

Montana Laboratory News

SUMMER 2017



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Presidential Message

Helen Keller once said "The best and most beautiful things in the world cannot be seen or even touched - they must be felt with the heart."

As we have exited summer and move past fall, winter is here. Nights are longer and the air a chill. As with the change in seasons there are changes and improvements for ASCLS-MT. Over this last year we have had a Facebook page created for ASCLS-MT and our website updated. These were great additions to our state society and I encourage you to like ASCLS-MT on Facebook and to check out our new website.

I started my term as president in August after coming back from a great networking trip to the National Convention in San Diego. While at the convention I ended my term as Scientific Assemblies Coordinator. I was involved with the scientific assemblies since attending my first convention. At that time I volunteered to be the chair of one of the individual assemblies which eventually lead me to the coordinators position which I held for two years. One of my biggest lessons I learned was that there is a wealth of knowledge at our fingertips just from being a member of ASCLS. The scientific assemblies are filled with members just like you who are hardworking individuals and with a knowledge base unlike any other. We all have experiences and knowledge that when shared only leads us to be stronger in our positions at life, work or home. I encourage you to become members of a scientific assembly.

At a national level there has been a lot of activity especially around the Protecting Access to Medicare Act (PAMA). PAMA is set to reduce the reimbursement on the clinical laboratory fee schedule, dramatically affecting laboratories all over the country. The new rates are set to take effect on January 1 of 2018. While these changes may not affect rural healthcare now they will impact it in the future. It is important for you to support any and all laboratory professional groups who are challenging this change in the fee schedule and reach out to our state representatives.

Thanksgiving has past but over the years it has become my favorite holiday as it reminds us to take a moment and look around at what we have and to be thankful for our health and family. As we enter into December and the upcoming chaotic time of Christmas and New Year's. My wish for you is safe travels and to take a moment and rejoice in the true meaning of Christmas.

Happy Holidays!!

Ashlee Ketchum, MLS(ASCP)^{CM}

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Carbapenem Resistance

Beta-lactams are by far the most used antibiotics worldwide and include the penicillins, cephalosporins, monobactams and carbapenems.

They all share a common beta-lactam ring and act similarly by binding to and inactivating the penicillin-binding proteins (PBPs), which are responsible for the formation of the bacterial cell wall.

Carbapenems, among the beta-lactams, are the most effective against Gram-positive and Gram-negative bacteria presenting a broad spectrum of antibacterial activity. Their unique molecular structure is due to the presence of a carbapenem together with the beta-lactam ring. This combination confers exceptional stability against most beta-lactamases (enzymes that inactivate beta-lactams) including ampicillin and carbenicillin (AmpC) and the extended spectrum beta-lactamases (ESBLs).

As they are highly effective against many bacterial species and less vulnerable to most beta-lactam resistance determinants, carbapenems are considered to be the most reliable last-resort treatment for bacterial infections. Furthermore, presenting fewer adverse effects, they are safer to use than other last-line drugs such as the polymyxins. For these reasons, the emergence and rapid spread through all continents of carbapenem resistance, mainly among Gram-negative bacteria, constitutes a global public-healthcare problem of major importance. ¹

In Enterobacteriaceae, there are two mechanisms of resistance. One type of resistance involves a cephalosporinase, such as AMP-C and certain ESBLs, which have a low-level carbapenemase activity combined with porin loss. The porin loss limits entry of the carbapenem into the periplasmic space. These isolates tend to hydrolyze ertapenem more than meropenem and imipenem, and are not usually resistant to all carbapenems. These isolates are clearly considered multi-drug resistant and appropriate infection control measures are recommended.

The second mechanism, and most alarming, is the presence of a carbapenemase, which is a beta lactamase that can hydrolyze carbapenems. These isolates are highly likely to be resistant to all carbapenems and other beta-lactam agents. Once identified infections control measures should be implemented immediately, including, but not limited to contact precautions and active surveillance testing. These isolates are considered an Infection Control Emergency.



