LABORATORY SPECIMEN RECEIVING, HANDLING, AND TRANSPORTATION

2020-2022

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Updated on: 2nd February 2020
I: SPECIMEN HANDLING AND RECEIVING:

1. PURPOSE:

1.1 The objective of this Standard Operating Procedure (SOP) is to describe the necessary stepwise procedures relevant to receiving, handling and transporting of specimens submitted to the Central Specimen Receiving & Processing (CSRP) in the Department of Laboratory Medicine and Pathology (DLMP) located at Qatar Rehabilitation Institutes (QRI), 3rd floor from all HMC locations (OP & IP) as well as from the outside clients, government, semi government and private.

2. Acronym List:

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>QRI</td>
<td>Qatar Rehabilitation Institutes</td>
</tr>
<tr>
<td>ACC</td>
<td>Ambulatory Care Center</td>
</tr>
<tr>
<td>WWRC</td>
<td>Women’s Wellness and Research Center</td>
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<tr>
<td>HGH</td>
<td>Hamad General Hospital</td>
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<tr>
<td>AWH</td>
<td>Al Wakra Hospital</td>
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<tr>
<td>AKH</td>
<td>Al Khor Hospital</td>
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<tr>
<td>NCCCR</td>
<td>National Center for Cancer Care and Research</td>
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<td>HH</td>
<td>Heart Hospital</td>
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<td>RH</td>
<td>Rumailah Hospital</td>
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<tr>
<td>CH</td>
<td>Cuban Hospital</td>
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<tr>
<td>HMGH</td>
<td>Hazm Mebaireek General Hospital</td>
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<td>SMC</td>
<td>Staff Medical City</td>
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<td>CDC</td>
<td>Communicable Disease Center</td>
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<td>PSY</td>
<td>Psychiatry</td>
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<td>FBJ</td>
<td>Fahad Bin Jassim Kidney Centre</td>
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<td>PEC</td>
<td>Pediatric Emergency Center</td>
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<tr>
<td>CCL</td>
<td>Clinical Core Laboratory</td>
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<tr>
<td>RRCL</td>
<td>Rapid Response Core Lab</td>
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<tr>
<td>HBK-CP</td>
<td>Hamad Bin Khalifa- Central Processing (Cerner encounter)</td>
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<tr>
<td>PHCC</td>
<td>Primary Health Care Corporation including QUN</td>
</tr>
<tr>
<td>QBB</td>
<td>Qatar Bio Bank</td>
</tr>
<tr>
<td>HHCS</td>
<td>Home Health Care (MDS, HHCS &amp; Ambulatory Service)</td>
</tr>
<tr>
<td>Private Clinics</td>
<td>Doha Clinic, Al Ahli Hospital, Al Emadi Hospital, Micro Health</td>
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<tr>
<td>PTS</td>
<td>Pneumatic Tubing System</td>
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<tr>
<td>Non HMC Clients</td>
<td>Ahmed Bin Mohammed Military College</td>
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<td></td>
<td>Army Clinics</td>
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<td></td>
<td>Aspetar</td>
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<td></td>
<td>Internal Security force (ISF)</td>
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<td>Medical Affairs Laboratory</td>
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<td>Medical Commission</td>
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<td></td>
<td>Mowasalat Clinic</td>
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<td>Police Clinic</td>
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<td></td>
<td>Primary Health Care Center (PHCC)</td>
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<td></td>
<td>QP Doha Clinic</td>
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<td></td>
<td>QP Dukhan Clinic</td>
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</tbody>
</table>
3. DOCUMENTATION:

3.1 As per DLMP policies and procedures.
3.2 As per HMC corporate policies.
3.3 Rejection Sheet: PCR-PM-001-002-020-01 Specimen Rejection Sheet
3.4 Handover book: PCR-PM-001-002-022-01 HAND-OVER
3.5 Verify the Accuracy Of Information Of Irretrievable Samples sheet: PCR-PM-001-002-006-01
3.6 Log book using for the ‘STAT’ hematology specimens from inpatient (QRI, ACC, WWRC) and outpatients.
3.7 Log book Singing from inpatients and OPD clinics while receiving histopathology, non-blood specimens (swab, urine and other miscellaneous).
3.8 Cerner Samples- Transfer List: Receiving transfer list for Cerner specimens from HMC and PHCC and dispatching into DLMP labs: PCR-PM-001-002-023-01 Tracking Transfer List From HBK
3.9 Table for Receiving and Dispatching

<table>
<thead>
<tr>
<th>Receiving</th>
<th>Dispatching</th>
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</thead>
<tbody>
<tr>
<td>All PHCC</td>
<td>Virology &amp; Molecular Biology Lab.</td>
</tr>
<tr>
<td>All Hospital</td>
<td>Immunology &amp; Histocompatibility Lab</td>
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<tr>
<td>All PEC</td>
<td>TB Lab</td>
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<tr>
<td></td>
<td>Metabolic Lab</td>
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<td></td>
<td>Cytopathology Lab</td>
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<td></td>
<td>Histopathology Lab</td>
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<td></td>
<td>Al-Khor Microbiology Lab</td>
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<td></td>
<td>Al- Wakra Laboratory</td>
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<td></td>
<td>NCCCR Flow cytometry Lab</td>
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<td></td>
<td>HGH Blood Bank Lab</td>
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<td></td>
<td>Referral Lab located at ACC.</td>
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<td></td>
<td>Cuban Hospital for streptococcal antigen test (According to the stability of the swab and transportation)</td>
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<tr>
<td></td>
<td>Troponin T to Sidra medical center from RRCP</td>
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</tbody>
</table>

3.10 Log book for Signed Transfer list by HBK CP for tracking purposes to AL Wakrah, Cuban, Al Khor and NCCR.
3.11 Private Hospital and Clinics Payment log book.
3.12 RRL Excel Sheet, infinity tracking list and transfer list.
3.13 Daily work sheet: Check Fridge and Transport Boxes, Cleaning centrifuges and work benches, Preparing Disinfectant: PCR-PM-001-002-021-01 DAILY CHECKLIST

4. SPECIMEN REQUIREMENTS:

4.1 Handling and transportation of specimens should be by the Infection Control Standards of Practice, with reference of categories of Isolation precautions as specified in Policy CL 7233.
4.2 Each Specimen must be along with an electronic order or paper request form.

5. POSSIBLE PROBLEMS OR PITFALLS:

5.1 Specimen delivered to the Central Specimen Receiving and Processing (CSRP) are rejected & write on rejection form, inform referring lab/center of rejection by calling with read-back by name & corp# and cancel it in the system for the following reasons:

5.1.1 Unlabeled or mismatched patient identification label.
5.1.2 Request form or Label with insufficient information.
5.1.3 Request form has no physician stamp and / or signature.
5.1.4 Request form received with no mark /mention on the required test.
5.1.5 Wrong tubes or container.
5.1.6 Unspecific/non-standard test names mentioned in the request form.
5.1.7 Leaking or contaminated specimen.
5.1.8 Wrong request form.
5.1.9 Request form received without specimens and vice versa.
5.1.10 Test requested is not available in HMC catalog.
5.1.11 Incomplete information on Cerner specimen labels.
5.1.12 Receiving more than one patient specimen/specimens in one biohazards bag.
5.1.13 Wrong Encounter, canceled order specimens, wrong order by physician & stickers of completed orders.
5.1.14 Specimens with dispatch status should be corrected by informing the concerned staff to login the specimen on their site.
5.1.15 Receiving one specimen with more than one accession number.
5.1.16 Request form without date and time of collection.
5.1.17 Specimens not received as per the specimen stability and transportation requirements e.g. Homocysteine, ACTH, Ammonia, Calcitonin delivered without ice.
5.1.18 Specimen labeled horizontally position. Improper fixing of Cerner stickers on the specimen container.
5.1.19 Blood Bank Specimens delivered to the Central Specimen Receiving and Processing (CSRP) are rejected on rejection paper base form:
5.1.19.1 Incomplete or Missing, name, letters and Stickers.
5.1.19.2 No Clinical Data/Diagnosis.
5.1.19.3 No Doctors signature and stamp.
5.1.19.4 No specimen collector name and corp # or signature
5.1.19.5 No location, no telephone number.
5.1.19.6 No time and date of collection.
5.1.19.7 Missing of any one of the three copies of Blood Bank request form.
5.1.19.8 Cerner Blood Bank specimens received from PHCC without request form.

