Department of Clinical Research Informatics (DCRI)
Clinical Center, NIH

Subject: Backup Processes for Unavailability of Electronic Clinical Systems

Purpose:

The purpose of the policy is to maintain the integrity of clinical and research information and processes and to insure the continuation of clinical care and research studies during the absence of available electronic/automated clinical systems.

Background:

The prevention, early detection and effective management of a scheduled or unscheduled CRIS down event are critical to assuring quality patient care at the Clinical Center (CC). To manage these events effectively, the Department of Clinical Research Informatics (DCRI) must identify the various roles and responsibilities of DCRI in maintaining CRIS and Ancillary Systems. DCRI's Technical Operations is responsible for providing the hardware and network infrastructure, while Clinical Operations is responsible for maintaining the CRIS Systems. Scheduled System downs require coordination between multiple departments and people. Provided in the guidelines below are: a checklist for planning scheduled system downs, description of the systems that define CRIS and the description of the systems affected by CRIS Downs.

Policy:

Clinical and research information management will be maintained with a backup manual process when electronic systems and information are not available. Defined procedures and guidelines will be followed. Involved informatics and technical staff will coordinate communications with each other, with clinical users and with administrators as required.

Attachments:

Policy Guidelines
Appendix A Organizational Roles, Assigned Responsibilities and E-mail Addresses
Appendix B Flyers- CRIS & LIS Down / List of Manual Forms to Use for Documentation and Department of Laboratory Medicine Downtime Process for Nursing
Appendix C Email template of Downs- Standardized terminology to send out.
Appendix D Nursing and Patient Care Related Guidelines For Scheduled Down
Appendix E Communication of System Downtime Roles and Responsibilities
Appendix F System Descriptions, Impact During CRIS Downs, & Assigned Responsibilities
Appendix G Ancillary System Descriptions, Impact During CRIS Downs, & Assigned Responsibilities

References:
Disaster Recovery Plan: located in the Data Center Operations Department, room B1N243.

Approved: _____
Jon McKeeby, D.Sc.
Chief, Dept. of Clinical Research Informatics

Implemented: 6/01: Revised: 10/03; 11/03; 07/04; 8/04; 11/04; 2/05; 6/06; 7/06; 11/06; 8/07, 5/08, 11/08

Guidelines:
Backup Processes for Unavailability of Electronic Clinical Systems

1.0 Scheduled System Downs- No User Access to CRIS Core & No Printouts.

There are no scheduled downtimes for systems. When they occur, they are related to maintenance upgrades and/ or system problem solving. All Scheduled CRIS and Non-CRIS downtimes must go through the Technical Review Board (TRB). As part of the TRB process they must be added to the Change Management calendar used to track and schedule system downtimes. Notification will occur if the system is expected to be down for more then 15 minutes. The downtime procedures are defined in the following section according to roles. The procedure is also defined in section 3.0.

1.1 Down Preparation- Clarification of Roles

A. The Deputy Chief Informatics Officer (CIO) or the Clinical Systems Architect utilizing DCRI staff will coordinate time with the following people (See Appendix A for organizational assignments) based on the reason for the system down.

The Deputy CIO and Server Support will send an e-mail to the CC Systems Notifications E-mail List. If email notification is needed to all CRIS users then the "CC CRIS Users Master Dist List - ALL" distribution list (DL) will be utilized. This DL is for emergent / CRIS critical purposes.

DCRI
- Team Leader of Systems Monitoring

DCRI
- Chief, DCRI
- Deputy CIO
- Director of the Project Management Office
- Clinical Application and Interface Team Leader
- Ancillary System Administrator
- CRIS Database Manager
- Triage Analyst
- DCRI Clinical System Architect

Diagnostic Radiology Department- Imaging Science Division
- Radiology Information System Administrator

Department of Anesthesia and Surgical Services (DASS)
- Perioperative Information System (POIS) Database Administrator
- DASS System Administrator

Department of Laboratory Medicine (DLM)
- Lab Information Manager
- Back-up Administrator

1.1 Down Preparation- Clarification of Roles (continued)

Department of Transfusion Medicine (DTM)
- Lab Information System Administrator
- Quality Assurance Specialist
- Transfusion Services Supervisor

Nursing and Patient Care Services (NPCS)-
(Entire nursing department is notified of downs)
- NPCS Chief
- NPCS Deputy Chiefs
- The on call nursing administrative coordinator

(Note: Refer to Appendix A.1 for individual's name for the roles listed above)
- For ADT System downtime notify the Deputy Chief, Ambulatory Care Services or designee and Admissions.

Nutrition
- Chief Nutrition Department
- Chief of Clinical Nutrition Services
- Assistant Chief of Food Services
- Registered Dietician Informaticist

Note: May need to call Nutrition Kitchen Supervisor on site weekdays beginning at 6:00 am

Pharmacy
- Chief
- IT Pharmacist
- QA Pharmacist
- Special Projects Pharmacist

Note: May need to call Pharmacy Administrative Officer of the Day.

B. Clinical Application and Interface Team Leader and Ancillary System Administrator will notify the Ancillary Departments that utilize interfaces of the proposed time by phone call and then send an e-mail from the CC DCRI Notifications (DO NOT REPLY) DL to the CC-ISD IE Notice DL E-mail List identifying the date, time and reason for the scheduled down.

C. DCRI Triage Analyst has the role for communicating the planned downtime during regular working week hours. Communication as to what service is down and the duration of the downtime needs to be relayed. If there will be three or more downtimes in a week, the Triage Analyst will send notification included in a table listing the various types of downtimes with date and times.
The procedures for system users during the downtime are the same whether or not there is less than or greater than 24 hour notification; however, the communication role of the Triage Analyst differs. They will notify the following people of the downtime utilizing e-mail. The email will be sent from the CC DCRI Notifications (DO NOT REPLY) DL to the CC-ISD IE Notice DL and CC System Notification DL

Down Preparation- Clarification of Roles (continued)
DCRI Triage Analyst (continued)
If email notification is needed to all CRIS users then the "CC CRIS Users Master Dist List - ALL" distribution list will be utilized. This DL is for emergent / CRIS critical purposes. Special security rights are required to send to this DL.

C. (Reference Appendix A):
- Departmental staff listed above in section 1.1A (reference Appendix A.1 for staff's role and name)
- Clinical Center Nursing Staff reference Appendix A.2 for DL E-mail addresses
- Clinical Center Department of Transfusion Medicine
- Clinical Center DCRI Government Staff
- Clinical Center CRIS Staff

1. 24 hour Advanced Notice (Planned Downtime):
   If the planned down has more than a 24 hour notice, during a regular working week, it will be communicated by having the Triage Analyst distribute flyers to the Nurse Managers' mailboxes and e-mail CC nursing staff via the CC System Notification DL. A sufficient quantity of flyers must be provided to the Nurse Managers, as the managers may cover more than one inpatient unit and/ or clinic (See Appendix B for sample flyers, and communication of down Department of Laboratory Medicine Downtime Process for Nursing).

2. Less than 24 hour Advanced Notice
   For Planned downtimes, during a regular working week, where there is than 24 hour advanced notice, the Triage Analyst will e-mail the CC nursing staff and Departmental staff listed above in section 1.1A.via the CC System Notification DL. Also, the Triage Analyst or designee will call all units and clinics.

Nurse Manager Mailboxes are located in the following locations:
- 10/2B01in work area room 2B04 - Inpatient Services
- CRC 1-5640- Ambulatory Care Services (13 clinics)

Flyers will be distributed to the Ambulatory Care Services only if the downtime will affect them during their hours of operation. Refer to the Nursing & Patient Care Services Organizational Chart as a resource when distributing flyers to the nurse managers. It can be found at the following URL link: http://intranet/nursing/resources/index.html

D. CRIS Analyst On-Call Assumes the responsibilities of the Triage Analyst during evenings, nights, holidays and weekends. The CRIS Analyst On–Call will follow the same notification instructions as the Triage Analyst in Section 1.1 C if assistance is needed from the Systems Monitoring team. In addition, the CRIS Analyst On-Call will contact the Nursing Administrative Coordinator, via the page operator.

2.0 Schedule System Downs- No Interface Transactions

There are no scheduled maintenance downtimes. They occur as needed. The best times to perform these needed maintenance activities requiring downtime are negotiated with the affected departments. This is defined in section 2.2. Planned system downs are identified as providing notification 24 hours in advanced.

2.1 Communication of Downtime (Planned)

The DCRI Triage Analyst or designee is responsible for communicating downtime information when the system is down. Team Leader of Systems Monitoring or designee is responsible for communicating when the system is operational. All downtime communication to the user will be sent from the CC DCRI Notifications (DO NOT REPLY) DL.

A. The Triage Analyst:
   1. Directs the NIH Page Operator via email to overhead page CRIS down 30 minutes before, at the time of down and the subsequent repeat announcements. Announcements are hourly unless the down is >2 hrs, then refer to extended planned downtime.
   2. Sends email notification to CC System Notification and CC-ISD IE Notice DL identifying the reason for the down

B. When the system is operational, the team leader of Systems Monitoring :
   1. Directs the NIH Page Operator to overhead page CRIS is operational.
   2. Notifies the Computer Support Staff at 301 496-8400, during regular working hours.
   3. Notifies the CRIS Analyst On– Call via the Page Operator (during evenings, nights, holidays and weekends only).
   4. Sends email notification to CC System Notification and CC-ISD IE Notice DL identifying the system is operational.

Note: Based on the type of application being down for a specific system and that it does not impact the NIH community, the overhead notification may vary at the user of the systems request (e.g. CBORD Down for 24 hours only announce at the beginning and the end of the down period).

If the downtime is delayed more than two hours from the initial time identified in the communication, an email will be sent out to users by the team leader of Systems Monitoring or designee.

If the system is not operational at the designated time continue with downtime overhead announcement and email notification that the system remains down. If it initially is an extended down then follow the extended downtime procedure otherwise go to unplanned downtime procedure.

2.2 Time Coordination

Communication between the Clinical Application and Interface Team Leader and the Ancillary System Administrator will occur when selecting/ coordinating the scheduled downtime.
Best Times are:

- DASS= 8:00 pm – 10:00 pm
- DLM= 8:00 pm – 10:00 pm
- DTM= 8:00 pm – 10:00 pm
- DRD= prefers after 4:00 pm
- Nursing= prefers 1:00 am; however, during business hours weekdays and weekends, the least disruptive time would be after 5:00 pm. Nursing requests the following as preferred times:
  - ADT scheduled down - 10:00 pm – 12:00 am.
  - Scheduled down < 24 hr notice - at 5:00 pm.
  - Times to Avoid- 11:00 am and 4:00 pm.
- Nutrition= 8:00 pm – 5:00 am
- Pharmacy= need to address each downtime on a case by case basis (8:00 pm – 10:00 pm)
- All Departments= 8:00 pm – 10:00pm

2.3 Notification to Ancillary Departments Of Proposed Downtime

A. DCRI Clinical Application and Interface Team Leader and Ancillary System Administrator will notify the Ancillary Departments that utilize interfaces of the proposed time through the following means:
   1. Phone call
   2. E-mail to the CC-ISD IE Notice DL E-mail List identifying the date, time and reason for the scheduled down.

B. Individual Departments determine if they need to call stat results and if they need to follow their own Interface Down Procedures and use manual procedures.

C. Refer to Appendix B & D for the affects of downtime on clinical departments interactions with patient care units.

2.4 Extended Planned Downtime (Greater than 2 hours)

A. The DCRI Triage analyst or designee is responsible for communicating downtime information when the system is down. When a planned extended down is scheduled the triage analyst will:
   1. Send initial email requesting the NIH Page Operator to overhead page as follows:
      i. If Down occurs between 7:00am – 10:00 pm= Overhead page every hour
      ii. If Down occurs between 10:00 pm – 6:00 am= Overhead page every two hours
   2. Send initial email notification from CC DCRI Notifications (DO NOT REPLY) DL to CC System Notification and CC-ISD IE Notice DL identifying the reason and details for the down.

   Note: The overhead notification may vary based on the type of application down for a specific system that has minimal impact the NIH community. At the main user of the systems request extended announcement can be reduced to what the user defines (e.g. CBORD downtime for 24 hours only announce at the beginning and the end of the down period).

B. During System down the DCRI Team Leader of Systems Monitoring or designee is responsible for:
   1. Confirming the hourly or every two hour announcements are being made over head until the system is operational.
   2. Sending email notification from CC DCRI Notifications (DO NOT REPLY) that the system remains down every two hours (unless designated otherwise) from the start of the down until they are notified it is operational. Email notification is sent to CC System Notification and CC-ISD IE Notice DL.
   3. Directing the NIH Page Operator to overhead page when CRIS is again operational.
   4. Sending email notification from CC DCRI Notifications (DO NOT REPLY) to CC System Notification and CC-ISD IE Notice DL identifying the system is again operational.

