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APPENDIX III: UHN MANAGED MICROBIOLOGY SEND OUT TESTS FOR UHN PATIENTS

Record of Edited Revisions

For handling procedure for Creutzfeldt-Jakob Disease (CJD), see Suspect RG 3 4 manual
REFERRAL LABORATORY TEST DICTIONARY

Specimens can be referred out to Reference Laboratories for tests not processed in-house. See Referral laboratory Test Guide website for test availability and information.

<table>
<thead>
<tr>
<th>Referral Laboratory</th>
<th>Test Guide Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Ontario Laboratory</td>
<td><a href="https://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Index.aspx">https://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/Index.aspx</a></td>
</tr>
<tr>
<td>Center for Disease Control</td>
<td><a href="http://www.cdc.gov/laboratory/specimen-submission/list.html">http://www.cdc.gov/laboratory/specimen-submission/list.html</a></td>
</tr>
<tr>
<td>Mitogen Advance Diagnostics</td>
<td><a href="http://mitogen.ca/drug-testing/">http://mitogen.ca/drug-testing/</a> NMDA(NR1) Receptor Antibodies</td>
</tr>
<tr>
<td>Maisonneuve-rosesmont Hospital</td>
<td>Voriconizole<a href="https://est.omni-assistant.net/hmr-labo/AnalysisRegistry/AnalysisSimpleSearch.aspx">https://est.omni-assistant.net/hmr-labo/AnalysisRegistry/AnalysisSimpleSearch.aspx</a> testing <a href="https://est.omni-assistant.net/hmr-labo/AnalysisRegistry/AnalysisSimpleSearch.aspx">https://est.omni-assistant.net/hmr-labo/AnalysisRegistry/AnalysisSimpleSearch.aspx</a></td>
</tr>
<tr>
<td>Laboratory of Parasitic Diseases National Institute of Health</td>
<td>Filaria Serology</td>
</tr>
<tr>
<td>National Hansen's Disease (Leprosy) Clinical Center</td>
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</tr>
<tr>
<td>Mayo Clinic Medical Laboratories</td>
<td>Gastric Biopsies for <em>H. pylori</em> <a href="https://www.mayocliniclabs.com/">https://www.mayocliniclabs.com/</a></td>
</tr>
</tbody>
</table>

See [Fedex Send out Table](https://est.omni-assistant.net/hmr-labo/AnalysisRegistry/AnalysisSimpleSearch.aspx) for a summary of key instructions for referred out tests with special directives.

See Appendix III for Microbiology samples sent out directly by UHN for UHN samples.
BACTERIOLOGY SEND OUTS AND PROCEDURES

SoftMic Test Send out to PHOL:

1. Open ‘Results Entry’ and scan order #.
   - For Virology Send outs: select PHLV from the keypad. Within the comment type the test the sample is being sent to PHL for.
   - For Bacteriology Isolate Send outs: in the isolate comment field for the corresponding isolate being send out, from the keypad select “>PRELI” and the comment corresponding to what you are sending to PHOL (eg. ID/AST to PHL).

2. ctrl ‘I’ for interim
3. Under Media “PHL” document the date the specimen was sent to PHOL.
4. To print PHOL report press instant report (from the top toolbar) , choose the correct printer, and format should be MIC10A, press ok
5. Refer to PHOL_Courier section for specimen packaging instruction.

Note: When possible (when sufficient quantity is received), especially when only referred out test is requested, a portion of sample should be maintained in house for tissue, sterile sites etc.

Special Instruction Specimens:

Streptococcus pneumoniae

Streptococcus pneumoniae sent to PHOL for Penicillin confirmation requires a specific protocol be followed for successful testing to be completed.

1. Monday - Friday, subculture must be ready/packaged to send before noon

2. Subculture requirements for same day set up at PHOL:
   - Subculture must be 18-24 hours old and pure
   - Plate must indicate date of subculture

3. Send out package must indicate:
   - For Microbiology Ref ID and Susceptibility section , 661 University Avenue, Toronto, On M5G 1M1
   - Attention Deirdre Soares
4. Bench technologist to phone PHOL next day for result @11:00
   - Tel # 416-235-6556
   - Bench to call Saturday morning. PHOL will have a technologist Saturday morning to read isolates sent Friday.

5. After 12:00 (noon) pick up on Friday or on the weekend:
   - PHOL does not set up *S. pneumoniae* susceptibility on the weekend.
   - Keep subbing isolate for send out on Monday morning.

**TB Send out:**

1. Load the printer with the White Paper marked [Mycobacterium culture PHOL TB Form](#)
2. Logon to Softmic
3. Click ‘Results’ tab from the left screen side, open QC/Send out List and choose **TB Culture New**
4. Select **Mark (F8)**, scan specimen barcode, should have red check mark, **Print the PHOL form:** press Instant Report on the upper right side of the screen. choose the correct printer, and format should be **MIC12**, press ok
5. Match names & LIS number, and pack sample with the PHOL report (no need to attach the LIS barcode). Follow the same for all samples
6. **MACRO Reporting:** All samples scanned should have a red check mark on the left side.
7. Choose Macro for **TB culture new**. Macro will result all specimen as “@PHOL….” and interim both **FA, TBS/TBA/TB**. All samples should have a **green!** after Macro is done.
8. Print out worklist (CTRL+P) & file the work list in the BACTI send out binder

**Keep blood sample for TB at room temp**
**Put the type of specimen and site if not indicated**

**QUANTIFERON TB (QFT):**

- MSH-out patient, testing not offered - the patient should directly go to Dynacare lab for sample collection and testing.
- MSH-in patient, we refer sample to Sick Kids
- UHN-in and out patient, to TGH core lab, contact TGH specimen processing manager

**Sick Kids Procedure**

NOTE: This document is Uncontrolled When Printed.
Collection procedure
Blood Collection Tube: 6mL Lithium-heparin tube (green top/white label).
- Tube should be between room temperature (17-25°C) at the time of blood filling.
- Only a Lithium-heparin anticoagulant is acceptable.

Blood collection: Collect a minimum volume of 5 mL of blood into single Lithium–heparin tube.
- Gently mix by inverting several times to dissolve the heparin.
- Blood must first be held at room temperature (17-25°C) for a minimum of 15 minutes and maximum of 3 hours before being placed in the refrigerator (2-8°C).
- Specimen may be held in the refrigerator for a further 16 to 48 hours before shipping.

Shipping to Sick Kids Microbiology:
- Ship on ice packs.
- Total time from collection to receipt in Sick Kids Microbiology laboratory cannot exceed 48 hours.

Specimen Shipping & Receipt / Handling at Sick Kids:
- Specimens should be shipped Monday to Thursday and received at Sick Kids by 5pm.
  - Deliver to: Microbiology Laboratory, room 3676, 3rd floor Atrium.
  - Specimens will be transferred to QFT – Plus Blood Collection Tubes on receipt.
- After hours: Deliver specimens to the Rapid Response Laboratory room 3642.

**H. pylori Send-out:**
- Log in: MayoMedicalLaboratories.com
  - Click sign in (right top corner)
  - Email: MicrobiologySpecialQueries-MBX@siniahealthsystem.ca
  - Password: Microbiology__ (change every 180 days)
- Under Test Catalog (left top corner) enter ZMMLS, click GO
- Click ZMMLS-Antimicrobial Susceptibility, Aerobic Bacteria, MIC
  - Click Order This Test (green box, right top corner)
  - Enter all the information under:
    - Patient Information
    - Ordering Physician Information
    - Specimen Information
    - Test-Specific Information: Gastric Biopsy-Helicobacter pylori
- Billing Information: Payer choose client
Parasitology Send out:
1. For Parasitology, load the printer with the White Paper Stool Parasites PHOL Parasitology Form Logon to Softmic
2. Click ‘Results’ tab from the left screen side, open QC/Send out List and choose Parasitology New
3. Follow 4-6 steps from above, please stick the diagnosis label on the requisition.
4. Choose Macro for O&P. Macro will result all specimen as “@PHOL….“ and interim all parasites O&P send out. All samples should have a green! after Macro is done Print out & file the work list in the BACTI send out binder
5. Pack samples into blue PHOL bag and put into walk in fridge
6. UHN samples: To print the PHOL forms go EPR under Microbiology then press PHOL form, scan or type Auxiliary order, type Y for yes or A for accept to print out the PHOL form(has all comments & diagnosis). Please stick a small label for LIS order number.