5.2 Specimen Labeling Correction-Irretrievable specimen

5.2.1 Under normal circumstance, the DLMP doesn’t correct any information on the specimen label and rejects every specimen that is not correctly labeled.
5.2.2 In cases where a mislabeled or unlabeled specimen is irretrievable or where recollection would affect the patient care (e.g. invasively collected sample, intra-operative samples, timed samples, etc.) AND the specimen itself can be identified with reasonable certainty; exceptions to the above policy may be made.
5.2.3 These decisions for exception will be made on a case-by-case basis under the responsibility of the Director/designee, or the pathologist on call.
5.2.4 In cases where the sub-optimal specimen is approved for testing, the patient’s physician or Nurse In-Charge Must accept responsibility in writing for the identification of the specimen being processed. (Appendix A: Form to Verify the Accuracy of Information of Irretrievable Specimen).
5.2.5 In case of the irretrievable specimen, the test will carry the following note. Specimen received with inadequate or discrepant label information, testing approved by a “healthcare provider.”
5.2.6 The irretrievable specimen may include but are not limited to:
5.2.6.1 Bone marrow
5.2.6.2 Tissue
5.2.6.3 Cerebrospinal fluid (CSF)
5.2.6.4 Stones
5.2.6.5 Amniotic Fluid
5.2.6.6 Autopsy
5.2.6.7 Blood Spots (SNS Cards or Postmortem Cards)
5.2.6.8 Body Fluids
5.2.6.9 Neonatal
5.2.6.10 Blood Gas (ABG)
5.2.6.11 Blood, Spleen and/or lymph node specimens from deceased Donor.
5.2.7 If relabeling allowed, the collector is required to attend specimen reclaiming area and relabel specimens filling the (Labeling of Irretrievable Specimens-form). Appendix.4.

5.3 How to report specimen rejections:

5.3.1 For inpatients, the laboratory staff shall inform the Head Nurse/Charge Nurse/Staff Nurse of the unit about the reason of rejection as soon as
possible, who shall notify the requesting physician, and a new specimen shall be ordered and collected if needed.

5.3.2 For outpatients CSRP technical staff informs phlebotomist, then phlebotomists/ Lab Technicians shall be informed who in turn will inform the ordering physician about the rejection and make the arrangement for recollection.

5.3.3 All rejections and communications must be documented in rejection sheet. Report incidents an electronic “Occurrence Variance Report” OVA must be initiated with 24 hours.

5.3.4 For Non-HMC, PHCC and private clinics, CP technical staff must inform the particular private, PHCC and Non-HMC technical staff the reason of rejection and arrange for re-collection if possible and needed.

6. **STEP BY STEP PROCEDURE:**

6.1 **Specimen with Non-Electronic Lab orders:**

6.1.1 Specimens are received in a rack or biohazard plastic bag in a transportation box accompanied by a request form.

6.1.2 The specimen receiving staff receives the specimen and checks for any leakage.

6.1.3 The specimen receiving staff placed the specimen at the assigned bench.

6.1.4 Check specimen label against the request form. The request form should be fully completed with the following information:

6.1.4.1 Patient’s full name and HC number.

6.1.4.2 Patient’s date of birth and sex.

6.1.4.3 Date and time of collection.

6.1.4.4 Type of specimens or specimen.

6.1.4.5 Location addresses and contact details.

6.1.4.6 Adequate clinical data.

6.1.4.7 Test required.

6.1.4.8 Physician stamp.

6.1.4.9 Identification of specimen for STAT tests.

6.1.4.10 Collector initial (Name & corporation number or signature)

6.1.4.11 Specimen registration at CSRP by clerical staff as (Table.1 Specimen Registration)

6.1.4.12 Technical Staff at CSRP must verify the patient information and the requested test before labeling the sample.

<table>
<thead>
<tr>
<th>Laboratory Section</th>
<th>Registration time during working hours</th>
<th>weekends</th>
<th>Storage/ Handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCL (Chemistry &amp; Hematology) Specimens</td>
<td>7:00AM-5:00PM by CSRP clerical staff. 5PM to 7:00AM by CSRP technical staff.</td>
<td>Friday 24 hours by CSRP technical staff. Saturday 7:00AM-3:00PM by CSRP clerical staff.</td>
<td>NA</td>
</tr>
<tr>
<td>Specimens</td>
<td>Collection Times</td>
<td>Registration Hours</td>
<td>Storing Conditions</td>
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<tr>
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<tr>
<td>Virology Specimens</td>
<td>7:00AM-5:00PM by CSRP clerical staff.</td>
<td>3:00PM-7:00AM by CSRP technical staff.</td>
<td>Daily After 1:30 PM, Specimens stored at CSRP, at 2-8°C. For STAT samples, CSRP technical staff must inform virology on-call staff.</td>
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<td></td>
<td>5PM to 7:00AM by CSRP technical staff.</td>
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<td></td>
<td>Friday 24 hours by CSRP technical staff.</td>
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<td></td>
<td></td>
<td>Saturday 7:00AM-3:00PM by CSRP clerical staff.</td>
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<td></td>
<td>3:00PM-7:00AM by CSRP technical staff.</td>
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<tr>
<td>Microbiology Specimens</td>
<td>7:00AM-5:00PM by CSRP clerical staff.</td>
<td>3:00PM-7:00AM by CSRP technical staff.</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>5PM to 7:00AM by CSRP technical staff.</td>
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<tr>
<td></td>
<td></td>
<td>Friday 24 hours by CSRP technical staff.</td>
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<tr>
<td></td>
<td></td>
<td>Saturday 7:00AM-3:00PM by CSRP clerical staff.</td>
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<tr>
<td></td>
<td></td>
<td>3:00PM-7:00AM by CSRP technical staff.</td>
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<tr>
<td>Immunology &amp; Histocompatibility Specimens</td>
<td>7:00AM-5:00PM by CSRP clerical staff.</td>
<td>Friday &amp; Saturday from 3:00PM-7:00AM, Routine specimens keep for the following day for registration. STAT specimens registered immediately.</td>
<td>After 2:30PM &amp; Weekends, specimens are stored at CSRP, at 2-8°C for the next day. Lymphocyte subset specimen stored at room temperature. For STAT samples, CSRP technical staff must inform Immunology on-call staff.</td>
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<tr>
<td></td>
<td>5PM to 7:00AM by CSRP technical staff.</td>
<td>Saturday, 7:00AM-3:00PM by CSRP clerical staff.</td>
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<tr>
<td>Molecular Biology Specimens</td>
<td>Registration Done at Molecular Biology Lab.</td>
<td>Registration Done at Molecular Biology Lab.</td>
<td>Working days after 1:30PM, and weekends specimens are stored at CSRP at 2-8°C. Except, respiratory specimens are stored after 8:00PM at CSRP at 2-8°C.</td>
</tr>
<tr>
<td>Molecular Genetic, Cytogenetic</td>
<td>7:00AM-5:00PM by CSRP clerical staff.</td>
<td>Friday and Saturday after staff at CSRP is registering only if</td>
<td>Working days after 3:00PM &amp; Weekends</td>
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<tr>
<td>Time Period</td>
<td>Department</td>
<td>Notes</td>
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<tr>
<td>5PM to 7:00AM</td>
<td>Technical</td>
<td>by CSRP technical staff.</td>
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<td>After 5:00PM, Routine specimens keep for the following day for</td>
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<td>registration. STAT specimens registered immediately.</td>
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<td>All Cytogenetic and molecular genetic specimens from HMC, CSRP clerical</td>
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<td>staff will do the registration and other non HMC clients Will send</td>
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<td>the request forms along with the specimen to the genetic lab for</td>
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<td>registration. CSRP clerical staff make registration for cyto-</td>
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<td></td>
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<td>genetic sample during week days for chromosomal karyotyping and</td>
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<td></td>
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<td>micro array tests only.</td>
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<tr>
<td>Special Chemistry</td>
<td>7:00AM-5:00PM</td>
<td>by CSRP clerical staff.</td>
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<tr>
<td></td>
<td>5PM to 7:00AM</td>
<td>by CSRP technical staff.</td>
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<td>After 5:00PM, Routine specimens keep for the following day for</td>
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<tr>
<td></td>
<td></td>
<td>registration. STAT specimens registered immediately.</td>
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<td></td>
<td></td>
<td>Friday CSRP Technical staff register from 7:00AM-12:15PM</td>
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<td>Saturday CSRP Clerical staff registers from 7:00AM-12:15PM.</td>
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<td>After 12:15PM, If STAT samples, CSRP staff are registering immediately</td>
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<td></td>
<td></td>
<td>and Routine specimens keep for the</td>
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</tbody>
</table>

