Prior to Downtime:

<table>
<thead>
<tr>
<th>Task</th>
<th>Detail</th>
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</thead>
</table>
| Paper Forms                 | Each care area is responsible for ensuring they have their downtime documentation books stocked and forms **AVAILABLE.** These can be found in the Document Center in the Lab Manual or ordered through the print shop.  
  • Manual order requisitions  
  • Manual accession log     |
| Downtime Specimen Creation | Downtime labels must be printed prior to downtime. When creating downtime specimens, choose the appropriate laboratory and 3 labels per specimen.                                                    |
| Access to BCA              | **Downtime Device BCA-PC** – This device provides key clinical information during downtime.  
  • Assure that a downtime staff member has access and proper training for the BCA device.  
  • The BCA location must be kept in an unlocked and accessible location.  
  • The BCA device must be plugged into emergency power outlets and be connected directly to a local printer. |
### Downtime:

<table>
<thead>
<tr>
<th>Task</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alert</td>
<td>Following overhead announcement or email, staff should switch to downtime procedures.</td>
</tr>
<tr>
<td>Access to Unity (Epic) Data</td>
<td>Access method:</td>
</tr>
<tr>
<td></td>
<td>1. <strong>View/Read only access SRO Environment</strong></td>
</tr>
<tr>
<td></td>
<td>- Prior to the Unity (Epic) Downtime, you will need to logoff from Unity (Epic).</td>
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<tr>
<td></td>
<td>- <strong>When you log back into Unity (Epic)</strong> (as you normally would); your Unity (Epic) access will <strong>automatically</strong> be redirected to the <strong>SRO (Read-Only Mode)</strong> environment version of Unity (Epic) so you will still be able to access any Unity (Epic) information entered prior to the downtime. The SRO (Read-Only Mode) environment will have a maroon heading and will only allow you to view the Unity (Epic) information until the downtime has been completed. Any information that you will not be able to access will be greyed out.</td>
</tr>
<tr>
<td></td>
<td>2. <strong>Log in to BCA-PC Device</strong></td>
</tr>
<tr>
<td></td>
<td>- Use your own ID with password</td>
</tr>
<tr>
<td></td>
<td>- Print desired reports</td>
</tr>
<tr>
<td>Processing Specimens</td>
<td></td>
</tr>
<tr>
<td>STAT</td>
<td>STAT specimens should be resulted by downtime procedures immediately.</td>
</tr>
<tr>
<td></td>
<td>- When specimens arrive at the lab, there will be three downtime stickers for each specimen. Place one sticker on the downtime log and one on the specimen. The third label will go to the technical section to be used on the instrument printout.</td>
</tr>
<tr>
<td></td>
<td>- Run specimen as normal on the instrument.</td>
</tr>
<tr>
<td>Routine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- During scheduled downtime, routine specimens are typically held for processing until system is back online.</td>
</tr>
<tr>
<td></td>
<td>- During prolonged downtime (&gt;2 hours), routine specimens will be processed as downtime specimens. See Network Lab Management for detailed direction.</td>
</tr>
</tbody>
</table>
## Recovery:

<table>
<thead>
<tr>
<th>Task</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alert</strong></td>
<td>End users may be notified that the system is back online by overhead announcement or email.</td>
</tr>
</tbody>
</table>
| **Access to Unity (Epic) Data** | - Once the downtime is complete, you will need to log off from Unity (Epic).  
- Once you log back in, your Unity (Epic) access will automatically be redirected to Unity (Epic Production -PRD) and you will be able to resume your daily Unity (Epic) activities as normal. |
| **Specimen Handling**         | **STAT**  
- Place STAT order results into EPIC.  
- Use Lab Specimen Linking to link downtime specimen to an order placed in EPIC.  
**Routine**  
- Deliver and process specimens according to policy. |
| **Downtime Result Communication** | Suspend any Beaker instrument auto verification before linking any specimens.  
All results will appear as normal in the chart once linked with downtime specimen and/or manually resulted after the system is back online. |
**Instructions to Access SRO (View/Read Only Environment):**

- SRO will show you a read-only view of Unity (Epic)
  - It will look like normal Unity (Epic) with a Maroon heading, but it will not allow you to do any documentation, it will only allow you to see what has been done.
  - You will still use the paper documentation during the downtime
    - SRO will be your tool to see what was already documented on the patient prior to the downtime
    - (If this is available, it will be used instead of BCA PC)