** Put the type of specimen and SAF if not printed **
**Filarial (Tissue Parasites Form) send out to PHOL is EDTA BLOOD **
**Acanthamoeba corneal scraping (Arthropods & Miscellaneous Parasites Form) send out to PHOL**
**For Leishmania PHOL form print from EPR if UHN patient.

Legionella & Mycoplasma Send out:
1. For Legionella, load the printer with the White Paper Legionella Detection for PHOL Legionella Form/ White Paper Urogenital Mycoplasma Culture for PHOL Form.
2. Logon to Softmic
3. Click ‘Results’ tab from the left hand side, open QC/Send out List and choose Send Out List
4. Follow 4-6 steps from above.
5. Choose Macro for Legionella/Mycoplasma... Macro will result all specimen as “@PHOL….“ and interim all samples. All samples should have a green! after Macro is done Print out & file the work list in the BACTI send out binder
6. Pack samples into blue PHOL bag and put into walk in fridge

** Put the type of specimen and site if not written **
** Use Urogenital Mycoplasma Culture for all respiratory samples from newborn **
** On each week Friday night pack all Urogenital Mycoplasma specimens in one brown paper bag and store it in -70 freezers and on Monday or Tuesday morning the serology Technician 1 will take the bag out and pack it with DRY ICE then send to PHOL.

**Mycology Send out:**
1. For nail/hair/skin scraping for fungus, load the printer with the White Paper Mycology Form
2. Logon to Softmic
3. Open ‘Results Entry’ and scan order #. Under CALCO and FUD choose }PHOL from keypad it will result specimen as “@PHOL.....” and ctrl ‘I’ for interim
4. To print PHOL report press instant report (from the top toolbar), choose the correct printer, and format should be MIC12, press ok
5. Match names & LIS number, and pack sample with the PHOL report(no need to attach the LIS barcode) follow the same for all samples
6. Pack samples into blue PHOL bag and keep in planting area at room temperature ** Put the type of specimen and site if not printed**
BACTERIOLOGY MOLECULAR DETECTION SENDOUTS:

Molecular detection may be requested from a variety of specimens – all require permission prior to testing.

1) Physician is to contact the microbiology senior technologists to ensure there is enough sample remaining for testing.
2) If sufficient sample is available, a UHN/MSH Request For Molecular Tests Form will be emailed to the requesting physician to begin the approval process as outlined on the Physician Procedure and request form for Ordering Molecular.
3) The physician will then proceed to contact appropriate individuals for specific test permission as listed below to complete the Molecular Test Form.
4) Once completed laboratory staff will proceed to prepare specimen for testing as per instructions below.

Mycobacterium Molecular Detection (includes AMTD, TB PCR, Mycobacterium PCR)

- **Contact for permission:** Requesting physician to call PHOL Customer Service for approval. Request will be documented on UHN/MSH Request For Molecular Tests Form and forwarded to a senior or charge tech through email to MicrobiologySpecialQueries-MBX@mtsinai.on.ca
- Lab orderables: MSH –use TBPCRX (G), UHN –cannot order in EPR but we will add TBPCR (I) and enter results here when they come back.
- PHOL Requisition: Print PHOL requisition –Press instant report, choose appropriate printer, format should be MIC10. Match names and pack sample with PHOL requisition to send out. Make sure “Test requested” area is filled in with test “TB PCR”.
- Frozen tissue aliquots are acceptable if there is no more tissue sample left
Bacteria Molecular Detection (includes 16sPCR, S.aureus PCR, etc.)

- **Contact for permission:** Requesting physician to call PHOL Customer Service for approval. Request will be documented on UHN/MSH Request For Molecular Tests Form and forwarded to a senior or charge tech through email to MicrobiologySpecialQueries-MBX@mtsinai.on.ca.

- Lab orderables: MSH –use MPCRX (G), UHN –cannot order in EPR but we will add MPCRX (I) and enter results here when they come back.

- PHOL Requisition: Print PHOL requisition –Press instant report, choose appropriate printer, format should be MIC10. Match names and pack sample with PHOL requisition to send out. Make sure “Test requested” area is filled in with test.

For approved Molecular Microbiology tests performed at Sick Kids hospital, complete the Sick Kids Molecular Microbiology PCR order form. Pack and send sample through KJV Courier.

Fungus Molecular Detection (includes Fungal PCR)

- **Contact for permission:** Requesting physician should contact the on-call UHN/MSH Microbiologist. Request will be documented on UHN/MSH Request For Molecular Tests Form and forwarded to a senior or charge tech through email to MicrobiologySpecialQueries-MBX@mtsinai.on.ca.

- Lab orderables: MSH –use FPCRX (G), UHN –cannot order in EPR but we will add FPCRX (I) and enter results here when they come back.
• Sick Kids requisition: Complete the Sick Kids Molecular Microbiology PCR order form. Pack and send sample through KJV Courier.

**MetaGenomic Analysis**

• **Contact for permission:** Requesting physician should email Dr. Samir Patel (Samir.patel@oahpp.ca) for permission. Request will be on UHN/MSH Request For Molecular Tests Form and forwarded to a senior or charge tech through email to MicrobiologySpecialQueries-MBX@mtsinai.on.ca

• Lab orderables: MSH –use MGASX (G), UHN –cannot order in EPR but we will add MGAS (I) and enter results here when they come back.

• Send out with comment:
  "This specimen has been sent to Public Health Ontario Laboratories (PHOL) for metagenomic analaysis (a research use only assay). Results will be communicated verbally directly from PHOL to the requesting physician, Dr. ______. If you have any questions or would like to receive a verbal result, please contact Dr. Samir Patel from PHL at 647-792-3172."

• Requisition: PHOL Requisition: Print PHOL requisition –Press instant report, choose appropriate printer, format should be MIC10. Match names and pack sample with PHOL requisition to send out. Make sure “Test requested” area is filled in with test.
SEROLOGY SENDOUTS:

SoftLab Test Send outs to PHOL

1. Ensure sendout test is ordered, received and verified in the LIS.
2. Go to Print Scheduler. Choose the ALT RL10A REP = PHOL/OR HIV REPORT.
3. Page down to the Order# field and scan in or type the order number, choose the correct printer, press run, print out PHOL form
4. No need to put LIS Label on the PHOL form only exception is the UHN PHOL form attach LIS bar code
5. Write dawn the test requested (e.g. Hepatitis B surface antigen, Parvovirus B19 IgG/IgM, CMV IgG/IgM, VZ IgG…..) under section-3 Test(s) Requested
   **Do not use PREVIOUS PHOL CODE(S) V05, S17…**
6. Scan all samples into existing Task list – ‘9SERO’. Save & Print task list when all send outs have been entered, choose Layout as ‘TL-LIST’ from drop down menu, and file in “Serology PHOL Send out Binder”
   a. If tasklist is already printed or if sending out a sample from another bench, place an LIS sticker on printed tasklist for current date.
7. Refer to PHOL_Courier for sample preparation for send out.

CHECKING ORDERS FOR IGM PHL SENDOUTS (SENIORS/DESIGNATE)

1) Order 8COM
2) Check Order Comments in Original Requisition Form / Order Comment Window for clinical information, UHN pts check diagnosis, history of ordering, last resort call doctor/ward if needed.

   ACUTE FETAL INFECTION or? ACUTE FETAL INFECTION
   US (Ultrasound Findings)
   ACUTE, RECENT INFECTION or EXPOSURE

3) Document in 8COM
   Result Tab – IgM sent to PHL
   \ M: Enter Clinical Information
   Also In- Patient: ordered in EPR or MSH or no Req. Form submitted
4) Match patient information, match Orders in SOFTLAB with PHL printed form,
5) For PARVO Ig M, remove auto-comment “Not sent out” and “Not tested @nci” replace
   with “*NOTE*@ MOH”, Technician will verify once sent out.
6) Add coloured label “Please do not cancel tests requested”
7) Scan all documents including PHOL printed form in SOFTMEDIA under the Order.
8) Give all forms back to Technicians for processing.

