CRIS

Clinical Research Information System

User Manual

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Chapter I: Polices and Process Redesign

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Computerized Prescriber Order Entry (CPOE) Policy

CRIS will support the Medical Executive Committee (MEC) Computerized Prescriber Order Entry (CPOE) compliance objectives and greater participation in CPOE. CRIS will make it easier for Prescribers and Affiliate Medical Staff to enter orders.

NOTE: Refer to **Medical Administrative Series Policy #M04-1 Medical Orders in the Clinical Center** for more information.

Prescribers and Affiliate Staff

Prescribers are defined as physicians, physician's assistants, nurse practitioners, nurse anesthetists, podiatrists, and dentists. A Prescriber can request a medical order.
Affiliate staff can request medical orders ONLY on behalf of a Prescriber. Affiliate staff can also request certain service requests within their own department.

CRIS Affiliate Medical Staff Listing

Acupuncturist	Anesthesia Technician
Clinical Health Technician, Nutrition	Cytology Technologist
Diagnostic Radiology Technologist	Dental Hygienist
EEG Technician	EKG Technician
EMG Technician	Genetics Counselor
Infection Control Consultant	Laboratory Technologist
Nuclear Medicine Technologist	Nurse (RN)
Nurse (includes LPN)	Occupational Therapist
Ophthalmic Technician	PET Technologist
Perfusionist	Pharmacist
Pharmacy Technician	Phlebotomist
Physical Therapist	Physical Therapy Assistant
Pulmonary Function Technologist	Radiation Therapist
Recreation Therapist	Recreation Therapy Specialist
Registered Dietician	Respiratory Care Practitioner
Social Worker	Speech Language Pathologist
Spiritual Minister/ Chaplain	Surgical Technologist
Transfusion Medicine Technologist	Vocational Rehabilitation Technician

Table 1: CRIS Affiliate Medical Staff Listing

NOTE: Refer to **Medical Administrative Series Policy #M90-5 Credentialing Health Practitioners at the Clinical Center** for more information.

For the purposes of CRIS, the following staff has the same rights as the Affiliate Medical Staff:

- Laboratory Technologist
- Cytology Technologist

Medical Orders and Service Requisitions

A medical order directs the execution of specific activities prescribed as part of a diagnostic, therapeutic, and/or research program. Medical orders can be authored for various categories of persons (i.e., patients, healthy volunteers, donors) or research samples (e.g., tissue screenings). Additionally, orders can direct activity at various locations, properly associated with the NIH and the Clinical Center.

- Only an authorized Prescriber may author a medical order because of the legal requirements for professional licensure, standards of accreditation and scope of approved practice.

A service requisition is exactly the same as a medical order except that it can be authored by an affiliate staff member. For example, transport of a patient by Messenger/Escort is classified as a service requisition because it does not need to be restricted for use by a Prescriber due to legal requirements for professional licensure, standards of accreditation and scope of approved practice.

- Service requisitions are used primarily to improve efficiency.
- From a systems functionality point of view, CRIS treats a service requisition exactly as it does a medical order.

Below is a sample list of common service requisitions for select areas.

Service Requisition Listing – Affiliate Medical Staff	
ADT	**Medical Records**
Intra-unit Bed Change	Electronic Information Retrieval
Transfer Order (Internal-Outpatient)	Information Release: Outside 3rd Party
Bioethics	Inpatient Chart Consolidation
Bioethics Consult	Non-Clinical Retrieve and Hold Record
Clinical Video/Photo	**Messenger Escort Service**
Clinical Photography	Patient Transport
Clinical Videography	**Nutrition**
DASS	Nutrition Consult: (Clinical)
Off Site Anesthesia Request	Nutrition Consult: (Research)
OR/Anesthesia Request	Oral Supplements
DTM	Paper Tray Service
Blood Pickup Service Request	Special Nutrition Requests
	Meal Delivery: Interrupt

Service Requisition Listing – Affiliate Medical Staff	
Pharmacy	**Social Work**
Med/IV Replacement	Assessment Consult- Social Work
Radiology (Imaging Sciences)	Counseling - Social Work
Digital Film Library Copy Request	Discharge Planning - Resources
DX Read Outside Film	Education - Social Work
NM Read Outside Scan	Language Interpreter - Social Work
NM Reanalyze Scan	Patient Resources - Social Work
PET Diagnostic: Read Outside Films	Social Work - Participation in Conference
	Spiritual Ministry
	Spiritual Ministry

Table 2: Service Requests Orderable by AMS

Service Requisition Listing – Restricted to Department Staff	
ADT	**Medical Records**
Protocol Special Exemption	Outpatient Administrative Expiration
Critical Care Medicine	**Office of Protocol Services**
ACT, Whole Blood, Arterial, CCMD	Protocol Special Exemption
ACT, Whole Blood, Venous, CCMD	Remove Patient from Protocol
Blood Gases, Arterial, CCMD	**Radiology**
Blood Gases, Venous, CCMD	NM Read Outside Scan
Cooximeter, Arterial, CCMD	PET Diagnostic: Read Outside Films
Cooximeter, Venous, CCMD	**Rehabilitation Medicine**
Glucose, Whole Blood, Arterial, CCMD	Art Therapy
Glucose, Whole Blood, Venous, CCMD	Human Movement Disorders Restricted
Lytes, Whole Blood, Arterial, CCMD	Massage Therapy
Lytes, Whole Blood, Venous, CCMD	Music Therapy
DASS	Occupational Therapy
Surgical Services Location Change - IP	Oral Motor Function - Restricted
Surgical Services Location Change - OP	Physiatry (Rehab Physician)
DTM	Physical Therapy
Research Human Cell/Tissue Processing Svc	Recreation Therapy
Epidemiology	Rehab Electro-Diagnostic Study
Isolation - Acid Fast Bacilli (AFB)	Modified Barium Swallow
Isolation - Cent Nerv Sys Precaut (CNS)	Speech Language Pathology
Isolation - Contact	Vocational Rehabilitation
Isolation - Respiratory	
Isolation - Special Respiratory	
Isolation - Strict	

Table 3: Restricted Service Requests

Visits

Purpose: The purpose of visits in CRIS is to associate orders, documentation, and results with specific patient (or specimen) activities or encounters at the Clinical Center. Time frames for the duration of a visit may be highly variable. Only one visit may be active at any given time for a patient. Once opened, a visit remains open until a subsequent visit is created, or until a patient no longer participating in any research protocol is deemed inactive or expires.
Types: There are seven visit types in CRIS:

- **Pre-NIH Registration**: This visit is used only in advance of a patient's first clinical encounter at NIH. It is closed at the time of initial registration, when the visit is changed to either inpatient or outpatient. "Pre-Admit" orders may be entered in this visit type in anticipation of a patient's first outpatient or inpatient encounter at NIH.
- **Inpatient**: This visit is used for every inpatient admission. It is closed at the time of discharge from the inpatient setting.
- **Outpatient**: This visit is used for patients who are seen as an outpatient. Every consecutive outpatient appointment or encounter, including the day hospital, is included in a single outpatient "visit" in CRIS. It is closed only when the patient is admitted, is deemed inactive, or expires.
- **Historical**: This is used only for back-loading historical MIS patient information.
- **Specimen**: This visit is used in very limited circumstances for tests on specimens that are not tied to specific Clinical Center patients.
- **OMS (Occupational Medicine Service)**: This visit is used only for patients (employees) seen by OMS. OMS records in CRIS will remain separate from those for employees who are also enrolled in clinical trials.
- **Expiration**: This visit is created when a patient enrolled in a protocol expires (whether at the Clinical Center or elsewhere). Autopsy orders may be entered during this "visit."

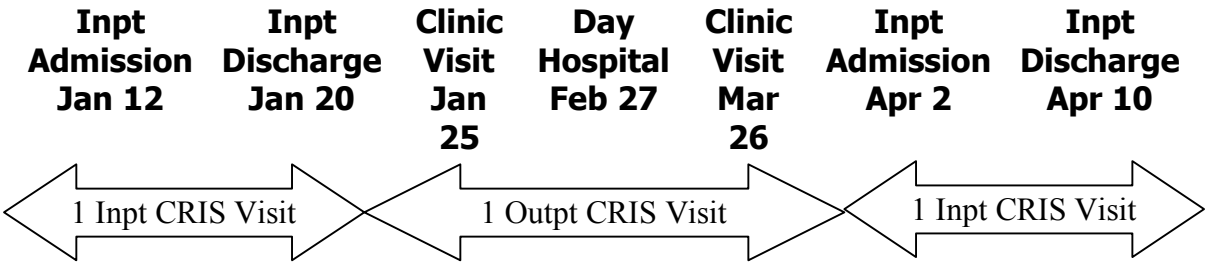


Figure 1: Inpatient and Outpatient Visits

Admission Discharge Transfer and Pass

The ADT group of processes includes the admission, discharge, internal and external transfer, and pass processes. These orders are sometimes referred to as 'enterprise orders'.

MIS will remain in place as the ADT system for CRIS Phase 1. All patient demographic information will be maintained in MIS, and will continue to be entered and updated only by Admissions staff. An interface between MIS and CRIS relays updated ADT information from either system to the other in real time. MIS also sends updated ADT information to the ancillary information systems, such as lab and radiology.

Policies for ADT and Pass remain essentially unchanged. Process changes described here are required because of changes in order management in CRIS.

The NIH Form 54 in MIS is now in the Admissions, Travel and Voucher (ATV) web-based system. This system is used to request different services, including admission, protocol entry, and travel arrangements. Staff will continue to request admission and protocol entry using the ATV system.

In CRIS, any protocol in which a patient is participating is listed in the Patient Info tab and the Summary tab under Health Issues. Patients are assigned to a primary protocol through the use of a Form 54/ATV. Patients may be assigned to secondary protocols using a signed consent form faxed to the Medical Records department. Medical Records department personnel can then enter this information (the protocol number) into the Health Issues in the patient record.

ADT: No Change

- Initial admission to NIH and every admission as an inpatient at the Clinical Center is authorized using the Form 54/ATV system.
- MIS will remain in place as the ADT system for CRIS Phase 1.
    - All demographic information is maintained in MIS.
    - Demographic information will continue to be entered and updated only by Admissions staff.
- Medical orders are required for inpatient transfer, discharge, and pass.
- External transfer and discharge orders must be entered by prescriber; they cannot be entered by an 'agent for' a prescriber.
- Bed assignment is nursing's responsibility.
- Demographic information in MIS can be entered or changed only by Admission staff.
- Prescribers are responsible for reviewing, re-instating, and/or changing patient care orders when a patient moves from one unit or level of care to another. The importance of order review by prescribers anytime there is a change in the level of care of a patient must be emphasized.

ADT: Major points of change

- CRIS includes the functionality to enter orders as conditional. The nurse manually activates the order when the condition set forth by the prescriber is met. The condition is designated in a free-text box during the order process and is viewable in the order display. Most ADT medical orders are conditional.
    - Inpatient transfers to other units (except to the OR), discharge, and pass orders are entered as conditional orders.
    - Inpatient transfers to the OR, Discharge-AMA/AWOL, and Discharge–Expiration are not entered as conditional orders.
- All ADT medical orders require at least two steps, sometimes three. These include entering the order, activating the order (for conditional orders), and completing the order.
- Nurses manually activate (start) and complete (close) conditional ADT orders. It is important to note at which point in each process this occurs.
- Nurses perform bed assignment in CRIS (rather than MIS), using a specific service requisition.
- Outpatients can be temporarily moved between outpatient settings in CRIS, including the OR, by a nurse using a service requisition.
- A service requisition is used by DASS nurses to move a patient within the OR/PACU, back to the unit of origin, or to the ICU (if preplanned).
- A medical order is needed to move a patient from the OR/PACU to any unit other than the unit of origin or to the ICU (if not preplanned).
- There is no automatic completion of ADT medical orders. In contrast, ADT service requests are completed automatically.
- MIS automatically suspends active orders when an inpatient is transferred to another unit or level of care. In CRIS, there is no automatic suspension of orders. Nurses are responsible for manually suspending all active orders at the time of transfer for inpatients.
    - Nurses do not independently 'unsuspend' medical orders; this is a prescriber responsibility.
- The nurse will manually suspend all active orders when activating a pass order.
    - Prescribers are responsible for including explicit direction in the conditional pass order regarding which orders to unsuspend when a patient returns from pass.
- Temporary locations in CRIS are used by certain procedural and testing areas (e.g., dialysis, EKG) where patients are not permanently assigned.

ADT: Key Concepts

- ADT and pass medical orders appear and are activated, if conditional, and completed on the worklist.

- Nurses manually activate (start), if conditional, and complete (close) ADT medical orders. It is important to note at which point in each process this occurs.
- Most often, the nurse suspends active orders when an inpatient is transferred (internal, external, and pass). In a pass order, prescribers must indicate which orders to unsuspend when the patient returns.
- Service requisitions exist for nurses to move patients among outpatient settings, including the OR, to assign a patient to a bed within the unit, and for OR/PACU nurses to move a patient within the OR/PACU and back to the sending unit or the ICU (if planned).

ADT Orders Details						
ADT Order	**Purpose**	**Order Type**	**Conditional?**	**Activation**	**Management of Pt's Active Orders**	**Completion/ Closing of ADT Order**
Internal Transfer – Inpatient (*except OR*)	To move patients between different IP care units	Med Order entered by Prescriber	Yes, except to OR	RN manually activates order on worklist	All active orders manually suspended by RN on transferring unit	Marked as done on worklist by RN on sending unit upon transfer
Internal Transfer-Inpatient *(to OR)*	To move patient to the OR for a procedure	Med Order entered by Prescriber	No	Active at time of entry	All active orders manually suspended by RN	Marked as done on worklist by RN on transferring unit upon transfer
Internal Transfer-Inpatient *(from OR or PACU to ICU or new Patient Unit)*	To move patient who unexpectedly will not be returning from surgery to their originating unit	Med Order entered by Prescriber	If needed	Active at time of entry, unless conditional. RN manually activates cond. order on worklist	Post-op orders should be entered and/or unsuspended prior to transfer	Marked as done on worklist by RN in OR/PACU upon patient's transfer
Intra-Unit Bed Change	To check patient into a specific bed on a nursing unit assigned by Admissions	Service Requisition entered by RN on receiving unit	No	Active at time of entry	N/A	Auto-completes immediately

ADT Orders Details						
ADT Order	**Purpose**	**Order Type**	**Conditional?**	**Activation**	**Management of Pt's Active Orders**	**Completion/ Closing of ADT Order**
Internal Transfer – Outpatient (*including OR*)	To move patients between different OP care settings	Service Requisition entered by RN	No	Active at time of entry	Order suspension not necessary unless ordered	Auto-completes immediately
External Transfer	To move patients to off-site facilities for further evaluation or care	Med Order entered by Prescriber	Yes	RN manually activates order on worklist when patient leaves CC	All active orders manually suspended by RN	Marked as done on worklist by RN on receiving unit when patient returns to CC
Surgical Services Location Change-IP or OP	To move patient within the OR area or from the OR to the originating unit or clinic	Service Requisition entered by RN	No	Active at time of entry	Post-op orders should be entered and/or unsuspended prior to transfer	Auto-completes immediately
Discharge - Routine	To discharge a patient from an inpatient hospital stay	Med Order entered by Prescriber only	Yes	RN manually activates order on worklist	New orders for Take Home Medications entered if needed. All active orders auto-discontinue four hours after discharge	Marked as done on worklist by RN on discharging unit upon discharge
Discharge – Expiration	To discharge a patient who has expired while at the CC	Med Order entered by Prescriber only	No	Active at time of entry	All active orders auto-discontinue four hours after discharge	Marked as done on worklist by the RN
Discharge	To discharge a	Med Order	No	Active at time	All active orders auto-	Marked as done on

ADT Orders Details						
ADT Order	**Purpose**	**Order Type**	**Conditional?**	**Activation**	**Management of Pt's Active Orders**	**Completion/ Closing of ADT Order**
– AMA/ AWOL	patient who has left AMA or is AWOL	entered by Prescriber only		of entry	discontinue four hours after discharge	worklist by RN on discharging unit
Pass	To allow inpatients to leave the CC for a set period of time	Med Order entered by Prescriber	Yes	RN manually activates order on worklist when patient leaves CC	Prescriber designates orders to un-suspend upon patient's return All active orders are suspended by RN when patient leaves on pass Orders are unsuspended by prescriber or RN when pt returns to CC - New orders for Take Home Meds are entered if needed	Marked as done on worklist by RN on receiving unit when patient returns to CC

Table 4: ADT Orders Table

Administrative Transfers
Inpatients are sometimes transferred to other inpatient units for administrative rather than clinical reasons. An example of this is when census is low in the Clinical Center, as may occur over a holiday weekend, and patient locations are consolidated to ensure quality care. The movement of patients in these circumstances does not necessitate a medical order from the prescriber.

In MIS, nurses were able to change the patient location without notifying Admissions. In CRIS, in the absence of a medical order, the Admissions personnel must perform the transfer in MIS to achieve the move in CRIS. This is accomplished through verbal and written communication between the nursing units and Admissions. The process is followed again when patients are transferred back to their units of origin.

No change
- Administrative transfers of patients do not require a medical order.
- Active patient care orders do not need to be suspended or reviewed by a prescriber in an administrative transfer, as the level/type of care has not changed.

Major points of change
- Nursing will communicate the anticipated movement of patients with the Admissions personnel through a phone call and with written documentation.
- Admissions personnel will manually change the patient location in MIS.
- Admissions personnel will communicate the completion of patient movement in MIS to nursing through a phone call.

Process flow – Administrative Transfer
1. The unit charge nurse prints a patient list or census from CRIS which includes all patients on the unit who are being transferred.
2. The charge nurse indicates in writing on the list to which unit these patients will go.
3. The charge nurse phones Admissions to alert the staff that the requested changes are being sent.
4. The list is sent to Admissions via the tube system.
5. Admissions personnel make the patient location changes in MIS.
6. Nurses move the patients to the new location.
7. Admissions will phone the accepting unit to confirm that the location change has been completed in MIS.
8. Nurses assign the patients to beds in the new unit in CRIS using an intra-unit bed change service request.

Admission

The admission process is initiated for any inpatient admission or first-time outpatient visit once the institute has prescreened a patient for protocol entry. A multipurpose form, the Form 54, currently exists to request admission as well as other services, such as travel and protocol entry. The Form 54 is completed on paper or electronically in MIS, sent to and then printed in Admissions. The MIS version of the Form 54 will not exist in CRIS. An electronic version of the Form 54 known as the Admissions, Travel, and Voucher (ATV) system is planned for the Hospital Services web site at http://atv.cc.nih.gov.

The CRIS admission process is very similar to the prior MIS process. ADT information continues to be stored and maintained in MIS. Admissions personnel enter and update patient information into MIS. This patient registration information crosses a real-time bidirectional interface from MIS to CRIS. Once the initial information has crossed from MIS to CRIS, Prescribers can enter orders on a patient in CRIS. All patient orders are entered in CRIS.

The protocol number is included in the Form 54/ATV system and entered into MIS by the Admissions staff. The protocol number crosses from MIS to CRIS with the patient's demographic information. Patients are assigned to a primary protocol through the use of a Form 54/ATV. Patients may be assigned to secondary protocols using a signed consent form faxed to the Medical Records department. Medical Records department personnel can then enter this information (the protocol number) into the Health Issues in the patient record.

The final step in the inpatient admission process is the assignment of a patient to a bed. Upon the patient's arrival to the inpatient unit, the nurse completes the bed assignment in CRIS, using an intra-unit bed change service requisition.

Major points of change

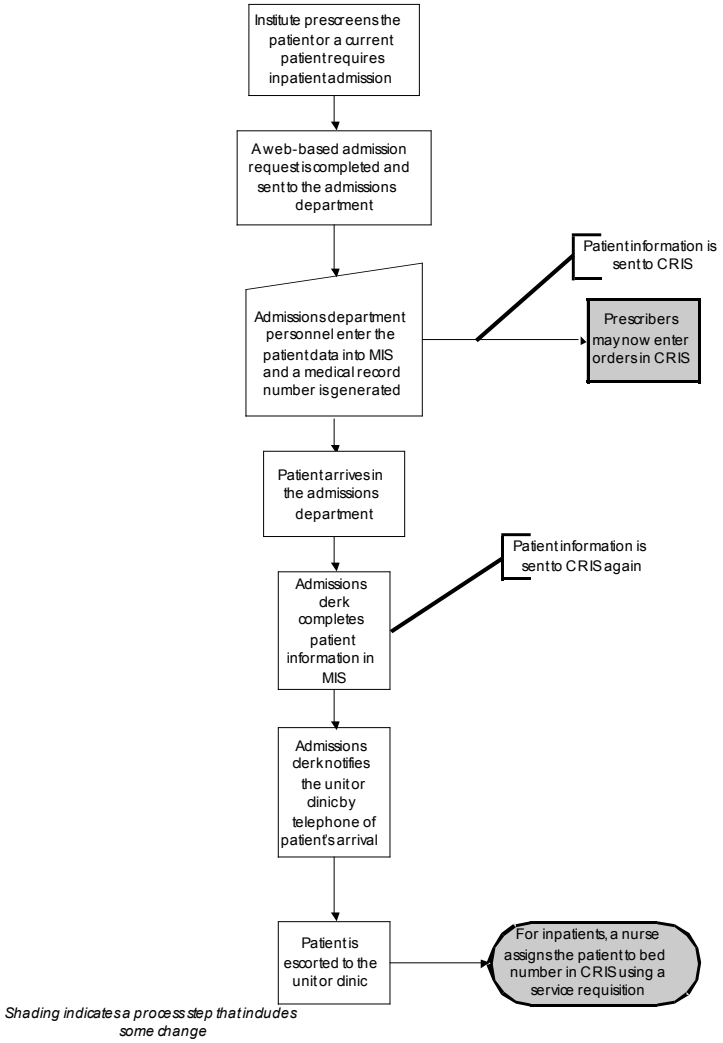
- A web-based registration system (ATV) will replace the current Form 54.
- A nurse assigns a patient to a bed in CRIS using an intra-unit bed change service requisition.

CRIS Process Flow - Admission

1. A new patient is registering with the NIH after the institute prescreening or a current NIH patient requires inpatient admission.
2. The Prescriber or an authorized affiliate medical staff as an "agent for" the Prescriber completes a web-based request for admission (ATV) which prints in Admissions.
3. The Admissions clerk enters the patient data (including protocol number) into MIS and a medical record number is generated for new patients, or retrieved for existing patients.
    - Patient information is sent to CRIS.

4. The Prescriber or an "agent for" may now enter orders into the patient record in CRIS. Orders entered prior to a patient's arrival are entered as Future Outpt/Pre-admit session-type orders.
5. The patient arrives in Admissions.
6. An Admissions clerk completes patient information in the MIS, including assigning the patient to a unit or clinic as indicated on the admission request form.
   - Updated patient information is again sent to CRIS again.
7. The unit or outpatient clinic is notified of the patient's arrival by telephone.
8. The patient is escorted to the unit or outpatient clinic.
9. For inpatients, a nurse assigns the patient to a bed number in CRIS by entering an intra-unit bed change service requisition.

CRIS Process Flow - Admission



Discharge
Patients in the NIH setting are not discharged from the CRIS system. The term 'discharge' reflects a change in the patient status from inpatient to outpatient. Discharge from the Clinical Center information system only occurs after the expiration of a patient.

Patients are discharged from the Clinical Center once their physician enters a discharge order and any pre-discharge orders and activities, such as teaching or the preparation of take-home medications, are carried out. Nurses may not enter a discharge order as an "agent for" the Prescriber under any circumstances.

In MIS, the Prescriber may indicate that certain activities must be completed before the patient is physically discharged, but the discharge order itself is active when entered. Nurses complete their discharge summary once the patient has been readied and actually discharged from the Clinical Center. Nurses then manually transfer the patient from an inpatient bed in MIS to the outpatient clinic as assigned by the physician in the discharge orders.

In CRIS, the discharge order is entered as a conditional order. The conditions are specified in a free text dialog box when the order is entered. When the nurse is ready to proceed with the discharge activities, s/he activates the order in CRIS. When the conditions are met and the patient is leaving, the nurse completes the discharge documentation and manually completes the discharge order in the worklist. Completing a discharge order in CRIS causes the information that a patient is discharged to cross the interface back to MIS, the ADT system.

Admissions personnel do not have to take any manual action in MIS. The inpatient visit closes immediately, and a new outpatient visit is established. Active inpatient orders remain active in the patient record for an additional 4 hours to allow time for documentation of tests performed, etc., then auto-discontinue.

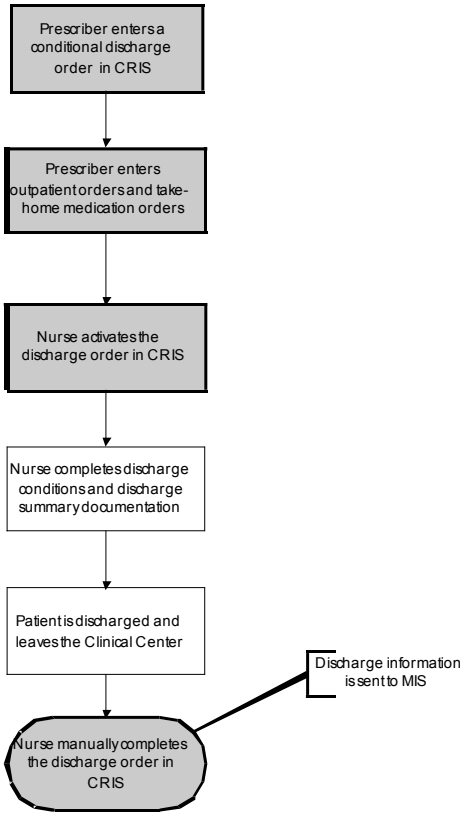
Major points of change
- An order to discharge a patient in CRIS is entered as a conditional order.
- The discharge order in CRIS must be manually activated by the nurse and then manually completed by the nurse when the patient is actually discharged from the Clinical Center.
- Take-home medication orders cannot be 'converted' but must be entered as new 'Take Home Medication' session-type orders or copied and re-ordered as Take Home Medication session type. This transmits the orders to the Outpatient Pharmacy and also enables the orders to cross visits, facilitating refills. (See Take Home Medication Process)

- Active orders remain active for 4 hours after the completion of the inpatient discharge order or any visit change (e.g., conversion from outpatient to inpatient).

CRIS Process Flow - Discharge

1. The prescriber enters a discharge-routine order in CRIS as a conditional order.
2. The prescriber stipulates the conditions as free text in the conditions dialog box. Conditions may include specific teaching, arrival and explanation of take-home medications, etc.
3. The prescriber enters future outpatient orders as 'Future Outpt/Pre-admit' session-type orders and take-home medications as 'Take Home Medications' session-type orders.
4. The nurse activates the discharge order in CRIS.
5. The nurse makes sure the discharge conditions are fulfilled and completes the discharge summary documentation.
6. The patient is discharged from the Clinical Center.
7. The nurse manually completes the discharge order in CRIS.
   - Patient status change from inpatient to outpatient is sent to MIS.

CRIS Process Flow - Discharge-Routine



Shading indicates a process step that includes some change

Temporary Patient Locations

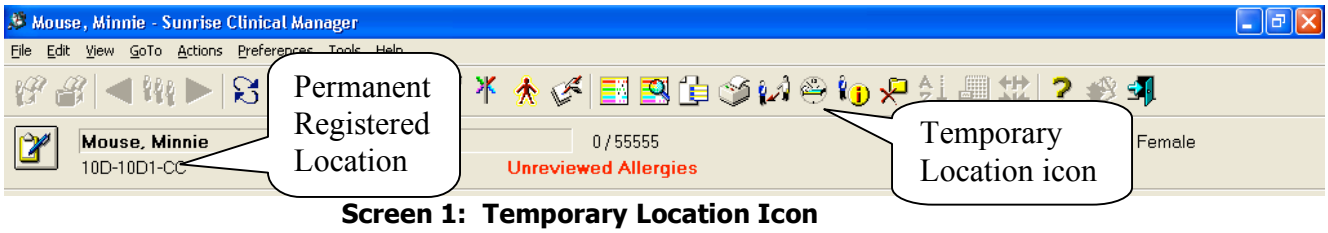
Inpatients and outpatients at the Clinical Center are frequently moved to various diagnostic and procedural areas of the hospital during the course of their care. For patient location and communication purposes, it is important to identify where the patient is located. CRIS displays the registered patient location in the header area at the top of each screen; this location is where CRIS will print order requisitions, test results, and labels by default.

Some patient care locations are not areas where a patient is routinely registered (e.g., hemodialysis). However, providers in those areas need to enter and receive printed orders and results in CRIS, because that is where the care is being delivered. To accommodate this notification need, CRIS provides a temporary location function accessible on the main patient screen.

To put a patient in a temporary location

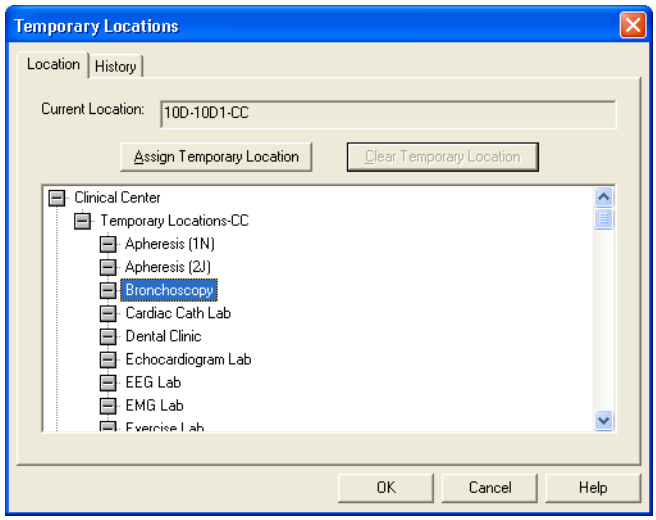
When a patient arrives in a temporary location, the staff in that area:

1. Click on the Temporary Location icon.



Screen 1: Temporary Location Icon

2. Select the appropriate temporary location from the Clinical Center list.

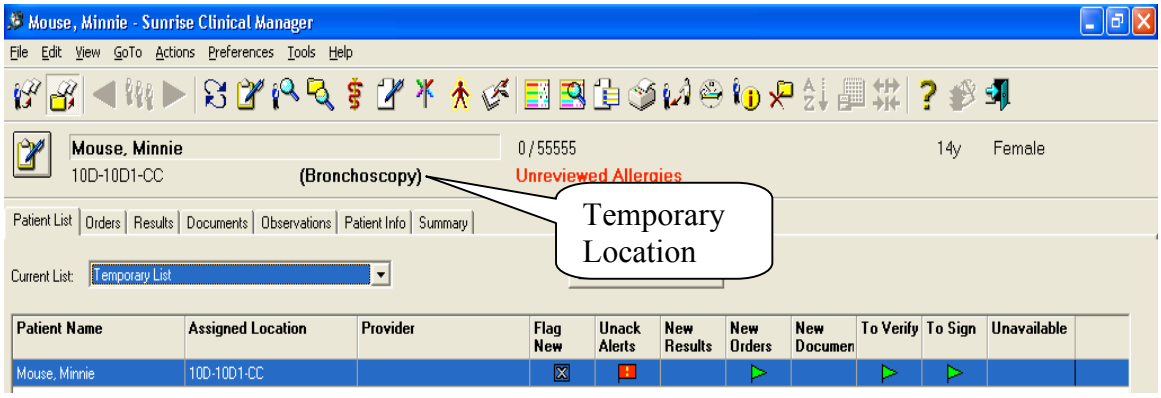


Screen 2: Temporary Location Selection window

Temporary Location Options in CRIS	
Apheresis (1N)	**Eye Clinic**
Apheresis (2J)	**GI Endoscopy**
Bronchoscopy	**Hemodialysis**
Cardiac Cath Lab	**MICU Proc Room**
Dental Clinic	**Outpt Phlebotomy**
Echocardiogram Lab	**PFT Lab**
EEG Lab	**Radiation Therapy**
EMG Lab	**Radiology Proc Areas**
Exercise Lab	**Rehab Med Tx Area**

Table 5: List of Temporary Locations

3. Click Assign Temporary Location.
4. Click OK. The temporary location is then noted parenthetically in the header.



Screen 3: Patient List with Temporary Location displayed

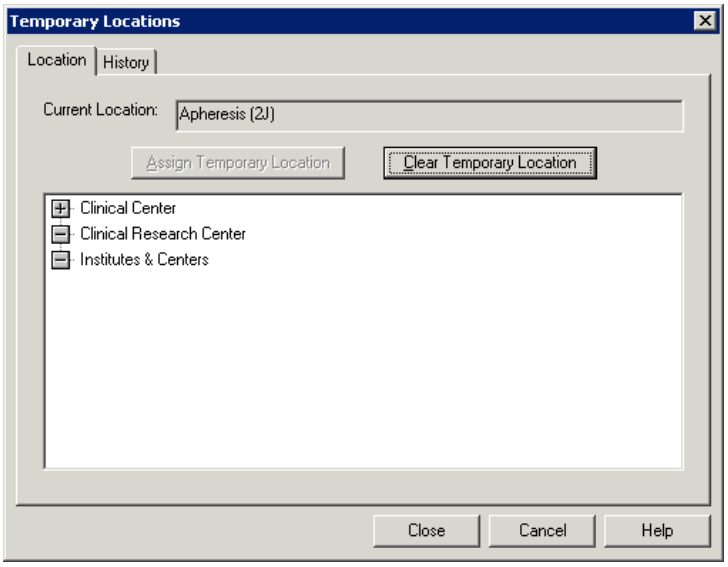
NOTE:

- Assigning patients to a temporary location does not affect their permanent registration location or visit type.
- Orders entered under the **Today Outpt/Current Inpt** session type while a patient is in a temporary location will print immediately at both a patient's permanent and temporary locations.
- Orders previously entered under the **Future Outpt/Pre-Admit** session type will print at both locations when the orders are released.
- Bar-coded lab labels will print at the patient's permanent location unless the temporary location is selected for label printing within the lab orders.

To return a patient to his/her 'permanent' location

When the patient is ready to leave the temporary care area, the staff in that area should "clear" the temporary location using the following steps:

1. Click on the **Temporary Location** icon.
2. Click the **Clear Temporary Location** button.



Screen 4: Clear Temporary Locations Button

3. Click **OK**.

Order Session Types

Purpose: The purpose of order session types is to indicate when orders should be active. Active orders print and are transmitted via interface to other clinical systems as needed. An order's session type is decided by the prescriber or affiliate medical staff as part of the order entry worksheet at the time the order is entered.

Types: There are 3 order session types in CRIS:

- **Today Outpt/Current Inpt:** This is the default session type on the order entry worksheet. These orders are active immediately, print immediately, and are available only in the current inpatient visit or same day outpatient visit. Exceptions include orders that first require verification (e.g., pharmacy); these orders are active and print only after verification. Orders are closed either by resulting, by manually completing, by canceling at the end of a visit, or by auto-discontinuing 4 hours after the close of a visit.

- **Future Outpt/Pre-Admit:** These orders are on "hold" when placed and become active and print when manually released in CRIS. Orders "holding" in this session type cross all visits until finally released during a particular visit; they are then associated only with that visit. They can be used for either future inpatient or outpatient visits. Once active, orders are closed by resulting, by manually completing, by canceling at the end of the visit, or by auto-discontinuing 4 hours after the close of a visit.

- **Additional notes on Future Outpt/Pre-Admit**

  - Orders placed in this session type must always include a "reason" (e.g., 8/25 OP13 visit, 9/15 admission)
  - Orders will print at the date/time of release, not date/time of entry
  - Orders will print at patient's current registered ADT location at time of release, not at location at time of entry
  - Orders entered under this session type will undergo checking for duplication at the time of release, not at the time of order entry.
  - The scheduled date of orders can be changed prior to being released, if clinically appropriate (e.g., patient early/late for scheduled visit)

- **Take Home Medications:** These orders are active and print immediately (after pharmacy verification), and are active across all visits (for purposes of refilling prescriptions) until closed by completion, manual canceling, or automated process based on CC policy. Take Home Medications include those prescribed in clinic for home use, in the hospital at the time of an inpatient discharge, and for use on pass. This session type must be used to transmit these orders to the outpatient pharmacy. Take home medications do not appear on the worklist manager.

Session types may be used in the various visit types as illustrated in the following chart:

Visit Type	Session Types		
	Today Outpt/Current Inpt	Future Outpt/Pre-Admit	Take Home Medications
Pre-NIH Registration	N/A	Allowed	N/A
Inpatient	Allowed	Allowed	Allowed
Outpatient	Allowed	Allowed	Allowed
Specimen	Allowed	N/A	N/A
OMS	Allowed	Allowed	N/A
Expiration	Allowed	N/A	N/A

Table 6: Visit Type with Order Session Type

Take Home Medications

Summary

Prescribers order take-home medications in both inpatient and outpatient settings. All take-home medications, including discharge, pass, and clinic prescriptions, are ordered under a TAKE HOME MEDICATION session type in CRIS. This directs the orders to the Outpatient Pharmacy for dispensing to the patient. It also allows the order to remain active across subsequent inpatient and outpatient visits, thus facilitating refills by the Clinical Center pharmacy.

In MIS, Prescribers have been able to convert inpatient medications orders to take-home medication orders. In CRIS, Prescribers can use the Reorder - Current function to order take-home medications from current inpatient medication orders; it is critical that the order session type be changed to TAKE HOME MEDICATION prior to submitting these new orders. Medications that are not already ordered for the inpatient are entered as new orders.

No change

- Take-home medications are a medical order for all clinic, discharge, and pass prescriptions.
- Take-home medication orders are verified, prepared, and dispensed by the Outpatient Pharmacy.

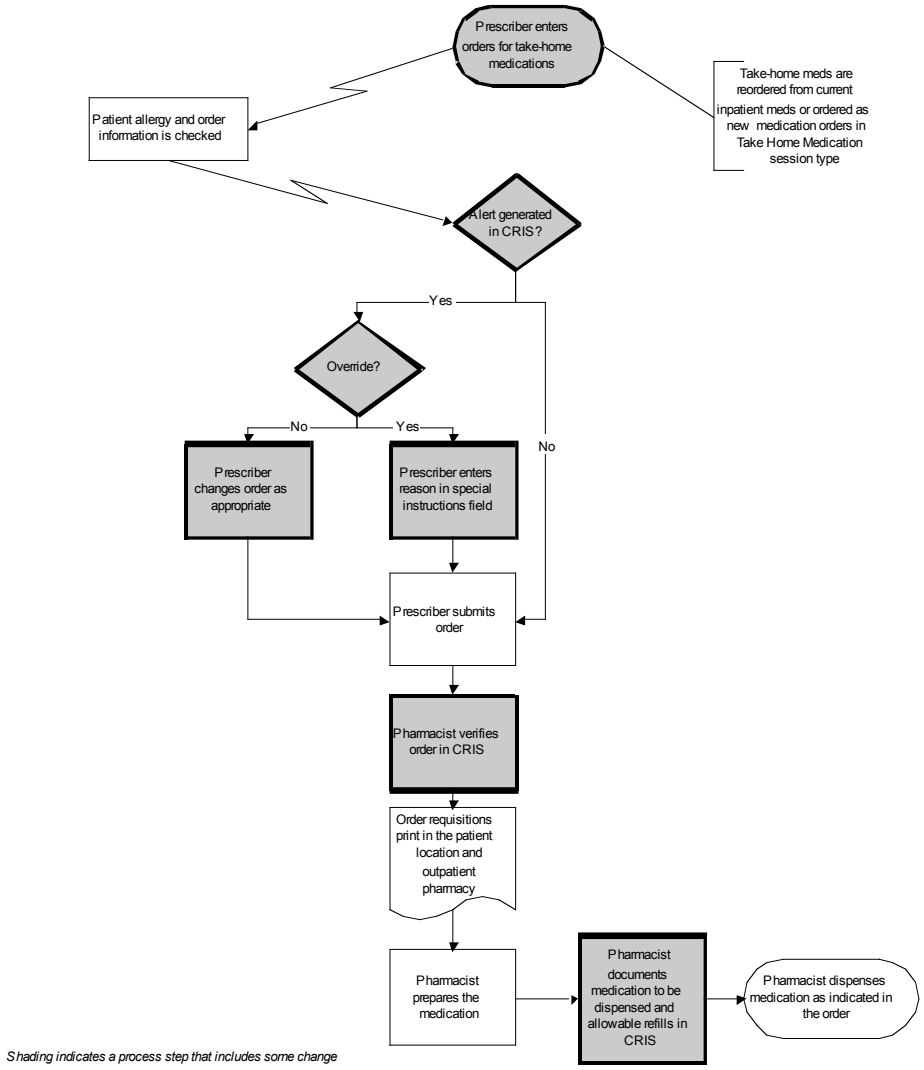
Major points of change

- Active medication orders cannot be "converted" to take-home medications as has been done in MIS. Take-home medications in CRIS require a new medical order entered under a **TAKE HOME MEDICATION** session type.
    - Orders of current inpatient medications for take home are reordered as **TAKE HOME MEDICATION** session type using the Reorder function (available by right-clicking on an order in CRIS).
    - Orders of different medications for use at home are placed as new orders in the **TAKE HOME MEDICATION** session type.
- Take-home medications are not included on the Medication Worklist used by the nurses to document medication administration.
- There are alerts warning of possible drug allergies and/or drug-drug interactions that may appear when placing medication orders.
- Pharmacy verification of the order is documented. No medication orders are active until verified by the pharmacy.
- Prescribers, pharmacists, and nurses are able to view a history of all take-home medications dispensed, as well as their remaining allowable refills.
- The first dose of a take-home medication is sometimes ordered to be given by the nurse before the patient leaves the Clinical Center. This dose can be included in and documented on the Medication Worklist if ordered as a separate one-time order in the Today Outpt/Current Inpt session type.

Notes:

- Prescribers should discontinue all take-home medications which they no longer want the patient to receive. The "active" take-home medications should reflect the patient's therapy currently provided by the Clinical Center outpatient pharmacy.
- Take-home medication orders placed through the copy/reorder function as duplicates of the inpatient medications, since both are active orders. Prescribers should override these alerts when submitting their orders. An alternative approach to avoid these alerts is to suspend all of a patient's take home medication orders at the time of an inpatient admission. These orders may then be unsuspended or discontinued as appropriate at the time of discharge.

CRIS Process Flow - Take-Home Medications



Shading indicates a process step that includes some change

CRIS Process Flow – Take Home Medications Description

1. The Prescriber enters orders for take-home medications.
   - Orders of current inpatient medications for take home are reordered under the TAKE HOME MEDICATION session type using the Reorder – Current function in CRIS.
   - Orders of different medications for take home are placed as new orders in the TAKE HOME MEDICATION session type.
2. Order information is checked at the time of entry and allergy or drug-drug interaction alerts may be generated.
3. If an alert is generated, the prescriber can change the order based on the alert or override the alert, but must enter an override reason in the special instructions field.
4. The Prescriber submits the order(s). The order will display in the pending verification status.
5. The pharmacist verifies the order; the order status changes to active. Upon verification by the pharmacist, order requisitions print in the patient's current registered location and in the Outpatient Pharmacy.
6. The pharmacist prepares the prescription.
7. The pharmacist documents the prescription to be dispensed, including the amount (e.g., 1 month supply) and any allowable future refills.
8. The pharmacist dispenses the prescription as indicated in the order.

Medication Charting

Medication Charting: No change

- Medication administration is documented in MIS by many locations/disciplines and continues in CRIS.

Medication Charting: Major points of change

- The WorkList Manager is used in locations/disciplines that did not use Medication Charting in MIS. These locations/disciplines include outpatient clinics, day hospitals, radiology, ICU's, and the respiratory care department.
- It is easier to document past due meds in CRIS, using filters.
- The CRIS Worklist Manager has an IV task form to document when an IV is started, as well as episodic assessments such as flow rate, flushes, and site assessments.
- Insulin sliding scale has a special order form in CRIS and is documented somewhat differently than other medication orders. The abbreviations AC and PC (meals) are no longer available. However, medications can still be ordered "before meals" or "after meals."
- IV access line flushes for central, apheresis, and PICC lines are in order sets in CRIS ("flush orders"). These are documented in the Worklist Manager.
- There is a separate task on the worklist to read a skin test.

Specimen Collection

Summary

The Specimen Collection processes include the inpatient AM 'batched' blood collection, inpatient blood and non-blood collections, research specimens, outpatient clinic specimen collections, specimen collections in the Outpatient Phlebotomy department, add-on specimen tests, and mail-in specimen processes.

Blood and non-blood specimens are collected from NIH patients in outpatient clinics, the Outpatient Phlebotomy Department, day hospital units, inpatient units, diagnostic areas, operating rooms, and treatment areas. These specimens may be used for therapeutic and/or research purposes.

Background:

Prior to CRIS, only specimens collected in the early morning 'batched' inpatient collection and specimens collected in the Outpatient Phlebotomy Department were labeled at the point of collection with bar-coded labels from the laboratory information system (LIS). Specimens collected at other times or in other locations were labeled with Admissions labels (which include patient name, date of birth, and medical record number) and sent to the labs with a transmittal sheet which contains specific order information regarding tests to be performed on the specimen. When specimens labeled with Admissions labels were accessioned into the labs, they were re-labeled with LIS bar-coded labels. This re-labeling was labor intensive for the labs, and, with the potential for mislabeling in such a large volume, represented a patient safety risk.

Most orders for lab tests on inpatient specimens were entered into MIS directly by the Prescriber or a research nurse on behalf of the Prescriber. In outpatient clinics, however, a paper order form was frequently used to order lab tests. These orders were then transcribed into MIS by phlebotomists in the Outpatient Phlebotomy or by clinic secretaries.

No Change

- The daily AM specimen collection is still the primary collection of the day for inpatients.
- On units with phlebotomy coverage, nurses will still determine which blood specimens are drawn by nurses and which by phlebotomists.
- An Order Requisition prints on the inpatient unit or outpatient clinic when an order requiring a specimen is entered and active. This serves as notification to care providers.

Major points of change

- Most specimens are labeled with lab barcode labels, not general admission labels.

- There is no 'Specimen collected' functionality in CRIS.
    - Order status will remain 'pending collection' until the specimen is received and accessioned in the lab, which will change the status to 'Specimen Received by Dept.'
    - Collection times are not captured at the time of collection for most specimens, but rather are recorded as the time received in lab.
- Labels for specimen tubes and containers can print on inpatient units, outpatient clinics, Outpatient Phlebotomy Department, OR/PACU, and selected other areas (on new Zebra label printers).
- Labels print by default at a patient's registered location. During order entry a user can select a different location to print lab barcode labels for specimens if needed.
- Specimen tubes and containers with lab barcode labels in most cases are sent to the lab with no accompanying paperwork.
    - There is no separate print-out called a 'T' sheet.
    - There is a short list of designated tests that need additional information recorded by the collector (e.g., pre- and post- drug levels).
    - The Order Requisition form which prints when an order is entered (or when released if it is a Future Outpt/Pre-Admit order) is used as paperwork for these exceptions.
    - Required information for these designated specimens is handwritten on the barcode label or the Order Requisition form; the latter is sent to the lab with the specimen.
    - Research blood, urine, and other specimens are collected as directed on the Order Requisition. Research blood, urine, and other specimens are labeled with lab barcode labels. All research specimens are sent or delivered with the Order Requisition form serving as the accompanying paperwork.
    - Anatomic path specimens continue to be labeled with admission labels and sent to the lab with paper order requisitions.
- Prescribers enter orders in CRIS for add-on tests to specimens already collected and received in the lab.
    - The lab should always be contacted first to assure specimen availability.
    - The lab performing the test is selected within the order from the label printing location options (e.g., for chemistry tests, select Lab: Chemistry).
    - The label printed in the lab communicates the order; the printed order requisition does not need to be sent to the lab.
- The paper order system used in outpatient clinics to communicate orders to the lab (or other areas) is eliminated with the implementation of CRIS. Paper orders will be accepted by the lab only during CRIS downtime.

- Lab orders, including research specimens, are entered directly into CRIS by the prescriber, or by a member of the Affiliate Medical Staff on behalf of the prescriber.
- Clinic clerks do not have security to enter any medical order into CRIS.
- Phlebotomists in the Outpatient Phlebotomy Department no longer enter lab orders as verbal orders or from paper order forms.
- Clerks in Outpatient Phlebotomy cannot enter orders but can release Future Outpt/Pre-Admit orders and reprint order requisitions.

Specimen Collection: Key Concepts

- Specimens, including those collected for research, are labeled with lab barcode labels rather than with general admissions labels with few exceptions (e.g., anatomic pathology).
- There is no 'Specimen collected' functionality in CRIS.
- Barcode labels print by default at a patient's registered location. A different location for label printing can be chosen when needed at the time of order entry. Order requisitions print at the patient's registered location; these forms can be reprinted on demand as needed.
- Barcode labels must be matched to the correct tube or collection container.
- Specimen tubes and containers with lab barcode labels in most cases are sent to the lab with no accompanying paperwork.
- Requests for add-on tests to specimens already in the lab are entered directly in CRIS.
- The paper order system used in Outpatient clinics to order lab tests has been eliminated.