- Access to SRO
  - Prior to the Unity (Epic) Upgrade, you will need to logoff from Unity (Epic).
  - When you log back into Unity (Epic), your access will have been **automatically** redirected to the SRO (Read-Only Mode) environment version of Unity (Epic) so you will still be able to access any Unity (Epic) information entered prior to the downtime.
  - **ONLY USE in the event of a downtime.**
  - Your workspace will have this header by the “Log Out” button:
Instructions to Print Reports Via BCA-PC:

1. Log in to the BCA PC
2. Select BCA Printing icon

3. Login to BCA application

4. Choose Report

5. Double click to view report to verify information has been pulled

6. Choose reports to print.

7. For specimens to be sent to a lab during downtime, use the Manual Accession Log in place of the Epic packing list.
Scheduled Downtime: Beaker LIS.

1. All scheduled downtime for the LIS will be coordinated by IT.
2. IT will provide notification of date, time and duration to Laboratory Administration, as well as the Managers at all laboratory sites. The Managers will determine the plan as to how specimens will be handled during the downtime.
3. The Laboratory Managers will assure that all specific downtime supplies, downtime logs/worksheets and other specific tasks (pending logs, completed specimen/patient logs, culture review logs, patient reports, etc) are assigned to staff for completion prior to the downtime.
4. Unless otherwise specified for a particular downtime event, the downtime protocols listed below shall be followed.

Unscheduled Downtime: Beaker LIS:

An unscheduled downtime occurs when there is an unexpected event that renders the system unusable / unavailable.

1. If a laboratory staff member has reason to believe there has been a system failure, the charge person should contact the Help Desk (4750).

Some indications of system failure might be error messages on screen, system running slow, being logged out repeatedly, inability to use the system, or non-functioning devices

2. IT will make the appropriate contacts to notify users of the downtime and its expected duration.

3. The Charge Person (or onsite Manager) will coordinate the downtime activities of the laboratory during the Code Green.

4. Laboratory Management will be notified at the beginning of the code green. [The Chief Information Officer, Risk/Compliance Manager or others may be notified if deemed necessary by the Chief Pathologist and Administrative Director.]

5. In an unscheduled downtime, each hospital floor is responsible for notifying the lab of any scheduled draws.

DOWNTIME PROTOCOLS:

EPIC: Scheduled Downtime:

Each Laboratory within the network will make sure, prior to the scheduled downtime, that their BCA devices are fully functional. These devices provide access to information that providers may request during downtime.

Each laboratory will assure that the draw lists of orders that have already been placed in EPIC are available during the downtime.

Each laboratory will assure that they have an adequate supply of downtime labels printed and available for use. Each Specimen ID will have 3 labels. (One label will be placed on the specimen, one label will be placed in the appropriate downtime log, and one label will be placed on the instrument printout or paper log in the technical section.)

A SRO (Shadow Read-Only) environment is available to users if they need access to patient data during the downtime. This environment is a READ-ONLY environment meant for look-up purposes only.
Each laboratory will determine, based on the expected length of the downtime, what specimens will be processed during the downtime. Generally during downtimes of short duration, the lab will only process STAT and time-sensitive specimens. Routines can be saved until the system is functional, providing analyte stability permits.

Unscheduled Downtime
An unscheduled downtime occurs when there is an unexpected event that renders the system unusable/unavailable. When this occurs the laboratory will follow its downtime procedures the same as when there is a scheduled downtime.

Instructions to Process Downtime Specimens

Prior to Downtime:
Print downtime labels for appropriate laboratory (3 labels per specimen)

Epic > Tools > Laboratory Tools > Downtime Specimen Creation

During the Downtime (First stage < 2 hours):

Once a Code Green is announced the downtime procedure should be followed. The only specimens that will be forwarded to the testing sections are as follows:

* All testing ordered as STAT
* All timed specimens
* All body fluids
* Stool for WBC
* Sedimentation Rate (ESR)
* PTT or D-Dimer (if not received frozen)
* Other time or temperature sensitive analytes

All other specimens should be held until further directions from Laboratory Management.
If the downtime is unexpected, there may be specimens that are in the different stages of collection and receiving. Use the following as a guide on how to process those specimens, (also see appendix A for a Network Downtime Flowchart).