<table>
<thead>
<tr>
<th>GROUP ORDERS Group Tests</th>
<th>Tests Included</th>
<th>Testing Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR Titers /Immune Status</td>
<td>Measles IgG Antibody</td>
<td>PHOL Serology</td>
</tr>
<tr>
<td></td>
<td>Mumps IgG Antibody</td>
<td>PHOL Serology</td>
</tr>
<tr>
<td></td>
<td>Rubella IgG Antibody</td>
<td>MSH Micro</td>
</tr>
<tr>
<td>MMRV Titers /Immune Status</td>
<td>Measles IgG Antibody</td>
<td>PHOL Serology</td>
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<tr>
<td></td>
<td>Mumps IgG Antibody</td>
<td>PHOL Serology</td>
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<tr>
<td></td>
<td>Rubella IgG Antibody</td>
<td>MSH Micro</td>
</tr>
<tr>
<td></td>
<td>Varicella IgG Antibody</td>
<td>MSH Micro</td>
</tr>
<tr>
<td>TORCH TITER IgG PANEL</td>
<td>Toxoplasma gondii IgG Antibody</td>
<td>PHOL Serology</td>
</tr>
<tr>
<td>TORCH Screening (Immune Status)</td>
<td>Rubella Virus IgG Antibody</td>
<td>MSH Micro</td>
</tr>
<tr>
<td></td>
<td>Cytomegalovirus (CMV) IgG Antibody</td>
<td>MSH Micro</td>
</tr>
<tr>
<td></td>
<td>Herpes Simplex Virus (HSV) IgG Type 1 and Type 2 IgG Antibody</td>
<td>PHOL Serology</td>
</tr>
<tr>
<td>TORCH Screening IgG &amp; IgM (Immune Status and Active Infection) Based on Clinical Information</td>
<td>Toxoplasma gondii IgG Antibody</td>
<td>PHOL Serology</td>
</tr>
<tr>
<td></td>
<td>Rubella Virus IgG Antibody</td>
<td>MSH Micro</td>
</tr>
<tr>
<td></td>
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<td>Herpes Simplex Virus (HSV) IgG Type 1 and Type 2 IgG Antibody</td>
<td>PHOL Serology</td>
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<tr>
<td></td>
<td>Toxoplasma gondii IgM Antibody</td>
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<td></td>
<td>Rubella Virus IgM Antibody</td>
<td>PHOL Serology</td>
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<td></td>
<td>Cytomegalovirus (CMV) IgM Antibody</td>
<td>MSH Micro</td>
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<tr>
<td></td>
<td>Herpes Simplex Virus (HSV) IgM - TEST NOT AVAILABLE</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>
Prenatal Screening (MSH):

1. Samples are stored in the Virology specimen fridge in a basket labeled Serology
2. Separate prenatal from fertility & Reproductive clinic (MIREF) samples
3. Logon to Soft Lab
4. Scan specimen barcode in “Order Entry” and compare test codes ordered in LIS with requisition (9HIV: Prenatal HIV, 9HAG: Prenatal Hepatitis B surface Antigen, 9RUB: Prenatal Rubella IgG AB, 9VDP: Prenatal syphilis screening)
5. Receive all tests under ‘Specimen’ tab but do not verify
6. If a HIV requisition is attached with the regular prenatal requisitions, remove HIV requisition and discard. **Do not separately send a sample for HIV**
7. **Check to make sure Dr. Mazzulli’s name is stamped in (section-1 Clinician/Referring Laboratory) on Prenatal screening requisition**
8. **Write referring Dr’s name from LIS/requisition under Clinician ID and “cc” ie: cc: Dr. Smith.**
9. Place LIS barcode label on requisition if not present and check the name matches on requisition and blood tubes
10. Once finished processing all samples, create a new task list – ‘9SERO’ and scan each sample
11. Save & Print task list when all send outs have been entered, choose Layout as ‘TL- LIST’ from drop down menu, and file in “PHOL Send out Binder”
12. **Arrange all samples in order in sample foam** and keep PHOL forms in order as well; pack both in a clear plastic zip lock. Put everything inside blue PHOL bags and store in walk-in fridge until morning pick-up

Prenatal Screening (UHN): Without Requisitions

1. Logon to Soft Lab, scan specimen barcode in ‘AUX ORDER’
2. Receive all tests under ‘Specimen’ tab but do not verify
3. Attach LIS barcode label on each tube match names.
4. Log in EPR, select Microbiology then select Prenatal report
5. Scan or type the EPR Auxiliary number, type ‘A’ to accept and ‘Y’ to print out the PHOL form
6. Attach LIS label to the prenatal form and match the names
7. Please follow steps 7-12 above

*If additional send out tests are requested (other than the 4 specified on the prenatal requisition), print another PHOL form from LIS and add the extra tests*
**NICU HIV Testing**

For Blood samples (whole blood in EDTA) received from the NICU for **HIV PCR**. These are **STAT** tests. Please process immediately upon receipt.

1. Test will be already ordered in Powerchart. If not, please add HIV PCR (9HIVP) and verify the send out. This is important, an auto email is programmed to send out once verified.
   - Serology is not necessary. If ordered, do not cancel. Send to PHOL with HIV PCR ordered as well. PHOL is aware PCR is priority if specimen quantity is an issue.
     i. Please email Susan Guest (MSH) if the incorrect test has been ordered by the nurse
   - If CD4 is requested and two blood tubes are sent, you may forward one to core lab. If CD4 is requested and only 1 tube of blood was sent, please forward to PHOL for HIV PCR only.
2. Print Requisition using Print Scheduler “HIV PHL form” and write **Baby HIV PCR** on the requisition.
   - Bring sample promptly to a senior. The senior must fax a copy of the HIV requisition form to PHOL HIV/HTLV contact at 416-235-6194. The senior technologist will email SupplementalVirologyLab@oahpp.ca that a sample is coming.
3. Package specimen in its own brown paper bag labelled as “Baby HIV PCR”
   - Send **EDTA Whole Blood**
   - **Do NOT centrifuge** the blood
4. Specimen are to be sent with the morning PHOL shipment (10:30) Mon-Friday.
   - Specimen which misses the routine morning pick-up can be sent the next morning. From specimen collection, test must be performed within 5 days.

**Antistreptolysin O Titer (ASOT) Testing**

1. Testing **REQUIRES** microbiologist approval. Ensure a microbiologist has approved before sending out.
2. Serum is required for ASOT testing.
3. Accession/Receive sample in LIS.
4. Prepare a Hospital for Sick Kids serology requisition
5. Send sample according to TGD regulation to Sick Kids by **KJV Courier**.
Fertility and Reproductive Health Requisitions

1. Samples are stored in Virology specimen fridge in a basket labeled Serology
2. Separate prenatal from fertility & Reproductive clinic (MIREF) samples
3. Logon to Soft Lab
4. Scan specimen barcode in ‘Order Entry’
5. Re-order tests requested on requisition as 9 Serology codes in LIS (e.g. Parvovirus B19 IgG = 9PARG…)
6. Receive all tests under specimen tab
7. All tests should include the comment saying “The sample has been sent to the Ministry of Health Lab (PHOL)……” Add comment if not present: ‘\ ‘F5’ ‘choose #1’
8. Verify all tests
9. **Print PHOL Form:** See [Printing Serology PHOL and HIV forms from Soft Lab](#)

Zika Virus Serology to PHOL

For full information visit [PHOL Test Information Sheet website](#) for Zika Virus

Routine: Specimens: 2 Blood tubes required:
- 1 serum tube (+ 1 extra Serum recommended)

Other Specimens: Test must be pre-approved by Dr. Tony Mazzulli
- 5mL Urine
- 400uL Amniotic fluid, tissue or CSF

Required information needed for Zika Virus:

The required information is mandatory upon ordering in EPR/CERNER and can be found in the LIS order comment when accessioning specimen.

