Wyoming Department of Health

Wyoming's Lab Loop

Wyoming Department of Health

A Publication of the Wyoming Public Health Laboratory Volume 2 Issue 3 Fall, 2005

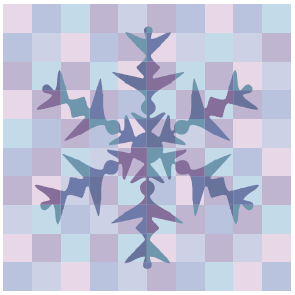
New CLIA Inspector for the State of Wyoming

Wyoming Department of Health Office of Healthcare Licensing & Surveys hired Russ Forney, PhD, MT (ASCP) as the new CLIA Inspector, effective November 28, 2005.

Russ comes to the state with a solid laboratory background. He retired from the Army this past summer, having served 26 years on active duty. Russ had a number of exciting assignments and travel opportunities while in the military, most were related to clinical laboratory management, blood bank operation, medical research, operational medicine, education, and even bioterrorism! His last assignment was at the US Military Academy, West Point, NY, where he served as an associate professor for 5 years prior to retiring. He holds a BS in Medical Technology/Chemistry, and a PhD in Biology/Parasitology. His post-doctorate experience was in clinical field trials and diagnostic device research at the Walter Reed Army Institute of Research. Russ worked with the South Dakota Department of Health for 6 months serving as a CLIA surveyor before joining the team in Wyoming.

On a personal note, Russ and his wife, Cinderella, live in Beulah, WY. Russ enjoys fly fishing, fly tying, and birding in his spare time. Cinderella works for the General Store in Beulah. They have 2 sons; Andy, 25 years old, serving as a captain in the Army, and Luke, 16 years old, who is a sophomore at Sundance High School with aspirations on becoming a science fiction writer. Their spotlight on the horizon is anxiously awaiting the arrival of their first grandchild next spring. Russ is just starting to become familiar with the strategic view of his new position. As he trains for his position he will gain a much better understanding of the system, which will shape his vision for CLIA surveys in Wyoming.

Inside this issue:



WPHL Clinical Laboratory Scientist Presents at ASM

Ms. Claudia Rogers, a Public Health Laboratory Scientist, researched and presented a poster on **Effect of Endocervical Specimen Adequacy for Detection of *Chlamydia trachomatis* Using the APTIMA COMBO 2® Assay** to the American Society for Microbiology, June 5-9, 2005, in Atlanta, Georgia. She has submitted her article to the ***Journal of Clinical Microbiology*** for publication and it is currently under review.

Ms. Rogers holds a BS degree and MT (ASCP) from Coe College in Cedar Rapids, Iowa and worked 18 years in clinical laboratories in Casper and Cheyenne. She has worked for the last 13 years at the State Lab doing Chlamydia/GC, HIV, and Hepatitis testing. She is very active in the Region VIII Chlamydia Infertility Project and has been involved with that for the last 12 years. Ms. Rogers also serves on the Licensing of Clinical Laboratories and Blood Banks Advisory Committee for the State of Wyoming.

Look for Claudia's abstract and the conclusions from her research on the following page.

Sample Adequacy for Detection of *Chlamydia trachomatis* continued

ABSTRACT

Cellular adequacy and the presence of columnar epithelial cells in endocervical specimens collected for *Chlamydia trachomatis* (CT) testing has been a significant concern with regard to test performance and organism detection. The use of amplified nucleic acid tests has provided much greater sensitivity for detection of CT than with older tests. This study evaluated the influence of specimen cellular adequacy for CT detection using the APTIMA Combo 2 assay, which utilizes transcription-mediated amplification. Endocervical specimens were collected from 601 female patients attending family planning, STD, and community health clinics. Following removal of exocervical mucus, two endocervical swabs were rotated simultaneously during collection. One swab was submitted for APTIMA testing following manufacturer's instructions. The second swab was used to prepare a slide, which was stained by direct anti-chlamydia fluorescent-antibody and evaluated for specimen adequacy and cellular components. The specimen was considered adequate if any columnar epithelial cells were present. Of 601 specimens tested by APTIMA, 37 (6%) were positive for CT by Combo 2. Based on the microscopic slide evaluation, 422 (70%) were graded adequate and 179 (30%) as inadequate. In the group of 422 adequate specimens, 23 (5.5%) were CT positive by Combo 2 and in the group of 179 inadequate specimens, 14 (7.8%) were positive by Combo 2 (P = 0.27). The results of this study suggest that, when testing for *C. trachomatis* with the APTIMA Combo 2 assay, endocervical specimen cellular adequacy does not appear to affect the sensitivity of the assay or the positivity of the results.