There are STAT specimens and routine specimens are kept for the following day for registration. Saturday, 7:00AM-3:00PM by CSRP clerical staff. Working days after 2:30PM the specimens store at CSRP at 2-8°C. Friday & Saturday after 12:15 PM, the specimens store at CSRP at 2-8°C.
<table>
<thead>
<tr>
<th></th>
<th>Registration done at TB Lab.</th>
<th>Registration done at TB Lab.</th>
<th>Working days after 2:00PM and weekends after 1:00PM the specimens store at CSRP at 2-8°C.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TB</strong></td>
<td></td>
<td></td>
<td><strong>Histopathology</strong></td>
</tr>
<tr>
<td></td>
<td>Registration done at Histopathology Lab.</td>
<td>Registration done at Histopathology Lab.</td>
<td>From Sunday to Thursday after 2:30 PM, the specimens are stored at CSRP except specimens from HGH inpatients stored at RRL for dispatching the following day.</td>
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<td></td>
<td>Weekends, specimens are stored at CSRP at 2-8°C.</td>
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<td><strong>Cytopathology</strong></td>
</tr>
<tr>
<td></td>
<td>Registration done at Cytopathology Lab.</td>
<td>Registration done at Cytopathology Lab.</td>
<td>During working days after 2:30PM and weekends, specimens are stored at CSRP at 2-8°C.</td>
</tr>
</tbody>
</table>
| Metabolic | Registration done at Metabolic Lab. | Registration done at Metabolic Lab. | During working days after 2:30PM and weekends (Saturday after 2:00PM), specimens are stored at CSRP at 2-8°C.  
For STAT samples, CSRP technical staff must inform Metabolic on-call staff.  
Amino acid must spin and freeze at -20°C.  
Guthrie Card at room temperature.  
Lab aide of Metabolic receive Amino acid, and Guthrie card on Saturday from 7:00AM-1:00PM.  
During week days, Lab aide from Metabolic lab receive Guthrie card 3 times in a day, at 7:00AM, 10:00AM and 1:00PM.  
Specimens receive on Saturday after 2:00PM must store at CSRP. |

| Table 1 Specimen Registration |

**Note:** Registration at CSRP Sunday to Thursday from 7:00AM-5:00PM and Saturday from 7:00AM-3:00PM by clerical staff, the remaining timings the registration done by CSRP technical staff.
6.1.5 Arrange all specimens in the proper racks and send to the designed section/sections.

6.1.6 STAT Specimens from phlebotomy Labs at QRI, ACC, and WWRC specimens received immediately by (Lab aide window) or through PTS at CSRP.

6.1.7 The minimum requirements for the specimen labeling of specimens received from outside organizations which need to be processed in HMC DLMP and /or to be sent out to referral labs are the following:

6.1.7.1 Patient name
6.1.7.2 Qatar ID. No /Passport
6.1.7.3 Date of Birth
6.1.7.4 Medical records (MR) number (as applicable)
6.1.7.5 Date and Time of specimen collection

6.2 Electronic System (Cerner):

6.2.1 Check the Cerner specimen label

6.3 Exceptions for Laboratory Sections:

6.3.1 Special Chemistry Lab:

6.3.1.1 All specimens received at CSRP must be logged in and dispatched to Special Chemistry lab according to the pre-set transportation schedule. From Sunday to Thursday after working hours 2:30PM and weekends after 12:15PM, the specimens are stored at CSRP at 2-8°C till the next day, then will be sent to special Chemistry Lab.

6.3.1.2 The specimen should dispatch to Special Chemistry Lab along with the transfer list.

6.3.1.3 The transfer list should sign by Special Chemistry technical staff and send it back either the same time of receiving or by the second batch.

6.3.1.4 For Renin and Chromogranin tests, after working hours and weekends, the specimen should be centrifuged and logged in and store the specimen at freezer at -20°C till the next day.

6.3.1.5 According to the stability of Renin and Chromogranin samples, CSRP technical staff must dispatched the specimens (Whole blood) immediately within one hour from the collection time.

6.3.2 Microbiology Lab:

6.3.2.1 Specimens send everyone hour with the transfer list to Microbiology Lab at HGH. STAT specimen must send immediately ex. CSF, Body fluid, Eye swab (Age below 1 month).

6.3.2.2 CSRP technical staff send transfer list along with samples, in order to keep a track/record of the receipt and delivery of specimens between both sites, which will be handed over in the next trip.

6.3.2.3 Transfer list must be signed with:

- Name
6.3.2.4 Non HMC clients, specimens send to AKH for registration and processing, except fungal Fluids, Microbiology Plates test will send to HGH Microbiology Lab for processing.

6.3.2.5 PHCC Microbiology specimens send to HGH Microbiology lab except some health centers, the specimens receive at CSRP, log in, prepare transfer list, send it to Microbiology lab, log in at Microbiology lab, re-routing for the sample, prepare the transfer list, send the specimen back to CSRP-QRI, and the technical staff at QRI-CP dispatch the specimen along with the transfer list that prepared by HGH Microbiology lab to Al khor.

6.3.2.6 All H. Pylori stool specimens must log in at CSRP-QRI, CP technical staff log in the specimen and prepare the transfer list then dispatch the specimen to AKH Microbiology according to the pre-set transportation schedule.

6.3.3 Blood Bank Lab:

6.3.3.1 Specimens receive from HGH inpatient, HGH OPD labs, Private Hospitals, PEC Al Rayan, PEC Al Sadd, must dispatch directly from collection location directly to HGH Blood Bank without passing by QRI-CP.

