

LONG BEACH PUBLIC HEALTH LABORATORY: IMPROVING LOCAL HEALTH SINCE 1906

by Emily Mumford, writer

LOCATION

The coastal city of Long Beach, CA, is located twenty miles south of downtown Los Angeles. A popular tourist destination, Long Beach has a population of about 500,000 people and a thriving port and oil industry.

Located in the heart of the city, Long Beach Public Health Laboratory shares quarters with the city's health department and its clinics, which serve the community's immunization, HIV, TB, STD and family planning needs. "This location gives the lab an easier outreach to the community through the clinicians and health offices all housed in the same building," said Mimi Lachica, MA, director of the Long Beach Public Health Laboratory. "There is a constant camaraderie among us all... and we [laboratorians] even occasionally see patients."

FACILITY

The public health laboratory moved into its current facility, a former Hewlett-Packard building, in 1993 and occupies about 5,000 square feet on the second floor. In 2004, the lab began a renovation to modernize and improve testing capabilities. They added a molecular lab, which allowed lab personnel to validate rt-PCR methods for infectious agents such as Influenza A and B, Norovirus, *Bordetella pertussis*, West Nile virus and *Bacillus anthracis*. "This molecular method serves as a back-up to conventional testing for the identification of these infectious agents," said Lachica.

At the same time, the Long Beach public health laboratory conducted a bacteriology retrofit to become a select agent facility. As a result, the lab can handle agents of bioterrorism safely and serves as a Laboratory Response Network sentinel lab.

During this construction phase, the lab also made the infrastructure changes necessary to maintain its environmental lead testing accreditation. To handle the acids required for lead testing, the lab needed to comply with safety regulations issued by the City Fire Department and the American Industrial Hygiene Association. Environmental lead testing has since become a large revenue generator.

DIRECTOR

Mimi Lachica, MA, grew up in the Philippines, but moved to the United States to earn her undergraduate degree at California State University in Long Beach. Lachica entered Cal State as a pre-med student, but ultimately decided not to pursue medical school. Instead, fascinated with her academic exposure to lab work, she switched into medical microbiology and "went from there." Ultimately Lachica earned a master's degree in health sciences with an emphasis in lab management at Cal State University in Los Angeles.

Lachica received her lab training in the Los Angeles County Public Health Laboratory in 1984, working there in public health microbiology for about three years. Returning to Long Beach in 1987, Lachica worked as a bench microbiologist in the STD Stat Lab for two years. Moving to the main facility of Long Beach's public health laboratory, Lachica spent the next 12-14 years working her way up from the bench to supervisor level. Lachica has now been working at the Long Beach Public Health Laboratory for 22 years; and as lab director for the last five.

"I love California," she said. "I wouldn't live anywhere else." Lachica has two sons: the older just graduated from UC Santa Cruz and the younger is a freshman in high school.

STAFF

"I have a great staff – a very smart, talented and very cohesive group," said Lachica. "We're small, but close-knit." The Long Beach Public Health Laboratory had 22 staff but, like many other public health laboratories, is slightly understaffed now. Lachica said, "We have lost four [employees] recently, but are doing our best so we can provide the same quality of testing services to our customers." Two of the staff members retired, one left for another position and one was lost as a result of "budgetary adjustments."

"There is a hiring freeze but the lab can replace one person," said Lachica, "and we are looking for a microbiologist preferably with a dual license who can perform both clinical lab science and public health microbiology testing."

The laboratory has made an effort to cross-train all of its staff, from support to paraprofessional to professional since "we are now limited in numbers," explained Lachica. In addition to keeping staff well-rounded, cross-training allows the lab to handle testing surges and staff shortages more easily. Another driving force for Lachica to cross-train her staff is for continuity of operations: in the event of a natural disaster, the laboratory will be able to provide identified essential functions and services.