CRIS Process Flow Descriptions and Diagrams - AM 'batched' blood draw - Inpatient

The primary blood specimen collection of the day occurs in the morning. The CIRS process continues to be much like the MIS process. Specimens for lab tests that are ordered as 'routine' prior to the scheduled collection date and/or blood specimens scheduled to be collected in the AM are 'merged' or 'batched' so that the collector (either a phlebotomist or RN) draws the minimum amount of blood required for all the ordered tests. The Charge Nurse on the unit determines which specimens are to be collected by the patient's nurse and which by a phlebotomist. This is the only inpatient collection process of the day in which phlebotomists routinely participate; individual specimens drawn later in the day are collected by the patient's nurse or a phlebotomist contacted specifically for the draw. Not all inpatient units are served by phlebotomists.

Early each morning, Laboratory Information System (LIS) bar-coded labels for all AM draw specimens are printed. The printing location depends on the collection patterns of each inpatient unit.

- For units where routine AM specimens are collected by both nurses and phlebotomists, labels will print in the Phlebotomy Department. Phlebotomists will bring the labels to the units on their rounds, set up and label tubes for the AM collection, and collect the specimens for which they're responsible.
- For units where routine AM specimens are collected only by nurses, labels are printed directly on the inpatient unit on special label printers. These labels are placed in a designated location by the unit clerk or head nurse, and are available to the nurse responsible for drawing the blood specimens.

For collections in either location, specimens are labeled with LIS bar-coded labels at the point of collection and sent to the lab. No paper form is usually required to accompany the specimen because the LIS bar-coded label includes all necessary patient identification and test information. Some tests require that additional information be recorded on the specimen label of the order requisition. The list of these tests will be available in each patient care area.

If a nurse must collect and send specimens before the phlebotomist has arrived on the unit with the AM labels, the specimens may be labeled with admission labels and sent with the printed order requisitions to the lab.

Major points of change

1. RNs and phlebotomists label specimens with LIS bar-coded labels instead of generic admission/MIS labels.
2. LIS bar-coded labels for AM specimens print directly on the inpatient unit where the patient is located if only nurses collect specimens on the unit. LIS bar-coded labels print in the Phlebotomy Department for the AM draw for those units where both nurses and phlebotomists collect specimens.

CRIS Process Flow - AM (Batched) Blood Draw – Inpatients - Ordering Process

1. Order is placed in CRIS by prescriber or affiliate medical staff (AMS).
2. Session type is "Today Outpt/Current Inpt" by default, so no selection needs to be made for inpatients.
    a. The specimen collection location field is blank by default, indicating the specimen will be collected at the patient's registered location at the date/time requested. The prescriber should select another location from the drop down list if appropriate.
3. An Order Requisition prints immediately on the inpatient unit.
4. Charge RN/Clerk places the Order Requisition in a designated location.
5. Early each morning all blood draw orders due for collection cross to LIS (between 12am and 4am) and the specimen merge occurs.
6. Specimen Pick-up List (from LIS) will print in Central Accessioning area (~4am).

7. Nursing Unit Worksheet (a.k.a., unit census) will print on each inpatient unit (~4am) and will be placed in a designated area.
8. LIS bar-coded labels will print in either Phlebotomy or directly on each inpatient unit, depending on the collection process for the unit and will be placed in a designated area.
9. Charge RN indicates on Nursing Unit Worksheet which specimens are to be drawn by RN or phlebotomist.

Phlebotomist Collects Specimen

1. Phlebotomist arrives at the inpatient unit with LIS bar-coded labels.
2. Phlebotomist checks labels against the Specimen Pick-up List.
3. Phlebotomist sets up and labels all tubes for morning draw, including research specimen tubes if set out.
4. Phlebotomist checks the Nursing Unit Worksheet to determine which patients are phlebotomist draws.
5. Phlebotomist draws blood specimens for indicated patients.
6. Phlebotomist transports or sends specimens to the lab; research specimen tubes are given to nursing for appropriate distribution.
7. Lab receives the specimens and defaults the collection date and time in LIS to the received date and time.
8. LIS sends received date and time as collection time to CRIS, which statuses the original order in CRIS as "Specimen Received by Dept."

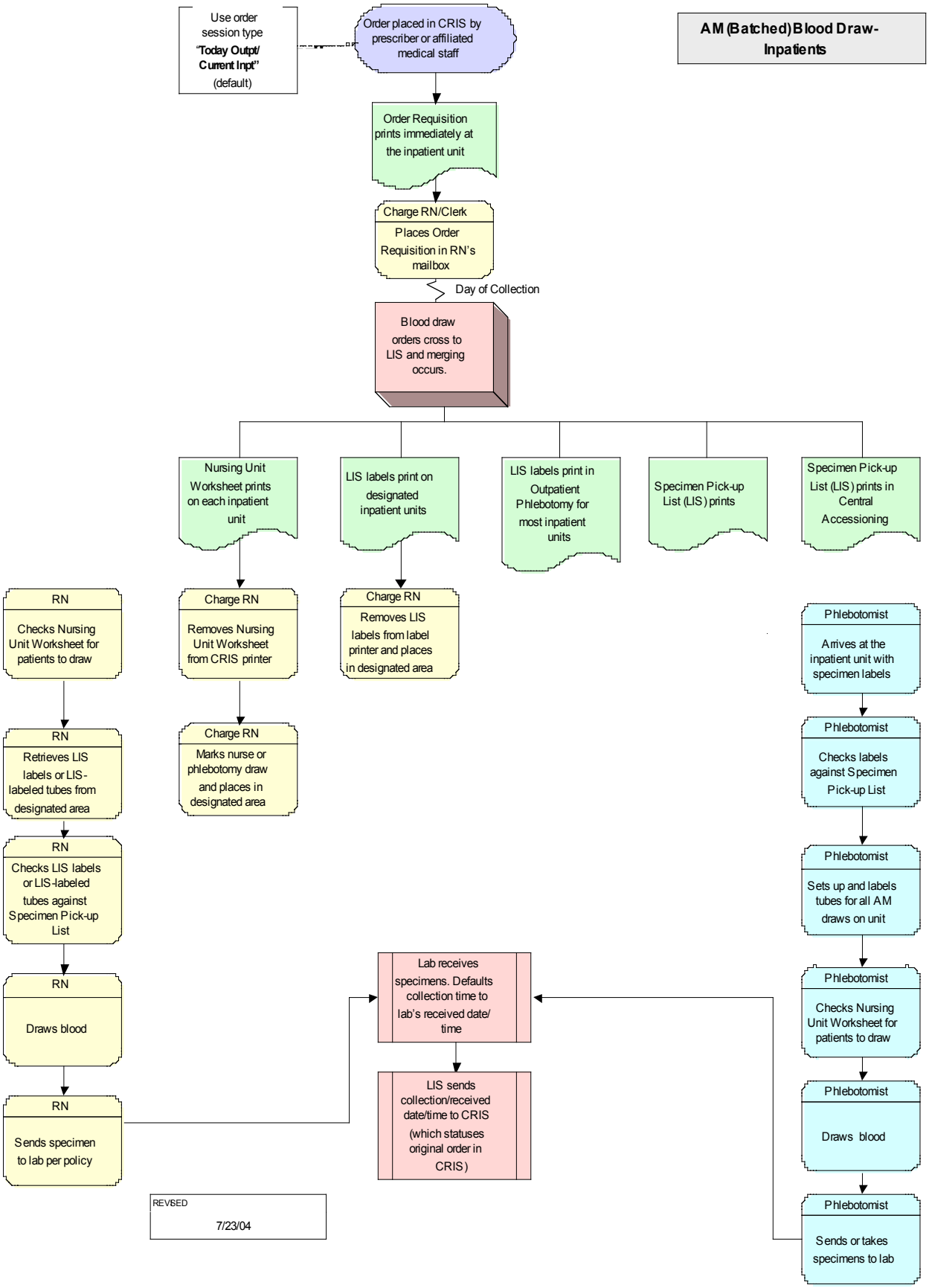
Nurse Collects Specimen

1. RN checks the Nursing Unit Worksheet to determine which patients are nurse draws.
2. RN retrieves the bar-coded labels or tubes from the designated area.
3. RN checks bar-coded labels or tubes against the Specimen Pick-up List.
4. RN draws blood specimens for indicated patients.
5. RN has specimens transported to the lab according to policy.
6. Lab receives the specimens and defaults the collection date and time in LIS to the received date and time.
7. LIS sends received date and time as collection time to CRIS, which statuses the original order in CRIS as "Specimen Received by Dept."

Notes:

- A review process exists on each unit to assure all ordered specimens were drawn and to discard leftover/unnecessary labels.
- Sometimes an additional test is ordered after the routine morning collection bar-coded labels are printed, but prior to the morning specimen collection. If this additional test can be collected in the same tube as one of the routine morning tests, the additional test label should be sent to the lab along with the routine morning specimen. The additional test will then be performed on the collected morning specimen to save the patient an additional draw.

- If a specimen is drawn before the phlebotomist arrives on the unit, the nurse will label the specimen with an admission label and send the specimen with a printed order requisition.


AM (Batched) Blood Draw-Inpatients
Use order session type "Today Outpt/ Current Inpt" (default)
Order placed in CRIS by prescriber or affiliated medical staff
Order Requisition prints immediately at the inpatient unit
Charge RN/Clerk
Places Order Requisition in RN's mailbox
Day of Collection
Blood draw orders cross to LIS and merging occurs.
Nursing Unit Worksheet prints on each inpatient unit
LIS labels print on designated inpatient units
LIS labels print in Outpatient Phlebotomy for most inpatient units
Specimen Pick-up List (LIS) prints in Central Accessioning
Specimen Pick-up List (LIS) prints
RN
Checks Nursing Unit Worksheet for patients to draw
Charge RN
Removes Nursing Unit Worksheet from CRIS printer
Charge RN
Removes LIS labels from label printer and places in designated area
Phlebotomist
Arrives at the inpatient unit with specimen labels
RN
Retrieves LIS labels or LIS-labeled tubes from designated area
Charge RN
Marks nurse or phlebotomy draw and places in designated area
Phlebotomist
Checks labels against Specimen Pick-up List
RN
Checks LIS labels or LIS-labeled tubes against Specimen Pick-up List
Phlebotomist
Sets up and labels tubes for all AM draws on unit
RN
Draws blood
Lab receives specimens. Defaults collection time to lab's received date/ time
Phlebotomist
Checks Nursing Unit Worksheet for patients to draw
RN
Sends specimen to lab per policy
LIS sends collection/received date/time to CRIS (which statuses original order in CRIS)
Phlebotomist
Draws blood
REVISED
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Phlebotomist
Sends or takes specimens to lab

Non-batched blood and non-blood collection process - Inpatient

All non-blood specimens and blood specimens scheduled to be collected at times other than the standard AM draw are collected at the requested time. An Order Requisition form prints at the patient's location at the time the inpatient lab order is entered; this serves as a notification of a new order. All information from the order in CRIS is included on the Order Requisition.

Lab orders cross to LIS on the scheduled date of collection. On that date, LIS labels print at the patient's registered location, and are used to label the specimen at the point of collection. In CRIS, the nurse no longer goes to the computer to indicate that the specimen has been collected, and no transmission sheet is generated. Specimens labeled with LIS bar-coded labels do not require a paper form (i.e., the Transmission sheet in MIS) unless additional information from the collector is required. If additional information is required, it must be written on the printed Order Requisition form and/or the label and sent to the lab with the specimen. For certain specimens, only collection date/time is required, and can be written on the specimen label. (Please refer to the lab guide manual at the DLM website for further details.)

Major points of change

- Specimens are labeled with LIS labels at the point of collection
- 'Specimen collected' is not entered in CRIS as it was in MIS
- Most specimens labeled with LIS labels do not require a transmission sheet or other paper form when sent to the lab
- Time of collection or additional information, when needed, is hand-written on either the LIS label or an Order Requisition form that should accompany the specimen to the lab

CRIS Process Flow - Non-Batch Bloods and Non-Blood Specimens-Inpatient

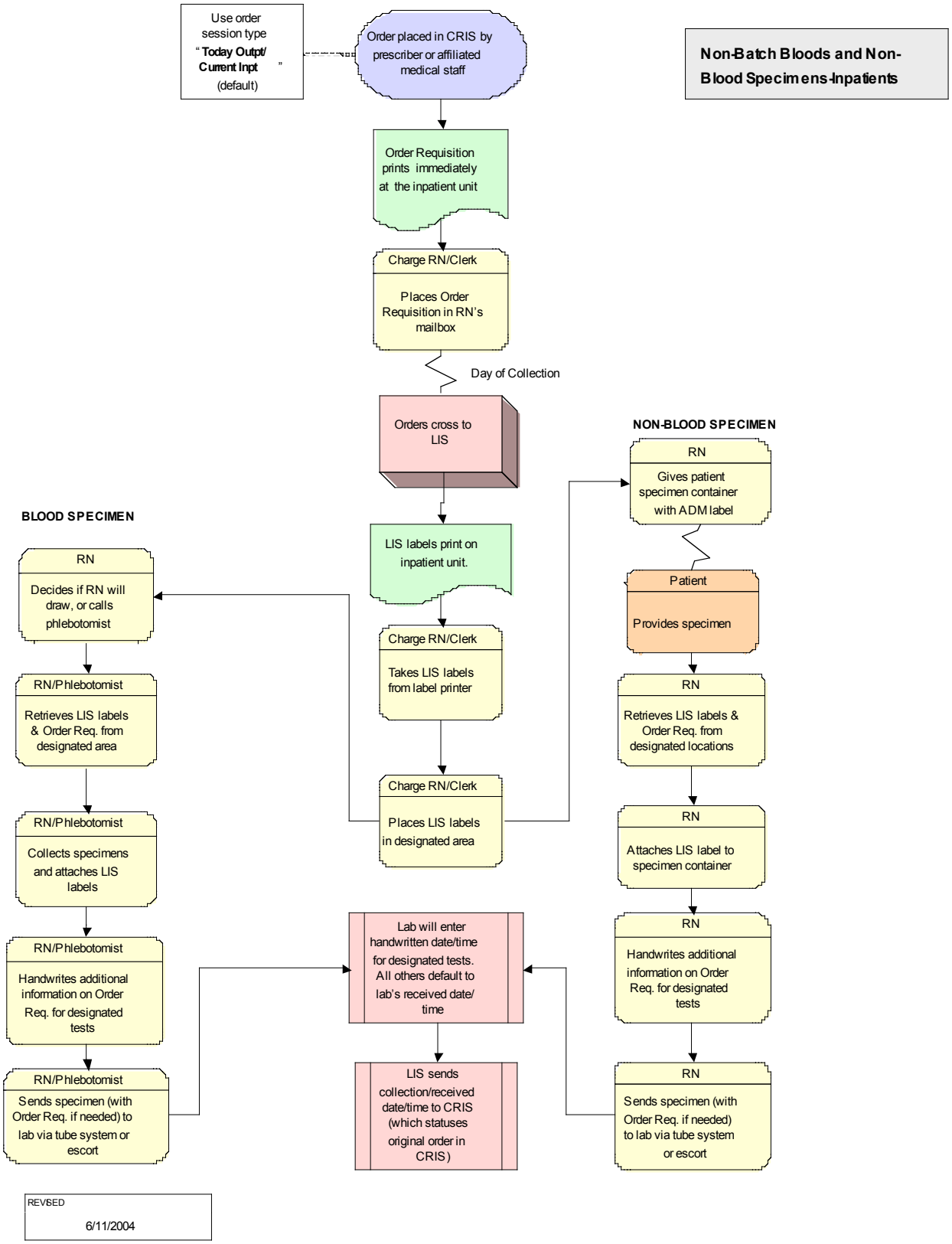
1. Order is placed in CRIS by prescriber or affiliated medical staff (AMS).
2. Session type is "Today Outpt/Current Inpt" by default, so no selection needs to be made for inpatients.
   - The specimen collection location field is blank by default, indicating the specimen will be collected at the patient's registered location at the date/time requested. The prescriber should select another location from the drop down list if appropriate.
3. An Order Requisition prints immediately at the inpatient unit.
4. Charge RN/Clerk places Order Requisition in a designated location.
5. Order crosses to LIS on date due to be collected.
6. LIS bar-coded labels print on inpatient unit on day of collection.
7. Charge RN/Clerk takes LIS bar-coded labels from the label printer.
8. Charge RN/Clerk places LIS bar-coded labels in designated area.

Blood Specimens

1. RN decides if RN will draw or calls phlebotomist.
2. RN/phlebotomist retrieves LIS bar-coded labels and Order Requisitions from designated area.
3. RN/phlebotomist collects specimens and attaches LIS bar-coded labels.
4. RN/phlebotomist handwrites additional information on Order Requisition and/or label for designated tests.
5. RN/phlebotomist sends specimens (with Order Requisition if needed) to lab via tube system or escort.
6. Lab will enter handwritten date/time as the collection time for timed tests in LIS; all other specimens default to lab's received date/time.
7. LIS sends collection date/time and received date/time back to CRIS which statuses the original order in CRIS as 'collected'.

Non-Blood Specimens

1. RN gives patient specimen container with Admissions label.
2. Patient provides specimen.
3. RN retrieves LIS bar-coded label and Order Requisition from designated area.
4. RN attaches LIS bar-coded label to specimen container.
5. RN handwrites additional information on Order Requisition and/or label for designated tests.
6. RN sends specimens (with Order Requisition if needed) to lab via tube system or escort.
7. Lab will enter handwritten date/time as the collection time for timed specimens in LIS; all other specimens default to lab's received date/time.
8. LIS sends received date/time back to CRIS, which statuses the original order in CRIS as 'collected'.


Use order session type "Today Outpt/ Current Inpt" (default)
Order placed in CRIS by prescriber or affiliated medical staff
Non-Batch Bloods and Non-Blood Specimens-Inpatients
Order Requisition prints immediately at the inpatient unit
Charge RN/Clerk
Places Order Requisition in RN's mailbox
Day of Collection
Orders cross to LIS
NON-BLOOD SPECIMEN
RN
Gives patient specimen container with ADM label
BLOOD SPECIMEN
LIS labels print on inpatient unit.
RN
Decides if RN will draw, or calls phlebotomist
Patient
Provides specimen
Charge RN/Clerk
Takes LIS labels from label printer
RN/Phlebotomist
Retrieves LIS labels & Order Req. from designated area
RN
Retrieves LIS labels & Order Req. from designated locations
Charge RN/Clerk
Places LIS labels in designated area
RN/Phlebotomist
Collects specimens and attaches LIS labels
RN
Attaches LIS label to specimen container
Lab will enter handwritten date/time for designated tests. All others default to lab's received date/ time
RN/Phlebotomist
Handwrites additional information on Order Req. for designated tests
RN
Handwrites additional information on Order Req. for designated tests
LIS sends collection/received date/time to CRIS (which statuses original order in CRIS)
RN/Phlebotomist
Sends specimen (with Order Req. if needed) to lab via tube system or escort
RN
Sends specimen (with Order Req. if needed) to lab via tube system or escort
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Outpatient Lab Orders

Prior to CRIS, all outpatient laboratory orders to be drawn by outpatient phlebotomy were ordered on a paper form. If the specimens were to be collected on the same day, the patient took this form with him/her to Outpatient Phlebotomy. If the specimens were to be collected on a future date, the form was either given directly to the patient to bring back on the scheduled draw date, stored in the clinic by date, or forwarded to outpatient phlebotomy and stored by date. When the patient arrived on the designated date for specimen collections, the Outpatient Phlebotomist placed the order in MIS as an "agent for" the prescriber.

If the specimens were to be collected in clinic, the prescriber or clinic RN (as "agent for") entered the orders into MIS.

With CRIS, the paper order forms have been eliminated. All lab orders are entered in CRIS, either for "Today Outpt" when due to be collected on the same day, or else for a "Future Outpt" encounter; these orders will be released at the time the patient returns. If the date of the expected encounter changes, this information can be updated in these "Future" orders prior to their being released.

Per MEC policy, only prescribers or those authorized to act as "agents for" prescribers can enter lab or other orders in CRIS.

Major Points of Change

- Lab orders are entered directly into CRIS by providers; order sets in CRIS make direct order entry faster and more convenient
- The paper order form process in outpatient clinics has been eliminated
- Phlebotomists do not enter lab orders from paper order forms
- Clinic clerks cannot enter orders into CRIS as agents for prescribers

CRIS Process Flow – Outpatient Lab Orders - FUTURE OUTPT/PRE-ADMIT Orders

1. **Future Outpt/Pre-Admit** order is placed in CRIS by prescriber or AMS.
2. Prescriber or AMS may select the specimen collection location/LIS bar-coded label print location from a pull down menu.
   - If this area is left blank (the default value) the LIS bar-coded labels will print at the patient's current registered location at the time the order is released.
   - If order is released by OP Phlebotomy staff, the system will print LIS labels in Outpatient Phlebotomy Department regardless of location selected.
3. Order is submitted; process stops until the patient returns to the CC and the order is released. No order requisitions or labels print until the order is released.

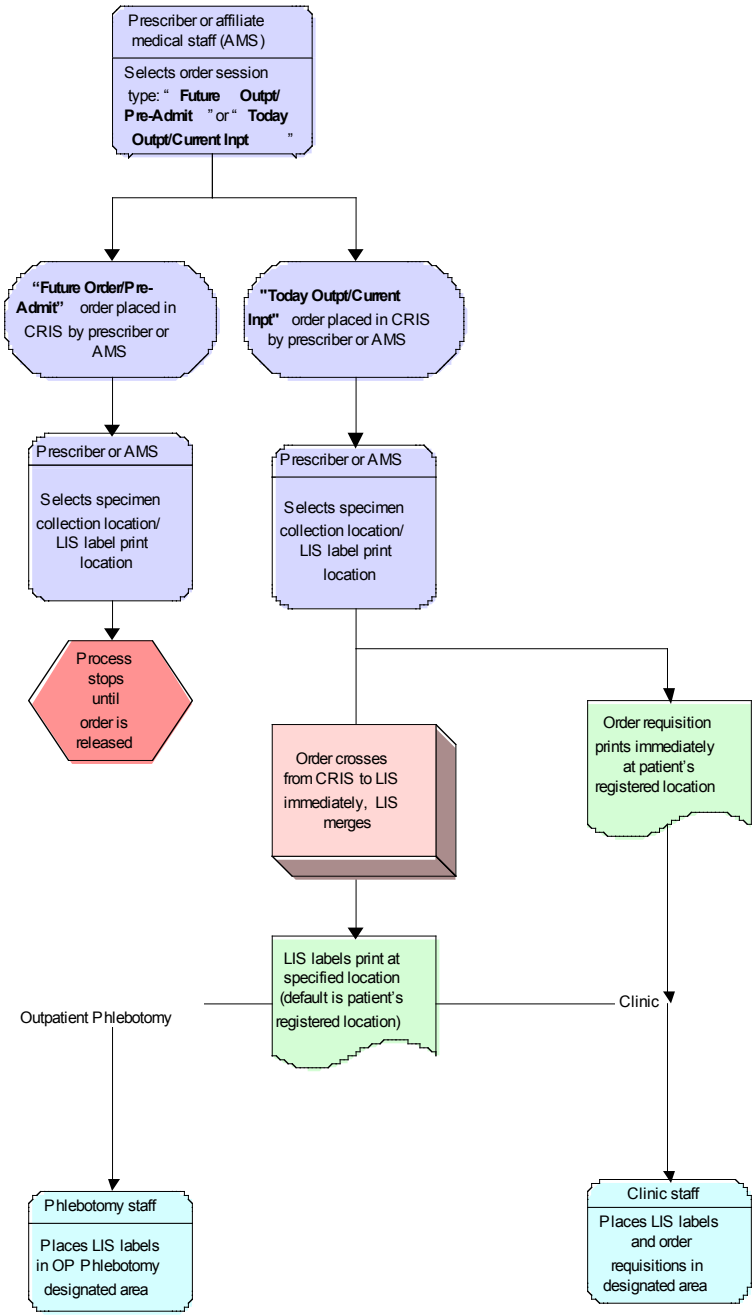
CRIS Process Flow – Outpatient Lab Orders - TODAY OUTPT/CURRENT INPT Orders

1. **Today Outpt/Current Inpt** order is placed in CRIS by prescriber or AMS.
2. Prescriber or AMS may select the specimen collection location/LIS bar-coded label print location from a pull down menu.
   - If this area is left blank (the default value) the LIS labels will print at the patient's current registered location, since the specimen is expected to be collected at this location.
3. Order is submitted; Order Requisition prints immediately at patient's current registered location.
4. Order crosses from CRIS to LIS.
5. LIS labels print at specified location (default is patient's registered location).

   Specimen to be collected in Clinic
   - If specimen is to be collected in the clinic, staff places Order Requisition(s) and LIS labels in location determined by clinic.

   Specimen to be collected in Outpatient Phlebotomy
   - Any special instructions are written on the order requisition and given to the patient in a recyclable envelope to carry to Outpatient Phlebotomy for specimen collection.
   - If LIS bar-coded labels have inadvertently printed in the clinic, the clinic staff will place the labels with the requisition(s) in a recyclable envelope, and give the envelope to the patient.
   - LIS bar-coded labels will print in Outpatient Phlebotomy if this location is selected as the specimen collection site in the lab order in CRIS.

Outpatient Lab Orders



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Specimen Collection Process – Outpatient Clinic

Major points of change

- The paper order form process has been eliminated.
- Prescribers or affiliate medical staff acting as "agent for" the prescriber enter lab orders directly into CRIS.
- If collection is to be in Outpatient Phlebotomy after the patient is seen in clinic, the patient will carry the Order Requisitions in a recyclable envelope to Outpatient Phlebotomy.
- Label printers which can produce both LIS bar-coded labels and Admission labels are located in each outpatient clinic area.
- LIS bar-coded labels are printed at the above locations, and specimens are labeled with these labels at the point of collection.
- There is no transmission sheet ('T' sheet) in CRIS.
- Except for a limited number of designated tests, specimens labeled with LIS labels do not need any accompanying paper form such as a 'T' sheet when sent to the lab.
    - For those designated tests which do require additional information to be hand-written by the collector, the Order Requisition form which prints at the patient's location is used and sent to the lab with the specimen. Some information may be written on the LIS bar-coded label (e.g., timed test).
- The default process, should LIS labels be unavailable for some reason, is to label the specimen with an Admission label and send the specimen with the Order Requisition form to the lab.

CRIS Process Flow - Specimen Collection Outpatient Clinic

1. RN checks CRIS for **Today Outpt/Current Inpt** and **Future Outpt/Pre-Admit** lab orders for patient.
    - To facilitate order retrieval, special filters will be used to display **Today Outpt/Current Inpt** and **Future Outpt/Pre-Admit** orders.
2. RN determines where the specimen is to be drawn: clinic or outpatient phlebotomy.

Specimen to be collected in Outpatient Phlebotomy

For **Today Outpt/Current Inpt** orders, the RN gathers order requisitions and labels (if printed in the clinic), places in recyclable envelope, and gives to patient to take to outpatient phlebotomy.

For **Future Outpt/Pre-Admit** orders that will be drawn in outpatient phlebotomy, the RN does not release the orders and sends patient to outpatient phlebotomy. Outpatient Phlebotomy will release the orders upon patient arrival.

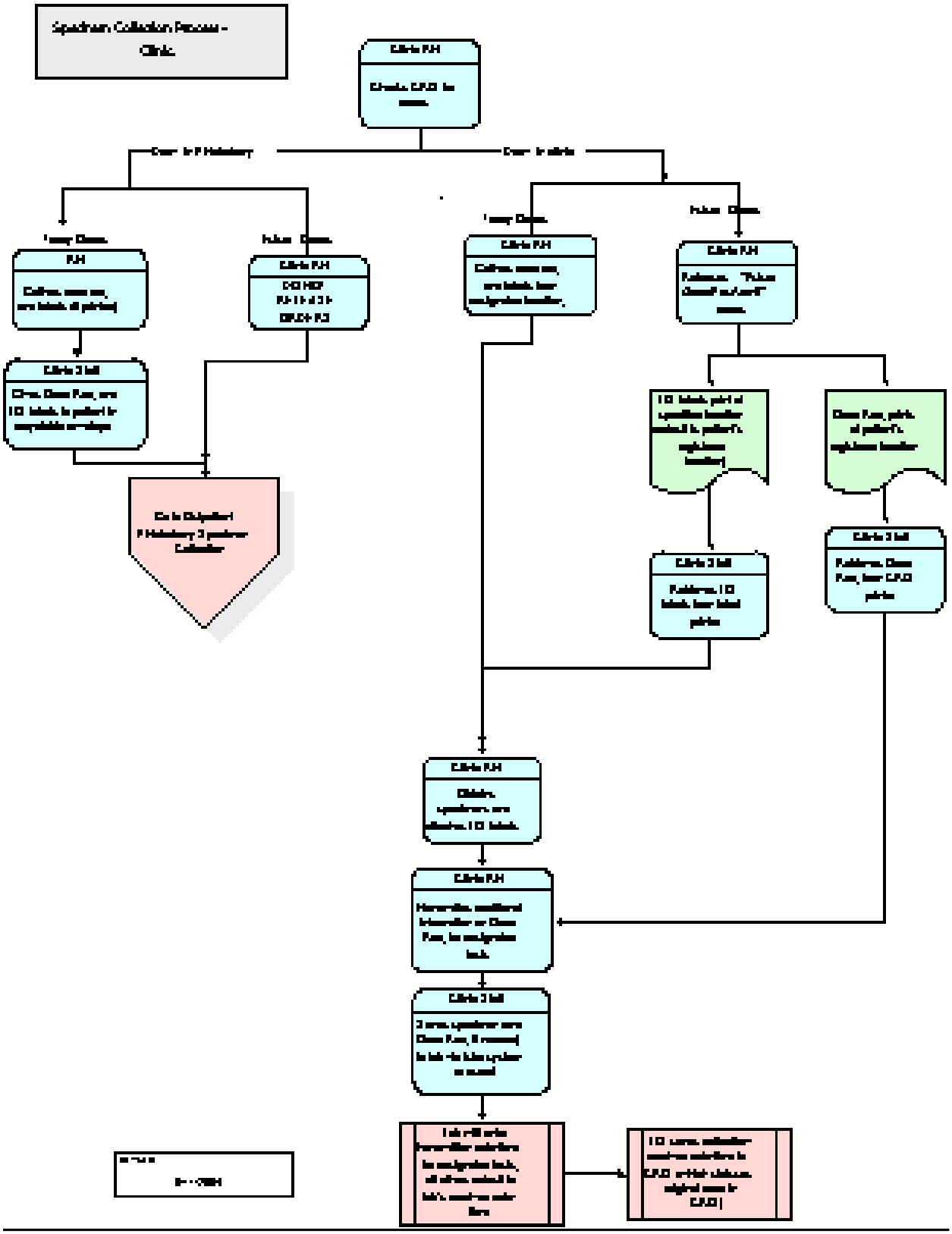
Specimen to be collected in Outpatient Clinic

For **Today Outpt/Current Inpt** orders that will be drawn in clinic, the RN gathers the labels and begins collection process (see step 3).

For **Future Outpt/Pre-Admit** orders that will be drawn in clinic, the RN releases the orders.

a. LIS bar-coded labels will print in the location specified in the order (default is patient's registered location).
b. Order requisitions print at patient's registered location.
c. Clinic staff retrieves bar-coded labels and Order Requisitions from printers.
   - Note: If the clinic where the specimen to be collected is not the patient's registered location, and the label location drop-down field in the order does not identify the clinic as the print location, the order must be discontinued and reordered to obtain LIS labels.

3. Clinic RN obtains specimens and attaches LIS labels.
4. Clinic RN handwrites additional information on the label and/or Order Requisition for designated tests.
   - Note: RN handwrites the correct date on the LIS label when sending non-blood specimens that were collected on a date other than the preprinted date.
5. Lab will enter handwritten date/time for timed tests as the collection time. All others default to the date/time the lab received the specimens.
6. LIS sends received date and time to CRIS, which statuses the original order in CRIS as 'collected.'



Specimen Collection in Outpatient Phlebotomy

Major points of change

- Phlebotomists will no longer enter orders as "agent for."
- Phlebotomy staff will review all lab orders for both session types to determine which specimens are to be collected that day.
- Phlebotomy staff will release all **Future Outpatient/Pre-admit** orders that are to be collected at that time.
- Phlebotomists will gather all Order Requisitions and LIS bar-coded labels for the specimen collections.
- Research specimens (blood, urine, and other) must be ordered in CRIS. These orders will contain the necessary collection instructions and also drive the printing of LIS labels for the specimens.

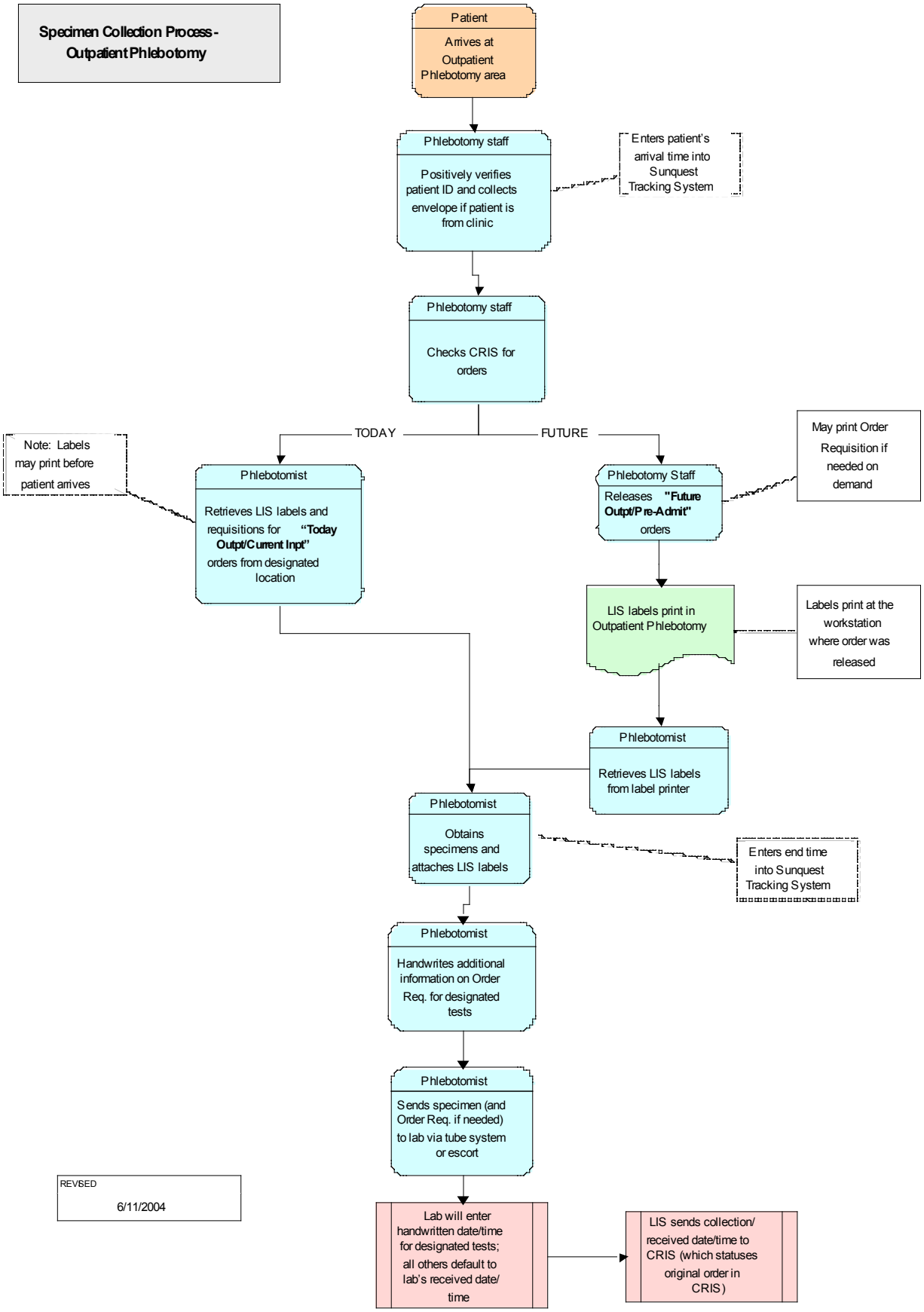
CRIS Process Flow - Specimen Collection Process – Outpatient Phlebotomy

1. Patient arrives in OP Phlebotomy Department and gives name at desk.
   - If coming from the clinic, the patient hands the envelope containing order requisitions and LIS bar-coded labels (if any) to the OP Phlebotomy staff.
   - OP Phlebotomy staff place requisitions and LIS bar-coded labels (if any) received from patient in designated location.
2. OP phlebotomy staff positively verifies patient's ID.
3. OP phlebotomy staff checks CRIS for **Today Outpt/Current Inpt** and **Future Outpt/Pre-Admit** lab orders for patient. Labels for Today Outpt should have already printed at the dedicated bar-coded label printer in OP Phlebotomy.
   - To facilitate order retrieval, special filters are used to display **Future Outpt/Pre-Admit** and **Today Outpt/Current Inpt** orders.
   - There will be 3 workstations for registering patients in OP Phlebotomy. Each will have its own CRIS printer and LIS bar-code printer.
   - A dedicated bar-coded label printer will generate labels for Today Outpt orders.

   For **Future Outpt/Pre-Admit** orders, the phlebotomy staff releases the orders.
   - LIS bar-coded labels print in OP Phlebotomy Department.
     - Must print order requisition for research and other designated tests.
     - Label and requisitions print at workstation where order was released.
   - Phlebotomist retrieves LIS labels.

For **Today Outpt/Current Inpt** orders, phlebotomist retrieves order requisition(s) and the LIS bar-coded labels delivered by patient or from OP Phlebotomy designated bar-coded label printer.

4. Phlebotomist obtains specimens and attaches LIS labels.
5. Phlebotomist handwrites additional information on label and/or Order Requisition for designated tests.
6. Phlebotomist sends specimen (with Order Requisition if needed) to lab via tube system, moser, or escort.
7. Lab will enter handwritten date/time for designated timed tests as the collection time. All others default to the date/time the lab received the specimens.
8. LIS sends received date and time as collection time to CRIS, which statuses the original order in CRIS as 'collected.'


Specimen Collection Process - Outpatient Phlebotomy
Patient
Arrives at Outpatient Phlebotomy area
Phlebotomy staff
Positively verifies patient ID and collects envelope if patient is from clinic
Enters patient's arrival time into Sunquest Tracking System
Phlebotomy staff
Checks CRIS for orders
TODAY
FUTURE
Note: Labels may print before patient arrives
Phlebotomist
Retrieves LIS labels and requisitions for "Today Outpt/Current Inpt" orders from designated location
Phlebotomy Staff
Releases "Future Outpt/Pre-Admit" orders
May print Order Requisition if needed on demand
LIS labels print in Outpatient Phlebotomy
Labels print at the workstation where order was released
Phlebotomist
Retrieves LIS labels from label printer
Phlebotomist
Obtains specimens and attaches LIS labels
Enters end time into Sunquest Tracking System
Phlebotomist
Handwrites additional information on Order Req. for designated tests
Phlebotomist
Sends specimen (and Order Req. if needed) to lab via tube system or escort
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Lab will enter handwritten date/time for designated tests; all others default to lab's received date/time
LIS sends collection/ received date/time to CRIS (which statuses original order in CRIS)

Add-on tests to specimens already in the lab

Additional tests on a specimen already received in the lab can be ordered in CRIS. This is accomplished by first calling to confirm specimen availability in the appropriate lab, then entering a new order in CRIS, indicating that the specimen is in the lab, and choosing a location for the test label to print. There are 6 possible lab locations: Lab – Chemistry, Lab – Hematology, Lab – Immunology, Lab – Microbiology, Lab - TTV, and Lab - HLA. The lab personnel retrieve the LIS labels from their local LIS label printer, add them to the specimen in the lab, and carry out the additional test(s).

Major points of change

- Prescriber enters the order for the add-on test in CRIS. With MIS, lab staff entered these orders directly in their ancillary system, with no countersignature of the order by the prescriber who requested it.
- A paper order requisition is **not** sent to the lab with a handwritten note stating the specimen is already in the lab. In CRIS, selecting the lab location within the new order causes a label to print in that location; this will serve the same purpose for communication as the paper requisition does now. This process facilitates the entry of the order by the prescriber from any location, as the paper lab order requisitions in CRIS print only at the patient's registered location.

CRIS Process Flow – Add-on Tests

1. The prescriber must always call the appropriate lab to make sure there is a specimen suitable for the add-on test. Lab personnel log all such calls.
2. The prescriber enters an order in CRIS for the add-on test.

    a. The prescriber indicates in the Special Instructions field that the "specimen is already in the lab" and any additional information that may be relevant.
    b. The prescriber chooses a location for the labels to print depending on the test ordered (Lab – Chemistry, Lab – Hematology, Lab – Immunology, Lab – Microbiology, Lab – TTV, or Lab – HLA). The lab personnel indicate during the preceding phone call which location to select.

3. Lab personnel retrieve the LIS labels from the printer and follow their local guidelines for labeling either a new tube or the previously received specimen.
4. Lab personnel carry out the additional test.

Notes:

- If the prescriber fails to select the correct label printing location in the CRIS order for the add-on test, the lab will not receive the necessary printed communication/label, and the add-on test will not be performed. The responsibility to select the correct lab location is the prescriber's; this is analogous to sending the MIS paper order requisition to the correct lab.
- If a suitable specimen is not available for the add-on test, a new CRIS order must be entered and a new specimen collected from the patient.

Non-NIH specimens and Non-patient specimens

The ancillary services handle many types of non-NIH patient specimens; these fall into three main categories:

- Referral specimens obtained from patients at outside facilities and sent to NIH for expert analysis. These patients may be asked to join active protocols at some point.
- Non-human specimens (e.g., animals) submitted from one NIH service area to another for testing.
- Human specimens where the identity should not be linked (e.g., blood donor specimens).
    - Non-human specimens that are submitted for testing are typically handled solely in the laboratory information systems (LIS), including SoftLab, SoftMic, and SoftPath. These specimens may be obtained from animals or solutions for possible infusion.
    - Orders for human specimens that should remain unlinked (e.g., blood donors) were traditionally entered in MIS via the NP registration process. In CRIS these orders are entered exclusively in the LIS ancillary systems.

No Change in Process

- Microbiology: Microbiology cultures performed on solutions submitted from pharmacy, epidemiology, and nuclear medicine are submitted to microbiology with a paper form instructing the laboratory which tests to perform. Microbiology techs enter the orders into LIS under fictitious patient names maintained solely in LIS. The unique identify of each specimen is entered as an order comment in LIS. Results may either be reported by the NIH mail service or transmitted by fax through LIS.
- Hematology: Tests performed on animal specimens are submitted to the DLM hematology section with paper requisitions identifying specific tests to be performed. Hematology techs enter the corresponding orders into LIS and report results either by NIH mail or by fax through LIS. Animals are generally identified by the last name of the researcher and the first name of the animal species (e.g., Monkey). The unique identity of each specimen is specified in the LIS order comment.

- Anatomic Pathology: CAP and other proficiency specimens are registered and tested in ancillary systems only.
- NCI: Specimens submitted to microbiology for culture by NCI Surgery Branch on the LAK/TIL cells are performed, with tests ordered on one of two fictitious patients in CRIS: "Data, PBMC" or "Data, Component B." The "Data, PBMC" patient is used to order and result cultures on LAC or TIL cells that are intended for patient infusion. The "Data, Component" patient is used to order and result cultures on reagent grade materials not intended for patient infusion. The individual unique identifier for each specimen is entered as an order comment. Results from "Data, PBMC" are called, while results from "Data, Component" are sent through NIH mail.

Change in Process

- Referral Specimens: For CRIS Phase I, all orders and results on non-NIH patient specimens and non-patient specimens are handled solely by the laboratory information system (LIS).
    - Some specimens are sent through a clinic while others are mailed directly to the testing area. Each testing service and referring protocol coordinator has a process for registering patient specimens and acquiring additional information necessary to process the specimens. In some cases, patient history is necessary to evaluate the specimen, while in other cases it is necessary to learn the identity of potential recipients when screening potential donors.
    - In the event the patient is later enrolled in an NIH protocol, a full admissions process is performed by the Admissions staff from the Form 54/ATV. A new medical record number is assigned during this registration.
    - Bone marrows referred to DLM Hematology (a.k.a., "K marrows") are handled by the laboratory information system in CRIS Phase I.
- DTM: Blood donor specimens are registered in LIS rather than MIS.
- DTM/MICRO: Cultures and gram stains from Human Cell and Tissue Products produced in the Cell Processing Laboratory are ordered and resulted in LIS. Results are retrieved directly from LIS.
- Microbiology: Blood cultures on blood component bags implicated in a transfusion reaction are ordered in LIS rather than in CRIS. Final interpretation of positive culture results is documented in CRIS by DTM staff via the Patient Information tab under Significant Event, Transfusion History.
- Microbiology: Blood cultures on apheresis platelets are ordered in LIS rather than CRIS. Results reports are generated via LIS and distributed by the pneumatic tube system.

Blood Component Preparation and Infusion Orders

In order for blood to be infused two separate orders required:

- A transfusion service order for the preparation of the blood component
- A nursing service order to actually infuse the prepared component
    - An intermediate step is a request from the nursing service to the transfusion service to release the blood component to the Messenger and Escort service, which picks up the pre-ordered blood component and delivers it to the nursing unit for infusion. A second delivery process exists for pre-ordered blood needed in the operating room for surgical procedures.

To prepare a red cell-containing component for infusion it is necessary to order a patient ABO type and screen for irregular antibodies and a crossmatch test to determine compatibility between the patient and the donor units. For plasma components such as Fresh Frozen Plasma and Cryoprecipitate it is desirable to have a patient ABO type on record to match the component type whenever possible.

No Change to Current Processes

- Two separate medical orders are necessary for the infusion of blood components. One is directed to the transfusion service to prepare the component and the second is directed to the nursing service to actually procure and infuse the component.
- Orders for the preparation of blood components (e.g., Type/Screen and Crossmatch) are initiated in CRIS and cross to the blood bank information system.
- Both pre-transfusion testing and the record of blood release to nursing are documented in the blood bank information system.
- Instructions for special processing of blood (blood component modifiers) are placed in CRIS indicating blood is to be irradiated, leukoreduced or washed as applicable.
- The blood product orders in CRIS will display different statuses depending on the stage of processing or activity.
- Nurses document blood infusion in CRIS. The fields on the CRIS flowsheet are duplicates of the documentation used in MIS.

Changes to Current Processes

- The specimen for ABO typing and antibody screening is used to perform pre-transfusion testing until midnight of the third day after collection. In CRIS a message is placed on the Type and Screen order form informing the Prescriber that if the "Repeat" selection is chosen, the specified frequency selected is "Daily every 4 days". In addition, the duplicate checking feature is set to check for duplicate orders 72 hours prior to and after the new order.

- A service requisition is ordered by nursing staff to notify the transfusion service to release blood to messenger and escort personnel. The service requisition replaces the MIS-O-Gram previously used for this purpose. The service requisition is manually completed by the transfusion service staff after the blood is released.

Pre-Operative and Intra-Operative Blood Orders

No Change to Current Processes

- A Maximum Surgical Blood Order Schedule (MSBOS) is mimicked in CRIS as an order set. Prescribers order blood by selecting the scheduled surgical procedure from the order set. This generates an order for a pre-determined number of red blood cells or for a Type and Screen depending on the requirements of the selected procedure.
- An abbreviated blood infusion documentation flowsheet is provided in CRIS to allow for the rapid documentation of blood infused during surgery.

Changes to Current Processes

- In CRIS, the OR float nurse places intra-operative blood orders "as an agent for" the Prescriber. These orders should be countersigned within 72 hours by the Prescriber per MEC policy. In the event that orders need to be placed by the medical technologists, the same process flow of placing the order "as an agent for" the requesting Prescriber is followed.

Transfusion Reactions

Adverse reactions to transfusion are rare but may be life threatening. This requires a mechanism for the immediate recognition and reporting of adverse events related to blood transfusion to the transfusion service, which initiates an evaluation and final classification of the adverse event. DTM may suggest modifications to future blood components or pre-medication to avoid future adverse reactions to blood transfusions.

No Change to Current Processes

- Nursing staff document adverse reactions to transfusion in the blood component administration documentation and send blood bags and all attached solutions to DTM for evaluation.
- The transfusion service performs an evaluation of the reaction based on the results of laboratory testing, record review, and inspection of blood component bags.
- The DTM fellow evaluates all information and assigns a final classification of the reaction. S/he may recommend pre-medication or special processing of blood components for future transfusions to help alleviate adverse reactions.