6.3.3.2 Specimen receive from PHCC, Non-HMC clients, Staff clinic, and Genetic center, QRI-CP technical staff receive, log in, prepare transfer list and dispatch the specimen to HGH Blood bank.

6.3.3.3 Specimens receive from QRI, ACC, WWRC, (Inpatient &Outpatient), QRI-CP staff send the specimen to QRI-Blood bank.

6.3.3.4 If the encounter of Blood bank specimen is not matching to the location that the specimen needs to be proceeded, QRI-CP staff will send the specimen back to the collection area to solve the issue.

6.3.3.5 Blood Bank samples receiving at CSRP requirements:

6.3.3.5.1 Patient name
6.3.3.5.2 Qatar ID. No /Passport
6.3.3.5.3 Date of Birth
6.3.3.5.4 Medical records (MR) number (as applicable)
6.3.3.5.5 Date and Time of specimen collection
6.3.3.5.6 Three copies of Blood Bank request form.
6.3.3.5.7 Even Blood Bank samples are electronically ordered via Cerner system, Blood Bank lab require the request form to be dispatched to them along with the samples.
6.3.4 **Histopathology Lab:**

6.3.4.1 CSRP-CCL receives all Histopathology specimens for 24 hours from QRI, WWRC, ACC inpatient & Outpatient. QRI CP staff log in the sample, prepare the transfer list and dispatch the specimen to Histopathology lab up to 2:30PM from Sunday to Thursday.

6.3.4.2 Histopathology specimen sends from HGH-Inpatient, RRCL receives the specimen and dispatches it directly to Histopathology lab without passing by QRI-CP.

6.3.4.3 Histopathology specimens that receive during weekends and after working hours, the specimen store at CSRP at 2-8°C, till dispatch to Histopathology according to the availability of Histopathology staff or send it the following day at 7:00AM.

6.3.4.4 Histopathology specimens with Fresh or Normal saline must be stored at CSRP at 2-8°C and contact Histopathology lab on call staff.

6.3.4.5 Frozen sections delivered directly to HGH Histopathology lab.

6.3.4.6 Specimens receive from Al Khor and Al Wakra from 7:00AM-3:00PM directly send to Histopathology lab without passing by QRI-CP. After 3:00PM, QRI –CP receive the specimen store at CSRP at 2-8°C till the following day.

6.3.4.7 If the specimen is placed in plain container, CSRP-QRI staff must make sure about the fixative of received specimen by checking the order information in the power chart:

   6.3.4.7.1 Open the power chart
   6.3.4.7.2 Type HC number
   6.3.4.7.3 Click laboratory.
   6.3.4.7.4 Check orders of Pathology
   6.3.4.7.5 Check order information
   6.3.4.7.6 Check the fixative use

6.3.5 **Molecular Biology/Virology Lab:**

6.3.5.1 Weekends & During working days after 1:30PM Virology blood specimens received at QRI-CP, must be stored at CSRP till next day morning the specimen will be dispatched to Virology Lab.

6.3.5.2 Weekends & during working days after 8 PM along with the blood specimens Respiratory and CSF specimens must be stored in the CSRP 2-8°C.

6.3.5.3 In case CSRP receive a call from wards or Biology/Virology Lab that there is STAT sample, will be sending to Biology/Virology Lab and the specimen should be processed urgently, QRI-CP must call on-call staff of Molecular Biology/Virology Lab.

6.3.5.4 All Virology blood specimens are sent to Virology Lab along with transfer list.

6.3.6 **Diagnostic Genetic Division (DGD):**

6.3.6.1 Specimens sent to DGD lab from 7:00AM to 3:00PM from Sunday to Thursday.
6.3.6.2 After 3:00PM and during weekends, specimens are stored at CSRP at 2-8°C till next day morning.

6.3.6.3 STAT and Bone marrow specimens receive after 3:00PM; QRI CP staff must call on-call staff of DGD lab.

6.3.7 Cytopathology Lab:

6.3.7.1 All Cytopathology specimens receive at CSRP should log in, prepare transfer list, and dispatch the specimen along with transfer list to Cytopathology lab.

6.3.7.2 Routine specimens receive after 2:00PM must be stored in CSRP, at 2-8°C and dispatch next day.

6.3.7.3 For CSF and STAT specimens receive at CSRP after 2:00PM, CSRP staff should inform the Cytopathology lab to decide to send or to store the specimen for the following day.

6.3.8 Immunology and Histocompatibility Lab:

6.3.8.1 Specimens receive after 2:30PM must be stored in CSRP until 7:00AM, next day.

6.3.8.2 Quantiferon (QFT) specimens are received only from Sunday to Wednesday from 7:00AM up to 2:30PM. After 2:30PM, contact immunology lab to confirm receiving of the specimens at HBK CP.

6.3.8.3 STAT Quantiferon (QFT) specimen receive at HBK CP for the transplant patients after 2:30PM from Wednesday until Saturday, inform the immunology staff about the specimen that receives at HBK CP and send the specimen to microbiology lab at HGH for the purpose of incubation for 16 hours from the time of receiving.

6.3.8.4 Routine QTF receive after 2:30PM from Wednesday till Saturday, CSRP staff reject the sample, inform the inpatient or outpatient about the rejection, document it in rejection sheet and in Cerner system and raise an OVA.

6.3.8.5 During working days after 2:30PM and weekends, CSRP receive STAT samples, QRI CP must inform on-call Immunology and Histocompatibility Lab staff.

6.3.8.6 During week days after 2:30PM and weekends, CSRP staff receive QTF samples after receiving a confirmation from Immunology staff to receive the sample, CSRP staff must send the sample to Microbiology lab for incubation 16 hours. The following day, CSRP staff collect the sample via drivers. CSRP staff dispatch the samples to Immunology lab along with transfer list with proper documentation of trans actions.

6.3.8.7 All specimens dispatch to Immunology and Histocompatibility Lab along with transfer list.

6.3.9 Metabolic Lab samples:

6.3.9.1 Metabolic Lab’s lab aide receives Guthrie Cards for newborn screening by signing the log book at CSRP from Sunday to Thursday & Saturday at 7:00AM-01:00PM.
6.3.9.2 Any Guthrie Card receive after working hours and during weekends, CSRP QRI technical staff keep the cards in tray assigned for Guthrie Card at room temperature to be dispatched the following day.

6.3.9.3 Technical staff at CSRP-QRI logs in Guthrie Cards for newborn screening, prepare transfer list.

6.3.9.4 For STAT samples, CSRP technical staff communicates with on-call staff of Metabolic lab.

6.3.9.5 Amino Acid Blood sample, CSF Amino Acid, urine Amino Acid, Carnitine that receive after 2:30PM, centrifuge, separate the plasma from supernatant and store it at freezer -20°C till next day morning.

6.3.10 Referral Lab Specimen:

6.3.10.1 Specimen receives at QRI-CP and log in as HBK-CP location in Cerner system from 7:00AM to 3:00PM.

6.3.10.2 Routine specimens received after working hours after 3:00PM and weekends, CSRP staff log in the sample, centrifuge it, aliquot it, and store it at 2-8°C or -20°C according to the specimen requirements.

6.3.10.3 STAT referral sample, CSRP technical staff contacts referral on-call staff immediately.

6.3.10.4 For Qatari patients, specimens can be sent to the referral lab with the transfer list. For the non-Qatari patients send the specimen to the referral lab along with the payment slip. In case of no payment slip, inform the concerned staff regarding the payment procedure and store the specimen at CSRP fridge for 24 hours and notify the referral lab technical staff. On the following day transfer the specimen to the referral lab with all the details for the follow up.

