LABORATORY REQUISITIONS

Starting July 11, 2006 the lab is requesting the following:

-for each person having a lab specimen collected and sent to Sioux or places further the lab requisition is to be faxed to Sioux Lookout as soon as specimen is collected

-you do not need to fax each requisition for a patient with multiple requisitions

-use the following **fax numbers**

807-737-5121

or

807-737-5115

General Specimen Collection

lursing Station Manual	**Title: Laboratory Staffing**
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
Approved by: Laboratory Director	Review Date:

Laboratory Staffing:

The SLMHC Lab is staffed from 0700 – 2300 hours Monday through Friday. Saturday, Sunday and Statutory holidays are staffed from 0700 – 1600 hours.

Walk in Out-Patient Sample Collections are performed Monday through Friday from 0800 – 1630 hours (holidays excluded).

Contact Numbers:

The Laboratory can be contacted by telephone via the hospital switchboard at 807-737-2877 or 807-737-3030.

Laboratory Department Extensions are as follows:	
All Departments	4800
Specimen Receiving	4801 / 4802
Chemistry	4807
Hematology	4804
Microbiology	4809
Transfusion Medicine	4803
Lab Manager	6571
Laboratory Fax Number is 807-737-5254	

Authority to Order Tests:

Laboratory personnel must not perform tests unless these procedures have been ordered by an Ontario physician, Nurse Practitioner or Midwife or other prescribed person as defined in Regulation 692. Patients from outside Ontario requiring blood work must be seen by a member of our Medical Staff either through the Emergency Room or the Clinic. When abnormal results would signify further testing not yet ordered, the Laboratory should notify the physician of the results and obtain orders to proceed with further testing. These orders must be followed-up in writing.

The Laboratory shall also provide services as required for the following departments or committees:

- Personnel (Employee) Health Services
- Infection Control Committee
- Occupational Health and Safety Committee

lursing Station Manual	Title: Introduction
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
Approved by: Laboratory Director	Review Date:

Introduction:

This Manual is intended to keep Nursing Station staff informed about Laboratory protocols. Co-operation between these members and the Laboratory staff is essential to provide prompt and optimal service to our patients.

Quality Control programs have been in operation in the laboratory for some time, whereby all procedures are monitored on a continuing daily basis. Our laboratory is inspected and licensed by the Ontario Ministry of Health and we participate in the OMA Quality Management Program-Laboratory Services (QMP-LS) Proficiency Testing and Accreditation Program.

We are striving to keep abreast of the new developments in a rapidly changing field, and are trying to provide our patients with the best in Laboratory Service.

We welcome your comments and suggestions. Please do not hesitate to contact us if there are any problems or questions.

Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
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Ordering Laboratory Tests (continued):

Note: Critical information includes:

Test	Essential Clinical Information
Microbiology:	
All specimens	Pregnancy status, immune status, antibiotic allergies, previous failed antibiotic treatments, present antibiotic treatment, if applicable.
Wound Swabs/Sterile Sites/Chlamydia	Body Site
Parasitology	Travel History, immune status
Blood cultures	Prolonged incubation time required, if applicable (ie endocarditis, Brucellosis, fever unknown origin)
Genital	Vaginal, cervical or rectovaginal site
Molecular Diagnostics:	
Human Papillomarivrus (HPV)	PAP smear history of ASCUS
Therapeutic Drug Monitoring:	
Aminoglycosides/Vancomycin	Peak/Trough collection, if applicable
Other TDM	Time since last dose
Overdoses	Time of ingestion

4.0. Procedural Notes:

4.1. Whenever possible use an addressograph card to transcribe the patient demographics on to the requisition. Ensure that all information from the addressograph is legible on the requisition.

4.2. The physician name and community address of the Nursing Station where the specimens were collected must be indicated on the requisition.

4.3. One requisition per patient must be faxed to the SLMHC Laboratory or Health Records Department after collection of the specimens to facilitate registration into the Hospital Information System and to confirm up to date demographics. Failure to do so may result in a service delay.

ursing Station Manual	**Title: Ordering Laboratory Tests**
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
Approved by: Laboratory Director	Review Date:

Ordering Laboratory Tests:

1.0. Purpose:

In order for the physician orders to be efficiently and effectively completed, it is imperative that the orders for lab work are communicated to the laboratory in an accurate and timely manner. The following procedure outlines the steps to communicate laboratory orders to the laboratory.