3.0 Unscheduled System Downs

3.1 Down Initiation

DCRI Computer Operation staff follows the defined Disaster Recovery Plan, which can be found in the Data Center Systems Monitoring Department located in room B1N243 for emergency and/or unexpected downs. The main DCRI contact is the Team Leader of Computer Operators.

3.2 Communication of Downtime (Unplanned)

Refer to Appendix E for specific procedures related to individual systems being down.

A. Depending on the source that identifies the problem, communication of the down is initiated either through Computer Operation staff contacting DCRI or DCRI contacting Computer Operation staff.

   If the system is expected to be down for more then 30 minutes, the DCRI Team Leader of Systems Monitoring or designee will:

   1. Direct the NIH Page Operators to make an initial overhead page that CRIS is down. This will be repeated every 15 minutes for the first hour and then every 30 minutes for the second hour and then hourly until CRIS becomes operational. Refer to extended planned downtime if down will be > 2hrs.
   2. Send an e-mail from CC DCRI Notifications (DO NOT REPLY) DL to CC System Notification and CC-ISD IE Notice DL identifying that the CRIS is down (see Appendix C).
   3. Notify the Computer Support Staff at 301 496- 8400, during regular working hours.
   4. Notify the CRIS Analyst On– Call via the System Monitoring (during evenings, nights, holidays and weekends only).

B. Involved departments are notified specifically by DCRI. Judgment is used in contacting other affected departments, based on the situation of the downtime. The DCRI Team Leader of Systems Monitoring or designee will:

   1. Send an email from CC DCRI Notifications (DO NOT REPLY) DL to CC-ISD IE Notice List as soon as DCRI is aware of a system interruption. Email to state "System interruption unknown impact. Further information to follow if system remains down for greater than 15 minutes."
   2. Call Admissions, DLM, DTM, Pharmacy, Nutrition and Radiology if the system is expected to be down more then 15 minutes, during regular working hours.
   3. Send out an e-mail to the staff listed in Section 1.1.A via e-mail to the CC System Notification and CC-ISD IE Notice Distribution List of the down status if the following criteria occurs:
      i. The system is expected to be down for 30 minutes.
      ii. The system has been down for 30 minutes.

3.2 **Communication of Downtime (Unplanned)- Continued**

4. If the down status greater than 30 minutes, DCRI Computer Support Staff/ DCRI staff :
    i. Call the page operator requesting an overhead announcement notifying users the system is down. Refer to extended planned downtime if down is greater than 2 hours.
    ii. Call individual patient care units, clinics and day hospitals notifying them if the down status is going to be greater than 30 minutes, during regular working hours. Note: During evening, nights, holidays and weekends the Administrative Coordinator assistance may be needed.
    iii. Sends email notification that the system remains down every two hours from the start of the down to CC System Notification and CC-ISD IE Notice DL.

5. Status of downtime
   Ancillary team leads are encouraged to call DCRI to obtain updated information on the status of the down or system interruption.
    i. Weekdays during business hours (7:00 am- 5:00 pm): Departments may call the CRIS Support Center (301) 496-8400 and request feedback on the status of all downs. The CRIS Analyst will contact the person responsible for the down and get an update. The update will be provided back to the department requesting the feedback.
    ii. Weekends, Evenings Nights and Holidays: Departments may call Systems Monitoring (301) 496-7525 and request feedback on the status of all downs. Systems Monitoring staff will contact the person responsible for resolution of the down for an update. The update will be provided back to the department requesting the feedback.

C. When CRIS is operational, the Team Leader of Systems Monitoring or designee will notify the NIH Page Operators to overhead page that CRIS is available for use.

D. Team Leader of Systems Monitoring or designee sends an e-mail to the CC System Notification and CC-ISD IE Notice DL identifying the reason for the unscheduled down, time the system went down and when it came back. A team of DCRI Operation staff will call the patient care units to confirm that the CPUs are operational.

3.3 Conversion to Use of Manual Documentation and Communication Forms For Prolonged CRIS Down

A. Refer to Section 4.0 for use of manual documentation and communication forms, as the same interventions will occur for an unplanned prolonged down.
B. Extended unscheduled downs require initiation of the defined Disaster Recovery Plan, which can be found in the Data Center Systems Monitoring Department, located in room B1N243.

4.0 Conversion to Use of Manual Documentation and Communication Forms for Prolonged CRIS Down

If the CRIS is down for a prolonged period of time, 30 minutes or greater, DCRI will communicate this information to the Chief, Nursing and Patient Care Services or her Designee, to determine the strategy for initiating the manual procedure. Each individual department will define their appropriate downtime procedure for using manual documentation.

The downtime procedures can be initiated for all CRIS activity or specific functionalities such as order entry, result retrieval, medication administration record (MAR/Worklist Manager) and/or clinical documentation. One or more of these functions may be down. The extent of what activities are working and what needs to be converted to downtime must be communicated.

Planned prolonged down will be communicated via a flyer from the Triage Analyst. The flyer states the reason and approximate time duration of the planned down. Unplanned down will be communicated by the Team Leader of Systems Monitoring or designee.

4.1 Manual Documentation

Order Entry

When order entry is not functioning, the user may not be able to enter orders into CRIS or the orders may not generate a task on the worklist manager (which includes the MAR). When either situation occurs the user may be instructed to use manual order entry procedure. This prevents duplicate orders from appearing on the MAR if the user inadvertently re-entered the order.

Clinical Documentation

Users may be instructed to use manual procedures even though CRIS allows the entering clinical documentation data

4.2 Guidelines and manual forms

Guidelines and manual forms for ordering and documenting, are available on every inpatient unit and clinic. The nurse managers for the inpatient units, day hospitals and clinics are responsible for keeping the forms updated and in stock. DLM and DTM will be notified by Ancillary System Administrator and/ or the Interface Administrator to accept paper requests and call stat results.

Manual ordering and documentation forms can be accessed from Medical Records Monday- Friday 7:00 am- 5:00 pm or accessed online at the following URL: http://intranet.cc.nih.gov/medicalrecords/forms/index.shtml

The following forms (Medical Record) are to be used for manual ordering and documentation:

1. Ancillary Tests- Imaging Services/ECG/ Dental (NIH- 2353-3)
2. Doctor's Orders/ Medical records (STANDARD FORM 508 or Orders Manual: (Computer Template) NIH - 2795)
3. Clinical Laboratory Ordering Record (NIH- 2353-1)
4. Inpatient Progress Notes- (NIH-509 or STANDARD FORM 509)
5. Outpatient Progress Notes (NIH-532-1)
6. Nursing Notes- to be used for inpatients only (STANDARD FORM 510)

7. TPN (NIH- 2859)

Non Medical Record Forms for the Department of Laboratory Medicine can be found at the following URL: http://cclnprod.cc.nih.gov/dlm/testguide.nsf/Index?OpenForm

1. Heme Stat Report
2. Chem Stat Report for Serum & CSF Report
3. Chem Stat Report for Whole Blood
4. Information Required for Specific Tests

4.3 Specimen Labels

Labels used during the downtime must include the patient's name, medical record number and date of birth and patient location. There are three types of labels:

1. CRIS lab labels (if available) are to be used to label any specimens being sent to the lab. These labels print from the Lab system, and as a result during CRIS downs may continue to print if the lab system is operational. These labels include bar coding specific to a unique identifier of what test needs to be done and is read by the lab system.
2. Admission labels (no bar code) are to be used if there are no CRIS lab labels. These are preprinted with the required patient information. If the function to view orders and a lab order exists in the CRIS system, you may write the Order ID number on the admission label. This order ID number identifies the specific test to be preformed and resulted on the specimen being sent down to the lab. The admission labels include a bar code that represents the MRN for the patient, and is different than the barcode on the LIS lab label which is the LIS Order number. Please add the patient care unit (PCU) on the label.
3. Handwritten labels are to be used if admission labels are not available. Please add the PCU on the label.

5.0 Admission Discharge Transfer (ADT)

Admission Discharge Transfer (ADT) will not occur when the CRIS System is down.

5.1 ADT Impact when the CRIS System is down

A. **Any Patient Admission**
CRIS will not send patient admission information to ancillary systems. Admitting a patient must first be initiated through the CRIS system to create the visit in CRIS. Pre-admit orders in CRIS should not be released until the inpatient or outpatient visit has been created. This applies to either the admission of an Inpatient or the creation of an Outpatient visit.

New orders and/or documentation entered while CRIS is down need to follow the procedures for manual entry until the CRIS system is operational (See 3.0 Conversion to Use of Manual Documentation and Communication Forms for Prolonged CRIS Down)**.**

B. **Transfer to another location in the hospital**
The Patient's location will not change in CRIS until the system is operational and the transfer order/ process have occurred. The patient can physically transfer to another unit for care when the CRIS system is down; however, lab labels will continue to print in the patient's old location identified in CRIS until the system is operational. Staff will need to communicate with the new location and forward labels accordingly with new patient location clearly identified.

C. **Visit Type**
If the patient is discharged while the CRIS system is down the current inpatient visit will not change to an outpatient visit until CRIS is operational. If the patient goes on pass while the CRIS system is down the current inpatient visit will not change to a leave of absence status until CRIS is operational.

6.0 System Descriptions, Responsible Parties and Customer Impact

CRIS Components: Equipment and Network That Comprise CRIS.
The following tables reflect the impact on system components or servers when the CRIS system is not operational

Appendix A – A.1 Lists the designated person and contact information for specific roles and responsibilities. A.2 Lists the Organizational E-mail addresses for key players involved in the downtime communication process.

Appendix F – The following table reflects the impact on the various system components and/ or servers if the CRIS Core system is not operational. Also included are the Departments and individuals responsible for the various system components or servers.

Appendix G – The following table reflects the impact on the various ancillary clinical systems if the CRIS Core System is not operational. Also included are the Departments and individuals responsible for the various system components or servers.

Appendix A
Organizational Roles, Assigned Responsibilities and E-mail Addresses

A.1. Organizational Role & Assigned Responsibilities

Clinical Center
NIH Page Operator – (301) 496-1211

Anatomical Pathology
Pathology LIS Administrator NCI/ NIH- Earle Barnes- (301) 496-0551

Department of Anesthesia and Surgical Services (DASS)
POIS Database Administrator – Chris Epinger – (301) 402-7430, Blackberry (301) 675-0855
DASS System Administrator - Nova Little- (301) 451-9404

Department of Clinical Research Informatics (DCRI)
Ancillary System Administrator– Tim Fink – (301) 435-8370
Casper Administrator– Doug Butters – (301) 496-7891
Casper Administrator– Mark Bradley – (301) 451-4682
Chief Informatics Officer – Jon McKeeby, D.Sc. – (301) 496-3826
Chief, Application Development Section– James (Jim) Pitts – (301) 496-7436
Chief, User Support Section– Bertram Brown – (301) 594-7802
Clinical Application and Interface Team Leader– Tony Barnes – (301) 496-4285
Clinical System Architect– Jon McKeeby, D.Sc. – (301) 496-3826
CRIS Database Manager– Myoung Lee – (301) 496-6857
CRIS Database Manager– Tim Maloney – (301) 496-6976
CRIS Database Manager– Tom Dawson – (301) 594-9887
Database Administrator– Jim Oseth – (301) 496-7905
Deputy Chief, DCRI– Joyce Yarington – (301) 594-7801
Deputy Chief, DCRI– David Herion – (301) 496-7734
Deputy Chief, DCRI– Patricia Sengstack – (301) 496-6576
Director of the Project Management Office– Sue Houston – (301) 496-6819
Information System Security Officer– John Franco – (301) 496-6745
Interface Analyst– Yenshei Liu – (301) 496-6789
Network Engineer– Jason Chan – (301) 496-8652
Network Engineer– Richard Walker – (301) 496-8652
Nurse Consultant– Susy Postal – (301) 594-9468
Operational System Analyst- Myoung Lee – (301) 496-6857
Physician Informaticist– David Herion – (301) 496-7734
Project Management Director– Sue Houston – (301) 496-6819
Senior Architect Developer– Steve Moore – (301) 496-8651
Systems Administrator– Barrett Grieb – (301) 347-1431
Team Leader of Computer Operators– Pam Carter – (301) 496-3844
Team Leader of Systems Administration– Dempsey Dunn – (301) 496-4712
Senior Nurse Project Manager- Susan Martin – (301) 496-4240
Triage Analysts– Rubi Defensor – (301) 435-8516
Triage Analysts– Susy Postal – (301) 594-9468
UNIX System Administrator– Chris Klein – (301) 402-0974

UNIX System Administrator– Tadele Yenegeta – (301) 496-9243

DCRI Systems Monitoring On-Call Computer Room – (301) 496-7525

Department of Laboratory Medicine
Laboratory Information Manager– Chung-Hee Row – (301) 402-3420
Laboratory Information System Administrator (Back Up) – Josh Cohen – (301) 402-0584
Laboratory Information System Analyst - Bonnie Meilinger - (301) 402-2959

Department of Transfusion Medicine
Lab Information System Administrator- Boyd Conley – (301) 496-4506 or 1 877 386-4764
Quality Assurance Specialist– James (Wade) Atkins – (301) 496-4506
Transfusion Services Supervisor– Sherry Sheldon – (301) 496-8335

Diagnostic Radiology Department- Imaging Sciences Division
Radiology Information System Administrator- David Sanford- (301) 435-2147
After 5:00 pm call the page operator and ask to speak to the PACs/RIS technologist on- call.