The results of this final evaluation and recommendation are documented in CRIS.

Changes to Current Processes

- When a reaction to a blood component infusion is suspected, the nurse documents the symptoms in the blood administration flowsheet in CRIS. In addition, a laboratory order is placed for the evaluation of the reaction. This occurs by selecting one of two order sets, "Transfusion Reaction RBC/WBC" or "Transfusion Reaction PLTS/Plasma." The order sets gather necessary information for the laboratory to perform its evaluation and also generate orders for specific tests. Depending on the type of component associated with the reaction, the nurse may be instructed to send post transfusion blood and urine specimens (RBC/WBC).
- The technologist performs testing and documents test results which appear in CRIS. These results previously were available only on paper.
- Once the DTM fellow reviews the results of initial testing, s/he may place orders for additional tests in CRIS as appropriate.
- Once the workup is completed, a summary is documented in the Transfusion Reaction Investigation Note by a transfusion service supervisor.
- The final classification is added to the Patient Information Tab as a Significant Event, type Transfusion History. This ensures that the history of adverse reactions to transfusion is prominently displayed across patient stays.

Consults

Clinical consultation is a frequent and often critical component of patient care at the Clinical Center. Consults are performed by staff from many of the institutes and centers, as well as several outside healthcare providers and organizations in the area. The Clinical Center Consult Review Committee performs monitoring of the quality and efficiency of formal clinical consults.

All requests for clinical consults provided by the institutes should be preceded by a telephone call directly to the consult service before actual order entry into CRIS.

Formal clinical consults may be documented using one of several mechanisms:

- Dictations, electronic distribution, review and signature using the ESA system provided by the Medical Record Department. The completed and signed consult report will be is found in the Results section of CRIS. The original consult order is automatically completed when the completed consult report is entered into CRIS.
- Direct keyboard entry into structured text fields, electronic distribution, review and signature using the ESA system provided by the Medical Record Department. The completed and signed consult report is found in the Results

section of CRIS. The original consult order is automatically completed when the completed consult report is entered into CRIS.
- Handwritten on the hardcopy Consult Report Form that is available using the Item Info tab on the consult order in CRIS or as available on the various nursing units and in the clinics. The completed and signed consult report is filed into the Consult Section of the patient's hardcopy medical record but is not entered into CRIS. The consultant must manually complete the original consult order in CRIS.

No change
- Consults may be dictated or handwritten. Dictation is preferred by the Clinical Center.
- Electronic distribution, editing and signature of consults continue to take place as a part of the transcription process in the ESA system.

Major points of change
- Consultants who either handwrite or directly enter their consults in clinical documentation in CRIS must manually complete the original consult order in CRIS.
- Unique highly structured consult notes may be designed and documented against as a part of the ESA transcription system.

Isolation

Summary

The isolation process is implemented when a patient is determined or suspected to be infected with a pathogen identified by the Epidemiology Service as requiring isolation. Confirmation of infection is through positive microbiology or other appropriate test results. Suspicion of infection can arise during the performance of a patient history or physical assessment. The isolation order may be for one or more of six isolation types: acid fast bacilli (AFB), central nervous system (CNS) precautions, contact, respiratory, special respiratory, or strict. The type of isolation precautions implemented depends on the specific pathogen involved.

The isolation order is a service requisition entered by a prescriber or Epidemiology Service staff member or a nurse as an "agent for". Even though the order completes after the close of a visit, staff members can view Isolation Status across visits as part of the Significant Events in the patient record in CRIS. The Epidemiology Service is responsible for maintaining the Isolation Status in Significant Events. A nurse uses the hospital services website to request an isolation cart be sent to the unit.

Discontinuation of isolation requires 2 steps:

- updating the Isolation Status in Significant Events in the patient record by the Epidemiology Service (nursing may also update)
- discontinuing the order.

No change

- Isolation is an order that can be entered by a Prescriber, an Epidemiology staff member, or by a nurse as "agent for" the Prescriber.
- The Prescriber and Epidemiology staff are notified verbally by phone when isolation is indicated**.**

Major points of change

- The Epidemiology Service staff member enters the isolation status in CRIS under Significant Events after the order is reviewed for accuracy.
- The Epidemiology Service is responsible for maintaining an accurate and current isolation status in the patient record in CRIS. Isolation status can be changed as needed in Significant Events.
- Nurses may also enter or update the isolation status in Significant Events when needed.
- The isolation status under Significant Events will remain across visits until manually changed. The order to isolate a patient will automatically be discontinued when the patient is discharged.
- The hospital services website is used to request an isolation cart.

Notes:

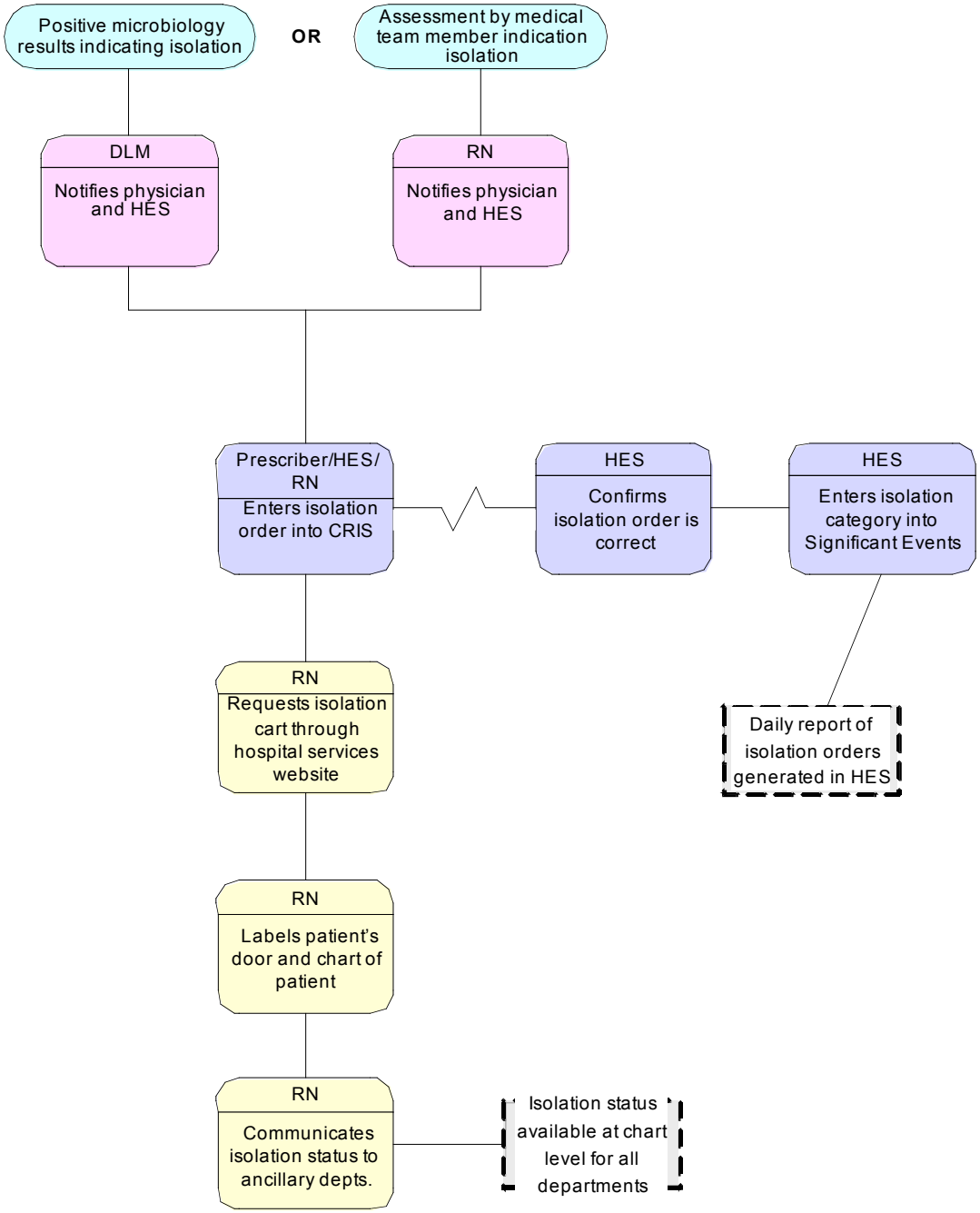
- It will be important for nurses and other staff to review the Significant Events section of the patient record for a current isolation status. The Isolation Status under Significant Events will remain across visits.
- Nurses should review Significant Events as part of the initial admission assessment to determine whether the patient required isolation at the time of their last discharge.

CRIS Process Flow – Initiating Isolation

1. Positive microbiology results confirm or an assessment by a medical team member suggests that isolation is indicated.
2. The attending physician and the Epidemiology Service are notified.
    a. The lab communicates positive microbiology or other test results.
    b. The medical team member communicates suspected infection.
3. The Prescriber enters the order for isolation. The nurse or Epidemiology Service staff may enter the order as an "agent for" the Prescriber. An Epidemiology Service staff member must review all orders for isolation.
4. If the patient is isolated on suspicion, the Prescriber orders appropriate cultures.
5. An Epidemiology Service staff member reviews and confirms the order for isolation.

6. An Epidemiology Service staff member enters the isolation status in Significant Events in the patient record in CRIS.
7. The nurse sends for an isolation cart using the Hospital Services website.
8. The nurse labels the patient's door and chart with appropriate isolation communication.
9. The nurse communicates the isolation status to ancillary departments as needed. Isolation status will be available at the chart level in CRIS for any department to view.

CRIS Process Flow - Initiating Isolation



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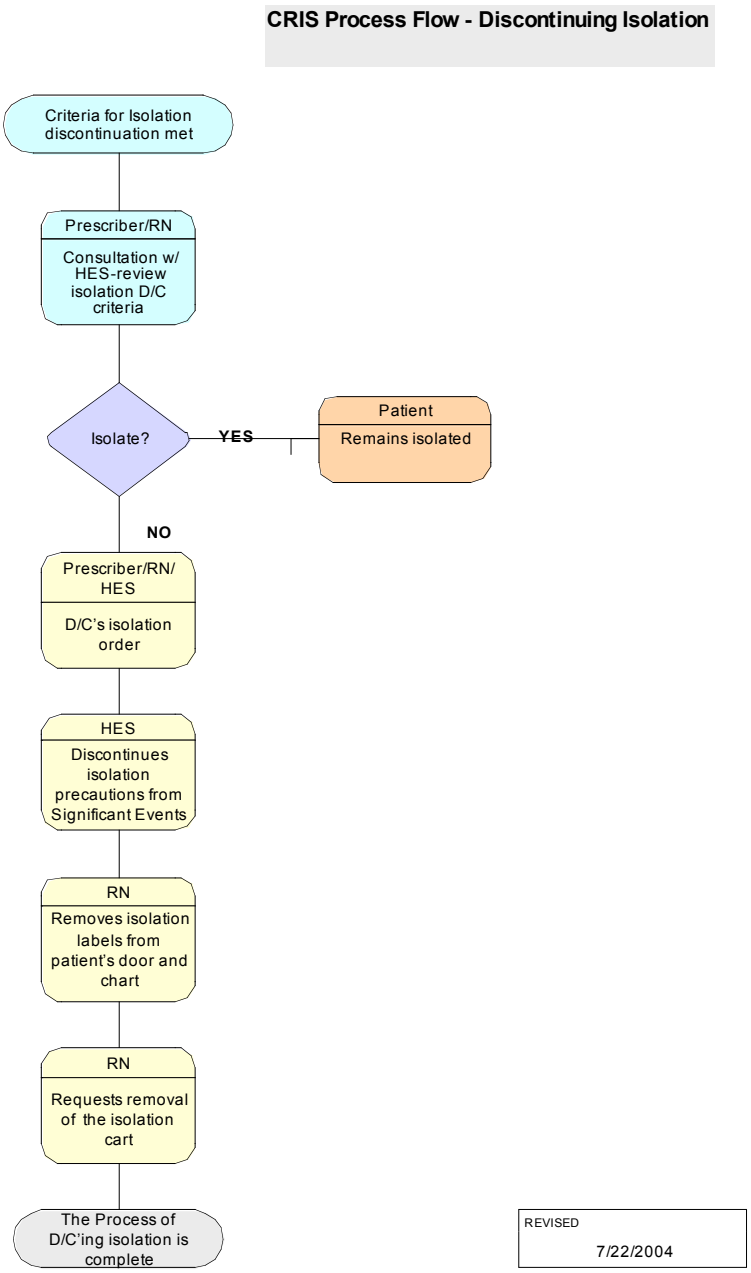
CRIS Process Flow - Discontinuing Isolation

1. When the criteria to discontinue isolation are met, a consultation with the Epidemiology Service is arranged by phone.
2. If it is determined that isolation should be discontinued, the order is discontinued by the Prescriber, an Epidemiology Service staff member, or the nurse in CRIS.
3. An Epidemiology Service staff member discontinues the isolation precautions in Significant Events.
4. The nurse will remove the signs from the door and chart.
5. The nurse will request removal of the isolation cart using a service requisition.



Admission/Travel/Voucher Request System (ATV) (Form 54 Replacement)

A new web-based application called the Admission/Travel/Voucher Request System (ATV) will take over many tasks that used to be handled by the MIS Form 54. Use the ATV system to enter requests for:

- inpatient admissions
- outpatient registrations
- travel requests for government sponsored travel for patients (not employees)
- travel vouchers for travel reimbursement requests
- lodging vouchers (including hotels, The Children's Inn and Safra Family Lodge)
- meal vouchers

ATV Access information
This secure system is web-based and only authorized users will have access. If you need access to be able to enter patients' admission, voucher, and travel requests, please contact the Ambulatory Care Service Office of the Chief, 301-496-2341.

ATV MIS to CRIS terminology
When using the new Admission/Travel/Voucher System, you'll see new terms to describe tasks that will be familiar to MIS users.

MIS Term	CRIS term
MIS (Medical Information System)	CRIS (Clinical Research Informatics System)
Form 54	Admission, Travel, Voucher Request
Meal Ticket or Meal money	Meal Voucher Request
Hotel	Lodging
Outpatient admission	Outpatient Registration
Blanks or box to be filled in	Data field
MIS code	User name and password
Air, Train travel arranged by NIH	U.S. Government sponsored Travel
Car, metro travel reimbursement	Travel Voucher

Tips for Users

- The screens read across from left to right
- A red asterisk (*) denotes mandatory information. The more data fields completed on the search screen, the fewer number of records that will match the criteria
- On the *Pending Request List Search* screen, the status and request type data fields can be used to verify that all requests have been processed or to check the status of a specific request
- Use the ATV confirmation number to search for a specific request
- Create your own reference sheet for the branch name and protocols under that branch by printing them out (use the print icon on the menu bar)

The application has a help tab with step-by-step instructions for submitting each request.

Miscellaneous Information

Basic Windows Skills

Windows skills are necessary to use CRIS. If end-users need Windows training, it is available in the practice lab. There is a Windows Skills CBT available and you can link to it from the CRIS Home Page (http://cris.cc.nih.gov/public).

Nursing Care Plans

There will be no nursing care plans is CRIS. There is a paper tool for interdisciplinary documentation used on the units now.

Date and Time Displays

CRIS uses a 24-hour clock.

- Twenty four hours is defined as starting at 00:00 and ended at 23:59
- Midnight is defined as 00:00 in the CRIS system.
- CRIS displays dates as Month/Day/Year (07/31/04)

MIS-O Grams

MIS-O-Grams are no longer available. Patient specific messages have been replaced with medical orders, service requisitions, and/or administrative requests.

Supplies, equipment services, pharmacy floor stock and maintenance requests (bldg requests) are ordered through the VSC (Visual Supply Catalog).

Volunteer Voucher Form

All payments will be processed through the Clinical Center Hospital Services System (http://supply.cc.nih.gov) using your Clinical Center login.

To enter a new Volunteer Payment Request,

- Login to the Hospital Service application (http://supply.cc.nih.gov).
- In the menu on the left, select (or click on) "New Request" under Volunteer Payment Request (near the bottom).
- You will be prompted for the patient's medical record number. Enter it and select "Search".
- The next screen requires you to check the box next to the patient's name to confirm the correct patient; do so and select "Continue".
- On the next three screens, just fill in the requested information and select "Continue" at the bottom.
- On the last screen review the information you've entered and either select "Modify" to make corrections, or "Submit" to forward the request to the Volunteer Office for payment.

Please be aware that you must have a correct SS# (or EIN#) and CAN # to request a payment. If a volunteer is foreign born without a SS#, then contact the healthy volunteer office at 301-496-4763 to request an EIN number The EIN number will be emailed to the requester within 2 business days and the requester will then enter a payment request. The healthy volunteer office will not be able to correct or add information to your request for payment. All updates will have to be entered by the requester.

- If you have any problems with the forms or need more information on submitting a request, contact Mandy Jawara or Carol Daniels at 301-496-4763.
- If you have any difficulties connecting or logging in, contact Jim Pitts at 301-496-7436, or jpitts@cc.nih.gov.

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How to Obtain a CRIS Code

In order to request a CRIS code, everyone needs to complete a CRIS Access Form and have the form signed by their supervisor. Submission of this form is required for assignment, modification or deactivation of CRIS access privileges, as mandated by NIH Information Technology (IT) Security Requirements located at http://irm.cit.nih.gov/nihsecurity/NIH_IT_Sec_Requirements.pdf. This policy specifies that all users of an IT system are only granted access to applications and information based on their job function and need to know.

In addition, there are two documents that each user needs to complete to receive their logon and password.

1. NIH Clinical Center Confidentiality Agreement
2. CRIS Password Reset Secrets
   There will be 5 questions listed and users can provide a response to 3 of them in order to reset their password should they forget it. Otherwise they will be required to physically come to DCRI and show their ID badge.

To access the document, visit the following web site:
http://cris.cc.nih.gov/public/cristraining/accounts.html

The form requires a supervisor's signature and must be returned to the Department of Clinical Research Informatics at the Clinical Center.

Deliver the completed and signed form

- In person, to Building 10, Clinical Center, Room 1C290
- Through interoffice mail to 10/1C290, CRIS ACCESS
- Or, by mail to CRIS ACCESS, NIH CC 10/1C290, Bethesda, MD 20892-1172.

If you have any questions about CRIS code access or forms contact the CRIS Support Center at 301-496-8400.

Chapter III: Getting Started

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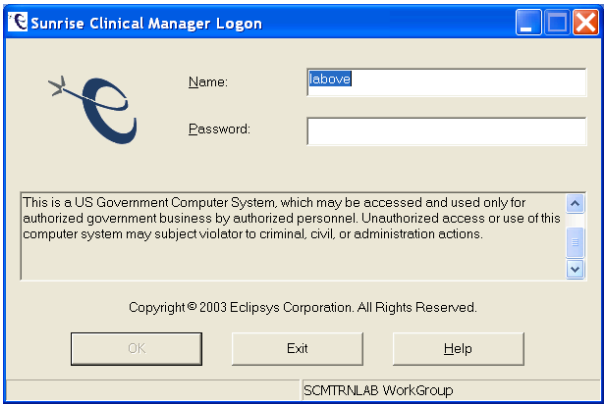
Log on to CRIS

The **Logon** dialog box allows you to log on to or exit from CRIS. Logging on requires that you enter two pieces of information: your username and password.



Screen 5: CRIS Log on Screen

Steps to log on to CRIS

1. In the **Name** field, enter your username in uppercase or lowercase letters. Log-on's and passwords are NOT case sensitive.
2. In the **Password** field, enter your **Password** field in uppercase or lowercase letters.
3. Click **OK**. If your username and password are correct, the system logs you on to CRIS.

Log off CRIS

When you have completed your work in CRIS, log off the system to prevent others from using your electronic signature.

Steps to log off of CRIS

1. From the **File** menu, choose **Log off,** or click the **Log off** icon on the toolbar.

Screen 6: Log off Icon

2. The **CRIS Log on** dialog box opens. You are now logged off.
3. To completely exit CRIS, click **Exit** on the **Logon** dialog box.

Automatic Logoff

CRIS automatically logs you off of the system after 5 minutes of non-use. This prevents others from using the system under your password if you are forced to leave the system running.

Change Your Password

Passwords need to be between 6 and 30 characters. You can use any characters including letters, numbers and symbols. You will be prompted to change your password the first time you log on and then every 180 days thereafter.

You use the **Change Password** dialog box to change your password. It opens automatically when you log on to CRIS for the first time or when your password expires.

To display the **Change Password** dialog box, from the **Preferences** menu, choose **Change Password**.

Screen 7: Change Password

Steps to change your password

1. Type in your old password
2. In the **New Password** box, type a password of your choice. Passwords must be ***at least six*** (6) and no more than thirty (30) characters in length. Any combination of numbers, letters, and symbols can be used.
3. Re-type the new password again in the **Confirm New Password** box.
4. Click on **OK** to complete.
5. If you have correctly changed your password, a confirmation message will appear. Click **OK**.

Screen 8: Change Password Confirmation Screen

6. If you have not correctly changed your password, you will get an error message. Click OK and repeat the steps above.

Screen 9: Change Password Error Message

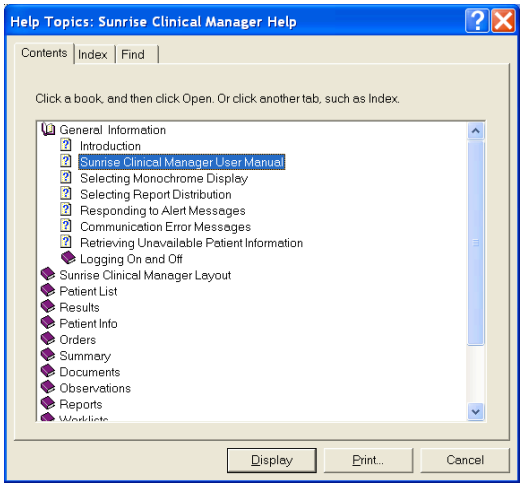
Online Access to Help and Documentation

CRIS has context-sensitive help and online documentation, which provide quick search-by-topic capabilities. You can access help in a three ways:

1. Help Menu.
2. What's This Icon
3. User Guide

Help Topics from the Help menu.

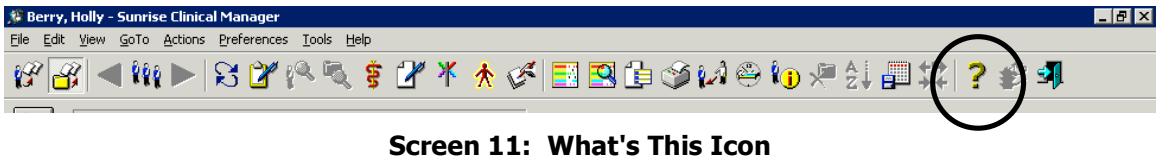
Help is available via the Help option on the Menu. You can search for help by contents, specific words in the index or by typing in a questions or phrase.



Screen 10: Help Contents

What's This Icon

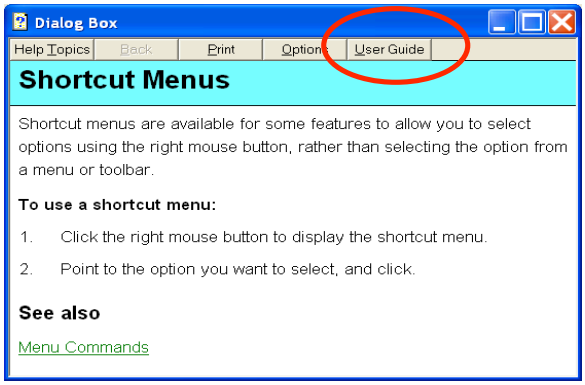
The Question mark icon on the toolbar allows you to select specific help on a screen. When you click on the icon, a question mark displays next to the cursor. When you click on a portion of a screen or on another icon, help will display specific to that portion of the screen or icon.



Screen 11: What's This Icon

Access the User Guide from the Online Help

You can access the CRIS User Guide in PDF format from the online help by clicking the **User Guide** toolbar button at the top of any help topic.



Screen 12: User Guide

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Title Bar

The title bar is a line or bar at the top of a screen that displays the currently selected patient name and the system name.

Menu Bar

The menu bar is located directly under the title bar. The menu bar contains drop-down menus. By clicking options from the drop-down menus, users can perform different functions in the system. The facility defines the security on menu options. When a menu option is not appropriate for a particular situation, it will display "grayed out." For example, if the user has not yet selected a patient from the Patient List, clicked the Orders tab and highlighted an order, then the menu option View/Order Details will be grayed out since there are no patient orders selected to view.

Toolbar

The toolbar is a row of buttons with pictures on them (icons) across the top portion of the screen. Each button represents something that you can do immediately if you click it. For example, at the far right there is a button with a picture of an open door with an arrow pointing out the door. This is the Logoff button. If you click it, you log off immediately. Toolbar preferences can be modified and saved for the current session that a user is logged into.

Patient Header

The **Patient Header** displays key information about the patient. Like an addressograph imprint, it uniquely identifies the patient, and includes the following demographic information: patient name, ID/visit number, assigned location, temporary location, age, and gender.

The **Patient Header** may display "Unreviewed Allergies" in red if the patient has allergies that have not been reviewed this visit. Allergies added to a visit after an initial allergy review will not cause "Unreviewed Allergies" to be displayed.

Expanded Header

The **Expanded Header** allows you to view more patient demographic information than is visible in the **Patient Header** at the top of the patient's chart. To open the **Expanded Header** dialog box, click the **More Header Info** icon on the toolbar, or from the **View** menu, select **More Header Info**.

Screen 13: More Header Info Icon

Patient List

The listing of patients displays based on the list selected in the Current List field.

Chart Sections (Tabs)

In CRIS, patient information is organized into a chart containing *chart sections*, similar to a physical chart. You maintain patient information by accessing a chart section and performing the tasks appropriate to that section.

For example, you can review orders for a patient in the **Orders** chart section, and view allergy information in the **Patient Info** chart section. Many of the data entry functions can be accessed from the appropriate chart section, or by selecting a toolbar icon or menu option.

The **Patient List** displays after you log on to CRIS, allowing you to choose the name of the patient(s) whose chart(s) you want to open. The selected chart(s) remains open as you move from section to section, until you change the selected chart(s) in the **Patient List**.

Chart Section	Description
Patient List	**Select a patient from a list of patients.**
Orders	**View and revise existing orders.**
Results	**View clinical results.**
Documents	**View patient care documentation.**
Observations	**View flowsheet documents.**
Patient Info	**Enter and view patient information, such as allergies and demographics.**
Summary	**View a summary of patient related information including active allergies, comments, medications, and health issues.**

Table 7: Chart Sections Table

Columns

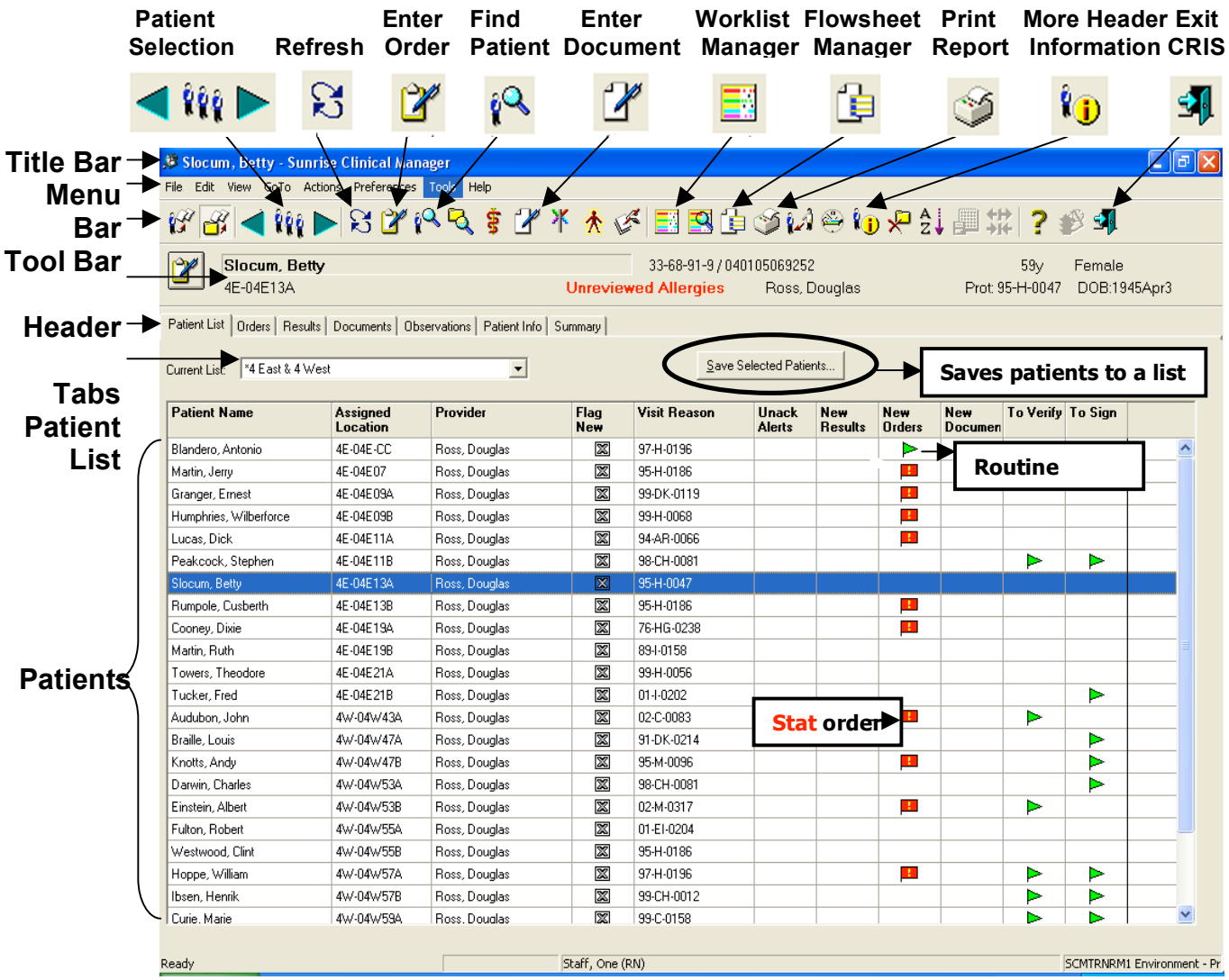
The columns on the Patient List display either information or flags pointing to pertinent data about the patient. For example, flags indicate if new results have been received for a patient and can be viewed by clicking the flag. The choice of columns displayed is specific to each list.

Patient Data Screens

The sections of the screen below the tabs are used to display information (such as a list of results or orders) or fields that accept data about the patient (such as orders or documents).

Status Line

The status line displays at the bottom of the screen. It contains the environment name, user name, and any informational messages.



Screen 14: Patient List Screen Overview

Chapter V: Working with Patient Lists

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Patient List

The **Patient List** displays when you start CRIS. It provides easy access to patient charts and notifies you about new information regarding those patients. In addition to looking at information on the screen, you can print a patient list as a report to take with you on rounds.

The information in the **Patient List** originates from the ADT system (MIS).

Flags in the **Patient List** indicate that new or significant information about that patient exists. You can access information on new and unacknowledged alerts, documents, results, and orders for the selected patient from the **Patient List**. You can create special lists of selected patients and patient lists based on specific criteria, such as location or care provider.

Refresh

The **Refresh Screen** icon updates the **Patient List** and any of the other chart sections. We recommend that you refresh the screen often, to make sure that the **Patient List** displays the latest information. **Refresh Screen** is also available in the **View** menu.

Screen 15: Refresh Icon

Select Patient Charts

You must select a chart before you can open and view patient records.

Select one patient's chart:

1. From the **Patient List**, select the name of the patient whose chart you want to open.
2. Access a chart section by selecting a chart tab.

Select multiple patient charts:

1. From the **Patient List**, select the name of the first patient whose chart you want to open.
2. Hold down Ctrl and click each patient you want to select.
3. Select a chart section by selecting the appropriate chart tab. The chart for the first patient you selected in the **Patient List** shows first.
4. Click **Next Patient** or **Previous Patient**, or from the **GoTo** menu, choose **Next Patient** or **Previous Patient**. You remain in the same

chart section, but now display the record for the next or previous patient in the **Patient List**.

Screen 16: Next & Previous Icons

Deselect all but one patient:

Click on the name of the one patient whose chart you want to keep selected. The default chart section automatically displays for that patient.

Use Flags to Track New Patient Information

Flags display on the **Patient List** to indicate that new information is available for a patient's chart. Flags can signal that a new order has been placed for the patient (**New Orders** flag), that a result has been completed for an order (**New Results** flag), that clinical documentation has been charted on a patient (**New Documents** flag), that verification is needed before an order can be processed (**To Verify** flag), that a signature is needed for an order or document (**To Sign** flag), or that a new alert has been generated (**New Alerts** flag).

To display new results, new orders, new alerts, or new documents, you may need to display the **Flag New** column in the **Patient List**.

The Flag New Column

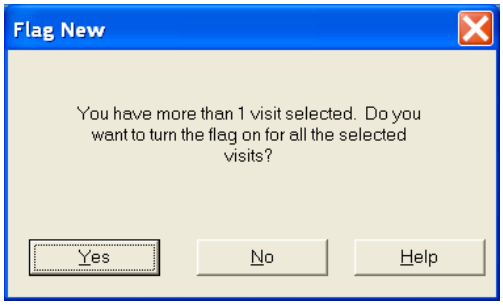
You can select one or more patients in the **Patient List** and turn the **Flag New** column on or off for the selected patients.

If a provider is assigned to a patient in CRIS, the **Flag New** column might be configured to be on, based on the provider's role for the patient. For example, for an attending physician, the **Flag New** column might be configured to be on to inform the physicians of all new orders, results, documents, etc. for that patient, from the beginning to the end of their stay. When a floor nurse is assigned to that patient, she/he could turn the **Flag New** column on to see all new information for the patient from the time they were transferred to the floor, or when she/he took over their care.

Steps to turn flags on or off:

1. On the **Patient List**, select the patient(s) for whom you want to turn the **Flag New** column on or off.
2. From the **Menu**, select **Actions - Flag New On** or **Flag New Off**.

3. If one patient is selected, the state of the **Flag New** column changes, depending on the option you chose. If multiple patients are selected, the **Flag New** dialog box opens, where you can confirm or cancel the action.



Screen 17: Flag New Dialog Box

Track New Results

You can display the **New Results** flag (in the **New Results** column) to see results that have been received since you last acknowledged having reviewed all results for the patient.

Steps to track new results

1. In the **Patient List**, look at the cell in the **New Results** column to see if it contains:
   a. A triangular green flag, which indicates that new results have been received since you last acknowledged having received all results for this patient.
   b. A rectangular red flag, which indicates that at least one of the results falls outside the normal range.
2. Double-click the flag to display the new results. The **New Results** dialog box opens.
3. To clear the flag, click **Clear Flag** on the **New Results** dialog box. Otherwise, click **Don't Clear Flag**. When **Clear Flag** is selected this will only clear the flag from your view.

Track New Documents

You can display the **New Documents** flag (in the **New Documents** column) to indicate that documents have been entered since you last acknowledged having reviewed documents for the patient.

Steps to track new documents

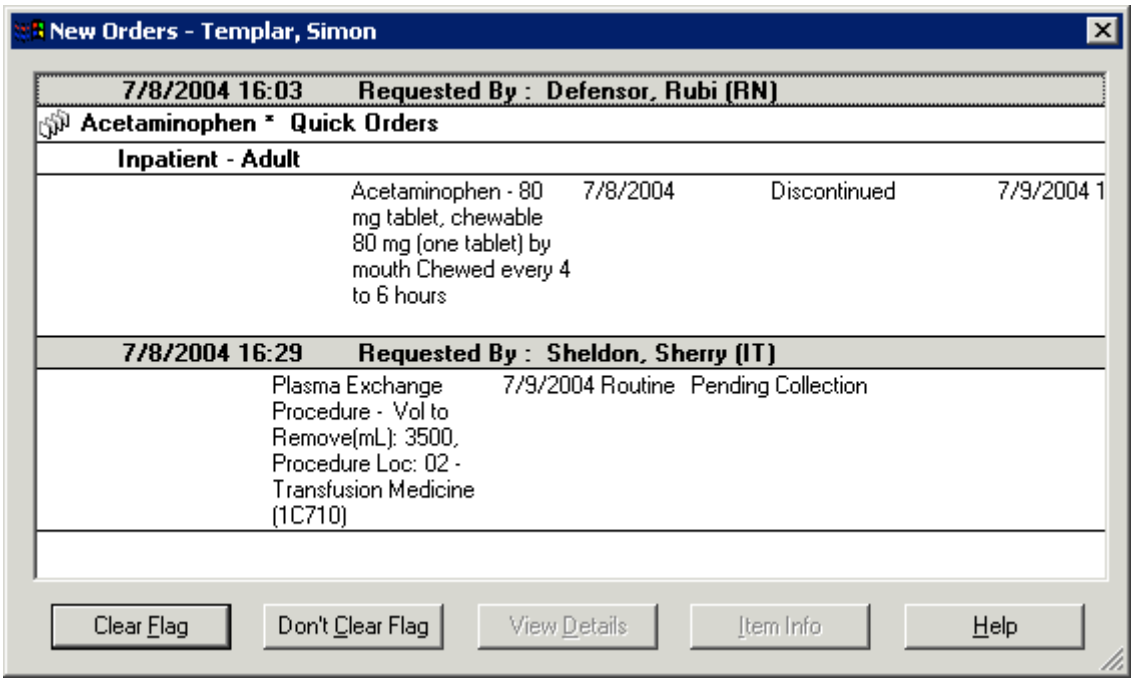
1. In the **Patient List**, look at the cell in the **New Documents** column to see if it contains a triangular green flag, which indicates that new

documents have been received since you last acknowledged having received documents for this patient.

2. Double-click the flag to display the new documents. The **New Documents** dialog box opens.
3. To clear the flag, check **Clear Flag** on the **New Documents** dialog box.

Track New Orders

You can display the **New Orders** flag to indicate that orders have been entered or substantially changed (such as canceled) since you last acknowledged having reviewed this patient's orders.



Screen 18: New Orders Window

Note: The **New Orders** flag will display when any previously held order is released since the user last acknowledged having reviewed this patient's order. It will not display for hold orders.

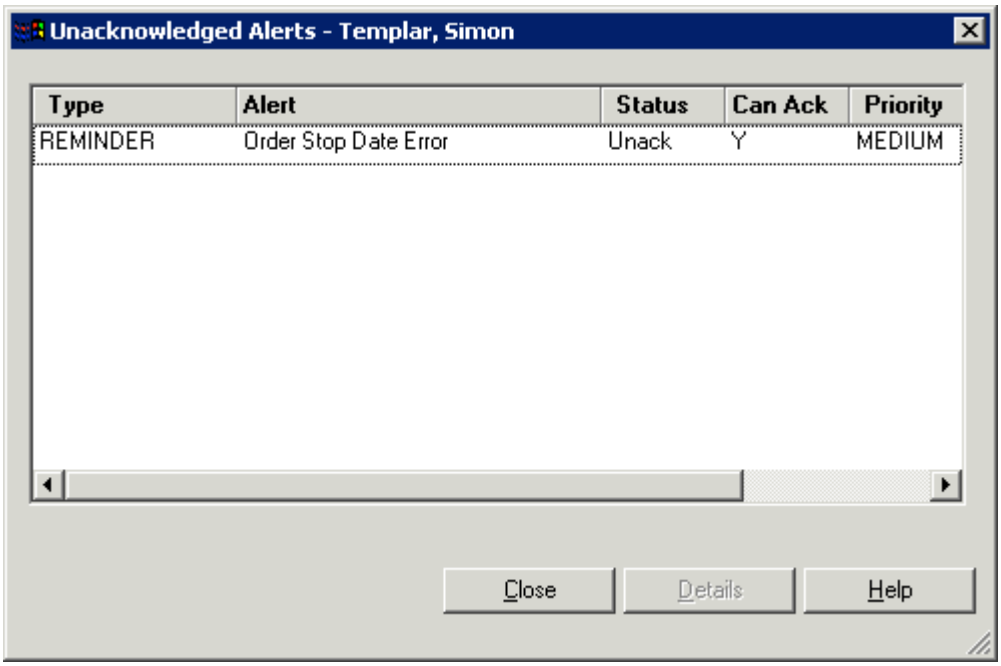
Steps to track new orders

1. In the **Patient List**, look at the **New Orders** column to see if it contains:
   a. A triangular green flag, which indicates that new orders have been entered since you last acknowledged having reviewed this patient's orders.
   b. A rectangular red flag, which indicates that at least one of these orders is STAT.

2. Double-click the flag to display the new orders. The **New Orders** dialog box opens.
3. To clear the flag, click **Clear Flag** on the **New Orders** dialog box. Otherwise, click **Don't Clear Flag**.

Track Alerts

Alert messages may appear to notify you of possible problems for a patient. Alerts can display as you are entering information, or at other times during your CRIS session. Many actions can generate alerts, such as duplicate orders, drug-allergy checking, attempting to enter orders more than a defined number of days in the future. The column on the **Patient List** that contains alert flags is **Unacknowledged Alerts**.



Screen 19: Unacknowledged Alerts

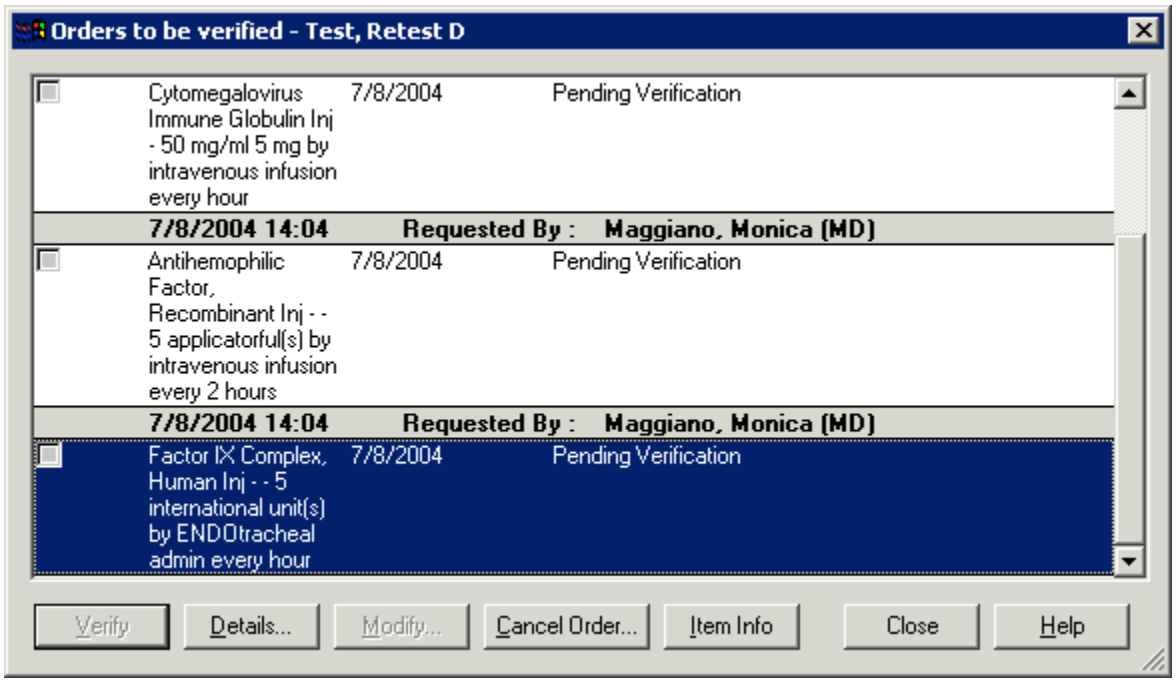
Steps to track new unacknowledged alerts

1. In the **Patient List**, select the patient for whom you want to view an unacknowledged alert.
2. Double-click the red flag in the **Unack Alerts** column. The **Unacknowledged Alerts** dialog box opens, listing all (new and old) unacknowledged alerts for the patient.
3. Double-click an alert, or select an alert and click **Details**. The **Alert Detail** dialog box opens.
4. To acknowledge the selected alert, click **Acknowledge**. (If you don't have the right to acknowledge alerts, the **Acknowledge** button is disabled.)

5. After you click **Acknowledge**, you can include an explanation of your action concerning the alert in the **Comments** field.
   Note: Only the person acknowledging an alert can enter a comment in the **Comment** field.
6. Click **Close**.

Track Orders That Need Verification

The **To Verify** flag (in the **To Verify** column) indicates that there are orders that have been entered for this patient that require verification before processing.



Screen 20: Orders to be Verified

Steps to track orders that need verification:

1. In the Patient List, look at the **To Verify** column. A triangular green flag indicates that orders have been entered for this patient that requires verification before processing.
2. Double-click the flag to display any orders that need verification. The **Orders to be Verified** dialog box opens.
3. Orders which you can verify are automatically checked. Orders that you do not have permission to verify are disabled.
4. Click **Verify** in the **Orders to be Verified** dialog box. All selected orders will have their status updated to the appropriate pending status. When there are no more orders to be verified, the flag will be removed from the Patient List.

Tracking Orders That Need a Signature

The **To Sign** flag indicates that someone's electronic signature is required for an order. As in MIS, most orders will be carried out without waiting for a signature. The To Sign flag, however, will make it easier and faster to sign orders entered on your behalf.

Steps to track orders that need a signature

1. In the **Patient List**, look at the **To Sign** column to see if it contains one of the following:
    a. A triangular green flag, which indicates that an electronic signature is required somewhere in the chart.
    b. A rectangular red flag with an exclamation mark, which indicates that your signature is required somewhere in the chart.
2. Double-click the flag to display orders that need to be signed. The **To Sign** dialog box opens. The checkbox in the **Unsigned Orders** tab may be enabled and checked, disabled, or enabled and unchecked, depending on whether you can sign the order as an individual or as part of a group.
3. Click **Sign**. The **Confirm Password** dialog box opens. If you are not authorized to sign this order, this button is disabled.
4. Enter your user password. If there are no more orders or notes on this patient chart for you to sign, the flag on the **Patient List** is removed.

Find Patients and Show Visits

You can use the **Find Patient** dialog box to search for patients who are currently registered or admitted, or those who have been discharged. After you have found a patient, you can show all visits for that patient and create a special or temporary list.

Screen 21: Find Patient Icon

Find a patient not on a list

1. From the **File** menu, choose **Find Patient**, or click **Find Patient** on the toolbar.
2. In the **Find Patient** dialog box, enter full or partial information to define the search criteria. The mandatory search criteria are:
    a. Partial **Last Name** in **Name** tab, or
    b. **ID Type** and **ID** in **Identification** tab, or
    c. **Role** and **Care Provider** in **Provider** tab (can be **Any Role**).
3. Click **Search**. A list of patients found displays in the **Search Results** window.

4. Double-click on a patient name, or select a patient name and click **Show Visits**. The **Show Visit** dialog box opens, and displays a list of the patient's visits.
5. Do one of the following:
    a. To create a special list, select the desired visits in the **Show Visits** dialog box and click **Save Selected Patients**.
    b. To create a temporary list, select the visit(s) you want and click **OK**. The visits display on the **Patient List** under the name **Temporary List**. The temporary list is saved for the current session only.

Create Your Own Patient Lists

CRIS may include default lists that you can use to access patient charts. You can also create your own lists of patients. You can create the following kinds of patient lists:

List	Description
Criteria-Based	**Lists in which you specify the criteria - such as location or care provider for which patients will appear in the** Patient List**. List criteria are saved when you exit, and lists are updated while you're logged on to CRIS.**
Special	**Lists in which you group individual patients together for quick access. They do not need to have any characteristics in common. These lists are saved when you exit CRIS.**
Temporary	**List that you create for the current CRIS session only. These lists are *not* saved when you exit.**

Table 8: Patient List Descriptions

Create patient lists where you define the criteria

Criteria-based lists are lists for which you define the criteria to be used to generate a patient list. For example, you can create a list that includes all the patients at a certain location, or all the patients cared for by a certain provider.

The information in criteria-based lists is updated automatically when you choose **Refresh Screen** or switch to a patient's chart. This enables you to see new information (for example, **New Results** flags) for the patients in your list.

