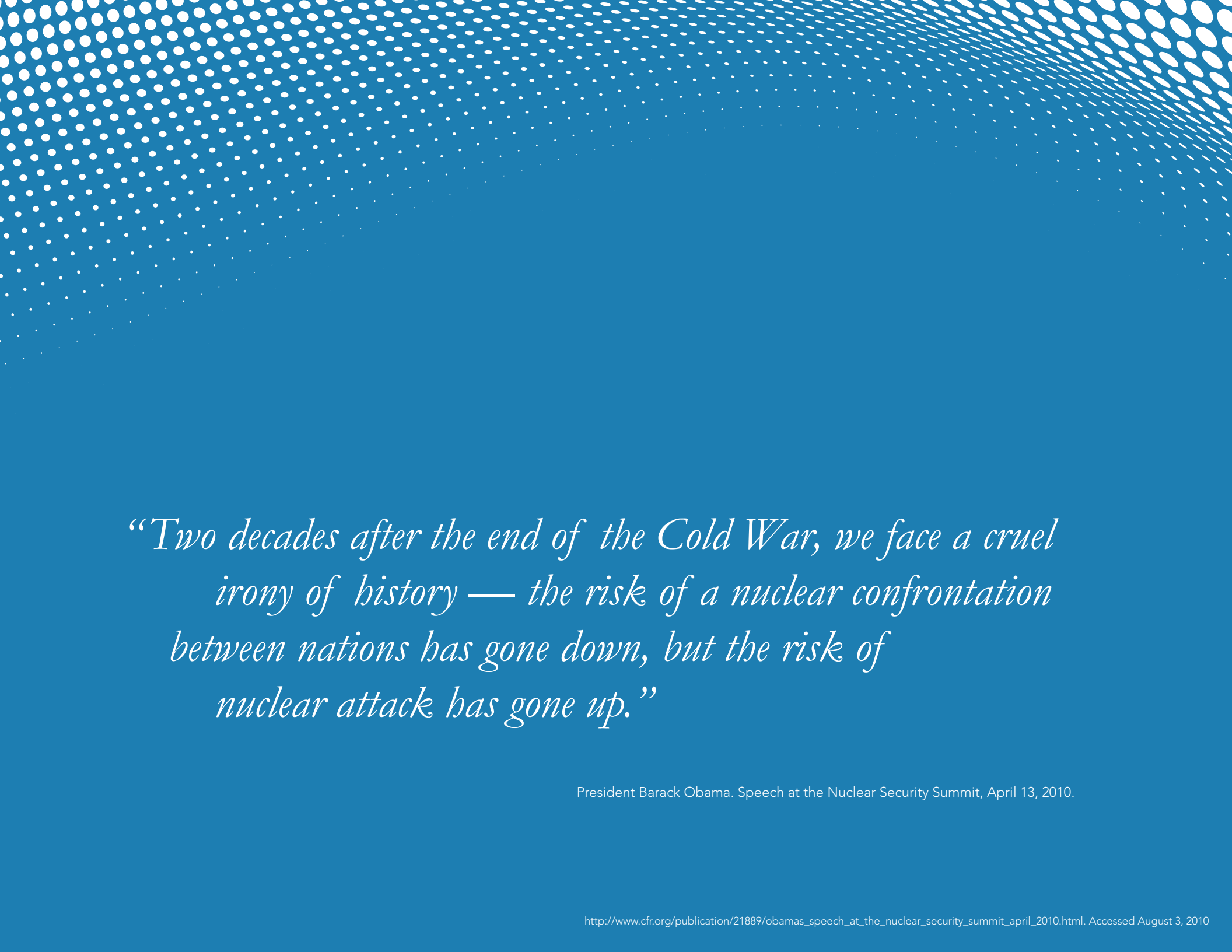
U.S. Department of Health and Human Services. Office of Preparedness and Response. Executive Steering Committee. Allocation of Scarce Resources Following Detonation of an Improvised Nuclear Device.

Presentation

Columbia University, College of Physicians and Surgeons and the National Cancer Institute, Radiation Epidemiology Branch. Radiological Science in the Context of Radiological Terrorism Workshop. Bethesda, MD. "Anticipated Psychological Impact of Radiological Terrorism."

Interviews and Background for Major Media Outlets

Federal News Radio *Science and National Security*. "How to Plan for Improvised Nuclear Devices." July 26, 2010.



“Two decades after the end of the Cold War, we face a cruel irony of history — the risk of a nuclear confrontation between nations has gone down, but the risk of nuclear attack has gone up.”

President Barack Obama. Speech at the Nuclear Security Summit, April 13, 2010.



ROW 1, FROM LEFT: MONICA SCHOCH-SPANNA, *Senior Associate, Center for Biosecurity* •

ANN NORWOOD, *Senior Associate, Center for Biosecurity* • RICHARD SERINO, *FEMA Deputy Administrator*.

ROW 2, FROM LEFT: BRIAN KAMOIE, *Senior Director for Preparedness Policy, National Security Staff, The White House*

• NICOLE LURIE, *Assistant Secretary for Preparedness & Response, HHS* • THOMAS INGLESBY, *CEO and Director, Center for Biosecurity*.

ROW 3: BROOKE COURTNEY, *Associate, Center for Biosecurity*.



National Meeting on Resilient American Communities

In December 2009, the Center organized and led the meeting *Resilient American Communities: Progress in Practice and Policy* (Washington, DC), in collaboration with the National Consortium for the Study of Terrorism and Response to Terrorism (START) and the Natural Hazards Center for the University of Colorado. It was the first national meeting to bring together policymakers, practitioners, and scholars to provide recommendations to the federal government on building resilience to disasters.

Strengthening community resilience is a stated top priority of the Obama Administration, as reflected in the HHS National Health Security Strategy and the DHS Quadrennial Homeland Security Review.

Among the more than 140 meeting participants were U.S. government officials, congressional staff, policy analysts, scholars, health officials, emergency managers, members of the media, and heads of private and nonprofit initiatives to reduce disaster risk.

Meeting participants made recommendations on how to improve local resilience efforts to prepare for extreme events and on how to shape U.S. federal policy to build community resilience.