Medical Record Department
Director, Medical Record Department -Tricia Coffey (301) 496-2292,
Medical Record Administration Specialist - Michelle Hendery (301) 402-3299

Nursing and Patient Care Services (NPCS)
Chief, Nursing and Patient Care Services– Clare Hastings – (301) 435-3489
Refer to Organizational Chart for individual's name for the roles listed below:
Deputy Chief, Ambulatory Care Services– Karen Kaczorowski – (301) 496-2341
Deputy Chief, Inpatient Services– Tannia Cartledge – (301) 496-4623
Nurse Managers
Nursing Administrative Coordinator - Contact via page operator
The Organizational chart's URL link is: http://intranet/nursing/resources/index.html
Note: If ADT System Down call Admission staff – (301) 496-3315

Nutrition
Chief, Nutrition Department- David Folio – (301) 496-2554
Chief, Clinical Nutrition Services- Madeline Michael – (301) 496-3312
Assistant Chief of Food Services- Jennifer Widger – (301) 496-0655
Registered Dietician Informaticist- Lee Unangst – (301) 451-7188
Note if need the Nutrition Kitchen Supervisor's number is – (301) 480-6825

Pharmacy Department
Administrative Officer of the Day: 1-888-641-7155 (pager)
Chief- Bob DeChristoforo – (301) 496-5477
IT Pharmacist- Michael Brown – (301) 402-8887
Special Projects Pharmacist- Barry Goldspiel – (301) 496-5869

A.2 Clinical Center Organizational E-mail addresses
CRIS Staff = cc-cris-staff@mail.cc.nih.gov
DCRI Government Staff= cc-dcri-Govt-staff@mail.cc.nih.gov
Department of Transfusion Medicine= cc-DTMstaff@mail.cc.nih.gov
Nursing Staff = nurs@mail.cc.nih.gov

CC-ISD IE Notice = isd_ie_notice@mail.cc.nih.gov
CC Systems Notification = cc-systems@mail.cc.nih.gov
CRIS Critical Distribution lists = CC CRIS Users Master Dist List - ALL

Appendix B
Example of Downtime Flyers /
List of Manual Forms to Use For Documentation

Figure B1. CRIS Downtime Flyer

CRIS Downtime
2 Hour

Purpose: Maintenance on CRIS Production Server
When: Wednesday, November 12, 2008
Time: 8:00 P.M. – 10:00 P.M .

Starting at 8:00 PM

- All users need to log off CRIS by 8:00 pm. You could lose your work if you remain on.
- You will not have access to CRIS. **DO NOT LOG ON UNTIL NOTIFIED**.
- Begin using Downtime (Manual) procedure.
  Important Note: You will need to write the ordering protocol for each order on the manual order forms listed below (e.g. For labs to DLM/ DTM on the Clinical Laboratory Ordering Record).
- Labels **will not** print out.
- You can **NOT** enter orders, document, print or retrieve information in the CRIS system.
- Ancillary Systems such as: CBORD, CITRIX, ECG, IDMS, LIS, PACS, PYXIS, RIS, Scheduling, Dictation/ Transcription, & more will be operational but results will not cross over to CRIS.
  Note: PYXIS will be functional but ADT will not be updated. Please admit in PYXIS manually.
- Please **do not send non-emergent orders** on the manual ordering forms during the down period.
- Please wait and enter **non-emergent orders** in CRIS after CRIS becomes operational.
- You will need to call Departments to communicate the orders and obtain service.

Emergent Lab Order, Please Follow This Procedure:

1. Send the specimen to the lab with a manual Clinical Laboratory Ordering Record Form.
2. Do Not enter Emergency Orders into CRIS. The Lab will enter the orders on their end.
3. Keep a written record of the results called back to the unit.

All Other **Emergent** Orders Follow The Defined Manual Ordering Process By Service

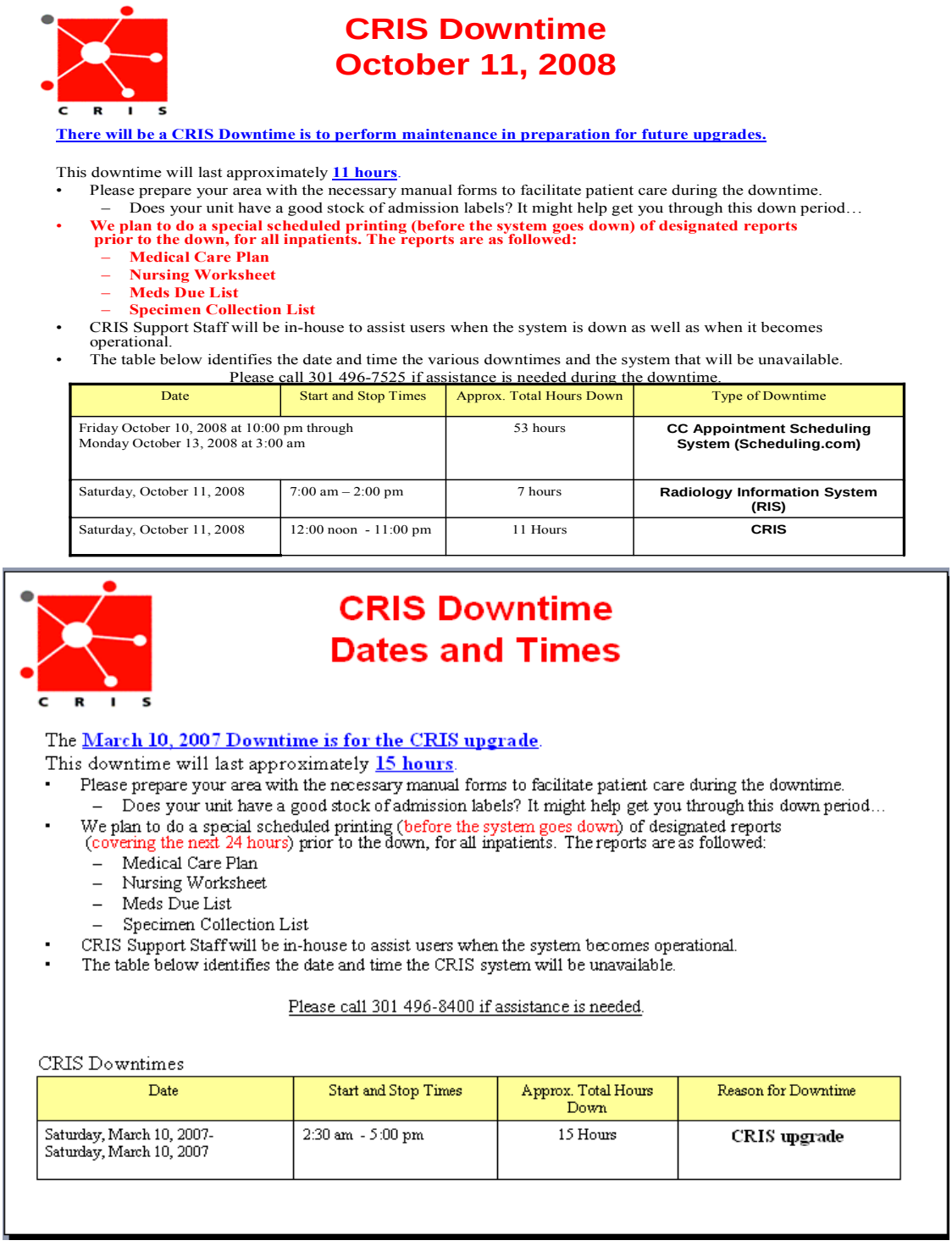
(Pharmacy, Imaging Services, Transfusion Medicine, Respiratory Care, Nutrition And All Other Clinical Services)
Please use the following forms to manually order or document:

- Ancillary Tests- Imaging Services/ECG/ Dental (NIH- 2353-3)
- Medical Records/ Doctor's Orders (SF508)
- Clinical Laboratory Ordering Record (NIH 2353-1)
- Inpatient Progress Notes (SF- 509)
- Outpatient Progress Notes (NIH-532)

Thanks For Your Cooperation And Patience!

Appendix B
Example of Downtime Flyers /
List of Manual Forms to Use For Documentation

Figure B2. CRIS Downtime Flyer with table of various downtimes



C R I S

CRIS Downtime
October 11, 2008

There will be a CRIS Downtime is to perform maintenance in preparation for future upgrades.

This downtime will last approximately **11 hours**.

- Please prepare your area with the necessary manual forms to facilitate patient care during the downtime.
  - Does your unit have a good stock of admission labels? It might help get you through this down period…
- **We plan to do a special scheduled printing (before the system goes down) of designated reports prior to the down, for all inpatients. The reports are as followed:**
  - **Medical Care Plan**
  - **Nursing Worksheet**
  - **Meds Due List**
  - **Specimen Collection List**
- CRIS Support Staff will be in-house to assist users when the system is down as well as when it becomes operational.
- The table below identifies the date and time the various downtimes and the system that will be unavailable.

Please call 301 496-7525 if assistance is needed during the downtime.

Date	Start and Stop Times	Approx. Total Hours Down	Type of Downtime
Friday October 10, 2008 at 10:00 pm through Monday October 13, 2008 at 3:00 am		53 hours	**CC Appointment Scheduling System (Scheduling.com)**
Saturday, October 11, 2008	7:00 am – 2:00 pm	7 hours	**Radiology Information System (RIS)**
Saturday, October 11, 2008	12:00 noon - 11:00 pm	11 Hours	**CRIS**

C R I S

CRIS Downtime
Dates and Times

The **March 10, 2007 Downtime is for the CRIS upgrade**.
This downtime will last approximately **15 hours**.

- Please prepare your area with the necessary manual forms to facilitate patient care during the downtime.
  - Does your unit have a good stock of admission labels? It might help get you through this down period…
- We plan to do a special scheduled printing (before the system goes down) of designated reports (covering the next 24 hours) prior to the down, for all inpatients. The reports are as followed:
  - Medical Care Plan
  - Nursing Worksheet
  - Meds Due List
  - Specimen Collection List
- CRIS Support Staff will be in-house to assist users when the system becomes operational.
- The table below identifies the date and time the CRIS system will be unavailable.

Please call 301 496-8400 if assistance is needed.

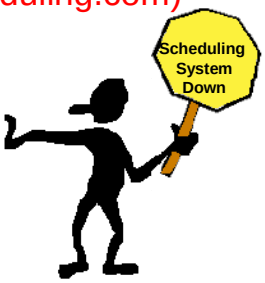
CRIS Downtimes

Date	Start and Stop Times	Approx. Total Hours Down	Reason for Downtime
Saturday, March 10, 2007- Saturday, March 10, 2007	2:30 am - 5:00 pm	15 Hours	**CRIS upgrade**

Appendix B
Example of Downtime Flyers /
List of Manual Forms to Use For Documentation

Figure B3. Scheduling System Downtime Flyer

CC Appointment Scheduling System (Scheduling.com)
53 Hour Down Time



Purpose: SCI Solutions Data center maintenance
Date and time: Friday, October 10, 2008 at 10:00 pm through
Monday, October 13, 2008 at 3:00 am

Please be aware that access to the CC Appointment Scheduling System (Scheduling.com) will be unavailable for 53 hours .

CRIS will be operational during this time.

It is requested that you enter appointments scheduled for Monday, October 13, 2008 into the Scheduling system before 3:00 pm, Friday, October 10, 2008 to help avoid delays on Monday morning.

Plan on implementing the down time procedures as noted below:

- Please call the specific patient care or diagnostic testing areas to schedule emergent appointments.
- **Medical Record Chart Pulls**
  Weekends, Holidays and After hours: Please call Admissions concerning any Medical Record Chart Pulls for appointments made for any period during the downtime, as they will not receive notification.

