

Date: November 9, 2009
Re: AHS Lab Services: Essential Test Menus for Pandemic (H1N1) 2009

Alberta's Laboratories must ensure essential laboratory services continue to be provided for Albertans during the course of the influenza pandemic. Increased volumes of tests, laboratory staff illness, and possible supply shortages will require that laboratory services and test menus are prioritized as the pandemic progresses.

The AHS Pandemic Response Plan organizes and links our mitigation strategies by "**Activation Levels:**"

- Initiation and Surge;
- Selective Prioritization;
- System Wide Prioritization;
- Recovery and Resumption.

Laboratory tests will be prioritized at each of these activation levels as needed. This may include increased turn-around-times and temporary suspension of some tests. Efforts will be made to ensure laboratories remain responsive to urgent client needs.

Calgary Laboratory Services, DynaLIFE_{DX} Laboratories, ProvLab and other laboratories have worked collaboratively to develop essential test menus for each pandemic activation level and processes for requesting urgent tests. Relevant stakeholders and clinician groups/programs were consulted as part of the planning process.

Escalation through the activation levels will be coordinated and directed through the AHS Emergency Coordination Centre. However, the activation level status of individual laboratories may vary depending on local conditions. Currently, Alberta's laboratories are in the "Initiation/Surge" Activation Level. AHS Emergency Coordination Centre and / or Zone Emergency Operations Centre will provide notification of changes to the pandemic activation level and the initiation of laboratory test menu prioritization when it occurs.

For additional questions go to the H1N1 for Health Professionals website:

<http://www.albertahealthservices.ca/660.asp>

or contact your Laboratory Physician / Clinician-on-call.

General Laboratory Tests (non-microbiology)	
Selective Prioritization	System Wide Prioritization
<p><u>Consists of the System Wide Prioritization tests plus the additional testing.</u></p> <ul style="list-style-type: none"> • Albumin • ALP • Bilirubin, total • Creatine kinase • HBsAg • Lipase • Magnesium • Urinalysis 	<p><u>STAT Requests Only:</u></p> <ul style="list-style-type: none"> • Acetaminophen • ALT • Bilirubin (neonates only) • Calcium • Creatinine • Electrolytes-Na, K, Cl, CO2 • Glucose • Rapid HIV (if available) • Salicylate (ER only) • Therapeutic Drug Monitoring • Troponin • CBC, automated diff • PT/INR • PTT • Fibrinogen • CSF cell count and diff (ER only) • Fluid cell count (ER only) • Osmolality, serum • Methanol, ethylene glycol (sent to UAH or CLS) • Serum HCG • Blood gases, if done by lab • Urine drug testing (ER only) • Cross Match • Rush case only for Surgical Pathology and Non-Gynecological Cytopathology (i.e. Suspect malignancies)

General Laboratory Tests (microbiology)
Selective Prioritization and System Wide Prioritization
<p><u>Microbiology</u></p> <ul style="list-style-type: none"> • STAT Gram stain • Blood parasite screen (e.g., malaria) • Blood Culture • CSF Culture • Sterile Fluid Culture • Deep Wound/Tissue Culture • Respiratory/BAL • Vaginal/Rectal GBS screen (pregnancy only) <p><u>Serology</u></p> <ul style="list-style-type: none"> • HBsAg (needlestick follow-up only) • Anti-HCV (needlestick follow-up only) • Anti-HIV (needlestick follow-up only) • Prenatal syphilis testing <p>All other microbiology testing requires Microbiologist on Call approval prior to collection</p>

ProvLab Diagnostic & Specialized Tests

Selective Prioritization and System Wide Prioritization

- Culture
 - CMV viral culture (congenital and immunocompromised)
 - GC culture & sensitivity in treatment failure
 - GC culture from eyes
 - LGV from eyes
- DFA
 - VZV DFA (BMT, immunocompromised)
- Mycobacteriology
 - AFB – Direct Smear
 - PCR on AFB smear-positive respiratory specimens
 - Routine Culture for mycobacteria
 - *Mycobacterium tuberculosis* identification and susceptibility
 - MAC identification (immunocompromised)
- PCR
 - CMV PCR (CMV viral load in immunocompromised)
 - EBV PCR (EBV viral load in acute/fulminant PTLT)
 - Enterovirus PCR (CSF and blood in critical cases)
 - HSV PCR on CSF
 - VZV PCR on CSF
 - HCV quantitative RNA PCR at week 12 post-treatment (non-2,3-genotype only)
- Serology
 - Acute Hepatitis investigation
 - Anti-HIV – indications in parallel with rapid HIV testing program
 - Needlestick investigation (Anti-HCV, Anti-HIV, HBsAg)
 - Pregnant women at risk for HIV, HBsAg, Syphilis
 - Red Rash protocol (Measles, Rubella, Parvovirus)
 - Syphilis Testing (neurosyphilis, congenital syphilis, and in pregnancy at delivery)
 - Organ Donor Screening (if required)
 - Tissue /cornea Donor Screening (Referred out)
 - VZV serology (high risk patients)
- Rabies DFA and PCR (Referred out)