2.0. Equipment:

- Patient Chart
- Appropriate Laboratory Requisition

3.0. Procedure:

3.1. Locate the appropriate laboratory requisition for the laboratory testing that have been ordered by the physician.

3.2. Accurately transcribe the patient information and test requests on to the requisition. Information on the requisition and/or the specimens **MUST MATCH**. The following information **MUST** be included on the Requisition:

- Full name (first and last name)
- Unique Hospital ID#
- Date of Birth
- Health Card # and address
- Gender
- Ordering Physician
- Family physician if different from ordering physician
- Patient location
- Type of specimen
- Time collection required if a timed collection
- Date and time of collection
- Initials of collector
- Examinations required
- Clinical information when required.*
- Priority (Routine, ASAP, STAT)

ursing Station Manual	Title: Prioritizing Laboratory Tests
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
Approved by: Laboratory Director	Review Date:

Prioritizing Laboratory Tests:

1.0. Purpose:

In order for Laboratory Staff to be able to prioritize their work effectively, information about the urgency of the test results is required. Three levels of priority have been established and these goals for lab response have been followed throughout the hospital. Excessive or unnecessary use of Urgent and STAT priorities is wasteful of the lab resources and may delay all test results.

2.0. Categories:

Priority	Triage Code	Time of Final Report
Routine	Non-Urgent / Scheduled	4-6 hrs from Receipt
Urgent	ASAP	<2 hrs from Receipt
STAT	Resuscitation / Emergent	<1 hr from Receipt

3.0. Procedural Notes:

3.1. Although the test results on every patient are important, the laboratory cannot process every test request as STAT or Urgent. **Please use discretion when using these terms and save them for true emergencies.**

3.2. **Tests can only be ordered "STAT" on a Physician's request.** When a "STAT" test is received in the Laboratory, all other testing is re-prioritized to complete the "STAT" in a timely manner.

3.3. The above are goals only and may not be attainable at all times for various reasons (ie. equipment failure, test volumes, staffing levels).

ursing Station Manual	**Title: Patient Identification**
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
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Patient Identification:

1.0. Purpose:

To reliably identify the individual as the person for whom the service or treatment is intended and to match the service or treatment to that individual.

2.0. Policy:

Patients are identified at the point the patient enters the Health Care Centre. To improve the accuracy of patient identification, use at least two patient identifiers whenever administering blood products, taking blood samples and other specimens for clinical testing, or providing any other treatments or procedures.

3.0. Procedure:

Two aspects of patient identification include "identifiers" and "sources".

3.1. The following identifiers are approved for positive identification of all patients:

- Patient name
- Date of birth
- Medical Record number
- Health Card number
- Government-issued photograph identification (ie driver's license)

3.2. Sources of the patient identifiers may include:

- Patient
- Relative (parent, spouse, adult sibling, adult child)
- Guardian
- Domestic partner
- Transferring facility if the patient is unable or surrogate is unavailable

Nursing Station Manual	**Title: Identification of Patient prior to Specimen Collection**
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
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Identification of Patient prior to Specimen Collection:

1.0. Purpose:

To ensure correct identification of all patients prior to collection of a laboratory specimen.

2.0. Equipment:

Where required, identification band attached to the patient, usually on the wrist.

3.0. Procedure:

3.1. For out patients, if patient is conscious and apparently competent, you may presumptively make an ID by asking his/her full name and date of birth.

3.2. For inpatients, also confirm ID by armband, ensuring that armband and requisition agree. The armband must be attached to the patient.

3.3. Specimens from patients for transfusion (crossmatch) testing, will not be accepted from the Nursing Station. Positive identification from the time of specimen collection to the completion of the transfusion episode, is not possible from remote locations.

3.4. If errors or discrepancies are found during the process of ID, specimens must not be collected until the problem has been satisfactorily resolved.

3.5. If names do not correlate or if the patient is without an armband or unconscious, have a nurse or family member identify patient. Note the family member's or nurse's name and the fact that she identified the patient on the requisition.

3.6. To identify unidentified emergency patients (i.e. in a disaster), identify the patient using a special identifier that is attached to the patient.

3.7. The parent, guardian or nurse may identify a pediatric patient.

lursing Station Manual	**Title: Specimen Labeling**
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
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Specimen Labeling:

1.0. Purpose:

This procedure provides instructions for labeling specimens.

2.0. Scope and Related Policies:

- Patient Identification on the specimen must match the patient identification information on the requisition, if applicable, or the electronically transmitted data.

For reasons stated above, and to avoid the potential for error and legal liability, Ontario's medical laboratories have adopted strict criteria for rejection of unlabeled or mislabeled specimens.

