



# Bioterrorism and Health System Preparedness



## Bioterrorism and Other Public Health Emergencies: Linkages with Community Providers

### Introduction

At the core of any public health emergency response plan is an indispensable group of professionals: community providers. These providers—whether local clinicians, emergency responders, or the staff of public health clinics—play a critical role in planning for, detecting, and responding to acts of bioterrorism and other public health emergencies. In the event of an emergency, these providers must be able to send and receive critical information to and from the public health system in a timely, efficient, and effective manner.

A Web-assisted audioconference sponsored by the Agency for Healthcare Research and Quality (AHRQ) in December 2003 examined the role of community providers in detecting and responding to a potential bioterrorist event or other public health emergency. The conference highlighted resources available to community providers from AHRQ, the Centers for Disease Control and Prevention (CDC), and the

American Academy of Pediatrics. The conference also examined the efforts of a pediatric practice-based research network to enable community-based providers to share information on emerging public health threats.

Presentations were made by the following researchers and practitioners:

- ▲ Helen Burstin, M.D., M.P.H.  
Director, Center for Primary Care, Prevention, and Clinical Partnerships  
Agency for Healthcare Research and Quality  
Rockville, Maryland
- ▲ Dan Baden, M.D., Clinician Communication Team Lead  
Emergency Communication System  
Centers for Disease Control and Prevention  
Atlanta, Georgia
- ▲ Molly Hicks, M.P.A., Associate Director, Department of Federal Affairs  
American Academy of Pediatrics  
Washington, D.C.

The Agency for Healthcare Research and Quality (AHRQ) is the lead agency charged with supporting research designed to improve the quality of health care, reduce its cost, address patient safety and medical errors, and broaden access to essential services. AHRQ sponsors and conducts research that provides evidence-based information on health care outcomes; quality; and cost, use, and access. The information helps health care decisionmakers—patients and clinicians, health system leaders, and policymakers—make more informed decisions and improve the quality of health care services.



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▲ Jeralyn Bernier, M.D., M.P.H.  
Research Director  
Cincinnati Pediatric Research  
Group  
Cincinnati Children's Hospital  
Medical Center  
Cincinnati, Ohio

A question and answer session followed the presentations.

## The Role of Community Providers in Bioterrorism Preparedness

Local providers are not only essential to detecting the first signs of bioterrorist activity, they are key resources for responding to a potential bioterrorist event. These providers need better links to the public health infrastructure, including local health departments, State laboratories, and emergency departments. Strengthening these links is especially important now because of the increased threat of a bioterrorist incident. A survey in the *Journal of Family Practice* found that, before the anthrax attacks, two-thirds of family physicians said they felt unprepared to respond to a bioterrorist event.<sup>1</sup>

*Community providers serve as critical sentinels in detecting the first signs of a public health threat.*

<sup>1</sup> Chen FM, Hickner J, Fink KS, Galliher JM, Burstin H. On the front lines: family physicians' preparedness for bioterrorism. *Journal of Family Practice*. 2002 Sept; 51(9):745-750.

Community providers serve as critical sentinels in detecting the first signs of a public health threat, whether a bioterrorist attack or other disaster. These providers face challenges, however, in identifying symptoms associated with bioterrorist activity. Patients often come to their providers with vague symptoms that may be confused with flu. Training and point-of-care information could better prepare community providers to diagnose and manage patients appropriately.

Providers need to interact with public health departments or emergency responders to develop ongoing relationships with the public health infrastructure (such as health departments and emergency medical services), develop community-based data sharing systems for ongoing surveillance for bioterrorism and other public health emergencies (such as the flu), and develop a role for community and volunteer providers to respond to public health emergencies.

AHRQ has several initiatives to help community providers prepare to detect and respond to potential bioterrorist activity. Under a contract from AHRQ, Vanderbilt University and the University of Alabama at Birmingham are developing training and information tools to meet the needs of clinicians in the community in the event of a bioterrorist attack. AHRQ also supports several practice-based research networks of community-based providers in their efforts to address important questions related to bioterrorism preparedness. According to Dr. Helen Burstin, AHRQ is enhancing and reinforcing linkages and information technology

connectivity between the health care system and the public health infrastructure. Further information on these and other AHRQ bioterrorism planning and response initiatives can be found at [www.ahrq.gov/browse/bioterbr.htm](http://www.ahrq.gov/browse/bioterbr.htm).

## CDC Resources for Community Providers

With the emergence of multiple public health threats ranging from the threat of chemical weapons to flu outbreaks, it is more important than ever for community providers to receive up-to-date public health information. To meet this need, Dr. Dan Baden explained that the CDC leads several outreach efforts designed to communicate with clinicians across the country.

- ▲ **Clinician Outreach and Communication Activity (COCA).** The CDC offers regular conference calls on emerging topics—such as updated information on Severe Acute Respiratory Syndrome (SARS)—to a network of more than 84 clinician and professional organizations, including the American Medical Association, American Nurses Association, and the American Academy of Pediatrics.
- ▲ **Clinician Registry.** The CDC's free registry provides clinicians with real-time information to help prepare for and respond to bioterrorism and other emergency events. More than 40,000 members have received more than 800,000 e-mail updates on terrorism, emerging diseases, and relevant



training opportunities. Clinicians may sign up at [www.cdc.gov](http://www.cdc.gov), selecting “emergency preparedness and response” and click on the clinician registry featured link.

