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MCL Begins Quality Improvement Project

The Mercy Clinical Laboratory Microbiology section has embarked on a LEAN quality improvement project. LEAN is a production practice that is centered on creating more value for the client with less work for the employee. LEAN principles allow the lab to cut costs and improve operational efficiencies without any compromise in quality or level of service provided to clients. Three microbiology technologists and a Six Sigma black belt are on the LEAN team.

The mission statement of the project is: "Mercy Microbiology will consistently exceed patient, customer, and business partner expectations in quality, accuracy, cost, delivery, and customer satisfaction. This will be accomplished through a business culture that understands and applies lean techniques."

The processes that take place in the department have been mapped, and opportunities for improvement have been identified. The LEAN team is evaluating those opportunities and implementing those that are an improvement over current processes. The time of day that cultures are read is being looked at to optimize growth of potential pathogens, and to maximize turn around time of identification and susceptibility reports. The LEAN team is also implementing the 5S method of organizing the workplace. The 5S's stand for Sort, Straighten, Shine, Standardize, and Sustain. The goal is to have the substantial LEAN work completed by December 31, 2009.



Three microbiology technologists and a Six Sigma black belt are participating in a MCL LEAN quality improvement project. Members of the project team include (left to right): Derek Novak, Jill Noble, Mary Nell Carpenter, Cristin Bradfield, Mitzi Brown and Gary Kimberlin.



Mercy Clinical Laboratory Implements New Blood Collection Tubes – Effective October 2009

In the coming weeks, Mercy Clinical Laboratory will be changing the types of BD Vacutainer® blood collection tubes for lithium heparin plasma and serum collections.

The new collection containers are:

	Lithium Heparin (plasma) with gel separator 4.5 ml draw green top
	Serum with separator gel 5.0 ml draw gold top
	Serum without separator gel 6.0 ml draw red top






Discontinued containers are:

	Serum with separator gel 8.5 ml draw red/gray top
	Serum without separator gel 10 ml draw red top

Implementing the new tubes has several advantages:

- Decreased volume of blood drawn per collection.
- Green Lithium Heparin with separator gel for plasma separation need only be mixed 8 -10 times before centrifugation. No need for 30 minute wait for clotting as needed with the Gold and Red serum tubes.
- Standardized specimen requirements for all patient types, whether collection occurs in the hospital or in an outpatient setting.

With the change to the new tubes there will be a change in tube type for tests. Mercy Medical Center and Mercy West Lakes will have these new requirements printed on the order labels. Use the following guide to help educate your staff about the new tube type for tests:

Old Tube type		New tube type		Tests
	10 ml Serum Gel		5.0 Gold Serum with Gel	Homocysteine Osmolality Vitamin D, 25
	10 ml Serum no gel		6.0 Serum no gel	Therapeutic drugs: Tobramycin Carbamazepine Theopilline Digoxin Valproic Dilantin Vancomycin Gentamicin H. pylori Lithium
	Green, no gel		4.5 Green with Gel	BMP, CMP CK MB Troponin Lipids, Hepatic function, TSH, FT4, BUN, Creatinine, pre-Albumin

The following have NO CHANGES:

Tube	Tests
Purple EDTA	Sed Rate Hgb A1C CBC Hct, Hgb, Platlett, White count BNP Ammonia
Fully filled Blue Na Citrate	Protime, PTT, Fibrinogen, D Dimer
Grey	Lactic Acid
Pink	ABO Rh, Cross Match

Mercy Medical Center Influenza Inpatient Statistics Sept. 9 through Oct. 8, 2009

MCL sent 76 Inpatient specimens to the UHL for test confirmations. PCR for Influenza A results:

- 9 positive (12%)
- 1 weak positive* (1%)
- 1 equivocal** (1%)
- 3 indeterminate*** (4%)
- 62 negative (82%)

The 9 positives tested for H1N1 were 100% positive. One specimen was positive with the rapid kit at Mercy and was negative for Influenza A by PCR at the UHL. Three specimens were negative with the rapid kit at Mercy and were positive for Influenza A by PCR at the UHL.