A. Does the specimen have a Beaker label on it?
   - no \[\rightarrow\] place on downtime log
   - yes \[\rightarrow\] has it been received in Beaker?
   - no \[\rightarrow\] place on downtime log
   - yes \[\rightarrow\] then deliver to testing section.

When it is determined that a test will be sent to the technical section for testing, the following actions will be taken:
1. Enter the patient information on the downtime log. (Make certain to record the date and the page number on the log).
2. Choose the next set of downtime labels (There are three labels for each specimen ID).
3. Completely fill in all sections of all three large labels including the test(s) ordered.
4. Place one label in the log, place the second label of that set on the specimen, and deliver the third label, including all of the small labels, with the specimen and log to the technical section. (The third label will be used on the report form by the tech performing the test. The patient identification will be entered by the tech for any small label that is used).
5. Each section will follow their specific procedure for testing samples during downtime. Refer to the section specific procedure for programming a specific analyzer.

Note #1: Once a page is complete, make a copy on [colored paper or marked as a copy] and deliver to the testing section. The technical section will assure that all tests that are on the log have been performed, to make reconciliation easier once the system is available.

Note #2: If a specimen is rejected for testing due to hemolysis or other reason, document on the log that it was rejected for hemolysis etc, follow your recollections procedures [MIB - fill out a recollection form, return to CLP area] and have the specimen recollected. When the new specimen is received in the lab it should be given a new downtime number and logged on the form as a new test request.

6. When testing is completed in the section: the technologist will use the downtime report form and document the results in the appropriate place, noting the date, time and their initials on the report.
7. This Downtime Report will be delivered to the appropriate ordering location [fax, hand delivery or calling]. After delivery of the report is complete, documentation is written on the report form of where, when and to whom the report was given to. (A copy of the report should always be kept in the laboratory, if the original copy is given to the ordering location).
8. Critical Values will be communicated in accordance with the Critical Values Policy. Documentation of the CV call will be made directly on the downtime report form with written notes of the test called and read back, who was called [full name], date, time and initials of person completing the call.
9. All Downtime reports will be sent back to the performing section, to keep with all the logs and paper work for the Downtime Recovery Phase.

For an extended downtime period it make become necessary to process specimens with the normal downtime process. The descision to process all specimens will be made by Network Laboratory Management and then communicated to all network labs. On the next page, a flowchart on how to process and send specimens to the referral labs should be used.
Network Laboratory Management has determined that specimens should be sent to the referral labs during this extended downtime.

**Network Downtime Flowchart ( > 2 hrs long )**

Does your lab perform the testing?
- yes
  - Is testing performed at a subsidiary lab?
    - yes: Send to reference by downtime req if needed.
    - no: Follow Network Downtime Flowchart. Process as normal per procedure.
- no: Does specimen have a Beaker Label?
  - yes: Place on a manual temperature specific referral accession log (form # 3471, 3471B, 3471C). [note: this would also include any specimens already placed in storage for a packing list].
  - no: Was specimen placed into storage before downtime?
    - yes: Copy the original downtime requisition & if it is a shared specimen, circle all tests that your lab has tested/performed. Make sure to note the receipt date and time in the lab on the requisition.
    - no: Log on a downtime specimen referral accession log, completely filling out all areas including the storage/transportation temperature of the specimens.

Send the specimen in the correct transport temperature and a copy of requisition with the manual downtime of the specimens.

Send the specimens in the correct transportation temperature with the accession logs in the large secondary bag.

Note the receipt date & time on the specimen label. Then place on a manual temperature specific accession log, labeled as not received in Beaker.

Copy the original downtime requisition & if it is a shared specimen, circle all tests that your lab has tested/performed. Make sure to note the receipt date and time in the lab on the requisition.
After the downtime:

* When the EPIC system is restored, IT will send the communication that the system is available.
* The Laboratory can at this time resume the normal testing process for specimens.
* Each section should immediately check to see that all analyzers are functioning properly in Beaker.
* All downtime paperwork will be segregated from all other reports and kept at the section level for the Downtime Recovery Phase.

### Downtime Recovery Phase

Staff will be designated by Laboratory Managers, Technical Specialists, and Section Leads for downtime recovery.