CONCLUSION

The clinicians in this study obtained only a 70% adequacy rate, suggesting that, when testing for CT using the Combo 2 assay, endocervical specimen cellular adequacy does not significantly affect the sensitivity of the assay or the positivity of the results. The increased sensitivity of the Combo 2 assay over first generation NAATs appears to compensate for the lack of adequate cellular components. However, clinicians should be encouraged to obtain adequate samples containing columnar cells, as these are the cells in which CT grow, and may be required for assays not included in this study. Ultimately, submission of the best possible specimen for *C. trachomatis* testing should always be a priority for clinicians who obtain endocervical samples for the diagnosis of infection.

Claudia Rogers, MT (ASCP)
WY Public Health Laboratory

According to an article in a 1999 issue of Sexual Transmitted Diseases, ***C. trachomatis*** is a bacterial sexually transmitted disease that causes an estimated 3 million infections annually in the United States. Symptoms range from non-existent to significant sequelae, including pelvic inflammatory disease, ectopic pregnancy, and infertility, making this study on sample collection very timely and applicable to today's practices.

New Staff Members in the Bioterrorism Preparedness Program

Wyoming Public Health Laboratory would like to take this opportunity to introduce two new members at the State's Bioterrorism Response Laboratory (BRL).
Let us introduce our new Chemical Terrorism Laboratory Coordinator, John

New Staff Members continued on Page 3

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Lab Loop Co-Editors

Gale Stevens and Wanda Manley

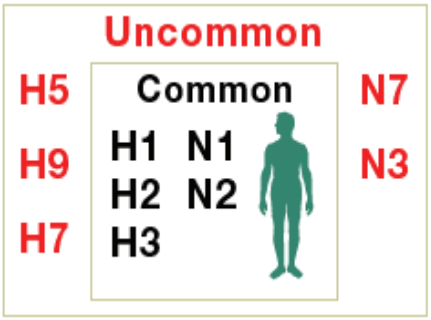
INFLUENZA Update

There are three types of flu viruses, type A, type B, and type C, with type A causing the most concern. Type B viruses usually produce a milder illness with symptoms that are less severe and don't last as long as type A virus. There are many different subtypes of influenza viruses. The subtypes differ based upon certain proteins on the surface of the virus (the hemagglutinin or “H” protein and the neuraminidase or the “N” protein). The hallmark of influenza viruses is antigenic variation, which comes in two forms: antigenic shift and antigenic drift.

Antigenic drift is a gradual, continual process that involves the accumulation of point mutations within the H and/or N proteins. Antigenic drift occurs in both influenza A and influenza B viruses. Antigenic drift allows for repeated infections over a lifetime and recurrent epidemics.

Pandemic viruses emerge as a result of a process called "antigenic shift,” which causes an abrupt or sudden, major change in influenza A viruses. These changes are caused by new combinations of the H and/or N proteins on the surface of the virus. Such changes result in a new influenza A virus subtype.

The appearance of a new influenza A virus subtype is the first step toward a pandemic; however, to cause a pandemic, the new virus subtype also must have the capacity to spread easily from person to person. Once a new pandemic influenza virus emerges and spreads, it usually becomes established among people and circulates for many years as seasonal epidemics of influenza. Influenza B viruses do not undergo shift and do not cause influenza pandemics.