To begin setting the criteria for your list

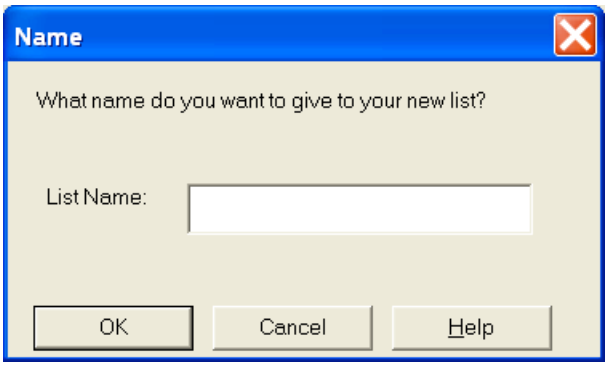
1. Select the **Patient List** tab.
2. From the **File** menu, choose **Maintain List**, and then **New**. The **Client Selection Criteria** dialog box opens.
3. Select one or more tabs containing the criteria to govern your list:
    a. **Your Role**: You can use the **Your Role** tab in the **Client Selection Criteria** dialog box to create a criteria-based list based on your role. When you create a criteria-based list based on your role, you can select one, several, or all of your provider roles. For example, you might be an Admitting physician for some patients, and a Consultant for other patients.
    b. **Location**: You can use the **Location** tab in the **Client Selection Criteria** dialog box to create a criteria-based list based on your logon location or other selected locations. For example, if you are Nurse Manager, you could create a list of all patients currently on 1 East. You can select multiple locations from the **Available Locations** list and add them to the **Selected Locations** list. If an available location has a plus sign to the left of the name, click on the plus sign to display additional locations.
    c. **Providers**: You can use the **Providers** tab in the **Client Selection Criteria** dialog box to create a criteria-based list based on providers' names and roles. For example, if you are a physician in practice with associates and are on call, you could create a list of your associates' patients, as well as your own patients. You can enter all or part of the provider's last name. When you enter the first letter, a list of names starting with that letter displays. As you enter additional letters, the list scrolls to the first entry that matches.
    d. **Service**: You can use the Service tab in the Client Selection Criteria dialog box to create a criteria-based list based on the patient's service (for example, Anesthesia or Medicine/Cardiology).
    e. **Visit Status**: You can use the **Visit Status** tab in the **Client Selection Criteria** dialog box to create a criteria-based list based on patients who are currently admitted, or patients with a specified event on a date or date range.

    Note: At a minimum, you must specify the following criteria:
    - Provider (including your role), or
    - Location

Name criteria-based lists

After you have set the desired options in the **Client Selection Criteria** dialog box and click **OK**, you can name your criteria-based list. You can use the **Name**

dialog box to create a new list with a new name, or to change the name of a list you are modifying.



Screen 22: New List Name Dialog Box

Modify a criteria-based list

To modify a criteria-based list:

1. Select the **Patient List** tab.
2. Select a **Current List**.
3. From the **File** menu, choose **Maintain List**, then **Modify**. (This option is disabled if the current list is not a criteria-based list.) The **Client Selection Criteria** dialog box for the currently displayed list opens.
4. Use the tabs to change the criteria.
5. Click **OK**. The **Name** dialog box opens.
6. Enter a new name.
7. Click **OK**.

Create temporary lists

You can create a temporary list when you're not sure what patient list a patient is on. A temporary patient list is one you create for the current CRIS session only. It is not saved when you log off, and is not updated while you are running CRIS.

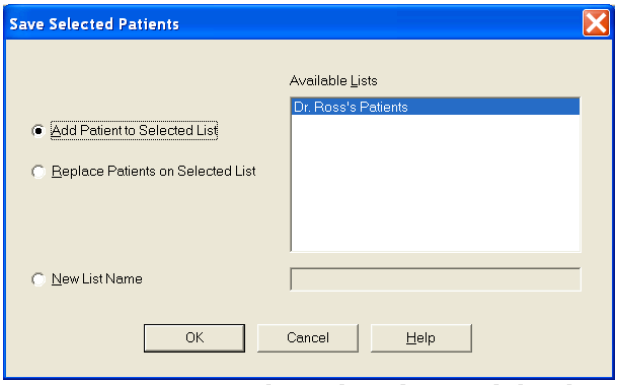
Create lists of specific patients

A special patient list contains the patients that you specify. For example, a staff nurse could create a special list for the patients assigned to them for this shift. The nurse could later maintain this list by adding new patient assignments and removing discharged patients.

Special lists are not updated when you log off of CRIS. You can, however, modify and update existing special lists. Special lists (ones created using the **Save Selected Patients** dialog box) are marked with an asterisk in the

Current List drop-down list.

The **Save Selected Patients** dialog box allows you to select one or more patients from a list on the **Patient List** and to add them to an existing list, to use them to replace patients on an existing list, or to use them to create a new list.



Screen 23: Save Selected Patients Dialog box

Create a new special patient list

1. Select the **Patient List** tab.
2. Select the patients' names that you want to include in a special list.
3. Do one of the following to open the **Save Selected Patients** dialog box:
   a. Click **Save Selected Patients** in the **Patient List**.
   b. From the **File** menu, select **Maintain List** and choose **Save Selected Patients**.
4. In the **Save Selected Patient** dialog box, choose **New List Name**.
5. Enter a name for the new list.
6. Click **OK**.

Remove patients from a special list

1. Select the **Patient List** tab.
2. Select a special list. Special lists are marked with an asterisk [*]. You can only remove patients from special lists, not criteria defined lists.
3. Select the patients that you want to remove from the special list.
4. From the **Edit** menu, choose **Remove Patient**, or choose the **Remove Patients** icon from the toolbar.

Screen 24: Remove Patient Icon

Add a patient to an existing special list

1. Select the **Patient List** tab.
2. Select the patients' names that you want to add to a special list.
3. Do one of the following to open the **Save Selected Patients** dialog box:
    a. Click **Save Selected Patients** in the **Patient List**.
    b. From the **File** menu, select **Maintain List** and choose **Save Selected Patients**.
4. In the **Save Selected Patient** dialog box, choose **Add Patient to Selected List**.
5. Select the list name from **Available Lists**.
6. Click **OK**.

Replace patients on an existing special list

1. Select the **Patient List** tab.
2. Select the patients' names that you want to replace in a special list.
3. Do one of the following to open the **Save Selected Patients** dialog box:
    a. Click **Save Selected Patients** in the **Patient List**.
    b. From the **File** menu, select **Maintain List** and choose **Save Selected Patients**.
4. In the **Save Selected Patient** dialog box, choose **Replace Patient on Selected List**.
5. Select the list name from **Available Lists**.
6. Click **OK**.

Delete a patient list

1. Select the **Patient List** tab.
2. Select the list you want to delete from the **Current List** drop-down list.
3. From the **Edit** menu, choose **Delete Current List**. A confirmation message displays.
4. Click **OK**.

Personalize Your Patient List View

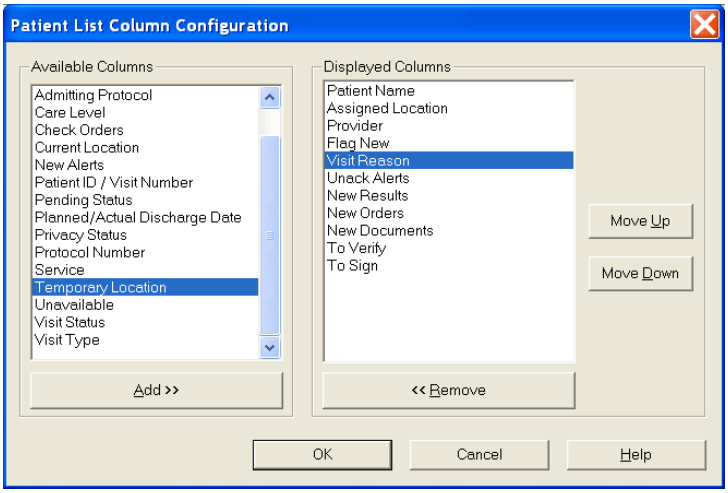
Column selection

When you first log on to CRIS, data will be standardized for each type of user. You can personalize your patient list view by adding, deleting or re-arranging the columns.

To define which columns you want in a Patient List:

1. Select the **Patient List** tab.

2. Select a **Current List**.
3. From the **View** menu, choose **Column Selection**. The **Patient List Column Configuration** dialog box opens.



Screen 25: Patient List Column Configuration Dialog Box

4. Select any of the columns of information you want to display from the **Available** list.
5. Click **Add**.
6. Click **OK**.

To remove columns from the current list:

1. Select the **Patient List** tab.
2. Select a **Current List**.
3. From the **View** menu, choose **Column Selection**. The **Patient List Column Configuration** dialog box opens.
4. Select the columns you want to remove from the **Displayed** list.
5. Click **Remove**.
6. Click **OK**.

To change the column sort order in the patient list:

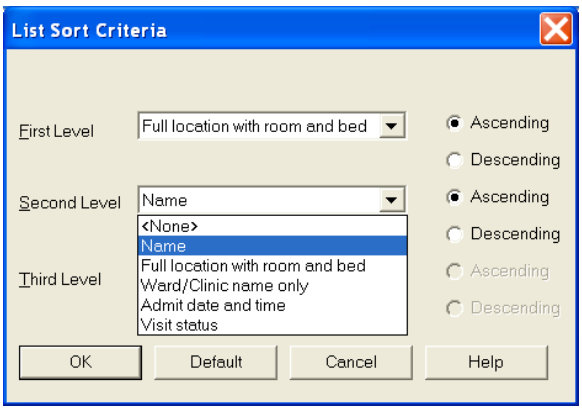
1. Select the **Patient List** tab.
2. Select a **Current List**.
3. From the **View** menu, choose **Column Selection**. The **Patient List Column Configuration** dialog box opens.
4. Select the column that you want to move up or down.
5. Click **Move Up** or **Move Down**, according to where you want to position the column. The higher the column is in this list, the farther to the left it displays in the **Patient List**.
6. Click **OK**.

Sorting Columns

After you have defined the columns in a **Patient List**, you can use the **List Sort Criteria** dialog box to define the order in which you want patients to be displayed. You can select three different levels of sort criteria, a level of priority for each criterion, and the sort order for each criterion (**Ascending** or **Descending**).

To sort a patient list:

1. Select the **Patient List** tab.
2. Select a **Current List**.
3. From the **View** menu, choose **Sort List**, or click **Sort** on the toolbar. The **List Sort Criteria** dialog box opens.



Screen 26: List Sort Criteria Dialog Box

4. Select a criterion in the **First**, **Second**, and **Third Level** fields.
5. Select a sort order for each level, either **Ascending** or **Descending**.
6. Click **OK**. The sort criteria are saved with the list, so the next time the list displays, the new criteria are used.

Chapter VI: Results

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Results Tab Overview

The **Results** chart section is where you can view clinical results for selected patients. It is comprised of the **Display** window and the **View Control Panel**.

The **Display** window of the **Results** chart section displays results in the form of numbers, text, and graphs, based on the type of result and the display format you select in the **View Control Panel**. The **Display** window's title bar reflects the **Since** and **Result Selection** filters you select. If more dates or results are available than can be displayed at one time, scroll bars allow you to scroll the dates or results into view.

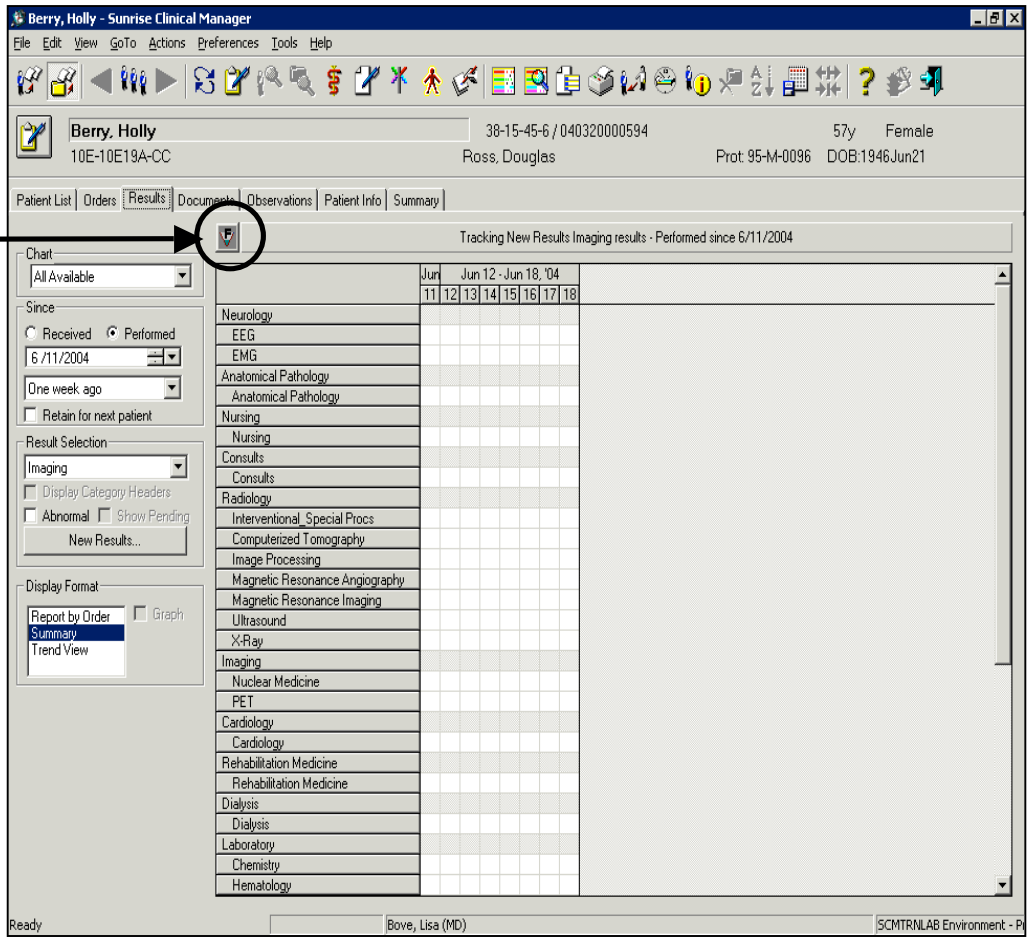
The **View Control Panel**, to the left of the **Display** window, is where you set your criteria for displaying results. CRIS uses results filters to show only those types of results that match the filter criteria. A filter enables you to focus on selected results by "filtering out" results that don't meet the filter criteria. For example, if you choose a Radiology filter, only the results from the Radiology department display.

To display the **Results** chart section, click the **Results** tab, or from the **Go To** menu, choose **Chart Section**, then **Results**.

Filters

You can specify which results you want to see by screening or *filtering* which results are to be displayed. A *filter* is a collection of one or more result categories or items; for a result to be displayed, it must fall into the specified category or match the specified result item. A filter enables you to focus on selected results by "filtering out" results that don't meet the filter criteria. For example, you can create a filter to display only lab results or only x-rays.

The **Filter** icon displays at the top left corner of the **Display** window to indicate that the results are filtered.



Screen 27: Filtered Results

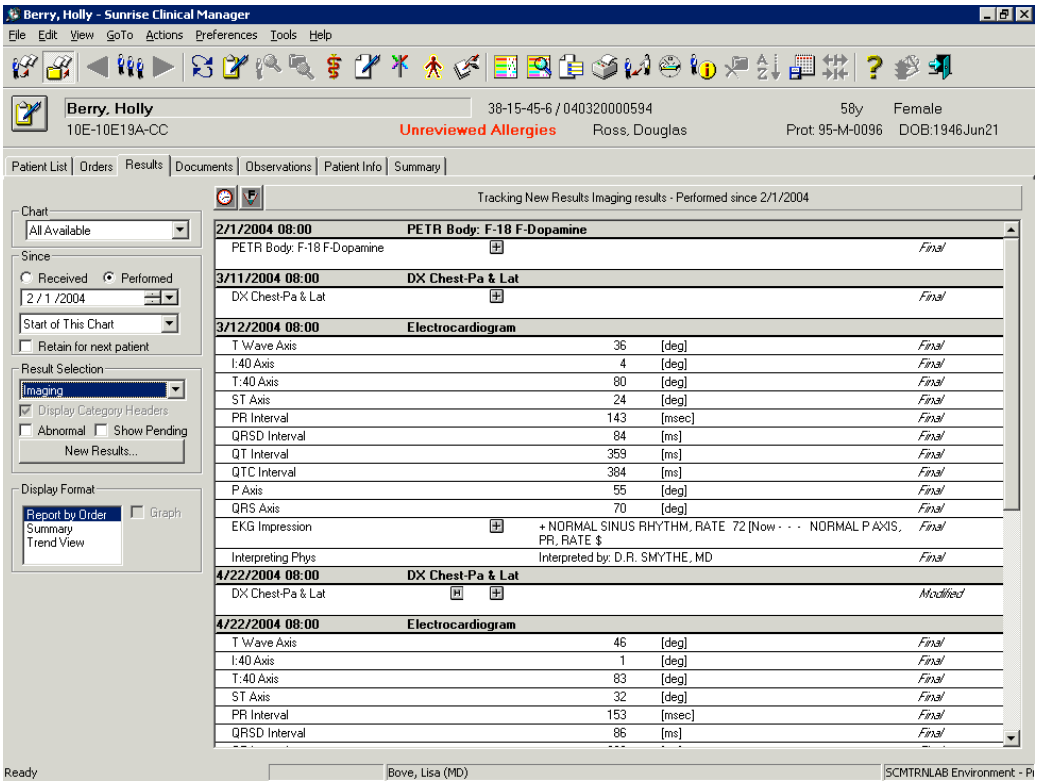
View Control Panel (Filter) Definitions

- **Chart**: **All Available** refers to all information for all visits. **This Chart** is limited to this visit.
- **Since**: Used to specify a date range for viewing. When you know exact dates, enter the start date in the **Since** field. If there is an end date, enter the date in the **To** field. You can also use pre-defined timeframes from the drop-down list such as one week ago or one month ago. You should not use both options at the same time. Note: If a time frame is used it will change the Since date.
- **Result Selection**: This option lets you view **ALL** information by department or category. Other categories are also available:

  - Imaging
  - Laboratory
  - Transfusion Medicine
  - Chemistry
  - Hematology
  - Microbiology

Display Format: This option gives you multiple ways to view information which may appear as a **Report, Summary** or grid for trending data.

Report by Order View - Displays results sorted by date and time, and each result with the associated order as its header.

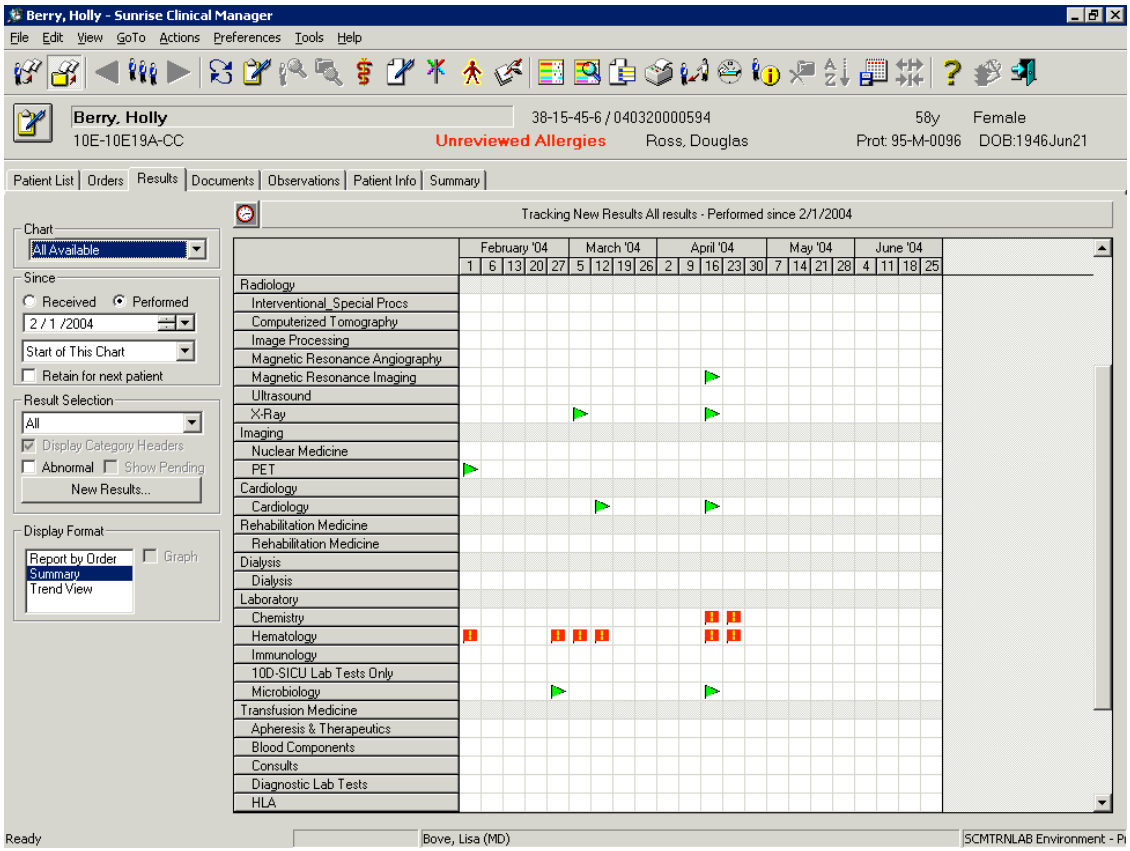


Screen 28: Results View by Order

When you double-click a cell in the spreadsheet, the selected results display in **Report by Order** view, and include the performed date/time, all numeric and textual information, the result reference range (if available), and the abnormality.

Summary View

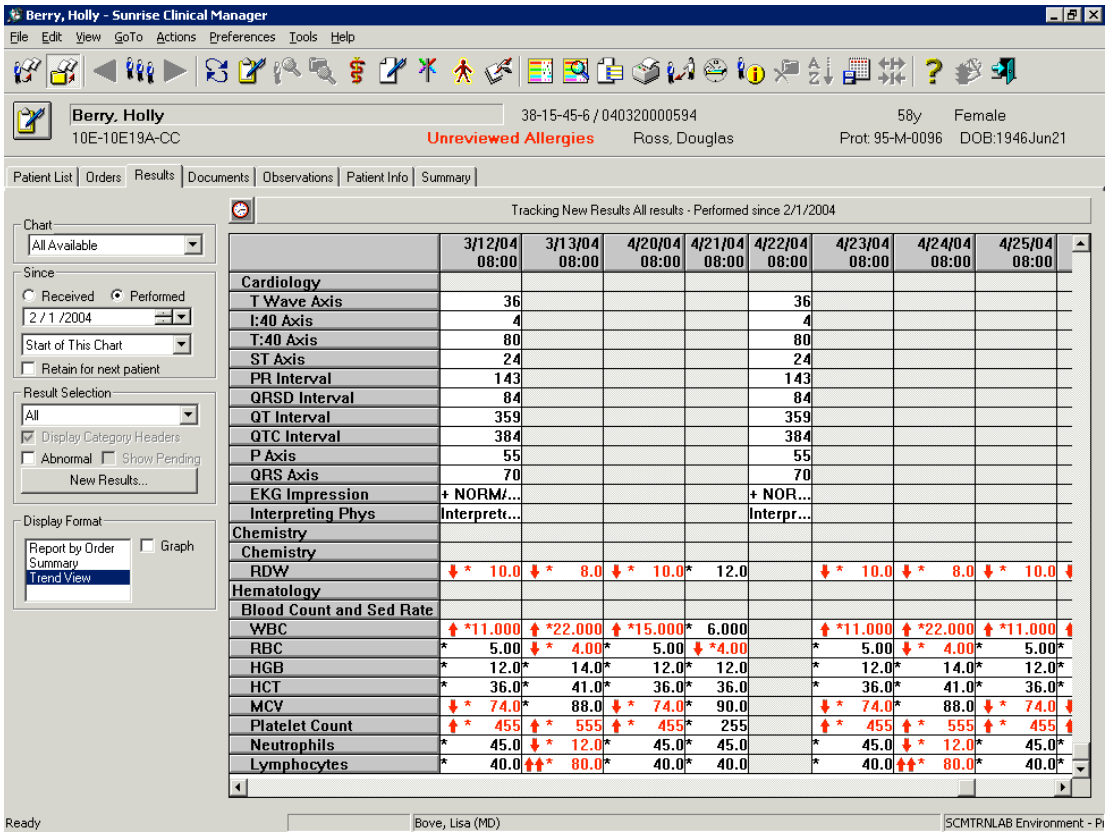
The **Summary** view displays an overview of results for a selected patient, based on the options you have selected in the **Chart**, **Since**, and **Result Selection** sections in the **View Control Panel**. The **Summary** view does not provide detailed result information, but rather whether or not specific results exist for a given date. The information displays in a grid with dates at the top and result categories on the left side.



Screen 29: Results Summary View

Trend View

The **Trend** view displays results in a grid or spreadsheet format. This view is most useful for viewing and comparing numeric results. The result category headings are listed down the left side of the display window. Abnormal results display in red to call attention to them; arrows indicate whether the result is above or below the normal range.



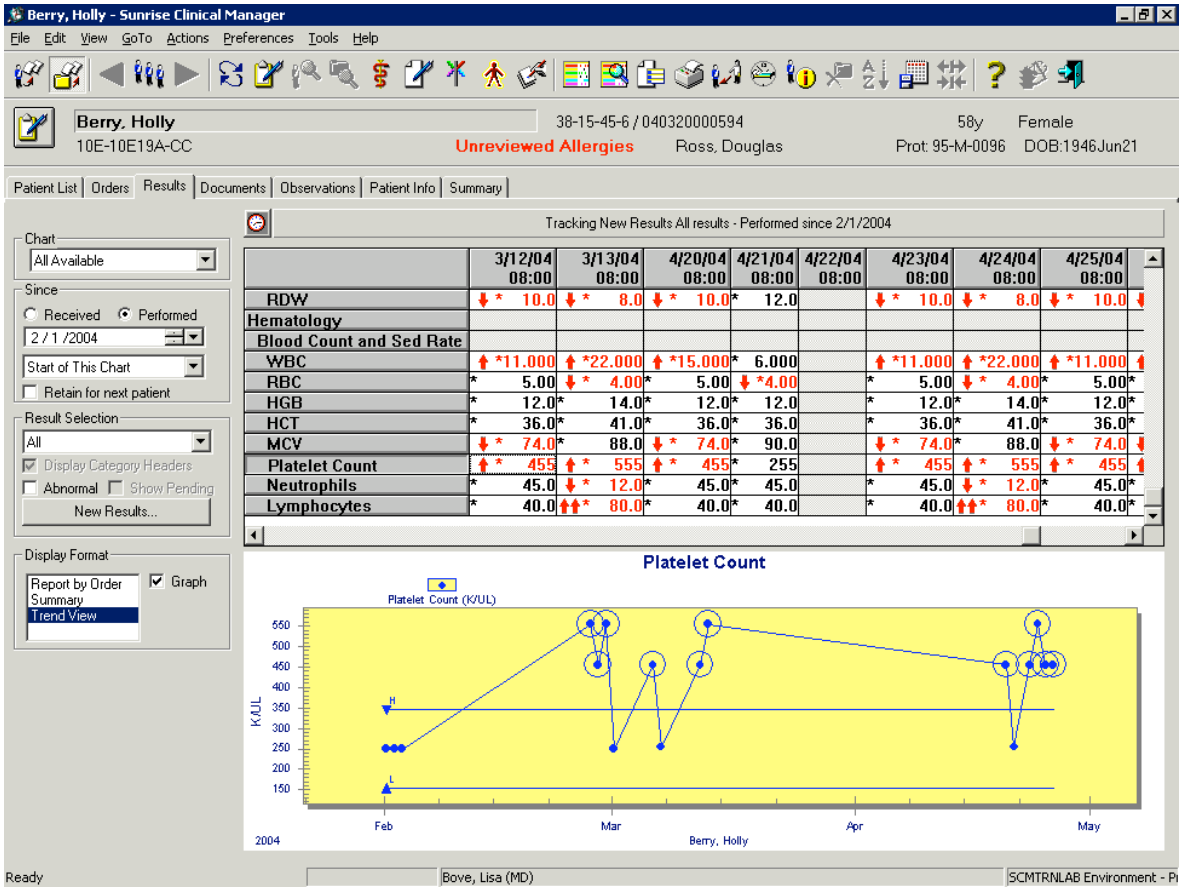
	3/12/04 08:00	3/13/04 08:00	4/20/04 08:00	4/21/04 08:00	4/22/04 08:00	4/23/04 08:00	4/24/04 08:00	4/25/04 08:00
Cardiology								
T Wave Axis	36				36			
I:40 Axis	4				4			
T:40 Axis	80				80			
ST Axis	24				24			
PR Interval	143				143			
QRSD Interval	84				84			
QT Interval	359				359			
QTC Interval	384				384			
P Axis	55				55			
QRS Axis	70				70			
EKG Impression	+ NORM/...				+ NOR...			
Interpreting Phys	Interpretc...				Interpr...			
Chemistry								
Chemistry								
RDW	↓ * 10.0	↓ * 8.0	↓ * 10.0	* 12.0		↓ * 10.0	↓ * 8.0	↓ * 10.0 ↓
Hematology								
Blood Count and Sed Rate								
WBC	↑ *11.000	↑ *22.000	↑ *15.000	* 6.000		↑ *11.000	↑ *22.000	↑ *11.000 ↑
RBC	* 5.00	↓ * 4.00	* 5.00	↓ *4.00		* 5.00	↓ * 4.00	* 5.00 *
HGB	* 12.0	* 14.0	* 12.0	* 12.0		* 12.0	* 14.0	* 12.0 *
HCT	* 36.0	* 41.0	* 36.0	* 36.0		* 36.0	* 41.0	* 36.0 *
MCV	↓ * 74.0	* 88.0	↓ * 74.0	* 90.0		↓ * 74.0	* 88.0	↓ * 74.0 ↓
Platelet Count	↑ * 455	↑ * 555	↑ * 455	* 255		↑ * 455	↑ * 555	↑ * 455 ↑
Neutrophils	* 45.0	↓ * 12.0	* 45.0	* 45.0		* 45.0	↓ * 12.0	* 45.0 *
Lymphocytes	* 40.0	↑↑ * 80.0	* 40.0	* 40.0		* 40.0	↑↑ * 80.0	* 40.0 *

Screen 30: Results Trend View

An ellipsis (…) is displayed if text results in the **Trend** view don't fit in a column. You can resize the column to view the text results. An asterisk is displayed if there is a result associated with that order that is not being displayed in the **Trend View**.

Working with Graphs

You can view results in a graph format when you select **Trend View** from the **View Control Panel** and check the **Graph** check box. The line graph does not display when the result item you choose contains text or if results do not exist.



Screen 31: Graphed Results

You can display a shortcut menu when a graph is displayed. The options in the shortcut menu allow you to customize the graph by selecting a plotting method, grid lines, and font size. You can check or uncheck options in the shortcut menu to display a normal range for the graph, to mark data points, and to specify whether the graph should be displayed in color. You can also zoom in on the graph, maximize the graph, print, or export the graph file from the shortcut menu.

Screen 32: Graph Shortcut Menu

To view results in graph format:

1. In the **Display Format** section of the **View Control Panel**, choose **Trend View**.
2. Select a row in the trend grid.
3. Click the **Graph** check box. The graph appears in the lower half of the **Display** window.
4. To change the graph format, click the right mouse button, and select the format options you want from the shortcut menu.

Remove Filter

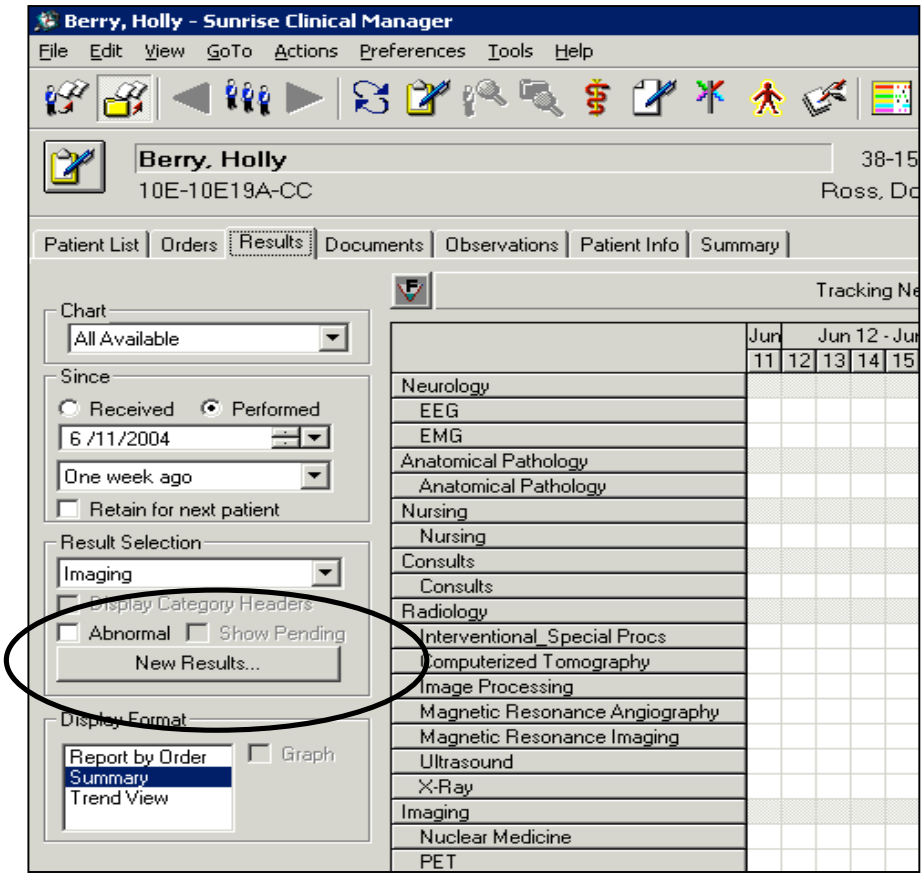
Once a filter is applied, you can remove it or change to another filter. To remove a filter, change the selection back to **All**.

New Results

You can display new results from the **Results** tab.

To view new results from the Results tab:

1. Click the **New Results** button. The **New Results** dialog box will display.
2. To clear the flag, click **Clear Flag** on the **New Results** dialog box. Otherwise, click **Don't Clear Flag**.



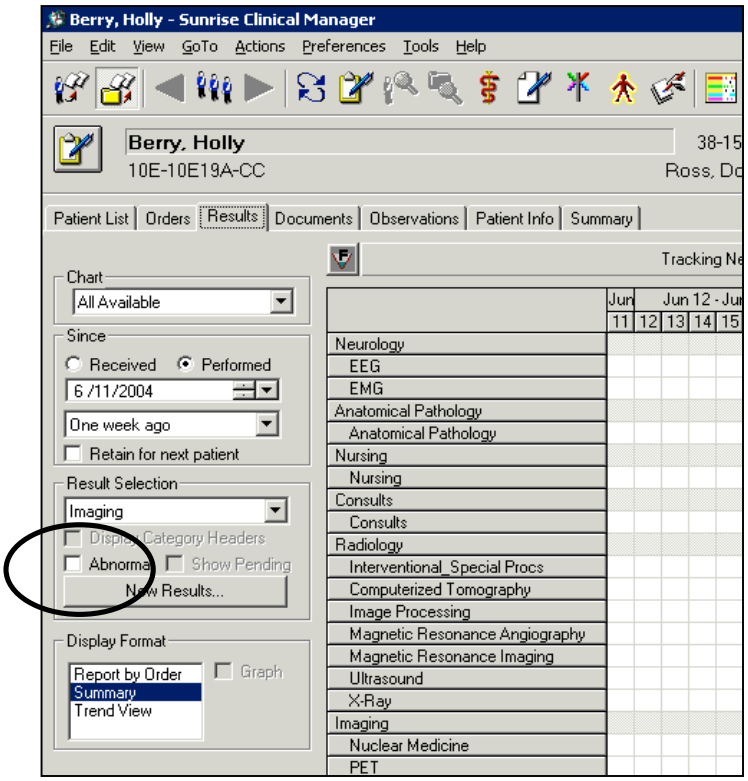
Screen 33: New Results Button

View Abnormal Results

You can limit the display in the **Results** tab to abnormal results only.

To display abnormal results only from the Results tab:

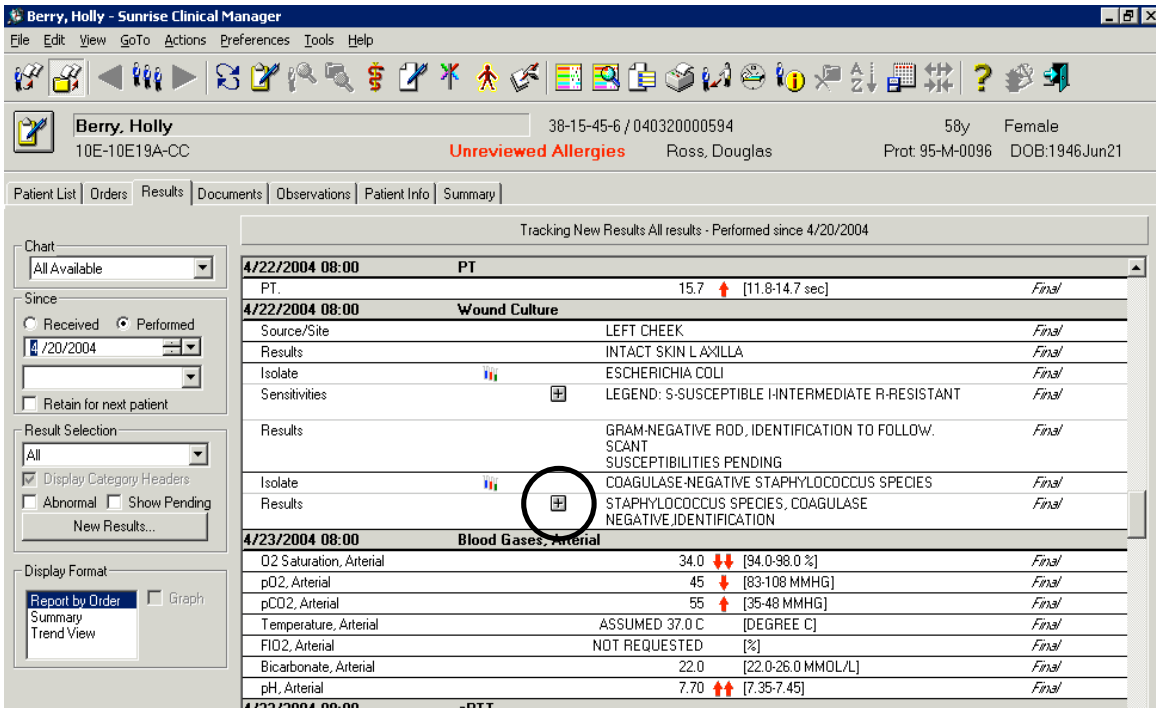
1. Click the **Abnormal** checkbox. Only abnormal results will display.
2. To view all results, uncheck the **Abnormal** checkbox.



Screen 34: Abnormal Results Checkbox

Viewing Expanded Results

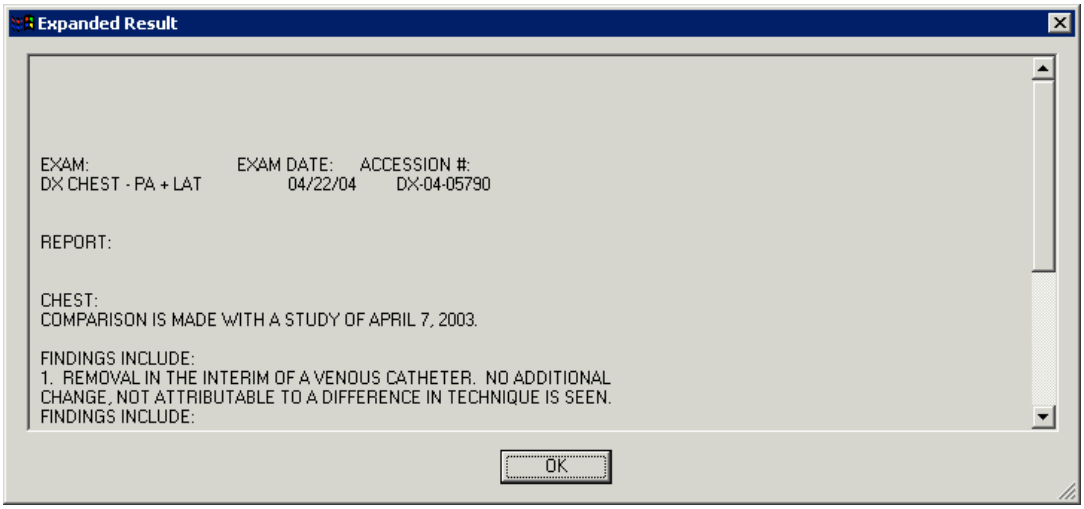
If a result contains more information than can be displayed at one time in the **Display** window of the **Results** chart section, you can view the complete result in the **Expanded Result** dialog box.



Screen 35: Expanded Results Icon

To view an expanded result:

1. In the **Results** chart section, click the **Expanded Result** icon. The **Expanded Result** dialog box opens and displays the text of the result. If available, an indication of where the result falls in the range is also displayed (for example, normal, abnormally high, etc.).



Screen 36: Expanded Result Screen

Symbols

The following symbols and icons indicate the various types of results:

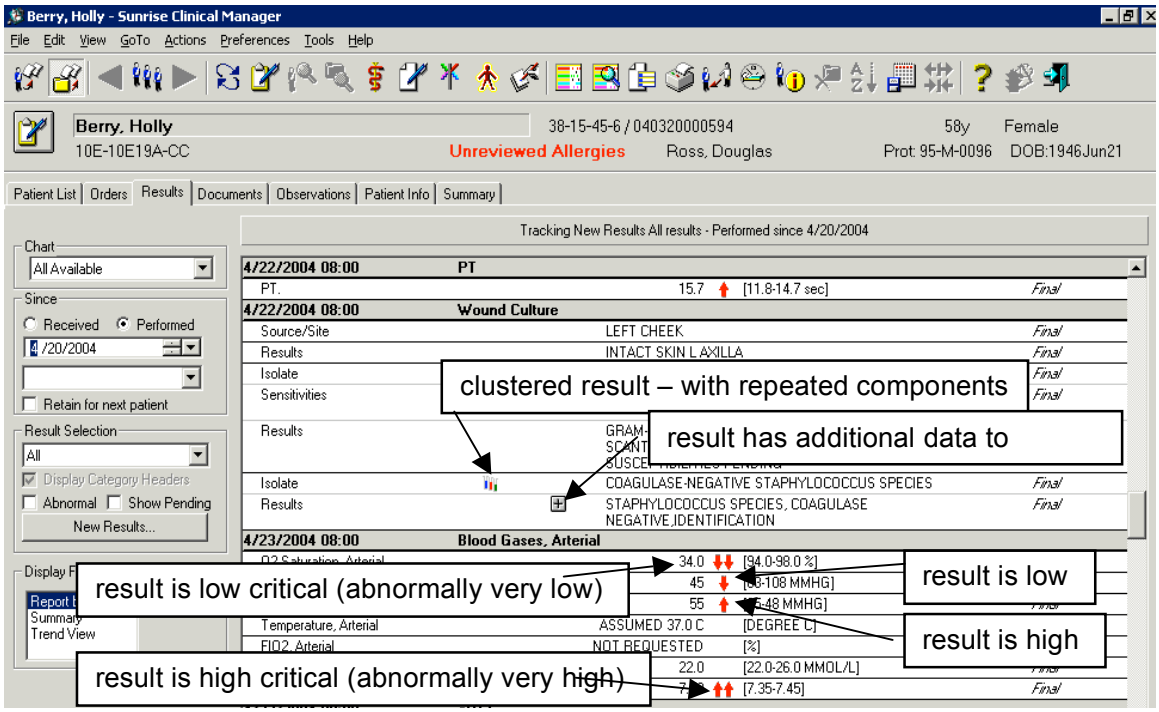


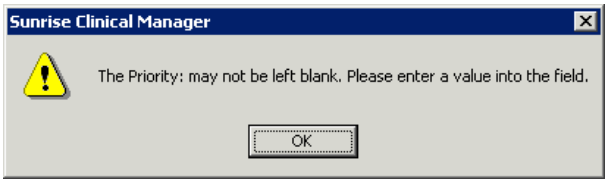
Table 9: Results Tab Symbols

Re-order from Results Tab

You can re-order tests and procedures directly from the Results tab.

To re-order from the Results tab

1. Right-click on the test result that you want to re-order.
2. Select **Reorder**. A message will display to let you know that there are required fields that need to be completed on the order form.



Screen 37: Re-order Sample Message

3. Click **OK**. The **Order Entry Form** will display.
4. Complete the form to re-order the test or procedure.
5. Click **OK**. The order will be placed on the Summary Pane of the Order Entry Worksheet.

6. Click on the **Order Entry** icon.

Screen 12: Order Entry Icon

7. Click **Submit**. The order will be submitted.

Personalize Your Results View

Change and save time scale for viewing results

You can change the time scale for the dates in the **Summary View** on a per-patient basis. There are up to four options:

- Days
- Weeks
- Months
- Years

Note: Depending on the date specified in the **Since** field, some of the selections in the **Actions** menu may be disabled. For example, if the value in the **Since** box is less than one month, **Months** and **Years** are disabled. If the value in the **Since** box is more than 6 months (such as a year ago), **Days** is disabled.

To change the time scale:

1. Display the **Results** chart section.
2. In the **View Control Panel**, select **Summary** from the **Display Format** list.
3. In the **Since** group box, select or enter how far back you want to display results.
4. From the **Actions** menu, select **Modify Time Scale** and then choose the interval you want. You can save the time scale for viewing a patient's results in the **Summary** view of the **Results** chart section. The time scale remains as you have selected for that patient, until you select and save a different interval..

To save the current time scale:

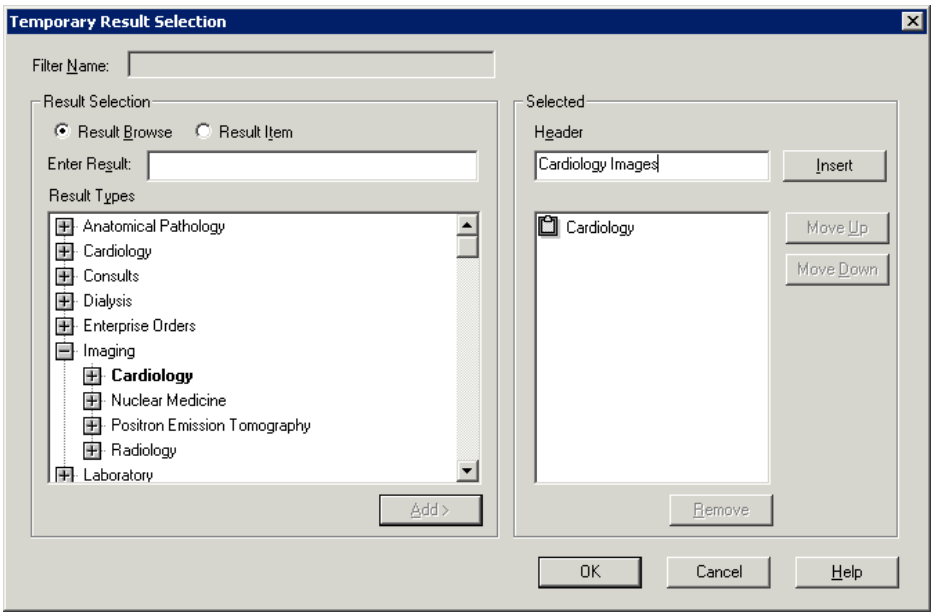
1. Do one of the following:
    a. Click the **Save Time Scale** icon on the toolbar.
    b. From the Preferences menu, select **Save Time Scale**.
2. The Save Time Scale icon displays at the top left corner of the Display window to indicate that you have saved a time scale.

Creating a temporary result selection filter

The **Temporary Result Selection** dialog box allows you to select results to be displayed in the view on a one-time or temporary basis. This filter is cleared and not saved after you log off or select another filter.

To create a temporary selection filter:

1. From the Result Section filter, select <Temporary Selection…>. The Temporary Result Selection window displays.



Screen 38: Temporary Results Selection Window

Setting your preferences for viewing results

The **Personal Results View Options** dialog box allows you to set up customized, personal preferences for the **Results** chart section. By setting your preferences, you can see the information important to you in the **Results** chart section. The three tabs in this dialog box allow you to:

- Create and maintain filters for the types of results you want to view (**Result Selection** tab).
- Create graph filters (**Graph Selection** tab).
- Specify the default result selection filter and display format for the chart section (**Display Format** tab).

