

State of Idaho
 Bureau of Laboratories
 2220 Old Penitentiary Rd
 Boise, ID 83712-8249

Phone: 208-334-2235
 Fax: 208-334-4067
 E-mail: statelab@dhw.idaho.gov

Idaho Bureau of Laboratories Clinical Forum

Volume 8, Issue 4

Winter 2015

Inside this issue:

- Could it be Mumps? 1
- 2015 *Salmonella* Enteritidis Outbreak 1
- Confirmed Select Agents 3
- 2015 Needs Assessment Highlights 3
- What's Wrong with this Picture? 5
- Upcoming Webinars 6

Could it be Mumps?

Vonnita Barton

Since the wide implementation of the Mumps, Measles, and Rubella (MMR) vaccine in the United States in 1967, mumps cases have dramatically decreased from approximately 186,000 cases in 1967 to 1,223 cases in 2014.¹ Although outbreaks are rare,

they do occur throughout the United States (Figure 1). In fact, Idaho experienced a mumps outbreak in 2014, contributing to that year's total of 26 cases.² Outbreaks are most likely to occur when individuals are in close proximity with others, including stu-

dents in the same class at school, on the same athletic team, or residing in the same dormitory.¹

Mumps is a contagious disease caused by paramyxovirus. It is spread through saliva or mucus from the mouth, nose, or throat. Its symptoms may include fever, headache, loss of appetite, and swollen salivary glands, called parotitis (Figure 2).¹ Alt-

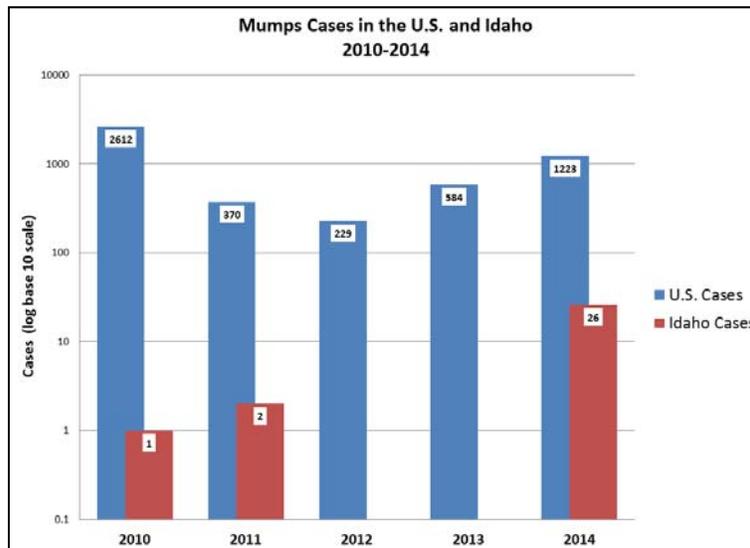


Figure 1. A comparison of reported Mumps cases in the United States and Idaho from 2010 to 2014.

(Continued on page 2)

2015 *Salmonella* Enteritidis Outbreak

Robert Voermans, Rachel Beukelman, and Erin Peterson

This summer, the Idaho Bureau of Laboratories (IBL) participated in an investigation of what is now thought to be the largest food-borne *Salmonella* outbreak in the history of Idaho. In June of 2015, IBL received more *Salmonella* isolates than the entire year of 2014 (Figure 1.). Many of the *Salmonella* iso-

lates received were linked by molecular epidemiology methods to food samples taken from a local deli, thus providing epidemiologists and health department officials the

(Continued on page 2)



IDAHO DEPARTMENT OF HEALTH & WELFARE
 DIVISION OF PUBLIC HEALTH

Could it be Mumps?

(Continued from page 1)

Figure 2. Mumps and other health issues may cause swollen glands called parotitis. Image from Public Health Image Library (www.phil.cdc.gov).



hough parotitis is a key indicator of possible mumps infection, the swollen glands can be caused by a number of other

issues including parainfluenza virus, Epstein-Barr virus (EBV), and noninfectious causes such as tumors, drugs, and immunologic diseases.

For example, in the 2014-2015 flu season, a number of states reported confirmed influenza cases (H3N2A) in which patients experienced parotitis.³ The samples were confirmed as influenza when suspected mumps samples were tested through a respiratory panel. This new symptom was dubbed “Flumps” for flu that resembled mumps.

Because EBV also has similar symptoms as mumps, including fever and swollen lymph nodes, EBV samples can be mistaken for

mumps and vice versa.

With these examples in mind, if a patient has symptoms of mumps and no other diagnosis (e.g., influenza) has been made, consider referring the sample to the Idaho Bureau of Laboratories (IBL). IBL can perform mumps RT-PCR or serology testing and participates in national influenza surveillance. Visit the IBL website at www.statelab.idaho.gov for testing information. Notifying IBL staff at 208-334-0589 prior to shipping samples to IBL is appreciated.