Montana
Public
Health Lab

C A R B A P E N E M R E S I S T A N C E

It is important to note however that there are organisms that are intrinsically resistant and can mimic carbapenem resistance. These MYSPACE bugs include *Morganella*, *Yersinia*, *Serratia*, *Providencia*, *Aeromonas*, *Citrobacter* and *Enterobacter*, all of which possess a chromosomal AMPC beta-lactamase and may test ertapenem resistant. These are not carbapenemase producing organisms and are not an infection control threat.² Therefore it is important to distinguish between mechanisms of carbapenem resistance and to send isolates of concern to your state public health laboratory for further confirmation and surveillance testing.

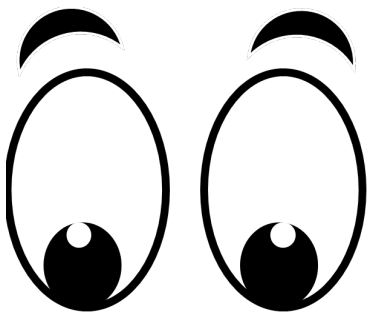
The Montana Public Health Laboratory (MTPHL) is currently working closely with the CDC Antimicrobial Resistance Laboratory Network (ARLN), and is prepared to help in this surveillance effort. MTPHL received some funding through CDC's Epidemiology and Laboratory Capacity Cooperative agreement (ELC) to perform surveillance for carbapenemase resistance. Public health laboratories across the nation have been asked to collect, confirm, and characterize carbapenem-resistant Enterobacteriaceae (CRE) and *Pseudomonas aeruginosa* (CRPA) isolates in their state for surveillance purposes. These activities are intended to help identify isolates that produce a carbapenemase and classify the kind of carbapenemase resistance present. In order to help conduct this surveillance effort, **we need your help!** Please click on the following link to read the guidance which identifies the isolates of interest, as well as collection strategies, testing provided, and reporting practices.

[Guidance for Implementation of CRE & CRPA Testing at the Montana Public Health Laboratory](#)

If you have questions, please contact the Montana Public Health Laboratory at 800-821-7284

References:

1. Carbapenem resistance: overview of the problem and future perspectives. Ther Adv Infect Dis. 2016 Feb; 3(1): 15–21. doi: 10.1177/2049936115621709
2. CRE Mechanisms and their Importance for Infection Prevention. Paul C. Schreckenberger. http://www.michigan.gov/documents/mdch/Schreckenberger_CRE_Conference_rev_6-25-15_495125_7.pdf



THE NEW METHOD OF SUBMITTING YOUR NAME FOR VOLUNTEER OPPORTUNITIES:

1. from the ASCLS.org main page:
2. hover over **Participate** in the main header.
3. The dropdown menu will offer **Volunteer Opportunities**.
 - a) This actually takes you to a brief tutorial on how to volunteer.

(www.ascls.org/participate/how-to-volunteer)

To actually fill out your volunteer profile:

1. sign in and go to the Member Community main page.
2. Click on **Volunteer** in the menu bar here to access the volunteer functions.
3. Right now the only opportunity there is Consumer Information Team, but they need you!

PLEASE THINK ABOUT VOLUNTEERING TODAY!

SAVE THE DATE: ASCLS-MT Spring Meeting, April 12 – 14, 2018 in Helena at the
Best Western Premier Helena Great Northern Hotel.

Do you feel like the medical laboratory profession is the *Sleeping Giant* of healthcare? Laboratory professionals contribute greatly to patient outcome, yet most of our healthcare colleagues have no idea about the dynamic profession we practice.

Come to Helena, the home of the Sleeping Giant, and help awaken the Sleeping Giant of healthcare through learning, networking, and just plain fun!

Now is the time to start considering awards!

- Actual deadlines aren't until February 15th, but a lot goes into the application process for some of the bigger awards.
- If you know who your nominee will be, talk to them soon so that they will have plenty of time for the application process.
- You can find awards criteria and applications in the current version of the guidelines found here: www.ascls.org/about-us/awards-and-scholarships
- It does say that there are updates coming in December, but your nominee can still start preparing.