2.1. Label the specimens with patient's **full** name (as shown on the Health Card), unique identifier ie HC# or date of birth, phlebotomist's initials, date and time of collection. (Band number is not an acceptable unique identification)

2.2. For samples collected into microtainers or plain glass tubes, label the specimen using a permanent marker.

2.3. Any specimens other than identifiable blood, must have the source and/or type (ie throat, citrated plasma, urine etc) written on the label.

2.4. Specimens submitted on slides must have the patient's full name (last name, first name) and date of collection handwritten on the frosted area or on a label directly attached to the slide.

4.0. Procedural Notes:

4.1. Specimen labeling must be complete before leaving the patient's side.

5.0. References:

5.1. OLA Requirements.

Nursing Station Manual	**Title: Specimen Quality Assurance**
Section: General Information	Original Preparation Date: January 2006
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7.6. Other Factors: Age, gender and pregnancy have an influence on laboratory testing. Normal reference ranges are often noted according to age. Documentation of pregnancy should be included if applicable on the ordering requisition.

ursing Station Manual	**Title: Specimen Quality Assurance**
Section: General Information	Original Preparation Date: January 2006
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Specimen Quality Assurance (continued):

4.2. Coagulation samples for APTT assays (not receiving heparin) must be collected to a full draw and are allowed a time interval of no more than 4 hours between venipuncture and testing. Specimens can be centrifuged separated and frozen, as in 4.1 if needed.

5.0. Hematology:

5.1. CBC (EDTA) specimens can be refrigerated 24-48 hours without affecting cell counts or morphology.

5.2. Specimens for ESR analysis must be tested within 4 hours of collection in the nursing station.

5.3. Reticulocyte counts drawn into EDTA tubes are stable for up to 6 hours at room temperature.

6.0. Microbiology:

All specimens should be stored at room temperature.

7.0. Procedural Notes:

7.1. **Therapeutic Drug Monitoring:** Different pharmacologic agents have patterns of administration, body distribution, metabolism, and elimination that affect the drug concentration as measured in the blood. Many drugs will have "peak" and "trough" levels that vary according to dosage levels and intervals. Check for timing instructions for drawing the appropriate samples with the referral laboratory.

7.2. **Effects of Exercise:** Muscular activity has both transient and longer lasting effects. The creatinine kinase (CK), aspartate aminotransferease (AST), lactate dehydrogenase (LDH), and platelet count may increase.

7.3. **Stress:** May cause transient elevation in white blood cells (WBC's) and elevated adrenal hormone values (cortisol and catecholamines). Anxiety that results in hyperventilation may cause acid-base imbalances, and increased lactate.

7.4. **Diurnal Rhythms:** Diurnal rhythms are body fluid and analyte fluctuations during the day. For example, serum cortisol levels are highest in early morning but are decreased in the afternoon. Serum iron levels tend to drop during the day. You must check the timing of these variations for the desired collection point.

7.5. **Posture:** Postural changes (supine to sitting, etc.) are known to vary lab results of some analytes. Certain larger molecules are not filterable into the tissue, therefore they are more concentrated in the blood. Enzymes, proteins, lipids, iron and calcium are significantly increased with changes in position.

ursing Station Manual	**Title: Specimen Quality Assurance**
Section: General Information	Original Preparation Date: January 2006
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Specimen Quality Assurance:

1.0. Purpose:

To ensure the integrity of each laboratory specimen in order to produce accurate and meaningful results.

2.0. General Information:

2.1. All specimens should be transported to the laboratory as soon as possible following collection.

2.2. Urine specimens for routine urinalysis must be tested within two hours of collection. Urine specimens greater than two hours old are not acceptable for microscopic analysis and therefore cannot be sent from the stations to the SLMHC Laboratory for examination.

2.3. SST specimens must be allowed to clot for 10-15 minutes, then centrifuged at 3500rpm for 10 minutes.

2.4. Tubes of blood should be placed in a vertical, closure up position after collection.

2.5. Avoid exposing blood specimens to artificial light or sunlight.

2.6. Unless otherwise indicated, serum or plasma must be separated from red cells within 2 hours of collection.

2.7. Tubes of blood are to be kept closed at all times.

2.8. The volume of blood must be sufficient to ensure accurate testing, full draws are recommended.

2.9. Examine plasma and serum for hemolysis and icteria, after centrifugation, if hemolyzed, recollect.

2.10. Specimens must not be re-centrifuged. Follow the appropriate centrifugation times.

3.0. Chemistry / Serology:

3.1. Separated serum/plasma shall not remain at room temperature for more than 8 hours. Samples must be stored at 4°C or frozen within 48 hours in order to preserve the concentration of analytes. Follow instructions for specific tests, which may require immediate freezing

4.0. Coagulation:

4.1. Coagulation specimens for PT/INR assays must be collected to a full draw (to the etched line on the tube) and are allowed a time interval of no more than 24 hours between venipuncture and testing. Specimens can be centrifuged if delay is greater than 24 hours, but not before. The plasma must then be removed from the cells and frozen ensuring that the transport vial containing the plasma is labeled as "PLASMA" and is transported maintaining a frozen state.