During Downtime Recovery the following should be performed:

1. Using the first Downtime Log, specimens received will be test requested into Beaker using the Order Entry function. Note: The correct visit encounter must be present before any test ordering can begin. Registration will create the encounters so you may have to wait until that is done.
   a. Priority is downtime
   b. Update the collection time and date and collector information
   c. In the lab specimen comment box enter the dot phrase, `.DRT`, then fill in the date & time the specimen was received in the lab during downtime. `[Downtime specimen rec’d on *** at ***.]`
2. Place the Beaker label on the Downtime log in the column to the immediate right of the downtime label.
3. Continue to order all tests on the logs.
4. When all ordering has been completed, deliver the completed logs to the sections.
5. Staff assigned to linking and reporting the specimens will ensure that the following are done:
   a. Check to make sure that all reports are with the completed logs.
   b. Suspend auto verification for the section that you are linking.
   c. Link the specimens using the downtime logs, both labels and a scanner.
   d. Once linking is completed, resume auto verification.
   e. Using the downtime report go to the Outstanding List and verify the tests performed.

Before final verification, check the results in Becker as compared to the downtime report to ensure that all values are the same.

6. For each specimen number being verified, use the edit key and go to the comment box on the bottom of the result entry screen(white box) and enter the dot phrase, `.DRE`.
7. Fill in the appropriate blanks for who the report was delivered to and date, time and initials of tech. `[Reported during Downtime to *** on *** at *** by ***].`
8. If the test is not interfaced, use Result Entry to manually enter the result following the normal procedure and then verify, making sure to enter the dot phrase, `.DRE` in the comment box.
9. Documentation of all CV’s will be done in the communication log as per normal procedure using the following dot phrase, `.DCV`. `[Critical Value called and read back during downtime to *** on *** at *** by ***].`

Technical Specialists will review all the Outstanding Worklists and reports in their section to assure completion of all downtime testing.

All downtime documentation will be retained in the respective areas in accordance with regulatory requirements for document retention.
Recovery:

*For specimens labeled with a Beaker label prior to downtime, skip to step 7.

1. Click Patient Station
2. Enter patient name or MRN to find patient.
3. Double click encounter, to open patient’s chart. (Registration will create the encounters)

Place the order with a priority of **Downtime**. (For inpatients, use Manage Orders to place orders. For outpatients, use Order Entry to place orders.) *If there are multiple orders to be placed, you can place them all at the same time.*

4. Sign the order. If necessary, enter the authorizing provider.
5. Go to Order Inquiry. Highlight order(s) to be collected and click collect. **You can collect multiple orders at once, and allow container sharing to evaluate.**
6. Print Labels, Update the Collection information, in the Lab specimen comment box use dot phrase, .DRT to add the receipt date & time in the lab and then electronically Receive Specimen.

7. Suspend auto verification on the method before linking any specimen.
8. Open Specimen Linking (Epic > Tools > Laboratory Tools > Specimen Linking)
9. The default view of “Lab Downtime Linking” displays a list of all downtime specimens that need to be linked. Scan the downtime barcode to highlight the downtime specimen to be linked, on the left hand side of your screen.

10. Scan the specimen barcode into the Specimen field.

11. Click Link in the activity toolbar.
12. After linking, go to the appropriate Outstanding Worklists and verify specimens. For each specimen number being verified, use the edit key and go to the comment box on the bottom of the result entry screen (white box) and enter the dot phrase, .DRE.

13. Fill in the appropriate blanks for who the report was delivered to and date, time and initials of tech. *Reported during Downtime to *** on *** at *** by ***.*

14. After verification note on the log that the specimen has been completed.

15. Keep log with downtime reports until checked by departmental Technical Specialist.

16. After Downtime is completed and all results have been verified, all orders/results will be checked to assure no missed orders or incomplete tests.

17. After linking is complete for the method, resume auto verification.
APPENDIX A

NETWORK DOWNTIME FLOWCHART

Is the specimen for Surgical Pathology, Cytology or Microbiology?

No

Is it a shared specimen with Micro / Pathology?

yes

Split specimen for downtime.

hold for delivery to lab. (with requisition). Be sure to note receipt date/time in the lab on requisition.

no

Does specimen have a Beaker label?

no

Is testing required immediately? (see procedure)

yes

Has it been received in Beaker?

no

Fill out downtime log for specimen.

[if it has a Beaker label, write the Beaker# on the log in the right hand column, before labeling].

1. Fill in the downtime labels.
2. Place one downtime label on downtime log.
3. Place one downtime label on specimen.
4. Deliver specimen with extra label to Technical Section.

yes

Hold specimen at appropriate storage temperature. Be sure to note receipt date/time in the lab on requisition.

no