Thanks For Your Cooperation And Patience!
Department of Clinical Research Informatics

Appendix B
Example of Downtime Flyers /
List of Manual Forms to Use For Documentation

Figure B4. LIS Downtime Flyer

Laboratory Information System
13 hours Downtime

Purpose: LIS Maintenance
When: Saturday, November 22, 2008
Time: 8:00 AM - 9:00 PM

CRIS system will be operational!

- **Blood Pickup Service Requests will print in the Dept. of Transfusion Medicine (DTM).**
- **Any LAB Orders that are entered during downtime will queue up (back up) in CRIS and will not cross over to the LIS Ancillary System. Results from the LIS, will not cross over to CRIS until the LIS system is operational.**

Emergent Lab Orders ONLY, Please Follow This Procedure:

1. Enter lab orders in CRIS.
2. **IMPORTANT** Send the specimen to the lab with one of the following:
   - An Order Requisition or
   - Clinical Laboratory Ordering Record (NIH-2353-1). Write the CRIS order ID number on the manual form. **Important Note:** You will need to write the ordering protocol, Patient Care Unit, and Ordering Prescriber for each order on the manual order forms.
3. Specimen should be labeled with the Admission labels.
4. An Admission Label and Typenex label are also required for Type and Antibody Screen.
5. All STAT and Critical lab results will be called during downtime.
   All lab results will be delivered to the patient care units hourly.
6. Keep a written record of the results called back to the unit.
7. When LIS system comes back up, label printer will print labels for the all queued orders during downtime or Time-Sensitive orders.

Do not redraw specimens for orders entered during the Down. ***Thanks For Your Cooperation And Patience!***

Appendix B
Example flyer: Department of Laboratory Medicine Downtime Process for Nursing
Projected Downtime: Date @ __:__ _.m – Date @ __:__ _.m. (insert date)

Prior to Down:

1. Please have all routine orders for labs in CRIS prior to the system down.
2. Have adequate supply of patient admission labels and the following forms on the unit:
   - ✓ Clinical Laboratory Ordering Record NIH 2353-1 (05/04) (Manual order sheet)
   - ✓ "Information Required for Specific Tests" (dose and draw time for drugs, etc)
   - ✓ STAT Report Logs for Chemistry (1 from for serum/CSF, and 1 for whole blood) and 1 form for Hematology" to record STAT lab results and critical lab values called to PCU during computer downs.
3. Review the purpose of these forms and their location with the staff.
4. The Nursing Administrative Coordinator will have additional copies of these 3 Forms.

CRIS Down:

ORDERS:

1. Limit manual lab orders during downtime.
2. Complete Clinical Laboratory Ordering Record NIH 2353-1 for lab tests required during downtime:
   - ✓ Use one order form per patient for Chemistry, Hematology, Immunology, Mayo, 24 hr urine.
   - ✓ Use a separate form for Microbiology tests
   - ✓ Use a separate form for Transfusion Medicine tests
   - ✓ Important reminder…
     PRINT PHYSICIAN name, enter PCU location, and **Protocol Number**
     DLM must have this information to enter CRIS orders after downtime is over.
3. Send the "Information Required for Specific Tests" if tests require specific information in order to be processed (e.g. drug levels and 24 hr urines)
4. Label specimens with Admissions Label (bar code labels will not be available)
5. **Write PCU location on the label.**

Manual RESULTS:

1. DLM will call STATS and Critical Value lab results to the PCU. Record these results on the form "STAT Report Log for Chemistry and Hematology" to record the lab results called.
2. Test reports will be sent to each PCU for STAT, Priority and Routine orders as soon as available via Messenger Escort at least hourly. All results called to the unit should be recorded on the STAT logs and filed in the front of the patient's chart for easy access/retrieval during the downtime.
   Important reminder -please do not call the lab for results during the downtime. During the downtime, it is difficult to retrieve results in the lab when working in the manual mode.
3. DTM will call the PCU when blood is ready for pick up and will continue to tube blood. Please be prepared to state patient's complete name, MRN, Date of Birth, and component type requested when initiating request for blood delivery.

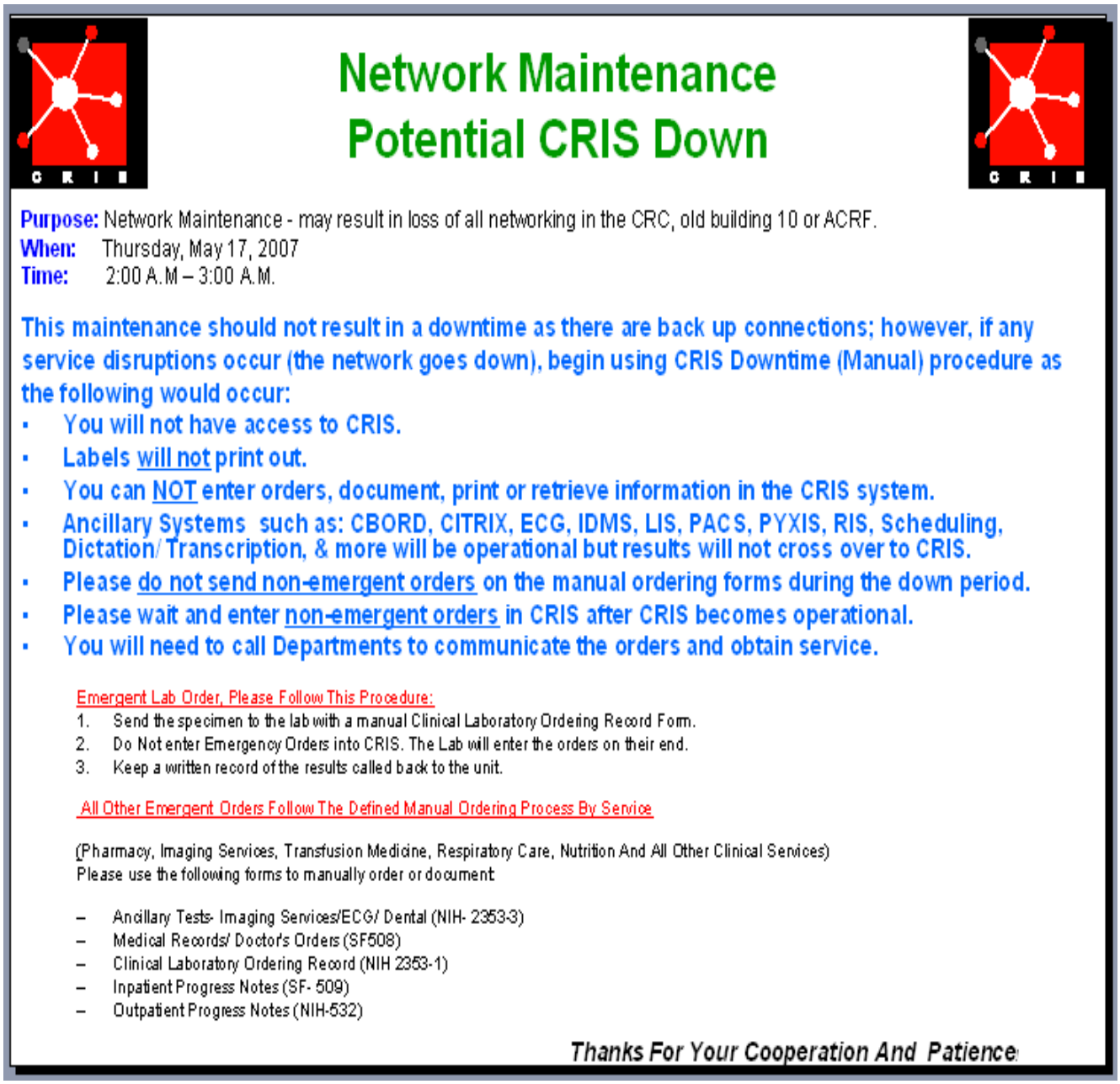
Appendix B
Example flyer: Department of Laboratory Medicine Downtime Process for Nursing
Projected Downtime: Date @ __:__ _.m – Date @ __:__ _.m. (insert date)

CRIS Up:

1. DLM and DTM will enter all lab orders that arrive in the labs with a Clinical Laboratory Ordering Record during the down period. Bar code labels for these orders will then print out in the labs.
2. Collaborate with your peers to see what samples were drawn during the downtime and discard the duplicate labels that may have printed on the units when CRIS is brought up.
   Do not redraw specimens that were drawn during the downtime.
3. Lab results from manual orders placed during downtime will not be available in CRIS until **Date @ __:__ a.m**. Keep the paper file of lab results on the PCU until all lab results are in CRIS. DLM expects that all Lab results from downtime will be in CRIS by
   Date @ __:__ a.m

Appendix B
Example of Downtime Flyers /
List of Manual Forms To Use For Documentation

Figure B5. Network Downtime Flyer



Appendix B
Example of Downtime Flyers /
List of Manual Forms To Use For Documentation

Figure B6. Sybase/CDR (Clinical Center Database) Downtime Flyer

Clinical Center Database Outage
4 Hour Downtime

Ancillary Clinical Systems (e.g. Lab, Radiology, etc) will be operational.

SoftMed will not be operational

Purpose: Clinical Center (CC) Database Maintenance

Date and Time: Wednesday, October 1st, 2008 from 6:00 pm until 10:00 pm

The SoftMed application will be affected.

This 4 hour downtime will primarily affect the following Web-based CC and Department applications:

Web-based CC applications	Department Applications:
Clinical Data Warehouse (CDW)	Blood Borne Diseases
Executive Information System (EIS)	Bioethics Tracking
* Hospital Services & Visual Supply Catalog	Building Services Requests
Hospital Statistics System (HSS)	Catheter Placement
Investigational Drug Monitoring System (IDMS)	Consult Evaluation System
MRD Diagnostic Discharge (DDX)	Pain Management Tracking
MRD Lab Report Requests	Pharmacotherapy Registration
Occurrence Reporting System (ORS)	Pharmacy Patient Tracking
Pharmacy Drug Formulary	Phlebotomy
Protocol History	**Patient Recruitment Tracking**
CRIMSON, Pyxis	**Volunteer Tracking, SoftMed and eSphere**

*Attn Nursing: For Central Hospital Supply (CHS) orders during this period, please contact CHS Hatfield at 301-451-0734 or contact the page operator to reach the CHS On-Call staff.

Investigational Medication Orders will not cross to IDMS, and notifications will not cross to SoftMed ChartReserve

Medications for patients assigned a Pain and Palliative Care Consult will not be sent to eSphere

Thank you for your cooperation and patience! The Department of Clinical Research Informatics (DCRI)

Appendix C

Example of Standard Terminology to send in Email and Message for CRIS Down

There are various types of system downtimes or delays where standard terminology can be used in an e-mail to users and a message to page operators informing them of what is affected by the down/delay.

These downtimes are:

1. Admission, Travel, Voucher (ATV) Down
2. CC Appointment Scheduling System (Scheduling.com) Down
3. Citrix Down
4. CRIS Down
5. CRIS Interface Down
6. CRIS Lab Interface Down
7. CRIS Lab System Down
8. CRIS Printing Down
9. CRIS Printing Delay
10. Internet Access Down (Loss of access to Scheduling.com and SIS Web)
11. NIH Network Delay
12. NIH Network Maintenance/ Potential Network Down
13. Perioperative Information System (POIS) / SIS Web Down
14. Radiology Information System (RIS) Down
15. Sapphire Maintenance/ Potential CRIS Down
16. SMM Down (Sunrise Medication Manager / Pharmacy System Down)
17. SoftBank Down/ DTM Lab System Down
18. Sybase/ CDR Down (Clinical Center Database Server)

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

1. Admission, Travel, Voucher (ATV) Down

Message to Page Operator:
The Admission, Travel, Voucher System (ATV) will be unavailable for use __Date__
from _time__ -_____.
During the ATV downtime, please use NIH Form 54 and contact the Admissions Department to communicate request and obtain service.

E-Mail Message:

The Admission Travel Voucher System (ATV) will be down __Date__ from _time__ -_____.
During the ATV downtime, you _____ have access to CRIS.

Please use the manual form NIH Form 54 Request for Admission /Travel/ Voucher/ Local Transportation for emergent requests and deliver the completed form to the Admissions desk to obtain service. If the request is not emergent, please submit an electronic request once the ATV system is operational.

For questions about the NIH Form 54, contact Admissions at 301-496-3315."

