Washington State Department of Health

ELABORATIONS

News and Issues for Washington's Clinical Laboratories

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Antibiotic-Resistant Organism Surveillance—Updates (Effective Immediately)

Since becoming the West Regional Antibiotic Resistance Laboratory in Centers for Disease Control and Prevention's (CDC) Antibiotic Resistance Laboratory Network (ARLN) in 2016, Washington State Department of Health multidrug resistant organism (MDRO) surveillance and advanced antibiotic resistance testing capabilities have expanded. Isolates submitted by clinical labs to the Washington ARLN undergo identification, resistance, and mechanism testing. If necessary, isolates are sent to CDC for additional testing and banking. Some MDRO surveillance is statewide, whereas other isolates are requested from sentinel labs that have volunteered to participate in this effort.

Updates

1. In addition to testing carbapenem-resistant Enterobacteriaceae (CRE), CR-*Acinetobacter* and CR-*Pseudomonas aeruginosa* isolates for carbapenemases, and surveillance screening on patients potentially exposed to a carbapenemase-producing organism, the West Regional Antibiotic Resistance Lab now performs
   - Identification and antifungal susceptibility on submitted isolates of *Candida spp*.
   - Surveillance screening for *Candida auris* colonization

2. The ARLN test menu is now live and should be used to access specimen collection and submission instructions and forms for all multidrug resistant organism testing (except tuberculosis).

3. CDC recently recommended that healthcare providers consider screening for
   - Carbapenemase colonization in admitted patients who have been hospitalized in a foreign country within the previous 6 months
   - *Candida auris* colonization in admitted patients who have been hospitalized in a region with sustained *Candida auris* transmission within the previous 12 months. (See the Tracking *Candida auris* maps; this includes New York, New Jersey and Illinois).
   - *Candida auris* colonization in any patient with a non-KPC carbapenemase
4. CDC recommends that clinical laboratories speciate all *Candida* isolates from invasive infections, and all *Candida* isolates from any patient who was hospitalized in a foreign country in the previous 12 months.

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Inside This Issue

Practice Guidelines

The following practice guidelines have been developed by the Clinical Laboratory Advisory Council. They can be accessed at the LQA website.

Acute Diarrhea
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ANA
Bioterrorism Event Mgmt
Bleeding Disorders
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Diabetes
Group A Strep Pharyngitis
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Rash Illness
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Proficiency Testing for 2019

Proficiency testing (PT), required under medical test site rules WAC 246-338-050, is a source of external quality control. Although labs perform daily internal quality control with their test systems, external quality control provides important interlaboratory comparisons to determine the accuracy and reliability of your testing procedures.

It is time to enroll in PT for 2019. Page five contains a list of the approved PT agencies. Call the programs for a free copy of their 2019 PT brochure or see their websites. Your PT provider has likely already sent you a PT order form and catalog for 2019. Early enrollment guarantees you will receive samples for the first testing event that occurs between January and March 2019.

- Shop around for prices and test groups.
- In order to cover all tests performed in your laboratory, it may be necessary to enroll in PT with more than one company.

Urine Culture Growth / No Growth Reminder: Does your laboratory perform urine cultures for growth/no growth only and/or colony count only? If so, participation in a five-sample proficiency testing program applies to you.

Failure to participate in PT results in a score of 0 percent for each analyte. This is a failure, and may jeopardize your ability to continue testing patient specimens.

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Website access:
Department of Health
Laboratory Quality Assurance
Public Health Laboratories

Information needed to enroll: Complete the 2019 order form in the PT brochure with the following information:

- Name (use the name exactly as it appears on your MTS license)
- Address
- CLIA ID number (primary means of identifying your lab)
- MTS license number (see your MTS license)
- Select the appropriate program for your lab (you may have to enroll in several modules and/or companies to cover all analytes)

NOTE: Authorize the PT agency to send copies of your results to the Washington State Department of Health Office of Laboratory Quality Assurance. Do this for each analyte!