The required information is as below:

- Relevant travel history (countries travelled to in the preceding 3 months)
- Dates of travel
- Symptom onset date
- Symptoms (e.g. fever, rash, arthralgia, conjunctivitis)
- Date of specimen collection
- If female, indicate if the patient is pregnant
- History of receiving any flavivirus vaccine (e.g. Japanese encephalitis vaccine, yellow fever vaccine)

Order and Shipment instructions to PHOL:

EPR (UHN)
- LIS order: 9ZIKX (Zika Virus IgM Antibody)
  ZIPCR (PCR for Zika Virus)
- PHOL Form: Print PHOL form from EPR; All clinical information will be printed. Send form with 2 serum specimens.

Cerner (MSH)
- LIS order: 9ZIKX (Zika Virus IgM Antibody)
  ZIPCX (PCR for Zika Virus)
- PHOL Form: Print PHOL for using standard PHOL serology format.

Other:
- Blood and Urine specimens: store at 2-8°C, ship to PHOL on ice packs.
- Other specimens: store at 2-8°C, ship PHOL on ice packs
  - if delivery of “other specimens” to PHOL will take more than 72 hours, specimens should be frozen and shipped on dry ice.

Testing:

Serology TAT is 6-8 weeks
Molecular testing TAT up to 14 days
STAT testing not available

**SIMIAN B VIRUS PROCESSING**

**TECHNICIAN:**
SIMIAN B VIRUS BASELINE
Sample taken from TGH New Employee in Animal House for Baseline
1. Do not enter in LIS
2. Enter Information in EXCEL File
   T:\microbiology\Virology\Simian B Virus Storage

NOTE: This document is Uncontrolled When Printed.
Any documents appearing in paper form that do not state "CONTROLLED COPY" in red print are not controlled and should be checked against the document (titled as above) on the server prior to use.
Enter Last Name. First Name, Date Received and Box #

3. Store serum in Simian Freezer MIT7 according to next available Freezer Box
4. Scan Requisition in V Drive /Microbiology /ScannedRequest/Planting
   File Name: example SimianB Virus20210428

TECHNOLOGIST:
Simian B Virus Antibody Testing
1. Samples and requisition are prepared by OHS at TGH.
2. Ship samples on dry ice to
   Dr. Julia K Hillard
   National B Virus Resource Center, Georgia State University
   161 Jesse Hill Jr. Drive, Atlanta GA 30303

3. With FEDEX Waybill, include CDC Permit to Import or Transfer Etiological Agents or Vectors of Human Disease.
   http://biotech.gsu.edu/virology/PDFs/DHS_Import_Documents_2017.pdf

4. On FEDEX on–line form, change the Bill transportation to “third party” enter UHN OHS Cost Centre
   OHS Cost Centre #711209015

5. Email/ phone National B Virus Resource to inform prior to shipping for them to schedule sample for testing
   Email: bvirus@gsu.edu
   Phone: 404.413.6550
   Fax: 404.413.6556

6. Examples of requisition, CDC form and FEDEX form and how to fill up the documentations can be found in send out book

Requisition Form:
   http://biotech.gsu.edu/virology/PDFs/2015%20Submission%20Form.pdf
Strongyloides Serology

1. Notify PHO before sending a priority specimen by contacting our Customer Service Centre at 416-235-6556 / 1-877-604-4567
2. Ship priority specimens separately from routine specimens in a clearly marked package (in accordance with the Transportation of Dangerous Goods Regulations) indicating “Priority” for easier retrieval.
3. We will use this bag to transport the samples with special stickers attached in each requisition form.

VIROLOGY MOLECULAR DETECTION SEND OUTS

Hepatitis B DNA and Hepatitis C RNA Send out

1. **Print out PHOL form**: Log on in EPR, press Microbiology then choose PHOL form, scan EPR#, press OK, type A for accept or Y for Yes
2. Log on to Soft Lab
3. Scan Auxiliary number into LIS Order entry
4. Click on ‘Specimen’ Tab, ‘Receive all’ print and label the blood purple tubes one for 9HBVD OR 9HCVQ and the other tube as 8ALI, attach a small barcode label to PHOL(EPR) form beside patient’s name
5. Pack the tubes in the foam and send them to 6th floor
6. Pick up samples from 6th floor
7. Check if the sample is from Liver Clinic place the 2nd aliquot in designated rack in the fridge to be sent to TWH Liver Clinic the following day
8. If not from Liver Clinic place 2nd aliquot in freezer box for HBVD or HCVQ
9. Both Quantitative HCV RNA & Genotype can be written on the same PHOL Form send one tube to PHOL(double the volume)
10. Place 9HBVD OR 9HCVQ/9HCVG aliquots in designated rack in the freezer for the next morning to send to PHOL
11. The next morning Technician 2 Scan ALL 9HBVD/9HCVQ Samples on the Task list (create a new 9SERO & save it) separately,
12. Go to Batch Resulting Work list, choose task list, scan Task list ID-put 9HBVD or 9HCVQ on test box, press OK, the list will show up, mark all, press add result, click the small box verified all then ok, save your work
13. Pack all 9HBVD, 9HCVQ/9HCVG aliquots in a white box sort them all in order with the PHOL form, pack both in a clear plastic zip lock
14. All PHOL samples are packed in blue PHOL bags to be ready for pick-up Mon-Fri at
<table>
<thead>
<tr>
<th>Department of Microbiology</th>
<th>Policy # MI_SO</th>
<th>Page 21 of 57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Manual</td>
<td>Policy # MI_SO</td>
<td>Version: 4.0 CURRENT</td>
</tr>
<tr>
<td>Section: Bacteriology Procedures</td>
<td>Subject Title: Send-out Information Manual</td>
<td></td>
</tr>
</tbody>
</table>

11:00am
TWH Liver Clinics:

Samples are sent Tuesday -Friday at 09:00 am. Place a sticker on bag (blue bags used for UHN samples) samples on Friday after 9:00am should be frozen at -20C. The TWH liver clinic will send someone on Mondays to pick up the Frozen Samples.

LIVER CLINIC (aliquots)
1. Save all Liver Clinic aliquots in fridge – MIRT13 – do not put in freezer
2. Send the aliquots the following day. Place sample inside the Blue Bag with ice pack and Sticker / Label at Plating Area- Deliver to UHN rack
3. Prepare a sticker or label package as:

   To: TWH Core Lab
   PLEASE CALL 6232 FOR PICK-UP

Measles/Mumps Diagnostic IgM/IgG Serology or PCR Send out

- Nasopharyngeal, throat swab, urine or CSF can be tested for measles PCR
- Buccal swab, throat swab, saliva, urine or CSF can be tested for mumps PCR
- Serum is used for Mumps/Measles IgM testing.

1. Receive, print and complete a MIC10 format PHOL report from result entry in the LIS.
2. Pack the sample according to TDG guidelines.
3. Email ICP of submitting hospital specimen was received and is being to PHOL for Mumps / Measles testing with specimen LIS#.
4. Phone PHOL customer service first to let them know a sample is on the way for the next available run. If unable to reach customer service, contact Duty officer 416 605 3113
5. Send samples by KJV. Send specimens to PHOL once per day at 6am during weekdays.

   Note: If STAT testing is requested, IPAC or requesting physician can contact and arrange STAT testing directly with PHOL.

Monkeypox Sendout

See Monkeypox Procedure
Middle Eastern Respiratory Syndrome Coronavirus – MERS-CoV / AVIAN FLU PCR
Send Out

Specimens for MERS-CoV testing will be processed same day if received by PHOL by noon.

All primary specimens can be handled in a containment level 2 lab.

Public Health Agency of Ontario instructions regarding specimen collection for MERS-CoV that includes appropriate specimen types, biosafety procedures:
Instructional video regarding NP swab collection
http://microbiology.mtsinai.on.ca/research/icuInfluenza/noseSwab.asp

1. Requests for MERS-CoV or Avian flu requires STAT notification to:
   • ICP for the relevant hospital/ward to be paged;
   • Prior to specimen submission, contact PHO’s Laboratory Customer Service Centre at 416-235-6556/1-877-604-4567 or the After-Hours Emergency Duty Officer at 416-605-3113.