The following comments will accompany weak positive, equivocal or indeterminate results:

* **Weak** - This specimen was weakly positive for Influenza A and was not strain typed as seasonal Influenza A/H1, A/H3 or for the Novel Influenza A/H1N1 (swine-like flu). Weak positive specimens often do not type so the lack of a result is considered inconclusive. Test results should be interpreted with consideration to clinical and epidemiologic criteria.

** **Equivocal** - The test result was equivocal, with the result falling between the positive and negative cut off values of this test. This result is considered borderline and should be interpreted with consideration to clinical and epidemiologic criteria.

*** **Indeterminate** - A test result could not be determined due to an inadequate specimen and /or interfering substances in the specimen that inhibited the reaction.

The “Red Flags” Rule Effective June 2010

As many as nine million Americans have their identities stolen each year. The crime takes many forms. But when identity theft involves health care, the consequences can be particularly severe.

Medical identity theft happens when a person seeks health care using someone else’s name or insurance information. A survey conducted by the Federal Trade Commission (FTC) found that close to 5% of identity theft victims have experienced some form of medical identity theft. Victims may find their benefits exhausted or face potentially life-threatening consequences due to inaccuracies in their medical records. The cost to health care providers – left with unpaid bills racked up by scam artists – can be staggering, too.

The Red Flags Rule, a law the FTC will begin to enforce in June 2010, requires certain businesses and organizations – including many doctors’ offices, hospitals, and other health care providers – to develop a written program to spot the warning signs – or “red flags” – of identity theft.

Every health care organization and practice must review its billing and payment procedures to determine if it is covered by the Red Flags Rule. Whether the law applies to you is not based on your status as a health care provider, but rather on whether your activities fall within the law’s definition of two key terms: “creditor” and “covered account”. If your organization or practice is a “creditor” with “covered accounts,” you must develop a written Identity Theft Prevention Program to identify and address the red flags that could indicate identity theft in those accounts.

The Red Flags Rule gives health care providers flexibility to implement a program that best suits the operation of their organization or practice, as long as it conforms to the Rule’s requirements. Your office may already have a fraud prevention or security program in place that you can use as a starting point.

Although there are no criminal penalties for failing to comply with the Rule, violators may be subject to financial penalties. But even more important, compliance with the Red Flags Rule assures your patients that you are doing your part to fight identity theft.

Looking for more information about the Red Flags Rule? The FTC has published **Fighting Fraud with the Red Flags Rule: A How-To guide for Business**, a plain-language handbook on developing an Identity theft Prevention Program. For a free copy of the Guide and for more information about compliance, visit ftc.gov/redflagsrule.

Sample Handling Ensures Accurate Results

In clinical laboratory testing, sample collection and preparation must be followed carefully to ensure accurate results. The following guidelines are recommended for the proper handling of serum and plasma samples.

- Draw the correct volume - Fill each tube to within 10% of the containers target draw volume
- Mix the sample – Mix all tubes by inversion immediately after collection.
 - Green plasma tubes: 8-10 times
 - Gold and Red serum tubes: 5 times
- Allow time to clot – Gold and Red serum tubes need a minimum of 30 min to clot before Centrifugation. Keep tubes vertical while clotting.
- Green plasma tubes can be centrifuged as soon as they are well mixed the 8-10 times.
- Centrifuge at the recommended speed and for the recommended time. Do not re-spin primary tubes.

Reference: Beckman Coulter, Inc.

New Staff: Melanie Vorsten

Melanie joined MCL in August as the Client Service Supervisor. She previously worked at St. Anthony Regional Hospital in Carroll for nine years, the last five 5 years as laboratory manager. Before working at St. Anthony's, she was at Broadlawns Medical Center. Melanie graduated from the University of Iowa. Her family includes husband Steve and daughters Liz and Abby.



PLEASE NOTE:

Version 3.0 of the MCL Test Manual was delivered to clients in October and is also available on MercyNet. Updates will be sent to clients with additional information and changes as they occur. Please make corrections in your test manual and keep updates for future reference.