Regulated analytes:

- Five sample modules shipped three times per year are required for all regulated analytes.
- The LQA website (add hyperlink: www.doh.wa.gov/lqa.htm) has a listing of the regulated analytes.
- PT participation is required for all non-waived tests for influenza A and B, and for direct strep antigen.
- Some manufacturers of waived test kits include in the

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Tips for Proficiency Testing Success

Improve your chances for successful participation in PT:

- Release results: Notify the PT provider to send copies of PT results for each analyte to LQA.
- Handle PT samples like patient samples, but do not refer them to your reference/main lab for further study. Do not run them multiple times.
- Retain all raw data: Save data showing the workup of PT samples, instrument printouts, worksheets, and log sheets.
- Attestation statement: Keep a copy of the form signed by the director and personnel who tested the samples.
- Make sure all testing personnel perform PT during the year.
- Be timely: Always be sure to meet the deadline for returning your results.
- Review your graded results: Review the graded PT results with your lab director. Document corrective action for scores below 80 percent. Evaluate ungraded results.

  Note: Anything less than a score of 100 percent is considered a failure for some immunohematology (blood bank) tests. Document corrective action for scores below 100 percent.

Resistant Organism Surveillance, cont'd from page 1

5. Several automated identification methods, including Vitek 2YST, API 20C, BD Phoenix yeast identification system, MicroScan, and RapID Yeast Plus, can misidentify *C. auris* as other rare *Candida species*. See Table 1 for *Candida species* that should be suspected as *C. auris* and submitted to PHL for confirmatory testing.

Table 1. When to Suspect *Candida auris*

Identification Method	**Organisms *C. auris* can be misidentified**
Vitek 2YST	*Candida haemulonii* *Candida duobushhaemulonii*
API 20C	*Rhodotorua glutinis (characteristic red color not present)* *Candida sake*
BD Phoenix yeast identification system	*Candida haemulonii* *Candida catenulata*
MicroScan	*Candida famata* *Candida guilliermondii* *Candida lusitaniae* *Candida parapsilosis*
RapID Yeast Plus	*Candida parapsilosis*

Table 1 is reproduced from CDC.

Surveillance Updates & Reminders

All Washington labs should submit the following isolate-types to PHL:
- Carbapenem-resistant *E. coli, Klebsiella species*, and *Enterobacter species*
- Suspected or confirmed *Candida auris* isolates
- Carbapenem-resistant *Acinetobacter species*

In addition to submitting the isolate-types above, **sentinel labs (and other interested labs) should submit one or more of the following isolate-types to PHL:**
- Carbapenem-resistant *Pseudomonas aeruginosa*
- Carbapenem-resistant *Citrobacter* species
- Carbapenem-resistant *Morganella, Proteus* and *Providencia* species (Note: These genera have intrinsic resistance to imipenem. Submit only those that are resistant to another carbapenem in addition to imipenem.)
- *E. coli* and *Klebsiella pneumoniae* isolates resistant to third-generation cephalosporins (for mobile colistin resistance (mcr) surveillance)
- All *Candida species* EXCEPT *albicans*

Table 2 summarizes species and resistance criteria for laboratories submitting isolates for MDRO surveillance.

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Resistant Organism Surveillance, cont'd from page 3

Table 2. Species, Resistance Criteria, and Submitters for Washington State MDRO Surveillance

Family or Genus	Antibiotic Resistance Criteria	Submitters
CR-Enterobacteriaceae: *E. coli* *Klebsiella spp.* *Enterobacter spp.*	Resistant to ≥1 carbapenem: Minimum inhibitory concentrations ≥4 mcg/ml for meropenem, imipenem, and doripenem, and ≥ 2 mcg/ml for ertapenem OR Kirby-Bauer zone of inhibition diameter ≤19 mm for meropenem, imipenem, and doripenem, and ≤18 mm for ertapenem	All labs
CR-Acinetobacter spp.	Resistant to ≥1 carbapenem: Minimum inhibitory concentration ≥8 µg/mL for any carbapenem OR Kirby-Bauer zone of inhibition diameter ≤14 mm for doripenem and meropenem, and ≤18 mm for imipenem	All labs
Candida auris (suspected or confirmed)	None	All labs
All *Candida spp.* EXCEPT *albicans*[1]	None	Sentinel labs
CR-*Pseudomonas aeruginosa*[1]	Resistant to ≥1 carbapenem: Minimum inhibitory concentration ≥8 µg/mL for any carbapenem OR Kirby-Bauer zone of inhibition diameter ≤15 mm for any carbapenem	Sentinel labs[2]
Carbapenem-resistant *Citrobacter spp.*	Resistant to ≥1 carbapenem: Minimum inhibitory concentrations ≥4 mcg/ml for meropenem, imipenem, and doripenem, and ≥ 2 mcg/ml for ertapenem OR Kirby-Bauer zone of inhibition diameter ≤19 mm for meropenem, imipenem, and doripenem, and ≤18 mm for ertapenem	Sentinel labs[2]
Carbapenem-resistant *Morganella, Proteus* and *Providencia spp.* [3]	Resistant to 1 carbapenem in addition to imipenem: Minimum inhibitory concentrations ≥4 mcg/ml for meropenem and doripenem, and ≥ 2 mcg/ml for ertapenem OR Kirby-Bauer zone of inhibition diameter ≤19 mm for meropenem and doripenem, and ≤18 mm for ertapenem	Sentinel labs[2]
ESBL *E. coli and Klebsiella pneumoniae*[1]	Resistant to ≥1 third-generation cephalosporin Minimum inhibitory concentration ≥4 µg/mL for cefotaxime and ceftriaxone, and ≥16 µg/mL for ceftazidime OR Kirby-Bauer zone of inhibition diameter ≤22 mm for cefotaxime, ≤19 for ceftriaxone, and ≤17 for ceftazidime	Sentinel labs[2]