6.3.10.5 Before CSRP staff log in the sample, they must make sure if the patient is Qatari or non-Qatari. If the patient is non-Qatari, the payment bill should be attached to the request form. Then, QRI-CP receives, log in, prepare transfer list and dispatch the specimen to referral lab. If the payment bill is not attached to the request form, CSRP technical staff should contact the wards or section informs them about the payment procedures. After the payment procedure is done, and then CSRP technical staff will continue the receiving protocols and not.

6.3.10.6 Qatari patients are exempted from payment.

6.3.10.7 There are tests requested by physician for non-Qatari patients are exempted from payment. CSRP staff has to contact referral lab at 40264018 for further details.

6.3.11 Pre-Marital samples:

6.3.11.1 Hematology, Chemistry and Virology sample:

6.3.11.1.1 Specimens are received at CSRP 24/7. Specimens either dump or load at pre-analytical machine.

6.3.11.2 Molecular Genetic sample:
6.3.11.2.1 During working days from 7:00 AM to 2:45 PM, CSRP technical staff send the molecular Genetic specimens directly to the lab through lab aide.

6.3.11.2.2 After working hours 2:45 PM and weekends, CSRP staff will keep the specimen with the attached packing list at 2 to 8°C in HBK CP. On the following working day, the specimen will send to the molecular lab.

6.3.11.2.3 Pre-Marital Molecular Genetic specimens are not log in by CSRP-technical staff.

6.3.12 TB Samples:

6.3.12.1 ALL TB specimens are received at CSRP are logged in manually as HBK-CP in the Cerner system.

6.3.12.2 TB specimens are received during working days from 6:30 AM to 2:00 PM and weekends from 6:30 AM to 1:00 PM according to the pre-set schedule.

6.3.12.2.1 After working hours during week days after 2:00 PM, and during weekends after 1:00 PM, TB specimens store at CSRP at 2-8°C till next day morning.

6.3.12.3 Non-Cerner TB specimens, CSRP technical staff send the request form along with specimens for registration and processing.

6.3.13 NCCCR samples:

6.3.13.1 NCCCR Flow Cytometry samples:

6.3.13.1.1 NCCCR Flow Cytometry specimens received at CSRP must be logged in, prepare transfer list and dispatch immediately to NCCCR lab.

6.3.13.2 NCCCR samples:

6.3.13.2.1 Specimen is received for 24/7 from NCCCR lab; CSRP technical staff must check the specimens against the transfer list dump or load all the specimens in pre-analytical machine except non-Blood or non-programmed samples. For these samples, CSRP staff must log in the specimen manually.

6.3.13.2.2 STAT NCCCR specimens that need to be proceeded at QRI-CCL, NCCCR technical staff contact QRI-CP staff in order to arrange transportation.

6.3.14 AL-Khor, AL-Wakra, Cuban samples:

6.3.14.1 CSRP receive specimens for 24/7. The specimens are received along with transfer list. CSRP technical staff should check the specimens against the transfer list after login by the preanalytical machine or manual login for the non-blood specimens and non-programmed specimens.
6.3.14.2 QRI-CP staff dumps or load the specimens except non-blood and non-programmed samples. Non-blood and non-programmed specimens logged in manually.

6.3.14.3 Transfer list that received from the three locations must be checked against the specimens that are placed in the rack. After, the specimens had checked the CSRP staff has to sign the transfer list with the following details: Name, Signature, Corporation number, Date, Time, and then the transfer list must return it back after documentation either by the same time of receiving the specimens or following batch.

6.3.14.4 **Al-Khor samples:**

6.3.14.4.1 All rerouting specimens that received from microbiology lab and H. Pylori specimens, QRI CP technical staff should login at HBK CP and transfer it to Al Khor lab when the driver arrives.

6.3.14.4.2 All Microbiology specimens that received from outside clients, since the specimens are received in a paper based (request forms), CSRP staff send the specimens to AKH Microbiology lab for registration and processing.

6.3.14.4.3 Fungal test that received from outside clients, CSRP technical staff receive the samples, register the request form, prepare transfer list, dispatch the specimen to HGH Microbiology lab.

6.3.14.5 **Al-Wakra samples:**

6.3.14.5.1 All Thyroglobulin and Bap (Ostase) specimens receive at CSRP, technical staff must log in, prepare transfer list then dispatch the specimens along with transfer list to Al-Wakra lab.

6.3.14.5.2 Other specimens receive at CSRP with encounter of AWK, QRI-CP staff, log in, prepare the transfer list, and dispatch the specimen along with transfer list to AWK lab.

6.3.14.6 **Cuban samples:**

6.3.14.6.1 Streptococcus rapid antigen A test with Cuban routing, if receive at CSRP, technical staff at HBK-CP, log in and keep the specimen at room temperature until 48 hours. With the limited time period transfer the specimen along with the transfer list to Cuban Hospital when the Cuban driver arrives at HBK CP.

6.3.14.7 **RRCL samples:**

6.3.14.7.1 CSRP technical staff receives specimens from RRCL along with transfer list and Infinity tracking list.

6.3.14.7.2 The Transfer list and infinity tracking list must be checked one by one against the specimens that are placed in the rack or in the biohazards bag at the same time of receiving the specimens at reception bench.
6.3.14.7.3 Load the specimens immediately to the pre-analytical machine.
6.3.14.7.4 Transfer the non-blood specimens to non-Blood bench and blood specimens to the blood bench for manual log in. After the specimens had logged in, the Non-Blood bench and blood bench technical staff should send the specimens to the concerned labs for the processing
6.3.14.7.5 STAT Hematology specimens and specimens with results must dispatch it immediately to Hematology lab along with HBK-CP log book by the blood bench technical staff.
6.3.14.7.6 The transfer list and Infinity tracking list must sign immediately upon receiving the specimens from RRCL with the details the mentioned in 6.3.14.3.
6.3.14.7.7 Specimens with RRCL encounter receive at CSRP, QRI-CP staff has to contact RRCL technical staff in order to reroute the specimens and then QRI-CP staff dispatch the specimens immediately to appropriate section for processing.

6.3.14.8 CCL-Chemistry Lab samples:

6.3.14.8.1 STAT specimens for Chemistry Lab must be dumped in the pre-analytical machine immediately upon receipt, unless you are being notified beforehand (via phone) about the delivery of the specimen to QRI-CP, in which case you must handover the specimen directly to the Special Handling Bench without dumping it in the machine.
6.3.14.8.2 All routine Chemistry specimens either load it or dump it in pre-analytical machine:

6.3.14.8.2.1 EDTA and Centrifuged specimens must be loaded it in Preanalytical machine.
6.3.14.8.2.2 Non-Centrifuged specimens that need to be centrifuged, QRI-CP staff must dump it in bulk loader of Pre-analytical machine.

6.3.14.8.3 After loading or dumping the specimens, If the specimens dispatch in error rack, CCL-Chemistry staff will handle their specimens and the specimens that are not related to Chemistry lab, CCL-Chemistry staff with hand over the specimens to error racks placed at CSRP for further manually logged in and sorting of the specimens.
6.3.14.8.4 All chemistry spot and 24 hours urine specimens receive from 6:00AM-4:00PM at CSRP, must log in manually, dispatch the specimen to CCL-Chemistry.
6.3.14.8.5 After 4:00PM, Chemistry spot and 24 hours urine routine specimens receive, log in, store at CSRP at 2-8°C till next day morning.
6.3.14.8.6 STAT Chemistry spot and 24 hours urine specimens receive at CSRP after 4:00PM, CSRP staff must log in, dispatch the specimen immediately upon receiving to CCL-Chemistry lab.
6.3.14.7 Stool specimens for HBK CCL receives and log in at HBK CP and dispatch to the Chemistry special handling bench.

