Clinical Laboratory Submissions to State and Local Public Health Laboratories

Background:

Nevada Administrative Code (NAC) 441A.235 requires clinical/medical laboratories to submit microbiological cultures, subcultures, or other specimens or clinical material to the State Public Health Laboratory or other laboratory designated by the health authority for confirmation or further testing (https://www.leg.state.nv.us/nac/nac-441a.html#NAC441ASec235). In an effort to standardize the specimens or isolates that must be submitted to a State Public Health Laboratory, the Nevada Department of Health and Human Services (DHHS), Division of Public and Behavioral Health (DPBH) has developed this guidance document. In addition to the below listed organisms, public health personnel may also request further specimen or isolate submission as deemed necessary for disease investigation purposes, on a case-by-case basis.

State and Local Public Health Laboratories:

In Nevada, there are two public health laboratories, the Nevada State Public Health Laboratory located in Reno, Nevada and Southern Nevada Public Health Laboratory, a local public health laboratory, located in Las Vegas, Nevada.

- Nevada State Public Health Laboratory (NSPHL)
  1660 N. Virginia Street
  Reno, NV 89503
  (775) – 688-1335
- Southern Nevada Public Health Laboratory (SNPHL)
  700 S. Martin King Blvd
  Las Vegas, NV 89106
  (702) – 759-1020

Clinical laboratories that submit specimens or isolates to the State or Local Public Health Laboratory should work with the laboratory within their jurisdiction. If the Public Health Laboratory within the appropriate jurisdiction is unable to perform the required testing, the Public Health Laboratory is then responsible to submit that specimen or isolate to a laboratory that is able to perform the testing, such as, a Public Health Laboratory in another state, the CDC laboratory, or other designated reference laboratory.

General Communicable Diseases:

Bacillus:

Non-motile and non-hemolytic *Bacillus* isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Botulism:

Clostridium botulinum testing should only occur after consult with the public health authority and the Centers for Disease Control and Prevention. If testing is deemed necessary, the specimens must be submitted to the State or Local Public Health Laboratory for shipment to the appropriate reference laboratory for testing.

Pertussis and Parapertussis:

Any clinical laboratory that identified *Bordetella pertussis* and *Bordetella parapertussis* via culture must submit isolates to the State or Local Public Health Laboratory for definitive identification.

Brucella:

Brucella isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Burkholderia:

Isolates of *Burkholderia mallei* or *Burkholderia pseudomallei* must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Campylobacter:

Any clinical laboratory that identifies *Campylobacter* spp. from a clinical specimen using a culture-independent diagnostic test (CDIT) must submit specimen to the State or Local Public Health Laboratory for definitive identification, subtyping, genetic sequencing, and antibiotic susceptibility testing.

COVID-19:

All clinical laboratories that identify SARS-CoV-2 via a laboratory-based molecular testing mechanism, must submit all positive samples with a CT value < 30 to the State Public Health Laboratory for genomic sequencing. At this time, the Nevada State Public Health Laboratory in Northern Nevada is performing genomic sequencing for the State.

Diphtheria:

*Corynebacterium diptheriae i*solates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Haemophilus influenza:

Isolates of *Haemophilus influenza* from a sterile site must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Legionella:

Legionella isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

***Listeria monocytogenes*:**

Listeria monocytogenes isolates must be submitted to the State or Local Public Health Laboratory for definitive identification, subtyping, genetic sequencing, and antibiotic susceptibility testing.

***Neisseria meningitidis*:**

Any clinical laboratory that identified *Neisseria meningitidis* from a sterile site must immediately submit the isolate the State or Local Public Health Laboratory for definitive identification and antibiotic susceptibility testing.

Malaria:

Any clinical laboratory that makes a finding of *Plasmodium* or malaria parasites in the blood film of a patient shall immediately submit one or more such blood films for confirmation to the State or Local Public Health Laboratory.

Q Fever:

Coxiella burnetti isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Salmonella:

Any clinical laboratory that identifies *Salmonella* spp. via culture or using a culture-independent diagnostic test (CDIT) must submit the isolate or specimen to the State or Local Public Health Laboratory for definitive identification, subtyping, genetic sequencing, and antibiotic susceptibility testing.

Shiga toxin-producing *Escherichia coli* (STEC):

The following specimens or isolates must be submitted to the State or Local Public Health Laboratory for definitive identification, subtyping, genetic sequencing, and antibiotic susceptibility testing:

- STEC isolates, including O157 and non-O157 strains, identified via culture
- E. coli O157 isolates without confirmation of the H antigen, detection of Shiga toxin, or detection of Shiga toxin genes
- Detection of Shiga toxin or Shiga toxin genes using a culture-independent diagnostic test (CDIT)
- Detection of E. coli O157 or STEC/Enterohemorrhagic E. coli (EHEC) using CDIT.