From the University of Albany, School of Public Health “Preparedness & Community Responses”

Because of emerging flu subtypes, vaccines must be re-evaluated each year through epidemiological surveillance

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New Staff Members in the Bioterrorism Preparedness Program continued

Dunkle. John joined our staff in October of 2005.
Before joining our staff John has been very busy teaching chemistry courses at Front Range Community College, University of Northern Colorado, and the University of Arizona. In addition to his teaching background, he has over 15 years experience as an analytical chemist in environmental water analysis working in private industry. He holds a BA in Chemistry from the University of Colorado, an MS in Chemistry from Colorado State University, an MA in Science Education from the University of Arizona, and an MS in Chemistry Education from the University of Northern Colorado. He is also a member of the American Chemical Society.
John will be working closely with the BRL in training for sample collection and shipping. His role also requires him to function as a liaison with laboratories in other states that have the capabilities for analyses of clinical samples that may contain chemical agents. John’s chemistry and education experience will play a big part in his new position as Chemical Terrorism Laboratory Coordinator.

John Dunkle Chemical Terrorism Laboratory Coordinator

Carrie Dornak, formerly employed with the Wyoming State Veterinary Laboratory and USDA as a research cooperator, also started working with the BRL in October of 2005. She transferred to Cheyenne from Laramie, Wyoming, when she accepted the position of Bioterrorism Microbiologist.
Carrie’s experience has concentrated in molecular testing and for the last two years her focus was on a field validation study of a real-time reverse transcriptase-polymerase chain reaction assay (rRT-PCR) for the rapid detection of Vesicular

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INFLUENZA Update continued from page 3

provided by sentinel site submission of specimens to the State Health Laboratories. Specimens are cultured and isolated at the laboratory, typed and subtyped to determine if the circulating strains are the same as those seen last year, and to ensure that circulating strains are included in the vaccination pools.
Pandemic flu planning is a high priority at the Wyoming Department of Health (WDH), especially given the recent attention to avian flu. There are many types of avian flu, but the one currently of concern is the type A subtype H5N1, an influenza virus which is currently causing outbreaks in poultry infects millions of poultry in Asia and Europe. Only a small number of human infections have been identified. This virus is easily spread among poultry, but has limited ability to spread from poultry to humans. This is a subtype of influenza that is not currently included in the vaccine pools, and the pandemic threat would become a reality if the H5N1 manages to mutate to effectively spread from human to human before an effective vaccine can be produced and distributed to the general population.

Our role at the Wyoming Public Health Laboratory (WPHL) is to collaborate with the Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) to develop pandemic flu plans to deal with this emerging threat, to provide laboratory analysis of suspect flu specimens and assist the WDH Infectious Disease Epidemiology Program in the surveillance of circulating strains of influenza viruses to detect novel strains that may emerge in Wyoming and the U.S.

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Report on Shipping Workshop

On August 25, 2005, The Wyoming Department of Health Bioterrorism Program hosted a workshop in Casper, Wyoming, on Transportation of Infectious Substances. The workshop was well attended by 34 attendees from 23 institutions across the state. The workshop offered 7.5 hours of P.A.C.E. credits.

This was an 8 – hour course that provided laboratorians the requirements for transportation and handling infectious substances and regulated medical waste. The attendees learned what materials qualify as infectious substances, diagnostic specimens, and biological products. Packaging, marking, labeling and documentation of these materials in accordance with the different applicable regulations were covered in detail.

Because our labs experience turn over in employees and possibly all that wanted to attend could not, we will be hosting this workshop again next summer. Hopefully this will give another opportunity to laboratorians to receive this mandatory training.

If anyone out there has attempted to decipher the Hazardous Materials Manual (49 CFR Parts 100 – 185) or has sat through the Saf – T – Pak Training CD and felt even more confused than when they started, this workshop is for you! Dates and locations for the next workshop will be forthcoming in the future.