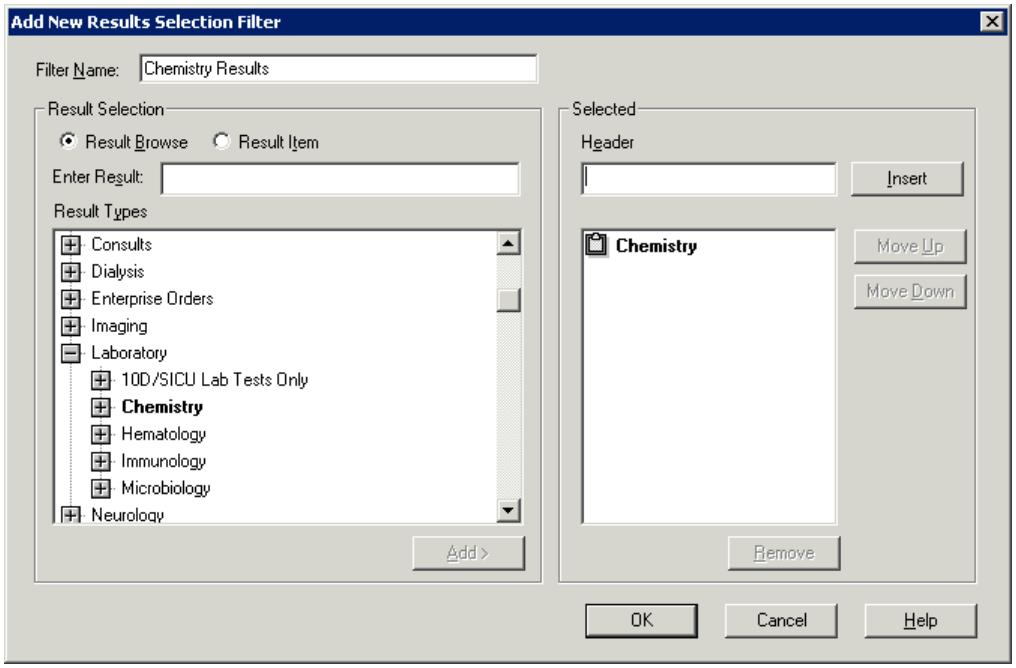
Results Selection Tab

The **Result Selection** tab of the **Personal Results View Options** dialog box displays the current result selection filters. In this dialog box, you can add, change, or delete filters, and choose a default filter for when you display the **Results** chart section. If you do not choose a default filter, the filter **All** (which

cannot be deleted or modified) is the default. You can create a new filter and make it the default, or you can make an existing filter the default.

To add a result selection filter:

1. From the **Preferences** menu, select **Results**. The **Personal Results View Options** dialog box opens.
2. Click the **Result Selection** tab.
3. To create a new filter, click **Add New**. The **Add New Results Selection Filter** dialog box opens.



Screen 39: Add New Results Filter Window

4. Type a name for your new results filter in the **Filter Name** field.
5. In the **Result Selection** group box, do one of the following:
    a. Click **Result Browse**. The **Browse** shows a tree structure of result groups and items. Select the group or item you want included in the filter. To select sequential groups or items, hold down Shift and click on each choice. To select non-sequential groups or items, hold down Ctrl and click on each choice.
    b. Click **Result Item**. Enter part or the entire name of the item you want to include in the filter. When you enter part of the name and pause, an alphabetical list of items that begin with the characters you entered displays in the browse window.
6. Select a category or item and click **Add** to place the selected item(s) in the **Selected** list. To delete any groups or items from the **Selected** list, select the category or item and click **Remove**.
7. Click **OK** to return to the **Result Selection** tab.

8. If you want to make the new filter the default, click **Set as Default**.
9. Click **Close** to save the filter and return to the **Results** chart section. The new filter appears in the **Result Selection** drop-down list in the **View Control Panel**. If you selected the filter as the default, it will be used the next time you log on and display the **Results** chart section.

Chapter VII: View Orders

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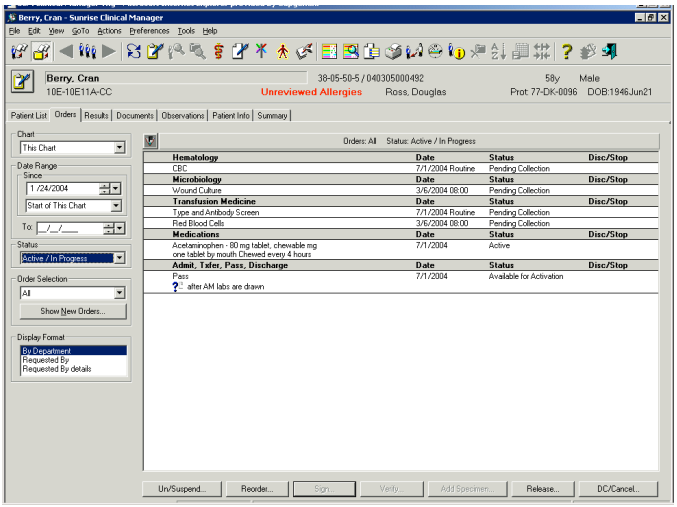
Orders Tab Overview

The **Orders** chart section allows you to review information about orders (including any available results) for a selected patient, to perform order maintenance functions. You can view order information in different formats—according to the department responsible for completing the order, or according to the date and time the order was requested. Using the options in the **View Control Panel**, you can specify which orders you want to view. The buttons at the bottom of the chart section allow you to perform order maintenance functions.

To display the Orders chart section:

1. Click the **Orders** tab, or, from the **GoTo** menu, choose **Chart Section**, then **Orders**. The **Orders** chart section is comprised of the following:
    a. The **Display** window, in the rightmost section of the screen, is where the orders appear, in the display format criteria you select in the **View Control Panel**. If more dates or orders are available than can be displayed at one time, scroll bars allow you to scroll the dates or orders into view.
    b. The **View Control Panel**, to the left of the **Display** window, is where you select your criteria for displaying orders.



Screen 1: Orders Tab

The **Function** buttons, along the bottom of the chart section, allow you to access order entry and maintenance functions for multiple orders.

- **Un/Suspend -** Opens the **(Un)Suspend Orders** dialog box, allowing you to suspend or unsuspend multiple orders for the selected patient.

- **Reorder -** Opens the **Copy/Reorder** dialog box, allowing you to reorder multiple orders. You can also copy the orders from another chart into the current chart for reordering.
- **Sign -** Opens the **To Sign** dialog box, where you can sign any orders that need your electronic signature. This button is disabled if no orders require signing, or if you do not have the security rights to sign orders.
- **Verify -** Opens the **Orders to be Verified** dialog box. This button is disabled if no orders require verification, or if you do not have the security rights to verify orders.
- **Release -** Opens the **Release Orders** dialog box, where you can release hold orders. You can release a single order or a batch of orders at one time.
- **DC/Cancel -** Opens the **Discontinue/Cancel Orders** dialog box, where you can discontinue or cancel one or more orders. You can also access the **Discontinue/Reorder Orders** dialog box from this dialog box.

Filters

You can specify which orders you want to see by screening or *filtering* which orders are to be displayed. A *filter* is a collection of one or more result categories or items; for an order to be displayed, it must fall into the specified category or match the specified order item. A filter enables you to focus on selected orders by "filtering out" orders that don't meet the filter criteria. For example, you can create a filter to display only active or completed orders.

The **Filter** icon displays at the top left corner of the **Display** window to indicate that the orders are filtered.

Orders Tab View Control Panel (Filters) Definitions

- **Chart**: **All Available** refers to all information for all visits. **This Chart** is limited to this visit.
- **Since**: Used to specify a date range for viewing. When you know exact dates, enter the start date in the **Since** field. If there is an end date, enter the date in the **To** field. You can also use pre-defined timeframes from the drop-down list such as one week ago or one month ago. You should not use both options at the same time. Note: If a time frame is used it will change the Since date.
- **Order Selection**: This option lets you view **ALL** information by department or category. Other categories are also available:
  - Imaging
  - Laboratory

- Transfusion Medicine
- Chemistry
- Hematology
- Microbiology

- **Display Format:** This option gives you multiple ways to view information which may appear as orders by department, requested by, and requested by details.

Apply filters

To view orders for:

- The current chart only
  1. In the **Chart** drop-down list on the View Control Panel, select **This Chart**.
- All available charts
  1. In the **Chart** drop-down list on the View Control Panel, select **All Available**.

To select the date range for viewing orders:

1. In **Date Range** group box in the **View Control Panel**, do one of the following to provide a **Since** date:
   a. In the **Since** field, enter a specific date.
   b. Use the increase/decrease arrows to change the date one day, month, or year at a time.
   c. Click the calendar arrow and select a date. Select the day after you have selected the month and year.
   d. Select a pre-defined option from the drop-down list, such as Start of This Chart.
2. Do one of the following to provide a **To** date:
   a. In the **To** field, enter a specific date.
   b. Click the increase/decrease arrows to change the date one day, month, or year at a time.
   c. Click the calendar arrow and select a date.

To view orders of a particular status:

- In the Status drop-down list on the View Control Panel, select the desired filter. For example, Active/In progress, All, or Discontinued orders.

To view particular types of orders:

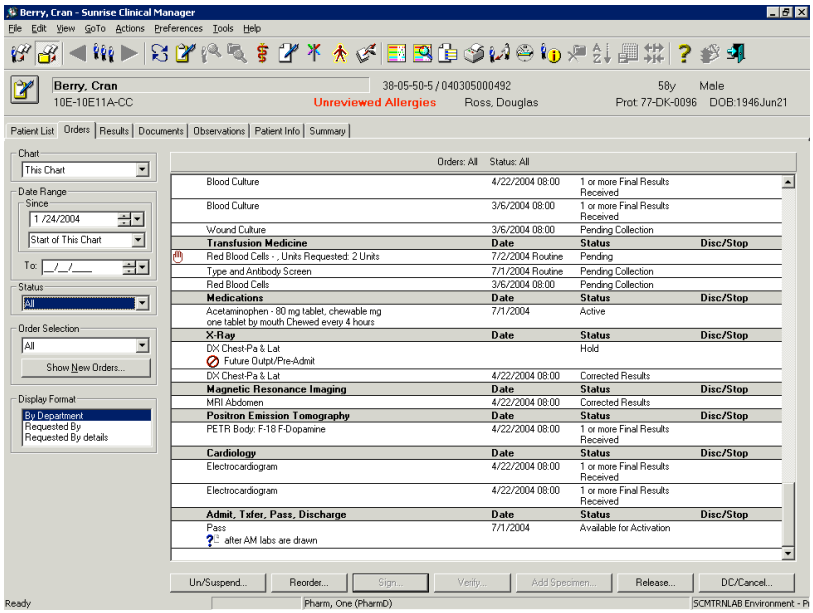
- In the **Order Selection** drop-down list on the **View Control Panel**, select the desired filter. For example All, Nursing, or Pharmacy.

Selecting the Display Format for Viewing Orders

You can view a patient's orders according to the department that performs the order, further organized by scheduled date and time within the department (**By**

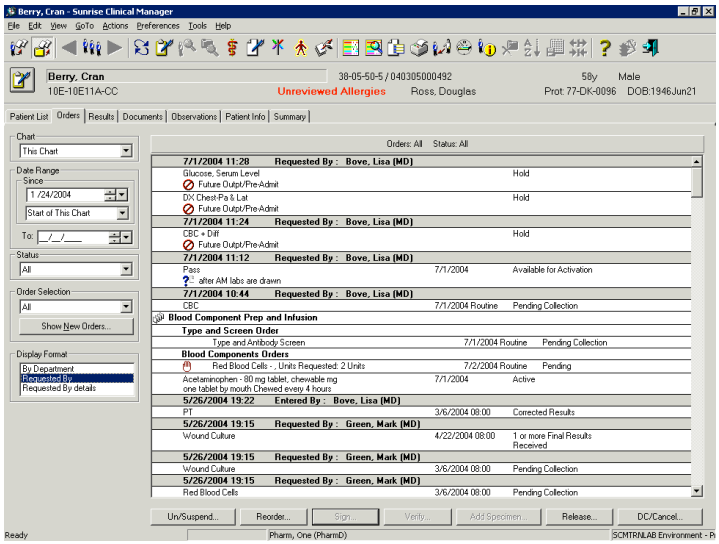
Department view), or according to the entered date and time (**Requested By** and **Request By Details** views).
In all views, you can double-click on an order to display its associated order form.

- **By Department** Format - The By Department view displays all orders according to the department that receives the order, and reports any results. For example, orders for medications are listed under Pharmacy.



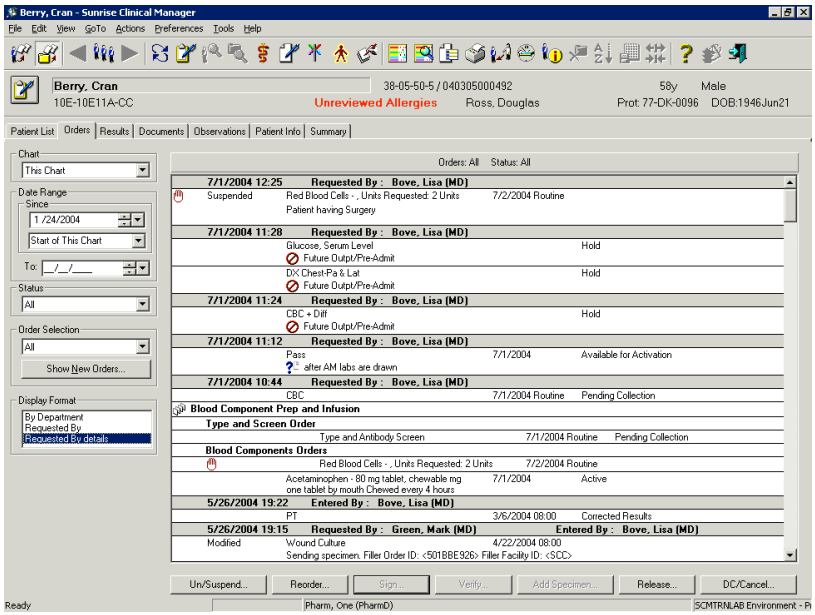
Screen 2: By Department Filter

- **Requested By Format -** The **Requested By** view displays all orders in the **Display** window of the **Orders** chart section grouped according to the date and time they were submitted to CRIS.



Screen 3: Requested by Filter

- **Requested By Details Format -** In addition to the details displayed in the **Requested By** view, the **Requested By Details** view displays orders grouped by the date and time that order maintenance functions were performed in CRIS. This includes Discontinue/Cancel, Modify, Suspend, and Unsuspend. This means that, orders may be displayed many times in the **Requested By Details** view.



Screen 4: Requested By Details Filter

Remove Filter

Once a filter is applied, you can remove it or change to another filter. To remove a filter, change the selection back to **All**.

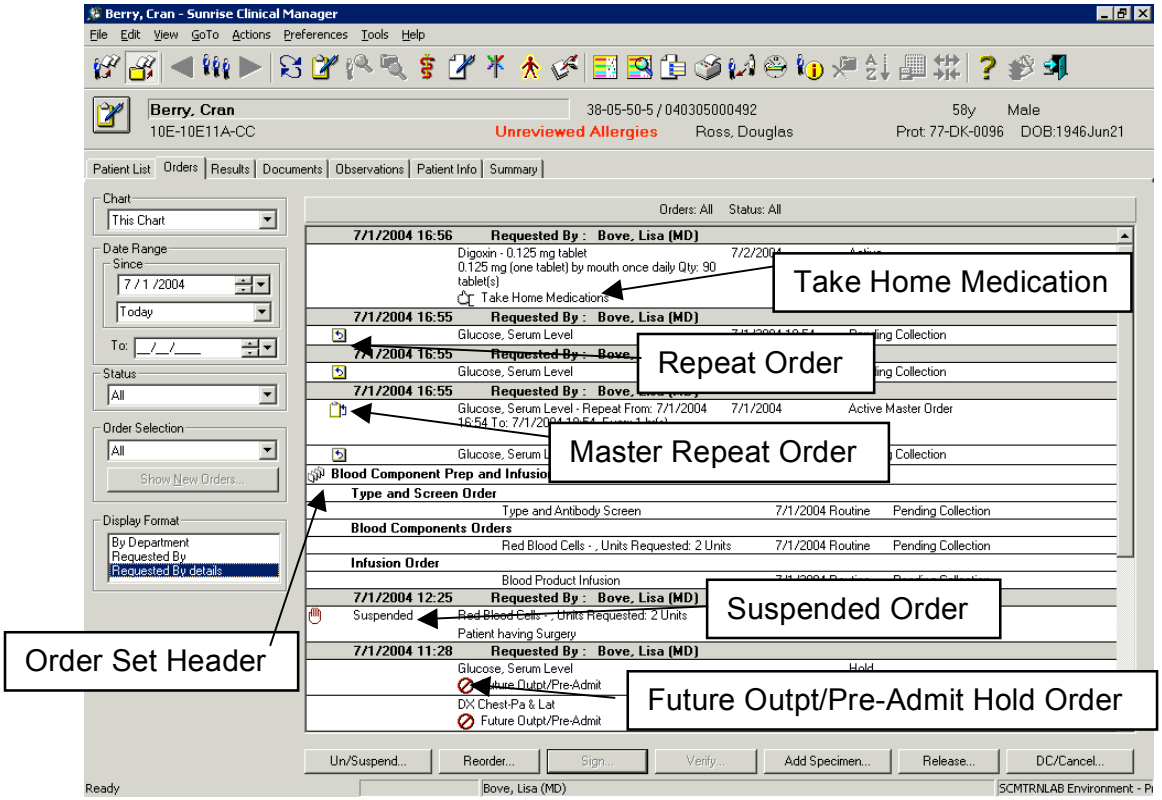
New Orders

To view new results from the Orders tab:

1. Click the **Show New Orders** button in the order selection box. The **New Orders** dialog box will display.
2. To clear the flag, click **Clear Flag** on the **New Orders** dialog box. Otherwise, click **Don't Clear Flag**.

Symbols

Various symbols display on the Orders tab.



Screen 5: Orders Tab Symbols

View Order Details

To display details of an order do one of the following in the **Orders** chart section:

- Select the order you want to view details for and from the shortcut menu, select **View Details.**
- From the **View** menu, select **Order Details**.
- Double-click on the order's header line.

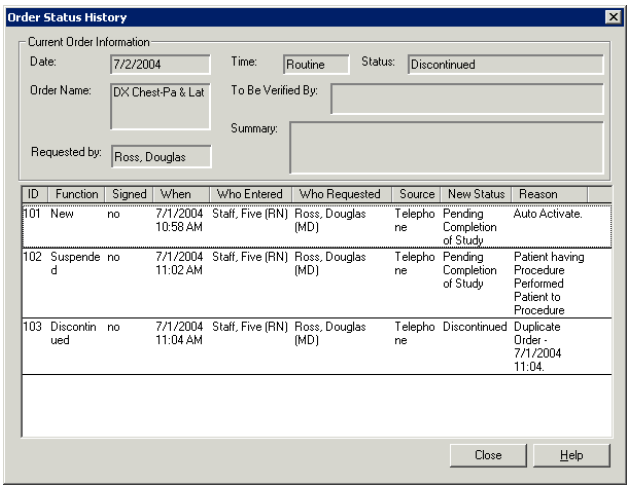
The order form opens in view mode, where you can see all the information associated with the order.

Reviewing Order Sets

You can view order sets in the **Orders** chart section in either the **Requested by** or **Requested by Details** view. An order set is listed in the **Display** window by its name, followed by the orders included in the set. You view details for an order set order the same way you view them for an individual order that is not part of an order set.

Reviewing the Status History of Orders

The **Order History Status** from the shortcut menu displays a dialog box which shows a history of all status changes for an order in chronological order.



Screen 6: Order Status History Dialog Box

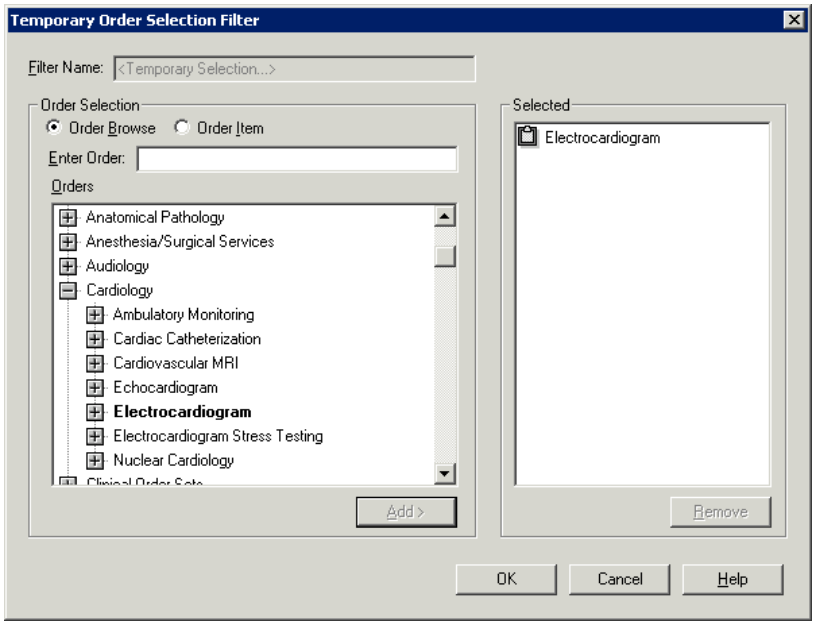
Personalizing Your Orders View

Creating a temporary Orders selection filter

The **Temporary Orders Selection** dialog box allows you to select Orders to be displayed in the view on a one-time or temporary basis. This filter is cleared and not saved after you log off or select another filter.

To create a temporary selection filter:

1. From the **Orders Section** filter, select **<Temporary Selection…>.** The **Temporary Orders Selection** window displays.



Screen 7: Temporary Results Selection Window

Setting your preferences for viewing results

The **Personal Orders View Options** dialog box allows you to set up customized, personal preferences for the **Orders** chart section. By setting your preferences, you can see the information important to you in the **Orders** chart section. The three tabs in this dialog box allow you to:

- Create and maintain filters for the status of the orders you want to view (**Status** tab).
- Create and maintain filters for the types of orders you want to view (**Order Selection** tab).
- Specify the default order selection filter and display format for the chart section (**Display Format** tab).

Status tab

The **Status** tab of the **Personal Order View Options** dialog box allows you to select which orders to display in the **Orders** chart section based upon status. It also allows you to set the default status filter to be used when you first open the **Orders** chart section.

To add a new order status filter to the Orders chart section:

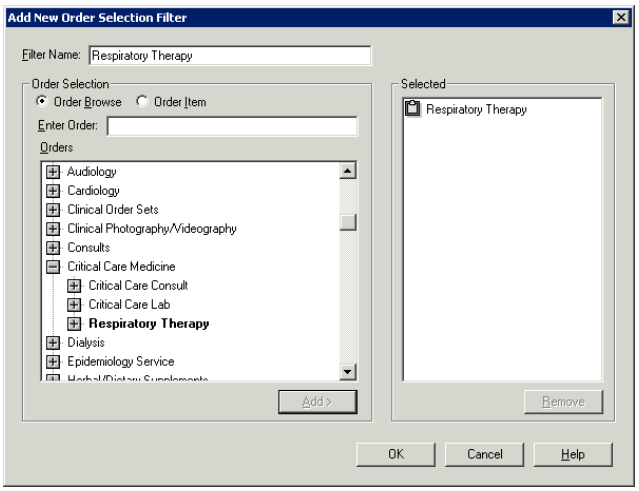
1. With the **Orders** chart section displayed, from the **Preferences** menu, select **Order Review**. The **Personal Order View Options** dialog box opens.
2. Click the **Status** tab.
3. Click **Add New**. The **Add New Status Filter** dialog box opens.
4. Enter a name for your new status filter. You can enter a name of up to 25 characters.
5. Do one of the following:
    a. Click **Any** to view orders of any status.
    b. Click **Orders Due to Expire** to view orders that are due to expire in x days. (The order must have a stop date for this option to work.)
    c. Click **Selected** and select the desired statuses from the list. To select consecutive statuses, select the first status, hold down Shift, and select the last status.
6. If desired, click the options on the right side of the dialog box to specify how you want to view suspended, PRN, discharge, and conditional orders.
7. Click **OK**. If you have entered a duplicate filter name, an error message displays. The new status filter name displays in the Status tab.

Orders Selection Tab

The **Orders Selection** tab of the **Personal Orders View Options** dialog box displays the current Orders selection filters. In this dialog box, you can add, change, or delete filters, and choose a default filter for when you display the **Orders** chart section. If you do not choose a default filter, the filter **All** (which cannot be deleted or modified) is the default. You can create a new filter and make it the default, or you can make an existing filter the default.

To add an Orders selection filter:

1. From the **Preferences** menu, select **Order Review**. The **Personal Orders View Options** dialog box opens.
2. Click the **Orders Selection** tab.
3. To create a new filter, click **Add New**. The **Add New Orders Selection Filter** dialog box opens.



Screen 8: Add New Orders Selection Filter Window

4. Type a name for your new Orders filter in the **Filter Name** field.
5. In the **Orders Selection** group box, do one of the following:
    a. Click **Orders Browse**. The **Browse** shows a tree structure of Orders groups and items. Select the group or item you want included in the filter. To select sequential groups or items, hold down Shift and click on each choice. To select non-sequential groups or items, hold down Ctrl and click on each choice.
    b. Click **Orders Item**. Enter part or the entire name of the item you want to include in the filter. When you enter part of the name and pause, an alphabetical list of items that begin with the characters you entered displays in the browse window.
6. Select a category or item and click **Add** to place the selected item(s) in the **Selected** list. To delete any groups or items from the **Selected** list, select the category or item and click **Remove**.
7. Click **OK** to return to the **Orders Selection** tab.
8. If you want to make the new filter the default, click **Set as Default**.
9. Click **Close** to save the filter and return to the **Orders** chart section. The new filter appears in the **Orders Selection** drop-down list in the **View Control Panel**. If you selected the filter as the default, it will be used the next time you log on and display the **Orders** chart section.

Chapter VIII: Enter and Maintain Orders

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Priority

Orders can be entered with three priorities

- Stat – same as in MIS, as defined by the department
- Non-Stat Time Sensitive – needs to be done at a certain time (time specific)
- Routine – each department defines routine

Result priorities are only available for Laboratory orders. For these orders, you can request a result priority of

- Routine – resulted within 4 hours
- Priority – resulted within 2 hours
- STAT – resulted within 1 hour

Service Requisitions

The services initiated by a service requisition can be ordered independently by Affiliate Medical Staff and clerical staff. Some service requisitions have restricted availability.

- Service requisitions in CRIS are primarily used to replace patient–specific MIS-O-Grams
- Service requisitions are used for a variety of tasks that do not require a medical order, including
    - Order medical records
    - Order a birthday cake
    - Order patient transport (except from admissions or to and from the OR/PACU).
    - Change a patient location within the OR/PACU or send a surgical patient back to the unit of origin.
    - Change a patient's outpatient location temporarily (e.g., from an outpatient clinic to a day hospital and then back again)
    - Assign a patient to a bed within an inpatient unit

Order Entry Worksheet Overview

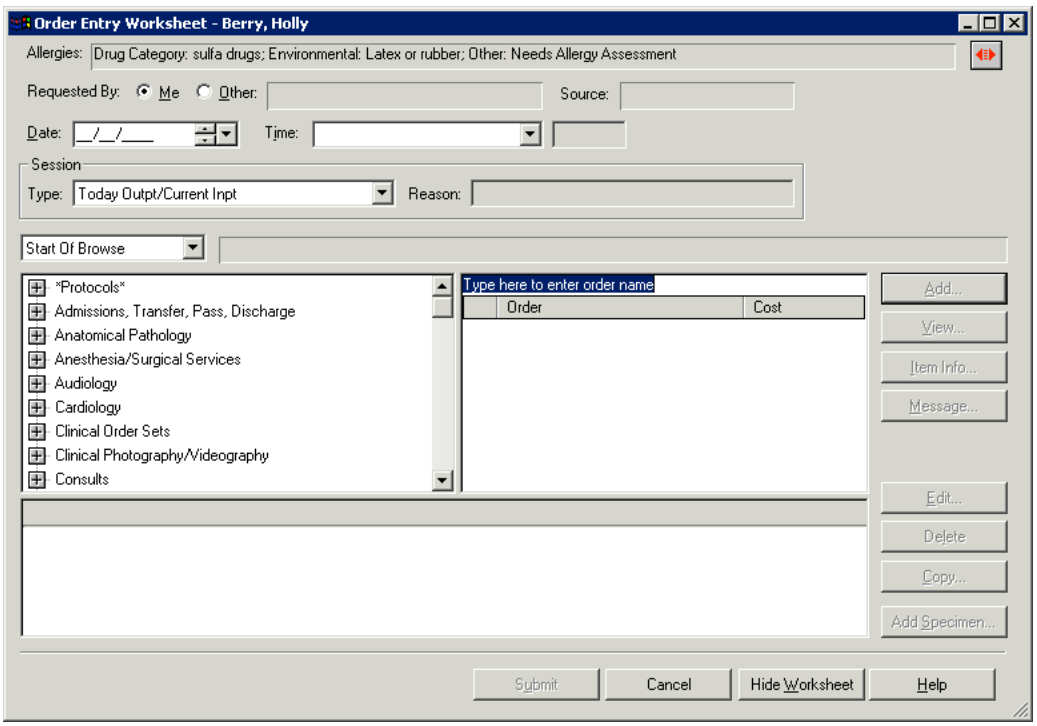
You enter orders for the currently selected patient using the **Order Entry Worksheet** and order forms. When you choose and enter an order from the **Order Browse** on the **Order Entry Worksheet**, the order is entered in the **Order Summary** window. An order form tailored to the special information needs of that order displays, prompting you to enter more details. When entering an order, you can specify that it is a hold or a discharge order, or a special type of order, such as a conditional or IV order.

You must submit orders entered on the **Order Entry Worksheet** before logging off or moving to another patient. Once an order has been submitted, it is available for review in the **Orders** chart section.

To enter an order, you can click on the **Enter Order** icon in the toolbar or the **Enter Order** icon to the left of the patient header

Screen 40: Enter Order Icon

This will open the Order Entry Worksheet. This is the starting point of all orders and service requests.



Screen 41: Order Entry Worksheet

Review allergies

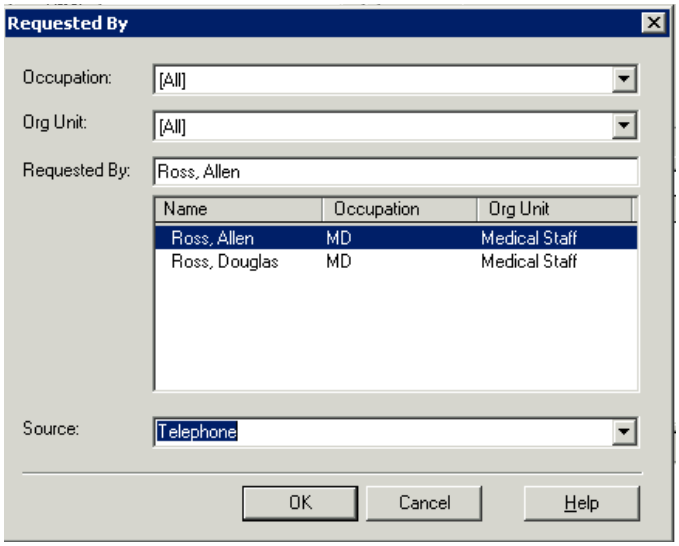
Allergies that have been entered for the selected patient display at the top of the Order Entry Worksheet. You can view more information about these allergies or add additional allergies by clicking on the red two headed arrow.

Enter orders as a Prescriber

If you have the security rights to enter your own orders, Me is automatically selected next to Requested By.

Enter orders on behalf of a Prescriber

If you are entering the orders on behalf of someone else, select Other to open the Requested By dialog box.



Screen 42: Requested By Dialog Box

1. Enter part of the care provider's last name and pause. The provider names that begin with the letters you typed appear in the search list.
2. Select the provider you are entering the order for.
3. In the **Source** drop-down list, select how you received the instruction to enter the order.
4. Click **OK**. You return to the **Order Entry Worksheet**
   Note: Once you have submitted an order, the requesting provider name can no longer be changed

Date and Time

You can use this date and time field to enter the start date and/or time of all the orders in this session. This does NOT alter the start date in order sets. You can type the date, use the increase/decrease arrows to change the date one day, month, or year at a time, or use the calendar control to select a date. You can enter an exact time or select a coded time (for example, STAT or Routine.) from the dropdown list.

Session type

Orders can be entered in three session types

- Today Outpt/Current Inpt – these orders will be processed when ordered. For inpatients, these orders are for any time during their stay. For outpatients, these orders are only for today.

- Future Outpt/Pre-Admit – these orders only become active when released. For outpatients, these orders are for any day but today. When you select this option, you can add specific instructions for the release of these orders in the reason field.
- Take Home Medications – orders will be available immediately and remain active across visits so that these orders will be directed to Outpatient pharmacy.

Hide Worksheet button

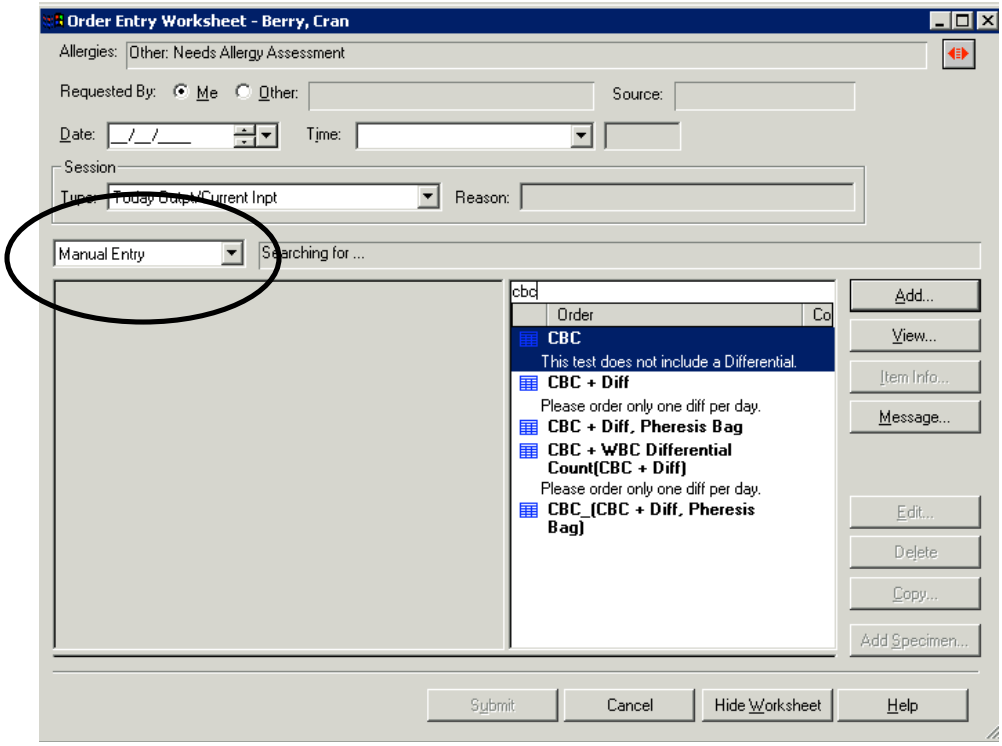
The hide Worksheet button closes the **Order Entry Worksheet** temporarily so you can access other functions for the patient. For example, while entering orders, you can hide the worksheet and review results prior to completing the orders. When you select the **Enter Orders** icon again, the worksheet displays again. You cannot log off or move to another patient's chart until you submit or delete the orders listed in the **Order Summary** window.

Find Orders and Order Sets

To select an order or order set, you can do one of the following

Manual Entry

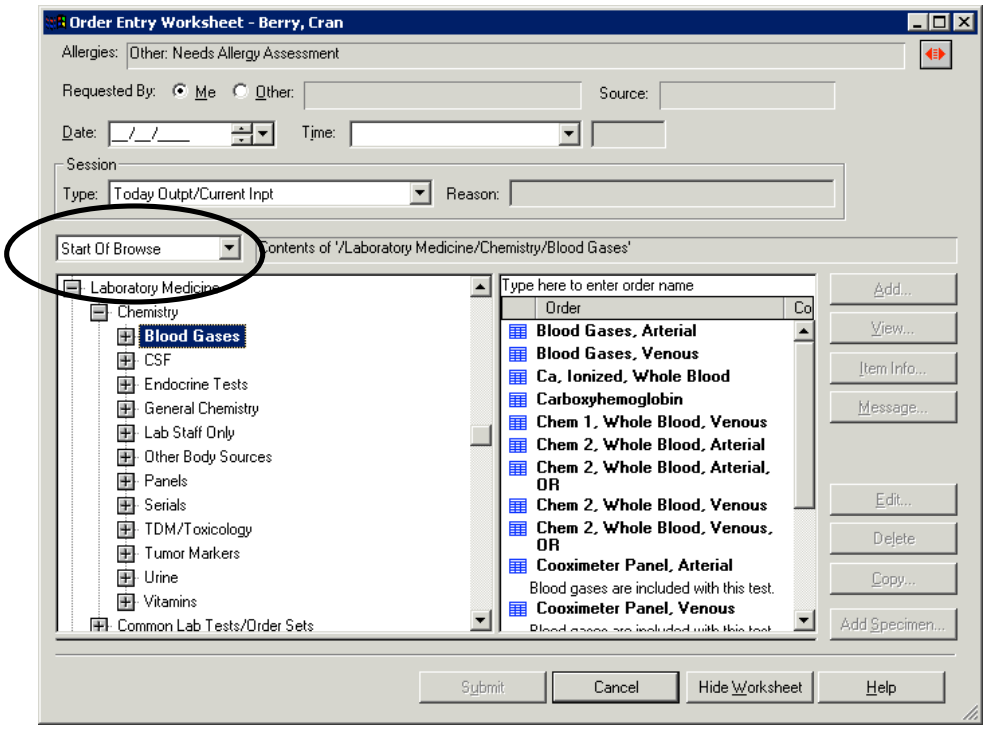
From the (Start At) drop-down list, select **Manual Entry**. Then, in the **Type here to enter order name** field, enter part of the name of the order item you want and pause. The right pane of the **Order Browse** displays the order items that begin with the characters you entered.



Screen 43: Using Manual Entry to Find Orders

Start of Browse

From the **(Start At)** drop-down list, select **Start of Browse**. This displays the first order group at the top of the left pane of the **Order Browse**. Select an order group; any groups contained within it display in the left pane, and any individual order items display in the right pane.



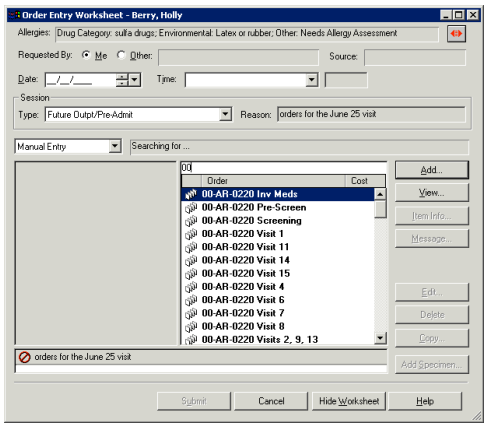
Screen 44: Using Start of Browse to Find an Order

Find Order Sets

Order sets are groups of orders conveniently located together to allow order entry at one time. There are three types of order sets

- Non-protocol order sets are groups of orders commonly ordered at one time
- Protocol order sets are groups of orders specific to the protocol. Some are grouped by visit or phase. Others are grouped by type of order
- Quick orders are medication orders pre-filled with common dosages, frequencies and administration routes

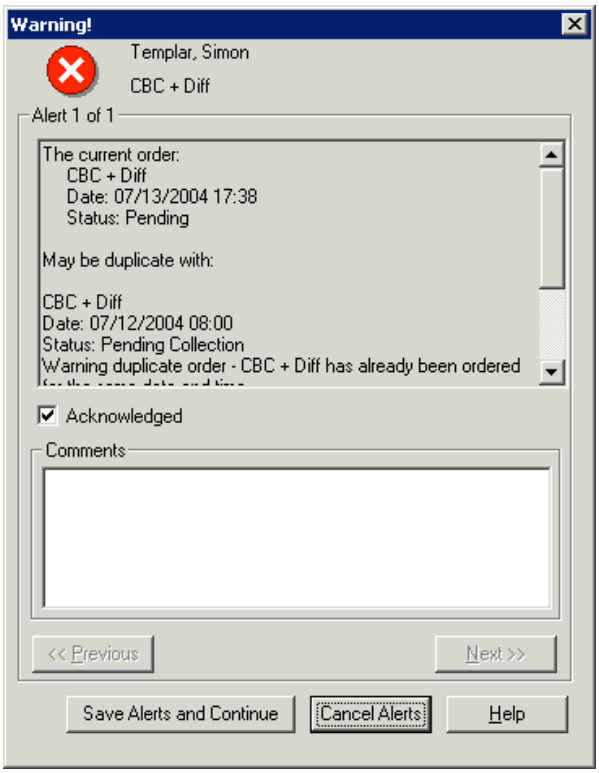
You can search for orders sets in the same way as for orders, either using Manual Entry to type in the name or number of the Order Set, or you can search through the listing using Start of Browse. Orders Sets as indicated by an icon on the list order display pane.



Screen 45: Order Set List

Alerts and Warnings

Alerts can display when entering orders. There are alerts for duplicate orders, allergy assessments, for entering medical orders more than one year in advance, and medication orders more than 90 days in advance. When an alert occurs, a window opens for you to acknowledge the alert.

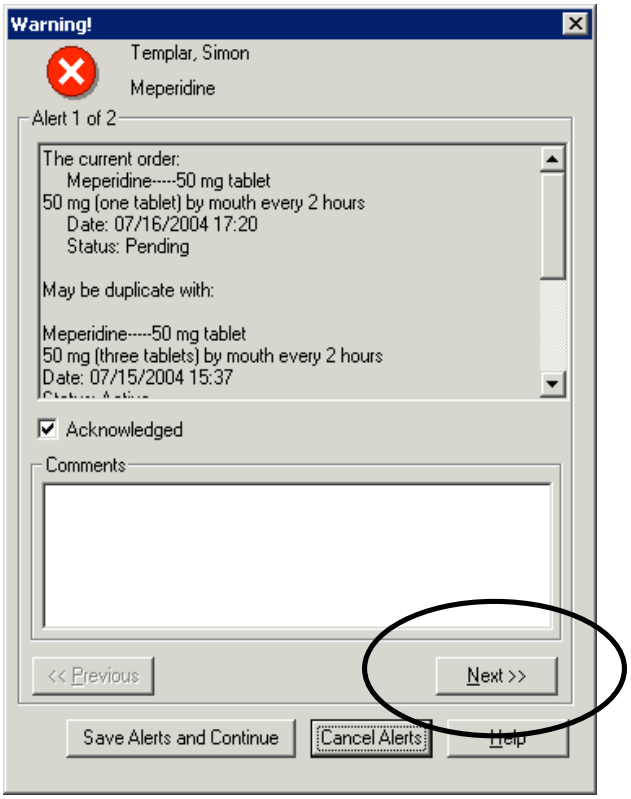


Screen 46: Sample Alert

On this screen, you have two options

1. To save the alert and continue to enter the order
2. To cancel the current order

Multiple alerts can be triggered for any one order. If there is more than one alert for the alert, the Next button becomes active.



Screen 47: Warning window with multiple alerts

When there are multiple alerts

1. Review the first alert and then select **Next** to view each alert.
2. Once you have viewed all the alerts,
   a. Select **Save Alerts and Continue** to enter the order or
   b. **Cancel Alerts** to go back and modify or cancel the order.

Duplicate Checking

- Each department specifies how often an order can be repeated without being a duplicate
- A duplicate alert is just an alert; you can acknowledge the alert and say you still want to continue to order it.
- This may cause duplicate alerts to displays with some serial lab testing and take home medications

Recommendations for Ordering and Reviewing Current Orders, Future Orders, and Take Home Medications in CRIS

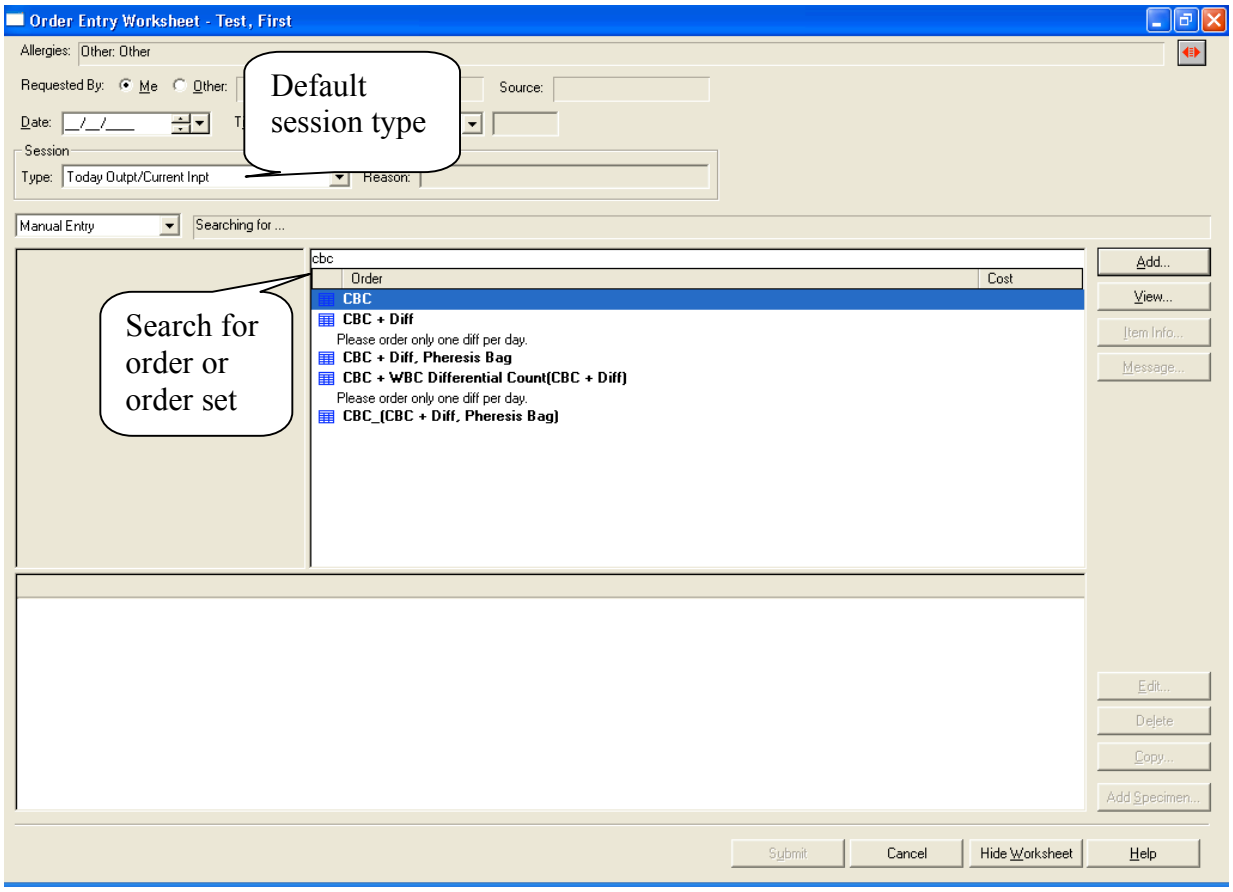
CRIS has "session type" functionality that permits orders to be placed for both immediate and future action. Depending on whether a patient is new to NIH, a current or future inpatient, or a current (today) or future outpatient, orders may be placed under the following session types

Current Visit Type	Session Types		
	Today Outpt/Current Inpt	**Future Outpt/Pre-Admit**	**Take Home Medications**
Pre-NIH Registration	N/A	Allowed	N/A
Inpatient	Allowed	Allowed	Allowed
Outpatient	Allowed	Allowed	Allowed

Screen 48: Visit Type and Order Session Type

Order for Today Outpt/Current Inpt

Use this default session type for orders to be carried out today in a clinic or day hospital or for hospital inpatients anytime during the current admission.