Current staff breakdown at the lab:

- 1 supervisor
- 6 public health microbiologists and clinical laboratory scientists
- 1 chemist for environmental lead, also trained in microbiology and clinical lab science
- 5 lab assistants
- 1 data entry clerk
- 1 billing clerk
- 1 accounts management clerk
- 1 secretary
- 1 lab director

REVENUE

The public health laboratory receives about \$2 million from the city's health fund. Fee-for-service revenue has grown from four to six figures in the past five years.

"Our priority is to grow our business," said Lachica. "Money talks."

Chlamydia/GC testing and clinical and environmental lead testing are the laboratory's biggest revenue generators. The US Department of Housing and Urban Development (HUD) pays the laboratory for the city's environmental health lead testing through grant funding.

TESTING

Long Beach's public health laboratory is an historic agency. It was established through the city health department in 1906, staffed with a part-time bacteriologist who had a mandate to help control whooping cough, undulant fever (Brucellosis), diphtheria, rats, overflowing cesspools, mosquitoes and flies.

Today, the laboratory has a much broader purview, and still conducts a mix of core public health, clinical and environmental tests. The city's busy port boosts the need for local environmental lead and water testing. The lab conducts recreational and non-potable water testing while the water department tests potable water.

HUD, other jurisdictions and remediation companies send a variety of specimens for lead testing, including dust wipes, paint chips, dirt, water, air, herbal medicines, pottery and china. "We work closely with public health nurses when there have been recalls of Mexican candies, and a few months ago we were inundated with [imported] china, bracelets, necklaces, backpacks, toothpaste..." said Lachica. Environmental lead testing is the public health lab's highest volume area. Lachica hopes to add other metals to the testing array soon.

The lab continues to test for H1N1, and has been since late April 2009. "We don't process as many H1N1 samples anymore because we now adhere to the CDC's testing guidelines, i.e., only test patients with influenza-like illness [ILI] symptoms (fever of 101°F or higher and a cough and/or sore throat) or patients who have died or have been hospitalized for 24 hours or more, or are part of an outbreak or cluster of people with ILI," explained Lachica. Nevertheless the lab's average of 200 flu tests per month has jumped to anywhere from 100-250 per week with the current outbreak.

On its public health and clinical side, the lab has mycobacteriology, mycology, virology, serology, bacteriology, parasitology, hematology and clinical chemistry testing capabilities. It is also a registered CDC select agent facility.

CHALLENGES

- 1 **Money.** "We are trying to make do with an ever-shrinking budget," said Lachica.
- 2 **Staffing.** "Our environmental, STD, and blood lead testing numbers are increasing, but our smaller staff is making it quite difficult," stated Lachica. "Cross training was a good investment and has benefited us in these challenging times."



RECENT SUCCESSES

"We have gained new clients recently, and we need to continue that trend," said Lachica. She noted that she used to visit potential clients but competing time demands have made that practice more difficult.

Another positive outreach effort for the lab came through Lachica's recent presidency of the California Association of Public Health Laboratory Directors (CAPHLD). "It's a unique organization of 37 public health laboratories in California," Lachica explained. "We're all the same, yet different. Things may only be endemic to one area so specialty testing varies from site to site. As an example, we would see more Coccidioidomycosis and tickborne testing in the coastal and Northern California regions."

As president, Lachica learned in much greater detail about the inner workings and politics of each lab, including funding and staffing profiles; and gained a broad overview of the issues faced by the state's unusual array of public health laboratories. "It was a great opportunity to represent all 37 California laboratories, to be their spokesperson." Lachica is now the immediate past-president of CAPHLD.

IMMEDIATE GOALS

- 1 Maintain and increase revenue through outreach to potential clients. "We are not novices at providing service outside of our jurisdiction," said Lachica. The lab already handles STD testing for some large clients outside of California.
- 2 Provide public health microbiology training in the fall of 2010.
- 3 Continue to build molecular testing capability. ■

The staff of the Long Beach public health laboratory.

Photo courtesy of the Long Beach Public Health Laboratory