References

¹Centers for Disease Control and Prevention. (2015). *Mumps*. Retrieved from <http://www.cdc.gov/mumps/index.html>

²Idaho Department of Health and Welfare. *Idaho Reportable Disease Data and Statistics*. Retrieved from <http://healthandwelfare.idaho.gov/Health/Epidemiology/IdahoDiseaseSummary/tabid/202/Default.aspx>

³Maddox, N. (2015). ELR: Making Surveillance Better. *Lab Matters*, Spring 2015, 11-15. Retrieved from [http://digital.aphl.org/publication/?i=257025#{"issue_id":257025,"page":0}](http://digital.aphl.org/publication/?i=257025#{)

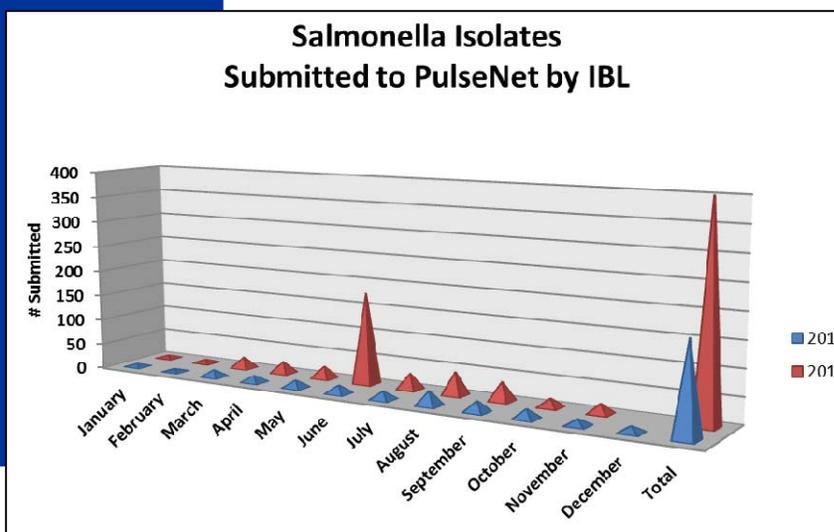
2015 Salmonella Outbreak

(Continued from page 1)

information they needed to better inform and educate the public about the rapidly changing situation.

IBL would like to thank all the hospitals for their submissions of *Salmonella* isolates. This outbreak is an excellent example of how working partnerships between IBL, clinical laboratories, and epidemiologists in both the Division of Public Health and local public health districts helps to protect the health of Idahoans.

Figure 1. To date, IBL has received 2.3 times more *Salmonella* isolates in 2015 than 2014 due to the outbreak in June 2015.



Select Agents Confirmed in Idaho in 2015

Erin Peterson

The State of Idaho has had two confirmed human cases *Francisella tularensis* reported this year. Both of these cases originated from routine wound cultures.

Francisella tularensis is a highly pathogenic organism and is known to cause laboratory acquired infections due to aerosolization and low infective dose numbers (as low as one organism).

If your lab suspects *Francisella tularensis*, please perform all work and manipulations inside a biosafety cabinet with BSL-3 practices and then call the Idaho Bureau of Laboratories to assist you with packaging and shipping to our LRN-B lab.

Key characteristics of *Francisella tularensis* (Figure 1):

- ◆ Slow growing (48 hr to 72 hr) organism
- ◆ Gram negative, tiny coccobacillus
- ◆ Requires cysteine enriched media for growth
- ◆ Does not grow on MacConkey agar



Figure 1. *Francisella tularensis* growth on Sheep Blood agar (left) and Chocolate agar (right) at 48 hours.

Prioritizing for 2016: Highlights from 2015 Needs Assessment

Wendy Loumeau

Idaho Bureau of Laboratories (IBL) conducted our annual needs assessment this past fall. The purpose of this assessment was to identify ways we could better meet the needs of our clinical and epidemiological partners. The results from this assessment helped us identify priority areas for 2016.

Fifty respondents completed the survey, with 36 from Idaho clinical laboratories and 14 from Idaho public health districts.

The assessment collected contact information data and inquired about laboratory testing, training, and use of IBL resources such as the website and Sampling and Submission Guides. One question asked about barriers laboratorians encounter when submitting samples

to IBL (Figure 1), with time identified as the primary barrier.

(Continued on page 4)