[1]If the number of each isolate-type for submission is too burdensome, sentinel labs may submit only a subset.
[2]All labs are encouraged to submit these isolate types but are not required to do so.
[3]Note: These genera may have intrinsic resistance to imipenem. Only those that are resistant to a carbapenem other than imipenem should be submitted.

We sincerely thank laboratories for their diligence in reporting and submitting antibiotic resistant organisms to public health. The ARLN will cover shipping costs associated with MDRO submission upon request. Please contact ARLN if you are interested in sentinel laboratory participation or if you have any questions/concerns regarding testing or shipping. Contact Kelly Kauber by email or by phone at 206-418-5500 if you have questions about admission- or surveillance-screening.

Proficiency Testing for 2019, cont'd from page 2

same package insert instructions for moderate complexity testing. This allows the laboratory to choose whether it wants to perform the test as a waived test following the waived test requirements or as a moderate complexity test following these requirements. If the laboratory chooses to perform the test as a moderate complexity test, it must participate in a five-sample PT program three times per year.

Non-regulated analytes: Test all non-waived tests (other than the regulated analytes) using one or a combination of the following:

- A two-sample PT program from one of the proficiency testing providers, or
- Blind samples with known values, or
- Split samples with another lab, or
- Split samples with another instrument or method, or
- Two analysts perform microscopic tests and compare results, or
- Kodachromes of microscopic tests, or
- Correlate patient results with clinical history.

Adding tests during the year:

- Notify our office within 30 days.
- Enroll in PT for regulated analytes before you start testing patient samples.

Discontinuing tests during the year:

- Notify our office within 30 days of discontinuing the tests.

Temporarily discontinuing tests during the year:

- Notify our office within 30 days if you temporarily discontinue a test.
- Use the appropriate action code from your PT provider if you temporarily discontinue a test at the time of a PT challenge.
- When you reinstate the test, notify our office.

LQA website: The LQA website contains additional information regarding proficiency testing, applications, licensing, practice guidelines, surveys and checklists, MTS rules and much more. If you have other questions regarding proficiency testing, contact Nora Estes at 253-395-6747.

Approved PT Providers

Amer. Acad. of Family Physicians (800) 274-7911

Amer. Assoc. of Bioanalysts (800) 234-5315

American Proficiency Institute (800) 333-0958

ACP Medical Lab Evaluation (800) 338-2746

College of American Pathologists/EXCEL
(800) 323-4040

WSLH (800) 462-5261

For answers to your PT questions, go to the LQA website or call Nora Estes at (253) 395-6747.

Calendar of Events

Training Classes:

2019 ASCLS-WA Spring Meeting
April 25-26 Olympia

2019 Northwest Medical Laboratory Symposium
October 9-12 Lynnwood

26th Annual Clinical Laboratory Conference
November 2019 Tukwila

Contact information for the events listed above can be found on page 2. The Calendar of Events is a list of upcoming conferences, deadlines, and other dates of interest to the clinical laboratory community. If you have events that you would like to have included, please mail them to ELABORATIONS at the address on page 2. Information must be received at least one month before the scheduled event. The editor reserves the right to make final decisions on inclusion.

Washington State Department of Health

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For persons with disabilities, this document is available upon request in other formats. To submit a request, please call 1-800-525-0127 (TTY/TDD 1-800-833-6388).

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