

WINTER 2018

Lab Link

THE NEWSLETTER OF MAIN LINE HEALTH LABORATORIES



The Catch of the Year

Rafael Shyti, clinical laboratory scientist at Main Line Health Labs at Riddle Hospital, was performing a manual differential on an elderly patient with a normal CBC. He suspected that he saw white blood cell inclusions suggestive of ehrlichiosis or anaplasma, tick-borne infections. Rafael took the time to review other results already reported on the patient and



Rafael (center) with Dr. N. Susan Yaron, pathology site chief and medical director, Riddle Hospital lab, (left) and Judy Smith, Riddle Hospital lab manager.

noted that the patient's platelet count had dropped from the previous day and that some of her liver enzymes had increased. Because of that, he further suspected that she may have a tick-borne disease. Although it is unusual to see such illness in older patients due to reduced outdoor activities, Rafael called the nursing unit to ask clarifying questions. The patient stated she "does do some gardening."

Rafael then followed the chain of command and asked the pathologist to review the slide. The pathologist agreed with the finding and notified the physician with the request to order serology testing for confirmation. Subsequent serology tests were positive for anaplasmosis and the patient was promptly treated.

Rafael's action was selected by Riddle Hospital's Patient Safety Committee as the Great Catch of the Year. ■

Epic changes at Main Line Health Laboratories

By Jack Galamb, Manager, MLH Laboratories Outreach

Simultaneous to the launch of Epic at the System level on March 3, 2018, MLH Laboratories will adopt Beaker, Epic's Laboratory Information System (LIS) software and other applications that will integrate the lab with the organizational transformation that will poise Main Line Health for a new era in health care.

A laboratory information system is software that records, manages, and stores data for clinical laboratories. LIS platforms have traditionally been most adept at sending laboratory test orders to lab instruments, tracking orders, implementing patient safety checks and recording results to a searchable database and reporting results to devices, electronic medical records (EMRs) or portals. It is the critical piece of infrastructure that enables hospital, academic, government and commercial laboratories to function at a high level of quality and efficiency. Because workflows of the clinical pathology labs (e.g., chemistry, hematology, etc.) and anatomic pathology labs differ, MLH has been using two different LIS platforms: Sunquest for clinical pathology and CoPath in the anatomic pathology and cytology labs.

Beaker supports workflows for both. The principle benefit of Beaker is the seamless data transfer from the LIS to the Epic EMR. This integration ensures clean orders, streamlines result reporting, and reduces duplication down to the result-component level. The bar code-enabled workflows ensure accurate specimen handling and allow tracking of specimens within and across sites beginning at the point of collection. There are quality and patient safety checks at every level.

Dashboards and reports measure common lab metrics such as results, phlebotomy collect-to-receive time, and critical



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Medication drop boxes to help combat the opioid epidemic

By Isabel Quintans, PharmD, CACP, CGP, Pharmacy Clinical Coordinator, Riddle Hospital

The Centers for Disease Control and Prevention estimates that 89 people die every day from opioid-related overdoses in the U.S., a statistic that has prompted the opioid crisis to be declared a public health emergency. Opioids, whether prescribed for injury, dental procedures or surgical recovery, are often the catalyst for an addict's transition to heroin; approximately 80 percent of individuals dependent on heroin claim to have started their addiction with prescription medications written for them or obtained from the medicine cabinets of their parents, grandparents or friends. Opioids have also become the target of thefts during real estate open houses.

In a recent article in JAMA Surgery, the authors found that more than 50 percent of prescriptions for the management of postoperative pain are often unused, unlocked, and undisposed of. This provides a significant opportunity for opioids to be used for non-medical purposes which has the potential to result in injury or death.



Main Line Health has partnered with local law enforcement to install permanent medication drop boxes in the main lobbies of Riddle Hospital, Bryn Mawr Hospital, Paoli Hospital and Lankenau Medical Center. The drop boxes offer a secure way to properly dispose of any type of medicine, keeping drugs safe from misuse while also protecting the environment. Members of the community may bring leftover medications and dispose of them in the designated box located by each hospital's main entrance. It is important to remove personal information from the prescription label and keep the medicine in its original container. The boxes are available to patients, employees and members of the public.