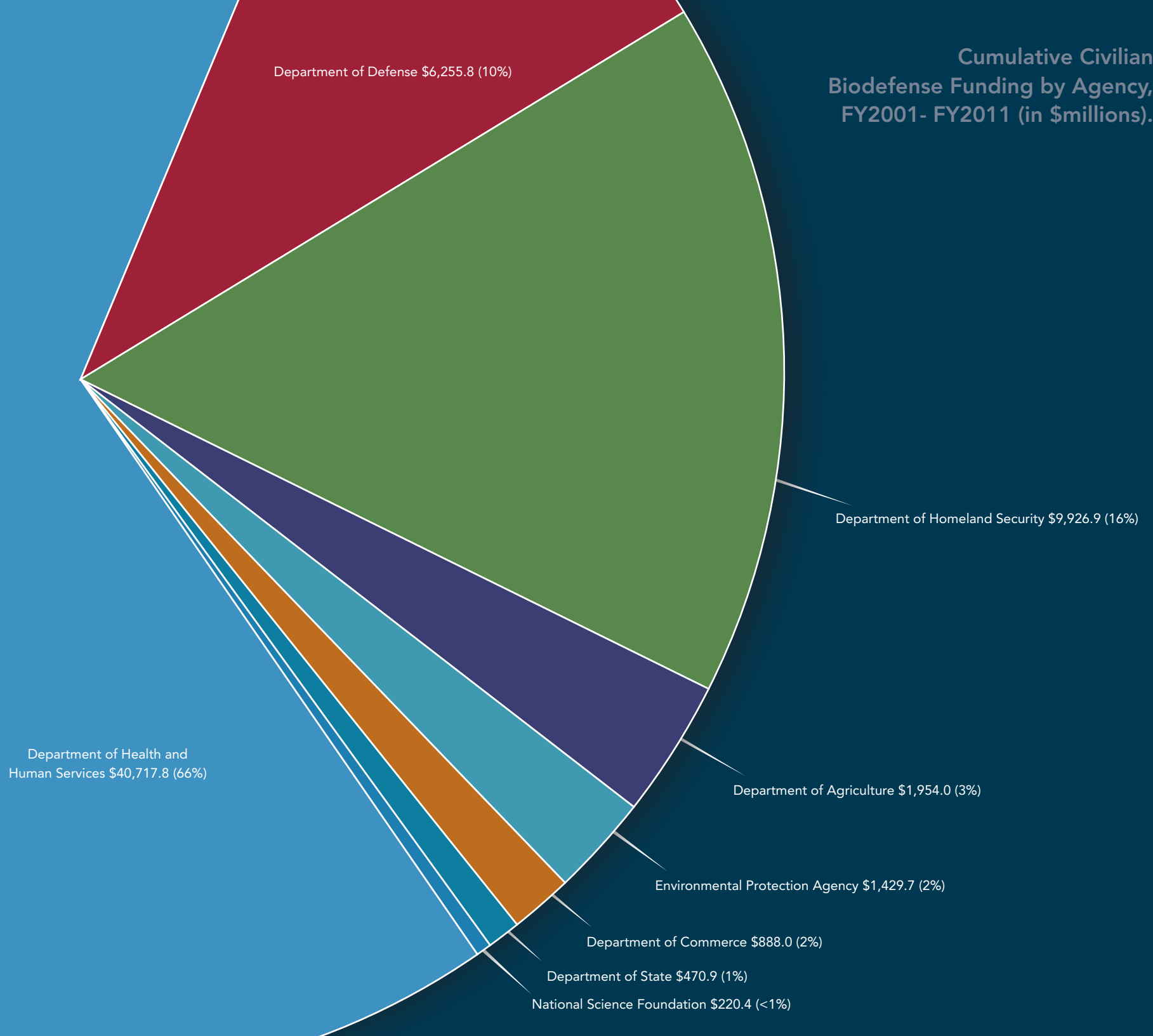
Expert Report on Community Resilience

The Center assembled leading disaster scholars from around the country to examine the research and evidence base for disaster response and, on the basis of this effort, to provide recommendations to U.S. policymakers on actions that would improve community resilience and help localities withstand extreme events.

Past federal policy efforts aimed at building community resilience have at times proceeded without benefit of the knowledge gained by disaster research professionals who have studied what has and has not worked. Similarly, the disaster researcher community has not always made it a priority to inform the policymaking process. The Center's report was intended to help improve the connections between these 2 important professional communities.

One leading disaster scholar described the report as “the best single treatment of the issues that is available at this point.”

Cumulative Civilian
Biodefense Funding by Agency,
FY2001- FY2011 (in \$millions).



GO ONLINE TO REVIEW

<http://www.upmc-biosecurity.org/website/resources/publications/2010/2010-06-14-biodefensefunding.html>

Annual Federal Biodefense Budget Analysis

Since 2004, the Center has published an annual analysis of the U.S. government biodefense budget, which spans 8 federal agencies, departments, and programs across the federal government.

As in past reports, this year's "Federal Agency Biodefense Funding, FY2010-FY2011," identifies all major biodefense-related programs in the federal agencies, describes their stated objectives, details the president's FY2011 budget request, and compares the current request with previous years' budgets.

This analysis is used widely as a reference within the U.S. government biodefense community. It has also become the standard reference for research institutions and members of the media who report on biodefense.

Before the Center began publishing this annual assessment, there was no standard, aggregate source of biodefense budget information available to government officials.



malERA's International Advisory Committee* (back row, left to right): GRAHAM BROWN, NOSSAL INSTITUTE FOR GLOBAL HEALTH, MELBOURNE, AUSTRALIA • DONALD A. HENDERSON, CENTER FOR BIOSECURITY OF UPMC, BALTIMORE, MD, USA • GEORGE GRIFFIN, UNIVERSITY OF LONDON, LONDON, UK • TUMANI CORRAH, MEDICAL RESEARCH COUNCIL GAMBIA, BANJUL, THE GAMBIA • NORMAN W. BAYLOR, OFFICE OF VACCINES RESEARCH AND REVIEW, CENTER FOR BIOLOGICS EVALUATION AND RESEARCH, ROCKVILLE, MD, USA • ZULFIQAR BHUTTA, AGA KHAN UNIVERSITY, KARACHI, PAKISTAN • FRANÇOIS GASSE, UNICEF, NEW YORK, NY, USA. (front row, left to right): JOEL BREMAN, FOGARTY INTERNATIONAL CENTER (NIH), BETHESDA, MD, USA • JOSÉ NÁJERA, INDEPENDENT; FORMERLY WORLD HEALTH ORGANIZATION, GENEVA, SWITZERLAND • MYRON M. LEVINE, CENTER FOR VACCINE DEVELOPMENT, UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE, BALTIMORE, MD, USA • CIRO A. DE QUADROS, SABIN VACCINE INSTITUTE, WASHINGTON, DC, USA • WALTER DOWDLE, TASK FORCE FOR GLOBAL HEALTH, DECATUR, IL, USA • SAMBA SOW, CENTRE POUR LE DÉVELOPPEMENT DES VACCINS DU MALI, MINISTRY OF HEALTH, BAMAKO, MALI.

