

DELAWARE'S PUBLIC HEALTH LABORATORY: 'WE'RE SMALL, BUT VITAL'

by *Emily Mumford*, writer

Delaware's public health laboratory is located on lakefront property in Smyrna, DE. Constructed in 1990, the one-story, stand-alone facility has an open central courtyard that staff can use to host BBQs and other events. The lab shares a campus with the Delaware Hospital for the Chronically Ill, a turn-of-the-century building used as a nursing home.

The facility has 32,000 square feet and a newly-remodeled BSL-3 level CT/BT area. There are two other BSL-3 level testing areas—one for microbiology (mainly TB) and one for virology.

A full service public health laboratory, Delaware is divided into sections focused on clinical microbiology, molecular virology, environmental chemistry, newborn screening, special projects and chemical and biological preparedness. The lab routinely handles a large number of STD and newborn screenings; currently the lab is gearing up for the flu season, and the advance of H1N1.

"There have been a steady number of swine flu specimens and a steady number of positive tests. No huge jumps," said Laboratory Director Jane Getchell, DrPH. Over the summer, the lab tested for Flu A, but on October 5 switched to its Flu A/B algorithm, subtyping everything to identify all of the circulating flu strains. "We have three ABI DXs and will be getting a fourth soon, so we're pretty well-prepared," said Getchell. "We've cross-trained staff, but we've also encouraged doctors to send specimens to commercial labs. LabCorp and Quest Diagnostics have a pretty heavy presence in Delaware."

Delaware's agricultural roots impact the types of testing performed at the public health laboratory. "We have more chickens than people," said Getchell, due to large chicken processing centers in the southern part of the state. In addition to concerns about avian influenza, the lab operates a TB program that helps trace the disease among undocumented workers. The public health laboratory also partners with the state agricultural lab on issues such as West Nile virus, rabies and other animal diseases.

A new project in the newborn screening section of the lab is underway. "We've recently received a grant for our cystic fibrosis testing," said Getchell. "We will be able to conduct molecular DNA characterization on all IRT-positive specimens." Some of the other mid-Atlantic public health labs have not developed this capability yet so Delaware will offer to test newborn specimens from other areas too. Getchell explained, "We think this may introduce some cost-savings all around."

Getchell grew up in Worcester, MA, and pursued laboratory work under her mother's practical guidance.

"I blame my mother," Getchell said. "She was a school-teacher, and a very independent woman. She impressed upon me that I would go to college and major in something that I could get a job in... not an English degree." After a "horrible" experience teaching Sunday School, Getchell ruled out the possibility of following her mother into teaching. At the University of Massachusetts, she scoured the book of majors, discovered Med Tech and was interested. She flunked her first chemistry test. But she stuck with it.

Getchell's first job was at the Texas Department of Health in the serology lab. She spent ten years there, and Texas funded her through her master's degree in public health from the University of North Carolina. Getchell also earned her doctorate in public health from UNC; for her doctoral research, she developed assays for Ebola and Lassa viruses in CDC's maximum security lab. (The lab was actually the module that had been used to isolate the astronauts and moon materials from the first moonwalk. "Of course, it's long gone now," remarked Getchell.)

She was the first person hired to work in the newly created AIDS lab at CDC. She was even able to go to the Institut Pasteur to learn how to grow and isolate the virus, then called Lymphadenopathy associated virus (LAV). She was the Assistant Director in the Iowa public health laboratory for twelve years and has now been at the Delaware lab for ten years. "I blew into Delaware with Hurricane Floyd," laughed Getchell.

Like other public health labs, Delaware is struggling with the current economic storm. The lab's staffing levels have been affected. "I used to be able to say we had 55, even 60, staff," said Getchell. "We're down to 50. And yes, some of those positions have been deleted. There is a hiring freeze and the state continues to delete unfilled positions. However, they have made promises not to lay-off state workers." Still, she said, "state workers have received a two-and-a-half percent pay cut, and five extra vacation days."