6.3.14.8 Urine illicit drugs and body fluids, QRI-CP staff must log in, dispatch the specimen immediately to CCL- Chemistry special Handling bench.

6.3.14.9 For further enquiry about CCL-Chemistry tests. CSRP staff has to refer to Lab Guide of CCL Chemistry lab.

6.3.14.10 Any malfunction occurs to Pre- analytical machine and CCL-Chemistry staff notifies CSRP-technical staff to stop loading or dumping the specimens in the machine. QRI-CP staff must ask the CCL-Chemistry lab to document their full details e.g. name, corporation number, date and time of malfunction take place. As well as, QRI-CP has to record their details in log book that assigned for Pre- analytical machine which placed in QRI-CP area.

6.3.14.9 CCL-Hematology Lab samples:

6.3.14.9.1 CBC & Coagulation STAT specimens should not be logged in at QRI-CP and must be delivered to Hematology lab without any delay. Either the details of the specimens must be recorded in the CP log book or the receipt of the specimen must be acknowledged in the logbook of Wards.

6.3.14.9.2 Routine Hematology EDTA specimens must load it in pre-analytical and coagulation specimens must dump in Bulk loader of pre-analytical machine.

6.3.14.9.3 STAT Non-Cerner Hematology specimens dispatch immediately along with request form after the registration is completed to CCL-Hematology lab and recorded in STAT log book that placed in CSRP. Specimens send for confirmation, QRI-CP staff receives the specimens along with copy of the results, log in, record the details of the specimens in the STAT log book, and dispatch it immediately to CCL-Hematology lab.

6.3.14.9.4 Non-Blood specimens e.g. Hemosiderin, Eosinophil samples, CSRP staff log in manually and dispatch immediately to CCL-Hematology lab.

6.3.14.9.5 Make sure that all STAT specimens are acknowledged properly upon receiving the specimen by CCL-Hematology lab. See 6.3.2.3

6.3.14.10 Primary Health Centers samples:

6.3.14.10.1 All PHCC blood samples properly centrifuged shall be loaded and directly to preanalytical machine of CCL and partially centrifuge blood specimens are dumped in dumping Bin of the analytical machine for further centrifuge.
6.3.14.10.2 All EDTA specimens according to the routing will be loaded in the pre-analytical machine.
6.3.14.10.3 All non-blood specimens receive at CSRP must be dispatched to Non-Blood bench for manually log in, sorting, dispatching the specimens to processing lab.
6.3.14.10.4 CSRP receive specimens from PHCC 3 times per day, except Al Wakra and Al Khor PHCC the specimens are received 6-7 times per day from Sunday to Thursday.

6.3.14.11 Non-HMC Clients and Private clinics:
6.3.14.11.1 All STAT and routine blood specimens are received on paper based, CSRP staff has to register the samples, dump or load, and dispatched immediately to processing labs.
6.3.14.11.2 If the specimens are received without HC number, CSRP clerical staff has to create HC number then register it in Cerner system, forward the specimen to the technical staff to label the specimen with Cerner.

6.3.14.12 Transfer list:
6.3.14.12.1 All transfer lists that are received from PEC Alsadd, Alrayyan, Airport, and HG RRL Labs must be checked, acknowledged (with Corp. No., Date, time of receiving) and returned immediately upon receipt.
6.3.14.12.2 Transfer lists that are sent from Alwakra, Al Khor, NCCCR and Cuban, HMG Hospitals must be checked, acknowledged on all pages and returned back to the driver in the next shipment. Also, details such as the number of transfer lists, names and signatures of the staff that handed over the list and the driver who collected the list, must be recorded in the CP logbook that is assigned specifically for tracking transfer lists.
6.3.14.12.3 For Health Centers, the transfer lists can be checked/completed within 24 Hrs of receiving (if not at the same time of receipt).

7. CENTRIFUGES:
7.1 CSRP HBK CP handling the non-refrigerated and refrigerated centrifuges for the centrifuging purposes if needed.
7.2 Each centrifuge has the proper daily maintenance sheet and PPM according to the yearly basis.
7.3 Clean the centrifuge housing chamber regularly using gauze pads damped with hypochlorite solution (Daily).
7.4 The surface must be dried immediately after cleaning.
7.5 In the event of condensation water formation, dry the centrifuge chamber by wiping out with an absorbent cloth.
7.6 The centrifuge chamber is to be checked for damage once a year.
7.7 For the Refrigerated Centrifuge Rotina 420R check the RPM 4500 RCF (Relative Centrifugal Force) (1652) time (5 minutes) Temperature (20°C). And the maintenance done on monthly basis by Engineering services department.

7.8 For the Non-Refrigerated Centrifuge Universal 320 check the RPM 4500 RCF (1920) time (5 minutes) And the maintenance done on half yearly basis (Every Six Months) by Engineering services department.

7.9 Check for broken glass and debris.

7.10 Clean buckets and carries with hypochlorite solution.

7.11 The rotos and accessory parts must be checked monthly by the engineering staff for wear and corrosion.

7.12 All lab service staff must ensure that operating speeds of centrifuges in use in the lab are checked at least annually as needed for the intended use, and this is done in a safe manner by Engineering/Bio Engineering.

7.13 Acceptance variation of speed for both types of centrifuges should be 4500 RPM ±5 % as per centrifuge manual.

8. TRACKING SYSTEM

8.1 From Phlebotomy to CSRP, QRI
   8.1.1 Phlebotomy staff must initiate transfer list on Cerner before specimen’s dispatch to CSRP.
   8.1.2 Phlebotomy staff must follow the status of dispatched specimens within 3 hours’ time on Cerner using transfer list number to confirm that all specimens were received in analytical lab.
   8.1.3 Record transfer list number on PCR-PM-001-002-023-01 Tracking Transfer List.
      Phlebotomy staff must contact CSRP staff in case the dispatched specimen is still in transit status and ask for troubleshooting action.

8.2 From CSRP, QRI to Analytical Laboratories of DLMP that Outside of QRI Building:
   8.2.1 CSRP staff must initiate a transfer list on Cerner the time specimens dispatch to these Analytical Laboratories: Histopathology, Cytology, Microbiology, HGH Blood Bank, Metabolic, TB (CDC), Immunology, Virology/Molecular Virology, NCCCR Flowcytometry, Special Chemistry, Al khor Hospital Microbiology, and Al Wakrah Hospital Chemistry
   8.2.2 CSRP staff on duty must follow within 2 hours’ time on Cerner using transfer list number to confirm that all specimens were received in assigned analytical laboratory.
   8.2.3 Record transfer list number on PCR-PM-001-002-023-01 Tracking Transfer List.
   8.2.4 CSRP staff on duty must contact the assigned analytical laboratory in case specimen is still in transit status and ask to follow the appropriate corrective action.

8.3 From other HMC locations (HGH-RRL, PEC, NCCCR, AWH, AKH, CH, HMGH) and PHCCs:
   8.3.1 Specimens dispatch to CSRP, QRI with two copies of transfer list, first copy must be signed by CSRP staff to acknowledge the batch receiving and second
copy must be kept in CSRP to be checked later and follow the specimen status in Cerner.

8.3.2 CSRP staff must check all transfer lists within two hours of receiving and contact the referring lab in case any specimen not received or lost.