Continuing Education for Laboratorians

On May 4, 2004 Governor Freudenthal approved and signed amended Rules and Regulations for Licensure of Clinical Laboratories, Chapters 1–6. These rules were amended by a state appointed advisory committee.
The advisory committee consists of 7 members, including a pathologist, a medical doctor, a hospital administrator, a laboratory technologist, a state public health laboratorian, a representative for third party carriers, and a representative consumer of medical care. This committee examined the lack of laboratory personnel qualifications in the state of Wyoming and amended the educational requirements, documentation of experience and/or training, and continuing education recommendations for various levels of laboratory personnel.
The purpose of this committee was to standardize laboratory personnel qualifications for the State of Wyoming licensure of clinical laboratories, yet still make the

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Addendum: Preparing for Pandemic Influenza

In the news today we hear it all the time. The world needs to be ready for a pandemic influenza, which according to the experts is long overdue. By definition, pandemic influenza results from a novel subtype of influenza A virus to which the overall population possess no immunity. Rapid global spread of the disease is observed and is associated with unusually high rates of morbidity and mortality. At this time laboratories should be considering what their action plan will be in response to a pandemic. This article is meant to provide information and guidelines to assist in developing your facility's plan.

The first step is to identify the clinical laboratory responsibilities. Is your facility going to perform rapid diagnostic testing? Will your lab be prepared to handle the increased workload of tests in addition to the normal workload your lab already handles?

Key points to consider:

- **Perform rapid diagnostic testing**
- **Maintain other laboratory services during a pandemic**
- **Prepare for potential high inpatient lab workload with respiratory illness**
- **Support public health surveillance activities**
- **Provide clinician and medical staff education and information**

Your laboratory needs to decide if rapid testing is an option for your facility. Consider the advantages and disadvantages of rapid testing. On one hand, the testing offers rapid turn-around times making stat testing possible. It can aid in rapid identification of an outbreak. Also, a high level of expertise is not required to perform rapid tests. But on the other hand, the positive and negative predictive values of rapid tests vary considerably depending on the prevalence of influenza in the community. False-positive (and true negative) influenza test results are more likely to occur when disease prevalence is low, which is generally at the beginning and end of the influenza season. False-negative (and true positive) influenza test results are more likely to occur when disease prevalence is high, which is typically at the height of the influenza season. It is essential to educate physicians on predictive values and the limitations of the rapid test results. Prevalence indicators can be used to help them decide when to test and assist them in interpreting test results accurately.

If flu prevalence is…	**and specificity is…**	**then PPV is…**	**false-positive rate is…**
VERY LOW (2.5%)	POOR (80%)	V POOR (6%-12%)	V. HIGH (88%-94%)
VERY LOW (2.5%)	GOOD (98%)	POOR (39%-56%)	HIGH (44%-61%)
MODERATE (20%)	POOR (80%)	POOR (38%-56%)	HIGH (44%-62%)
MODERATE (20%)	GOOD (98%)	GOOD (86%-93%)	LOW (7%-14%)

PPV (Positive Predictive Value)

If flu prevalence is…	**and sensitivity is…**	**then NPV is…**	**false-negative rate is…**
MODERATE (20%)	POOR (50%)	MODERATE (86%-89%)	MODERATE (11%-14%)
MODERATE (20%)	HIGH (90%)	V. GOOD (97%-99%)	V. LOW (2%-3%)
HIGH (40%)	POOR (50%)	MODERATE (70%-75%)	MODERATE (25%-30%)
HIGH (40%)	HIGH (90%)	V. GOOD (93%-94%)	LOW (6%-7%)

(NPV (Negative Predictive Value)

Biosafety education needs to be reinforced when dealing with a pandemic. It is critical that physicians and all health care workers involved are educated on how samples should be safely collected. The laboratory staff needs to consider its biosafety levels, being sure to do processing under a BSL II cabinet to reduce exposure to infectious aerosols.