   **NOTE:**
   • Ensure the clinical information is available before calling PHOL
   • Page microbiologist-on-call for any missing information as identified by PHOL Customer Service/After-Hours Emergency Duty Officer

2. Clinical information is **required** by PHOL

3. Specimens requested can include:
   • Upper respiratory tract: NP swab AND throat swab
   • Lower respiratory tract: sputum or BAL
   • EDTA blood (purple top tube)
   • If the patient has gastrointestinal symptoms, submit a stool sample in a dry sterile container - do not use other transportation media containers such as Cary-Blair.
   • acute (when patient first seen with acute respiratory illness) and convalescent (21 to 28 days after illness onset) serology

   **Note for suspected Avian Flu respiratory specimens:**
   • Heat inactive primary specimens
   • Perform Flu/RSV testing in house on Aries platform
   • Send specimen to PHOL for AVIAN Flu PCR whether in-house flu is positive or negative

UNIVERSITY HEALTH NETWORK/MOUNT SINAI HOSPITAL, DEPARTMENT OF MICROBIOLOGY
4. Receive, print and complete a MIC10 format PHOL report from result entry in the LIS with clinical information.
5. Pack the sample according to TDG guidelines. Mark package as “STAT” testing.
6. Notify PHOL customer service if not done by IPAC and Send samples by KJV to PHOL immediately. Contact PHOL Duty officer 416 605 3113 if unable to reach customer service.

**WNV Molecular Testing to PHOL**
Non-donor/non-recipient blood and CSF for WNV molecular testing needs approval of the Microbiologist-on-call

**Zika Virus Molecular Testing to PHOL**
Please submit Mandatory Information Intake Form for Zika Virus Testing together with PHOL Requisition Form, refer to PHOL website for form if required.
OTHER MISCELLANEOUS NATIONAL (NON-GTA) AND INTERNATIONAL SEND OUT SPECIMENS

Other miscellaneous routine specimens require testing to reference laboratories outside the GTA. These specimens are sent daily through Fedex.

1. Using the Sendout Shipping Information Table search for the specified test requested. Information on sample type, requisition, packaging and shipping addresses among other information can be found in this table.

2. Once the specimen is accessioned in the LIS, parafilm the container lid and put the specimen in a plastic biohazard bag containing and absorption pads (to absorb any possible spills). (You can use the plastic SAF T Pak bag). Place requisition in the outside sleeve of the biohazard bag.

3. Package bagged specimen(s) as per TDG guidelines. Ensure to affix sender and recipient address labels.

4. See Specimen packaging section for Fedex specific packaging instructions

5. See Courier section for requesting Fedex.

Note: all Chlamydia positive rectal swabs will be reflexed for LGV testing and sent to NML.
COURIERS

<table>
<thead>
<tr>
<th>Courier</th>
<th>Monday - Friday</th>
<th>After hours/Weekends/Holidays</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routine</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Labs Courier (UHN, CAMH, Bridgepoint)</td>
<td>Delivery: 8:00am-9:00pm &amp; 1:00am, 4:00am</td>
<td>Delivery: 8:00am-5:30pm</td>
</tr>
<tr>
<td></td>
<td>Pick up: 8:00am - 8:00pm</td>
<td>Pick-up: 8:00am-5:00pm</td>
</tr>
<tr>
<td>PHOL Courier (PHOL specimens)</td>
<td>Pick up only: 10:30am</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Special</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FedEx Courier (Non-GTA routine specimens)</td>
<td>Pick up only: 4:00pm</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>KJV Courier</strong></td>
<td>9:00am - 5:00pm (online)</td>
<td>Anytime (by phone request)</td>
</tr>
<tr>
<td><strong>Taxi</strong> (If all above unavailable)</td>
<td>Anytime</td>
<td>Anytime</td>
</tr>
</tbody>
</table>

Life Labs Courier Specimen Transportation

Life Labs courier is used for transportation of specimens between UHN and UHN client hospitals.

To send out a sample using Life Labs Courier:

1. Place specimens in a biohazard specimen bag. If there is a requisition, place it in the outer sleeve of the bag.
2. Ensure final packaging is a Blue Life Labs Courier Bag within the hard plastic container.
3. Ensure the insert at the top of the bag, indicates receiver hospital.
4. Place Life Labs Courier Bag on the shelf beside the microbiology specimen receiving window.

**PHOL Courier Specimen Transportation**

PHOL courier is used for transportation of routine specimens to PHOL.

To send out a sample using PHOL Courier:

1. Place specimens in a biohazard specimen bag, with the **PHOL requisition** in the outer sleeve.

2. If applicable, arrange all samples in order in a foam carrier. Keep requisitions in the same order as the samples and place both in a clear plastic zip lock bag.

3. Ensure final packaging is a **Blue PHOL Courier Bag** within the hard plastic container.

4. Place PHOL Courier Bag in a fridge if courier is not coming imminently, if not place the Courier Bag on the trolley by the serology specimen management bench.

For PHOL directions and location for all deliveries (including after-hours, weekends and STAT specimens) see link: [PHOL Directions and Receiving Dock Instructions](#)

Note: For STAT deliveries, contact PHOL **Duty officer** 416 605 3113 if unable to reach customer service.

**FEDEX Courier Specimen Send Out**

Fedex courier is used for International and National non-GTA routine miscellaneous specimens.

To send out a sample using Fedex:

1. Package specimen(s) as per **TDG guidelines**.

2. For Courier service go to: [http://www.fedex.com/ca_english/](http://www.fedex.com/ca_english/)  
   Log in using current ID and password.
3. Complete a FedEx Express form online.
   a. After logging in, the following window pops-up. In the first section—My Shipment Profile, click drop down arrow and choose the the name of the person to whose attention shipment is being sent.

![FedEx Ship Manager](image)

   b. Scroll down to the Package & Shipment Details, fill in No. of packages and Weight.

   ![Scroll Bar](image)
c. Click “SHIP” in section 6

d. Click “Ship” in the section of Confirm your shipment details
e. A screen will appear displaying your waybill. Print TWO copies of the waybill.

4. Retrieve a FedEx International Shipment Documentation holder. Open the purple zip-lock holder and place the completed FedEx sheet face up (so that information is showing on the clear plastic side with all barcodes showing).
5. Affix the prepared FedEx International Shipment Documentation holder outside the prepared package. Ensure Sender and Receiver addresses are also on the outside of the package. Ensure final specimen packaging is labelled UN3373.

6. Staple the sender’s portion of the FedEx Express online form to the photocopied send out requisition and file in the Shipping Documents Binder on the send out bench.

7. Leave the completed FedEx Clinical Pak package for pickup by FedEx on the ledge at the reception desk outside the Lab. near Secretary’s desk. The courier makes pickup at 16:00 hours Monday to Friday.

**KJV Courier Specimen Transportation**

KJV Courier service is used for any GTA deliveries not serviced by routine couriers during regular hours or for deliveries outside of regular courier hours see Courier Table.

To send out a sample using KJV:

1. Package specimen(s) as per TDG guidelines.

2. Ensure final specimen packaging is a SAF T PAK labelled UN3373.

3. For Courier service:
   a. If KJV’s service is required on Monday-Friday between the hours of 9am to 5pm use their website online to request their services by following to Step 4.
   b. If KJV’s service is required after hours (outside 9am - 5pm), on weekends or holidays, call 647-212-2395 to request their service. Follow instructions given as per phone conversation. **If wait time is longer than expected, call for delivery by taxi using STAT Transportation by Taxi - Procedure QEPMI5007i**

4. Click KJV website link to open website: [http://www.kjvcourier.com](http://www.kjvcourier.com) Beside "Existing Accounts" click "Online Services"

5. Enter Account No. & Password and click "Yes" circle for saving account number on this computer. Then click on "Login".
6. On the Main Page under Main Menu: Click on “Enter New Order”. A page will pop up to create a “New Order” page.

7. Under Main Menu:
   a. Click the down arrow ▼ to access the drop down bar at the top of the form, select an address for **pick up** and click **select** to the left.
   b. again, click the down arrow ▼ to access the drop down bar at the top of the form. This time select an address for **delivery** and click **select** to the right. Addresses will automatically populate.

8. Complete remaining form filling in all sections with *asterisks and any “Special Instructions”.
   For the sections below always select the following:
   a. Person Placing Order → Use your own name or “Microbiology Tech”
   b. Service → Same day VIP
   c. Vehicle → Car
   d. Number of Pieces → Type in number
   e. Description → Parcel

9. Click on “Continue” at the bottom of the page to proceed.

10. After you confirm order information is correct, select **Process**.

11. After you process the order, a Waybill Page will pop up.

12. Print Waybill page and keep it open. Secure the bottom half of the page; “KJV’s Copy” onto the package. The top half of the page is not needed.