Another step that Main Line Health is taking to fight prescription drug abuse is to provide patients with opioid safety information upon discharge. This guide is intended to help educate patients and their caregivers on what opioids are, how they work, how to take them safely, signs and symptoms of overmedication or overdose, and the proper means for safely handling, storing and disposing of such medications.

If you have any questions, please contact Isabel Quintans at quintansi@mlhs.org

If you or a loved one struggles with opioid dependence or other addictions, please call Mirmont Treatment Center at 484.227.1453. We can help. ■

New influenza and RSV testing

*By Pradeep K. Bhagat, MD
System Chairman, Department
of Pathology, and Chief of Clinical
Pathology, Main Line Health;
Medical Director, Main Line Health
Laboratories; and Pathology Campus
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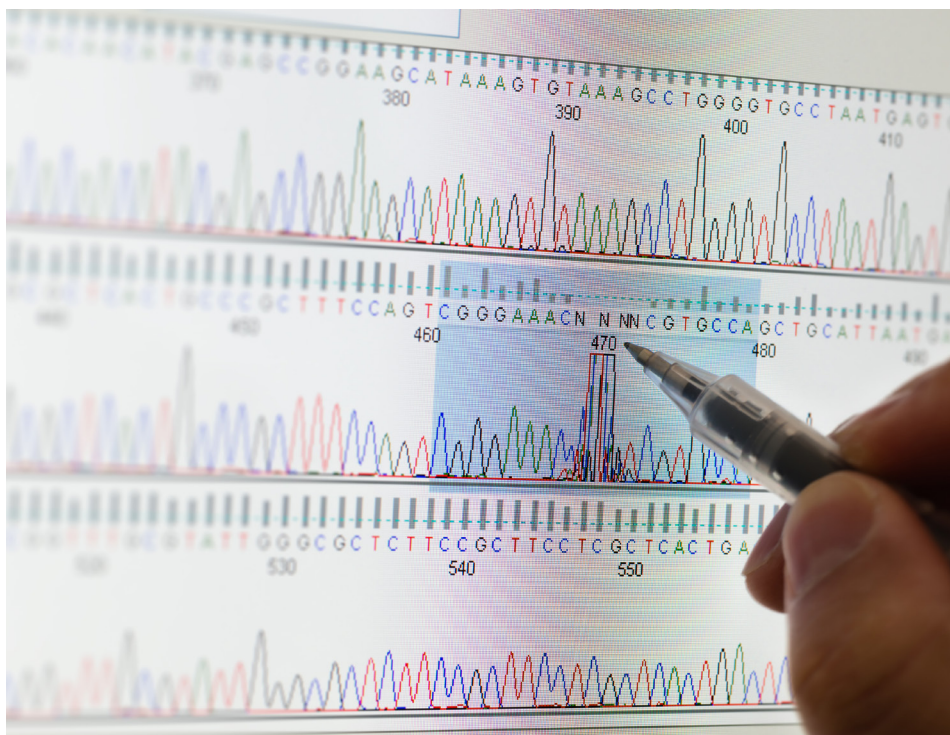
Main Line Health laboratories began performing a more accurate and faster influenza A and B and respiratory syncytial virus (RSV) by polymerase chain reaction (PCR) utilizing Cepheid Xpert® Express on Monday, January 29, 2018. These tests are performed at all four campus laboratories. The new rapid tests are offered stat with a one-hour turnaround time. The sensitivity and specificity of these assays is 98%, the same as the current viral respiratory panel. The laboratory will offer three options: Influenza + RSV, RSV only and flu testing only.



The new tests for flu and RSV will require a nares specimen taken with a flocked flexible minitip swab in 3 ml BD Universal Viral Transport media, BD product number 220531. Contact the MLH Lab Client Service Center at 484.580.4520 to order to order the new specimen kits.

The PCR method removes the concern about the false negative rate with the current rapid influenza test method. Since this rapid testing for influenza and RSV is highly reliable, there

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Thyroid-afirma veracyte genomic sequencing

Main Line Health Laboratories is now using Veracyte's Afirma Genomic Sequencing Classifier (GSC) test evaluation of the indeterminate thyroid cytology results (Bethesda categories III and IV).

The Afirma GSC is a next generation version of the Afirma Gene Expression Classifier (GEC) test, which has been used by MLHL since 2014. Compared to GEC, GSC can identify 30% more benign nodules in a group of patients with indeterminate cytology findings.