ASCLS-Montana has finally joined Facebook!

We launched our FB page on March 29th of this year.

We currently have six administrators:

Trish Smith, Ashley Schlosser, Jaq Briceno, Brenden Collins, Tori Rensink & Maria Rodriguez.

The basic functions of the page is for posting ASCLS-MT related events, photos & videos, and encouraging visitors to sign-up to become an ASCLS member. We have the option later to promote & advertise ASCLS-MT across the internet, targeting a narrow audience of medical professionals, to help generate new members (for a small fee). Currently we only have 19 followers (as of July 20th).

If you have Facebook, please "like" and share our page @ <https://www.facebook.com/ASCLSMT>

-Trish Smith

Legislative Update: PAMA and the CLFS

As most of you are aware, the Clinical Laboratory Fee Schedule (CLFS) has been in the crosshairs for quite some time now. In 2014 Congress passed the Protecting Access to Medicare Act (PAMA) to base Medicare CLFS reimbursement rates on laboratory-reported private market rates. The Centers for Medicare and Medicaid Services (CMS) issued a proposed rule on October 15, 2015 to revise the CLFS. The proposed rule required applicable clinical laboratories to report private payer payment rates and the test volume associated with those payment rates for laboratory services reimbursed under the CLFS. Unfortunately, the rules excluded 95 percent of clinical laboratories from reporting their private market rates, including most physician office and hospital laboratories due to the definition of an applicable reporting lab. In September of this year, CMS released its draft 2018 Clinical Laboratory Fee Schedule (CLFS), which is based on the data collection process from these applicable laboratories. CMS anticipates more than \$600 million in cuts to laboratory reimbursement in 2018 alone, which is dramatically more than Congress anticipated when the law was passed. The proposed cuts will cause significant disruption in the ability of some laboratories to serve the needs of the healthcare system and patients. Unless there is a change, these rates will go into effect on January 1, 2018, and if they do, Medicare beneficiary access to clinical laboratory services will be put at risk. Over ten years, the cuts may total as much as \$13 billion, which is more than three times the estimate of \$3.9 billion Congress originally anticipated.

The impact of cuts to the Clinical Laboratory Fee Schedule (CLFS) will fall disproportionately on nursing homes served by local hospitals, small independent laboratories, and laboratories in physician offices, as well as Medicare-dependent hospitals and community hospitals in rural areas. Having committed the agency to a deeply-flawed data collection process, CMS has now drafted a distorted fee schedule built on questionable data collected from just five percent of the laboratories in the United States. CMS admits that just 1.85 percent of data was collected from laboratories serving rural areas.

Cuts to the CLFS will have a ripple effect through private insurers and other government payers like Medicaid, which use the CLFS to set their own rates. The outpatient laboratory service system in the United States could see a reduction in total annual reimbursements by as much as 25 percent over the next three years. The result will be a dramatic reduction in available testing and access to laboratory services for patients and clinicians. The cuts may also result in a near elimination of capital investment in the latest technologies needed to improve care. Unfortunately, CMS chose not to delay implementation until it could collect a more accurate representation of the laboratory marketplace. CMS did implement a 10% limit reduction on those tests where there was no National Limiting Amount, as ASCLS and others requested. If that limit was not used, some tests would see reductions of more than 30% next year. This will have a small, positive overall impact on the reductions.

Generally speaking, in-patient hospital laboratories see little if anything billed under the CLFS. Of greater concern is the lack of reporting from Physician Office Labs, outreach labs, and smaller independent labs who didn't meet the CMS definition of an "applicable" lab. That definition distorted the breadth of the data collected.

