

The question today is not whether a new act of bioterrorism will occur in the United States, but whether we will be ready for it and when it does. Here's how one SPH center is helping the state of Michigan and the nation prepare.

COUNT DOWN

The House side of the Capitol was closed for a sweep for anthrax contamination October 19, 2001, in Washington, D.C.



The numbers are there, and they're impressive. In the first year after it was funded in October 2002, the Michigan Academic Center for Public Health Preparedness conducted ten comprehensive onsite training events across the state of Michigan, providing about 13,000 hours of direct training contact to more than 3,300 public health workers representing the state's 45 local health departments; trained more than half of Michigan's local public health officers and emergency preparedness coordinators; and distributed about 900 course CD-ROMs.

But what the numbers can't show are the quality of the training and the rigor of its evaluation, and how enthusiastically the center and its offerings have been received by the Michigan public health community.

All this happened in a heartbeat, by the standards of academe. The center presented its first course only five months after receiving funding from the Centers for Disease Control and Prevention, through a cooperative agreement with the Association of Schools of Public Health. Michigan is one of 22 centers located around the country and housed in schools of public health.

"Our mission is to enhance our partnerships with state and local public health, in order to provide competency-based bioterrorism training to strengthen the preparedness and response capacity of Michigan's public health work force," says Rosemarie Rowney, MPH '77, the center's director of training, who has faculty appointments in both the University of Michigan School of Public Health and the School of Nursing. "We really hit the deck running. It was so much fun to put this together with Jenifer Martin Lowry, the administrator, because it was like a startup company. We came from different cultures—she came from a law firm and I came from a local health department—and we both felt this sense of urgency and commitment."

by Jeff Mortimer

Rowney worked for the Oakland County Health Department for 20 years, the last seven as its health officer. Lowry helped oversee the American Red Cross Liberty



**Jenifer Martin
Lowry**

Disaster Relief Fund for the victims of 9/11. Her Michigan roots are deep: she grew up in Ann Arbor, where her father was on the SPH faculty, and she's a UM alumna. "The issue is the strength and capacity of the public health work force and infrastructure," Lowry says.

The center is part of UM's Bioterrorism Preparedness Initiative, a gathering of UM faculty interested in bioterrorism research and training. "Our training prepares the

The broad foundation of research by SPH faculty directly informs the center's efforts. For example, Monto uses his perspective from a career in infectious disease research to mold curricula for frontline public health workers who must understand epidemiology and surveillance systems in order to detect and report outbreaks of bioterrorism.

One of the center's finest achievements to date was its sponsorship of a day-long International SARS Symposium at the Lydia Mendelssohn Theatre on the UM campus in January. The glittering roster of presenters from China, Hong Kong, Europe, Canada, and the U.S. explained how their first-hand experience in identifying and controlling SARS could be applied to issues relevant to bioterrorism and public health prepared-

from the program. "The topics identified for training range from public health law to epidemiology and surveillance to risk communication to laboratory and worker safety to information technology," she notes. "This is a broad mandate. In a state as large and diverse as Michigan, it's quite an undertaking."

The state's diversity is reflected in local health departments. "They're as different as night and day," says Rowney. "Some have extraordinary resources and are well funded and have very well prepared staff, and others are really struggling with budget cuts and don't have access to people who are prepared in public health."

"I would compare it to the explosion of knowledge that's going on with the mapping of the human genome," says Jean

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local public health work force to deal with emerging infectious diseases," Rowney explains. "We can use this training to respond to an influenza pandemic or to an incident of bioterrorism. Look how West Nile Virus swept across the country. And monkey pox—whoever thought we would be looking at that? Our preparedness training has broad application."

Arnold Monto, a professor of epidemiology and director of the UM Bioterrorism Preparedness Initiative, notes that because the Academic Center is housed in a large university, "it is able to draw on experts with very different talents, all of whom make valuable contributions to our understanding of how to be ready for a bioterrorist event."

ness. SARS was a real-life case study for preparedness (see sidebar, page 27).

"This was the pinnacle of the center's benefit to people in my position," says Dr. Dennis Smallwood, medical director for the health departments of Sanilac, St. Clair, Huron, and Tuscola counties in Michigan. "When you left the conference, you felt you'd been pretty well oriented to state-of-the-art preparedness with respect to the virology and the epidemiology and the personal care. I'm hoping quite honestly that they're able to do more presentations of that quality in the near future on topics that are relevant to us."

Lowry says the legislation creating the funding mechanism for these centers was quite specific about what was expected

Chabut, MPH '68, chief administrative officer for public health at the Michigan Department of Community Health. "It's too much and too specialized for the ordinary



**Rosemarie
Rowney**

training and preparation of public health people to handle all alone. Just because you're an academic institution or a capable state health agency doesn't mean you have people sitting on the sidelines ready to

process huge amounts of new information and turn it into practical action."

"You train to a lot of different levels," says Rowney. "When we started out, our level was very basic. Our first course was

an overview of Michigan's emergency management organization—how we're organized in the state of Michigan. Now we are moving to more sophisticated technical levels and finally to proficiency, where you practice what you do through drills and exercises." The center's course offerings are grounded in the CDC-endorsed Bioterrorism and Emergency Readiness Competencies for all Public Health Workers, a standard of readiness for the country.

The center's training offerings also expose SPH students to the skills and expertise necessary for careers in preparedness. Several students have worked with center staff as graduate interns, and many have attended training offerings. Jennifer Thompson, a second-year MPH

ings that they've completed, and will lead to certification and standardization of competencies. Because MI-Train is a distance-learning tool, people in the most remote parts of the state now have online access to substantive training offerings."