**Not all members of the committee appear in photograph. Photograph courtesy of malERA.*

Malaria Eradication Research Agenda

D. A. Henderson serves on the International Advisory Committee for malERA (Malaria Eradication Research Agenda), which seeks “to identify the critical research areas that must be addressed to eradicate malaria, and to lay out a process to best organize research and development efforts to move from malaria control to eradication.”

malERA is led by a council of international organizations including the World Health Organization, Roll Back Malaria Partnership, National Institute of Allergy and Infectious Diseases (NIH), The Wellcome Trust, and the Bill & Melinda Gates Foundation. malERA is one of the largest operational international R&D programs that has ever been developed, with a budget of close to \$100 million.

Professional Activities

Publications

Federal Agency Biodefense Funding, FY2010-FY2011. Franco C. *Biosecurity and Bioterrorism*. 2010;8(2).

Billions for Biodefense: Federal Agency Biodefense Funding, FY2009-FY2010. Franco C. *Biosecurity and Bioterrorism*. 2009;7(3).

Selected Advisory Board, Scientific Committee, and Task Force Memberships

Federal Emergency Management Agency. Technical Working Group on Community Preparedness.

U.S. Environmental Protection Agency. National Drinking Water Advisory Council.

National Consortium for the Study of Terrorism and Responses to Terrorism (START), a DHS University Center of Excellence. Executive Steering Committee.

Selected Presentations

Avancees Vaccinales. Paris, France. "Smallpox: Death of a Disease." Scientific Workshop.

Carnegie Council for Ethics & International Affairs. New York, NY. "Seminar Session on Smallpox, Biosecurity and Ethical Issues."

Center for a New American Security (CNAS). Washington, DC. "Creating Resilience to Biological Threats."

Natural Hazards Center of the University of Colorado and the Community & Regional Resilience Institute (CARRI). Disaster Resilience Workshop. Boulder, CO. "Resilient Public Health and Medical Systems."

University of California Institute on Global Conflict and Cooperation. IGCC Public Policy and Biological Threats Summer Training Program. San Diego, CA. "Biosecurity in an Age of Terrorism."

University of Pittsburgh School of Medicine. Department of Microbiology.

Pittsburgh, PA. "Smallpox Eradication: A Victory and a Continuing Problem" and "Biodefense "

World Health Organization. 30th Anniversary of Smallpox Eradication Ceremony. Geneva, Switzerland. Commemoration Speech, Unveiling of the Statue Marking the Eradication of Smallpox.

Interviews and Background for Major Media Outlets

ABC News Medical Unit. "7 Diseases We'd Forgotten About." August 14, 2009.

Foreign Policy. "The Man Who Defeated Smallpox." May 5, 2010.

Global Health Magazine. "The Death of a Disease." May 11, 2010.

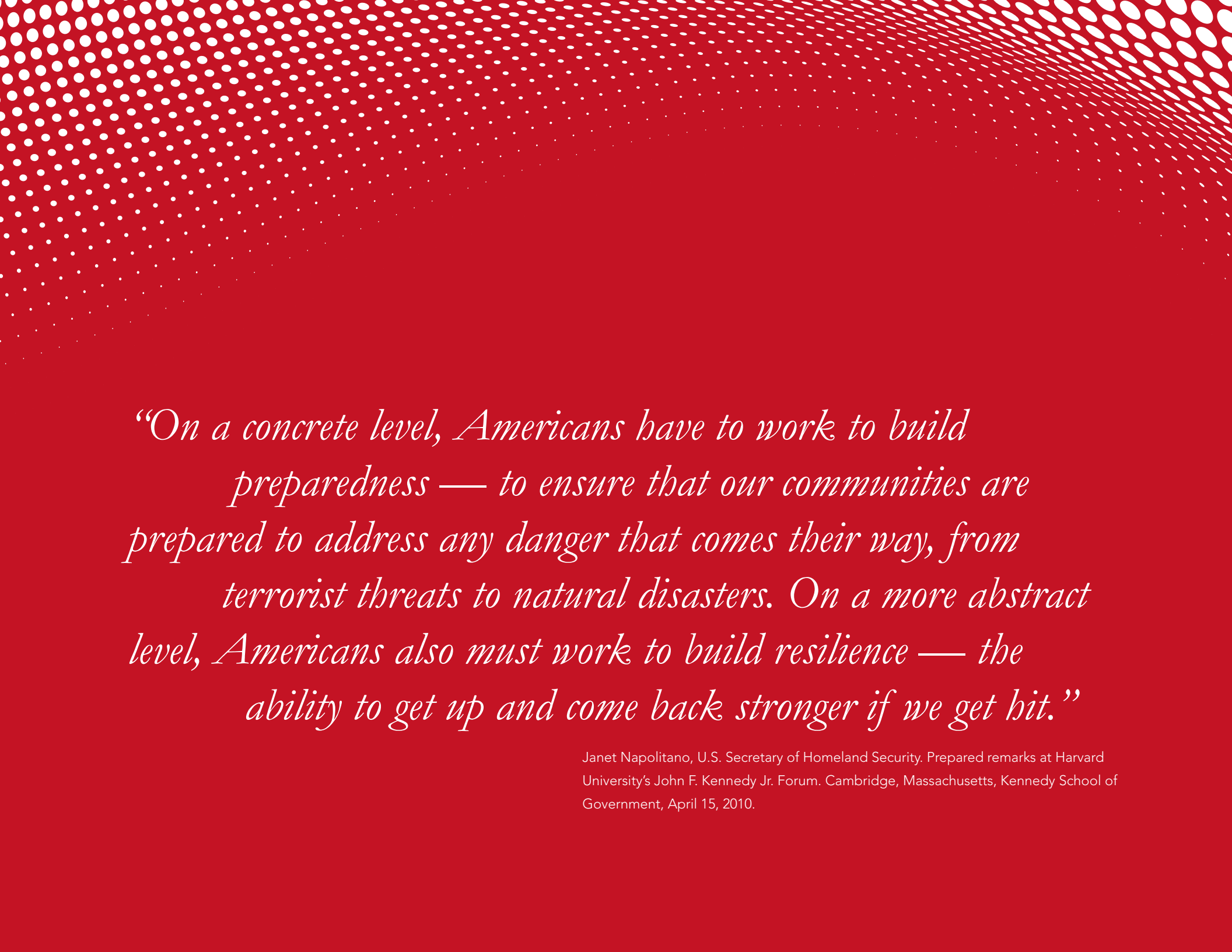
Global Security Newswire. "U.S. Boosts Biodefense Funding in New Budget." June 24, 2010.

