



Southern Nevada Public Health Laboratory (SNPHL)

Laboratory Update 2006
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SNPHL Update

- State and Bioterrorism laboratory testing, facility and communication capability listed in this update were not available locally in Southern Nevada prior to 2004.
- SNPHL is a branch of the State laboratory affiliated with the Southern Nevada Health District, through an interlocal agreement

SNPHL - located in SNHD multi-use building



SNPHL

Three Laboratories in One

- Bioterrorism testing
- State laboratory testing
- Clinical testing to support SNHD



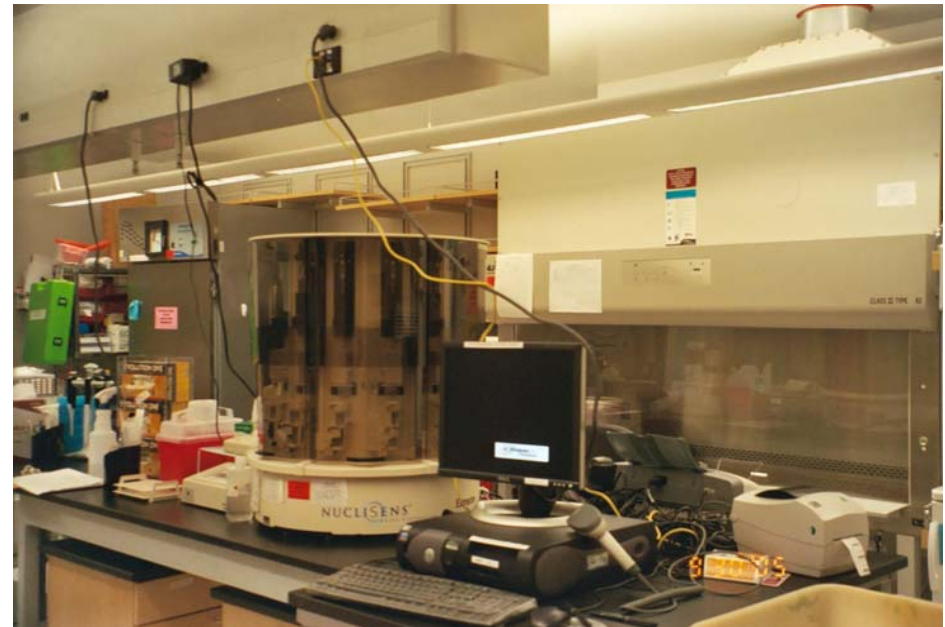
Bioterrorism testing at SNPHL

- Only Southern Nevada laboratory registered with CDC to perform Laboratory Response Network (LRN) testing
- Only Biological Safety Level 3 (BSL-3) containment laboratory in Southern Nevada
- Ability to test for at least 10 biological agents and toxins

Biological Safety Level 3 (BSL 3) laboratory



Pass through
decontamination autoclave



BSL 3 lab interior



SNPHL Organization and Staff

- SNHD Community Health Service Division
Dr. Larry Sands, Director
- Dr. L D Brown – Director of SNPHL and
Nevada State Health Laboratory-Reno
- 1 Laboratory Manager,
6 Clinical Laboratory Scientists,
2 Laboratory Assistants, 2 Couriers



Collaboration with local First Responders

- Las Vegas Metropolitan Police Dept
- Clark County and Las Vegas HazMat
- Federal Bureau of Investigation
- US Postal Service

Standardize unknown sample collection protocols for submission of samples for biological testing



State Laboratory Testing

- Initiated and validated confirmatory testing for over 20 reportable disease isolates including Salmonella/Shigella serotyping and E. coli O157 confirmation
- Report confirmatory results to CDC for inclusion in national surveillance databases such as National Antimicrobial Resistance Monitoring System (NARMS)

SNPHL

Molecular testing (RNA/DNA)

- Only local laboratory with capability to perform molecular testing for Norovirus and Avian Influenza
- Current validation of molecular respiratory panel to be used for year round surveillance for Adenovirus, Influenza A/B, Parainfluenza



Communication

- Serve as resource for local laboratorians
- Arrange testing and shipment of samples to CDC, FDA or other government lab
- Provide courier service to local laboratories to ensure quick delivery of samples for confirmation testing



Training

- Provide local laboratories with training in identification of bioterrorism agents
- Through CDC National Laboratory Training Network (NLTN), provide access to continuing education opportunities such as teleconferences

Current Clinical Laboratory

Testing



- Perform clinical laboratory testing for Office of Epidemiology including stool culture and parasitology.
- Provide testing, sample collection instructions and courier pickup to the SNHD Outbreak Investigation Team
- Lead testing currently in validation



Laboratory Information Management System (LIMS)

Provides electronic

- tracking of specimens and result reporting
- connectivity with Office of Epidemiology
- storage of records
- interface with automated analyzers
- future connectivity with CDC and SNHD Nursing Division

Emergency Power

New emergency generator installed
9-16-06

Provides 100% backup power for entire building





Challenges

- Continue validation of clinical laboratory testing for SNHD Nursing Division
- LRN Recertification and CLIA Re-inspection
- Staff must continue to be competent and able to perform testing in multiple departments: Microbiology, Molecular, and Immunology

Challenges continued

Space and Staff

- Facility limitation

Current laboratory space has reached maximum utilization for equipment and personnel. Space constraints will not allow for installation of new, unplanned for, equipment

- Workforce development

Difficult to find licensed staff with high complexity research testing experience

View of BSL-2 laboratory



Gas Chromatography analyzer
for Microbial identification



Pulsed Field Gel Electrophoresis
(PFGE)

Challenges continued

Project Neon – MLK flyover

- Desert Lane will become Martin Luther King Boulevard
- 100% air intake at front of building
- Construction may interfere with operation of BSL 3 laboratory and testing procedures
- High traffic area may impact SNPHL security

Front access to building on Desert Lane