Nursing Station Manual	Title: **Specimen Rejection**
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
Approved by: Laboratory Director	Review Date:

3.0. Procedural Notes:

3.1. When a specimen is deemed unacceptable, the physician/nurse in charge must be notified; the requisition will be returned to place of origin with a note for repeat collection.

3.2. Documentation of all problems relating to unsuitable specimens, requisition completion, labeling of specimens must be made in ledger for Specimen Rejection. Documentation must include: date/time, person contacted, technologist's initials and nature of problem. Request for repeat specimen must also be stated. The specimen will be accessioned as per usual, after the tests are ordered – they must then be cancelled and a comment entered indicating the reason for rejection.

3.3. Risk Management:

3.3.1. Inappropriate specimens should not be processed.

3.3.2. Deviations from any SOP requires the approval of the Section Head / Laboratory Manager and the Laboratory Director. (see next page)

3.3.3. Deviations shall be documented in an Occurrence Log or with an Occurrence Report for review by the Laboratory Manager and the Laboratory Director.

3.3.4. If an SOP does not exist for a particular situation, notify the Laboratory Manager immediately for further instructions.

Should a Supervisor be unavailable for assistance err on the side of caution. Perform the testing and bring this situation to the attention of management ASAP.

3.3.5. Provide the disclaimers where appropriate regarding specimen suitability, etc.

4.0. References:

4.1. Manual of Clinical Microbiology, 5th ed. Balows, A.; ASM, 1991.

4.2. Laboratory Quality Assurance, Howanitz, Peter, Howanitz, Joan. McGraw-Hill, 1987.

4.3. CLSI, Procedures for Collection of Diagnostic Blood Specimens by Venipuncture, 3rd ed; 1991.

4.4. North Branson Hospital "Laboratory Criteria for Unacceptable Specimens," 1990.

4.5. MLO Journal, March 1995. "Creating a workable specimen rejection policy," pp 37-42.

4.6. OAML Guidelines for Clinical Laboratory Practice: Guideline for the Rejection of Unlabelled Specimens; 1996.

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2.2.2. ➢ **Glass Slides:**

➢ Glass Slides MUST have the patient's name clearly printed in pencil on the slide. Under no circumstances will laboratory staff transcribe the patient's name onto the slide.

An unlabelled or improperly labelled slide and any associated material will be returned with a notation indicating that testing has not been done as the laboratory was unable to identify the patient from whom the specimen was obtained.

2.2.3. ➢ **Mismatched Specimens** are defined as specimens which are submitted with a requisition on which the identifying information does not exactly match that which appears on the specimen. There may be a mismatch of either the first name or surname. For instance, the requisition may bear the patient's nickname while the specimen label, generated from the health card, bears the patient's full name. Or the patient may be identified by a married name or hyphenated name on the health card and may be known to the physician by her own family name.
In these instances, the laboratory should contact the physician to verify that the requisition and specimen pertain to the same patient. The date, time and results of the conversation should be recorded and a note added to the requisition indicating that the change has been made, consistent with the physician's instructions. If no contact can be made with the physician, the laboratory shall do the testing and add a disclaimer to the report to the physician, indicating that the specimen and requisition did not match and that the results of test should be interpreted with care.

2.2.4. ➢ **Unlabelled Specimens / No Requisition:**

Unlabelled specimens submitted without an accompanying laboratory requisition will be rejected. No testing will be done and no report will be generated.