National Public Radio *Talk of the Nation Science Friday*. "Book Recounts Challenges of Eradicating Smallpox." November 20, 2009.

New York Times. "A Campaign Shows Signs of Progress Against Polio." April 12, 2010.

Science. "Book Review: Smallpox — The Death of a Disease." November 21, 2009.

Washington Post. "Tragedy of Individual Haitians Risks Overshadowing Chronic Health Problems." February 22, 2010.



“On a concrete level, Americans have to work to build preparedness — to ensure that our communities are prepared to address any danger that comes their way, from terrorist threats to natural disasters. On a more abstract level, Americans also must work to build resilience — the ability to get up and come back stronger if we get hit.”

Janet Napolitano, U.S. Secretary of Homeland Security. Prepared remarks at Harvard University's John F. Kennedy Jr. Forum. Cambridge, Massachusetts, Kennedy School of Government, April 15, 2010.



SENATOR BOB GRAHAM, CO-FOUNDER, THE WMD CENTER; FORMER CHAIR, COMMISSION ON THE PREVENTION OF WEAPONS OF MASS DESTRUCTION PROLIFERATION AND TERRORISM •
SENATOR JIM TALENT, CO-FOUNDER, THE WMD CENTER; FORMER VICE CHAIR, COMMISSION ON THE PREVENTION OF WEAPONS OF MASS DESTRUCTION PROLIFERATION AND TERRORISM.
FACING PAGE: COLONEL RANDALL J. LARSEN, USAF (RETIRED), CEO, THE WMD CENTER; FORMER EXECUTIVE DIRECTOR, COMMISSION ON THE PREVENTION OF WEAPONS OF MASS
DESTRUCTION PROLIFERATION AND TERRORISM.



Scientific Counsel for the WMD Commission

A Center Senior Associate served as the chief biological scientist to advise the bipartisan Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism (WMD Commission), which was established by Congress to address the grave threat posed by proliferation of weapons of mass destruction. In December 2008, the Commission published *World at Risk*, which recommended 13 actions to be taken by the U.S. government, and then issued a report card 1 year later.

The Center helped shape the content of the report and prepared testimony for Senators Graham and Talent for 3 separate hearings for the Senate and House Homeland Security Committees and the House Judiciary Committee. The work of the Commission was key to a sensible policy outcome on U.S. laboratory security.

The Center also provided scientific consultation for the Commission's influential video on influenza vaccine production and supported the need to invest in new vaccine technologies for influenza and other infectious diseases.

“Several terrorist groups, particularly al-Qa’ida, remain interested in chemical, biological, and radiological materials and weapons.... Some terrorist groups see employing CBRN materials as low-cost, high-impact options for achieving their goals.”

Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, January-December 2007. Deputy Director of National Intelligence for Analysis.

“....we receive reports indicating that al-Qa’ida and other groups are attempting to acquire chemical, biological, radiological, and nuclear weapons or materials.”

Annual Threat Assessment of the Director of National Intelligence for the Senate Armed Services Committee. Director of National Security J. Michael McConnell. February 27, 2007.

“Some terrorist groups see employing chemical, biological, radiological, and nuclear (CBRN) materials as a high-impact option for achieving their goals.”

Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, Covering 1 January to 31 December 2008. Deputy Director of National Intelligence for Analysis.

“IN PARTICULAR, WE ASSESS THE TERRORIST USE OF BIOLOGICAL AGENTS REPRESENTS A GROWING THREAT AS THE BARRIERS TO OBTAINING MANY SUITABLE STARTER CULTURES ARE ERODING AND OPEN SOURCE TECHNICAL LITERATURE AND BASIC LABORATORY EQUIPMENT CAN FACILITATE PRODUCTION.”

Annual Threat Assessment of the Intelligence Community for the Senate Armed Services Committee. Director of National Intelligence Dennis C. Blair. March 10, 2009.

“A wide array of reporting in 2005 indicated continued interest by al-Qa’ida and other terrorist groups in developing chemical and biological capabilities for use in attacks against Western targets, especially in Iraq and Afghanistan.”

Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, January-December 2005. Director of National Intelligence.

New Report on Biological Weapons Threat to the U.S.

For many years, agencies and commissions across the federal government have publicly concluded that biological weapons are a top threat to the country. However, it has not been easy to synthesize or compare the information in the federal government's assessments.

The Center's January 2010 report, "U.S. Government Judgments on the Threat of Biological Weapons: Official Assessments, 2004-2009," is the first report to synthesize key judgments of high-level U.S. documents published across the breadth of federal agencies over a number of years.

This report made evident that U.S. government concerns about biological weapons and bioterrorism are consistent from one presidential administration, Congress, and commission to the next.

As biodefense policy and legislation were being developed over the course of the past year, this report was circulated widely on Capitol Hill and in the Obama Administration.



U.S. Biosecurity Policy Review

Dr. Inglesby co-authored “Necessary Progress in Biosecurity” with former Senator Tom Daschle as a foreword for the *Harvard Law and Policy Review*’s July 2010 issue, “Symposium on Public Health and Biosecurity.”

