**Downtime Procedure**  
**Department of Clinical Laboratories**  
**The Ohio State University Wexner Medical Center**

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<th>Laboratory:</th>
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<tr>
<td>Rapid Response Laboratory</td>
<td>Procedure</td>
<td>12/14/2004</td>
<td>Revision 4</td>
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<tr>
<th>Document Author:</th>
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<th>Acknowledgement / Required Copy Holders*:</th>
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<tr>
<td>Erin Strong</td>
<td>RRL Lab Manager</td>
<td>All RRL personnel</td>
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**Approval***:
Laboratory Division Director: All Division Directors  
Laboratory Medical Director(s): East Hospital Laboratory Medical Director

**Approval and Acknowledgements***:
Refer to QPulse system and Document Details report for laboratory directors(s)’ electronic signature approval, employee acknowledgment and effective date.
1. **POLICY**
   1.1. The following procedure will be followed in the event of a problem involving the LIS, analyzers, or both in order to allow for continued operation of the Hematology, Chemistry, Coagulation and Urinalysis areas.

2. **PURPOSE OF DOCUMENT**
   2.1. To define the procedure by which the Hematology, Chemistry, Coagulation and Urinalysis areas can function and recover results after loss of host computer function and or power loss.

3. **SCOPE OF DOCUMENT**
   3.1. All personnel who rotate within the Hematology, Chemistry, Coagulation and Urinalysis areas will be responsible for following this policy.

4. **RESPONSIBILITY**
   4.1. The Medical Director of the laboratory is responsible for establishing this policy. The Lead Technologist is responsible for maintaining this document and ensuring at least biennial review by the Medical Director or designee.

5. **PROCESS**
   5.1. **Hematology Area**
      5.1.1 **Refer to 5 L HEME-33 Hematology Downtime Policy in Q-Pulse for information regarding:**
         a. What to do when you notice a LIS/WAM downtime situation
         b. WAM Downtime
         c. IHIS Downtime
         d. IHIS and Sunquest Downtime
         e. IHIS and WAM Downtime
         f. Network Downtime (IHIS, WAM, and Sunquest)
         g. Additional information on Instrument Downtime
         h. Recovery from Downtime
      5.1.2 **Resulting Fluid Differentials**
         a. Do manual differentials using manual keyboards only.
         b. Write results on the printout.
         c. When WAM or Sunquest comes back up, and all CIDs are linked in WAM. Put results in via the WAM Differential keyboard.
      5.1.3 **In the Hematology area when neither analyzer is functional:**
         a. In the event both analyzers are not functional simultaneously, all samples must be sent to the UH Critical Care Lab.
         b. Call the UH Hematology area and communicate the necessity to send samples.
         c. Call a courier and set up a pick up schedule for every half hour to take the samples to the UH lab. STAT samples must be individually called to the courier service for a STAT pickup.
         d. Call the Emergency Department, JamesCare East, East ICU, Lab Administration and other appropriate floors to indicate possible delay in Hematology results.
         e. When corrective actions have been taken, document on an Instrument Problem Report Form located in Q-Pulse.
         f. Tests must be credited using reason code MAINX (sent to main lab) and re-ordered using UH lab test codes.

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<th>UHE test code</th>
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h. In the event that the UH Critical Care Lab is unable to process specimens as well, specimens are to be sent to the James Lab or the Reference Laboratory. Consult with the Lead Tech or Laboratory Manager before sending specimens to either of these laboratories.

i. Upon sending patient specimens to any outside laboratory, that laboratory is responsible for calling critical values and STAT laboratory results to the appropriate medical unit per their own policies and procedures. All reference lab requisitions have the UHE Laboratory phone number listed (257-3999) on the form with the UHE account number. UHE personnel will notify the appropriate unit. UH and James lab personnel will call the units directly.

j. Results from the UH Critical Care Lab are available in Mysis with all other lab results. Results from a Reference lab must be manually entered into the LIS upon completion by CPA staff. Refer to the CPA Policy and Procedure Manual for further instructions on send-out specimens test result.

5.1 In the Chemistry area when the LIS is down:
If there is a loss of host computer function, turn on the AU680 analyzers’ patient report printouts.