2.2.5. ➢ **Unlabelled Specimens / Requisition:**

Unlabelled specimens received with a test requisition will be rejected. The laboratory may contact the physician to inform him/her that unlabelled specimens have been received with a requisition. The laboratory will not seek confirmation that the specimens are associated with the requisition. The requisitions will be accessioned and the laboratory report will indicate that no testing was done for the specimens.

lursing Station Manual	**Title: Specimen Rejection**
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2.2. Criteria for Specimen Rejection:

2.2.1. ➢ **Difficult to Collect and Irretrievable Samples** require a different procedure from those procedures for samples that may be readily recollected. The following listing is not inclusive but indicates those difficult to collect or irretrievable samples to which special attention should be paid by both the physician and the laboratory:

- Histopathology/cytology specimens (other than PAP smears, urines and sputums)
- Body fluid (ie. CSF)
- Blood culture in height of fever *
- Biopsies
- Kidney stones
- IUD's for culture

* *Adult: 8 -10 ml is an acceptable draw*

* *Pediatric: 0.5 – 5 ml is an acceptable draw*

For the above noted specimens submitted unlabelled, testing may be performed. The laboratory will contact the physician to advise that unlabelled specimens have been received. The laboratory should make no effort to verify the identity of the patient. An oral report of the results of testing on the unlabelled specimens will be provided but a note should be made on the written test report indicating that unlabelled specimens were received and test reports must be interpreted with caution.

Blood cultures with too little or too much sample will be processed however the test reports must be interpreted with caution.

Some analytes are more affected by hemolysis than others. If a hemolyzed sample is irretrievable, test and use canned comment "Hemolyzed" by pressing F5 and typing hemolyzed in result comment field. Some Haematology parameters and coagulation results are affected. (refer to the Hematology and Coagulation manuals)

If a lipemic sample is irretrievable, test and use canned comment "LIPEMIC" by pressing F5 and typing "LIPEMIC" in result comment field. Some Haematology parameters and Coagulation results are affected. (refer to the Haematology manual)

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Specimen Rejection:

1.0. Principle:

1.1. Of paramount importance is preventing the inappropriate acceptance of a specimen that could negatively impact a patient's well being by causing inappropriate treatment.

1.2. A specimen must be "unequivocally associated" with the test requisition.

2.0. Criteria:

2.1. Criteria for Unacceptable Specimens:

2.1.1. Requisitions:

Requisitions must accompany <u>all</u> specimens, must be legible and must include:

2.1.1.1. Complete name. Last name first, proper given name. Check for proper spelling.
2.1.1.2. Gender and date of birth
2.1.1.3. Health Card Number and Address
2.1.1.4. Patient location (ie. room number, OP, EOR, RI, etc.)
2.1.1.5. Ordering as well as family physician, if different
2.1.1.6. Pertinent patient history to assist Laboratory in testing and antibiotic treatment where appropriate.
2.1.1.7. Type of specimen
2.1.1.8. Date / time specimen collected
2.1.1.9. Initials of individual collecting specimen
2.1.1.10 Examinations required

Note: Where the requisition is not properly completed, the person responsible for the collection will be contacted to correct the problem. The specimen will be processed but no report will be issued until the requisition is completed. Urgent specimens will be processed and reported (verbally). Written report will be given when requisition complete.

2.1.2. Specimens:

Specimen must be labelled (legibly) with full patient name (as shown on the Health Card) collection date/time and initials of person collecting specimen and either the Health Card number or Date of Birth.

rsing Station Manual	Title: Safety
Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
Approved by: Laboratory Director	Review Date:

Safety:

1.0. Purpose:

Because of contacts with sick patients and their specimens, it is important to follow safety and infection control procedures.

2.0. Procedure:

Protect Yourself:

2.1. Practice universal precautions:

- Wear gloves and a lab coat or gown when handling blood/body fluids.
- Change gloves after each patient or when contaminated.
- Wash hands frequently.
- Dispose of items in appropriate containers.

2.2. Dispose of needles immediately upon removal from the patient's vein. Do not bend, break, recap, or re-sheath needles to avoid accidental needle puncture or splashing of contents.

2.3. Clean up any blood spills with a disinfectant such as freshly made 10% bleach.

2.4. If you stick yourself with a contaminated needle:

- Remove your gloves and dispose of them properly.
- Squeeze puncture site to promote bleeding.
- Wash the area well with soap and water.
- Record the patient's name and ID number.
- Follow your institution's guidelines regarding treatment and follow-up.

Protect the Patient:

2.5. Place blood collection equipment away from patients, especially children and psychiatric patients.

2.6. Practice hygiene for the patient's protection. When wearing gloves, change them between each patient and wash your hands frequently. Always wear a clean lab coat or gown.

Section: General Information	Original Preparation Date: January 2006
Written / Issued by: Laboratory Manager	Revision Date: 12/05/2012
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Ordering Laboratory Tests (continued):

5.0. References:

5.1. CLSI H3-A5: Procedures for the Collection of Diagnostic Blood Specimens by Venipuncture - Fifth Edition.

5.2. OLA Requirements and Guidance Information, Version 3, September 2005.