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M E M O R A N D U M

To: All Physicians, Nurse Practitioners, Nurse Managers, Directors of Nursing, Clinical Instructors/Educators, PEI Hospital Laboratories, PEI Nursing Homes

From: **Provincial Laboratory Test Utilization and Formulary Committee**

Date: July 10th, 2014

Dear Colleagues:

As a result of our annual review of Request Forms, the Provincial Laboratory Test Utilization and Formulary Committee (PLTUFC) has made some **changes to the request forms**. Some of our clinical colleagues have been consulted in making these changes. The request forms are mainly for out-patient use; therefore, the adjustments are made accordingly. **Once you have the new forms, please send the old request forms to the nearest hospital laboratory or destroy them by September 1st , 2014. Forms can also be printed out from the web address below.**

The major changes in the new forms are as follows:

BLOOD TEST REQUEST FORM

Layout

To mimic clinical utility, new sections were added **"Cardiac Function and Lipids"** and **"Nutritional Status"**. The appropriate tests are placed in these sections.

Please note: as **serum iron** has limited clinical utility when ordered in isolation, it **is now part of the Iron Studies panel (*iron, transferrin (TIBC) & %Sat)*.**

AST – removed from Request Form

AST is present in cytosolic and mitochondrial iso-enzymes of liver, cardiac muscle, skeletal muscle, kidney, brain, pancreas, lungs, leucocytes and red blood cells. It is less sensitive and specific for liver than ALT. AST may be requested by specialists/internists by writing the request under "Other".
ALT is found in its highest concentration in the liver **and is more specific to the liver**.

Ref: Postgraduate medical journal J 2003;79:307-312
Doi:10-1136/pmg.79.932.307

Serum Urea – removed from Request Form

Serum urea or blood urea nitrogen (BUN) is the end product of protein metabolism and its production and concentration vary with protein intake, enhanced tissue breakdown due to hemorrhage, trauma or use of steroids and in liver disease.

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Serum urea concentration is a less specific indicator of glomerular function then serum creatinine which is the end product of metabolism in muscles. While a decrease in glomerular filtration rate (GFR) is associated with increase in both serum urea and serum creatinine, urea concentrations may vary independent of the GFR. A rise in creatinine concentration almost always represents a reduction in GFR.
In specific clinical situations, selective ordering of serum urea alone or serum urea and creatinine simultaneously, may be indicated. These conditions include **acute renal failure, pre-renal failure, renal dialysis, chronic renal failure, GI bleeding, and hyperosmolar conditions.**
Routine screening of serum creatinine and serum urea simultaneously **is not recommended**. Selective ordering of serum urea alone or of both serum urea and creatinine is useful in appropriate settings.

Ref: Ontario Association of Medical Laboratories Guidelines for Clinical Laboratory Practice. CLP 687 1990

ESR – removed from the Request Form

The ESR is a laboratory test with only limited clinical indications. It should not be ordered as a screening test in asymptomatic individuals.
C-Reactive Protein (CRP) is the best marker for inflammation, as it is more sensitive and more specific than the ESR. CRP and ESR should not be ordered together, except in the case of **temporal arteritis or polymyalgia rheumatica. ESR may also be helpful in evaluating systemic lupus erythematosus (SLE) flares and diagnosing and monitoring Osteomyelitis.**

Ref: Best Tests September 2005. CRP and ESR: bpac^{nz} recommendations. Retrieved from: http://www.bpac.org.nz/resources/campaign/crp_esr/bpac_crp_vs_esr_besttests_pf.pdf
Alberta Health Services. Laboratory Report Vol 3, No 1, April 2013. C Reactive Protein (CRP): http://www.albertahealthservices.ca/LabServices/wf-lab-nls-2013-04-crp.pdf

dsDNA-can be ordered separately for monitoring

ANA is now a screen (if positive, will automatically follow up with ENA testing); dsDNA is still part of the ENA panel or it can now be ordered on its own. Please note the back page of the requisition explains these changes.

Vasculitis panel

The vasculitis panel now consists of only MPO and PR3 (antigenic determinants of ANCA).
anti-GBM must be ordered on its own.

URINE, BODY FLUID AND CSF TEST REQUEST FORM

72-Hour Fecal Fat

The fecal fat test measures the poor digestion or absorption of fat. The test requires a high fat diet of 100 grams of fat per day for 5 days with a careful record of food intake and collection of stools during the last 72 hours of this diet.
Since this test requires a diet with a calculated amount of fat and record of the diet, ideally a dietician should be involved; unless the requesting physician is providing all the required information on diet, collection and storage of collected stool.
There is no scientific evidence that a 24 or 48 hour stool collection provides an accurate measurement of fat digestion/absorption.

Ref: Patient Information Brochure, Fecal Fat Test, Hotel Dieu Hospital, Kingston Ontario.

MICROBIOLOGY REQUEST FORM

VRE – removed from the Request Form

Vancomycin-Resistant Enterococci (VRE) screening on the Island is **limited to ICU patients** at the QEH, the **Renal Dialysis Program**, and at the **direction of an Infection Control nurse**. This is due to the very low rate of VRE on the Island, our continued surveillance in clinical samples from hospitalized patients, and that disease is essentially limited to the ICU and dialysis population. There is no risk of VRE induced illness to healthy individuals (normal colonization) and no treatment is required.

Ref: Manitoba Guidelines for Prevention and Control of Antibiotic Resistant Organisms (ARDS)
VRE Information for Patients Guidelines, CFFS, Harbour Base Hospital, NSW
J Clin Microbiol. Apr 2006;44(4):1578-1780
doi:10.1128 JCM.444.1578-1580. 2006

Screening for Chlamydia and Gonorrhea

Female (ages <21) urine molecular screening for Chlamydia and Gonorrhea will now be routinely accepted for processing and sent to Halifax. This is to accommodate new Pap screening guidelines which have changed the date for first Pap to age 21 as well as MD/NP request.

For women over 20 years of age, the endocervical swab is the preferred collection method. Yet, first-void urine from females over age 20 will be processed for Chlamydia and Gonorrhea in very high risk cases and when endocervical examination is refused (requires documentation or consultation).

Urine Indwelling Catheter Changes

Indwelling Foley catheters are now separated to either <14 days indwelling or≥14 days. Additionally, Alberta and other provinces have recommended appropriate indications to send urine from an indwelling Foley catheter which includes changes in baseline temperature or other specific clinical findings which when checked will guide the depth of workup. Urine collected from catheters ≥14 days or without appropriate indications is more likely to lead to the misuse of antibiotics or delay in care.

We hope these changes will guide the physicians in their test ordering practices. If you have any questions please call:

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Bill Bylhouwer, Provincial Technical Director, Laboratory Services (368-7647)
Co-chairs, PLTUFC

pc: Brenda Worth, Provincial Chief Nursing Officer
Dr. Gregory German
Dr. Jennifer Fesser
Dr. Marvin Tesch

The requisitions can be found on the **Provincial Laboratory Website**: **www.healthpei.ca/labreqs**