5.2.1 With the analyzer in Standby, from the Main Screen select the Menu List icon.
   b. On the Basic Condition Tab select Edit. Realtime List is now available, select it.
   c. In the Patient drop-down box change None to 3.OSU WMC East.
   d. Select OK then Confirm.
      - All samples must be programmed manually as described in the AU680 Test Procedure. When programming samples, you must use Misys Downtime CID labels provided by the Central Processing Area as your specimen ID number. This allows for the AU680 to then transmit results to the appropriate accession number once host communications have been restored.
      - Call all STAT and critical results to the appropriate floor and write all necessary critical call information on the printout to denote the call. The callback information must be entered into the LIS when the system is functional. Results for routine tests are given on a “by request” basis.
      - If upon restoration of LIS functions results do not begin to automatically cross over to Misys, you may be required to reset the interface on the AU680. Consult the User’s Guide for details.
      - If it is necessary to force a result transmission from the AU680 to the host computer:
         e. With the analyzer in STANDBY, from the Main Screen select the Sample Manager button.
         f. Choose Select All or Select Samples Individually (use the arrows to scroll to desired specimens and click to highlight)
         g. Once selection(s) has been made Select Online Transfer. In the Popup box Start Transferring? Select OK or Cancel.
            - If results still don’t cross the interface contact LIS for assistance in checking/resetting the interface(s).
            - When accepting results in the LIS remember to modify with call back information as appropriate.
            - Return AU680 Realtime List (see 5.3.1 above) to None.

5.2.2 In the Chemistry area when neither analyzer is functional:
   a. Notify the laboratory manager, the Emergency Department, East ICU, and the nursing supervisor to indicate expected delay in results.
   b. Send all specimens to the Ohio State University Laboratory for analysis.
   c. Call UH chemistry department to notify staff that our instruments are down.
   d. Contact BEST Courier (475-8900, Account:9152) and set up a pick up schedule for every 30 minutes. All stat samples must be called immediately for a stat pickup.
   e. Tests already ordered with East lab tests must be credited using the reason code MAINX (sent to main lab) and re-ordered using main lab test codes.
   f. Refer to MIQ for OSU Main Test Codes
g. When corrective actions have been taken, document on an Instrument Problem Report Form located in Q-Pulse.

5.3 In the Immunochemistry area when the LIS is down:

a. Print all results during downtime:
   b. Click on Print.
   c. Select Report Option.
   d. Select Results Report.
   e. Sort by SID.
   f. Type in Start Date and Ending Date.
   g. Click Print Report.
   h. Call all STAT and critical results to the appropriate floor and write all necessary critical call information on the printout to denote the call. The callback information must be entered into the LIS when the system is functional. Results for routine tests are given on a “by request” basis.
   i. Program samples using Misys Downtime CID labels provided by the Central Processing Area as your Specimen ID number as described in the appropriate procedures. This allows the instruments to transmit results to the appropriate accession number once host communications have been restored.

   a. In the Immunochemistry area when neither analyzer is functional:
      a. Notify the laboratory manager, the Emergency Department, and the nursing supervisor to indicate expected delay in results.
      b. Send all specimens to the Ohio State University Laboratory for analysis.
      c. Call UH Immunochemistry department to notify staff that our instruments are down.
      d. Contact BEST Courier (475-8900) and set up a pick up schedule for every 30 minutes. All stat samples must be called immediately for a stat pickup.
      e. Tests already ordered with East lab tests must be credited using the reason code MAINX (sent to main lab) and re-ordered using main lab test codes

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5.4.1 In the Coagulation area when the LIS is down:

a. Set the analyzer to print all patient results. From the main menu go to the STATUS menu, arrow down to online result printout and press the ENTER key.

b. When programming samples during a LIS downtime, you must use the LIS Downtime CID labels provided by CPA. This will allow for the STACompact® to then transmit results to the appropriate accession number once host communications have been restored. If you have a bar-coded CID label, you may program the STACompact® with that CID number.

c. Call all STAT and critical results to the appropriate floor and write all necessary critical call information on the printout to denote the call. The callback information must be entered into the LIS when the system is functional. Results for routine tests are given on a “by request” basis.