13. Go back to the Waybill and save a copy in the file “KJV Courier Waybills” found here: \Microbiology\KJV COURIER - Waybills. Save the file as the date. (eg. 2015.04.21)

14. Once Steps 1-9 are completed, click on “Return to Main” in the middle of the page and SIGN OUT.

15. Leave the packed specimen on the Specimen Management Bench Sorting Area for pick up

For PHOL directions and location for all deliveries (including after-hours, weekends and STAT specimens) see link below:
PHOL Directions and Receiving Dock Process

TAXI Specimen Transportation

1. Package bagged specimen(s) as per TDG guidelines.

2. Ensure final specimen packaging is a SAF T PAK labelled UN3373.

3. Refer to STAT Transportation by Taxi - Procedure QEPM15007i for instructions on sending specimens by Taxi.
Related Documents:

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Document Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sendout Shipping Information Table</td>
<td></td>
</tr>
<tr>
<td>Referred Out Test Results Entry</td>
<td></td>
</tr>
<tr>
<td>Post-Analytical - Refer-out Test Results Reporting Procedure</td>
<td>QPCMI18001</td>
</tr>
</tbody>
</table>
APPENDIX I: SEROLOGY TESTS ORDERING SCREENS

Table 1: serology in house from 1-R

![Seroology ordering screen](image)

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Management System\UHN_Mount Sinai Hospital Microbiology\Standard Operating Procedures\Bacteriology Procedures\
Table 2: serology-prenatal
Table 3: serology-donor

[Image of a computer interface showing a list of serological tests and their codes.]
Tables 4, 5 & 6: serology-refer out
NOTE: This document is Uncontrolled When Printed.
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APPENDIX II: VIROLOGY/SEROLOGY PHOL PENDING LIST

Procedure in LIS:

1. In SoftLab, open “Resulting Worklist”.

2. Use Template “9REF”; specify date range (i.e. From 4 months ago until 2 weeks prior); status use “Pending+Non-verified”; include both received and unreceived samples (uncheck “Received only”)

3. Once pending list appears, right click mouse anywhere on this list to customize what columns to display.
4. Add to show columns C Date (Collection Date) and R Date (Receive Date) by selecting each of those on the left, then press the “->” Key.

REMOVE the C Time (Collection Time) and R Time (Receive Time) by selecting each of those on the right, then press “<-” Key.

Press OK.
5. Once list appears again, filter first by Receive Date by pressing on the “R Date” column tab until all the unreceived samples appear on the top (the “R Date” would be BLANK). Cancel ALL orders that were not received by lab for ≥7 days as follows:

   **Result field:** CANCELLED

   **Comment field:** This specimen was documented as collected but not received by the Microbiology/Virology Laboratory after 7 days. If this test is still required, please place a new order.

6. Sort the Pending List by Ward. Result all tests ordered under any Occupational Health and Safety wards (i.e. OHS, GOCC, PMOCC, WOCC) with:

   “Report is sent directly to Occupational Health and Safety.”

   Verify results!

7. Refresh the Pending List by pressing “refresh”

8. Sort the Pending list by Receive Date again so that oldest specimens received are at the top.

9. Go to SoftLab Desktop → Reports → SQL Reports → EQ Print SQL Reports
10. Once screen bridges to SQL Report program, use arrow keys to scroll to and highlight “PENDING_PHOL”. Press “V” for View (Red Circle).
11. Enter **same date range** as the pending list pulled in LIS (i.e. 20171102 [Tab] 20180313)

Press “Enter” and wait until list appears. (May take up to a minute)
12. Press “P” for Print. Another list will appear on the top left. Use ↑↓ or PageUp keys to scroll to the very top of that list until cursor highlights “Save   Save to File”.

Press “Enter”.

13. At Save to box, Enter “pend+today’s date” (i.e. pend20180327).
Press “Enter” → Select “Y”. However, this file will ONLY be saved for 6 days.

Now you can close this window.

14. Go back to SoftLab Desktop → [SHIFT]+[F2] → Type in File name of “Save to” file (i.e.pend20180327) → Click “Find”. When file appears, double click on file to open.

15. When list appears on screen; Open File tab → Export to Excel

16. Uncheck “Comma” box → Check “Other” Box → Type in “|” ([SHIFT]+[\]) in box beside “Other” → Click “Export”
17. When exported excel file appears, expand all columns to show all contents.

18. FORMAT the excel file as follows:

a. **BOLD FONT** and Add **FILTER** (Black arrow) to **Row 1**.

b. Insert Header by:
   
   i. Go to **Insert** Tab and select “Header & Footer” (Red Arrow below)

   ii. Type in Header (Use **BOLD** font and **Font size 16**):

   Please fax back reports to (416) 619 5522-VERIFIED BY PHL. Thank you.
iii. Click left mouse key anywhere OUTSIDE of the header box → Go to View Tab → Select “Normal” view (Red arrow below)

This will bring the excel worksheet back to the normal view of list of orders and tests as before.

c. **FREEZE** First Row by:

Go to View Tab → Under “Freeze Panes” (Red Arrow) → Select “Freeze Top Row”
19. Sort by Receive Date (Click where black arrow points and select Sort A to Z)

**This excel list should now essentially contain identical patient orders as the LIS 9REF pending worklist**

Save file type As Excel Workbook with the same name Today’s Date + Initials (i.e. 20180327jkc) under: T:\Microbiology\Virology\Faxed PHL pending Lists\2018

NOTE: If date file saved is not the same as date faxed, save using the DATE FAXED!
20. Go through LIS pending worklist by bridging to Order Entry to see which orders need to be faxed to PHOL according to priority.

If an order needs to go on a PHL pending list and be faxed, order 8PFAX and document the **date faxed** (F6) in the comment field. **DO NOT VERIFY YET!** Order 8PFAX in **each** order that was faxed.

***Verify 8PFAX **only** when all results from PHOL have been entered and verified for that order.

i.e. If an order is already on a previous pending list and have been faxed but still waiting for results, it should have 8PFAX ordered but unverified.

**Note:** For 2\textsuperscript{nd} time and subsequent faxes ➔ Add subsequent dates those faxes were faxed again in the comment field underneath first time it was faxed

<table>
<thead>
<tr>
<th>Sort by:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Test</td>
<td>Receive Date</td>
<td>Ward</td>
</tr>
<tr>
<td>To deal with STAT tests first (i.e. HIV, prenatal tests etc...)</td>
<td>To get rid of orders not received by the lab for &gt;7 days</td>
<td>To result and verify tests ordered under any Occ. Health &amp; Safety wards</td>
</tr>
<tr>
<td>To verify any unverified test results or sent out comments (i.e. tests with result but not verified; any tests ending in “2” such as 9TSC2, 9HBD2 etc...)</td>
<td>To deal with oldest test orders received first</td>
<td>To deal with critical or certain wards first upon request</td>
</tr>
<tr>
<td>To deal with tests based on their TAT from PHOL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. On exported SQL pending list, DELETE all orders that DO NOT require fax. Retain **ONLY** the ones you will fax now, in batches of no more than 10 specimen order numbers per fax. (Same order number can appear on different rows for a different test)
If need to fax >10 orders, break into batches of 10 orders per fax in multiple excel sheets by cutting and pasting into a new excel tab within the same file (ONLY if these batches are faxed on the same day).

22. Create a different excel file name if a second batch of orders are faxed on a different day! Save using the DATE FAXED.

23. Translate LIS test codes to corresponding test names and enter in a separate column to the right of the test codes (i.e. 9TSCX → HIV See diagram in Step #19)

24. Print this list by:

   Highlighting the cells you wish you print → File → Print → Under Settings, select “Print Selection” (Red Circle) and choose “Fit All Columns on One Page” (Red Arrow); choose Landscape Orientation (Blue Circle) → Print (Blue Arrow)

Fax printed sheet to PHOL @ 416-265-6552.
APPENDIX III: UHN MANAGED MICROBIOLOGY SEND OUT TESTS

For UHN patient samples only, the follow list of send out tests are managed by the UHN specimen processing team directly and sent directly to PHOL.