▲ **Clinician-Specific Web Pages.**

The CDC offers several Web pages with information on the avian flu, smallpox, SARS, West Nile virus, and other potential public health threats. Click on the “A-Z Index” shown at the top of the CDC Web site ([www.cdc.gov](http://www.cdc.gov)).

▲ **Clinician Information Line**

**(CIL).** The CDC’s information line at (877)554-4625 responds to questions from clinicians on emerging health concerns ranging from the flu to smallpox. Staffed by clinicians, the CIL is accessible 24 hours a day, 7 days a week.

## Resources for Pediatric Terrorism Preparedness

When it comes to the threat of terrorism, community providers need extra resources to respond to the special needs of children. Children have unique health and mental health needs that really distinguish them from adults and make them more vulnerable than adults to bioterrorism and other catastrophic events, according to Molly Hicks of the American Academy of Pediatrics. For example, children will not understand the complexity of an evacuation plan that is broadcast over radio or television. In addition, a chemical weapon may cause greater harm to children because they breathe more rapidly than adults and will absorb more of any chemical agent that is released.

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While the pediatric workforce is familiar with children’s special needs, providers outside the pediatric community would benefit from continuing education to better respond to children in the event of a possible terrorist attack. The American Academy of Pediatrics, a national membership organization of 57,000 pediatricians and pediatric specialists, provides several resources that can help community providers prepare for a possible terrorism threat. Foremost among these is the Academy’s “Children, Terrorism & Disasters” Web site, which is located at [www.aap.org/terrorism](http://www.aap.org/terrorism). The site provides information on biological agents as well as extensive resources and links for providers, community planners, and families.

The Academy also provides a “Children, Terrorism & Disasters” toolkit, which offers important tips for parents and caregivers. The toolkit can be downloaded from the Academy’s Web site free of charge ([www.aap.org/terrorism/topics/parents.pdf](http://www.aap.org/terrorism/topics/parents.pdf)).

Through funding from AHRQ, the Academy is developing the Pediatric Terrorism Preparedness Resource. The resource guide will serve as a comprehensive clinical and policy reference on the needs of children following a terrorist attack or other

disaster. This resource will improve the ability of all health care professionals to undertake pediatric preparation and planning, and will provide activities for hospitals, schools, emergency medical systems, and communities. The resource guide will have an accompanying Web site where the Academy will post updates.

The Academy plans to publish a comprehensive resource for providers working with children on crisis-related mental health problems. Until then, the Academy has on its “Children, Terrorism & Disasters” Web site a section devoted to children’s mental health needs during times of crisis (entitled “Psychosocial Aspects”). In this section, the Academy provides guidance on the role of pediatricians in responding to children’s emotional needs and advice on talking to children about disasters.

## Surveillance Tool Launched by Pediatric Practice-Based Research Network

Another group working to address the special needs of children in the event of a public health emergency is the Cincinnati Pediatric Research Group (CPRG), a Midwestern regional practice-based research network spanning 8 counties in 3 States. The CPRG comprises 45 community child health care providers in 22 practices. With support from AHRQ, this regional network of pediatricians is working on strategies that allow community-based provider networks to share critically important information to help them identify and respond to bioterrorist events and other health threats.



The CPRG recently launched the Symptom Surveillance Project, a Web-based surveillance system with a pediatric focus, which facilitates communication between community providers and government agencies charged with monitoring symptoms associated with transmissible diseases or bioterrorism. According to Dr. Jeralyn Bernier of the CPRG, the Symptom Surveillance Project involves providers in the detection of bioterrorism and outbreaks that are both naturally occurring and intentional, and establishes regular two-way communication between providers and health departments.

CPRG members enter data about prevalent symptoms and unusual cases in their outpatient pediatric office settings. Symptoms entered into the password-protected database include those associated with transmissible diseases and bioterrorism-linked illnesses. Interactive computer graphs enable physicians to view customized snapshots of symptoms prevalent in their region. While the system does not replace required reporting of diseases, the local health department reviews the data regularly, allowing for more timely detection of disease outbreaks.

With many providers occupied with busy practices, CPRG strives to keep

data collection simple. Weekly data collection takes about 10 minutes for participating physicians to review and enter. The network is studying different incentives to motivate providers to participate, including offering modest financial remuneration and complimentary staff lunches for active participants.

In the future, the CPRG plans to expand its activities by linking with other provider networks. CPRG also hopes to improve threat detection by adding automated analyses of claims data and telephone triage information. Information on CPRG and updates on the network's research projects can be found at <http://cprg.cchmc.org>.

## For More Information

The audioconference on which this Issue Brief is based, "Bioterrorism and Other Public Health Emergencies: Linkages with Community Providers," is available on the AHRQ Web site ([www.ahrq.gov/bioterbr.htm](http://www.ahrq.gov/bioterbr.htm)).

Information on the tools discussed in this Issue Brief, and other tools and publications related to health system preparedness for bioterrorism, will be posted on the AHRQ Web site as it becomes available. Please check the Web site frequently.

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*This issue brief was prepared for AHRQ by AcademyHealth under contract number 290-98-0003.*

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