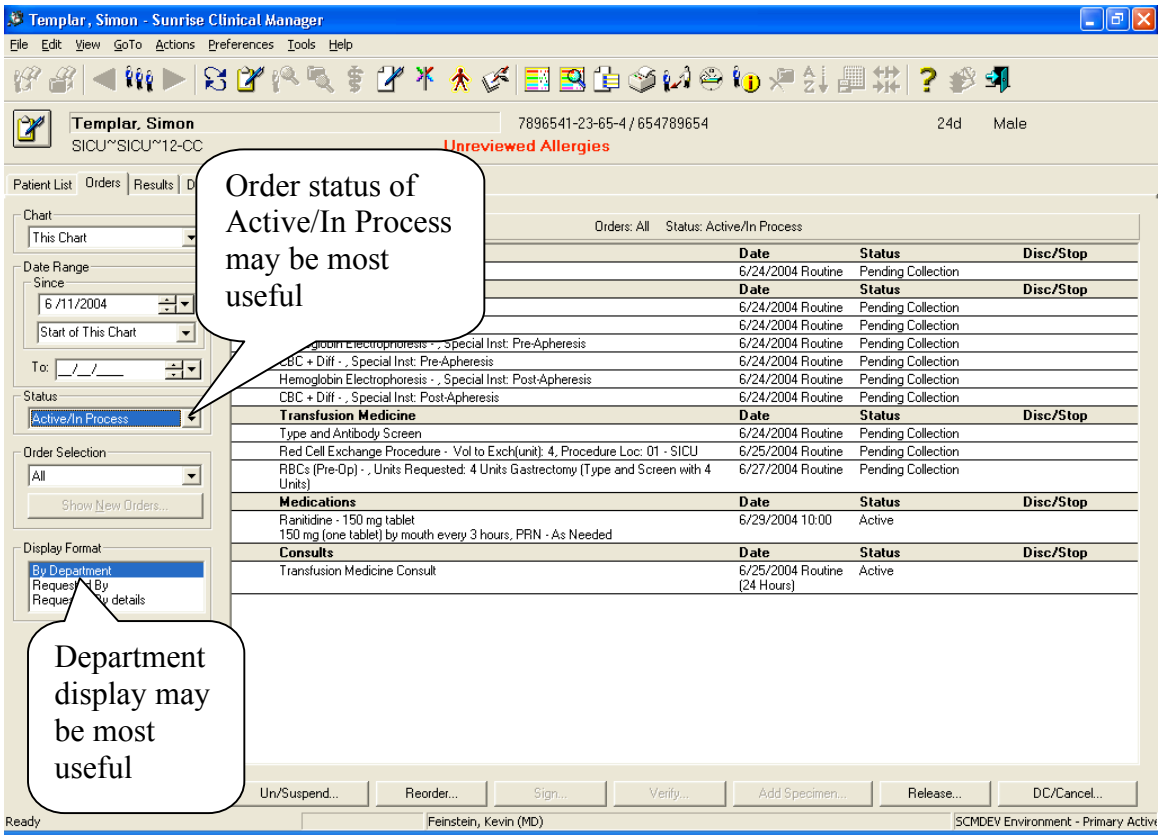
Screen 49: Default Session Type

Simply place and submit orders as needed for the patient. There is no need to adjust the session type in this situation.

Note: OR/Anesthesia Requests and Off Site Anesthesia Requests should always be placed in this session type, since these are requests to schedule procedures and should be active immediately.

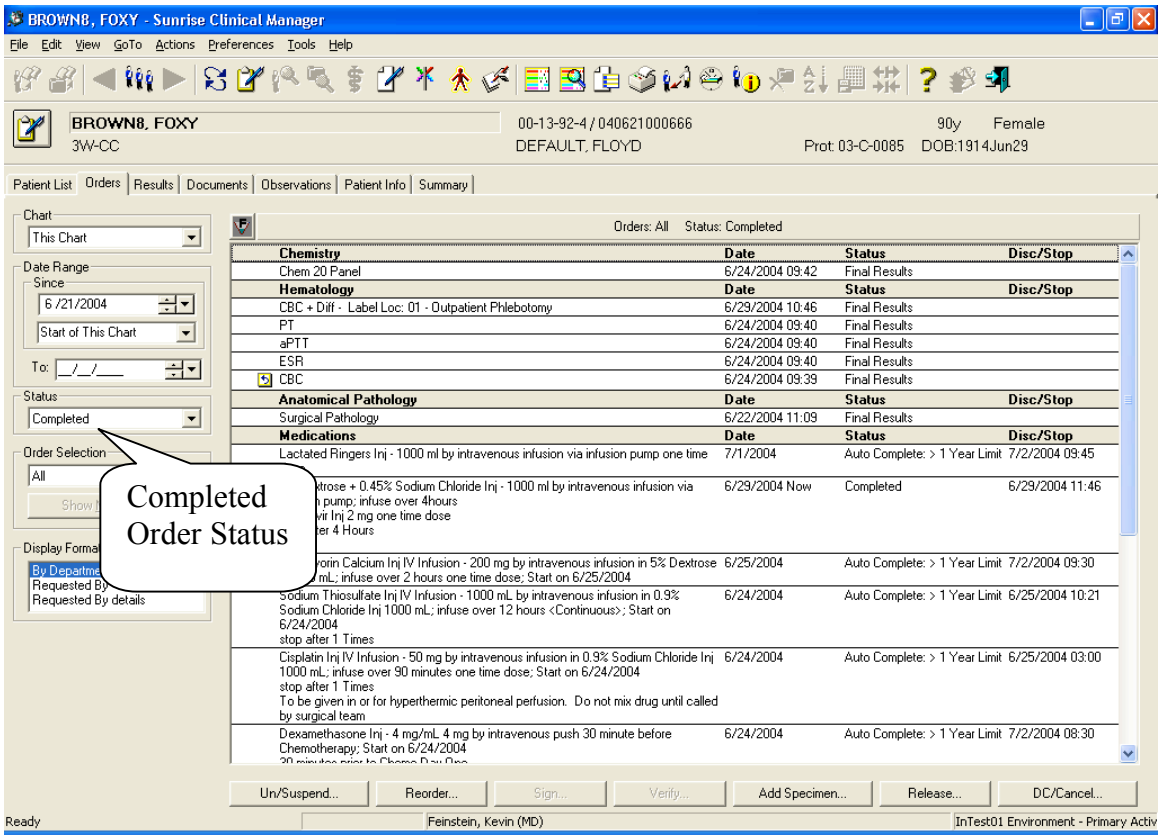
Review Orders for Today Outpt/Current Inpt

Order status of Active/In Process filters those orders that are active, but not yet resulted or completed.



Screen 50: Active/ In Process orders status filter

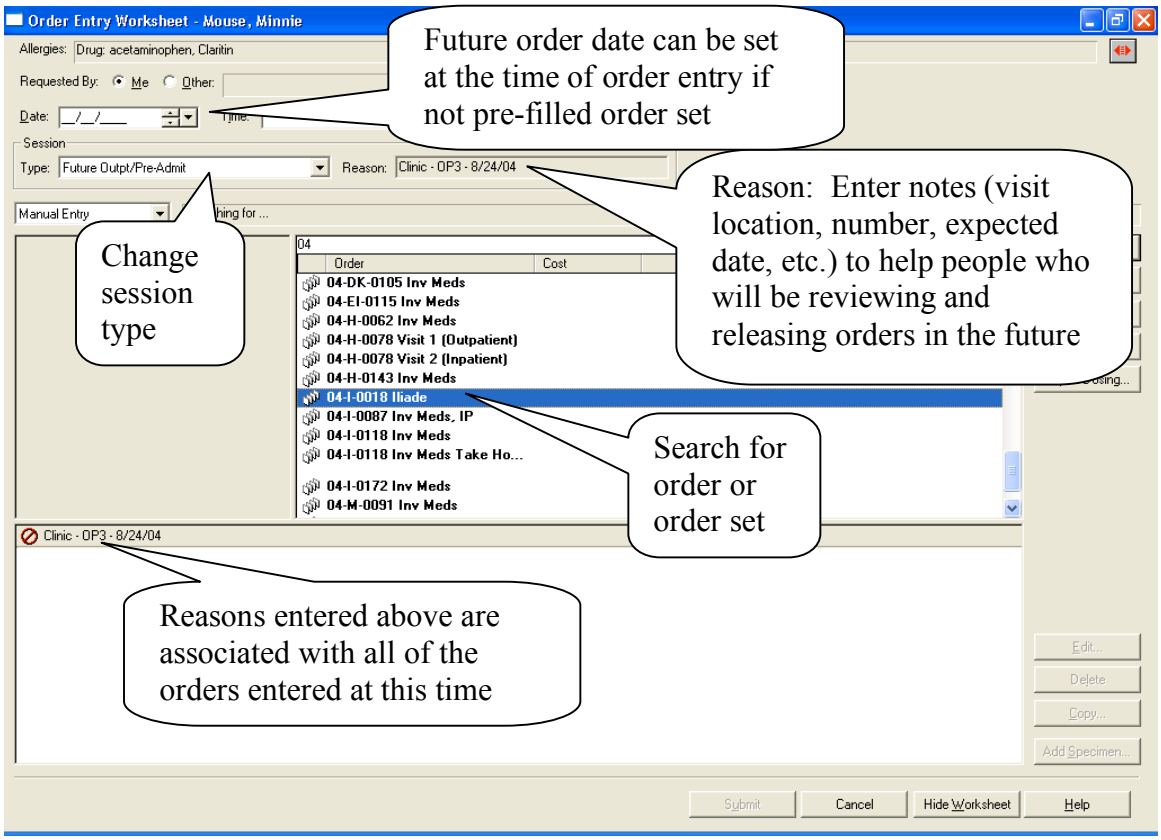
The Completed status will help to review orders that have already been carried out and resulted.



Screen 51: Completed order status filter

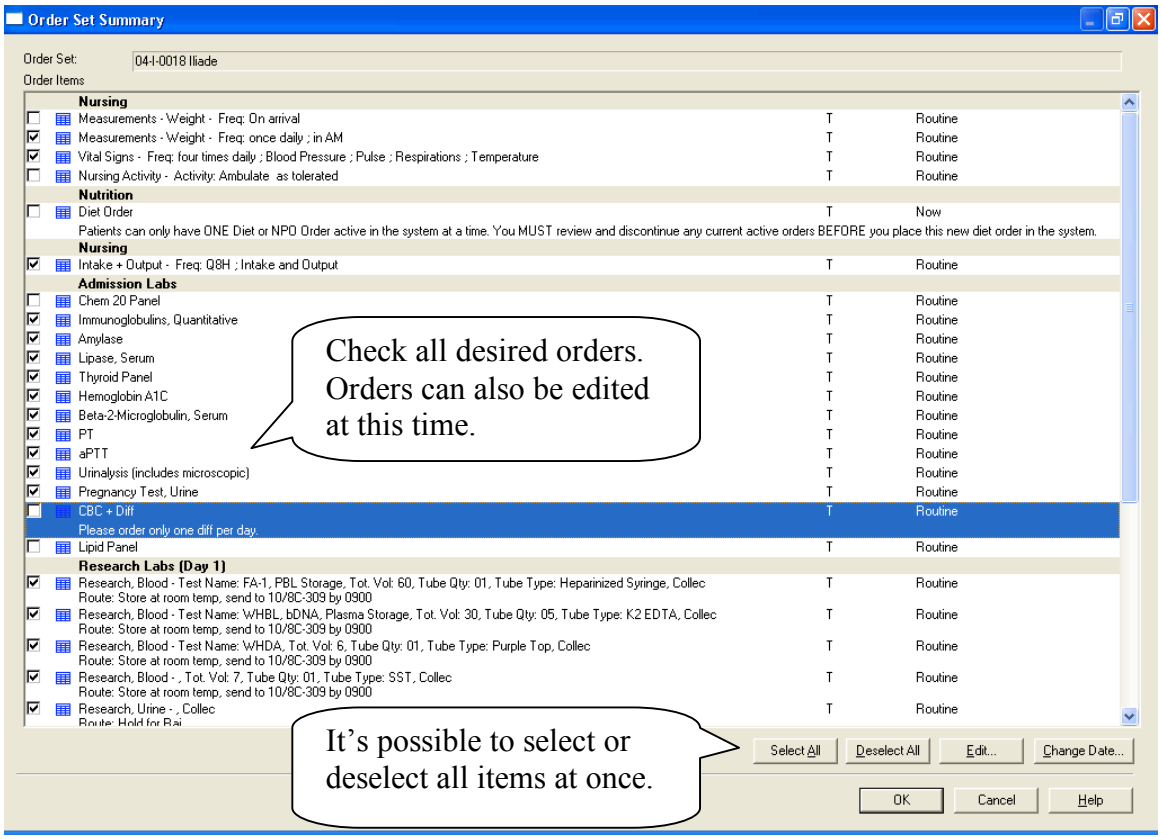
Order for Future Outpt/Pre-Admit

MIS allowed orders to be entered for future admissions only. CRIS allows orders for both future admissions, as well as for future outpatient encounters and testing. Use this session type for orders to be placed for a future-dated outpatient encounter (even the next day), as well as for anticipated admissions to the hospital. Always indicate a "reason" for these future orders.



Screen 52: Future Outpt/Pre-Admit Session type

Within an order set, select all orders that are needed.



Screen 53: Order Set Summary window

The Prescriber should indicate the future date the orders are expected to be carried out. If the order date was not entered initially on the order entry worksheet, the date can also be updated in another way without entering each order individually.

Order Set Summary

Order Set: 04-I-0018 Iliade

Order Items

Nursing
Measurements - Weight - Freq: On arrival T Routine
Measurements - Weight - Freq: once daily ; in AM T Routine
Vital Signs - Freq: four times daily ; Blood Pressure ; Pulse ; Respirations ; Temperature T Routine
Nursing Activity - Activity: Ambulate as tolerated T Routine
Nutrition
Diet Order T Now
Patients can only have ONE Diet or NPO Order active in the system at a time. You MUST review and discontinue any current active orders BEFORE you place this new diet order in the system.
Nursing
Intake + Output - Freq: Q8H ; Intake and Output T Routine
Admission Labs
Chem 20 Panel T Routine
Immunoglobulins, Quantitative T Routine
Amylase T Routine
Lipase, Serum T Routine
Thyroid Panel T Routine
Hemoglobin A1C T Routine
Beta-2-Microglobulin, Serum T Routine
PT T Routine
aPTT T Routine
Urinalysis (includes microscopic) T Routine
Pregnancy Test, Urine T Routine
CBC + Diff T Routine
Please order only one diff per day.
Lipid Panel T Routine
Research Labs (Day 1)
Research, Blood - Test Name: FA-1, PBL Storage, Tot. Vol: 60, Tube Qty: 01, Tube Type: Heparinized Syringe, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Blood - Test Name: WHBL, bDNA, Plasma Storage, Tot. Vol: 30, Tube Qty: 05, Tube Type: K2 EDTA, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Blood - Test Name: WHDA, Tot. Vol: 6, Tube Qty: 01, Tube Type: Purple Top, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Blood - , Tot. Vol: 7, Tube Qty: 01, Tube Type: SST, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Urine - , Collec

Select the orders for which a date is to be specified with shift-clicks and/or control-clicks.

Select the "Change Date" function.

Change Date... Cancel Help

Screen 54: Order Set change date

Order Set Summary

Order Set: 04-I-0018 Iliade

Order Items

Nursing
Measurements - Weight - Freq: On arrival T Routine
Measurements - Weight - Freq: once daily ; in AM T Routine
Vital Signs - Freq: four times daily ; Blood Pressure ; Pulse ; Respirations ; Temperature T Routine
Nursing Activity - Activity: Ambulate as tolerated T Routine
Nutrition
Diet Order T
Patients can only have ONE Diet or NPO Order active in the system at a time. You MUST review and discontinue any current active orders BEFORE you
Nursing
Intake + Output - Freq: Q8H ; Intake and Output T
Admission Labs
Chem 20 Panel T
Immunoglobulins, Quantitative T
Amylase T
Lipase, Serum T
Thyroid Panel T
Hemoglobin A1C T Routine
Beta-2-Microglobulin, Serum T Routine
PT T Routine
aPTT T Routine
Urinalysis (includes microscopic) T Routine
Pregnancy Test, Urine T Routine
CBC + Diff T Routine
Please order only one diff per day.
Lipid Panel T Routine
Research Labs (Day 1)
Research, Blood - Test Name: FA-1, PBL Storage, Tot. Vol: 60, Tube Qt T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Blood - Test Name: WHBL, bDNA, Plasma Storage, Tot. Vol: 30, Tube Qty: 05, Tube Type: K2 EDTA, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Blood - Test Name: WHDA, Tot. Vol: 6, Tube Qty: 01, Tube Type: Purple Top, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Blood - , Tot. Vol: 7, Tube Qty: 01, Tube Type: SST, Collec T Routine
Route: Store at room temp, send to 10/8C-309 by 0900
Research, Urine - , Collec T Routine

Change Date

Date: 8 /24/2004

When: << < Aug 2004 > >>

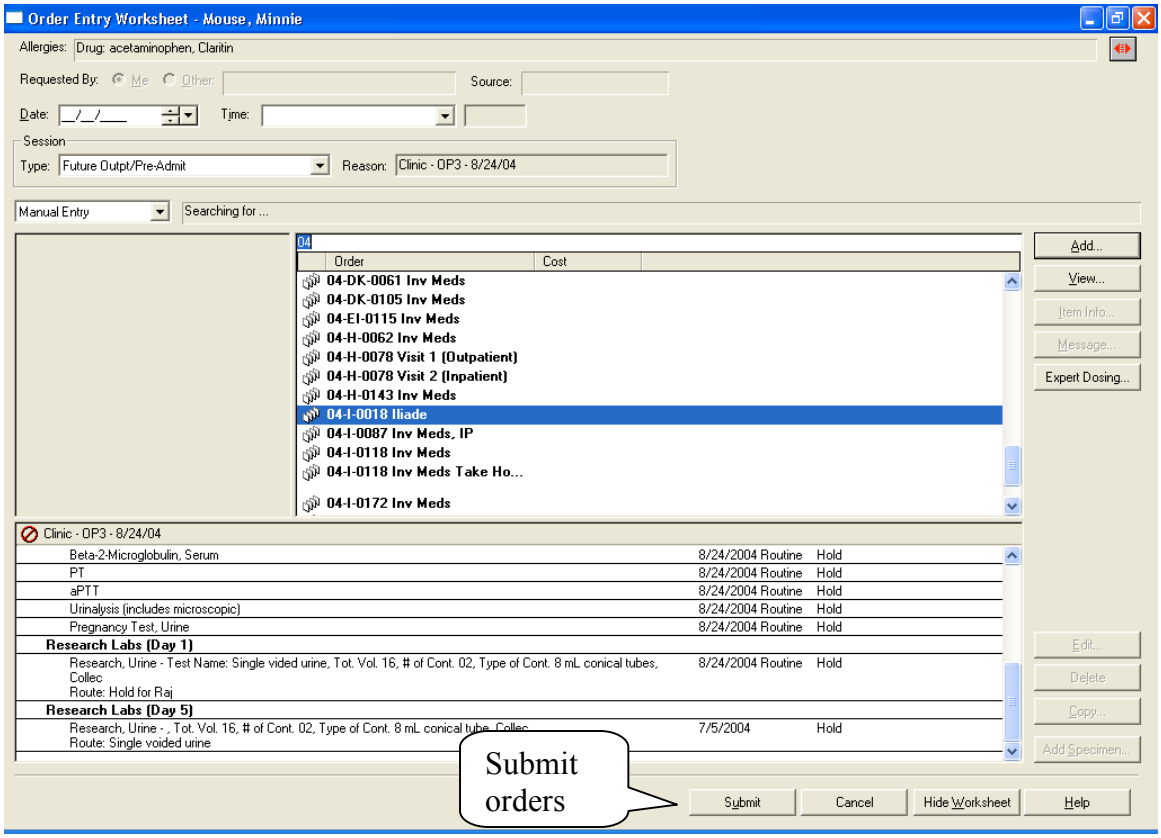
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Enter the date orders are expected to be performed.

Select All Deselect All Edit... Change Date...

OK Cancel Help

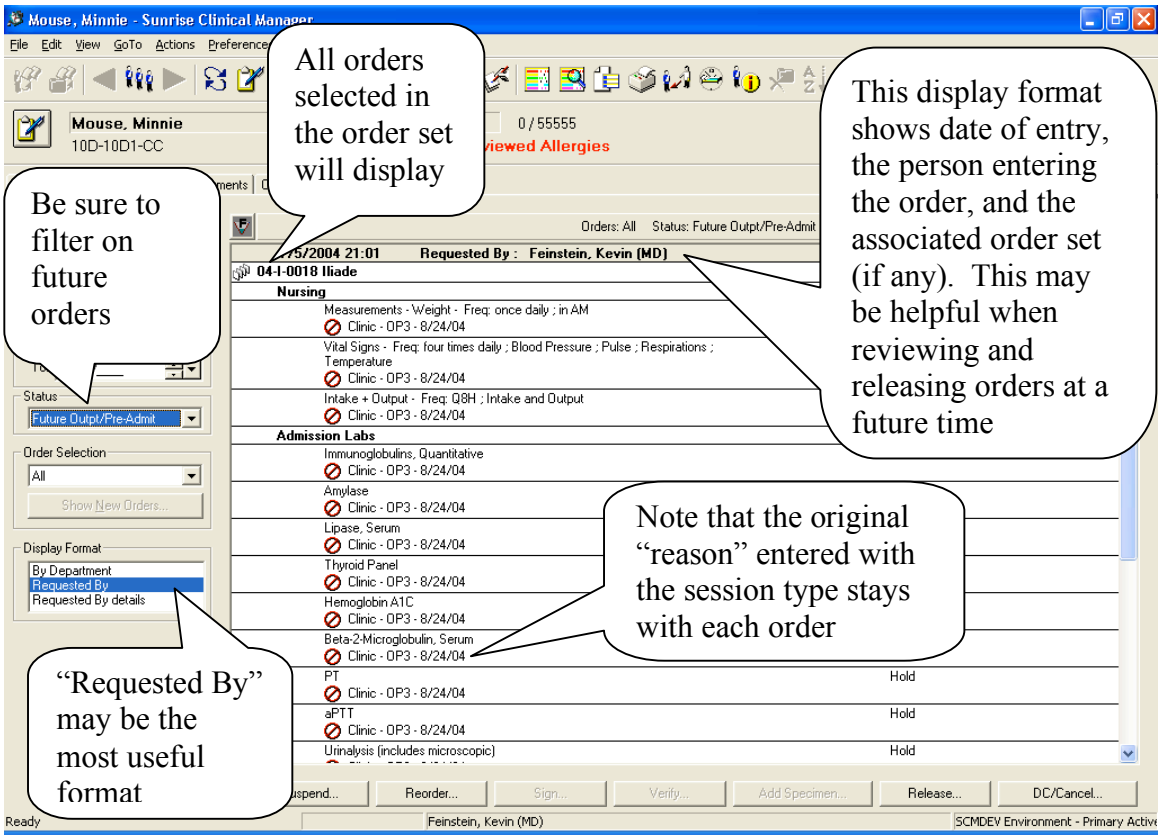
Order dates will then be updated accordingly. The orders should be reviewed once more on the Order Entry Worksheet before being submitted.



Screen 55: Future Outpt/Pre-Admit orders summary pane

Review Orders for Future Outpt/Pre-Admit

All orders entered and submitted under the "Future Outpt/Pre-Admit" session type can also be easily reviewed with the help of the order filters.

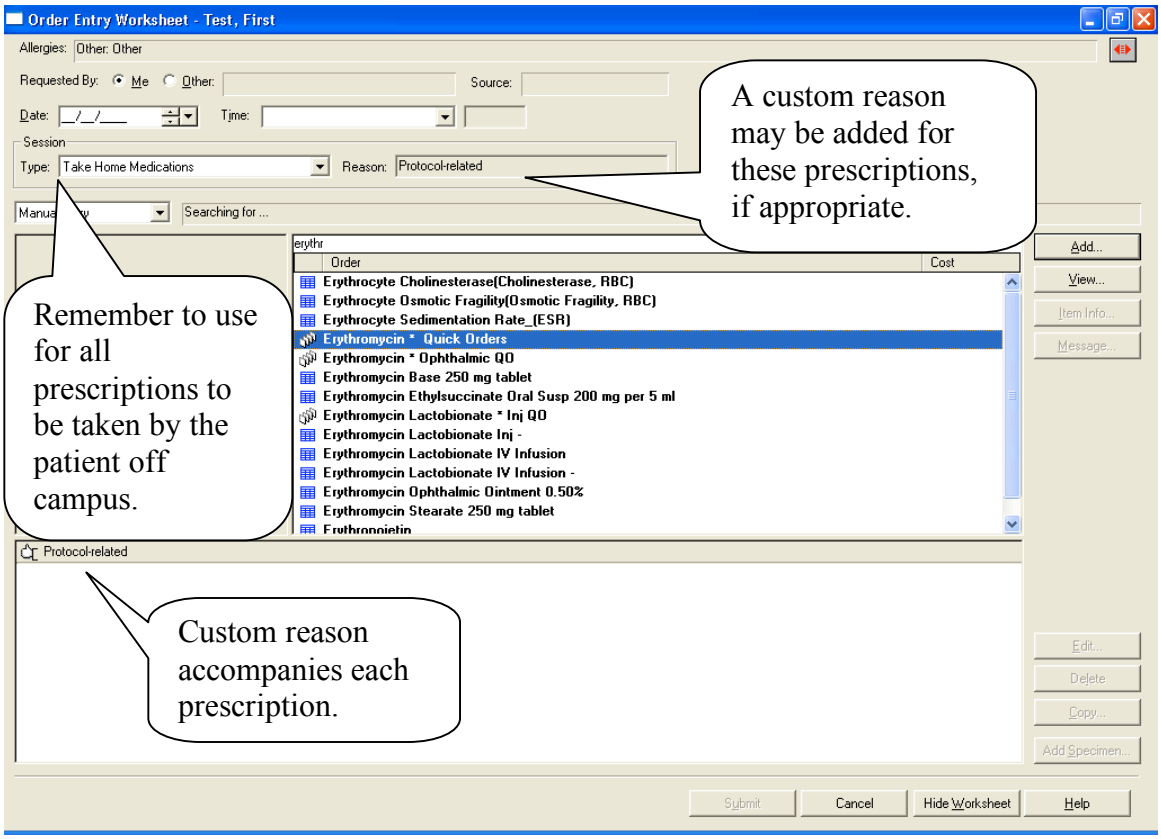


Screen 56: Future Outpt/Pre-Admit status filter

Ordering Take Home Medications

Take Home Medications include those prescribed in a clinic for home use, in the hospital at the time of an inpatient discharge, and for use on pass. All orders for take home medications require the correct session type in order to be processed correctly by the outpatient pharmacy.

Take home medications can be easily ordered from the pharmacy quick order screens, which have common take home prescriptions and quantities pre-filled on the order forms. Be sure to change the session type to Take Home Medications before submitting these orders

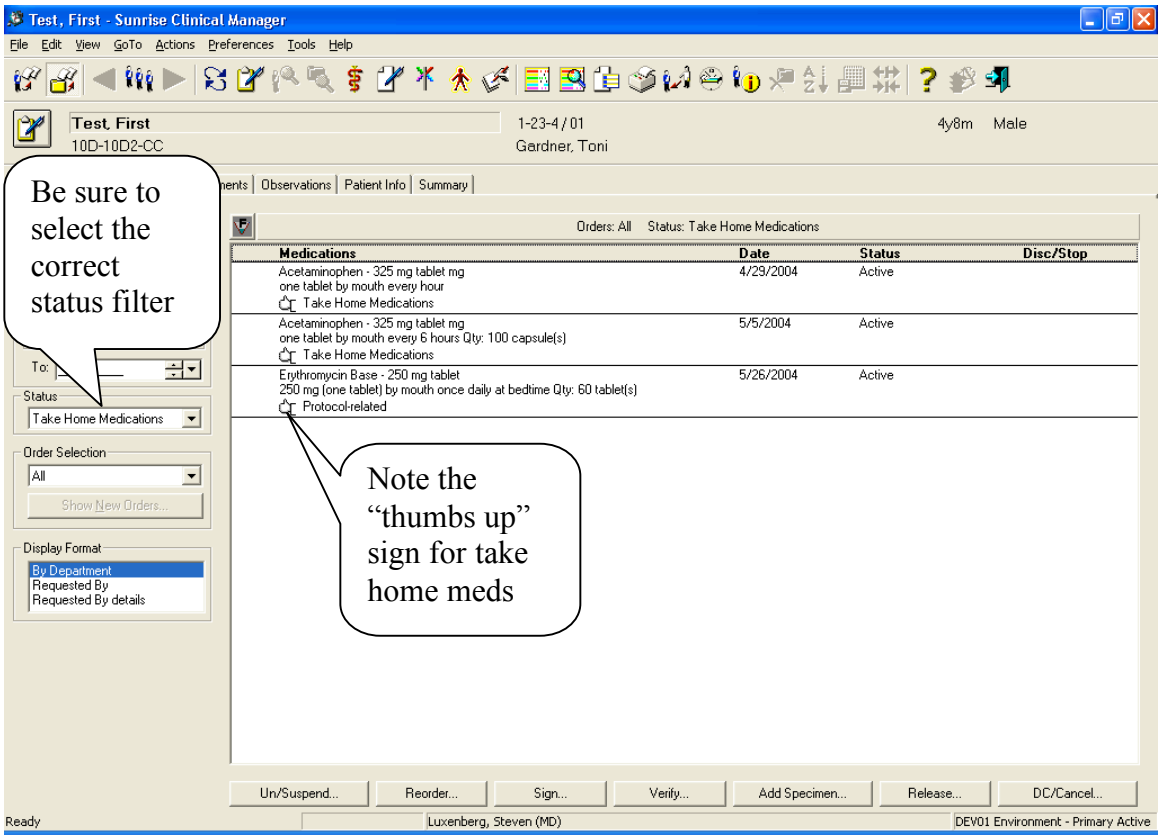


Screen 57: Take Home Medications session type

If it's appropriate to prescribe the current inpatient regimen of medications to a patient who is about to be discharged, a quick way to create these orders is via the "reorder" function. Simply "right-click" on the order for discharge, pick "Reorder," and pick "Current." The "reordered" medication will then appear on the order entry worksheet, awaiting any appropriate modifications and review before being submitted. You will need to change the session type to Take Home Medications before submitting these orders.

Review Orders for Future Outpt/Pre-Admit

All current "Take Home Medication" orders can also be easily reviewed with filters.



Screen 58: Take Home Medications status filter

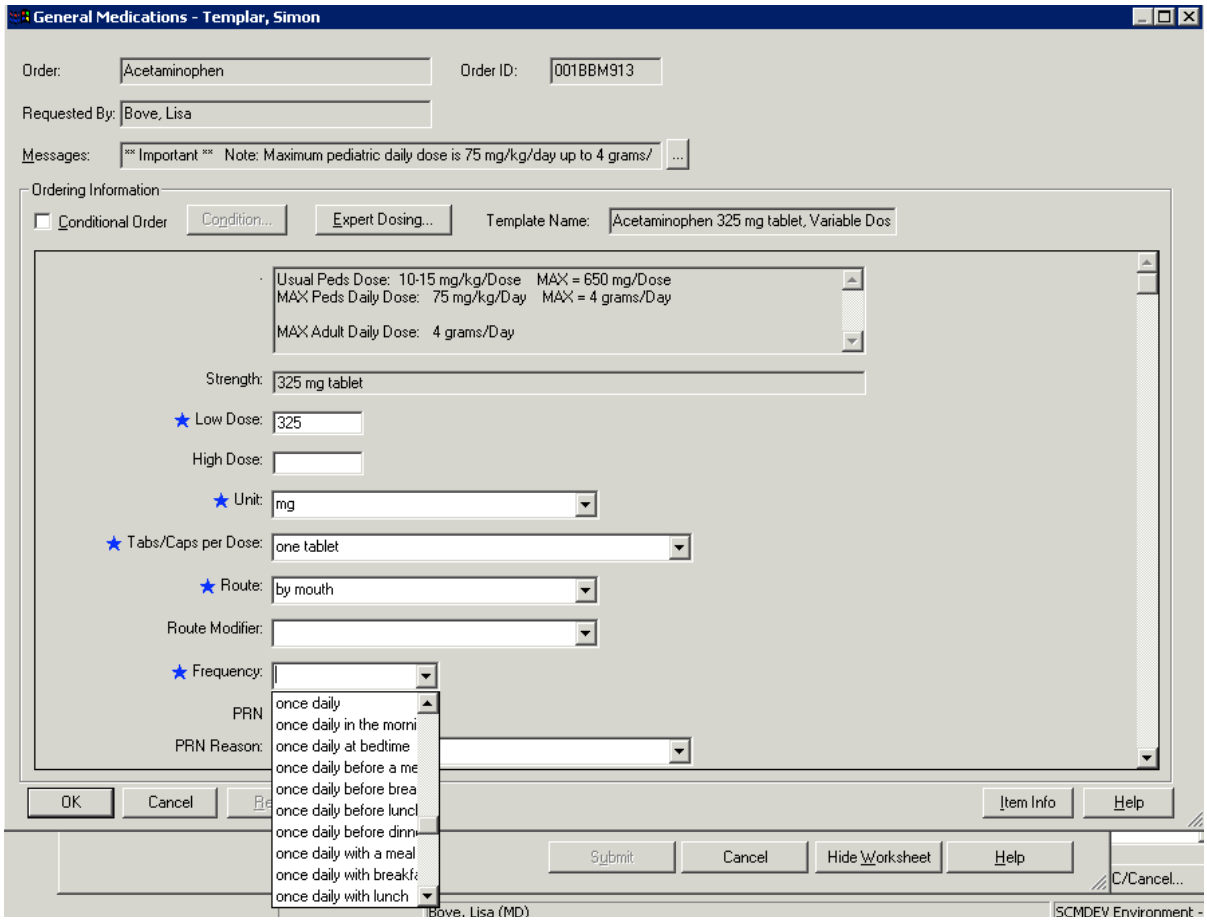
Take home medications do not appear in the worklist manager for documentation of administration. However, they will generate "duplicate order" or "drug interaction" warning messages, since they are considered active. Prescribers may choose to suspend active outpatient prescriptions during inpatient stays, and unsuspend as appropriate at the time of a patient's discharge, in order to avoid these duplicate messages.

Note: Take Home Medications that are no longer appropriate for the patient should be cancelled by the responsible Prescriber(s).

Entering Orders

1. From the **Order Entry Worksheet**, locate an order you want to enter. Click **Add**.
2. Fill in the requested information.
   a. There may be special instructions about the order in the **Messages** box. This is informational only, and cannot be changed.
   b. Required fields are marked with a blue star. Data must be entered into these fields prior to submitting the order.
   c. Other fields are optional. These are completed when there is more information to convey about the order.

d. Some fields already contain prefilled/default data when you open the form. These fields may be modified as needed.
e. The **Frequency** field is often too short to display all the frequency details. You can select an option, click in the field and arrow to the right to read the entire field if needed.



Screen 59: Order form with frequency field

3. Click **OK**.
4. Click **Submit**.

Edit or delete an order before submitting

You can edit or delete an order BEFORE submitting it

1. To edit an order before submitting it
   a. Select the order you want to edit.
   b. Click Edit. The Order Entry Form for the selected order opens.
   c. Change or add to the existing fields. Click **OK**. You return to the **Order Entry Worksheet**.
2. To delete an order before submitting it

a. Select the order you want to delete.
b. Click **Delete**. The order is removed from the order summary window.

If you enter, but don't submit orders on the **Order Entry Worksheet**, and then hide the worksheet, the icon changes to indicate that there are unsubmitted orders. You cannot log off or switch to another patient's chart until you submit or delete unsubmitted orders.

Screen 60: Unsubmitted Orders Icon

Enter Order Sets

Order sets are groups of orders commonly ordered at one time. You order an order set just as you would an individual order - using the **Order Browse** on the **Order Entry Worksheet**. If you don't want every item in the order set, you can eliminate parts of an order set when you order it.

How Order Sets Work

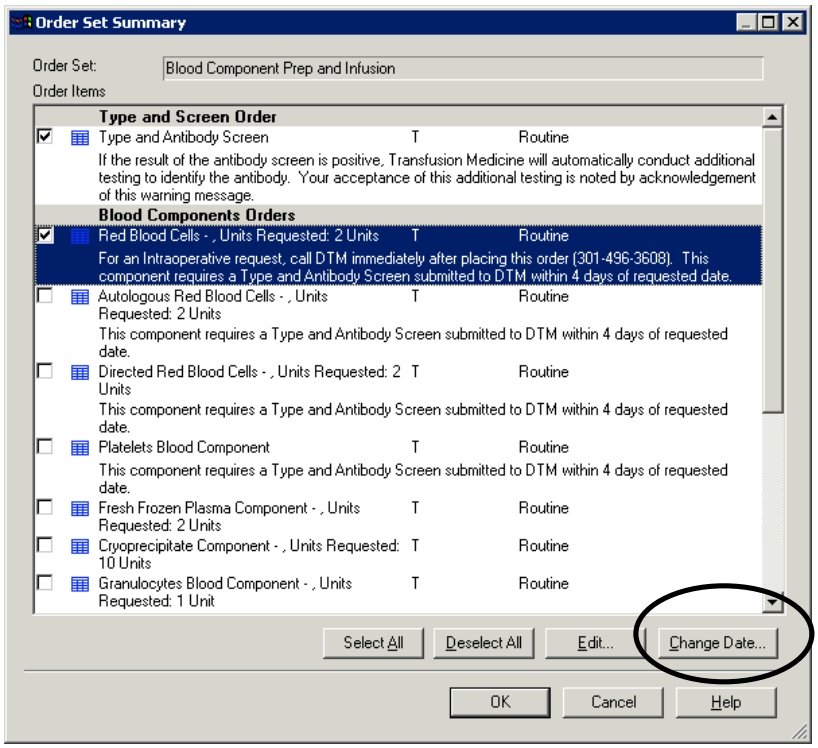
Order sets are groups of orders conveniently located together to allow order entry at one time. There are three types of order sets

- Non-protocol order sets are groups of orders commonly ordered at one time
- Protocol order sets are groups of orders specific to the protocol. Some are grouped by visit or phase. Others are grouped by type of order
- Quick orders are medication orders pre-filled with common dosages, frequencies and administration routes
- When tests/procedures or other orders happen in sequence, the days can be built into the order set
    - T= today, the day the order set is ordered or released from hold
    - T+1 = tomorrow, the day after the order set was ordered or released from hold
- Check marks are used to select the items from the order set that you want to order
    - Items are usually ordered for everyone (both sexes) are pre-set
        - You can add or deselect individual items
        - If whole order is radically different, just deselect all and select the ones you want

- Pre-set checkmarks redisplay for next time you use order set
- Headings are just informational for Prescribers
  - No matter how orders are grouped in the order set, they are programmed to display in specific spots on the order display
  - If you filter the order display by details, it will bring all the order set together under the name of the order set
- There are no pre-filled repeat orders within order sets
  - Prescribers can create repeat orders from the Order Entry, but they can't be pre-filled in the order set.

Working with Order Sets

The **Order Set Summary** dialog box displays all the inactive order items in an order set. You may remove or edit individual items in the order set as necessary. You also can specify or change the start date for each of the items using the **Change Date** button.



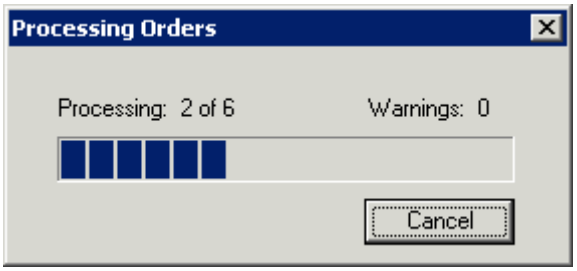
Screen 61: Order Set

Processing Order Sets

When you add an order set, CRIS displays the **Processing Orders** progress indicator that shows you the following

- The number of orders to be processed,
- Where CRIS is in processing the orders, and
- The number of warnings associated with the orders.

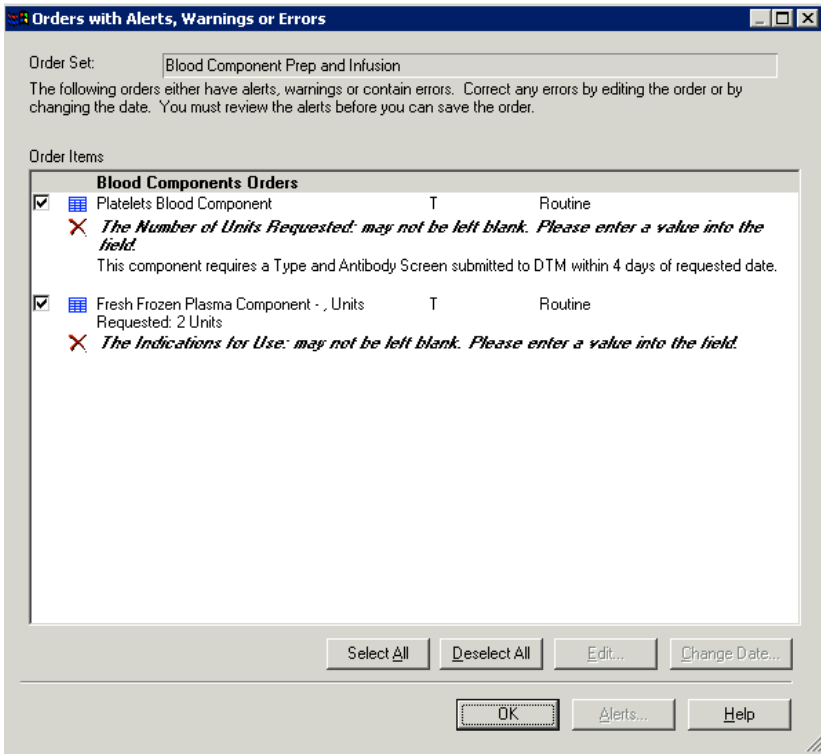
- Any warnings or errors display in a dialog box. After the order is completed, if there were warnings or errors, the **Orders With Alerts, Warnings or Errors** dialog box opens.



Screen 62: Processing Order Sets Dialog box

Alerts, Warnings or Errors When Processing Order Sets

This dialog box allows you to review any alerts, warnings, or errors for orders in an order set that violate clinical parameters, exceed dosage limits, and so on.

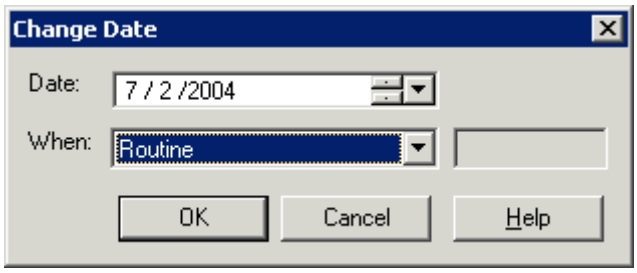


Screen 63: Orders with Alerts, Warnings or Errors Dialog box

Changing the Date for Order Items in an Order Set

The **Change Date** dialog box allows you to select one or more order items from an order set and change the start date(s).

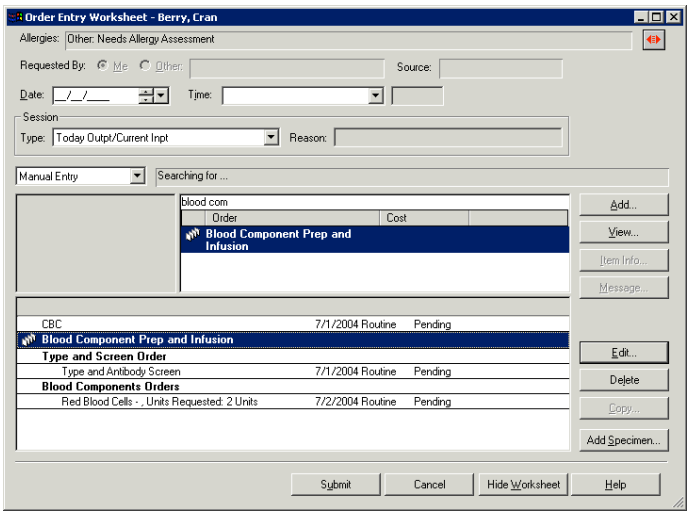
Note: If you choose several orders and apply a coded time that one (or more) of the orders does not support, those orders generate an error message, and you return to the **Order Set Summary** dialog box. The orders that generated errors are highlighted.



Screen 64: Change Order Set Date dialog box

To change the date of an unsubmitted order within an order set

1. In the **Order Summary** window of the **Order Entry Worksheet**, select the order set containing the order you want to modify and click **Edit**.
2. The **Order Set Summary** dialog box opens.



Screen 65: Unsubmitted Order Set

3. Select the order(s) for which you want to change the date, and click Change **Date**. The **Change Date** dialog box opens.
4. Specify a date and time for the order(s), then click **OK**. You are returned to the **Order Set Summary** dialog box.

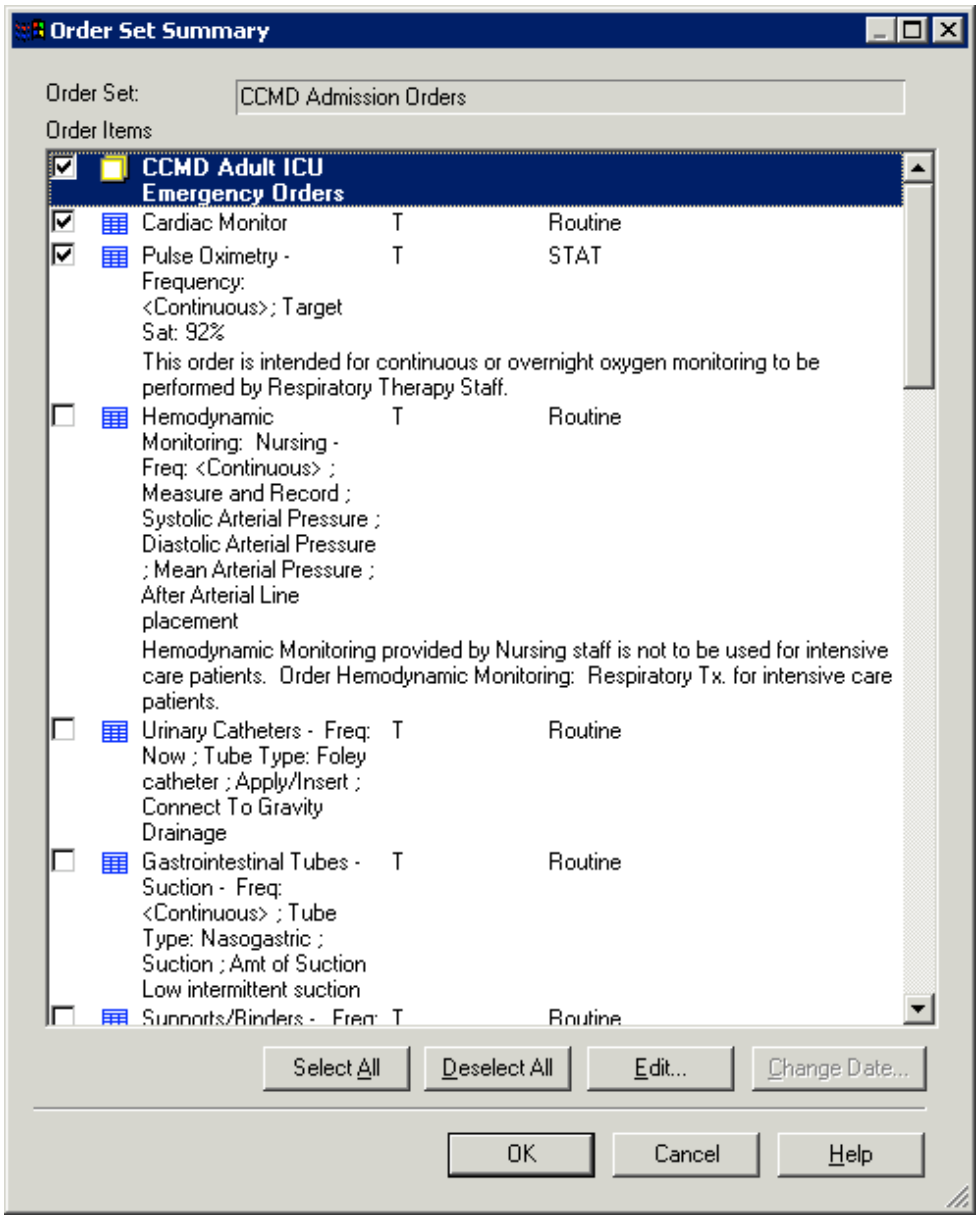
Note: When you change the date of a hold order, it releases the hold on the order.

5. Click **OK**.
6. Continue entering orders on the **Order Entry Worksheet**, or click **Submit** to submit the order set.