Daschle and Inglesby argue that the question is no longer whether the U.S. should pursue better biosecurity policies — a goal with bipartisan appeal and wide public support — but rather how the U.S. should pursue needed improvements.

The authors examine ideas put forth by a number of leading policy and legal scholars, and they offer their own recommendations for strengthening U.S. biosecurity.

SENATOR TOM DASCHLE, SPECIAL POLICY ADVISOR AT THE LAW FIRM DLA PIPER AND DISTINGUISHED SENIOR FELLOW, CENTER FOR AMERICAN PROGRESS; FORMER MAJORITY LEADER OF U.S. SENATE • COVER, *Harvard Law and Policy Review*. SUMMER 2010;4(2).
[HTTP://HLPRONLINE.COM/2010/07/VOLUME-4-2/](http://hlpronline.com/2010/07/volume-4-2/).

Professional Activities

Publication

Necessary Progress in Biosecurity. Daschle T, Inglesby T. *Harvard Law and Policy Review*. 2010;4(2).

Selected Advisory Board, Scientific Committee, and Task Force Memberships

U.S. Department of Health and Human Services. National Biodefense Science Board.

U.S. Department of Homeland Security. Biodefense Net Assessment Executive Review Panel.

Maryland Department of Health and Mental Hygiene. Governor’s H1N1 Flu Advisory Board.

National Academy of Sciences. Committee on Science of the Anthrax Investigation.

Council on Foreign Relations.

American Anthropological Association. Commission on the Engagement of Anthropology with the U.S. Security and Intelligence Communities.

March of Dimes. Technical Advisory Committee.

Selected Presentations

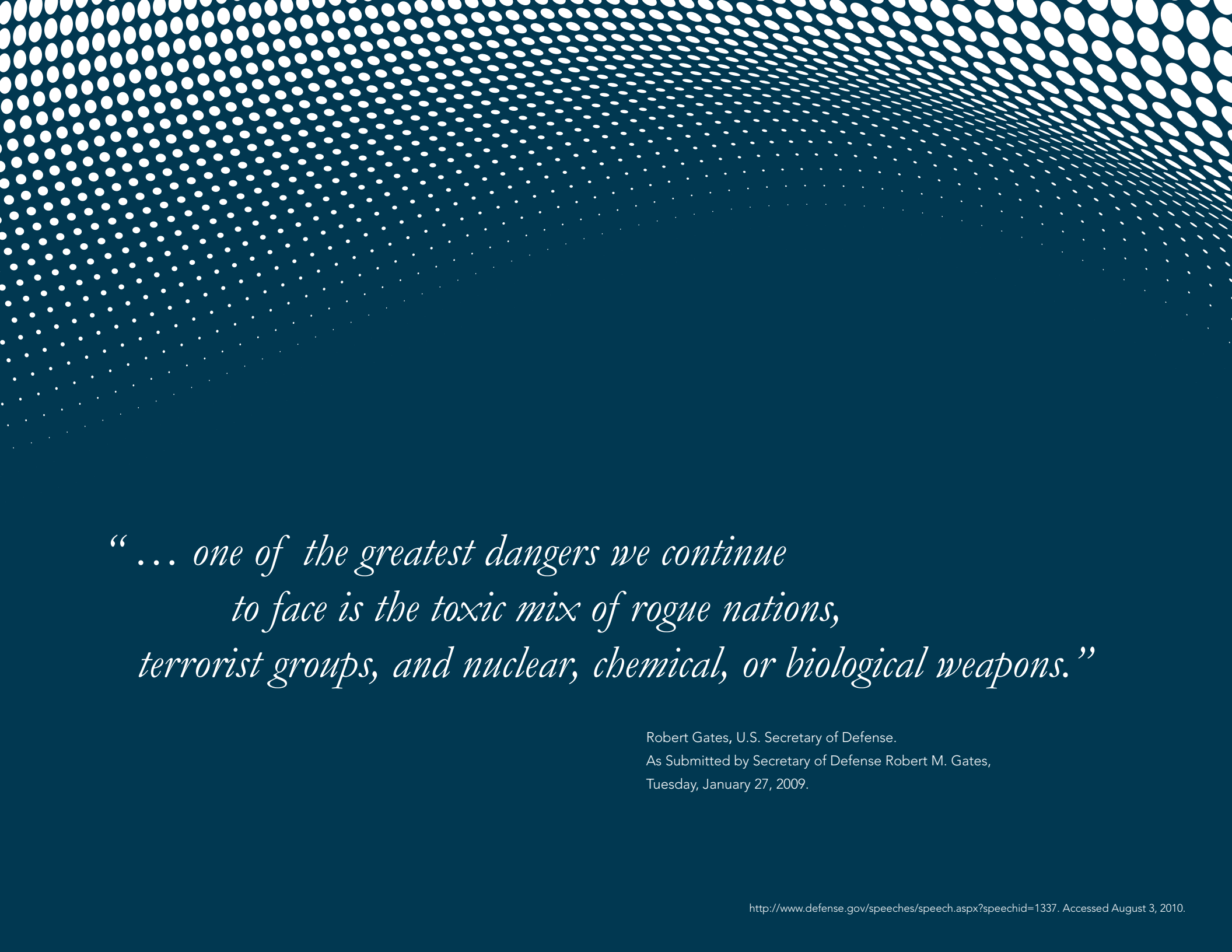
National Governors Association Center for Best Practices. Workshop on Security Implications of Public Health Threats. Minneapolis, MN. “Bioterrorism and Homeland Security.”

Swedish Institute for Infectious Disease Control. Stockholm, Sweden. “Biosecurity Threats.”

American Anthropological Association Annual Meetings. Philadelphia, PA. “Professional Ethics and the Security Sector: A Dialogue with the Larger Anthropological Community.”

Interviews and Background for Major Media Outlets

Global Security Newswire. “Former Senators Criticize Possible Cut to Bioshield Funds.” July 13, 2010.



*“... one of the greatest dangers we continue
to face is the toxic mix of rogue nations,
terrorist groups, and nuclear, chemical, or biological weapons.”*

Robert Gates, U.S. Secretary of Defense.

As Submitted by Secretary of Defense Robert M. Gates,
Tuesday, January 27, 2009.