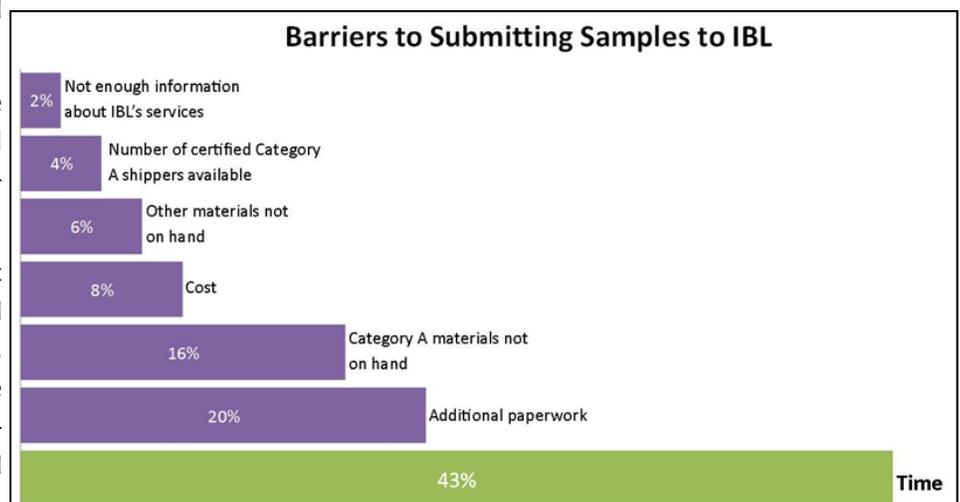


Figure 1. Time was identified as the primary barrier for laboratories to submit samples to IBL.

Prioritizing for 2016

(Continued from page 3)

Priorities to address these potential barriers include the following:

- ◆ Simplify the process to shipping samples to IBL with fewer options for submission forms.
- ◆ Continue to offer the Packaging and Shipping Division 6.2 Materials training.
- ◆ Gather more specific information about the time barrier and address, if possible.

Another question pertained to disposal and destruction of biological waste. Most laboratories (84%) dispose of their waste through a medical waste contract service (Figure 2). This could be an area of concern when disposing identified select agents, as many medical waste contract services do not allow disposal of Category A agents. IBL plans to write a future Clinical Forum article discussing this potential issue.



Figure 2. Most respondents dispose of their biological waste through a medical waste contract service.

Respondents reported interest in brief online training modules with a variety of topics

- 94%** training format of interest was **online training modules**
- 96%** time available to commit to training listed as **10 minutes to 1 hour**
- 66%** training topic of interest was **epidemiology and the laboratory**
- 60%** training topic of interest was **packaging and shipping 6.2 materials**
- 58%** training topic of interest was **CLIA regulations**
- 54%** training topic of interest was **biothreat preparedness**

Figure 3. A summary of responses pertaining to training formats, time available, and topics.

With training-specific questions, the majority of respondents (96%) indicated that they would be able to commit 10 to 60 minutes for an online training session, and online training formats are preferred over webinars, job aids, and workshops (Figure 3). IBL is in the process of developing online training modules for clinical laboratorians and epidemiologists to address this need. In addition, the Centers for Disease Control and Prevention Laboratory Training Branch (<http://www.cdc.gov/labtraining/>) offers a variety of online modules that are free of charge (Figure 4). Topics include basic microbiology, packaging and shipping, and biological terrorism.

The top five IBL resources accessed on State Lab website include (1) packaging and shipping information, (2) submission forms, (3) sampling and submission guides, (4) Clinical Forum, and (5) online ordering. A website update is scheduled for 2016 to ensure that the location of these resources is intuitive for end users.

Seventy percent of respondents consider the Clinical Forum newsletter to be useful; the remaining 30% have not seen it. Topics of interest include (1) CLIA regulations, (2) new methods, (3) quality

(Continued on page 5)

Prioritizing for 2016

(Continued from page 4)

assurance/quality control, (4) bio-threat, and (5) virology; these topics will be considered for future Clinical Forum articles.

IBL would like to thank those of you who completed this needs assessment. Your responses allow us to better meet your laboratory training and public health service needs. For questions or additional feedback about IBL services and resources, please contact Wendy Loumeau at loumeauw@dhw.idaho.gov.

CDC Laboratory Training



Figure 4. CDC offers a variety of online training opportunities for laboratorians at http://www.cdc.gov/labtraining/content-pages/247_online_training.html.

What's Wrong With This Picture?

answer on page 6



Clinical Forum Editorial Staff

Dr. Christopher Ball
Robert Voermans
Wendy Loumeau
Amanda Bruesch
Vonnita Barton
Lindsey Catlin
Erin Peterson

To be added

or removed

from the

Clinical Forum

email list:

statelab@dhw.idaho.gov

Solution to *What's Wrong With This Picture?*

There is a biohazard bag in a regular trashcan. It is not recommended to dispose of materials labeled as biohazardous in a non-biohazardous waste receptacle.

Upcoming Webinar

January 20, 2016; 3:00 pm Mountain Time

“Fundamentals of Biosafety and Biosecurity in Public Health Laboratories”

Contact Wendy Loumeau at loumeauw@dhw.idaho.gov to register or to access archived programs.

Happy Holidays from IBL!



Back row: Elizabeth Parent, Cassie Dayan, Michael Stevenson, Kari Getz, Vonnita Barton, Rachel Beukelman, Kimberly Dillon, Robert Voermans, Lavanya Vempati, Erin Peterson; Middle row: Steve Gregoire, Christopher Ball, Jeffrey Johnson, Mohammed Al Charakh, Cina Brown; Front row: Russell Eck, Lisa Lam, Wendy Loumeau, Lindsey Catlin, Amanda Bruesch, Ashley Machado