As you can see, this will have a very serious impact on many of our Montana laboratories, hence our Montana citizens. I urge you to keep abreast of this critical issue. Watch for updates on the ASCLS Member Community Open Forum and action alert requests from our ASCLS Government Affairs Committee. When you see an alert, please act on it immediately. Contact Senators Tester and Daines and Representative Gianforte and let them know how critical this issue is to our state. Be the VOICE!

ASCLS UPCOMING EVENTS:

1. The Clinical Laboratory Educators' Conference (CLEC)

February 22-24

2018, Houston, TX

2. The Legislative Symposium- Legislative Symposium

Mar 19 - 20, (ET)

Hilton Alexandria Old Town, 1767 King Street, Alexandria, VA, 22314, US

3. ASCLS Montana 2018

April 11 - 14, 2018

Great Northern Best Western, Helena, Montana

4. Medical Laboratory Professionals Week

APRIL 22-28, 2018

5. 2018 ASCLS Annual Meeting

Jul 29 - Aug 2, (CT)

Swissôtel Chicago, 323 E Upper Wacker Drive, Chicago, IL, 60188, US

**Do you have news to share? An idea for
the MLN? Send your comments and
suggestions subject line "MLN
Submission" to
cararyan7@gmail.com**



IMPORTANT:

This is a friendly reminder that ASCLS memberships expired 07/31/17. As of now, you will no longer receive ASCLS publications, emails, or services unless you renew.

MEMBERSHIP

ASCLS rolled out new membership packages created for employer groups and educational institutions.

These packages offer:

- A reduced student and/or Professional 1 membership rate**
- Free or discounted registration(s) to the ASCLS national meeting, clinical lab expo, Legislative Symposium or the CLEC conference**
- Electronic access to the CLS journal and ASCLS Today newsletter**
- deep discounts for ASCLS provided CEUs and programs**

Employer groups:

Rates: \$78 per Professional 1 member, inclusive of state dues. (MT = \$15)

Discounts: For groups of 10 and up, you will receive receive a coupon for \$50 off any ASCLS Educational Product-includes self-studies, live-streamed, virtual, webinars or live (in-person) ASCLS educational event- for every 5 members you have in your group. For example, groups of 20 members will receive 3-\$50 off coupons.

Educators Package:

For Hospital based programs: Take advantage of this offer and extend the rates to your clinical instructors and your academic affiliates' liaison.

For University/College based Programs: Thank your clinical affiliates with this access to free CE for the professionals who teach your students.

Rates: \$25 per student and \$78 per faculty/clinical preceptor; inclusive of state dues.*

Free registrations awarded:

- Programs with 5-20 students will receive 1 free registration to an ASCLS national meeting (early bird rate).
- Programs with 21-40 students will receive 2 free registrations to an ASCLS national meeting (early bird rate).
- Programs with 41 or more students will receive 3 free registrations to an ASCLS national meeting (early bird rate).

(Either the Program Director or the lead contact for the package must be a member of ASCLS. They may be, but are not required to be, included in the package.)

Visit <http://www.ascls.org/membership/membership-packages> for all the information and how to submit your applications.



Check out the new look to the ASCLS-MT website. The revised website went live in September, and we want to make it a valued resource for both members and non-members. Suggestions for improvements and additional content are encouraged. Contact us under the "About ASCLS-MT" tab and send us an e-mail with your feedback.



American Society for Clinical Laboratory Science - Montana

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Region VIII Leadership Academy

Our Region VIII Leadership Academy 2016-2017 graduates were Franki Herdt (Wyoming) and Mechelle Sargent (Idaho). They presented their project at the ASCLS National Meeting in San Diego July 29, 2017.

They designed a toolkit that state and regional leadership can use to:

- a. Find out why people aren't members
- b. Find out why people lapsed their memberships
- c. Market ASCLS to their state laboratorians
- d. Based on survey results, focus recruitment efforts
- e. Get involved in the MLS/MLT programs in their states to inform students early on about ASCLS and the benefits

The toolbox will be in Dropbox and on the Region VIII website, and will incorporate the New Member Packet project from the 2014-15 R8LA in the promotion of the toolkit.