Researchers validated the Afirma GSC on a prospective, multicentric, blinded cohort of 191 indeterminate thyroid nodule fine needle aspiration samples, the same sample set previously used to validate the first-generation Afirma GEC. The Afirma GSC maintained the original tests' high sensitivity (91% versus 90%) and significantly increased its specificity, from 52% to 68%.

The Afirma GSC identifies benign Hürthle cells, with increased specificity of 59%, compared with 12% with Afirma GEC.

In addition, the test provides classifiers for medullary thyroid cancer, the BRAF V600E variant and add classifiers to identify RET/PTC1 and RET/PTC3 fusions which are almost always associated with malignancy.

There is no change in specimen collection, ordering, reporting or cost.

Report samples issued by Veracyte can be obtained by contacting Jack Galamb, outreach manager, at 484.580.4006 or galambj@mlhs.org. These results are reported as an addendum to the original cytology case.

If you have any questions or concerns, please contact Vlasta Zemba-Palko at 484.476.2608. ■

Epic changes

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results missing documentation in communication logs. Laboratory data will be integrated with MLH laboratory clients through a number of methods.

EpicCare is an electronic medical recording (EMR) solution certified for Meaningful Use Stages 1 and 2. EpicCare is developed, implemented and supported by an in-house team. Modules include dashboards that combine and display clinical and financial metrics as well as customizable templates. EpicCare will be the EMR for practices currently using NextGen.

Epic Systems' EpicCare Link is the Web-based application for connecting independent physicians to Main Line Health. Secure access is granted to physicians and their staff members to select patient information. It is a Web-based portal system that allows MLH Labs to extend patient information to external care facilities and improve the continuity of care in the community. This continuity provides many benefits, including the following:

- Provides a more transparent flow of information between physicians. Secure access is granted to physicians and their staff to select patient information.
- Allows physicians to order labs and make referrals.

EpicCare Link will be offered to non-MLH physician practices and nursing facilities. The application is designed to be secure and easy to implement. Potential EpicCare Link users can request access by visiting mainlinehealth.org/link.

Physician practices that use EMRs which are currently interfaced using Mobile MD will continue to receive results through that hub. At launch, EMR results will be read-only. Also, anatomic pathology and cytology, which are currently not interfaced with some EMRs, will be included in the results feed at Epic launch. All EMRs interfaced with Mobile MD will need to be tested. Clinical support offered by MLH will continue.

SmartChart/Sorian data will be imported into Epic. There will be two stages of conversion:

- The last three years of results in Sunquest/Soarian will be imported directly into Epic. When users go to the lab section of Epic they will be able to look back to March 2015. Labs from March 2015 forward will be in the same flowsheet as Epic Labs.
- Results prior to March 2015 will be converted as part of the legal medical record conversion. Result reports will be converted from Soarian into the historical document section of Epic. This will not be complete by the March 3 launch as there are over 12 terabytes of compressed data to convert. Until the legal medical record conversion is complete, MLH IT will implement a bridge strategy where results can be looked up. This will either be read-only access to Soarian or some other archival solution. The final strategy is currently under development.

According to Elena Hall, manager of the community EMR program, current SmartChart (and future Epic) users

should sign up for training ASAP. Look for an email from the medical staff office or contact the Help Desk.

If you have any questions, contact Elena Hall at halle@mlhs.org. ■

Sources: Elena Hall, Community EMR Manager

Donald Klingen MD, System VP and Chief Medical Information Officer

John Marshalek, Epic Senior Application Analyst III (EpicCare Link)

Christopher Monzo, Epic Senior Application Analyst III (Beaker)

Rapid flu

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should be less need to order the expensive respiratory viral panel. The comprehensive viral respiratory panel should be limited to those patients who are immunocompromised, require ICU care, or whose diagnosis will be altered with a positive test by avoiding antibiotic therapy. Our goal is to use this test more judiciously, reducing costs while improving clinical care.

We will be auditing the ordering of all comprehensive viral respiratory panels for adherence with the recommended clinical pathways and providing feedback to clinical programs and individual ordering providers. Our infection prevention teams are available to meet with clinical teams to review the preferred clinical pathways.

If you have any questions, please call Dr. Mark Ingerman, system chief of infectious diseases at Main Line Health, at 610.896.0210 or Dr. Bhagat at 484.476.3521. ■

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