To cope, the laboratory has shifted staff and eliminated some small volume tests. "We're working harder and avoiding overtime and weekend work because there is no money to pay for it," said Getchell. The lab is feeling the pinch most acutely in the managerial levels: Lab Manager I and II positions are open, impacting daily operations. For the most part, open bench-level positions have been staffed with contract employees, who are paid with grant funds. "Every grant application we write, we build in money for contract employees," explained Getchell.

The Delaware public health laboratory operates on



Microbiologist II Jennifer Cascarino demonstrates PFGE to DHSS Deputy Secretary Henry Smith; Delaware Lt. Governor Matt Denn; and Delaware Division of Public Health Director Karyl T. Rattay, MD, MS, FAAP, FACPM.

Photo courtesy of Delaware PHL

about \$1.6 million in revenues, \$1.5 million in grant funds and \$55,000 in state funds (excluding personnel costs).

"I have to give our staff credit," said Getchell. "We have had a pay cut. Positions have disappeared. But morale is still pretty good. Everyone is working hard and feeling good about the work that is done." She noted that an active employee committee has helped bolster staff attitudes by organizing potluck dinners, a boat trip and other fun events.

"We need to make sure that morale doesn't slip," said Getchell. "We're small, but vital."

In an annual effort to boost staff morale and focus public attention on the important work conducted within the public health laboratory, Delaware celebrates National Laboratory Week "in a big way" each year. "The format changes from year to year," said Getchell, but they use the week as a platform for community outreach, opening the lab to schools and local partners. One year the lab scheduled the opening ceremony for its remodeled BT-CT suite during Lab Week, hosting the governor and other politicians for the celebration. "Laboratory Week celebrations have given us access to politicians that we don't normally have access to. We can showcase the lab and our work, and impress upon them why we are here."

On another occasion, the lab used Lab Week as an opportunity to revamp the waning Delaware Laboratory Association into a new Laboratory Preparedness Advisory Committee (LPAC), to reinvigorate communication among multi-disciplinary laboratories. This year the Lieutenant Governor attended the festivities and gave a talk: his participation was tied to the newborn screening program, and stemmed from his involvement with recent legislation that requires insurance companies to cover medical formula for babies with diagnosed genetic conditions.

"Lab Week has always been a morale booster and while our speakers and programs are typically externally focused, we also have fun that week," remarked Getchell.

The lab is also contemplating some greater

measures to alleviate the economic pressure. At the end of 2008, Delaware completed the APHL Lab Assessment, which sparked communication among the state's public health, environmental and agricultural laboratories. "The assessment showed us what might be cost-effective as a lab system," said Getchell, "and since then we've worked together to identify ways to cooperate and save money. We realize that our future is at stake."

The labs have earmarked a number of processes that could be consolidated to save money: purchasing equipment and supplies, training, and equipment maintenance. Laboratory leadership has also examined overlap in programs, such as water testing, which is conducted in both the environmental and public health laboratories.

"But, we may not stop there," said Getchell. "Originally, I had proposed a co-located lab, on the Utah model, but of course we don't have the funding for a new building now. However, lack of funding doesn't preclude administrative consolidation." At this point, the labs are working at the governor's initiative to create the best solution for the state and have not advanced any formal recommendations.

Getchell said, "Be careful what you wish for. We're there!"

Getchell is forward-thinking in all of her plans for the lab. She has identified growth areas in public health and is working to realign the lab with those priorities. "The future is molecular," she said matter-of-factly. "Multi-arrays, multi-analyte assays." She would also like to build a biomonitoring program and was disappointed that the Delaware lab did not receive a recent CDC grant in this area. "We've done a lot of the background work, and we have the equipment," she said.

"Public health needs to concentrate on chronic disease, on healthcare over sick-care," said Getchell. "We should begin looking at genetic tendencies for disease. And also ask ourselves—how can we be more helpful to ensure the population's health? It's going to be about keeping people healthy." ■