We started the new class 2017-2018 with 4 interns: Abbey Wichman (Montana) Aboubacarr Drammeh (Montana) Tina Dihle (Colorado) Kami McGann (Idaho). At IMSS they attended many educational sessions to begin their year. They have been working on a project that will benefit Region VIII and the states in Region VIII. They meet monthly via Go to Meeting to discuss their project and also to receive more education from a dedicated staff of ASCLS leaders. You can look forward to more information at the Spring Meeting.

Antimicrobial Stewardship for the community! Get Involved! Send something to your local paper!

November 13-19, 2017 kicked off the U.S. Antibiotics Awareness Week. While antibiotics are life-saving, they do come with risks. Bacterial resistance to antibiotics is everywhere and the way we utilize antibiotics today will affect patients and how we deliver healthcare in the future. Although some people are at greater risk, no one can avoid the risk of antibiotic-resistant infections. As we all were affected by last year's devastating fire season that swept across our state, in healthcare we have also been watching antimicrobial resistance as it sweeps across the nation. Antibiotic resistance and its consequences are here in our community with names like MRSA and C diff, and we all have a part to play in protecting our antibiotic resources. An antibiotic is a type of drug that kills or stops the growth of bacteria. Antibiotics are not effective against viruses such as the common cold and influenza.

Antibiotic resistance is also worsened because of antibiotic prevalence. Antibiotics are among the most commonly prescribed drugs used in healthcare today. Our biggest weapon in fighting bacterial disease (antibiotics) is also the biggest aide in perpetuating resistance. Each year in the United States, at least 2 million people acquire serious infections with bacteria that are resistant to one or more antibiotics. Of those 2 million people, at least 23,000 people die from these complicated infections. Those numbers may seem far-fetched here in our little corner of the Big Sky state, but we are seeing these resistant bacteria here at home as well. MRSA or methicillin resistant *Staphylococcus aureus* and *Clostridium difficile* (C difficile or C diff) have become household names for many Montanans and are currently among the top resistance threats in our state. MRSA is a member of a group coined as "super bugs" due to their impressive ability to survive and change in order to resist antibiotics. Just two short years after the discovery of Methicillin in 1960, strains of methicillin resistant *Staph aureus* began to emerge globally and are now common in our own community today.

C. difficile, is a common issue resulting from antibiotic use. C. difficile is a diarrheal disease often associated with long-term use of antibiotics in elderly patients or in cases of inappropriate use of antibiotics. Misuse of antibiotics can include taking other people's prescriptions, not following your physician's instructions and overuse for non-bacterial infections. Antibiotics can wipe out the normal "good" bacteria in our bodies for several months putting us at increased risk for developing C. difficile. C. difficile infections result in 14,000 deaths each year in the U.S.

Resistance is the threat, so what are we doing to stop this wildfire from spreading?

Every patient and every bacterium has the potential of being unique in either its identification or its response to antibiotics. Because of this variability, bacteria must be grown and tested against a panel of antibiotics in order to find the best choice to treat infection. This is known as susceptibility testing. The healthcare team works closely assessing each patient and making the best decision for their circumstance. This timeframe is closely monitored by pharmacists, physicians, nurses and the laboratory to provide and execute the safest patient care possible.

The World Health Assembly in 2015 adopted a global action plan to address the issue of antimicrobial resistance. The goal of this action plan is to safeguard the use of antibiotics for prevention and treatment of infectious diseases. Antimicrobial stewardship is the multidisciplinary approach to the safe and responsible use of antibiotics, and hospitals around the world, including Marcus Daly, are adopting practices to improve antibiotic prescribing.

Healthcare is ever evolving and like our bacterial counterparts, we must adapt in order to thrive. As we look at the upcoming cold and flu season, please make a conscious effort to minimize infections and properly utilize antibiotics as a patient or a healthcare team member. Together as a community, we can all work to be good stewards of antibiotics and preserve this valuable resource to make our community a healthier place.