If Received at Sinai:
- DO NOT “add on” test to orders within our department for the list below.
- Direct samples back to UHN laboratory, phone them for awareness.

If encountered:
- Request test be ordered in EPIC by the requestor if needed
- If an add-on request or circumstances require sample retrieval or submission between UHN/MSH, work collaboratively with the UHN core laboratory to make arrangements.

<table>
<thead>
<tr>
<th>AMOEIC SEROLOGY</th>
<th>DENGUE IgM SEROLOGY</th>
<th>HEPATITIS C (HCV) DRUG RESISTANCE ANALYSIS</th>
<th>MUMPS ACUTE/ACTIVE DISEASE (IGM)</th>
<th>PINWORM PREP</th>
<th>TOXOPLASMA TOTAL ANTIBODY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAPLASMA SEROLOGY</td>
<td>EBV EA IGG</td>
<td>Hepatitis C Ab PHOL Confirmation</td>
<td>MUMPS IMMUNITY (IGG/TOTAL ANTIBODY)</td>
<td>O FEVER SEROLOGY</td>
<td>TRICHINELLA SEROLOGY</td>
</tr>
<tr>
<td>ARBOVIRUS SEROLOGY</td>
<td>EBV VCA IGM</td>
<td>HEPATITIS E ANTIBODY</td>
<td>MUMPS MOLECULAR DETECTION, OTHER</td>
<td>RABIES SEROLOGY</td>
<td>TRYPANOSOMA SEROLOGY</td>
</tr>
<tr>
<td>BARTONELLA HENSELAE SEROLOGY</td>
<td>ECHINOCOCCUS SEROLOGY</td>
<td>HERPES SIMPLEX IGG ANTIBODY</td>
<td>MUMPS MOLECULAR DETECTION, URINE/CSF</td>
<td>RICKETSIA SEROLOGY</td>
<td>TULAREMIA SEROLOGY</td>
</tr>
<tr>
<td>BLASTOMYCES SEROLOGY</td>
<td>FILARIA (SKIN SNIP FOR MICROFILARIAE)</td>
<td>HISTOPLASMA SEROLOGY</td>
<td>MURINE TYPHUS SEROLOGY</td>
<td>ROCKY MOUNTAIN SPOTTED FEVER SEROLOGY</td>
<td>VARICELLA ZOSTER IGM</td>
</tr>
<tr>
<td>BRUCELLA SEROLOGY</td>
<td>FILARIA SEROLOGY</td>
<td>HISTOPLASMA SERUM ANTIGEN</td>
<td>MYCOPLASMA DETECTION</td>
<td>RUBELLA, IGM</td>
<td>WEST NILE VIRUS ANTIBODY, IGG</td>
</tr>
<tr>
<td>CHIKUNGUNYA IGG ANTIBODY</td>
<td>FUNGUS CULTURE - NAIL/HAIR/SKIN</td>
<td>LEPTOSPIRA SEROLOGY</td>
<td>OVA AND PARASITE, OTHER</td>
<td>SCHISTOSOMA SEROLOGY</td>
<td>WEST NILE VIRUS ANTIBODY, IGM</td>
</tr>
<tr>
<td>CHIKUNGUNYA IGM ANTIBODY</td>
<td>H. PYLORI SEROLOGY</td>
<td>LYME DISEASE SEROLOGY</td>
<td>OVA AND PARASITE, STOOL</td>
<td>SPOROTHRIX ANTIBODY</td>
<td>WORM/INSECT IDENTIFICATION</td>
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<td>CHLAMYDIA PNEUMONIAE SEROLOGY</td>
<td>HBV DNA</td>
<td>MEASLES ACUTE/ACTIVE DISEASE (IgM)</td>
<td>OVA AND PARASITE, URINE</td>
<td>STRONGYLOIDES SEROLOGY</td>
<td>YELLOW FEVER IgG ANTI BODY</td>
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<td>COCCIDIOIDOMYCETES SEROLOGY</td>
<td>HCV GENOTYPING</td>
<td>MEASLES IMMUNITY (IGG/TOTAL AB)</td>
<td>PARVOVIRUS B19 ACUTE/ACTIVE DISEASE (IgM)</td>
<td>TETANUS SEROLOGY</td>
<td>YELLOW FEVER IgM ANTIBODY</td>
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<td>CYSTICERCOSIS SEROLOGY</td>
<td>HCV RNA</td>
<td>MEASLES MOLECULAR DETECTION, CSF</td>
<td>PARVOVIRUS B19 IMMUNITY (IGG)</td>
<td>TOXOCARA SEROLOGY</td>
<td>YERSINIA SEROLOGY</td>
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<td>DELTA VIRUS ANTIBODY</td>
<td>HCV RNA (TRANSPLANT)</td>
<td>MEASLES MOLECULAR DETECTION, URINE</td>
<td>PHL Blood Parasite Confirmation and Speciation</td>
<td>TOXOPLASMA ANTIBODY, IGG</td>
<td>ZIKA VIRUS IgG SEROLOGY</td>
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<td>DENGUE IgG SEROLOGY</td>
<td>HEPATITIS B SURFACE ANTIGEN (PHL)</td>
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<td>TOXOPLASMA ANTIBODY, IGM</td>
<td>ZIKA VIRUS IgM SEROLOGY</td>
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Record of Edited Revisions

Manual Section Name: Send-out Information Manual

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<th>Page Number / Item</th>
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<tr>
<td>Annual Review</td>
<td>May 1, 2002</td>
<td>Dr. T. Mazzulli</td>
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<td>May 12, 2003</td>
<td>Dr. T. Mazzulli</td>
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<td>Annual Review</td>
<td>May 26, 2004</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Multiple resistant organism multidrug bactericidal testing at CHEO – added</td>
<td>September 11, 2004</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>CHEO instruction for Transplant team when requesting testing.</td>
<td>December 16, 2004</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>May 12, 2005</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Send-out Bench duties</td>
<td>April 01, 2006</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Malaria send-out protocol moved from Parasitology Manual</td>
<td>April 01, 2006</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>SEND OUT to PHOL procedure for after-hours, weekends and holidays added</td>
<td>April 01, 2006</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>April 1, 2006</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Histoplasma antigen send-out procedure added</td>
<td>August 26, 2006</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Slit Skin send-out procedure added</td>
<td>August 26, 2006</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Removed Malaria coverage section</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Added Parasite reporting procedure</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Modified printing PHOL requisition (from LIS)</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Removed UHN printing of PHOL requisition</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Added - Printing PHOL Requisition from Softlab for Serology Tests</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Revised Histoplasma Ag, Blastomysis Ag and Slit Skin Send out</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>March 14, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Send-out Bench duties #24, revised – remove ureaplasma, mycoplasma</td>
<td>May 01, 2007</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>New PHOL forms implemented</td>
<td>November 15, 2007</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>April 15 2008</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Slit Skin for Leprosy specimen collection link added</td>
<td>January 25, 2009</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Annual Review</td>
<td>April 15 2009</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>June 10, 2010</td>
<td>Dr. T. Mazzulli</td>
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**Policy # MI_SO**