Preparing for Pandemic Influenza - continued

Examine current workload and explore how your laboratory will incorporate increased testing into the laboratory's normal operation. It is also critical to identify what impact a pandemic will have on your laboratory. What are the consequences if part of your staff becomes ill? Are supplies going to be compromised if you begin to experience a high demand for diagnostic testing? Consider the impact to your lab if you experience:

- **Staff shortages**
- **Supply shortages**
- **Very high demand for diagnostic testing**
- **Disruption of community and medical staff infrastructure**
- **High visibility of the laboratory within the community and by media**

Laboratories do not need to experience a pandemic to experience staff shortages. The lack of workers will be magnified if staff fall victim to influenza. The whole structure of the hospital will be disrupted as health care workers become sick. For example, the laboratorian's role may be redefined in the case of a nursing shortage requiring added duties that may not normally be in the scope of their regular job. The front line of defense is to cross train within the lab and throughout the hospital.

You may consider utilizing temporary employees or Temp Agencies when staff shortages become serious. An accelerated training program may be implemented and temporary employees could be used to perform minimal complexity tasks, freeing existing staff to perform tests of higher complexity.

Not only will flu testing be in high demand, but all other diagnostic tests used to determine patient status will be coming in greater volumes too. Things that might be considered to assist in the increased workload may be emphasis placed on testing prioritization, limiting selected test requests with a plan to notify your clinical staff of testing priorities, and batching certain tests.

If at all possible, consider developing a surge capacity plan (support from other laboratories), which might include increasing reference testing send-outs.

Assess the risk of sample collection and testing for all staff. Once risk has been determined, it is highly possible you may decide not to test if the procedure is going to put staff at risk of infection. Utilize your Physician Staff, Infection Control Officer and Pathologist to help make these determinations.

Increased testing can lead to problems with supplies. In the case of a pandemic, labs across the nation will be looking at the same issue. It might be necessary to begin stockpiling critical reagents and supplies to assist you in maintaining a working inventory. Start researching different vendors and the possibility of having a back-up supplier for when things get tight. Materials Management is there to assist you when researching avenues for additional supplies.

We all live in relatively small communities in Wyoming. Labs are most likely going to be highly visible to the community and possibly in the media spotlight. I t is important to get the right information out there without causing excessive panic or distress. Preparing your response to the community might mean scripting your responses in order to field questions that will inadvertently be directed your way. A hospital's Human Resource Director or Public Relations Director will be an invaluable resource at this time.

A small check list will be of assistance as you begin to plan how your facility will prepare for pandemic influenza:

Preparing for Pandemic Influenza - continued

PLANNING AND PROTOCOL DEVELOPMENT:

- **Determination of testing priorities and limitations with a medical staff notification plan**
- **Plan for reliance on clinical diagnosis with minimal or no testing**
- **Plan for management of high volume specimen load**
- **Specimen referral plan to reference or public health laboratories**
- **Plan for monitoring of employee health**
- **Specimen transport contingency planning**
- **Cross training and utilization of staff with accelerated training program**
- **Medical staff education of laboratory impact**
- **Integration of laboratory planning into medical institution plans**

When a pandemic begins, clinical laboratories will need to scale up to manage increased numbers of requests for influenza testing. As part of this effort, the Wyoming Health Department will work with clinical laboratories to provide them with guidelines for safe handling, processing and rapid diagnostic testing of clinical specimens from patients who meet the case definition for pandemic influenza.

At this time influenza A (H5N1) is a virus infecting birds and only infects humans who come in direct contact with infected animals. It has not mutated to the point where it is transmitted human to human. The concern is that this mutation will occur, which will trigger a pandemic. Surveillance will require a close scrutiny of patient history and symptoms. Because this certain strain of virus is causing the most concern, testing for influenza A (H5N1) is indicated for:

- Persons who recently visited or lived in an area affected by influenza A H5N1 outbreaks in animals or where a human case has been confirmed, and either had direct contact with affected animals, or had close contact with a person with confirmed or suspected influenza A H5N1 infection.
- Persons at occupational risk for infection with H5N1.
- Persons who work on farms, or in live poultry markets or who process or handle poultry **with known or suspected H5N1 avian influenza infection.**
- Workers in laboratories that contain live H5N1 influenza viruses.
- Healthcare workers in direct contact with a suspected or confirmed H5N1 patient.

When such patients are identified, contact the Infectious Disease Epidemiology Program immediately (888-996-9104) to coordinate testing and to discuss isolation recommendations.