The manual form can be accessed from Medical Record Department's online forms at the following URL: http://intranet.cc.nih.gov/medicalrecords/forms/index.shtml

2. CC Appointment Scheduling System (Scheduling.com) Downtime

Message to Page Operator:
Due to maintenance, access to the Appointment Scheduling System (Scheduling.com) is not available. CRIS is operational. Please call the specific patient care or diagnostic testing areas to schedule emergent appointments

E-Mail Message:

Access to the CC Appointment Scheduling System (Scheduling.com) is not be available
CRIS will be operational during this time.

- Please call the specific patient care or diagnostic testing areas to schedule emergent appointments.
- Please call Admissions concerning any Medical Record Chart Pulls for appointments made for any period during the downtime, as they will not receive notification.

NOTE TO DCRI IF APPLICABLE:
Important request: It is requested that you enter appointments scheduled for Date into the Scheduling system **before** Time and Date to help avoid delays on Monday morning.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

3. Citrix Down

Message to Page Operator:

The Citrix system will be unavailable for use (give date and time if you know in advance).
During the downtime CRIS will be operational only from Standard Clinical Desktop Computers (SCDs).

E-Mail Message:
During the Citrix downtime, you will have access to CRIS only from Standard Clinical Desktop (SCD) computers.

You CAN enter orders, document, print and retrieve information from the SCDs which are located on nursing units and ancillary departments (DLM, DTM, Pharmacy…) in designated areas.

Ancillary Systems such as: RIS, LIS, ECG, PACS, Scheduling, CBORD, PYXIS, Dictation/ Transcription, IDMS & more will be operational and results will cross over to CRIS.

SunRay Computers will not have access to CRIS.

Email through Citrix will be unavailable for use during the downtime.

Remote access from off site will be unavailable.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

4. CRIS Down

Message to Page Operator:
The CRIS system will be unavailable for use (give date and time if you know in advance). Please use Downtime procedure.

E-Mail Message:

- Please begin using Downtime (Manual) procedure.
- You will not have access to CRIS.
- **Important Note:** You will need to write the ordering protocol for each order on the manual order forms listed below (e.g. for labs to DLM/ DTM on the Clinical Laboratory Ordering Record).
- Labels will not print out.
- You can NOT enter orders, document, print or retrieve information in either system.
- You can not admit, transfer or discharge a patient in CRIS until it becomes operational.
- Ancillary Systems such as: CBORD, CITRIX, ECG, IDMS, LIS, PACS, PYXIS, RIS, Scheduling, Dictation/ Transcription, & more will be operational but results will not cross over to CRIS. Note: PYXIS will be functional but ADT will not be updated. Please admit in PYXIS manually.
- Please do not send non-emergent orders on the manual ordering forms during the down period.
- Please wait and enter non-emergent orders in CRIS after CRIS becomes operational.
- You will need to call Departments to communicate the orders and obtain service.

Emergent Lab Order, Please Follow This Procedure:

1. **Send the specimen to the lab with a manual Clinical Laboratory Ordering Record Form.**
2. **Do Not enter Emergency Orders into CRIS. The Lab will enter the orders on their end.**
3. **Keep a written record of the results called back to the unit.**

All Other Emergent Orders Follow the Defined Manual Ordering Process by Service
(Pharmacy, Imaging Services, Transfusion Medicine, Respiratory Care, Nutrition and All Other Clinical Services)

Please use the following forms to manually order or document:

- Ancillary Tests- Imaging Services/ECG/ Dental (NIH- 2353-3)
- Medical Records/ Doctor's Orders (SF508)
- Clinical Laboratory Ordering Record (NIH 2353-1)
- Inpatient Progress Notes (SF- 509)
- Outpatient Progress Notes (NIH-532)

Appointment Scheduling - . You will be unable to view new patient information or demographic updates on patients in the Scheduling System.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

5. CRIS Interface Down

Message to Page Operator:
There is/ will be a CRIS Interface Down (give date and time if you know in advance). CRIS is operational; however Admission, Discharge and Transfer (ADT) and transactions information from CRIS will not update or cross over to ancillary systems until the interfaces are operational. You will need to call Departments to communicate orders and obtain service.

E-Mail Message:

There is/ will be a CRIS Interface Down (give date and time if you know in advance). CRIS is operational; however Admission, Discharge and Transfer (ADT) transactions from CRIS will not update or cross over to ancillary systems until the interfaces are operational.

You will need to call Departments to communicate orders and obtain service.

CRIS will be operational during this downtime. You CAN enter orders, document, and retrieve information and print. Protocol information updates will not occur until the interface is operational. New patients will not cross from CRIS to the ancillary systems until the interfaces are up.

Orders entered in CRIS will queue up (back up) not cross over to the Ancillary Systems. Results from the Ancillary Systems, will not cross over to CRIS until the interface is operational.
The Ancillary Systems include:

- Crimson
- ECG system
- eSphere
- IDMS System
- Laboratory Information System (LIS) = Micro, Lab, Blood Bank, Anatomic Pathology
- Nutrition System (CBORD)
- Perioperative Information System (POIS/ SIS Web)
- ProSolv Cardiovascular System
- Radiology Information System (RIS)
- The Appointment Scheduling System (Scheduling.com)
- Transcription System
- Viasys

PYXIS ADT information will not be updated. Please admit by hand per manual procedure.

Admission – During the interface downtime, the patient's previous preadmit, outpatient and inpatient visits are visible when you do a patient search in CRIS. ***You must wait until the patient's current visit is available in CRIS SCM before releasing orders or documenting.***

CRIS Interface Down (continued next page)

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

5. CRIS Interface Down (continued)

Transfers- During the interface downtime, the patient's CRIS location will not be transferred to their new location. Users can still document on the patient, but it will show up as the patient residing in their old location. For services, you must communicate with the ancillary departments (i.e. Dept. of Laboratory Medicine, Dept. of Transfusion Medicine, Phlebotomy, Nutrition, Pharmacy, Messenger and Escort) as to where the patient is actually located.

Discharges-You can enter and mark the Discharge Order task as done; however, the patient will remain on the unit's Patient List until the interface is operational.

Appointment Scheduling- You will not be able to make appointments for patients admitted while the interface is down or view new patient information and /or demographic updates on current patients in the Scheduling System.

Updated patient protocol information will not cross from CRIS to the Appointment Scheduling system, and Medical Record Pull requests will not cross from Scheduling to Medical Record Department (MRD). Any Medical Record pulls on patients who were scheduled during the CRIS interface down will require that a phone call is made to MRD (Monday –Friday 7:00 am -6:00 pm) or Admissions (After hours, weekends and holidays) notifying them of the need for a Medical Record Pull.

SIS Web- You will be able to submit OR case requests while the interface is down; however, new preadmit patients will not be available in SIS Web until the interfaces are operational. Please call the front desk of the Operating Room (OR) if you need to schedule an OR case on a new patient.

Lab specimens and label- Please do not send non-emergent orders on the manual ordering forms during this period. It is suggested that users enter non-emergent orders after the interface becomes operational.

Lab Labels will not print during the downtime. You must enter the CRIS order number on an admission label to send the specimen. Labels will print when interface is operational.
Do not redraw theses specimens.

During downtime the Department of Laboratory Medicine will call the nursing units with stat results.

The Department of Transfusion Medicine will call the nursing units when blood components are ready and with stat results.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

6. CRIS Lab Interface Down

Message to Page Operator:
There is/ will be a CRIS Lab Order Interface Down (give date and time if you know in advance). Please call the Department of Laboratory Medicine (DLM) and the Department of Transfusion Medicine (DTM) to communicate orders and obtain service. Lab labels will not print out during this downtime. Thank you.

E-Mail Message:

There will be a Laboratory Order Interface Down
CRIS will be operational during this time.

You will need to call the Department of Laboratory Medicine (DLM) and the Department of Transfusion Medicine (DTM) to communicate orders and obtain service. Lab labels will not print out during this downtime. Results from the LIS will not cross over to CRIS until the LIS system is operational.

You CAN enter orders, document, and retrieve information and print; however, orders entered will queue up (back up) in CRIS and not cross over to the selected Ancillary System. The Ancillary System includes:

- Laboratory Information System (LIS)= Micro, Lab, Blood Bank, Anatomic Pathology

Please do not send non-emergent orders on the manual ordering forms during this period. It is suggested that users enter non-emergent orders after the interface becomes operational. During downtime the DLM and DTM will call the nursing units with stat results.

Lab Labels will not print during the downtime. You must enter the CRIS order number on an admission label to send the specimen.

Lab Labels will print for orders entered during downtime when LIS is operational. Do not redraw theses specimens.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

7. CRIS Lab System Down

Message to Page Operator:
There is/ will be a CRIS Lab System Down (give date and time if you know in advance). You will need to call the Department of Laboratory Medicine (DLM) and the Department of Transfusion Medicine (DTM) to communicate orders and obtain service. Lab labels will not print out during this downtime. Thank you.

E-Mail Message:

There will be a Laboratory Information System (LIS) Down
CRIS will be operational during this time.

- **Important Note:** For **emergent lab orders** needed during the downtime, either print out the CRIS order requisition or complete the Clinical Laboratory Ordering Record (NIH-2353-1) and send to Department of Laboratory Medicine (DLM) or Department of Transfusion Medicine (DTM)
    - Please be sure to include the following information on the manual form:
        1. The CRIS Order ID number,
        2. Patient care unit,
        3. Protocol number and,
        4. Ordering physician.

- You CAN enter orders, document, and retrieve information and print; however, orders entered will queue up (back up) in CRIS and not cross over to the selected Ancillary System. The Ancillary System includes: Laboratory Information System (LIS) = Micro, Lab, Blood Bank, Anatomic Pathology
- **Blood Pickup Service Requests** will print in DTM. During downtime DLM and DTM will call the nursing units with stat results.
- All lab results will be delivered to the patient care units hourly.
- A Typenex label and admission label are required for Type and Antibody Screen.
- Please do not send non-emergent orders on the manual ordering forms during this period. It is suggested that users enter non-emergent orders after the interface becomes operational.
- Lab labels will not print out during this downtime.
  When the LIS comes back up, labels for the labs entered during the LIS downtime will printout– **Please do not redraw the sample.**
- Results from the LIS, will not cross over to CRIS until the LIS system is operational.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

8. CRIS Printing Down

Message to Page Operator:
Present tense: The CRIS Printing system is down. CRIS is operational. Please call Departments to communicate the orders and obtain service

E-Mail Message:

CRIS will be operational during this time; however, transactions entered in CRIS will not print out in the form of requisitions.

You may enter orders and the orders will be retrievable in CRIS. The printing of the order requisitions will queue up (back up) in CRIS until the printing system becomes operational.

You will need to call Departments to communicate the orders and obtain service.
Please implement backup procedures to blood bank for all blood component orders and blood pick up service requests.

During the printing downtime, the following will not print:

- Admission Labels,
- Pharmacy Labels/ Medication orders in Pharmacy,
- Order Requisitions (all orders)
- Reports (e.g. Medical Care plans)…

As noted, medication order entry is available, but delays in order/label generation in Pharmacy will occur. During the printing down, Pharmacy will not fill new orders unless they are notified.
Please call Pharmacy for urgently needed medication.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

9. CRIS Printing Delay

Message to Page Operator:
Present tense: There is a delay in CRIS Printing. CRIS is operational. Please call Departments to communicate the orders and obtain service

E-Mail Message:

CRIS Printing is operational but delayed

CRIS is operational during this time; however, transactions entered in CRIS are delayed in printing out.

You will need to call Departments to communicate the orders and obtain service.
Please implement back up procedures to blood bank for all blood component orders and blood pick up service requests.

You may enter orders and the orders will be retrievable in CRIS. The printing of the order requisition has queued up (back up) in CRIS and the following printouts are delayed:

- Admission Labels,
- Pharmacy Labels/ Medication orders in Pharmacy,
- Order Requisitions (all orders)
- Reports (i.e. Care plans)

As noted, medication order entry is available, but delays in order/label generation in Pharmacy will occur. During the delay in printing, Pharmacy will not fill new orders unless they are notified. Please call Pharmacy for urgently needed medication.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

10. Internet Access Down

Message to Page Operator:
Present tense: Internet access to the Appointment Scheduling System and SIS Web is down. CRIS is operational. Please call the specific patient care or diagnostic testing areas to schedule appointments. Please call the front desk of the Operating Room (OR) if you need to schedule an OR case.

E-Mail Message:

Access to the CC Appointment Scheduling System (Scheduling.com) or SIS Web will not be available for _____ minutes.

CRIS will be operational during this time.
Please call the specific patient care or diagnostic testing areas to schedule emergent appointments. Please call the front desk of the Operating Room (OR) if you need to schedule an OR case or to get a copy of the current OR schedule.