**Section:** Bacteriology Procedures

**Subject Title:** Send-out Information Manual

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<tr>
<td>Annual Review</td>
<td>June 10, 2011</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td><strong>Send-out Shipping Information Table added</strong></td>
<td>June 05, 2012</td>
<td>Dr. T. Mazzulli</td>
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<td>Annual Review</td>
<td>June 05, 2012</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>June 05, 2013</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Updated Headers/footers, UHN log, Miravista req Review of Requisitions printed and procedures</td>
<td>August 23, 2014</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Added CJD procedure link</td>
<td>August 23, 2014</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>August 23, 2014</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>General PHOL Delivery Information</td>
<td>January 20, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Addition of MERSCoV and BACTERIOLOGY MOLECULAR DETECTION SENDOUTS</td>
<td>February 17, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Updated after hours/stat send to PHOL, merged in General PHOL inquiries with this.</td>
<td>April 1, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Updated link to sick kids fungus pct</td>
<td></td>
<td></td>
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<tr>
<td>Added KJV courier protocol</td>
<td>May 1, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Added Courier table</td>
<td></td>
<td></td>
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<tr>
<td>Moved Serology Workflow to Workflow manual</td>
<td>May 5th, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Added FEDEX courier protocol</td>
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<tr>
<td>Annual Review</td>
<td></td>
<td></td>
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<tr>
<td>Updated Molecular bacte test requisition with July 14th version.</td>
<td>August 1, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Added comment when sending out for metagenomic assay:</td>
<td>October 1, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>&quot;This specimen has been sent to Public Health Ontario Laboratories (PHOL) for metagenomic analysis (a research use only assay). Results will be communicated verbally directly from PHOL to the requesting physician, Dr. ______. If you have any questions or would like to receive a verbal result, please contact Dr. Samir Patel from PHL at 647-792-3172.&quot;</td>
<td></td>
<td></td>
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<tr>
<td>Added MERS under VIROLOGY MOLECULAR DETECTION SEND OUTS section</td>
<td>October 20, 2015</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>Created instructions for Measles PCR send out.</td>
<td></td>
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<tr>
<td>Added link to PHL sendout for Zika Virus</td>
<td>January 27, 2016</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae</em> send out instructions added.</td>
<td>February 25, 2016</td>
<td>Dr. T. Mazzulli</td>
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### Page Number / Item

<table>
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<tr>
<th>NICU HIV Testing moved to serology section. HIV testing procedure changed from sick kids to PHOL send out.</th>
<th>March 24, 2016</th>
<th>Dr. T. Mazzulli</th>
</tr>
</thead>
</table>
| Zika Virus changes:  
  - Changed from a serum & plasma to 2 serum samples  
  - Updated orderable specific for Cerner and Citrix  
  Added for required information: “The required information is mandatory upon ordering in EPR/CERNER and can be found in the LIS order comment when accessioning specimen.” | April 5, 2016 | Dr. T. Mazzulli |
| Annual Review  
  Updated MSH logo in header  
  Addition of Referral laboratory test dictionary section  
  Removed Resulting report section to Refer-out Test Results Reporting Procedure QPCMI17001. | May 5, 2016 | Dr. T. Mazzulli |
| Under Bacteria Molecular testing section of BACTERIOLOGY MOLECULAR DETECTION SENDOUTS added: “For approved Molecular Microbiology tests performed at Sick Kids hospital, complete the Sick Kids Molecular Microbiology PCR order form. Pack and send sample through KJV Courier.” | July 14, 2016 | Dr. T. Mazzulli |
| Updated NICU HIV procedure to include updated requisition format and step to highlight both tests requested on requisition. | July 22, 2016 | Dr. T. Mazzulli |
| ASOT serology to HSC added | July 24, 2016 | Dr. T. Mazzulli |
| Updated NICU HIV procedure to:  
  - Process STAT  
  - Always order HIV PCR  
  - Notify if there was problem ordering  
  - Use print scheduler for requisition  
  - Show specimen to senior before sending  
  - Package separately: HIV PCR attn. Jocelyn  
  - Send by Courier if misses routine PHL pick up in am  
  - Instructions to manage samples if serology/CD4/1 or 2 samples are received | December 9, 2016 | Dr. T. Mazzulli |

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UNIVERSITY HEALTH NETWORK/_MOUNT SINAI HOSPITAL, DEPARTMENT OF MICROBIOLOGY

Management System\UHN\Mount Sinai Hospital Microbiology\Standard Operating Procedures\Bacteriology Procedures\
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<tbody>
<tr>
<td>Annual Review</td>
<td>May 05, 2017</td>
<td></td>
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<tr>
<td>Updated NICU HIV procedure to:</td>
<td>March 05, 2018</td>
<td>Dr. T. Mazzulli</td>
</tr>
<tr>
<td>- Use HIV form not neonatal HIV PCR form</td>
<td></td>
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<tr>
<td>- Updated email to fax requisition for PHOL notification.</td>
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<tr>
<td>Inserted links for PHOL after hours specimen dropoff</td>
<td></td>
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<tr>
<td>Page 34-47 Appendix II Virology PHOL Pending List added</td>
<td>May 31, 2018</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>October 08, 2019</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>pg 3 added Mayo Clinic to Referral table</td>
<td></td>
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<tr>
<td>pg 5-6 updated send-out procedure for QFTB; added send-out procedure for H. pylori</td>
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<tr>
<td>Pg 20 all CT+ rectal swabs to be sent to NML for LGV</td>
<td>October 30, 2019</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Addition of 16s notification form</td>
<td>August 20, 2020</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Annual Review</td>
<td>August 31, 2020</td>
<td>Dr. T. Mazzulli</td>
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<tr>
<td>Updated Measles/Mumps/MERS:</td>
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<tr>
<td>- Removed notification to microbiologist</td>
<td></td>
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<tr>
<td>- Updated process to notify IPAC and send samples to PHOL right away (do not wait until morning)</td>
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<tr>
<td>Updated QUANTIFERON TB (QFT) procedure from SickKids requisition</td>
<td>September 25, 2020</td>
<td>Dr. T. Mazzulli</td>
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Full document review included in all updates. Bi-annual review conducted when no revision had been made within 2 years.

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<tr>
<td>Updated Baby HIV PCR with tube type, contact info, and test collect/receipt info</td>
<td>Jan 13, 2021</td>
<td>Dorna Zareianjahromi</td>
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<tr>
<td>Minor formatting change</td>
<td>April 11, 2021</td>
<td>Jessica Bourke</td>
</tr>
<tr>
<td>Added section on Simian B virus antibody testing</td>
<td>May 6, 2021</td>
<td>Wayne Chiu</td>
</tr>
<tr>
<td>Clarified instructions TB quantiferon from Sinai outpt</td>
<td>July 9, 2021</td>
<td>Wayne Chiu</td>
</tr>
<tr>
<td>Added PHOL Duty officer contact information to measles section and MERS section, also PHOL section</td>
<td>Oct 15, 2021</td>
<td>Wayne Chiu</td>
</tr>
<tr>
<td>Added section for strongyloides serology, PHOL update</td>
<td>Feb 10, 2022</td>
<td>Wayne Chiu</td>
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<tr>
<td>Added approval needed for non-donor/non-recipient blood and CSF for WNV PCR testing to PHL</td>
<td>Mar 11, 2022</td>
<td>Qin Liu</td>
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<tr>
<td>Added info regarding zika molecular sendout</td>
<td>Mar 16, 2022</td>
<td>Wayne Chiu</td>
</tr>
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<td>Edited by:</td>
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<td>Added section “checking orders for IGM PHL sendout”</td>
<td>March 26, 2022</td>
<td>Wayne Chiu</td>
</tr>
<tr>
<td>Updated sendout frequency for measles mumps</td>
<td>June 23, 2022</td>
<td>Wayne Chiu</td>
</tr>
<tr>
<td>Add link for monkeypox</td>
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<tr>
<td>Minor formatting change</td>
<td>November 24, 2022</td>
<td>Wayne Chiu</td>
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<tr>
<td>Minor formatting change</td>
<td>March 24, 2023</td>
<td>Oliver Li</td>
</tr>
<tr>
<td>Added the followings to Baby NICT HIV testing</td>
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<tr>
<td>• Send <strong>EDTA Whole Blood</strong></td>
<td>April 03, 2023</td>
<td>Qin Liu</td>
</tr>
<tr>
<td>• <strong>Do NOT centrifuge</strong> the blood</td>
<td></td>
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<tr>
<td>Addition: APPENDIX III: UHN MANAGED MICROBIOLOGY SEND OUT TESTS FOR UHN PATIENTS</td>
<td>May 4, 2023</td>
<td>Jessica Bourke</td>
</tr>
<tr>
<td>Updated Measles/Mumps STAT procedure. For bacteriology send-outs added:</td>
<td></td>
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<tr>
<td><em>Note: When possible (when sufficient quantity is received), especially when only referred out test is requested, a portion of sample should be maintained in house for tissue, sterile sites etc</em></td>
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<tr>
<td>Updated send-out for MERS-CoV or Avian Flu (pg 23):</td>
<td>June 21</td>
<td>Qin Liu</td>
</tr>
<tr>
<td>Added notes for Avian Flu PCR send-out</td>
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