8.4 From Non-HMC Clients:
- 8.4.1 Non-HMC Clients must dispatch specimens along with proper Log Book/Sheet at CSRP, QRI.
- 8.4.2 CSRP staff must receive specimens and sign the Log Book/Sheet confirming the # of specimen received by following a proper documentation procedure.
- 8.4.3 In case of rejection contact the responsible person of the referring lab and follow the standard rejection procedure.

9. PROVIDE RESULTS

9.1 Client using HMC electronic patient records are not printed, after verifying/completing results are available on HMC electronic patient records-Cerner Melinum.
9.2 At CSRP, QRI dedicate printer auto prints results every day at 6:00 am after completing/verifying tests by analytical labs. Subsequently, printed results segregated according to the clients and put into sealed envelope for pickup.
9.3 At analytical section, sensitive results, like HIV-PCR, Molecular Genetics are manual printed and given to the respective clients.

10. SAFETY ISSUES

10.1 All specimens should be considered potential biohazards high risk and universal precaution should be taken while handling.
10.2 All individuals dealing with specimens should be wearing proper Personal Protective Equipment (PPE).
10.3 Smoking, eating, drinking and using make-up in the technical work areas are strictly prohibited. Additionally, food should not be stored in technical refrigerators and working area
10.4 Use of Laboratory coats is required. Sandals or shoes with open toes or negative heels are not recommended.
10.5 Hands should be washed frequently during the day, before and after removing gloves and before leaving the Laboratory.

11. REFERENCES:

11.1 Management of laboratory Specimens Policy CL 7067.
11.2 Patient Identification Policy CL 7026.
11.3 College of American Pathologists, Laboratory General Checklist, Version 25.09.2012, 325 Waukegan roads, Northfield IL 60093-2750, USA.

12. APPENDIX:
**SPECIMEN LOG IN PROCEDURE:**

- Launch the PathNet Collection Appbar.
- Click on log in specimen button.
- Pathnet Collections Specimen Log-In window will appear. Press Retrieve button.

- Log-In by accession window will appear. Make sure that the specimen is properly labeled and location is HBK CP. Using a barcode reader, scan the accession number of the specimen received.

- Scan continuously the accession numbers of the specimens received. The status of each specimen should read as “collected”.
- Press the log in button after scanning of all the received specimens is completed.
- Press the refresh button from the AppBar to clear the Log In accession window.
- Segregate and distribute the received specimens to concerned sections for processing.

II : SPECIMEN TRANSPORTATION

13. PURPOSE:

13.1 The purpose of SOP is to explain how specimen transports with appropriate safety, stability, integrity and packaging procedures that appropriate to specimen type and distance. This is related to transport specimen between HGH & HBKMC sites by drivers who transport specimen between DLMP sites that situated in HGH and outside the HGH campus. Included certified training for personnel involved with packaging and shipping infectious substances.

13.2 This SOP describes the approach for effective and efficient planning and optimizing procedures applicable for both accreditation requirements and quality assurance related to specimen transportation procedures.

14. PRINCIPLE:
14.1 The DLMP has a written procedure defining the criteria for packaging and labeling the different type of specimen.
14.2 The DLMP packages and ships infectious material in accordance with applicable HMC, local, and international regulations.
14.3 Specimens from QRI, ACC, and WWRC inpatient and outpatient specimens are transported to QRI CP directly by hand in biohazard bags put in closed box with biohazard sign outside and/or via Pneumatic tube system (PTS) by biohazard bags.
14.4 Specimens received from out-side locations (ex. Hamad Bin khalifa medical city, Rumailah, Heart, NCCCR, Primary Health Centers, other HGH sites) transported in a thermal box with temperature monitoring thermometer inside by vehicles.
14.5 The DLMP ensures that the person who involved in the transportation of laboratory specimens are trained on appropriate safety procedures suitable to specimen type and transporting distances.
14.6 The DLMP has procedures detailing the transportation, handling of patient specimens (blood, body fluids, and tissue) to ensure that all specimens are submitted in an appropriately labeled container with a secure lid to prevent leakage during transporting.
14.7 The tracking system allows for documentation of time of dispatch and receipt, as well as condition of specimens upon receipt. An example of an acceptable tracking system is submission of transfer list (prepared by the client or courier) with each batch of client specimens, which may be checked against the specimens received by the laboratory. Some laboratory tests (e.g. Coagulation assays) have time limitations and temperature conditions between collection and analysis. This requirement applies to couriers/transportation systems that are part of the DLMP, not to outside courier systems. Specimen tracking process also performed by the Cerner online tracking system.
14.8 The laboratory services of DLMP have policy in place to monitor quality of submitted specimens and corrective action in specimen transportation and improving the performance of clients who are frequently submitted specimens improperly.

15. **STEP BY STEP PROCEDURE:**

15.1 **Internal Specimen Transportation Procedure:**

15.1.1 **By Aides.**

15.1.1.1 Trained personnel transfers specimens from OPD phlebotomy labs (QRI, WWRC, ACC) to Central specimen receiving and processing (CSRP) area of DLMP, QRI.
15.1.1.2 Laboratory specimens should be properly transported from (CSRP) to the concerned analytical Sections (DGD and QRI Blood Bank) by laboratory Aide.
15.1.1.3 All carriers (Laboratory Aide) must wear their photo identification badges and uniform.
15.1.1.4 Wear the appropriate personal protective equipment (PPE), like gloves, gown, and closed-toed shoes when packaging for sending and specimen receiving, ensuring that the carrier (laboratory Aide) is not contaminated.
15.1.1.5 Lab Aide should wear one glove in a hand and other hand without; so, he/she can manage his/her access doors and carrying request forms. Do not wear gloves in both hands considering safe movement of public when transport specimens from specimen receiving to concern laboratory section and vice versa.

15.1.1.6 Do not touch door handles with gloves.

15.1.1.7 Do not reuse disposable gloves - they are meant for single use.

15.1.2 By Pneumatic Tube System (PTS).

15.1.2.1 Inpatient and outpatient specimens from QRI, ACC and WWRC are received in QRI CP by carriers through Pneumatic tube system (PTS).

15.1.2.2 Place each patient specimens in a plastic zip lock biohazard bag before sending it through PTS.

15.1.2.3 Place the sealed specimen bags into the carrier then carefully and securely latch it before sending.

15.1.2.4 Load the carrier in the transport mechanism and enter the station number and press “Send”.

15.1.2.5 The receiving process is automatic and requires no station operator.

15.1.2.6 After collecting specimens from the PTS carrier, place an empty carrier in the station dispatcher and press “Empty send” on the keyboard.

15.1.2.7 Each PTS carrier is assigned for concerned sections or wards by default.

15.1.2.8 Make sure the latches at the both ends of carrier are securely fastened before sending the carrier through PTS.

15.1.2.9 Package all laboratory specimens as per Management of laboratory specimen’s policy CL 7067.

15.1.2.10 If any contamination occurs or system shutdown should inform the control room number 44398666.

15.1.2.11 Follow the corporate policy CL 6064 Pneumatic Tube System (PTS).

15.2 External Specimen Transportation Procedure (By Vehicles):

15.2.1 Laboratory specimens should be properly transported from specimen receiving area of QRI and other HGH sites to the concerned laboratory sections by trained drivers from Gulf warehousing company.

15.2.2 External Specimen Transportation Service starts from Specimen Receiving area of QRI, NCCR, PEC ALSADD, RRLs, AWK and AKH at 24/7 hours.