Medical Record Chart Pulls

- Monday –Friday 7:00 am -6:00 pm: Contact the Medical Record Department (MRD) concerning Medical Record Chart Pulls.
- Weekends, Holidays and After hours: Please call Admissions concerning any Medical Record Chart Pulls for appointments made for any period during the downtime, as they will not receive notification.

Also IDMS Item Info in CRIS may not be available.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

11. NIH Network Delay

Message to Page Operator:
Present tense: The NIH network may experience a downtime. If the Network goes down, please use CRIS downtime procedure.

E-Mail Message:
On enter date, maintenance is being performed to the NIH Network
This maintenance should not result in a downtime. However, if any service disruptions occur and the network goes down, please begin using CRIS Downtime procedure.

12. NIH Network Maintenance/ Potential Network Down

Message to Page Operator:
Present tense: The NIH network may experience a downtime. If the Network goes down, please use CRIS downtime procedure.

E-Mail Message:
On enter date, maintenance is being performed to the NIH Network
This maintenance should not result in a downtime. However, if any service disruptions occur and the network goes down, please begin using CRIS Downtime procedure.
.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

13. Perioperative Information System (POIS) Down

Message to Page Operator:
Present tense: Access to the SIS Web is down. CRIS is operational. Please call the front desk of the Operating Room (OR) if you need to schedule an OR case.

E-Mail Message:

Access to SIS Web will not be available for _____ minutes.

CRIS will be operational during this time.
Please call the front desk of the Operating Room (OR) if you need to schedule an OR case or to get a copy of the current OR schedule.

14. Radiology Information System (RIS) Down

Message to Page Operator:
The Radiology Information System (RIS) will be unavailable for use __Date__ from _time__ -_____.
During the RIS downtime please page the Radiology Technologist to communicate orders and obtain service

E-Mail Message:

The Radiology Information System (RIS) will be down _____, _____ from 6:30AM until approximately ~12:00 noon.

During the RIS downtime, you will have access to CRIS.

Orders placed in CRIS for Radiology and Nuclear Medicine will not cross over into the Radiology system.

Please page the Radiology Technologist on duty to schedule patient exams and obtain service during the RIS downtime.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

15. Sapphire Maintenance/ Potential CRIS Down

Message to Page Operator:
The network server, Sapphire, is down. You **will not** have access to your personal folders on the H Drive and various other network folders during this time. You will have access to CRIS from Standard Clinical Desktop (SCDs) computers only.

E-Mail Message:

Potential CRIS Downtime
Sapphire is down. During this network server interruption, you **will not** have access to your personal folders on the H Drive and various other network folders.

You will have access to CRIS from Standard Clinical Desktop (SCDs) computers only."

During the Sapphire Server (main file server) downtime, you may experience intermittent outages where CRIS becomes unavailable for use.

- If CRIS goes down - Please begin using Downtime (Manual) procedure as you will not have access to CRIS.
  Important Note: You will need to write the ordering protocol for each order on the manual order forms listed below (e.g. for labs to DLM/ DTM on the Clinical Laboratory Ordering Record).
- You can NOT enter orders, document, print or retrieve information in CRIS.
- Ancillary Systems such as: CBORD, CITRIX, ECG, IDMS, LIS, PACS, PYXIS, RIS, Scheduling, Dictation/ Transcription, & more will be operational but results will not cross over to CRIS. Note: Pyxis will be functional but Admission Discharges and Transfers (ADT) will not be updated. Please admit by hand per manual procedure.
- Labels will not print out.
- Please do not send non-emergent orders on the manual ordering forms during the down period.
- Please wait and enter non-emergent orders in CRIS after CRIS becomes operational.
- Please do not log on until notified.

You will need to call Departments to communicate the orders and obtain service and/or use manual ordering as identified by the department.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

16. SMM Down (Sunrise Medication Manager / Pharmacy System Down)

Message to Page Operator:
The Pharmacy System is down. CRIS is operational. Medication orders can be entered in CRIS, but cannot be verified by Pharmacy or charted on the worklist. Please enter a medication replacement request for all new medication orders that are needed urgently.

E-Mail Message:

Subject: Pharmacy System Down

The Pharmacy System component of CRIS is down. CRIS is operational and medication orders can be entered, but will not cross over to the Pharmacy System.

- You will not be able to chart new medication orders until the Pharmacy System is operational.
- These orders will remain unverified by pharmacy until the system is operational.
- Please place a medication replacement request for all new medication orders that are needed urgently.
- When Pharmacy System becomes operational, please remember to chart all medications administered during the downtime.

STOP do not send this information- Information for DCRI Staff
Message to send when Pharmacy System becomes operational The Pharmacy System is now operational. Please remember to chart all medications administered during the downtime.

For **Unplanned** Downs: When the Pharmacy Dept notices that SMM is down they must call Systems and Monitoring (like they currently do). Systems Monitoring will notify Database team and if it's going to take long to fix, the system will be down for 30 minutes, the DB team will notify Systems and Monitoring to send out "SMM Down" message.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

17. SoftBank Down/ DTM Lab System Down

Message to Page Operator:
The Department of Transfusion Medicine Lab System (SoftBank) is down You will need to call the Department of Transfusion Medicine (DTM) to communicate emergent BLOOD COMPONENT orders and obtain service during this time.

E-Mail Message:

The Department of Transfusion Medicine Lab System (SoftBank) is down. You will need to call the Department of Transfusion Medicine (DTM) to communicate emergent BLOOD COMPONENT orders and obtain service during this time.

CRIS and Laboratory Information System (LIS) are operational
If possible please hold on entering routine blood component orders until the system is back up.
Please call DTM to communicate and obtain service for **transfusion orders ONLY** such as:

- All blood component orders
- Type and screen
- Direct Antiglobulin Tests (DAT)

DTM Blood Component Orders that are entered in CRIS during this downtime will queue up (back up) in LIS and will not cross over to SoftBank until it is operational. Results from SoftBank will not cross over to CRIS until the SoftBank system is operational.

Emergent Blood Component Lab Orders ONLY, Please Follow This Procedure:

1. Enter lab orders in CRIS.
2. Call DTM at 301-496-8335 to let them know the request is STAT
3. Send the specimen (if applicable) to the lab with the Order Requisition. Specimen should be labeled with the LIS labels and Typenex label if applicable.
4. All STAT and Critical lab results will be called during downtime.
5. When the SoftBank system comes back up downtime results will be entered and will cross to CRIS.

Do not redraw specimens for orders entered during the SoftBank downtime.

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

18. Sybase/CDR Down (Clinical Center Database Server)

Please note that usually an overhead announcement is not made for this and flyers are not distributed.

Message to Page Operator:
The Clinical Center database server will be unavailable for use Date at time. During the downtime, you will not have access to web based Clinical Center Applications such as Pyxis, Visual Supply Catalog, ORS and more.

E-Mail Message:
The Clinical Center database server will be shut down for maintenance Date at time. Service should resume by Time

NOTE: CRIS and other clinical systems will NOT be affected.
This down will primarily affect the following web-based CC applications:

Web-based CC applications

- Clinical Data Warehouse (CDW)
- CRIMSON
- Executive Information System (EIS)
- *Hospital Services & Visual Supply Catalog
- Hospital Statistics System (HSS)
- Investigational Drug Monitoring System (IDMS) -Orders from CRIS will not cross to IDMS
- MRD Diagnostic Discharge (DDX)
- MRD Lab Report Requests
- Occurrence Reporting System (ORS)
- Pharmacy Drug Formulary
- Protocol History
- Pyxis - If the down is at 2 a.m., patients with appointments will not be sent to Pyxis

Department Applications:

- Blood Bourne Diseases
- Bioethics Tracking
- Building Services Requests
- Catheter Placement
- Consult Evaluation System
- eSphere- Medications for patients assigned a Pain and Palliative Care Consult will not be sent to eSphere
- Pain Management Tracking
- Pharmacotherapy Registration

Sybase/ CDR Down (continued next page)

Continued: Example of Standard Terminology to send in Email and Message for CRIS Down

17. Sybase/CDR Down (Clinical Center Database Server)- Continued

- Pharmacy Patient Tracking
- Phlebotomy
- Patient Recruitment Tracking
- SoftMed - Chart Reservation notifications will not cross to SoftMed ChartReserve
- Volunteer Tracking

*Attn Nursing: For Central Hospital Supply (CHS) orders during this period please contact CHS Hatfield at 301-451-0734 or contact the page operator to reach the CHS On-Call staff.

Nursing and Patient Care Related Guidelines For Scheduled Down
CC Computer Shut Down for Emergency Maintenance
Insert Date at __:__ p.m. – __:__ a.m.

All computer systems (CRIS, ancillary systems, internet, and intranet) within the CC Data Center will experience intermittent down periods beginning **Date** @ **__:__ p.m**. through **Date** @ **__:__ a.m**.
Here are some tips to help you prepare for this planned outage.

Communication During Computer Down-Time

1. Prior to the system going down, the Page Operator will announce the actual shut downtime and, will also make an announcement when CRIS has returned back to functioning capacity. The leadership staff will follow-up with a phone call to each PCU to verify the CRIS is working.
2. All attempts should be made to enter information into CRIS prior to **Date** @ **__:__ p.m**. including nursing assessments and medication administration.
3. Please request physicians to enter new patient orders into CRIS prior to **Date** @ **__:__ p.m**
4. All communication will be conducted using the Pneumatic Tube Stations with a follow up phone call to the appropriate department for STAT orders.
5. Messenger and Escort will make hourly rounds to DLM to pick up and deliver lab results to PCU's.
6. Medical Record Documentation
   ALL required forms will be on each PCU in a designated "COMPUTER SHUT-DOWN AREA."
   The forms include:
   - Doctor's Orders (Standard Form 508)
   - Clinical Laboratory Ordering Record NIH-2353-1 (05-04 or most current version)
   - Orders Manual: Ancillary Tests NIH-2353-3 (6-03)
   - Two (2) DLM Report Logs for recording lab results phoned to the PCU
     1. Clinical Chemistry Service Stat Report Log
     2. Hematology Service Stat Report Log
   - Inpatient Progress Notes (NIH-509 or STANDARD FORM 509)
   - Outpatient Progress Notes (NIH 532-1) for outpatients only
   - Nursing Notes (Standard Form 510)
   - Instructions for Manual Input into Pyxis Medstation

Note:

- All manual documents and order forms need to include the patient's name, medical record number, ate of birth, patient location, ordering prescriber's name.
- DLM computer downtime forms can be found under DLM Website http://cclnprod.cc.nih.gov/dlm/testguide.nsf/Index?OpenForm

Nursing and Patient Care Related Guidelines For Scheduled Down

Instructions: Note all manual documents and order forms need to include the patient's name, medical record number, date of birth, patient location, and ordering prescriber's name.

MD Orders

1. After the computer system is shut down, all medical orders will need to be written on "Doctor's Orders" (Standard Form 508) and signed and dated by the RN after they are read. Each set of written, verbal or telephone orders will require a date/time the signature of the Licensed Independent Practitioner (LIP) and the location of the patient. If transcription is needed, the registered nurse will need to date/time and sign his/her signature at the bottom of the order set.

2. Each time an LIP writes a new medical order, a new order sheet must be used. The copies of the medical orders are sent to multiple departments such as sending copies to pharmacy and nutrition.

3. All lab orders requested during the computer shut down will be transcribed onto the Clinical Laboratory Ordering Record NIH-2353-1 (05-04 or most current version) by a prescriber or his/her authorized agent. At the bottom of this form, the RN transcribing the order will note under the LIP name whether this was a written, verbal, or telephone order.

4. Save all MCP's and all Doctor's Order sheets after the MCP has printed.

5. Attach all Doctor's Order sheets with the current MCP to facilitate entering orders into CRIS once the system has returned.

6. When the CRIS system comes back up, check all written lab results with the printed copy to validate accuracy.

Nursing Documentation

During the down-time, use the Nursing Progress Report (Standard Form 510) for documenting patient assessments, and complete information relative to medication administration. For example, be sure to include the medication name, dose and number of tabs given so that this information can be transcribed into the CRIS system once it becomes operational.

Appendix D

Nursing and Patient Care Related Guidelines For Scheduled Down

Return of CRIS

1. When the CRIS comes back up:
   a. An LIP or authorized agent will enter all written, verbal, and telephone orders into CRIS, except lab and DTM orders that were already sent to DLM and DTM during the downtime as they will be entered by these departments.
   b. A nurse will:
      - Request a new Medical Care Plan (MCP) to validate the accuracy of all medical orders entered.
      - File the original manual copy of all order forms in the unit chart under "MD Orders."
      - Document all nursing admission assessments, medications, blood products into the CRIS. If CRIS is down for a short time duration and the use of manual forms has not been implemented, then assessments should be entered into the system when it comes back.