Department Specific Orders

Critical Care Medicine

Most CCMD orders are not available via the orders browse. These orders are restricted to CCMD Prescribers and are all part of order sets starting with CCMD. ACLS orders are only available through an order set call CCMD Admission Orders



Screen 66: ACLS Orders

DASS

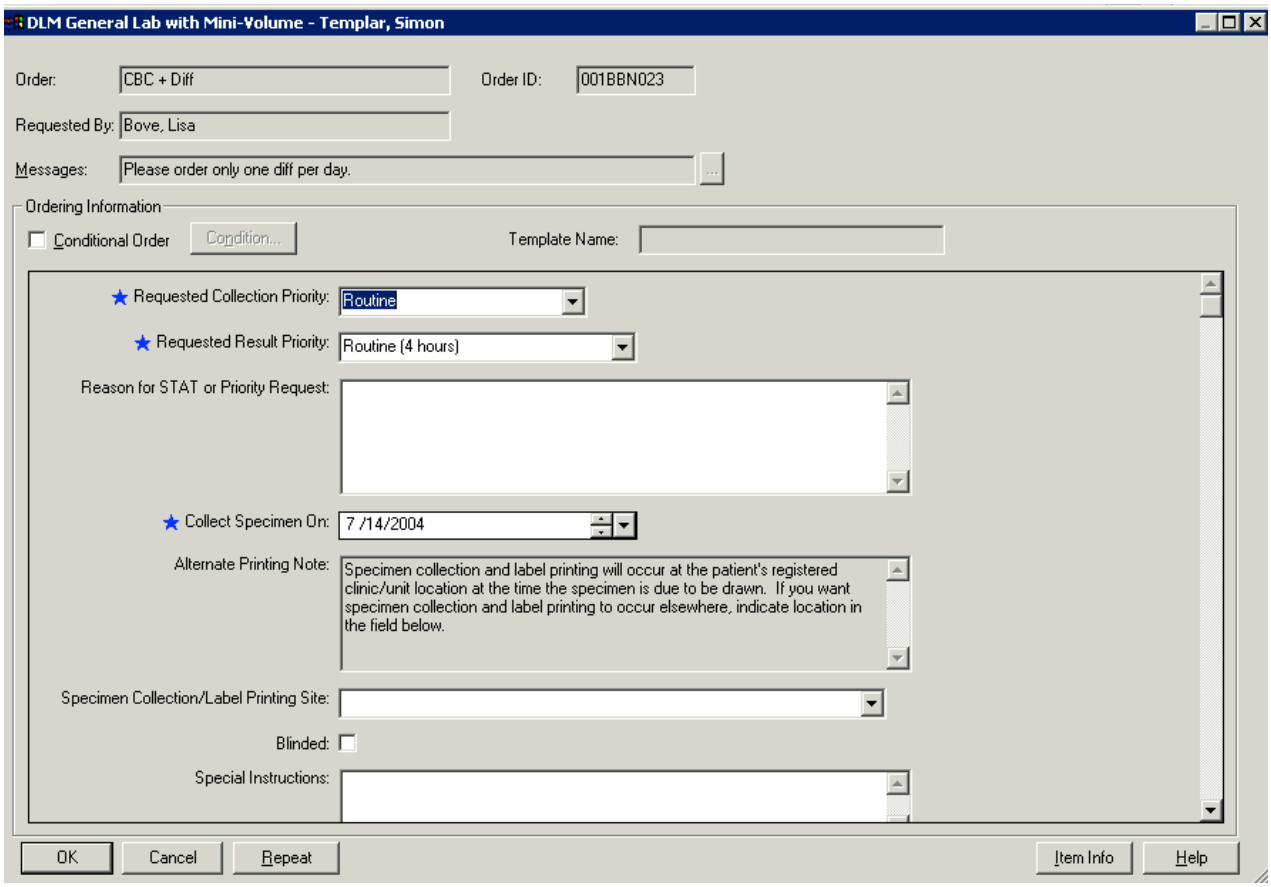
The following are the available DASS department service requests

- Off Site Anesthesia Request
- OR/Anesthesia Request

These service requests replace the MIS OR Scheduling Card (aka Mis-O-Gram) to communicate patient scheduling information for surgery and anesthesia services outside of the OR. The weekly OR Schedule is created by DASS from the data submitted on these service requests. Both of these service requests must be entered in the Session Type Current Inpt/Today Outpt session. DASS will not get notice of the request to book a case if entered in other session types.

Laboratory

Once entered into CRIS, Lab orders are interfaced to the Lab computer system for accessioning, specimen collection and resulting. Most lab orders use the same order form.



Screen 67: General Lab order entry form

General Laboratory order entry fields

1. Requested Collection Priority
   - Stat – same as in MIS, as defined by the department
   - Non-Stat Time Sensitive – needs to be done at a certain time (time specific)
   - Routine – each department defines routine
2. Requested Result Priority
   - Routine – resulted within 4 hours
   - Priority – resulted within 2 hours
   - STAT – resulted within 1 hour
3. Reason for Stat or Priority Request
   - Enter a note in this field to explain why the test is needed test or at a specific time.
4. Collect Specimen On
   - This field is used to define the date that you want the specimen collected.
5. Specimen Collection/ Label Printing Collection Site
   - Specimen collection and label printing will occur at the patient's registered clinic/unit location at the time the specimen is due to be drawn. If you want specimen collection and label printing to occur elsewhere, indicate location in the field.
6. Blinded Checkbox
   - Check this box if this study is part of a blinded study
7. Special Instructions
   - Use the special instructions field to enter information needed to process this order. Mail-in instructions would be entered into this field as well.

Lab orders will be entered in the Pending Collection status. All specimen collection information will be entered into the Lab system and sent to CRIS when updated.

DLM had standardized the number of serial samples for all tests

- 01-08
- 09-15
- 16-25
- 26-40

Certain Lab tests will require that the order requisition be sent to the lab along with the specimen. These include tests that require information written on the label and/or on the order requisition. Specimens sent to the lab with Admissions labels (no bar code label available) must always be sent with the Order Requisition. Information must be written and sent with drug test order

requisitions. If this information is missing, the test will be performed and a result comment attached to notify physician that additional information (dose, route, time) may be required for proper result interpretation.

Test Name	Information to be Included on Order Requisition	Information to be Written on Tube
DRUGS		
Acetaminophen	Time of draw	
Amikacin	Time, date, route of dose; time of draw; start-stop times of IV dose	
Carbamazepine	Time, date, route of dose; time of draw	
Cyclosporin	Time, date, route of dose; time of draw	
Digoxin	Time, date, route of dose; time of draw	
Gentamicin	Time, date, route of dose; time of draw;start-stop times of IV dose	
Lithium	Time, date, route of dose; time of draw	
Methotrexate	Time, date, route of dose; time of draw, start-stop times of IV dose	
Phenobarbitol	Time, date, route of dose; time of draw	
Phenytoin	Time, date, route of dose; time of draw	
Tacrolimus	Time, date, route of dose; time of draw	
Tobramycin	Time, date, route of dose; time of draw, start-stop times of IV dose	
Valproic Acid	Time, date, route of dose; time of draw	
Vancomycin	Time, date, route of dose; time of draw; start-stop times of IV dose	
Sirolimus	Dose, Time and date of last dose, time of draw	
Itraconazole	Pre, Post, or Random;Time and date of draw, infusion start/stop time, any antimicrobials	Write on Label: Pre or Post or Random (the same test must be ordered separately for Pre, Post, Random)

Test Name	Information to be Included on Order Requisition	Information to be Written on Tube
Flucytosine	Pre, Post, or Random;Time and date of draw, infusion start/stop time, any antimicrobials	Write on Label: Pre or Post or Random (the same test must be ordered separately for Pre, Post, Random)
Sulfamethoxazole	Pre, Post or Random;Time and date of draw, infusion start/stop, dose	Write on Label: Pre or Post or Random (the same test must be ordered separately for Pre, Post, Random)
Sulfonamides	Pre, Post or Random; Time and date of draw, dose, type of Sulfonamide	Write on Label: Pre or Post or Random (the same test must be ordered separately for Pre, Post, Random)
Sulfadiazine	Pre, Post or Random; Time and date of draw, dose, type of Sulfa drug	Write on Label: Pre or Post or Random (the same test must be ordered separately for Pre, Post, Random)
CRIS test name	Print order requisition with following information or write needed information on order requisition; send to DLM	
BLOOD GASES/ CCMD		
Blood Gas, Art.	FIO2, temperature	
Cooximeter Panel, Art.	FIO2, temperature	
Chem2,WB,Art.	FIO2, temperature	
Chem2,WB,Art,OR	FIO2, temperature	
Blood Gas, Ven.	Temperature	
Cooximeter Panel, Ven.	Temperature	
Chem2,WB,Ven.	Temperature	
Chem2,WB,Ven,OR	Temperature	
Microbiology Specimens	Send order requisitions for all Microbiology specimens	
MISCELLANEOUS		
24 hour Urine Tests	If Aliquot, Total volume of collection; date and time of collection	
A.M. list draws combined with later timed draw order		Send any extra bar code labels with the specimen
Amino Acid Quant, 1-5, Serum	List up to 5 specific Amino Acids to be tested	

Test Name	Information to be Included on Order Requisition	Information to be Written on Tube
Anti-Pneumococcal AB, Anti-Diphtheria, Haemophilus influenza B, Tetanus, Meningococcal	Pre, Post or Random	Write on Label: Pre or Post or Random (the same test must be ordered separately for Pre, Post, Random)
Anti Xa Low Molecular Weight Heparin		Write on Label: Time of the draw post injection
Body Fluid Tests	Type of body fluid	
Bone Marrow Analysis	Contains required patient information	
Chemo Differentials		Mark Label with Red dot
CSF specimens		Write on Label: Number of tube drawn
Indinavir, If patient is on		Write on Label: INDINAVIR
Mail in specimens	Date of Specimen Collection	Write on Label: "MI" or mail in
N-Methylhistamine, Ur	Indicate if Pt is on antihistamines. Volume if 24 hr collection	
Ntx-Telopeptides, Ur	Indicate if 24hr collection or random (must be other than 1st AM void).	
Organic Acids, Ur	Indicate suspected organic acids	
Research Blood, Urine,Other	Print requisition, send to performing lab	Write on Label: Collection time if required
Sendout Tests, "OTHER"	Name of approved Test	
Serial Tests	Write date of collection; Send Test requisition that includes specimen collection times; indicate time points variances	Send empty tube if time skipped (blood not drawn for that time point); send unused labels at end of sequence or empty tubes if already labeled.
Timed test		Write on Label: Time of draw
WBC STR Profile	Donor and recipient names	
Xylose-5gm dose, 5hr,ur	Dose and Time given, time drawn	
Xylose-25gm dose, 5hr,ur	Dose and Time given, time drawn	

Nursing

Three orders that alert nurses that a test or procedure is scheduled. These do not interface with CAS, just a send a message to Nursing.

- Unit Tests – most serial tests
- Procedure – On Unit
- Procedure – Off Unit
    - These service requests ask about conscious sedation so nurses can plan

Nutrition

The following are the available Nutrition department orders

- Diet Order
- Meal Delivery: Interrupt
- Nothing by Mouth – NPO
- Nutrition Consult (Clinical)
- Nutrition Consult (Research)
- Oral Supplements
- Paper Tray Service
- Pediatric Formulas
- Special Nutrition Requests
- Tube Feeding – Adult
- Tube Feeding - Pediatric

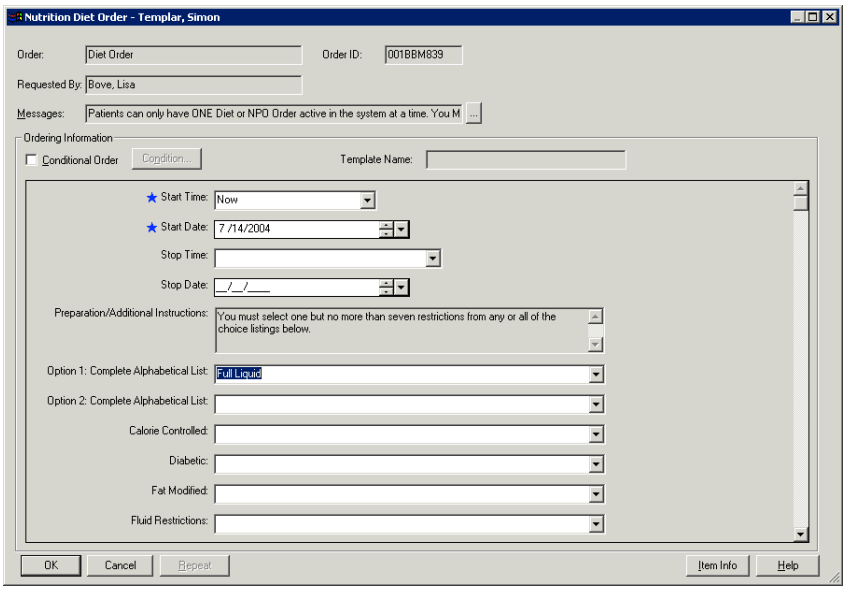
There is an interface between CRIS and the Nutrition Department computer system (CBORD)

- The Nutrition Department computer system only recognizes one order, the last one
- There is nowhere for Special Instructions to go in the Nutrition Department computer system, so it isn't on the diet or NPO form
- If you need to communicate something about the diet – where to deliver, no red Kool Aid – use the **Special Nutrition Request**

Diet Order

The Diet Order is used to enter any diet and specific restrictions. Up to seven (7) restrictions can be entered into the Diet Order at one time. A patient can only be on one active diet order at any point in time in our computer system. The patient can be on multiple restrictions (e.g. 1800 calories and 2 gram sodium), but only one order. The combination of restrictions, entered at the same time, form a diet order. All restrictions have to be entered at the same time to be active together If you enter a diet order for a 1800 calorie diet and then went back in and entered a 2 gram sodium diet for example, the nutrition department system would 'overwrite' the 1800 calorie diet with the 2 gram

sodium diet. When you want to change the patient's Diet Order, you should discontinue to active Diet Order and enter a new one.

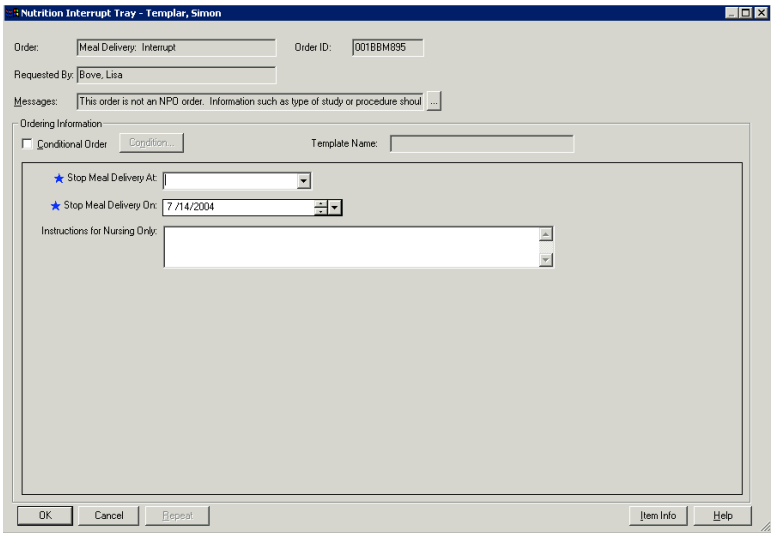


Screen 68: Diet Order form

The Option 1 and Option 2 fields include a list of all diets and restrictions. These fields can be used to enter the diet restrictions, or you can enter restrictions into the specific type below.

Meal Delivery: Interrupt

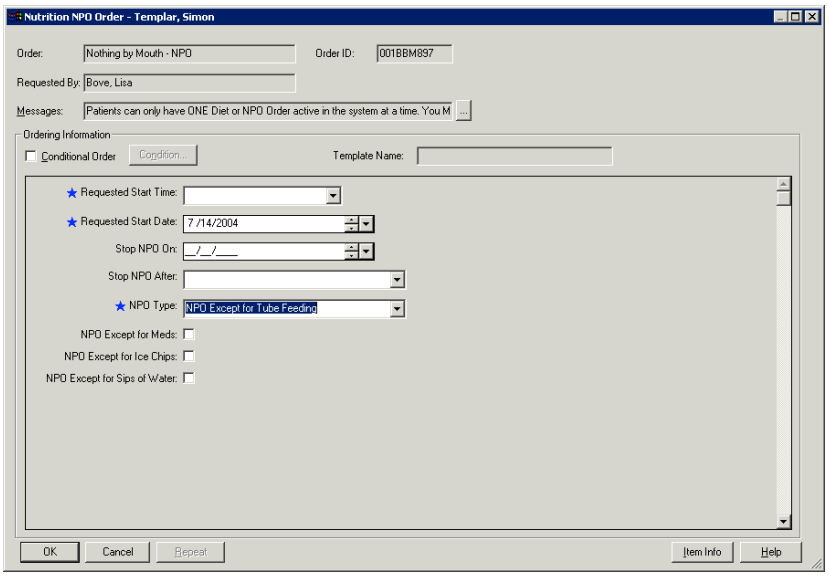
Meal Delivery: Interrupt is like the MIS Delay Tray and does not require a Prescriber; nursing can enter it or complete it. To stop a meal for a specific time, use the Meal Delivery: Interrupt order. This order allows you to specify which meal you want held. You can also add instructions for nursing if appropriate. When the patient can have meal service again, this order should be completed.



Screen 69: Meal Delivery: Interrupt order

Nothing by Mouth – NPO

Use the NPO order to stop all food service. You can enter specific nursing information in this order if needed, as well. This order should either include a stop date and time or should be completed when you want meal service to resume.



Screen 70: NPO Order

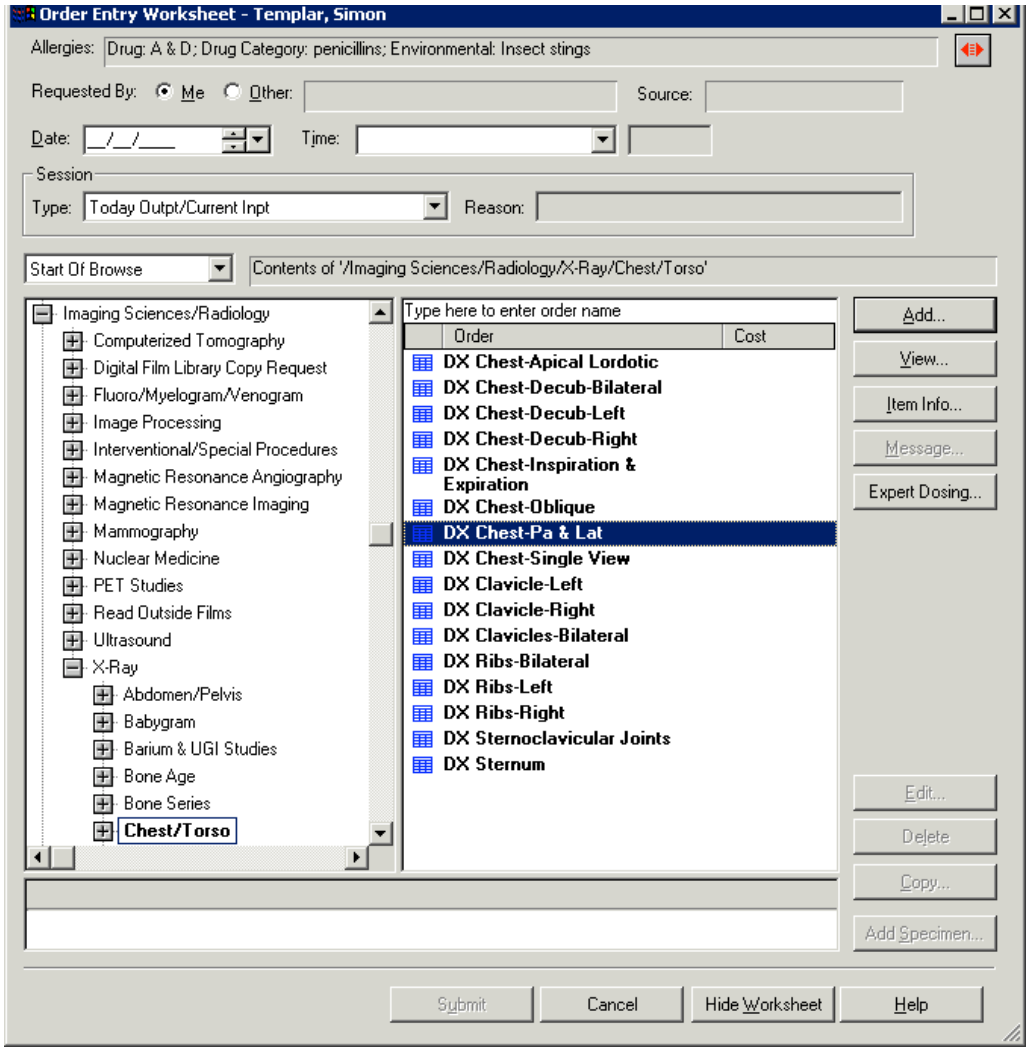
Imaging Sciences/ Radiology Orders

Ordering and Resulting Process

- The order is entered by Prescriber (or Agent for Prescriber) into CRIS and has a Pending Completion of Study status on Orders Tab.

- The order interfaces with Radiology Information System (RIS).
- The order also goes to Mitra Broker-All equipment queries patient information and study description.
- When the study is completed by the technologist in the RIS the message goes to and the RIS as sends a message to the Dictaphone interface which makes the Dictaphone ID valid.
- The Radiologist scans the Dictaphone ID located on the patient request with the Dictaphone equipment and dictates the report.
- The Transcriptionist types the report in the RIS and RIS sends the preliminary report to the CRIS the MITRA Broker, and to the Radiologist Case Signout application in RIS.
- The Radiologist signs the preliminary report in RIS and the RIS sends the Final report to CRIS interface and MITRA Broker.

The orders within the Imaging Department are grouped by service and the order names begin with the type of order, for example, NM for Nuclear Medicine, DX for X-Rays.



Screen 71: Imaging Sciences/Radiology order browse

Imaging X-Ray General - Templar, Simon

Order: DX Chest-Pa & Lat Order ID: 001BBQ184

Requested By: Bove, Lisa

Messages:

Ordering Information

Conditional Order Condition... Template Name:

★ Priority:

Reason for STAT or Priority Precedence:

★ Schedule Patient for Test/Exam On: __/__/____

★ Reason for Exam/Diagnoses/History:

★ Location of Exam: 01 - Radiology Department

★ Pregnancy Status: 02 - No

★ Can Pt Comprehend English Instructions: 01 - Yes

★ Transport Mode: 01 - Ambulatory

Special Instructions:

OK Cancel Repeat Item Info Help

Screen 72: General Radiology order form

General Radiology order entry fields

1. Priority
   - Stat – same as in MIS, as defined by the department
   - Non-Stat Time Sensitive – needs to be done at a certain time (time specific) – use this priority for 'On Call' procedures. Prescribers ordering exams for MRI, Special Procedures/Interventional Radiology and Nuclear Medicine imaging should select a date and time of 12:00 hours in advance. This will be considered as a time request; it will not necessarily be the time the imaging procedure will be performed.
   - Routine – each department defines routine
2. Reason for Stat or Priority Request
   - Enter a note in this field to explain why the test is needed test or at a specific time.
3. Schedule Patient for Test/Exam on
   - This field is used to define the date that you want the test done.

4. Reason for Exam/Diagnosis/History
   - Use this field to enter information needed to describe the expected purpose of the study.
5. Blinded Checkbox
   - Check this box if this study is part of a blinded study
6. Special Instructions
   - Use the special instructions field to enter information needed to process this order. Mail-in instructions would be entered into this field as well.

Lab orders will be entered in the Pending Collection status. All specimen collection information will be entered into the Lab system and sent to CRIS when updated.

ORDER and RESULT STATUS MATRIX FOR IMAGING SCIENCES PROGRAM				
EVENT	**SYSTEM STATUS**			
	MIS	Radiology System (RIS)	CRIS	
			ORDERS TAB	**RESULTS TAB**
Order exam in CRIS			If ordered for < 72 hours from now: "Pending Completion of Study" If ordered for > 72 hours from now: "Pending"	None
Started and Completed Study in RIS	In Progress	Start and complete	Performed	None
Transcribe report	Preliminary Results	Transcribed	Interim Results Received	Preliminary
Radiologist review and sign in RIS	Final	Final (preliminary Report)	1 or more final results received	Final
Cancellations or Changes to Order or Result:				
Order cancelled by Prescriber (In			Discontinued	None

ORDER and RESULT STATUS MATRIX FOR IMAGING SCIENCES PROGRAM				
EVENT	**SYSTEM STATUS**			
	MIS	Radiology System (RIS)	CRIS	
			ORDERS TAB	**RESULTS TAB**
CRIS)-If Pending Completion of Study status				
Order cancelled by Prescriber (In CRIS)-If Pending status			Cancelled	None
Result Corrected or Amended		Addendum	Corrected Result	Modified
Multiple studies dictated together	If before signature: "Preliminary" If after signature: "Final"	If before signature: "Transcribed" If after signature: "Final"	If before signature: "Interim results received" If after signature: "1 or more final results received"	If before signature: "Preliminary" If after signature: "Final"
Cancelled in Cerner			Cancelled by Performing Department	None
Replacement Exam in RIS-When ordered			Pending Completion (for that day or next day), Pending (for 3rd day on)	None

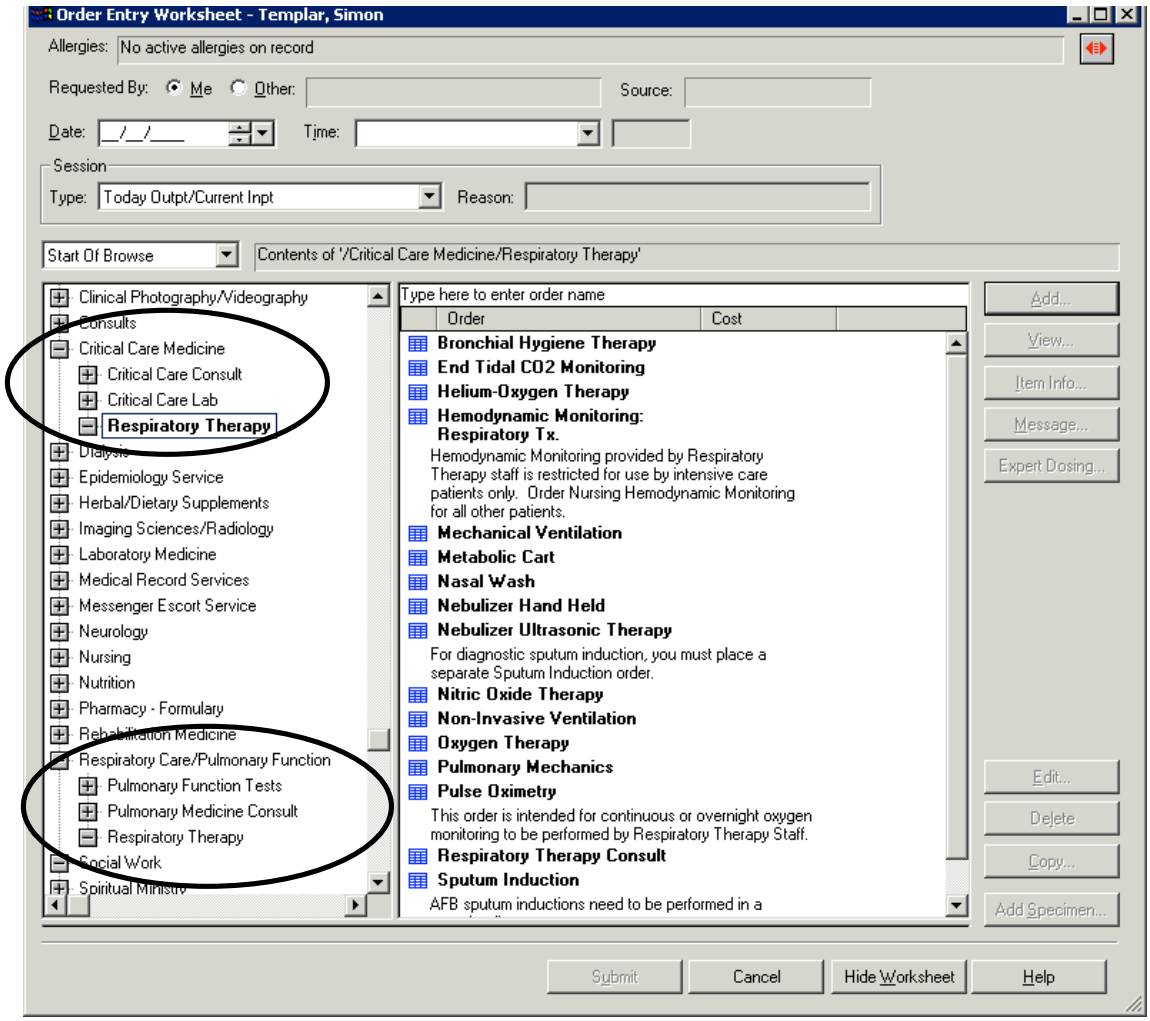
ORDER and RESULT STATUS MATRIX FOR IMAGING SCIENCES PROGRAM				
EVENT	**SYSTEM STATUS**			
	MIS	Radiology System (RIS)	CRIS	
			ORDERS TAB	**RESULTS TAB**
Replacement Exam in RIS-When Started and Completed in RIS		Start and complete	Performed	None
Replacement Exam in RIS-When Transcribed in RIS		Transcribed	Interim Results Received	Preliminary
Radiologist review and sign in RIS		Final (preliminary Report)	1 or more final results received	Final

Screen 73: Imaging Service Result and Order Status

Respiratory Therapy

Respiratory orders can be found in two places on the order browse

- Critical Care Medicine – Respiratory Therapy
- Respiratory Care/ Pulmonary Function – Respiratory Therapy



Screen 74: Respiratory Therapy Orders

- Respiratory therapy treatments requiring medication administration will be documented on the worklist.
- Orders for Pentamidine and Ribavirin require an order for a Respiratory Therapy Consult to order the required negative flow room.
- To order oxygen therapy for home use when a patient is on a pass, Prescriber should enter a Respiratory Therapy Consult order and specify requirements.

Respiratory Therapy Consult - Templar, Simon

Order: Respiratory Therapy Consult Order ID: 001BBM904

Requested By: Bove, Lisa

Messages:

Ordering Information

Conditional Order Condition... Template Name:

Priority: Routine (Today)

Reason for STAT or Priority Precedence:

Request Consult On: 7 /14/2004

Reason for Consult: patient going on pass needs take home oxygen

Location of Consult: 01 - Bedside

Educational Need:

Special Instructions:

OK Cancel Repeat Item Info Help

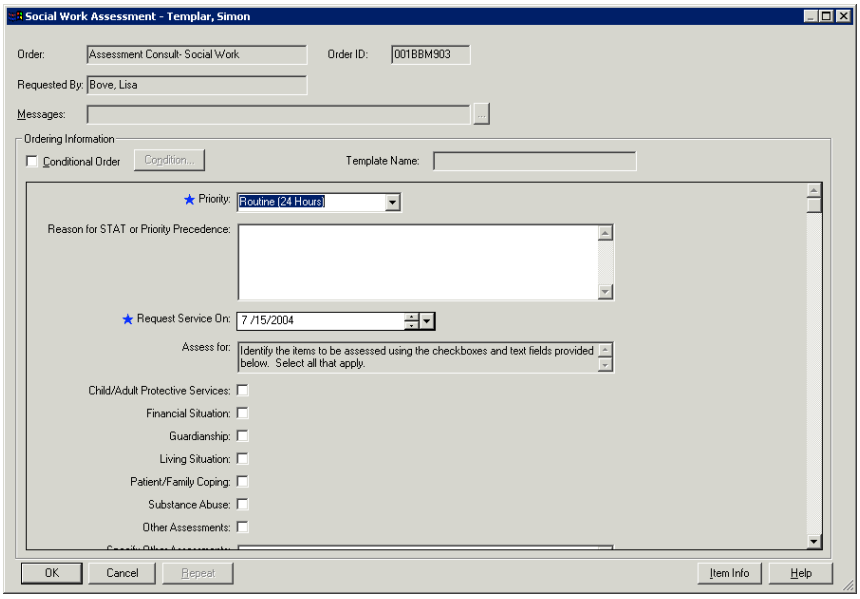
Screen 75: Respiratory Therapy Consult order

Social Work

The following are the available Social Work department orders

- Assessment - Consult
- Counseling
- Discharge Planning
- Education
- Language Interpreter
- Patient Resources
- Social Work - Participation in Conference

Social workers enter their consult document under Clinical Documentation. Social work orders will be manually completed once the order is carried out and documented.

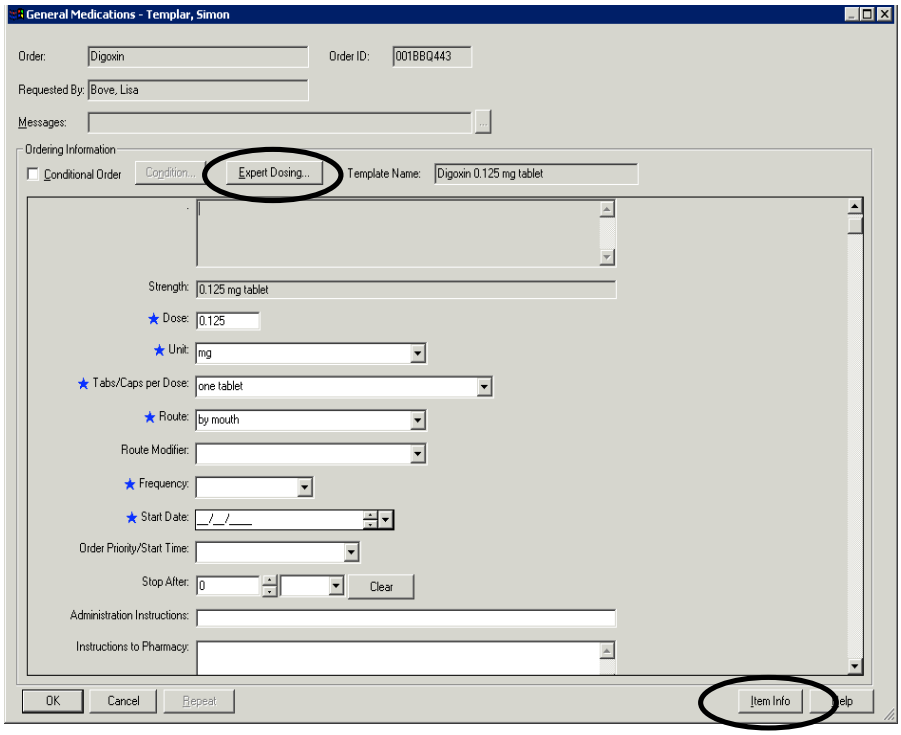


Screen 76: Social Work consult order

Medication Orders

Overview of medication orders

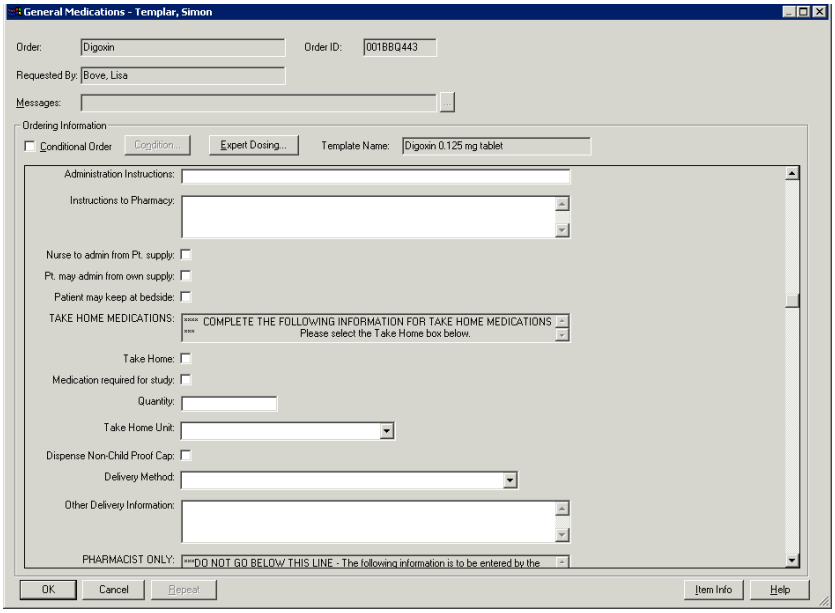
Most medications and IVs use a similar order entry form.



Screen 77: Medication order entry window

Selected general medication order entry fields

1. First gray field
   - This field is used to display medication information (if available). In addition, you can click on the Item Info button at the bottom of the screen to link to Micromedex.
   - In addition, some medications have attached expert dosing available. To access the expert dosing information, click on the Expert Dosing button near the top of the form.
2. Strength
   - Pre-filled, view only field
3. Dose
   - Pre-filled, can be calculated
   - Required
4. Unit
   - Drop-down list of available dispensing units
   - Required
5. Tabs/Caps per Dose
   - Drop-down list of available dispensing units
   - Required
6. Route
   - Drop-down list of available dispensing units
   - Required
7. Frequency
   - Drop-down list of available dispensing units
   - Required
8. Start Date
   - This field is used to define the date that you want the medication started.



Screen 78: Medication order entry form continued

Additional fields include instructions for pharmacy, fields to define take home medications, prn medications and pharmacy only dispensing fields.

Take home medication orders

Prescribers order take-home medications in both inpatient and outpatient settings. All take-home medications, including discharge, pass, and clinic prescriptions, are ordered under a TAKE HOME MEDICATION session type in CRIS. This directs the orders to the Outpatient Pharmacy for dispensing to the patient. It also allows the order to remain active across subsequent inpatient and outpatient visits, thus facilitating refills by the Clinical Center pharmacy.

- Orders for take home medications are entered as TAKE HOME Active medication orders cannot be "converted" to take-home medications as has been done in MIS. Take-home medications in CRIS require a new medical order entered under a TAKE HOME MEDICATION session type.
    - Orders of current inpatient medications for take home are reordered as TAKE HOME MEDICATION session type using the Reorder function (available by right-clicking on an order in CRIS).
    - Orders of different medications for use at home are placed as new orders in the TAKE HOME MEDICATION session type.
- Take-home medications are not included on the Medication Worklist used by the nurses to document medication administration.
- There are alerts warning of possible drug allergies and/or drug-drug interactions that may appear when placing medication orders.
- Pharmacy verification of the order is documented. No medication orders are active until verified by the pharmacy.
- Prescribers, pharmacists, and nurses are able to view a history of all take-home medications dispensed, as well as their remaining allowable refills.
- The first dose of a take-home medication is sometimes ordered to be given by the nurse before the patient leaves the Clinical Center. This dose can be included in and documented on the Medication Worklist if ordered as a separate one-time order in the Today Outpt/Current Inpt session type.

Screen 79: Take Home Medication Icon

Steps

- The Prescriber enters orders for take-home medications under the **Take Home Medication** session type.

- The Prescriber submits the order. The order will display in the order summary as "pending verification".
- The pharmacist verifies the order; and the order status changes to active.
- Upon verification by the pharmacist, order requisitions print in the patient location and in outpatient pharmacy.
- The pharmacist prepares the medication, documents the medication to be dispensed, including the amount (e.g., 1 month supply) to be dispensed and allowable future refills and dispenses the medication as indicated in the order.

Add an additive to an IV solution order

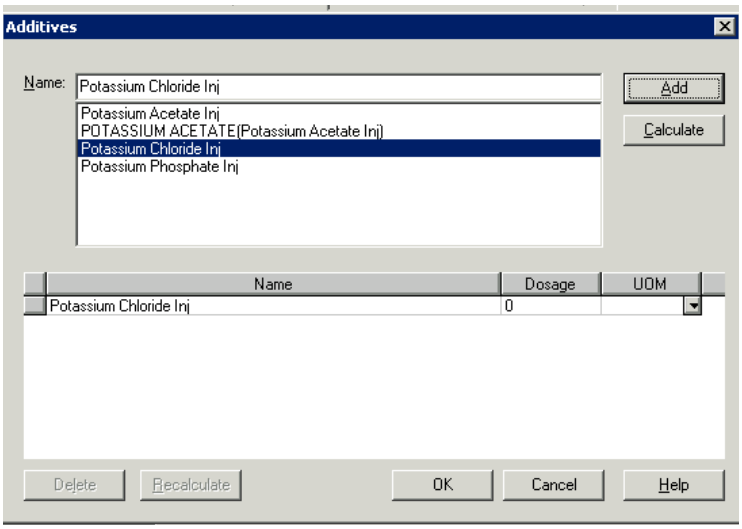
The **Additives** dialog box allows you to enter one or more additives for an IV solution order. If the **Additive** button does not appear on the order form, you cannot add an additive to that order.

To add additives to an IV solution

1. Open the **Order Entry Worksheet**.
2. From the **Order Browse** or **Manual Entry**, choose an IV solution order.
3. Click **Add**. The order form for the solution opens.
4. To the right of the **Additives** field, click the **Additive** button.

Screen 80: IV Additives Icon

The **Additive** dialog box opens.



Screen 81: IV Additive window

5. In the **Name** field, enter the first few characters of an additive name and pause. The additives that start with the characters you typed display in the **Additive** list.

6. Select the additive you want from the list and click **Add**.
7. In the **Additives** grid, for each additive, enter a dosage in the **Dosage** cell and select a unit of measurement from the **UOM** cell.
8. Repeat steps 5 through 7 to add all additives as appropriate.
9. Click **OK**. The additives are checked and a message displays if no dose has been specified for any of the additives. You return to the order form.
10. Click **OK** to add the order to the **Order Summary** window of the **Order Entry Worksheet**.

Delete an additive from an order

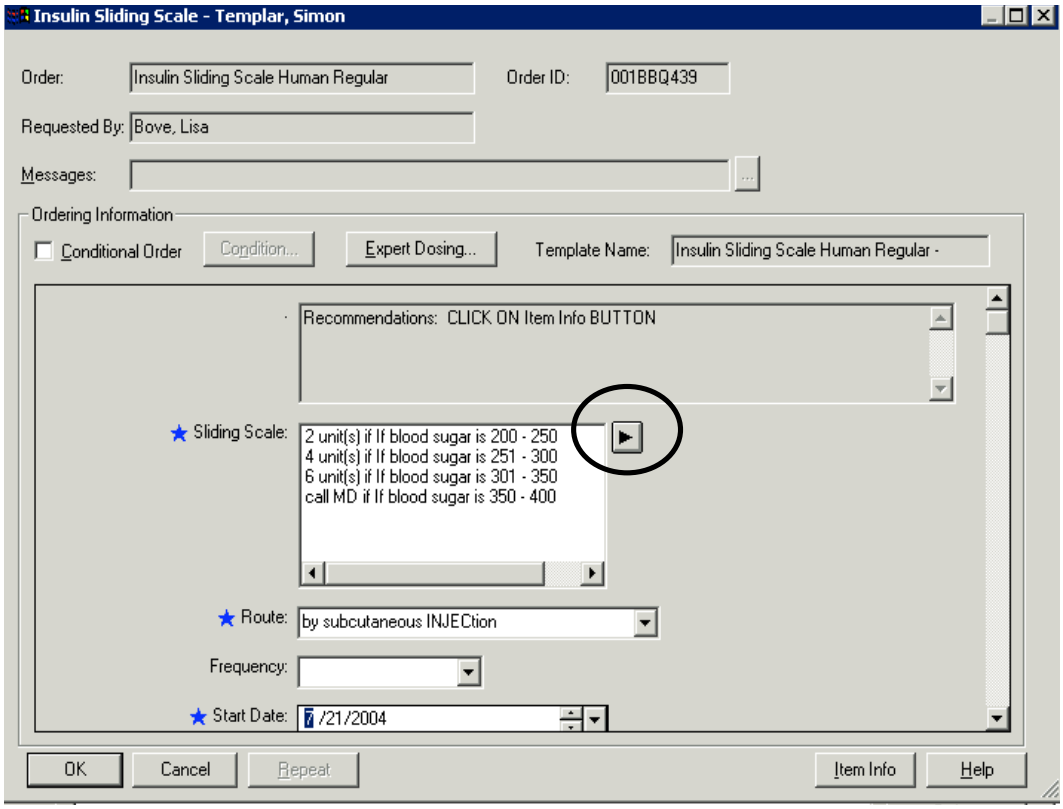
You can delete an additive from an order before you submit the order. After an order has been submitted, you cannot delete it or any additives associated with it, but you can cancel the order.

To remove an additive from an IV order

1. Do one of the following
    a. If you have the order form displayed, go to step 2.
    b. If you have added the order to the **Order Summary** window of the **Order Entry Worksheet**, select the order and click **Edit**.
2. Click the **Additive** button next to the **Additives** field. The **Additives** dialog box opens.
3. Click the button to the left of the additive you want to delete.
4. Click **Delete**.
5. Click **OK**. You return to the order form.

Enter a variable-dose medication order

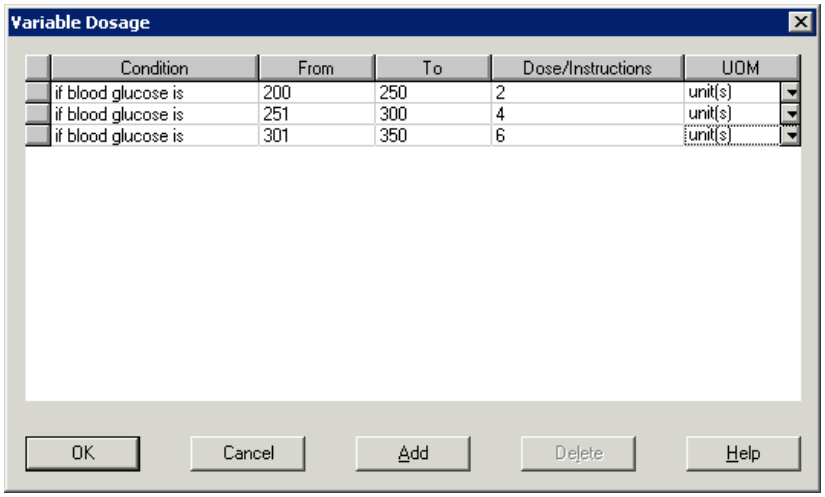
When entering an order, you can specify variable doses that are titrated based on changing laboratory parameters. For example, you can specify a sliding scale insulin order based on glucometer readings/serum glucose levels, or a variable heparin dosage based on PTT results.



Screen 82: Variable Dose Icon

To enter a variable-dose order

1. In the **Order Browse**, select a medication order and click **Add**.
    a. If the order is not pre-filled, the order form for the order opens.
    b. If the order is pre-filled, it is added directly to the **Order Summary** window. Select the order and click **Edit** to open the order form.
2. Click the variable dose icon, the large arrow next to the large white box. The **Variable Dosage** dialog box opens.



Screen 83: Variable Dose Window

3. In the **Condition** field, enter the condition.
4. In the **From** field, enter the low value of the lab test.
5. If desired, in the **To** field, enter the high value of the lab test.
6. In the **Dose/Instructions** field, enter the desired information.
7. In the **UOM** field, select the appropriate units of measurement.
8. To add another condition, click **Add** and perform steps 3 through 7. Enter as many conditions, ranges, and doses as apply.
9. To remove a condition, select the condition and click **Delete**.
10. Click **OK**. The **Variable Dosage** dialog box closes and the conditions, ranges, and doses are listed in the **Variable Dose** field on the order form.

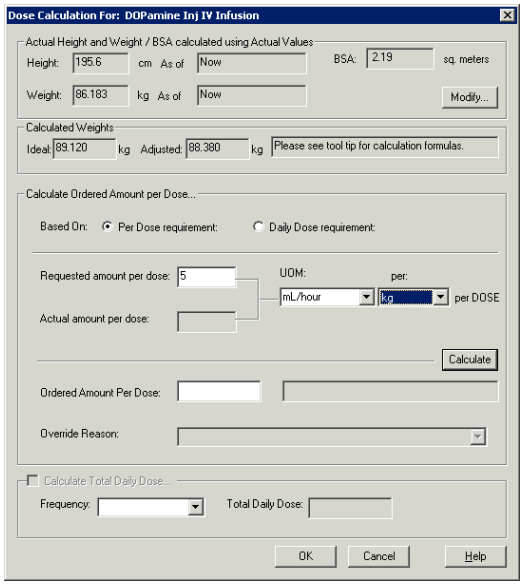
Calculate a dosage for a medication order

Screen 84: Dose Calculation Icon

When an order form includes the **Calculated Dose** and **Calc Info** fields, you can use an online calculator to determine the correct dose for a medication order. You can calculate a dose based on the per dose requirement or the daily dose requirement. You click the equal sign next to the **Calculated Dose** field to open the **Dose Calculation** dialog box.

The patient's height, weight, and body surface area are used to calculate the dose. If the height and weight haven't been entered, the **Height/Weight** dialog box displays automatically when you click the equal sign to open the **Dose Calculation** dialog box.

Once you have calculated a dose, you can recalculate it directly from the order form.



Screen 85: Dose Calculation Dialog box

To calculate a dose based on the per dose requirement

1. On the order form, click the equal sign next to the **Calculated Dose** field.
2. The **Dose Calculation** dialog box opens. If the height and weight have not been entered for the patient, the **Height/Weight** dialog box opens. After you enter the height and weight and click **OK**, the **Dose Calculation** dialog box displays.
3. Review the patient's height, weight, and body surface area. Click **Modify** to change the values in the **Height/Weight** dialog box, if desired.
4. If it is not already selected, click **Per dose requirement**.
5. Enter the requested amount of the medication in the **Requested amount per dose** field.
6. From the **UOM** drop-down list, select a unit of measure.
7. From the **per** drop-down list, select **kg** or **m2** (square meters).
8. Do one of the following
    a. Click **Calculate**.
    b. Press **Tab**.
9. Place the cursor in the **Ordered Amount Per Dose** field.
10. The dose is calculated and displayed in bold text in the **Ordered Amount Per Dose** field.
11. Optionally, select a **Frequency** from the drop-down list and check the **Calculate total daily dose** check box. The total daily dose is displayed.
    Note: You can override the calculated dose, if desired.