15.2.3 Trained drivers from Gulf Warehousing company (GWC) transport specimens from Specimen Receiving Area of QRI to Hamad Bin Khalifa Medical City sites (Virology & Molecular Biology, Immunology and Histocompatibility Lab), HGH, and TB lab. And from HGH, Podiatry Clinic, Metabolic Lab, Genetic Center, NCCCR Hospital, Psychiatric Hospital, PEC Al Sadd, FBJ, OPD Annex and other Hamad sites to QRI CP by using 8 vehicles.
15.2.4 Trained drivers from Gulf Warehousing Company transport specimens from Al Wakra Hospital & nearby PHCC and Al Khor Hospital & PHCC to Specimen Receiving Area of QRI using 2 vehicles.

15.2.5 Drivers properly trained for the job also transport special test specimens from Al Khor and Al Wakra hospitals to Blood Bank - HGH and collect specimens from Specimen Receiving area of QRI to deliver the same to respective locations.

15.2.6 The driver assigned for AKH, collects Non HMC clients and Health Center urine and stool specimens (H. pylori) from QRI CP area and dispatching it to Al Khor microbiology for processing.

15.2.7 The availability of Gulf Warehousing company vehicles for 24/7 is as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Time slot</th>
<th>Number of vehicles</th>
<th>Number of drivers</th>
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15.2.8 Drivers always wear an appropriate uniform and official ID during working hours.

15.2.9 The staff at QRI CP must monitor the temperature inside the specimen transportation boxes and vehicles at different intervals.

15.2.10 For Microbiology and immunology specimen should be transported at room temperature (20-25°C) in a specimen transportation box, which should be labeled outside as biohazard, with a fastened lid.

15.2.11 Other laboratory specimens eg: molecular biology, TB, special chemistry and cytopathology must be transported at 2-8°C in a specimen transportation box with biohazard sign outside and with fastened lid.

15.2.12 Temperature of thermos box should be checked daily at different intervals.

15.2.13 Do not leave a box containing specimens in an unlocked car. Always enter a facility with carrying a box.

15.2.14 Do not touch any specimen bag or container that appears soiled. Ask a laboratory staff to place the specimen(s) in another bag for safe transportation.

15.2.15 Drives should not open the specimen transportation box.

15.2.16 Each vehicle should have contact device (mobile phone and everybody should familiar with contact numbers), proper air-condition, safety tool box, gloves, emergency outfit, temp monitoring thermometer (temperature needs to be recorded at least 3 times in 24 hrs. and submitted to transport coordinator in monthly basis for review and sign.

15.2.17 All drivers should know how to read and record temperature in the monitoring sheet.

15.2.18 Each driver must use the Hand-held device in each schedule of transportation for tracking purposes.
15.3 **Specimen Tracking System.**

15.3.1 The laboratory section under the DLMP have implemented a specimen tracking system recently with the assistance of M/s Gulf ware housing company to track the external specimen transportation time of dispatch and receipt.

15.3.2 This tracking system consists of three components.

- **Order Management System (OMS) software.**
- **Hand Held Device.**
- **Barcode IDs for Staffs and Transportation boxes**

15.3.3 **The OMS** is a web-based software and it pertains many features.

15.3.4 **Delivery tracking**: It provides real time information about where the drivers are located, what is the status of delivery and how many drivers are standby, idle or stop.

15.3.5 **Reports**: three types of reports can be generated, the first one is reason code analysis which shows the reason for delay in the delivery of samples. Monthly reports, daily delivery reports and performance analysis of each drivers can also be generated through this feature.

15.3.6 **Location Master**: Through this feature can create and save the location codes for different laboratory locations.

15.3.7 **Route Master**: Through this feature can create and save route codes and addresses of different lab locations.

15.3.8 **Scheduler Master**: Through this feature can upload schedules by weekly basis. Once uploaded in the system the drivers can show their assigned schedules in their hand-held device.

15.3.8.1 **Hand Held Device** must be used by drivers at the time of transporting the specimens and it gives the information about pending and completed tasks. In each transportation schedule the driver must scan the assigned barcodes of technical staff and transportation box.

15.3.8.2 **Barcodes IDs** for technical staffs, their corporation number is used to create the barcode IDs and that we will be able to easily identify which staff had dispatched or collected the particular batch of samples. For the transportation box, the barcodes are fixed on each specimen transportation boxes and it is just a series of barcode numbers only, there is no specific pattern while creating the barcodes for boxes.

15.3.9 Smoking and Eating are strictly forbidden in the car with or without carrying specimen boxes.

15.3.10 In case of an accident or drivers sick should contact specimen transportation coordinator immediately.

15.3.11 **The following points are applicable for both the above categories (Internal & external specimen transportation)**

15.3.12 All specimens should be considered high risk and should be carried in a closed transport bag with biohazards sign outside.
15.3.13 Transportation of specimens should be in accordance with the infection control standards of practice.
15.3.14 Keep transportation box appropriately maintained and clean to handle all specimen types.
15.3.15 Specimen must be handled in a safe manner up right position in a rack and according to applicable legal requirements or guidance.
15.3.16 All specimens must be secured in the appropriate specimen container; ensuring that the lid of the container is properly closed and will not leak.
15.3.17 Several specimens can be placed in a thermos box; but to prevent spillage of contents, specimens should not be packed too tightly or too loosely.
15.3.18 Blood specimens that are required to be transported on ice (2-8°C) and STAT specimen should be delivered immediately by hand to the laboratory reception.
15.3.19 Establishes a good working rapport with the client and is able to communicate effectively.
15.3.20 In the event of any spillage, follow the simple steps: S.P.I.LL procedure:

15.3.20.1 S- Secure the area and wear appropriate Personal Protective Equipment.
15.3.20.2 P- Protect co-workers, visitors and patients by keeping the area clear.
15.3.20.3 I- Inform others and fill OVA. Call Control Room telephone number:
   - Hamad Bin Khalifa Medical city: (4439 8666)
   - Al Khor Hospital: (4474) 5455
   - Hamad General Hospital & Women’s Hospital : (4434) 2333
   - Al Wakra Hospital:
15.3.20.4 L- Leave clean up to occupational health and safety officer, particularly important for large spills.

15.3.21 Perform hand hygiene techniques (washing and rubbing) before and after putting gloves and when appropriate.

16. LIMITATIONS OF THE PROCEDURE:

16.1 Shortage of thermo boxes or packaging box for specimen transportation
16.2 Variable temperature, especially during summer time.

17. SAFETY ISSUES:

17.1 Specimen containers should be placed in a transportation bag placed in a thermo box with proper specimen labeling and paperwork. In all cases, use of appropriate containers and packaging technique for specimens is important as leaking packages may pose a health hazard.
17.2 Precautions should be taken when handling and transporting specimens and /or specimens to minimize contamination.
17.3 Wear the appropriate personal protective equipment (PPE).
17.4 Be aware in case of any spillage of the specimen.
17.5 Perform hand hygiene techniques (washing and rubbing).
17.6 All carts, Thermo boxes, secondary containers must be labeled with biohazard label.
17.7 Report any incident to supervisor or designee
17.8 Do not touch any specimen bag or container that appears soiled. Ask a laboratory staff to place the specimen(s) in another bag for safe transportation.
17.9 Do not put the box down in a spill (wet) area.

18. References:

- LMP_PM_001_001_000_02 Process Management
- PCR_PS_001_000_000_01 Competency of Laboratory Services
- PCR_PS_001_001_000_01 Laboratory Services Training and Competency Program
- CL 6064 Pneumatic Tube System (PTS)

19. ATTACHMENTS/APPENDIXES:

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