ProvLab Public Health Tests (outbreak investigations and surveillance)

Selective Prioritization and System Wide Prioritization

- Outbreak investigations as directed by MOH:
 - Norovirus RT-PCR for ACUTE care facilities only
 - Other examples: Food Poisoning, Hepatitis A, etc.
- Microbiology Laboratories should continue to submit bacterial Isolates from notifiable enteric disease (examples: *E. coli* O157, *Salmonella*) and from notifiable invasive disease (examples: *N. meningitidis*, *Listeria*, *S. pneumoniae*, Group A Streptococcus). TESTING MAY BE DELAYED.

ProvLab Influenza and Respiratory Virus Tests	
Selective Prioritization	System Wide Prioritization
<ul style="list-style-type: none"> • Hospitalized patients / ER pending admission <ul style="list-style-type: none"> • DFA (depending on capacity) • Influenza A RT-PCR • RVP if negative influenza A (depending on capacity) • Community-based <ul style="list-style-type: none"> • Testing only upon approval by virologist-on-call (VOC) • Outbreaks <ul style="list-style-type: none"> • DFA (LTC only) • Influenza A RT-PCR • RVP if negative influenza A (depending on capacity) • Tarrant Viral Watch <ul style="list-style-type: none"> • Influenza A RT-PCR • RVP 	<ul style="list-style-type: none"> • Hospitalized patients / ER pending admission <ul style="list-style-type: none"> • Testing as supplies permit and as prioritized by AHS ECC • Community-based <ul style="list-style-type: none"> • Testing only upon approval by virologist-on-call (VOC) • Outbreaks <ul style="list-style-type: none"> • Testing only upon approval by virologist-on-call (VOC) • Tarrant Viral Watch (depending on capacity) <ul style="list-style-type: none"> • Influenza A RT-PCR • RVP
ProvLab Environmental Microbiology	
Selective Prioritization and System Wide Prioritization	
<ul style="list-style-type: none"> • Still under discussion. Further information to follow. 	

Genetics Laboratory Services	
Molecular Testing	
Selective Prioritization	System Wide Prioritization
<p><u>Consists of the System Wide Prioritization tests plus the additional testing.</u></p> <ul style="list-style-type: none"> Genetic Disorder Testing for 150 Genetic Disorders – all cases 	<ul style="list-style-type: none"> Genetic Disorder Testing for 150 Genetic Disorders – all cases. (Specimens that exceed capacity for testing will be processed and stored)
Cytogenetics Testing	
Selective Prioritization	System Wide Prioritization
<p><u>Consists of the System Wide Prioritization tests plus the additional testing.</u></p> <ul style="list-style-type: none"> Urgent Blood based tests Prenatal Testing (maternal serum screening – Second Trimester < 17 weeks) – two week turn around time Prenatal Testing (maternal serum screening – Second Trimester > 17 weeks) – one week turn around time 	<ul style="list-style-type: none"> Urgent Bone Marrow based tests All Prenatal Testing <p>All other Cytogenetic Tests require Cytogeneticist approval prior to collection.</p>
Biochemical Genetics	
Selective Prioritization	System Wide Prioritization
<ul style="list-style-type: none"> Ongoing metabolite monitoring for patients with inherited metabolic, disorders: ie patients with PKU, MSUD, urea cycle disorders, MMA, those on enzyme therapy, etc. requires Biochemical Geneticists approval reduced from 1/week to once per month or less. Newborn Metabolic Screen Acute diagnostic workup for an inherited metabolic disorder: i.e. Newborn or infants with hyperammonemia, lactic acidosis, seizures, lethargy. 	<ul style="list-style-type: none"> Metabolite monitoring for patients with inherited metabolic, disorders: ie patients with PKU, MSUD, urea cycle disorders, MMA, those on enzyme therapy, etc. requires Biochemical Geneticists approval. Newborn Metabolic Screen Acute diagnostic workup for an inherited metabolic disorder: i.e. Newborn or infants with hyperammonemia, lactic acidosis, seizures, lethargy requires Biochemical Geneticists approval.

Molecular Pathology	
Selective Prioritization	System Wide Prioritization
<ul style="list-style-type: none"> All tests requires Pathologist on Call approval prior to collection. 	

HLA (Histocompatibility) Typing	
Selective Prioritization	System Wide Prioritization
<ul style="list-style-type: none"> All tests requires Tissue Typing Director approval prior to collection. 	