Arnold Monto

The center even dispatched staffers to all eight of the state's emergency preparedness regions to raise the workers' computer comfort level. "We not only teach people how to log on to MI-Train, but also how to navigate it, as well as how to load a CD-ROM or judge a credible website," says Yael Hoffman, the center's project manager. "It's one thing to put

crystallized and made real that relationship. It not only connects us with what's going on at the university, but it lets the university have a peek into local public health practice communities and see what we're doing. I think it's informed both entities in developing training and activities that make sense."

That cross-fertilization is one of the center's basic operating principles. "We knew that people would not want to hear academics talk about their research or the literature unless it was immediately applicable," says Rowney. "We needed street credibility, so people who work in the field on a day-to-day basis are in on all of our planning."

The results of this approach are getting enthusiastic reviews. "They have mes-

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— Rosemarie Rowney, Director of Training, Michigan Academic Center for Public Health Preparedness

student in epidemiology, says one reason she chose Michigan was specifically to become engaged in this type of work.

Recently, the center teamed with the Michigan Department of Community Health to design and activate MI-Train, which might best be described as an online preparedness school. Visitors to the site, <http://mi.train.org>, can access an archive of the center's "3-D" offerings, take training courses from across the country, link to an array of resources, and keep track of their progress.

"It's all part of a broader work force development initiative," says Lowry. "It means that first responders will have access to a centralized learning management system that tracks the training offer-

courses online, and another to teach people how to use them. With financial resources so tight in health departments and the state, it's the optimal use of taxpayer money to take this program around the state and teach people how to use MI-Train and computer-based products."

The MI-Train project exemplifies both the collaborative soul of the center and how it has integrated SPH and its resources into the fabric of the state's public health system.

"One of the things that the academic center has done is establish a formal relationship with the local public health practice community," says Mark Bertler, executive director of the Michigan Association for Local Public Health. "The center has

sages that are practical and useful for people at the local level," says Rebecca Head, MS '75, PhD '83, director of public health preparedness for the Washtenaw County Public Health Department. "It's wonderful to have academic research, but after one of the center's sessions, we walk out of the building with actual tools we can use right away, from emergency planning to developing exercises to working with other staff in public health to help them understand and become competent in emergency preparedness."

The center's commitment to collaboration was recognized last September at the Association of State and Territorial Health Officials/National Association of County and City Health Officials Joint Conference

in Phoenix. Together with the Michigan Department of Community Health and the Michigan Association for Local Public Health, the center received the national Linkages Award for exemplary collaborative planning for statewide preparedness training.

"That award recognizes our ability to translate the academic expertise into real life practice," says Lowry. "We are able to do that due to our partnerships and relationships with the Michigan Department of Community Health and the Michigan Association for Local Public Health. The strength of these relationships here in Michigan is unique."

Rowney says it was particularly thrilling to receive the award after "less than one year of operation. It was, to me, a great

acknowledgement of how much we prize our relationship with local health departments and the state health department. Nothing could have happened unless we had those linkages."

But don't take the insiders' word for it. "Folks in public health are beginning to understand they're really a partner with the center," says MALPH's Bertler. "We're having a blending of cultures here that's really a long time in coming, but seems to be just exactly what we need right now in order to improve public health practice." ■

Jeff Mortimer is a freelance writer and publications consultant who lives and works in Ann Arbor.

SARS: A Case Study for Preparedness

Health professionals have learned a great deal since SARS arrived on the scene about a year ago. But at an all-day symposium this past January, presenters made it clear the learning process continues on this emerging infectious disease.

Nearly 400 people from across the country attended the SARS case study, examining what was learned and how it applies to this year's re-emergence of SARS, as well as other newly identified diseases such as avian flu and the West Nile Virus. Another one hundred viewed a simultaneous webcast. Hosted by the Michigan Academic Center for Public

Control and Prevention (CDC), said another important lesson is that some people infected with SARS will not transmit the disease to anyone, while others might pass it to hundreds of others. Figuring out who those "superspreaders" are and preventing them from sharing infection is essential, he said.

The CDC recently issued a new plan for how to deal with SARS, and the Michigan Department of Community Health (MDCH) followed with a state-specific plan released in mid-January. Matthew Boulton, clinical associate professor of epidemiology at the School of Public Health and the recently named

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Health Preparedness, the event drew doctors, nurses, public health professionals, emergency responders, and students.

Participants included Malik Peiris, professor of microbiology at the University of Hong Kong, who played a key role in the identification of the SARS coronavirus and is heavily involved this year in work on both SARS and the new avian flu. He made his presentation by phone from Hong Kong.

Peiris said his work on SARS has demonstrated that new, emerging diseases continue to pose a threat and that health professionals should not relax and think that all has been solved in medicine.

David Bell, senior medical officer for the National Center for Infectious Diseases, part of the Centers for Disease

chief medical executive for MDCH, said Michigan continues to refine its approach for dealing with emerging diseases.

In February, it rolled out a new disease reporting web site—the Michigan Disease Surveillance System—a tool for tracking diseases through 40 different reports to help health professionals design appropriate responses. Boulton called on public health leaders to emphasize epidemiology and laboratory skills to identify and track new diseases as a complement to public health's existing strength in health program services.

For a webcast of the symposium, visit www.sph.umich.edu/bioterrorism/news/webcasts.html. ■

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