2. The oncoming nurse will be responsible for double-checking all medical orders written during the CRIS down-time period. This process involves comparing for accuracy each manual medical filed in the unit chart against the current MCP. When completed, the nurse will initial, date and time the bottom of each order set.

Pharmacy

1. The Pyxis Medstation is available during shut down.
2. Any new orders or admissions will need to be manually entered (see attached instructions).
3. A record of patients manually entered into the Pyxis Medstation will be kept in the designated shut down area. The record is to be sent to pharmacy when the system comes back up (see attached).
4. After CRIS comes back up, all written and verbal orders must be entered into CRIS by the unit RN or MD.
5. A RN cannot enter Chemo/TPN orders. Make sure you request physicians to order chemo/TPN before 12 Noon.
6. A printout of 24-hour use on the Pyxis will be required to send to the Pharmacy by the end of the evening shift.
7. Pharmacy will call lab for any emergency results.
8. All written orders will be tubed to the Pharmacy during the shut down. A follow-up call to Pharmacy will be required to assure that pharmacy received ***STAT orders***

Nutrition

1. Any transfers, new diet order, nutrition orders, food allergies, special nutrition requests and nutrition consults or changes to orders will need to be sent via the Pneumatic Tube System to Nutrition Services on the Standard Form 508 utilizing the above guideline for MD orders. Diet office personnel are not authorized to accept verbal orders.
2. All diet orders and transfers will be manually entered into the Nutrition Department Computer system (CBORD) by Nutrition Department personnel using the information provide on Standard Form 508.
3. After CRIS comes back up, all nutrition/diet orders must be entered into CRIS by the unit RN, MD or LIP.

Appendix D

Nursing and Patient Care Related Guidelines For Scheduled Down

Medical Records Department

1. If there is an emergent need for medical records, contact Admissions at (301) 496-3315.
2. All required documentation forms will be on each unit at the in a designated "Computer Shut Down Area."
3. The Administrative Coordinator on duty will have an extra supply of forms.

Department of Laboratory Medicine (DLM)

1. Please attempt to have physicians put in all requests for labs prior to the system shutting down in an effort to obtain a transmittal slip.
2. Any stat lab orders requested during the shut down will require you to send the lab specimen with a Clinical Laboratory Ordering Record NIH-2353-1 (05-04 or most recent version). No other form will be accepted. At the bottom of the order form under LIP signature, identify either written or verbal order.
3. Apply a preprinted patient label from CRIS, admissions or a hand written label (include the patient's full name, medical record number and date of birth) on the specimen prior to sending it to the lab.
4. STAT lab results will be called to the unit by DLM. The unit RN will document the results on either the *Clinical Chemistry Service Stat Report Log* or the *Hematology Service Stat Report Log*.
5. The Administrative coordinator on duty will have extra forms. DLM downtime forms can be found under DLM Website http://cclnprod.cc.nih.gov/dlm/testguide.nsf/Index?OpenForm
6. Communications with DLM will be via telephone and pneumatic tube system.
7. For specimen pickup you will need to call Messenger and Escort
8. All lab orders will be entered by the DLM. You will need to assure and validate that the orders are entered into the MCP when the system comes back up. Refer to Appendix B

CHS

9. The Pyxis Supply Station may **not** be functioning during the shut down. Each unit has a key to the Pyxis Supply Station. Please note where your key is located as this is your means to obtain supplies.
10. CHS will have someone in house until the system comes back up

Imaging Sciences

The Radiology, Nuclear Medicine and PET Departments will be available for emergent test as the computer shut down will not affect their imaging equipment.

Department of Transfusion Medicine (DTM)

1. Orders placed during the down will require a copy of the manual LIP order sent to the DTM on the Clinical Laboratory Ordering Record NIH-2353-1. At the bottom of the order form under LIP signature, identify either written or verbal order.
2. Apply a preprinted patient label from CRIS, admissions, or a hand written label (include the patient's full name, medical record number and date of birth) on the specimen prior to sending it to the lab. Typenex labels will still be required for all Type and Screen and RBC orders.
3. The RN will be required to call DTM to ensure that orders for blood components are received
4. DTM will call the nursing unit when the blood product is ready for distribution. Blood may be distributed via pneumatic tube system if it is functional and nurses will be expected to provide the patient's full name, MRN, Date of Birth, and the component requested prior to distribution.
5. Orders will be entered by DTM once the system is restored.

Department of Anesthesia and Surgical Services (DASS)

1. OR case requests submitted manually to the front desk of the OR will be entered into POIS by the OR Scheduler when the system is restored.

Adding a New Patient to Pyxis

In the event that a patient's name does not appear on the Pyxis Screen, the user will manually add the patient's full name and ID number to Pyxis Medstation.

From the main Menu, select Remove.

If the patient you want is not listed:

a. From the Remove Meds, Return Meds, or Waste Meds screen, Press the ADD PATIENT button. The Add A Patient screen appears.

b. Enter the patient's last name, and select Enter to go to the First Name Field.

c. Enter the patient's first name, and select Enter to go to the patient ID field.

d. Enter patient's medical record number.

e. Press Accept.

Nursing and Patient Care Related Guidelines For Scheduled Down

Record of Patients manually added in Pyxis

Please print clearly in all documentation fields.
Please return this record to pharmacy when CRIS is in operation.

Date.	Patient Name	Unit	Medical record No.

Notes:

Nursing and Patient Care Related Guidelines For Scheduled Down

"Quick" Computer Shut Down Check List

□ Identify Computer Shut Down Area in the nurse's station

□ Assure that you have the required manual forms
The forms include:

- Doctor's Orders (Standard Form 508)
- Clinical Laboratory Ordering Record NIH-2353-1 (05-04 or most current version)
- Orders Manual: Ancillary Tests NIH-2353-3 (6-03)
- Two (2) DLM Report Logs for recording lab results phoned to the PCU
  1. Clinical Chemistry Service Stat Report Log
  2. Hematology Service Stat Report Log
- Inpatient Progress Notes (NIH-509 or STANDARD FORM 509)
- Outpatient Progress Notes (NIH 532-1) for outpatients only
- Nursing Notes (Standard Form 510)
- TPN (NIH-2859)
- Instructions for Manual Input into Pyxis Medstation

Note all manual documents and order forms need to include the patient's name, medical record number, date of birth, patient location, allergies, ordering prescriber's name.

□ Check med pyxis for access during the shut down (pharmacy for problems)

□ All LIP orders have a date, time and LIP signature and patient location

□ All LIP orders transcribed have RN signature, date and time

□ All Lab specimens must be accompanied with a Clinical Laboratory Ordering Record (NIH-2353-1)

□ When the computer system comes up the following is entered into CRIS
□ All written/verbal LIP orders – except for DTM and DLM orders
□ Meds, blood or blood products and admissions notes
□ All orders entered into CRIS are verified against a new MCP
□ All orders are double checked for accuracy by the night shift, initialed and dated

***** Please read computer shut down packet for details**

Important Note: You will need to write the ordering protocol for each order on the manual order forms listed below (e.g. For labs to DLM/ DTM on the Clinical Laboratory Ordering Record).

CRIS Downtime Processes – By Department

Department	How to Handle Routine Orders During time	How to Handle STAT Orders During Downtime	How to Retrieve Results	Who will Enter Orders into CRIS post Go-Live
Admissions 301 496-3315	Patients are admitted to Clinical Center using Request for Admission/Travel/Voucher/Local Transportation form (NIH- 54) NOTE: Patients will not receive an embosser plate, labels, chart (for new patients) or admission forms until CRIS is operational	Call Admissions Department.	N/A	Admission staff will enter admission orders and patient information
Blood Bank/DTM 301-496-4506	Tube copy of downtime order form (NIH 2353-1) to Blood Bank/DTM.	Tube copy of downtime order form (NIH 2353-1) to lab and follow up with phone call to department.	N/A	Lab staff
Laboratory Chemistry 496-3386 Hematology 496-4473 Microbiology 496-4433	Process same for Routine and Stat Labs. Use order form (SF- 508) to identify labs needed. Select labs required on Clinical Laboratory Ordering Record (NIH 2353-1 revised 5/04) and send to lab accompanying the specimen through the tube system. Some test may require using an additional form "Information required for specific test" located at http://cclnprod.cc.nih.gov/dlm/testguide.nsf/Index?OpenForm		**Routine** - Results will be delivered by messenger to units on routine rounds. **STAT** – Unit will be called with result and the hardcopy will be delivered by messenger.	Lab staff
Nutrition 301-496-2390 or 301 496-0241	Tube copy of downtime order form (SF- 508) to Nutrition Call Center (tube station 422).	Tube copy of downtime order form (SF- 508) to Nutrition Call Center and follow up with phone call to department.	N/A	LIP or RN
Pharmacy Unit Dose 496-1914 IV Meds 496-6551	• Tube copy of downtime order form (SF- 508) to Pharmacy: include patient name, allergies and unit location on form. • There is a new downtime TPN (NIH-2859) order form that will be available on all units. • For Medication Replacement, make a copy of the order (whether it is from your medical care plan or on a manual form) and tube to the pharmacy.	Tube copy of downtime order form (SF- 508) to Pharmacy and follow up with phone call to department.	N/A	LIP or RN
Radiology 301-496-7700	Patient to bring a copy of downtime order form (SF- 508) to Radiology with them from the inpatient unit or clinic.	Patient to bring a copy of order form (SF- 508) to Radiology and follow up with phone call to department.	**Routine and STAT** – Clinicians can call the Radiology department or physically go to the department to retrieve results.	Technical Staff, RN's & Radiologists

Department	How to Handle Routine Orders During Downtime	How to Handle STAT Orders During Downtime	How to Retrieve Results	Who will Enter Orders into CRIS post Go-Live
Respiratory Therapy/ CCTRCS 301 496-0758	• Page Respiratory Therapy via the page operator 301496-1211. • Provide a copy of downtime order form (SF-508) to the respiratory therapist. NOTE: For respiratory medications pharmacy will need to provide a copy of order form to therapist.	Page RT via page operator STAT. Provide a copy of downtime order form (SF-508) to therapist.	Clinicians can page the respiratory therapist assigned to the individual unit through the page operator.	RT assigned to the specific areas.

- ✓ Orders need to be legibly signed on the Downtime MD Order Sheet, co-signed by the nurse and include the patient location and allergies.
- ✓ Put original downtime order on patient's chart.
- ✓ **Nursing Documentation Post Go-live**: Document all nursing admission assessments, medications given and blood products into the CRIS.

Revised CRIS Downtime Matrix 10-11-08 Final

Appendix E

Example of System Down Communicate Process

This is to assist DCRI with maintaining communication during unscheduled downs. Until revisions to the Downtime Policy are completed, please follow the interim plan below:

If SCM interfaces are down:

Tony Barnes, Tom Dawson, Tim Maloney, Myoung Lee and John Kocher (NT Administrator on-call during evening, nights, holidays and weekends) must be called to coordinate. They will call others as needed.

Call Joyce Yarington, Jon McKeeby immediately.

1. Systems Monitoring to call the NIH Page Operator and have them make an overhead announcement that the CRIS Interfaces are down. This announcement should repeat every 15 minutes for the first hour and then every 30 minutes until the system is operational.
    a. Message: The CRIS Interfaces are down.
    b. Use message from Appendix C- CRIS Interface Down.
2. Tony Barnes will call DLM and DTM identifying they need to call STATS to the floor. Also identify that they may get specimens with no order message.
3. Call the Radiology and identify that the interfaces are down. Systems Monitoring can call Page operator to obtain radiology contact information.
4. Systems Monitoring to send e-mail to CC System Notification and CC-ISD IE Notice DL identifying that the interfaces are down if it is greater than 30 minutes. This gets the message to all other interfaced groups (EKG, Softmed, IDMS, POIS etc.).
5. For planned downs or assistance call Susy Postal or Rubi Defensor (during regular working hours) or the CRIS Analyst On-Call (during evening, nights, holidays, and weekends) with status.
6. Call the CRIS helpdesk (496-8400) and give status every 30 minutes.
7. Call Joyce Yarington or Jon McKeeby every 30 minutes (during regular working hours), or use best judgment to call during evening, nights, holidays, and weekends.
    a. Joyce Yarington or Jon McKeeby will call Dr. Herion, and Patricia Sengstack to give status every 30 minutes (during regular working hours).
8. Send e-mail to CC System Notification and CC-ISD IE Notice DL when operational.
9. Systems Monitoring to call the NIH Page Operator to make an overhead announcement that CRIS interfaces are operational.

If SCM interfaces are down for more then 2 hours notify the following people: Joyce Yarington or Jon McKeeby, Dr. Herion, and Patricia Sengstack.