BIOSECURITY AND BIOTERRORISM

BIODEFENSE STRATEGY, PRACTICE, AND SCIENCE

Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science

Thomas Inglesby and D. A. Henderson are Coeditors-in-Chief of this peer-reviewed journal, the only one of its kind, which ranks among the top 10 in international relations. With a readership that has grown steadily since its inception in 2003, the journal now reaches an international audience of individual and institutional subscribers in the U.S., Canada, South America, Europe, India, China and across Asia. The journal is read both in print and online around the world, with article downloads increasing from year to year. The majority of online traffic is from libraries of major U.S. and international academic institutions and U.S. government agencies, though the number of international readers is growing.

Highlights from *Biosecurity and Bioterrorism*, 2009-2010

"Public Willingness to Take a Vaccine or Drug Under Emergency Use Authorization during the 2009 H1N1 Pandemic." Sandra Crouse Quinn, Supriya Kumar, Vicki S. Freimuth, Kelley Kidwell, Donald Musa.

"Destruction of Microbial Collections in Response to Select Agent and Toxin List Regulations." Arturo Casadevall, Michael Imperiale.

"Trust Across Borders: Responding to 2009 H1N1 Influenza in the Middle East." Louise Gresham, Assad Ramlawi, Julie Briski, Mariah Richardson, Terence Taylor.

"Environmental Decontamination Following a Large-Scale Bioterrorism Attack: Federal Progress and Remaining Gaps." Crystal Franco and Nidhi Bouri.

"How to Reduce the Impact of 'Low Risk Patients' Following a Bioterrorist Incident: Lessons from SARS, Anthrax, and Pneumonic Plague." G. James Rubin, Petra Dickmann.

"Exposure to Bioterrorism and Mental Health Response among Staff on Capitol Hill." Carol S. North, Betty Pfefferbaum, Meena Vythilingam, Gregory J. Martin, John K. Schorr, Angela S. Boudreaux, Edward L. Spitznagel, Barry A. Hong.

"Bacterial Pneumonias during an Influenza Pandemic: How Will We Allocate Antibiotics?" Sandro K. Cinti, Andrew R. Barnosky, Steven E. Gay, Susan Dorr Gool, Marie M. Lozon, Kristin Kim, Phillip E. Rodgers, Nancy M. Baum, Bruce A. Cadwallender, Curtis D. Collins, Carrie M. Wright, Robert A. Winfield.

"Legal Perspectives: Emergency Use Authority and 2009 H1N1 Influenza." Susan E. Sherman, Joseph Foster, Sonal Vaid.

"Legal Perspectives: Federal Declaration of a Public Health Emergency." Jennifer Ray.

"Science for Policymakers: Influenza Vaccine Production for the U.S. Market." Lauren M. Smith, Gigi Kwik Gronvall.

"Source Reduction in an Anthrax-Contaminated Mail Facility." Dorothy A. Canter, Thomas J. Sgroi, Laurel O'Connor, Carlton J. Kemper.

Clinicians' Biosecurity Network (CBN)

On a biweekly basis, the Center's *CBN Report* provides expert updates on issues in clinical biosecurity to several thousand subscribers from 54 countries. These brief summaries of new developments in infectious diseases, drug development, public health preparedness, and policy highlight biosecurity implications of clinical issues, identify areas in need of research, and call attention to unusual events and emerging outbreaks. While topics in pandemic influenza predominated in the past year, we have also published reports on dengue fever, anthrax among heroin users in Europe, and airborne spread of *C. difficile*.

The Center established the CBN following the anthrax attacks of 2001 to provide a source for timely and reliable updates during biosecurity emergencies. During the H1N1 influenza outbreak, the Center tracked and reported on the outbreak daily to provide information on epidemiology, medical management, and legal, policy, and social issues that played a role in national and global response.

Biosecurity News In Brief

The Center tracks a broad array of reputable national and international news outlets, peer-reviewed scientific literature, and key reports from the U.S. government, NGOs, and international agencies to provide a daily news digest for our subscribers.

This email newsletter covers ongoing disease epidemics, emerging threats to national and homeland security, public health and hospital preparedness and response, medical countermeasure development, and cutting-edge scientific research pertaining to biosecurity.

On the H1N1 influenza pandemic alone, we compiled and delivered close to 900 news items from 270 global outlets to international, national, and local leaders and practitioners.

To subscribe to the BNIB visit:

http://www.upmc-biosecurity.org/biosecurity_briefing

CBN Report Titles, 2009-2010

Pertussis Resurgent in California
The Evidence for ECMO Use in
Severe Influenza

Universal Vaccines: Hope for the
Future

Airborne Spread of *Clostridium
difficile*

1976 Swine Flu Vaccination and
2009 H1N1

Many Gaps Exist in Plans for
Environmental Decontamination
Following a Large-Scale
Bioterrorism Attack

The 2009 H1N1 Experience:
Conference Report

Puerto Rico Declares Dengue
Fever Epidemic

New Report: The Next Challenge
in Healthcare Preparedness

ACIP Endorses Universal Flu
Vaccination

Hospital Response to the 2009
Influenza Pandemic: A Survey of
U.S. Hospital Epidemiologists

H5N1 Remains a Pandemic Threat

Anthrax Cases among Heroin Users
in Europe Illustrate Novel Risk

Unusual Case of GI Anthrax in New
Hampshire Raises Questions

Will the D225G Mutation Herald
More Severe Illness in 2009 H1N1
Patients?

Antigenic Drift Is Not the Sole
Factor Driving Evolution of the
Influenza Virus

2009 H1N1 Influenza Update:
Cases, Hospitalizations, and
Mortality

Critical Care of H1N1 Influenza A
Patients

Clinical Aspects of H1N1 Influenza
A Infection

New IOM Guidance on Crisis
Standards of Care for Use in
Disaster Situations

Single-Dose Vaccination for the
2009 H1N1 Influenza A Virus

H1N1 Dual Infections

Zanamivir Resistance in Influenza

A Novel H3N2 Influenza A Variant
Emerges

2009 H1N1 Influenza A: Clinical
Details, Antiviral Resistance, and
Other Mutations

To subscribe to the CBN visit:

<http://www.upmc-cbn.org/subscription/subscribe.html>

“Our nation, like all countries, faces many threats with the potential for large-scale health consequences, including disease outbreaks, natural disasters, and terrorist attacks. Preparing for and responding to these and other threats requires the commitment of, and cooperation among, all segments of society: government, the private sector, local communities, and international partners.”