For a regularly updated listing of H5N1-affected countries, see the OIE website at http://www.oie.int/eng/en_index.htm and the WHO website at http://www.who.int/en/

Wyoming Public Health Lab's (WPHL) role in a pandemic influenza outbreak will be to provide local healthcare providers with specimen submission forms that specify the clinical and epidemiologic data that should accompany clinical specimens sent to the WPHL. (During the early stages of a pandemic, clinicians should include information on patients' symptoms and risk factors, if known.)

WPHL will provide rapid communication of test results and reminders that negative test results (especially by rapid diagnostic testing) might not rule out influenza and should not affect patient management or infection control decisions.

Preparing for Pandemic Influenza - continued

Guidance on the use of commercially available rapid diagnostic tests for the detection of influenza A can also be provided by WPHL to assist the clinical labs in this decision making process. These tests may be used by physicians to supplement clinical diagnoses of pandemic influenza. Because the sensitivity of rapid diagnostic kits might not be optimal, physicians should take their positive and negative predictive values into consideration when interpreting test results.

WPHL will also provide guidance on which specimens need to be sent to the state lab.

A pandemic will begin slowly and take off with a vengeance. At different stages of a pandemic certain things should be done:

During an interpandemic and pandemic alert period, clinical labs should work with the WDH to address laboratory surge capacity issues and begin training personnel in management of respiratory specimens during an influenza pandemic, all in preparation for the major influx of cases you will expect during a pandemic. All specimens being submitted should be clearly labeled, with a completed specimen submission form. Your facility should institute surveillance for influenza-like illnesses among laboratory personnel working with the suspected novel influenza viruses (fever watch).

As the illness expands into pandemic size, clinical labs will begin scaling up to manage increased numbers of requests for influenza testing. To protect the heath of laboratory workers during a pandemic, public health, clinical, and hospital laboratories should maintain good safety practices, which include performing all testing under the BSL II hood with increased personal protection. Routine vaccination against influenza should be encouraged throughout the hospital staff, especially the laboratory personnel and hospital staff who are exposed and working with specimens from patients with respiratory infections.

Preparing for a pandemic will require good communication and teamwork from everyone in the health care community. The key is to PLAN NOW! The more you plan and look to the future of pandemic influenza, the more you will be prepared to handle all that this situation has to throw in your way.

For more information pertaining to pandemic planning for laboratories, please refer to:

http://www.cdc.gov/flu/professionals/labdiagnosis.htm

INFLUENZA Update continued from page 4

Currently only select sentinel sites may submit specimens to the WPHL for analysis. If a health care provider suspects an unusual subtype of influenza virus, a cluster of influenza like illness, or an outbreak in an institution or long term care facility, they should contact the WDH Infectious Disease Epidemiology Program to arrange for testing at the WPHL.

Several tests are available for detection of influenza virus. The Rapid Flu tests are typically minimal complexity tests but can often produce false positive results particularly during the beginning or the end of the season when sporadic cases are occurring (see table in Addendum). The positive predictive value (PPV) of such rapid tests increases during an influenza outbreak. More complex diagnostic tests such as viral culture, Direct Fluorescent Antibody (DFA) staining, and real time Reverse Transcriptase Polymerase Chain Reaction (rRT-PCR) can be conducted at the WPHL to provide rapid subtyping of influenza virus. Results will be reported to the EPI Unit for proper surveillance and management of the outbreaks.

Continuing Education for Laboratorians continued

qualifications attainable to the laboratorians across the state. It is hoped that making this requirement flexible, education can be easily attained, regardless of staff shortages that make attendance to off-site training difficult and Continuing Educational Units (C.E.U.) becoming too cost prohibitive. Therefore, documentation of training, regardless of formal C.E.U.'s, awarded or not, meets the requirements for this qualification.