If QDX interfaces are down:

Tony Barnes must be called to coordinate. They will call others as needed.
Call Joyce Yarington and Jon McKeeby immediately.

1. Systems Monitoring to call the NIH Page Operator and have them make an overhead announcement that the CRIS Interfaces are down. This announcement should repeat every 15 minutes for the first hour and then every 30 minutes until the system is operational.
    a. Message: The CRIS Interfaces are down.
    b. Use message from Appendix C- CRIS Interface Down.
2. Tony Barnes will call DLM and DTM, identifying they need to call stats to the floor. Also identify that they may get specimens with no order message.
3. Call the Radiology and identify that the interfaces are down. Systems Monitoring can call Page operator to obtain radiology contact information.
4. Systems Monitoring can call Pharmacy.
5. Systems Monitoring to send e-mail to CC System Notification and CC-ISD IE Notice DL, identifying that the interfaces are down if it is expected to be down for greater than 30 minutes. This gets the message to all other interfaced groups (EKG, Softmed, IDMS, POIS, etc.).
6. For planned downs or assistance call Susy Postal or Rubi Defensor (during regular working hours) or the CRIS Analyst On-Call (during evening, nights, holidays and weekends) with status.
7. Call the CRIS helpdesk (496-8400) and give status every 30 minutes.
8. Call Joyce Yarington or Jon McKeeby every 30 minutes (during regular working hours), or use best judgment to call during evening, nights, holidays and weekends.
    a. Joyce Yarington or Jon McKeeby will call Dr. Herion and Patricia Sengstack to give status every 30 minutes (during regular working hours).
9. Send e-mail to CC System Notification and CC-ISD IE Notice DL when operational.
10. Systems Monitoring to call the NIH Page Operator to make an overhead announcement that CRIS interfaces are operational.

If QDX interfaces are down for more then 2 hours notify the following people: Joyce Yarington or Jon McKeeby, Dr. Herion, and Patricia Sengstack.

If SCM is down:

Tom Dawson, Tim Maloney, Myoung Lee, John Kocher, Tony Barnes must be called to coordinate. They will call others as needed.
Call Joyce Yarington and Jon McKeeby immediately.

1. Systems Monitoring to call the NIH Page Operator and have them make an overhead announcement that the CRIS system is down. This announcement should repeat every 15 minutes until the system is operational.
    a. Message: CRIS is down.
    b. Use message from Appendix C- CRIS Down.
2. Tony Barnes will call DLM and DTM, identifying they need to call stats to the floor. Also identify that they may get specimens with no order message.
3. Call the Radiology and identify that the interfaces are down. Systems Monitoring can call Page operator to obtain radiology contact information.
4. Systems Monitoring can call Pharmacy.
5. Systems Monitoring to send e-mail to CC System Notification and CC-ISD IE Notice DL identifying that the CRIS is down if it is expected to be down for greater than 30 minutes. This gets the message to all other interfaces (EKG, Softmed, IDMS, POIS, etc.).
6. For planned downs or assistance call Susy Postal or Rubi Defensor (during regular working hours) or the CRIS Analyst On-Call (during evening, nights, holidays and weekends) with status.
7. Call the CRIS helpdesk (496-8400) and give status every 30 minutes.
8. Call Joyce Yarington or Jon McKeeby every 30 minutes (during regular working hours), or use best judgment to call during evening, nights, holidays, and weekends. Joyce Yarington or Jon McKeeby will call Dr. Herion and Patricia Sengstack to give status every 30 minutes (during regular working hours).
9. Send e-mail to CC System Notification and CC-ISD IE Notice DL when operational.
10. Systems Monitoring to call the NIH Page Operator to make an overhead announcement that CRIS is operational.

If SCM Report Services, Label Printing, Order Generation Services or other SCM Functionality is down:

Tom Dawson, Tim Maloney, and John Kocher (NT Administrator on-call during evening, nights, holidays and weekends) must be called to coordinate. They will call others as needed.

1. Those involved in the problem will decide if Systems Monitoring needs to call the NIH Page Operator and have them make an overhead announcement that the CRIS is down.
    a. Message: Needs to be individualized based on type of down. Still do the other tasks.
    b. If users call Systems Monitoring, the CRIS on-call analyst or Computer Support Staff: You can state that there are CRIS Services down and we are working on a resolution.
2. Ancillary departments will be called if necessary.
3. Call the CRIS helpdesk (496-8400) during regular working hours and give status every 30 minutes.
4. Call Susy Postal or Rubi Defensor (during regular working hours) or the CRIS Analyst On-Call (during evening, nights, holidays and weekends) with status. They will send out an e-mail through the CC System Notification and CC-ISD IE Notice DL, to users communicating down status if it is greater than 30 minutes. If necessary
5. If service has not resumed within **one hour,** call Joyce Yarington or Jon McKeeby.
6. Send e-mail to CC-CRIS Core administrator list when operational.

If Denali or MAX goes down.

Tad Yenegeta or Chris Klein, Jim Oseth or Steve Bergstrom, Chris Epinger, Tony Barnes or Yenshei Liu must be called to coordinate. They will call others as needed.

1. Notify Systems Monitoring (496-7525).
2. Turn off all threads with cdr in name and results from Softmed.
3. Tad Yenegeta or Chris Klein must make sure server is operational.
4. Jim Oseth or Steve Bergstrom must make sure Sybase is operational.
5. Tony Barnes and Yenshei Liu need to make sure no data is lost before restarting. They may need to reload data first. Tony or Yenshei should e-mail Murali if occurs in the middle of the night so he can check his processes.

No need to call down.

If Sybase on Denali goes down

Jim Oseth or Steve Bergstrom, Tony Barnes or Yenshei Liu must be called to coordinate. They will call others as needed.

1. Notify Systems Monitoring (496-7525).
2. Turn off all threads with cdr in name and results from Softmed.
3. Jim Oseth or Steve Bergstrom must make sure Sybase is operational.
4. Tony Barnes and Yenshei Liu need to make sure no data is lost before restarting. They may need to reload data first. Tony or Yenshei should e-mail Murali if occurs in the middle of the night so he can check his processes.

Appendix F

Impact on the CRIS Core when System Components or Servers are down.

Legend:

Component Name	**Name of System Component**
Description	**Description of the function that the system component provides in respect to the CRIS Core system.**
Firewall Location	**Location of component in relation to the CC Checkpoint Firewall (Escher). Behind mean that the system component is protected from access by rules on the firewall.**
Impact On CRIS Core	**The affect a down of the System Component on has to the CRIS Core System.**
Responsible Party	**The persons whom should be notified when the system component is down.**

Component Name	Description	Firewall Location	When Component is Down Impact On CRIS Core	Responsible Party
CC Checkpoint Firewall (Protects Clinical Data)	Maintains Security	N/A	No User Access to CRIS Core. No printing from CRIS Core. No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	Tadele Yenegeta Chris Klein
CC Domain Controllers	SCM MSQM is installed on the Domain Controllers and is used by the interfaces to send and receive messages.	In front if NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	Dempsey Dunn Tony Barnes
CC Network PIX Firewall	Main CC Network.	N/A	No User Access to CRIS Core. No printing from CRIS Core. No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	Jason Chan Richard Walker
CCSXAPCONSES	Enterprise	Behind NIH/CC Checkpoint Firewall	No Administration Configuration changes to SCM or Installation of New Clients.	Dempsey Dunn Tim Maloney Tom Dawson
CCSCMPMUL	SCM Multum Server	Behind NIH/CC Checkpoint Firewall	Loss of drug interaction checking for CRIS Core users.	Dempsey Dunn Tim Maloney Tom Dawson
CCSXAPCONSORD	SCM CDS/Order Generation	Behind NIH/CC Checkpoint Firewall	Repeat orders will not get created for CRIS Core orders.	Dempsey Dunn Tim Maloney Tom Dawson
CCSXAPCONSES	SCM HL7 Executive	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	Dempsey Dunn Tony Barnes Tim Maloney
CCSXAPMASQL	Master Active	Behind NIH/CC Checkpoint Firewall	No Access To CRIS SCM.	Dempsey Dunn Tim Maloney Tom Dawson
CCXAPPRT1	SCM Print Servers	Behind NIH/CC Checkpoint Firewall	No printing from CRIS Core.	Dempsey Dunn Tim Maloney Tom Dawson

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Component Name	Description	Firewall Location	When Component is Down Impact On CRIS Core	Responsible Party
CCXAPPRT2	SCM Print Servers	Behind NIH/CC Checkpoint Firewall	No printing from CRIS Core.	Dempsey Dunn Tim Maloney Tom Dawson
CCSXAPCONS RPT	SCM Report	Behind NIH/CC Checkpoint Firewall	No Printing of Reports.	Dempsey Dunn Tim Maloney
CITRIX	Client access for CRIS	N/A	No User Access via CITRIX. Possible thru SCD clients.	Doug Butters Mark Bradley
CRIS-SAN	SCM Storage	Behind NIH/CC Checkpoint Firewall	No patient data available from CRIS Core. All CRIS Core System Functions may be affected.	Tim Maloney John Kocher Dempsey Dunn Barrett Grieb
IE	Interface Engine Server	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	Tadele Yenegeta Chris Klein Tony Barnes Yenshei Liu
QDX	Interface Engine Application	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT to ancillary, Results, Statuses.	Tony Barnes Yenshei Liu Tim Maloney
Monet	Domain Name Server used within CC	In front if NIH/CC Checkpoint Firewall	No ADT User Access to CRIS for users using Monet as name server: Majority ADT users.	Tadele Yenegeta Chris Klein
SCD	Standard Clinical Desktop	N/A	No User Access via Standard Clinical Desktop: Majority of users.	Bertram Brown Citrix Team
SunRay Clients and Server	Client access for CRIS	N/A	No CRIS Core User Access via Sunray. Possible thru CITRIX.	Tadele Yenegeta Chris Klein

Appendix F (Continued)

Impact on Ancillary Systems when the CRIS Core is Not Operational.

Legend:

Ancillary System	**Name of System Component**
Description	**Description of function that the Ancillary System provides.**
Impact When CRIS Core is Down	**The affect to the Ancillary System when CRIS Core is down.**
Responsible Party	**The persons whom should be notified when the Ancillary system is down.**

Ancillary System	Description	Impact When CRIS Core is Down	Responsible Party
ATV	Admission Travel Voucher System	Lists of values (e.g. Attending Physician, Primary Physician, or Protocols) and Patient Demographics may not be up to date with information from CRIS Core.	Seth Carlson Frank Mickey Tim Maloney Tony Barnes
CBORD	Nutrition System	Allergies and Orders are not sent from CRIS to CBORD. Admission, discharge and transfer (ADT) transactions are not sent from CRIS to CBORD.	Dempsey Dunn Jim Oseth Tony Barnes
CDW	Clinical Data Warehouse – Sybase databases common, cllab, cdr_new	Orders from CRIS and results from Ancillary Systems are not loaded into CDR. ADT transactions from CRIS are not loaded into CDR.	Tadele Yenegeta Chris Klein Jon McKeeby Steve Bergstrom
CRIS Core	Order Entry Documentation and Retrieval system	ADT transactions from SCM are not sent to ancillary systems.	DCRI Operations, Tony Barnes
Dictaphone	Transcription System	N/A	Barrett Grieb Michelle Hendery
EKG	EKG System	Orders are not sent from CRIS and results are not sent to CRIS.	Barrett Grieb Tony Barnes
LIS (Micro, Lab, Blood Bank, Anatomic Pathology)	Laboratory Information System	Orders are not sent from CRIS and results are not sent to CRIS. ADT transactions are not sent from CRIS to LIS.	Earle Barnes Tony Barnes Chung-Hee Row Josh Cohen Boyd Conley
POIS	Perioperative Information System	ADT transactions are not sent from CRIS.	Barrett Grieb Chris Epinger Tony Barnes
PYXIS	Pharmacy Dispensing System	ADT transactions are not sent from CRIS.	Steve Bergstrom Rick Decederfelt
RIS	Radiology Information System	Orders are not sent from CRIS and results are not sent to CRIS. ADT transactions are not sent from CRIS.	David Sanford
SoftMed	Transcription System	Orders are not sent from CRIS and results are not sent to CRIS. ADT transactions are not sent from CRIS.	Barrett Grieb Tony Barnes Jon McKeeby Michelle Hendery
SCI Scheduling	Appointment Scheduling	Protocol History transactions are not received from CRIS. ADT protocols are not received from CRIS.	Tony Barnes Yenshei Liu
WristBand/Emboser	WristBand Creation	ADT transactions are not sent from CRIS. Wristband orders are not sent from CRIS.	Tony Barnes Yenshei Liu Tim Maloney