Kathleen Sebelius, U.S. Secretary of Health and Human Services.
National Health Security Strategy, December 2009.



MADELEINE ALBRIGHT *(as President of the United States, Atlantic Storm),
Principal, The Albright Group, LLC; former Secretary of State of the United States*

ABOUT THE CENTER FOR BIOSECURITY

MORE THAN A DECADE OF LEADERSHIP IN BIOSECURITY

Prior to joining UPMC in 2003 as the Center for Biosecurity, the group was founded in 1998 as the first and only academic center focused on biosecurity policy and practice. The Center's work has helped to define the character and potential consequences of major biological threats, the policies needed to protect the nation, and the response capacities necessary to diminish their effects.

In the late 1990s, the Center led a major effort to develop consensus guidelines for medical and public health management of anthrax, smallpox, plague, botulinum toxin, tularemia, and the hemorrhagic fever viruses. The results were published in the *Journal of the American Medical Association (JAMA)*, and the pathogens described in the guidelines came to be known as the "category A agents," to signify the most dangerous biothreats. This effort was critical in shaping U.S. biodefense strategy and planning.



ROW 1, LEFT TO RIGHT : D. A. HENDERSON, *Distinguished Scholar, Center for Biosecurity* • JAN ELIASSON (as Prime Minister of Sweden, *Atlantic Storm*), former Ambassador of Sweden to the U.S.; former Deputy Secretary of State and Former Undersecretary General for Humanitarian Affairs at the United Nations • TARA O'TOOLE, Undersecretary for Science and Technology, DHS; former CEO and Director, Center for Biosecurity • SIR NIGEL BROOMFIELD (as Prime Minister of the UK, *Atlantic Storm*), former Director of the Ditchley Foundation and former Ambassador of the UK to Germany • MONICA SCHOCH-SPANIA, Senior Associate, Center for Biosecurity • COLONEL RANDALL J. LARSEN, USAF (RETIRED), CEO, The WMD Center; former Executive Director, Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, with MICHAEL CHERTOFF, Co-Founder and Managing Principal of the Chertoff Group; Senior of Counsel at Covington & Burling LLP, Washington, DC; former U.S. Secretary of Homeland Security. ROW 2, LEFT TO RIGHT: DANIEL HANFLING, Clinical Professor, Department of Emergency Medicine, George Washington University; Special Advisor, Emergency Preparedness and Response, Inova Health System, with Brooke Courtney, Associate, Center for Biosecurity • GRO HARLEM BRUNDTLAND (as Director General, WHO, *Atlantic Storm*) former Prime Minister of Norway and former Director-General, WHO • COLONEL RANDALL J. LARSEN • PAULA J. OLSIEWSKI, Program Director, The Alfred P. Sloan Foundation, with GIGI KWIK GRONVALL, Senior Associate, Center for Biosecurity, with JENNIFER NUZZO, Associate, Center for Biosecurity • JERZY BUZEK (as Prime Minister of Poland, *Atlantic Storm*), President of the European Parliament; former Prime Minister of Poland. ROW 3, LEFT TO RIGHT: LAWRENCE D. KERR, Deputy Director for Countering Biological Threats, Office of the Director of National Intelligence, with DANIEL SOSIN, Acting Director, Office of Public Health Preparedness and Response, CDC • TARA O'TOOLE • TAMMY TAYLOR, former Senior Policy Analyst, National Security and International Affairs Division, Office of Science and Technology Policy, Executive Office of the President, The White House, with BROOKE BUDDEMEIER, Certified Health Physicist, Global Security Directorate, Lawrence Livermore National Laboratory, and Thomas Inglesby, CEO and Director, Center for Biosecurity • D. A. HENDERSON with RONALD ST. JOHN, former Director General, Centre for Emergency Preparedness and Response, Public Health Agency of Canada • BERNARD KOUCHNER (as President of France, *Atlantic Storm*), French Minister of Foreign and European and Affairs; former Minister of Health of France • THOMAS R. FRIEDEN, Director, CDC, with THOMAS INGLESBY.

In a little more than 10 years, the Center has hosted a dozen high-profile events, including 2 groundbreaking biosecurity tabletop exercises: *Dark Winter* (2001), which focused on domestic response to a covert release of smallpox, and *Atlantic Storm* (2005), which led internationally recognized leaders through a bioterrorism scenario that centered on a smallpox outbreak. National and international officials, biosecurity experts, and media continue to refer to these influential exercises.

As a result of our active and dynamic engagement over the years with the biosecurity policy community through expert working groups, congressional testimony, large conferences, small advisory meetings with leaders, and scholarship and publications, the Center has secured a distinct reputation as a trusted, informed source of research and analysis, innovative ideas, and sound advice on biopreparedness and response, both in the Washington, DC, policy community and in the broader international community of experts in the field.



THOMAS V. INGLESBY, MD
Chief Executive Officer and Director

Center for Biosecurity Leadership

On November 11, 2009, UPMC President Jeffrey Romoff appointed Dr. Inglesby Director and Chief Executive Officer of the Center. Dr. Inglesby served as COO from 2003 to 2010, managing the Center's staff of 35 and concurrent, high-visibility projects.

Since its inception in 2003, he has served as Coeditor-in-Chief of *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*, the top journal in the field, and he co-edited a seminal book on medical and public health response to bioterrorism, *Bioterrorism: Guidelines for Medical and Public Health Management*, which was published by the *Journal of the American Medical Association (JAMA)* in 2002. Dr. Inglesby also planned and executed the 2 highest profile U.S. biosecurity exercises, *Atlantic Storm* (2005) and *Dark Winter* (2001).

Dr. Inglesby is an Associate Professor of Medicine and Public Health at the University of Pittsburgh and a distinguished researcher, author, and public speaker. He is known internationally for his more than 150 articles, editorials, and presentations on topics that include biosecurity, national security, epidemic preparedness, pandemic response, hospital preparedness, and vaccine and medicine development. He has also been invited to provide Congressional testimony and to present briefings to senior officials in all presidential administrations since 1999 and to brief members of Congress and their staff.