Shigella:

Any clinical laboratory that identifies *Shigella* spp. via culture or using a culture-independent diagnostic test (CDIT) must submit the isolate or specimen to the State or Local Public Health Laboratory for definitive identification, subtyping, genetic sequencing, and antibiotic susceptibility testing.

Staphylococcus Aureus:

Any clinical laboratory that identified vancomycin-intermediate or vancomycin-resistant *Staphylococcus aureus* via culture must submit the isolate to the State or Local Public Health Laboratory for definitive identification and antibiotic susceptibility testing.

Tetanus:

Clostridium tetanus isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Tuberculosis:

Any clinical laboratory that identifies *Mycobacterium* spp. via culture or using a culture-independent diagnostic test (CDIT) must submit the isolate or specimen to the State or Local Public Health Laboratory for definitive identification, subtyping, genetic sequencing, and antibiotic susceptibility testing.

Tularemia:

Isolates of *Francisella tularensis* must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping.

Vibrio:

Any clinical laboratory that identifies *Vibrio* spp. via culture or using a culture-independent diagnostic test (CDIT) must submit the isolate or specimen to the State or Local Public Health Laboratory for definitive identification and subtyping.

Yersinia:

The following specimens or isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and subtyping:

- *Yersinia pestis* and *non-pestis* isolates identified via culture
- Specimens that detected *Yersinia pestis* specific DNA or antigens, including F2 antigen, by direct fluorescent antibody assay (DFA), immunohistochemical assay (IHC), or polymerase chain reaction (PCR).

Sexually Transmitted Infections:

Neisseria gonorrhea:

The following isolates must be submitted to the State or Local Public Health Laboratory for definitive identification and antibiotic susceptibility testing:

- Disseminated *Neisseria gonorrhea* isolates
- Isolates of *Neisseria gonorrhea* from patients with severe disease
- Isolates of *Neisseria gonorrhea* found by a clinical laboratory to be resistant to cephalosporin or azithromycin

Healthcare Associated Infections:

Enterobacteriaceae:

The below table is a complete list of Enterobacteriaceae of public health importance. Any isolates of these organisms should be sent to the State or Local Public Health Laboratory for definitive identification and antibiotic susceptibility testing if:

- The clinical laboratory is unable to perform complete antibiotic susceptibility testing
- The organism is determined to be resistant to Imipenem, Doripenem, Ertapenem or Meropenem

Common Genera of Enterobacteriaceae			
Escherichia	*Klebsiella*	*Providencia*	*Serratia*
Enterobacter	*Proteus*	*Salmonella*	*Shigella*
Other Genera of Enterobacteriaceae			
Alishewanella	*Cedecea*	*Leminorella*	*Rahnella*
Alterococcus	*Citrobacter*	*Moellerella*	*Raoultella*
Aquamonas	*Cronobacter*	*Morganella*	*Samsonia*
Aranicola	*Dickeya*	*Obesumbacterium*	*Sodalis*
Arsenophonus	*Edwardsiella*	*Pantoea*	*Tatumella*
Azotivirga	*Erwinia*	*Pectobacterium*	*Trabulsiella*
Blochmannia	*Ewingella*	*Phlomobacter*	*Wigglesworthia*
Brenneria	*Grimontella*	*Photorhabdus*	*Xenorhabdus*
Buchnera	*Hafnia*	*Poodoomaamaana*	*Yersinia*
Budvicia	*Kluyvera*	*Plesiomonas*	*Yokenella*

Buttiauxella	*Leclercia*	*Pragia*	

Pseudomonas: Submit to the State or Local Public Health Laboratory Pseudomonas *aeruginosa* isolates that are resistant to imipenem, doripenem, or meropenem. However, no isolates from persons with cystic fibrosis need to be submitted.

Acinetobacter: Submit to the State or Local Public Health Laboratory *Acinetobacter baumannii* isolates that are resistant to imipenem, doripenem, or meropenem using standard susceptibility testing methods.

Acinetobacter and Pseudomonas isolates must be sent to the State or Local Public Health Laboratory for definitive identification and antibiotic susceptibility testing if the clinical laboratory is unable to perform complete antibiotic susceptibility testing.

Candida auris: Submit to the State or Local Public Health Laboratory any specimen that meets either of the following criteria:

- Detection of *C. auris* in a specimen using either culture or a culture independent diagnostic test (CIDT) (e.g., Polymerase Chain Reaction [PCR])
- Detection of an organism that commonly represents a *C. auris* misidentification in a specimen by culture. A list of these organisms can be found here: https://ndc.services.cdc.gov/wp-content/uploads/CandidaAuris.pdf