Amended rules went into effect on the day the governor signed it. It requires 10 hours of continuing education per year, or 20 hours per 2 years for clinical laboratory scientists. Within the rules, there are various qualifications for different levels of laboratory positions. The commission revising the current Wyoming Licensure Law states that the earliest date for C.E.U. review will be in 2007. At that time the requirement for annual C.E.U.'s will be reviewed and counted for the past 3 years. Your staff will be required to have 30 hours of education by the year 2007. Set your goals to attain at least 10 C.E.U.'s per year to be compliant with this new amendment.

A sample of educational opportunities, which would meet requirements would be: Certificate of Attendance; documentation of magazine articles read from professional journals applicable to your job; any on-site training received from pathologists, doctors or other professionals in the field; training offered from your facility (facility specific); documentation of training received in staff meetings presented by fellow laboratorians; in addition to any C.E.U.'s earned. Tracking continuing education is determined by the lab staff, whether the supervisor maintains the documentation in a centralized location or individual staff members take responsibility of tracking their own continuing education. Either way the lab facility will be responsible for producing this information upon request.

The document that outlines this amendment can be found at the following link: http://soswy.state.wy.us/Rule_Search_ Main.asp

At the "Public Access to Rules" page, choose the following:

Agency: Health, Dept of

Program: Clinical Laboratories, Licensure of

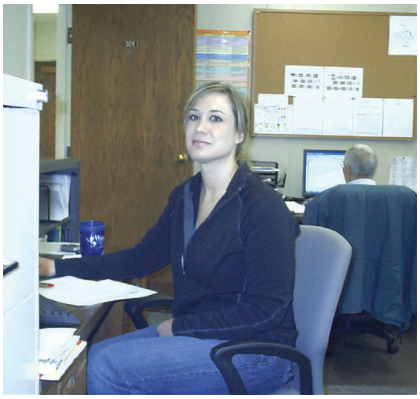
Rule Type: Current Rules and Regulations

Click on "Search"

Most of the changes are in Document #5507. You will find the link to 5507 on the left of the page.

Information supplied by Claudia Rogers, MT (ASCP), ASCLS State Public Health Laboratorian Committee Member

New Staff Members in the Bioterrorism Preparedness Program continued



Carrie Dornak
Bioterrorism Microbiologist

Continued from Page 3

Stomatitis Virus (VSV). Her group conducted field studies, utilizing a mobile lab, in various locations in Central America. She also performed bench validation of these methods at the Plum Island Animal Disease Center at Orient Point, NY. She received her education at Texas A&M University and holds a BS in Biomedical/Animal Science and an MS in Veterinary Sciences.

Our staff is pleased to have John and Carrie working with us. John

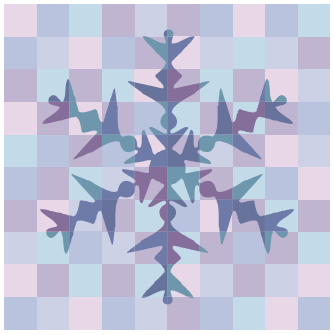
What is HL7?

Around the world, healthcare demands the ability to send and receive healthcare data. With the vast amounts of information being exchanged it becomes very challenging to exchange this data given the complexity and the abundance of clinical terminology as well as the structural complexity of the presented information. HL7 was developed to overcome these obstacles with standard grammar, vocabulary, and format so that clinical data can be shared amongst all healthcare systems. In using HL7 as the standard, all systems following the specifications are able to communicate easily with one another, without the need for information conversion.

Wyoming's Lab Loop

Information Available in this Issue:

- *New CLIA Inspector and new employees in the BRL*
- *WPHL presents poster at ASM*
- *Influenza Update*
- *Continuing Education for Laboratorians*
- *What is HL7?*



What's Coming Up?

Event	Location	Date
American Society for Microbiology General Meeting	Orlando, FL	May 21-25, 2006
APHL Annual Meeting	SLC, UT	June 26-28, 2006
Micro in the Mountains	Breckenridge, CO	July 5-7, 2006
Bioterrorism Response Lab Wet Workshop	TBA	Spring 2006
Antimicrobial Susceptibility Testing	TBA	June 20, 2006

Check out the BT Resources page at:
http://wdh.state.wy.us/lab/BT%20Resources.asp

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