Dr. Inglesby serves on expert panels and committees of the Defense Science Board and the National Academy of Sciences, and in an advisory capacity to CDC, NIH, HHS, DHS, DARPA, DIA, and the DNI.

On February 8, 2010, the Center welcomed Anita Cicero, JD, as Deputy Director and Chief Operating Officer. Ms. Cicero brings to this position 2 decades of experience as a practicing attorney in both the U.S. government and private sector.

Before joining the Center, Ms. Cicero was the Managing Partner in charge of the Washington, DC, office of Drinker, Biddle & Reath, LLP, where she was responsible for more than 100 lawyers and approximately 200 staff members. Ms. Cicero is the first woman to have served in this role. During her time in government, Ms. Cicero served as a trial attorney in the Environmental Enforcement Section of the U.S. Department of Justice.

In the realm of biosecurity, Ms. Cicero managed a consortium of companies

that focused on advancing public policy to foster research and development of medical countermeasures. Among its accomplishments, the consortium provided invited Congressional testimony and analysis to the U.S. government on strategy and organizational capacity and animal efficacy studies.

Much of Ms. Cicero's private practice focused on the creation and management of consortia, and she developed considerable experience in structuring and forming consensus approaches to complex regulatory and scientific challenges and in collaborating with U.S. government officials to solve problems. In this capacity, she has worked with officials from the FDA, HHS, DOD, EPA, the State Department, the U.S. Congress, the European Commission, and other bodies in the U.S. and Europe.

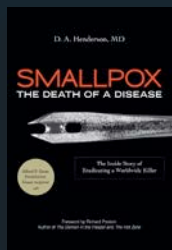


ANITA CICERO, JD

Chief Operating Officer and Deputy Director



D. A. HENDERSON, MD, MPH
Distinguished Scholar



Smallpox—The Death of a Disease: The Inside Story of Eradicating a Worldwide Killer

Published in June 2009 and already in its second printing, Dr. Henderson's book *Smallpox — The Death of a Disease: The Inside Story of Eradicating a Worldwide Killer* is a personal account of the challenges, obstacles and disasters faced by an intrepid international program in achieving the global eradication of smallpox.

THE CENTER'S FOUNDERS

Dr. Henderson is a Distinguished Scholar at the Center for Biosecurity of UPMC and a Professor of Public Health and Medicine at the University of Pittsburgh. He is Dean Emeritus and Professor of the Johns Hopkins School of Public Health and a Founding Director (1998) of the Johns Hopkins Center for Civilian Biodefense Strategies.

From November 2001 through April 2003, Dr. Henderson served as the Director of the Office of Public Health Emergency Preparedness and, later, as a Principal Science Advisor in the Office of the Secretary of the Department of Health and Human Services. Dr. Henderson's previous positions include: Associate Director of the Office of Science and Technology Policy, Executive Office of the President (1990-93); Dean of the Faculty of the Johns Hopkins School of Public Health (1977-90); and Director of the World Health Organization's global smallpox eradication campaign (1966-77).

In 2002, he received the Presidential Medal of Freedom, the nation's highest civilian honor. He is the recipient of the National Medal of Science, the National Academy of Sciences'

Public Welfare Medal, and the Japan Prize, shared with 2 colleagues. He has received honorary degrees from 17 universities and special awards from 19 countries.

Dr. Henderson serves as an advisor to many organizations in the United States and abroad. He is a Member of the Institute of Medicine, a Fellow of the American Academy of Arts and Sciences, an Honorary Fellow of the National Academy of Medicine of Mexico, an Honorary Fellow of the Royal College of Physicians of London, an Honorary Member of the Royal Society of Medicine, and a Fellow of a number of professional medical and public health societies.

In June 2009, Prometheus Books published a new book by Dr. Henderson entitled *Smallpox — Death of a Disease*. This personal account of the challenges, obstacles, and disasters faced by an intrepid international program in achieving the global eradication of smallpox is in its second printing.

Dr. O'Toole was confirmed on November 4, 2009, as the Under Secretary for Science and Technology at the U.S. Department of Homeland Security. The Science and Technology (S&T) Directorate is the primary research and development arm of the Department of Homeland Security.

From 2003 to November 2009, Dr. O'Toole was the CEO and Director of the Center for Biosecurity and Professor of Medicine and of Public Health at the University of Pittsburgh. Prior to founding the UPMC Center in 2003, Dr. O'Toole was one of the founding members of the Johns Hopkins Center for Civilian Biodefense Strategies, and she served as Director from 2001 to 2003.

Dr. O'Toole is internationally known for her work on biosecurity and on health and safety issues related to the U.S. nuclear weapons complex. Her publications in the biodefense field include articles on the response to anthrax, smallpox, and plague biological attacks; containment of contagious disease epidemics; biodefense research and development strategies; and hospital preparedness. From 2003 to

2009, she served as Coeditor-in-Chief of the peer-reviewed journal *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*.

She has served on numerous government and expert advisory committees dealing with biodefense, including panels of the Defense Science Board, the National Academy of Engineering's Committee on Combating Terrorism, and the National Academy of Sciences' Working Group on Biological Weapons. She served as Chair of the Board of the Federation of American Scientists from 2006 to 2007, and in 2006, she was appointed to the Board of the Google Foundation's International Networked System for Total Early Disease Detection.

From 1993 to 1997, Dr. O'Toole served as Assistant Secretary of Energy for Environment Safety and Health and was principal advisor to the Secretary of Energy on environmental protection and on the health and safety of the approximately 100,000 workers in the U.S. nuclear weapons complex and DOE laboratories.



TARA O'TOOLE, MD, MPH

Under Secretary for Science and Technology, DHS; former CEO and Director



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“Strengthening biosecurity is a priority that has broad and bipartisan appeal.... It is how we pursue [that] goal that requires continued wise planning, pragmatism, and consistency with American values and principles.”

Necessary Progress in Biosecurity. Daschle T, Inglesby T.
Harvard Law and Policy Review. 2010;4(2);270



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Sam Hurd Photography: pages 46 and 47

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University of Pittsburgh, Mike Dradziniski: Page 57, row 1, photo 1 (photograph of D. A. Henderson)

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