5.4.2 In the Coagulation area when neither analyzer is functional:

b. In the event that BOTH STA Compact analyzers are down, specimens need to be sent to the Ohio State University Medical Center Laboratory for analysis.

c. Contact the Hematology/Coagulation department and inform them that the STACompact® is down.

d. Contact BEST Courier (475-8900) and set up a pick up schedule for every 30 minutes to take the samples to UH main lab. STAT samples must be called immediately for STAT pickup.
e. Notify the Emergency Department and other appropriate locations to indicate possible delay in Coagulation results.

f. Tests already ordered with East lab tests must be credited using the reason code MAINX (sent to main lab) and re-ordered using main lab test codes

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g. When host computer is functional, results may either be entered manually in function MEM or can be re-transmitted through the analyzer PC.

h. Refer to the STACompact® operators manual section 6, page 14 to retransmit patient results.

i. Turn off the online print option to stop printing all results.

j. In the event that UH main lab in unable to process specimens as well, specimens are to be sent to the James Lab or other contracted laboratory.

5.5.1 In the Urinalysis area when the LIS is down:

a. Set Clinitek Advantus to print all patient results.
   - From main screen select “Menu”.
   - Select “Setup” then “Printer”.
   - If printing is off the first line will read “Internal-off”. Touch box next to this message to scroll through options and select “Internal-ON with 2 blank lines between patient result sets”.

b. Run Dipsticks on Clinitek Advantus.

c. Attach printouts to downtime result form.

d. Perform microscopic examinations on the urine specimens.

e. Note results (of Dipsticks and microscopic examinations) in the Urinalysis Downtime Log.

f. Call STAT and critical results to the floor and fax if necessary.

g. When LIS is back up, you can either enter results into LIS from the Urinalysis Downtime Log or recall the results from the Clinitek Advantus.
   - To send results from Clinitek Advantus:
     - From Main screen select “Menu” then memory.
     - Select last batch, all patients or search. Search will allow you to search for a sample by CID number.
     - Once selection is made, touch the ‘square with arrow’ symbol to send results to the LIS.
   - To manually enter results into the LIS:
     - Log into Misys.
     - Double click “Urinalysis Result Entry”
     - Click “File” then select “New”.
     - At Keyboards select “URINS” then click “OK”.
     - Test names will be displayed on the on-screen keyboard. Click the corresponding key for each test then enter results. Repeat until all results are entered.

5.5.2 In the Urinalysis area when the Clinitek Advantus is not functional:

a. Use backup instrument Clinitek Status.

b. Follow direction for use as specified in the Clinitek Status manual.

c. Complete Urinalysis downtime log and call STAT and critical results to the floor and fax if necessary.

d. Enter results manually in Misys (see directions above).
5.5.3 In the Urinalysis area when Clinitek Advantus/Status are both not functional:
   a. In the event that BOTH urinalysis analyzers are down, specimens need to be sent to the Ohio State University Medical Center Laboratory for analysis.

5.6.1 In the Manual Testing (non-interfaced) area when the LIS is down:
   a. Perform testing as usual except use the downtime results form in lieu of computer Worksheets.
   b. Call all STAT results of manual testing to the appropriate unit and fax as necessary.
   c. When the computer is back up, enter results into the system.

5.6.2 In the Manual Testing area when the manual testing instruments are down or inventory depleted:
   a. UHE maintains no backup instrumentation for our non-interfaced instruments.
   b. If we find that our ESR analyzer is not functional, immediately send all STATS to UH CCL.
   c. Inform CCL that instrumentation is down or supplies are depleted and that we must send testing to them.
   d. Inform UHE Lead and Manager of the situation.

5.7.1 If Unity Connect is down:
   a. Enter QC manually as per the Unity Real Time procedure in Q-Pulse

5.7.2 If the computers are down and/or access to Unity Real Time is unavailable:
   a. Use each department’s backup ranges (paper or computer charts) to check each point manually to verify result. The results will be back loaded into Unity once the database is back online.

5.7.3 Surge Capacity:
   a. When OSUE hits surge capacity, patients that need admitted directly or from the EED are placed in the EED, Pre-op, PACU, or Endoscopy until rooms become available. In the event that this occurs:
      • Call LIS and request that they turn on lab label printers for surge floors.
      • Call/page the laboratory manager.

6 REFERENCES
   6.1 XN Manual
   6.2 AU680 Manual
   6.3 CXP Manual
   6.4 STA Max Manual
   6.5 Clinitek Advantus and Status Manuals

7. RELATED DOCUMENTS
   f. Refer to QPulse System or Document Detail Report for related Laboratory Policies, Procedures, and Master Forms