

Southern Nevada Public Health Laboratory: Starting From Square One

Manager

Pat Armour became the first person employed by the Southern Nevada Public Health Laboratory (SNPHL) when she accepted the job as manager in 2003. Armour, a medical technologist with over 30 years of experience, moved to Nevada to escape the -60°F winter temperatures of her native Wisconsin. She did clinical testing at two local hospitals, worked in the Lockheed Engineering quality assurance department and then managed a physician's office laboratory before responding to an advertisement for a two-year, grant-funded position in an unnamed laboratory that turned out to be a branch facility of the Nevada State Laboratory in Reno. "It was a leap of faith," she said.

Location

In a medical complex on the campus of the Clark County Health District, Nevada's population is clustered in the northern and southern parts of the states, said Armour, with a huge swath of federally-owned land in between. The idea of a state laboratory facility to serve the Las Vegas area, she said, came about after 9/11 "with the realization that 70% of our population is in the southern part of the state and we needed a closer facility to decrease response time." Although Armour noted upon questioning that the laboratory is "maybe 15 minutes from the nearest casino," she said, "just remember that Las Vegas is a community and our main focus is community public health." In addition to Las Vegas, the Clark County Health District encompasses several other cities, including Henderson—one of the fastest growing cities in the nation.

Facility

The 5,000-square-foot laboratory occupies the top floor of a one-time warehouse, renovated with federal bioterrorism (BT) grant money. "We do have windows," said Armour, "you just can't see out of them; they're more like skylights."

Staff

10. In addition to Armour, there are 5 microbiologists, 1 laboratory assistant, 2 couriers/clerks and 2 security guards.

Revenue

The laboratory gets a portion of its revenue from the federal government and a portion from Clark County Health District, which has administrative responsibility for the laboratory building and staff under an inter-local agreement with the University of Nevada School of Medicine in Reno (home of the main state public health laboratory). Although the main state public health laboratory has programmatic responsibility for the SNPHL testing program, it has no funding available to support SNPHL laboratory operations. The SNPHL is just beginning a fee-for-service program and hopes to serve Medicaid clients in the not-too-distant future.

Distinguishing Characteristics

- ▶ Only in existence for one year (so far).
- ▶ The only BSL-3 laboratory in southern Nevada and one of only six microbiology laboratories in Clark County.
- ▶ An LRN reference laboratory.

Highest Volume Testing

Thus far, laboratory staff have focused on BT-related testing and analyzers. "We are now moving toward other high volume public health testing. We anticipate running about 800 HIV tests per month by late summer." Armour explained that since the laboratory does not yet have an information management system (LIMS) or an automated HIV testing system, all testing and record-keeping is done by hand. "You can only start doing large volumes of testing with a small staff if you automate," said Armour.

Notable Success Stories

▶ Building the laboratory. "We started from square one in June 2003 when the laboratory construction was not completely finished. I didn't realize I was gonna be climbing up on step ladders and telling the contractor that they had put things in wrong. Between June and August 2003, I purchased the biosafety cabinets and over \$400,000 of equipment. I had no staff; had to hire everybody." The first few staff members—mostly microbiologists—wrote all the standard-operating-procedures, obtained CLIA certification and LRN registration and conducted safety training.

▶ Developing a training program for HAZMAT first responders. The laboratory created a sample collection kit using jumbo zip lock bags, culture swabs, plastic spoons and knives, a laminated 8.5" X 11" index card scooper and a "poor man's bleach solution."

▶ Developing a close working relationship with the Clark County epidemiology department. "We work with our epidemiologists to look at patient symptomology and to try to identify organisms and do follow-up testing. We had ten investigations of unusual deaths or illness between January and May 2005, including toxic shock syndrome, Norovirus and food-borne illness investigations. These team investigations are an important step in our BT response strategy; BT preparedness includes the capability to perform surveillance for unusual instances of illness and death which could be caused by intentional use of a biological organism."

Biggest Challenges

▶ "Because we were never here, just getting up and running has been a challenge."

▶ Implementing a LIMS—PowerLab from SysWare. "That system is going to be a life-saver for us."

▶ Maintaining surveillance of illnesses associated with Clark County's large tourist population. "Visitors come from all over the world year-round."

Vacancies

The laboratory will be adding three new positions within the next six months: an expert in pulse field gel electrophoresis, an immunologist and a microbiologist. Because Nevada requires state licensure for clinical laboratory scientists, the new hires will probably be practicing medical technologists—who easily meet state criteria. In addition, the Clark County Health District is moving all of its STD testing to the laboratory and will be transferring some of its staff for this purpose. "We'll be happy to have them," said Armour.

Goals

"I have a wonderful staff, dedicated to the community and to public health. We want to do the job well. Right now our main focus is to validate all allowable LRN

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