12. Click **OK**. The fields in the order form are updated to display the calculated dose. The **Calc Info** field displays the formula that was used to calculate the dose.

To calculate a dose based on the daily dose requirement

1. On the order form, click the equal sign next to the **Calculated Dose** field.
2. The **Dose Calculation** dialog box opens. If the height and weight have not been entered for the patient, the **Height/Weight** dialog box opens. After you enter the height and weight and click **OK**, the **Dose Calculation** dialog box displays.
3. Review the patient's height, weight, and body surface area. Click **Modify** to change the values in the **Height/Weight** dialog box, if desired.
4. Click **Daily dose requirement**.
5. Enter the requested amount of the medication in the **Requested Daily Amount** field.
6. From the **UOM** drop-down list, select a unit of measure.
7. From the **Per** drop-down list, select **kg** or **m2** (square meters).
8. Select a **Frequency** from the drop-down list.
9. Do one of the following
    a. Click **Calculate**.
    b. Press Tab.
10. Place the cursor in the **Ordered Amount Per Dose** field.
11. The dose is calculated and displayed in bold text in the **Ordered Amount Per Dose** field. **Note:** You can override the calculated dose, if desired.
12. Click **OK**. The fields in the order form are updated to display the calculated dose. The **Calc Info** field displays the formula that was used to calculate the dose.

Change a calculated dose

After a dose has been calculated, you can change it in the **Dose Calculation** dialog box or from the order form. You must enter the reason you are changing the dose in the **Override Reason** field. You can choose a predefined reason, or enter free text.

To change a calculated dose from the Dose Calculation dialog box

1. In the **Ordered Amount Per Dose** field, enter the desired dose.
2. The **Override Reason** field becomes active.
3. Enter an override reason or select a reason from the drop-down list.
4. Click **OK**.

To change a calculated dose from the order form

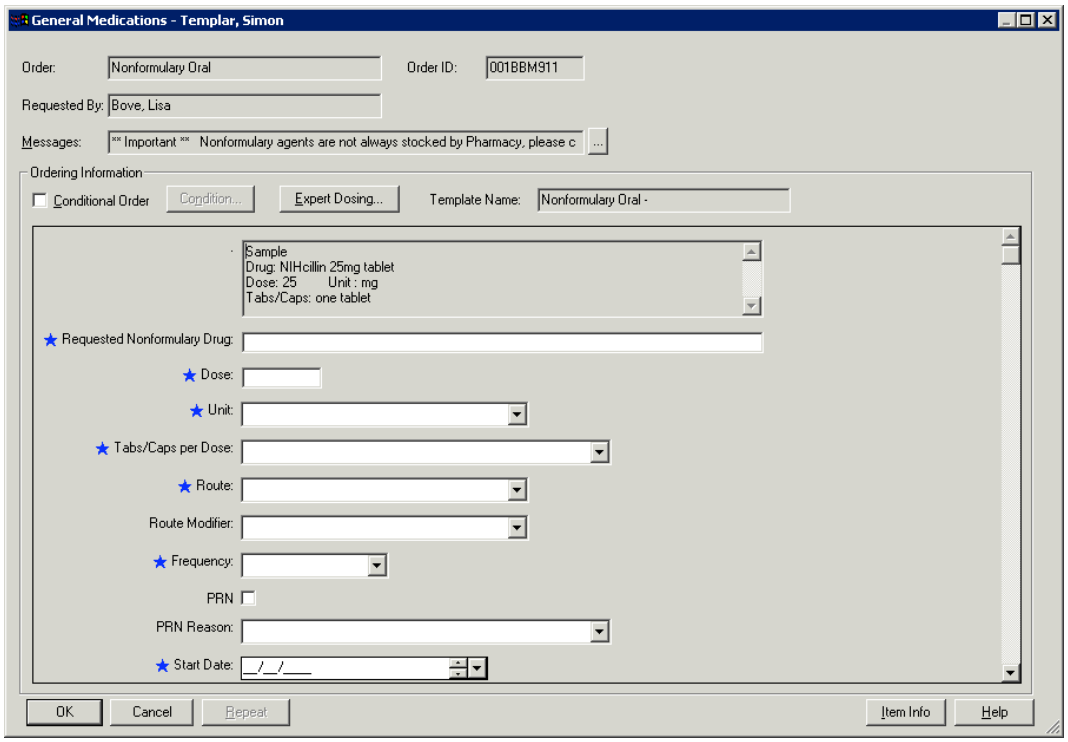
1. Enter the desired dose in the **Calculated Dose** field and press Tab to move to the next field.
2. A message displays, asking you to provide an override reason. Click **OK**.
3. The **Dose Calculation** dialog box opens, with the **Override Reason** field active.
4. Enter an override reason, or select a reason from the drop-down list.
5. Click **OK**.

Changing the patient's height or weight for a calculated dose

If you change the patient's height and weight in the order form after a dose has been calculated, the **Calculated Dose** field is automatically updated when you enter a new value in the **Height** or **Weight** fields and press Tab to move to the next field.

Non-Formulary Medications

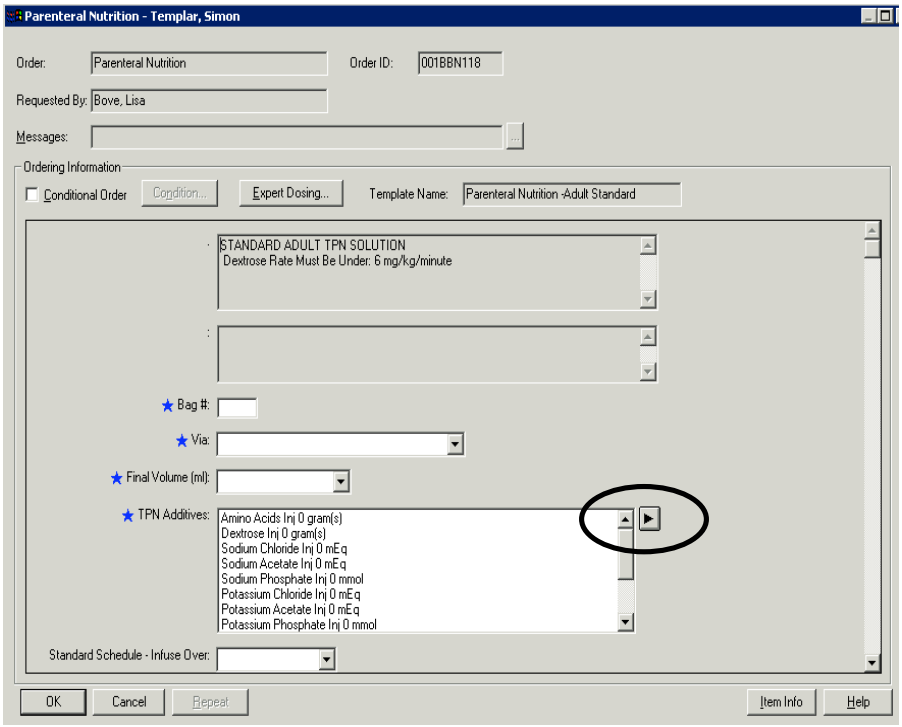
You can order non-formulary medications if needed. A number of orders are available via manual entry, which all start with **Nonformulary**. Select the appropriate type of nonformulary product, such as **Nonformulary Inj**, **Nonformulary Oral**, etc. Enter all the appropriate information including the medication name and dose, as well as any specific instructions needed.



Screen 86: Nonformulary medication order form

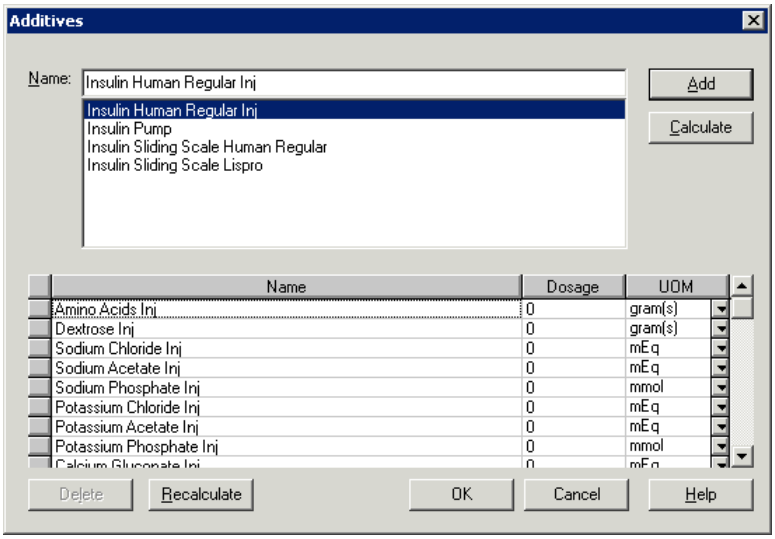
TPN

TPN orders have some fields pre-filled. Additive amounts, however, must be entered before submitting these orders.



Screen 87: TPN Order Entry Form

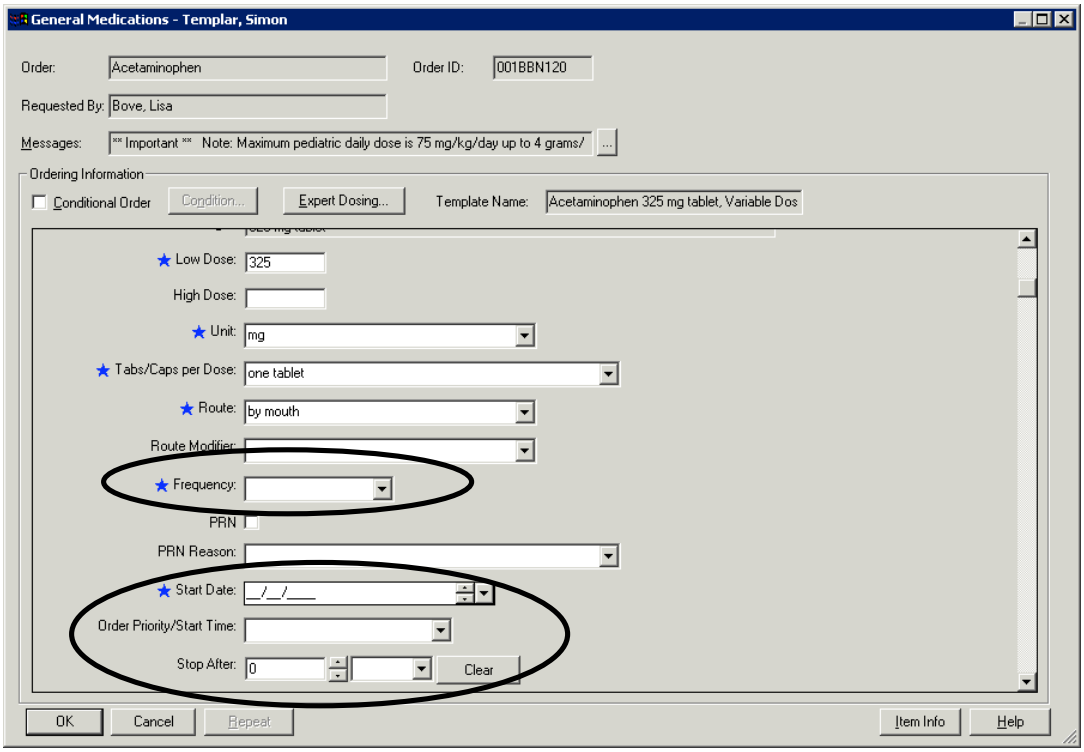
To add the additives amounts, click the arrow next to the TPN Additives field.



Screen 88: Additives Dialog box

Scheduled Meds

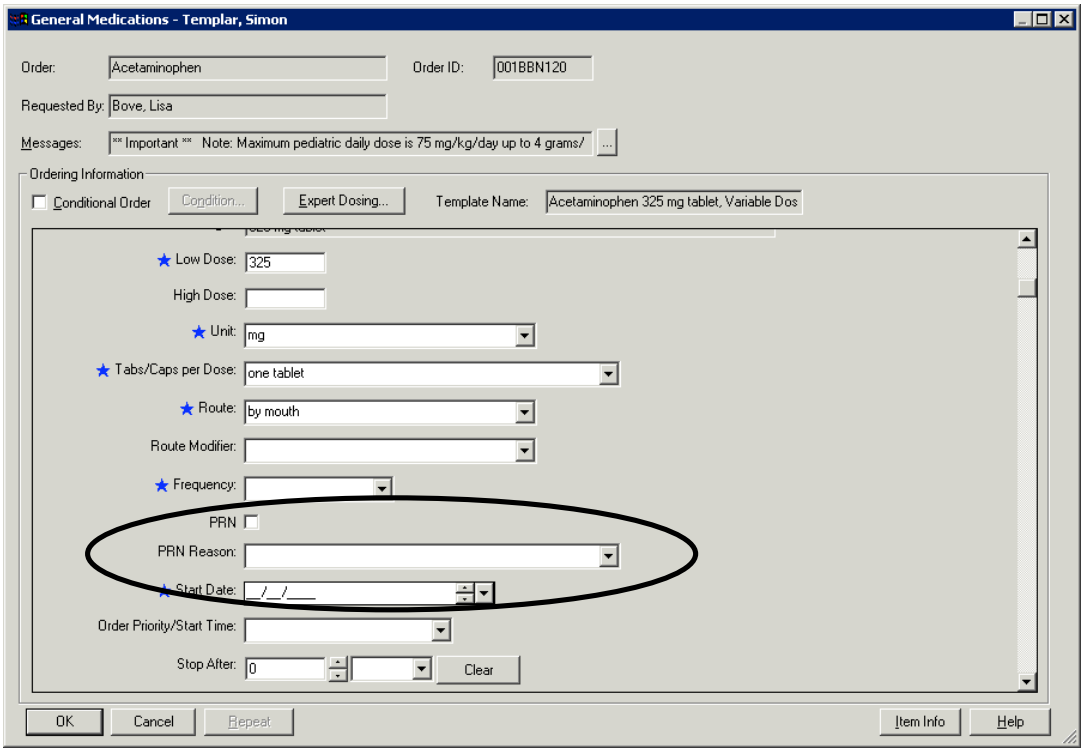
Medications display on the Worklist based on the start date, stop date and frequency fields. Completing these fields is necessary to correct administer these medications.



Screen 89: Scheduled medication order entry form

PRN Medications

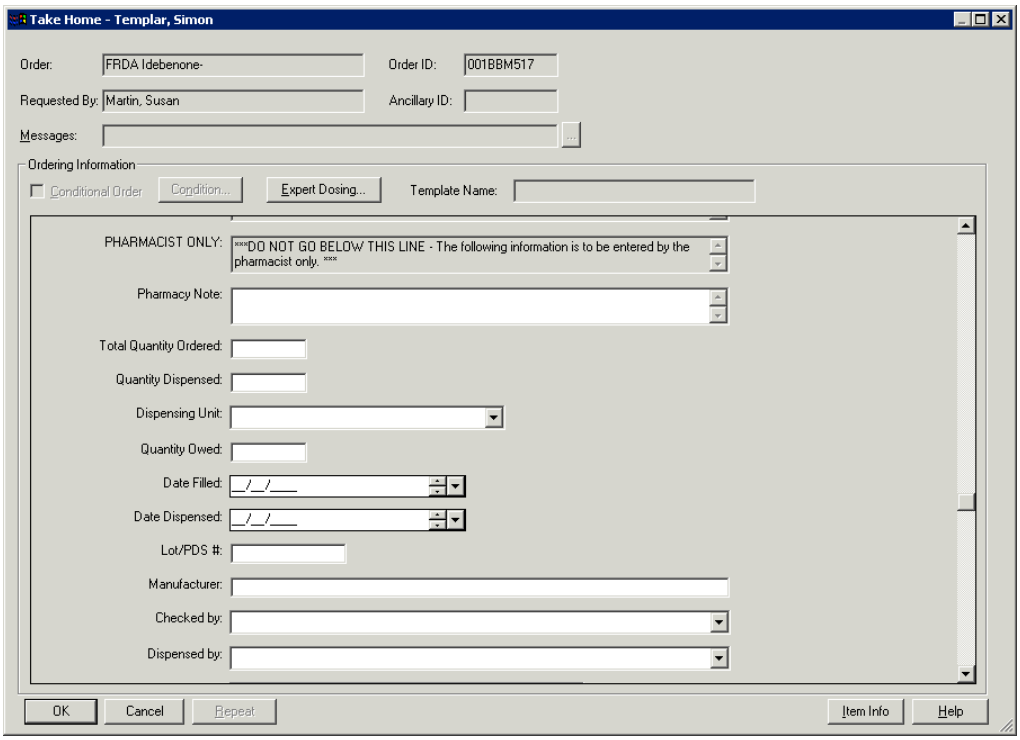
Medications display on the Worklist as PRN only if the PRN checkbox is checked. In addition, completing the PRN Reason field will instruct the nurse when they can administer the medication.



Screen 90: PRN Medication Order Entry form

Dispensing Medications

Pharmacists will add dispensing information to the order entry form when they dispense the medication to the patient. These fields are marked as Pharmacist Only fields and are the only fields that are active when you modify an order.



Screen 91: Pharmacist dispensing fields

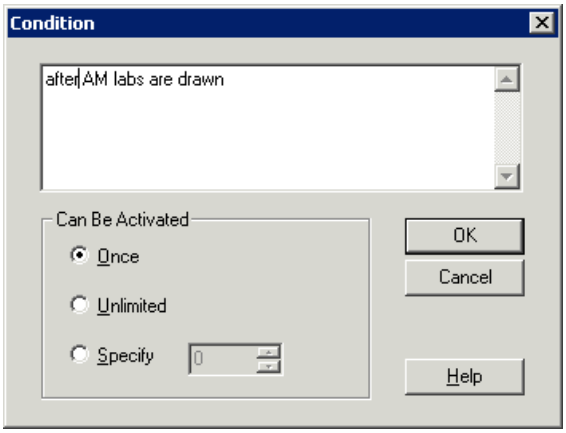
To dispense medications

1. Right-click on the order you wish to dispense.
2. Select **Modify Order – Requested by Me**. The Order Entry field will display.
3. Enter the appropriate information into the dispensing fields (white fields).
4. Click **OK**.

Special Orders

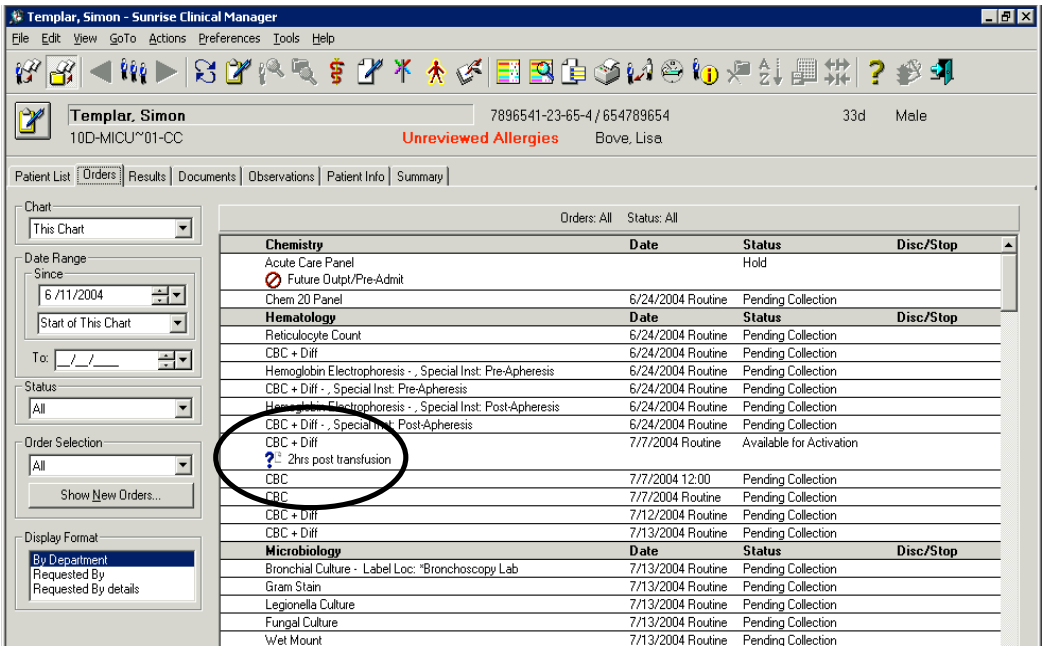
Conditional Orders

A conditional order is one that is activated when certain conditions are met. The **Condition** dialog box lets you specify the conditions that must be met for an order to be performed.



Screen 92: Condition Dialog box

The Conditional order functionality allows a Prescriber to write and enter a "conditional" medical order for future activation, based on specific requirements contained within the original order, e.g., CBC 2 hours after a red blood cell infusion is completed. Using this functionality, the Prescriber would enter an order for future execution and place the order in a special conditional status. Conditional orders are displayed with a question mark icon to visually identify their conditional status.



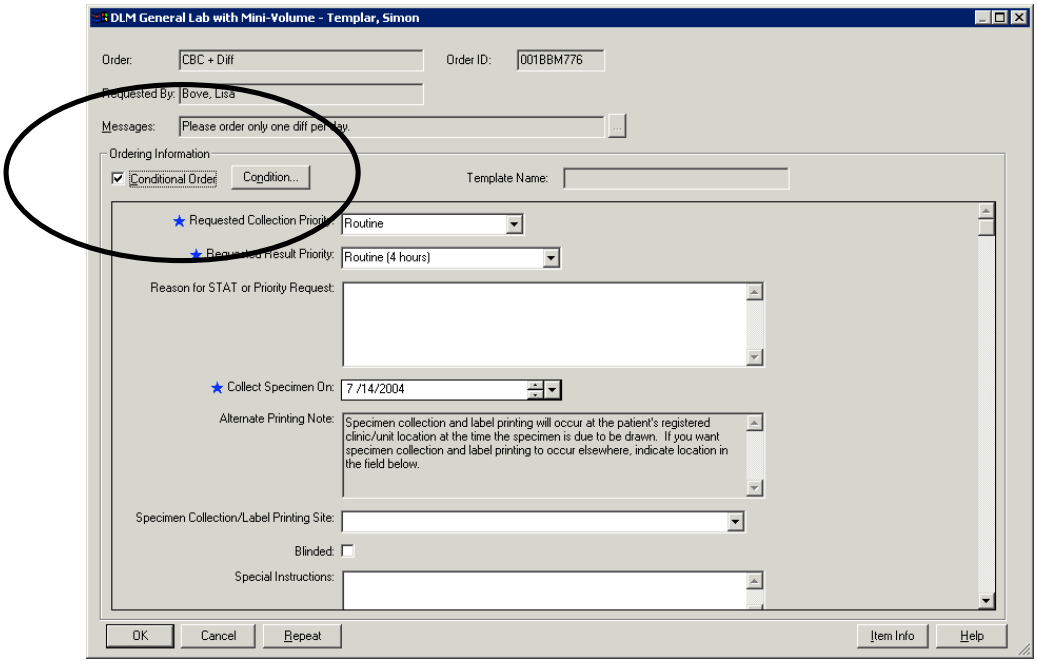
Screen 93: Conditional Order icon

The conditional order can then be activated by another Prescriber, or by a member of the Affiliate Medical Staff (considering their professional licensure, scope of practice, condition of the patient, and compliance with the conditions for execution set in the original conditional order). The activation of a conditional order must be done manually. Activation cannot automatically be done by the

system itself (e.g., automatically activate order when the patient returns for next outpatient visit).

To enter a conditional order

1. In the **Order Browse** of the **Order Entry Worksheet**, select an order that has an **Order Form** icon next to it, or select an order in the **Order Summary** window and click **Add**. The order form opens.
2. Check the **Conditional Order** check box. The **Condition** dialog box automatically opens.



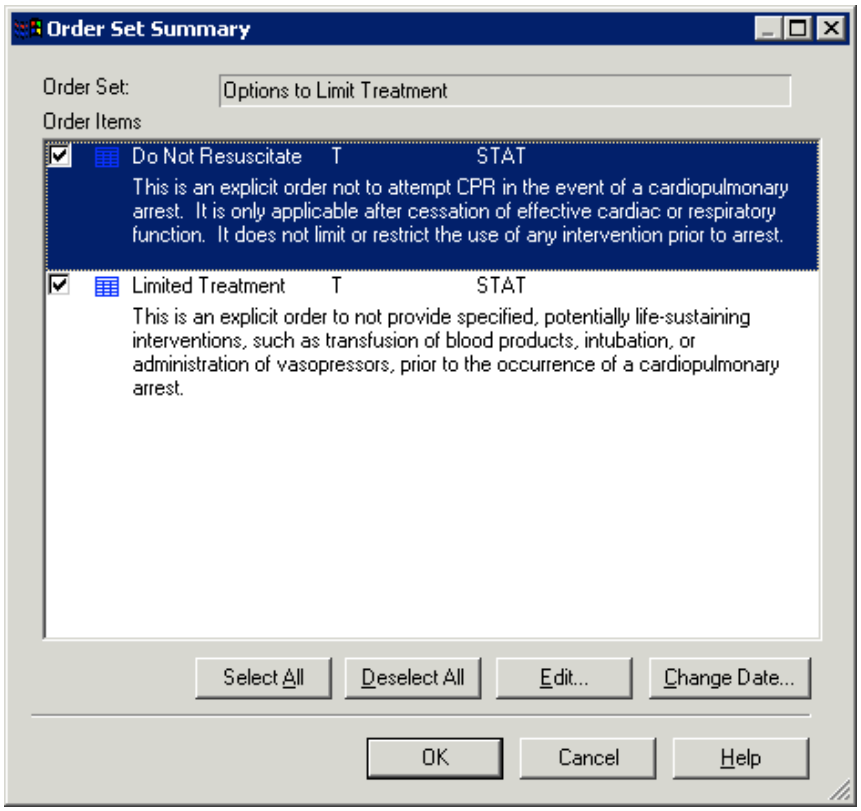
Screen 94: Conditional Order checkbox

3. Enter a condition for the order.
4. Specify the number of times the order can be activated.
5. Click **OK**.

DNR and Code Orders

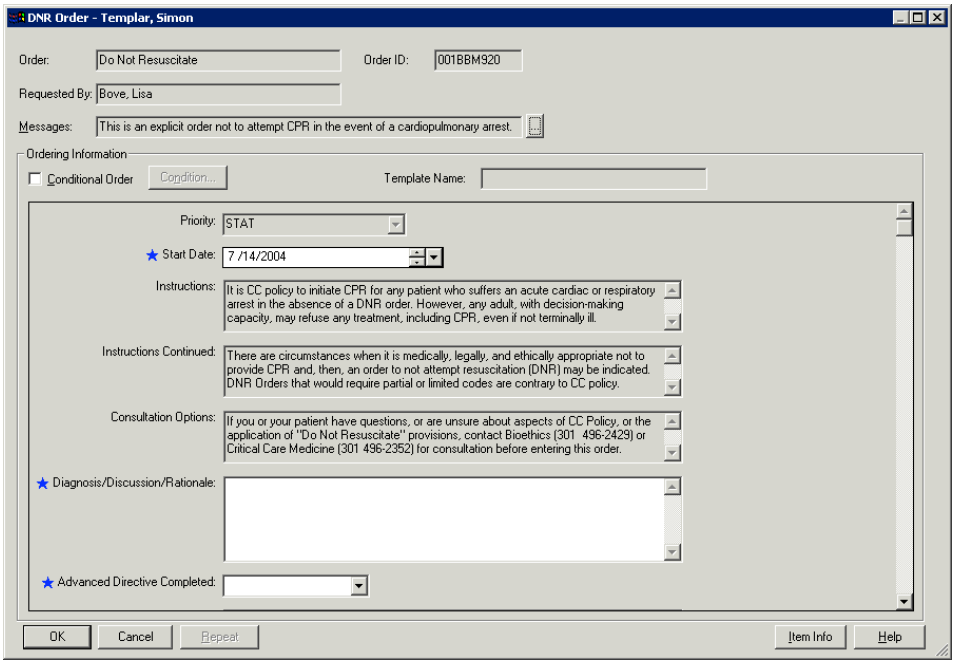
DNR orders are entered as an order set called Options to Limited Treatment. There are two orders within this order set

- Do Not Resuscitate
- Limited Treatment



Screen 95: Options to Limit Treatment Order Set

These should both be completed for any patients that require this level of care. Code status will continue to be documented on paper in the progress notes.



Screen 96: DNR order form

Limited Treatment Order - Templar, Simon

Order: Limited Treatment Order ID: 001BBQ185

Requested By: Bove, Lisa

Messages: This is an explicit order to not provide specified, potentially life-sustaining intervention

Ordering Information

Conditional Order Condition... Template Name:

Priority: STAT

★ Start Date: 7 /21/2004

Instructions: Limited Treatment orders in the absence of a DNR order may lead to inconsistent medical decisions, harm to the patient and might preclude the early initiation of a more effective or less invasive intervention that could prevent the cardiopulmonary arrest.

Instructions Continued: In rare instances when a Limited Treatment Order is considered for a patient without a Do Not Resuscitate (DNR) Order, a Bioethics Consult is mandatory (301 496-2429).

Consultation Options: If you or your patient have questions, or are unsure about aspects of CC Policy, or the application of "Limited Treatment" provisions, contact Bioethics (301 496-2429) or Critical Care Medicine (301 496-2352) for consultation before entering this order.

★ Diagnosis/Discussion/Rationale:

★ Advanced Directive Completed:

★ Do Not Resuscitate (DNR):

★ Bioethics Consult Completed:

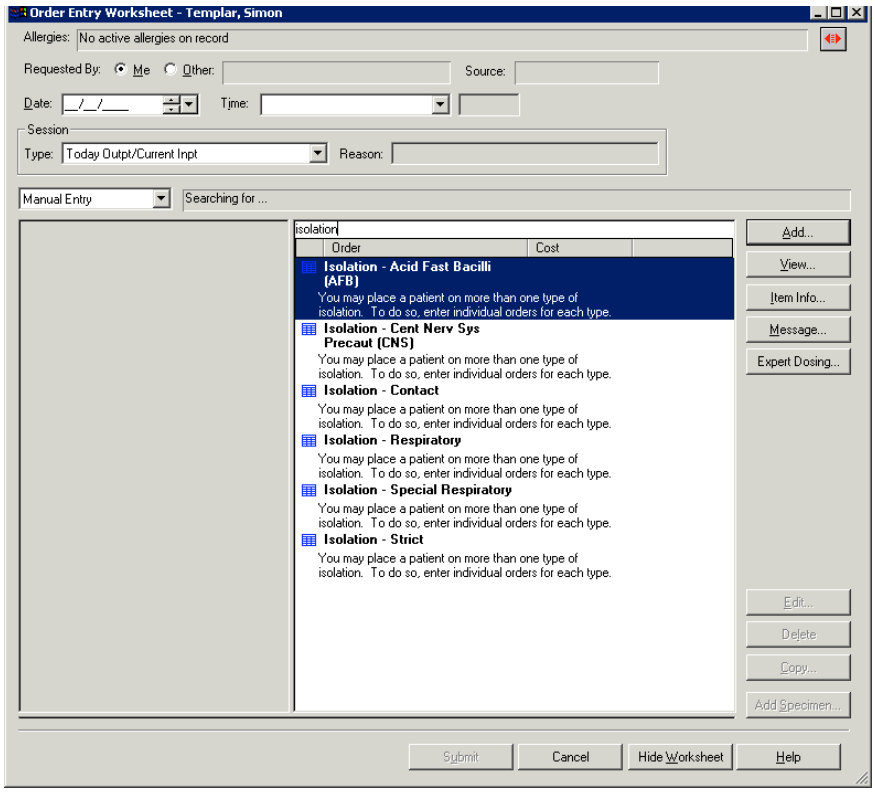
OK Cancel Repeat Item Info Help

Screen 97: Limited Treatment Order form

NOTE: Refer to **Medical Administrative Series Policy #M91-7 Do Not Resuscitate (DNR) Orders and Limited Treatment Orders** for more information.

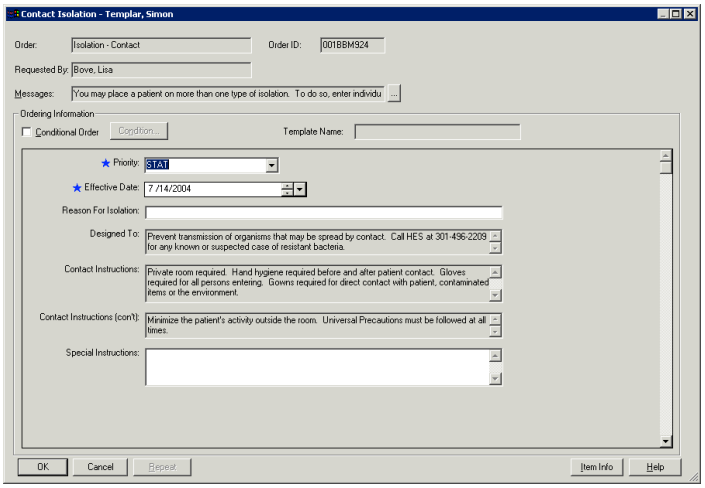
Isolation Orders

Isolation orders are entered by a Prescriber, Epidemiology Service staff member, or a nurse (acting as an "agent for"). There are separate orders for each type of isolation.



Screen 98: Isolation orders

Each order includes specific fields to enter details about the isolation.



Screen 99: Isolation order form example

The Prescriber, patient care unit and Epidemiology Service are notified verbally by phone when isolation is indicated per test results, patient history, etc.

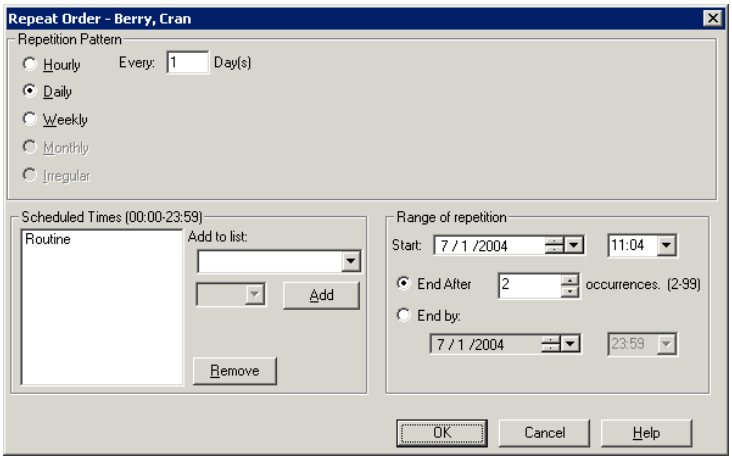
Repeat Orders

Repeat orders are orders that are sent to an ancillary department every time an occurrence of the order is repeated. When you enter a repeat order, occurrences of that order are automatically created and generated, based on the repeat control information you specify. Not all orders are repeatable. Laboratory and Radiology departments use the repeat order function due to interface requirements, whereas Nursing and Pharmacy do not. Nursing and Pharmacy orders have a frequency field that allows you to order the procedure or medication with repetition.
Note: An order placed during a **Take Home Medication** order session may not be repeated.

When an order can be repeated, the **Repeat** button on the order form is active. You specify the repeat control information in the **Repeat Orders** dialog box. Duplicate checking does not display when entering report orders.

The first occurrence of a repeat order is considered the "master" order, and is indicated with the icon to the left in the **Orders** chart section and on the **Order Entry Worksheet**. Other instances of the repeat order are indicated with the icon on the right.

Repeat orders are processed in the background, and can be reviewed in the **Orders** chart section after they are entered and submitted.



Screen 100: Repeat Order Dialog box

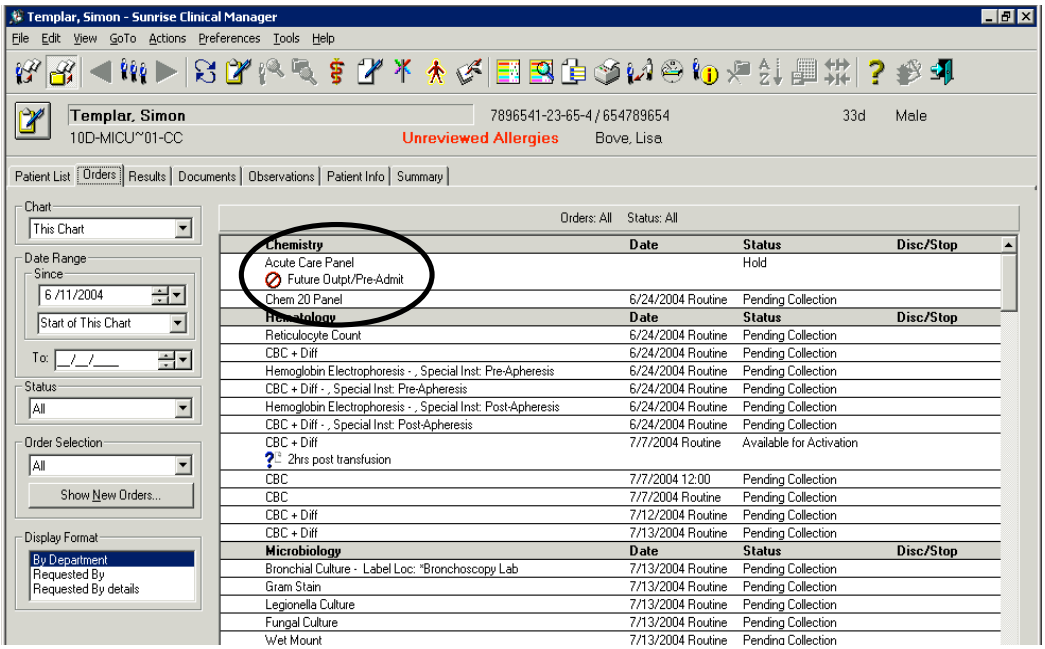
To repeat an order

1. Select the order from the **Order Entry Worksheet** and click **Add**. The order form displays.
2. Click **Repeat**. The **Repeat Orders** dialog box opens.
3. Select whether you want to create an **Hourly**, **Daily**, or **Weekly** repetition pattern by clicking the respective option.

4. Create a repetition pattern by selecting the options associated with **Hourly**, **Daily**, or **Weekly**.
5. If you chose the **Daily** or **Weekly** pattern, select a scheduled time, if desired. If you select **Non-Stat Time Sensitive**, you must enter an actual time or select a time from the drop-down list. If you select **Routine**, the drop-down list is disabled.
   Note: You cannot add more than one occurrence of an order with the same date and time.
6. Click **Add** to add a time to the list, or **Remove** to remove a time from the list.
7. Specify the range of repetition by entering a **Start** date and time, and selecting **End after X occurrences** or **End by** to specify when the order repetition should end.
8. Click **OK**. You return to the order form. If the order form displays **Start Date**, **Start Time**, **Stop Date**, or **Stop Time** fields, they are disabled, because you've entered this information on the **Repeat Orders** dialog box.
9. Click **OK**. The orders are processed and placed in the **Order Summary** window, with the different start date(s).
   Note: The first occurrence of a repeat order is considered the "master" order, and is indicated with the icon to the left in the **Orders** chart section and on the **Order Entry Worksheet**. Other instances of the repeat order are indicated with the icon on the right.
10. Click **Submit** to submit the repeat orders.

Future Orders (Hold)

The CRIS **hold/release** functionality allows a Prescriber to write and enter medical orders for future release. The Prescriber enters an order for a future date and places the order in a special Future Outpt/Pre-Admit (hold) status and adds a planned release date in the reason field. Hold orders are displayed in CRIS with a red circle with a line icon to visually identify their hold status.

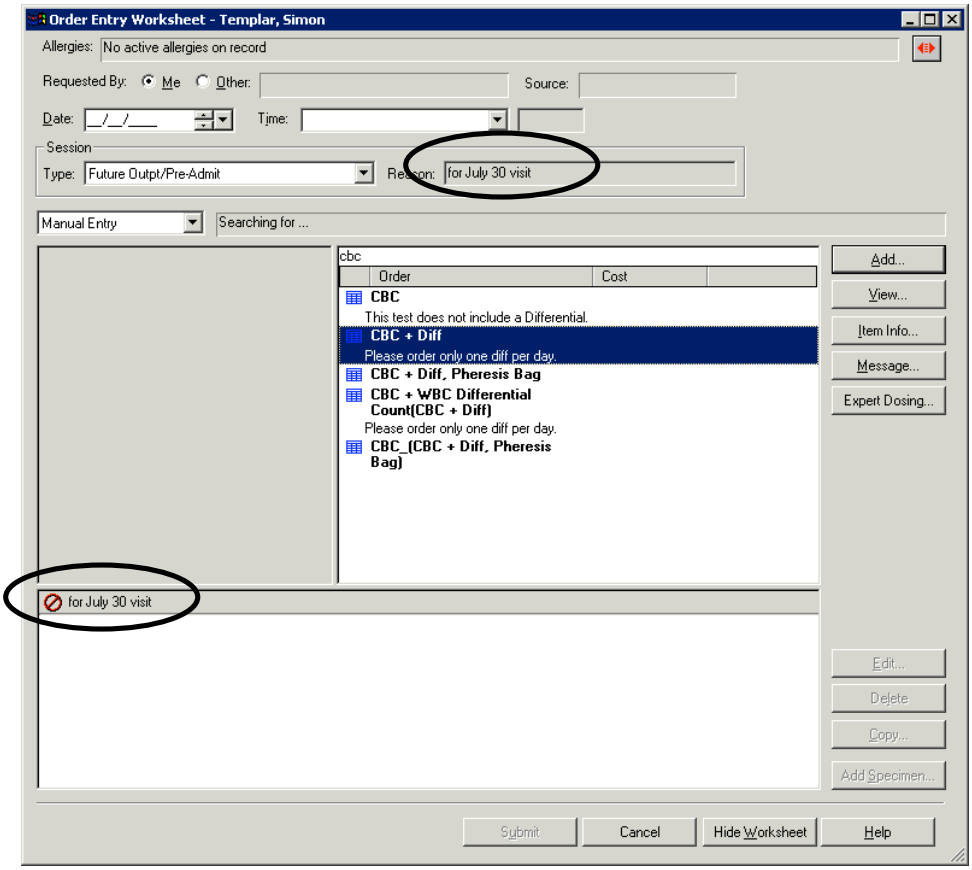


Screen 101: Hold Orders icon

Another Prescriber, or member of the Affiliate Medical Staff (considering their professional licensure, scope of practice and the condition of the patient), could then "release" the order. The release of a hold order must be done manually within CRIS. The system cannot automatically release hold orders, e.g. automatically release order after three days. Pre-registration orders, which apply only to those patients who have never been seen previously as an inpatient or outpatient at the Clinical Center, are treated as hold orders and may be released in an equivalent fashion.

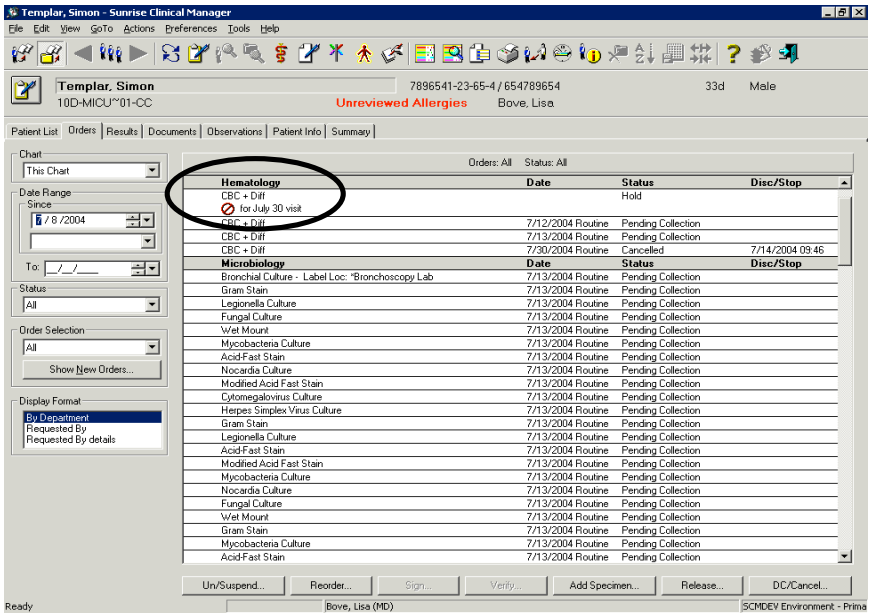
To enter a future (hold) order

1. From the **Order Entry Worksheet**, locate an order you want to enter.
2. Change the session type to Future Outpt/Pre-Admit.
3. In the Reason field, enter the date the orders should be released (e.g. when the patient is expected to return for this test/procedure).



Screen 102: Enter Future Orders

4. Find the order you want and click **Add**.
5. Fill in the requested information.
    a. There may be special instructions about the order in the **Messages** box. This is informational only, and cannot be changed.
    b. Required fields are marked with a blue star. Data must be entered into these fields prior to submitting the order.
    c. Other fields are optional. These are completed when there is more information to convey about the order.
    d. Some fields already contain prefilled/default data when you open the form. These fields may be modified as needed.
6. Click **OK**.
7. Click **Submit**. The order will remain in the hold status until released.



Screen 103: Future Order

Serial Specimen Ordering, Label Printing, and Collection

Many serial specimens are collected at the Clinical Center in both inpatient and outpatient settings. Like all other lab tests, serial specimen orders are entered prescribers or by affiliate medical staff acting as "agent for." These orders may be placed under one of two session types:

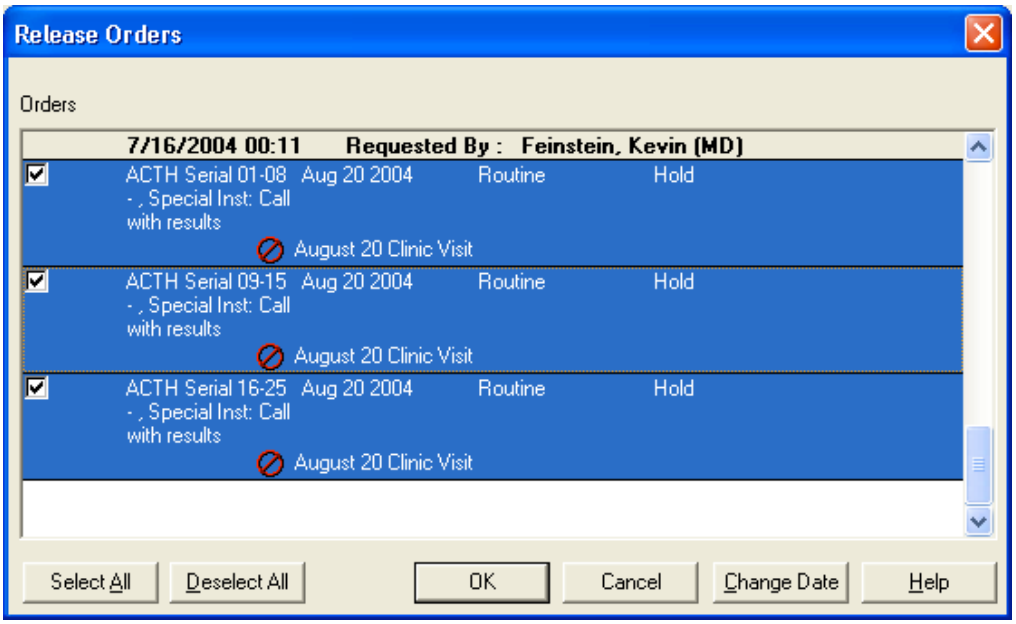
- **Today Outpt/Current Inpt**: these orders will be active immediately, with labels and order requisitions printing immediately on the patient's current registered unit or clinic.
- **Future Outpt/Pre-Admit**: these orders will be on "hold," and will not become active until released. Labels and order requisitions do not print until the orders are released.

Orders on "hold" are normally not released until needed (i.e., at the time of a clinic visit or inpatient admission). However, it is sometimes helpful to prepare for specimen collection in advance of a patient's visit by labeling the necessary collection tubes. In order to obtain the order requisitions and labels at such a time, the following steps should be followed:

1. When the specimen collection will take place in a setting other than the patient's registered location, this information should be temporarily updated in CRIS to the clinic or unit where the specimen collection will actually take place. This is necessary because CRIS order requisitions and bar-coded lab labels print at the patient's registered location when orders on "hold" are released. Locations are updated in CRIS via transfer orders:
    - Transfer Order (Internal–Inpatient): a medical order used to move patients to inpatient units

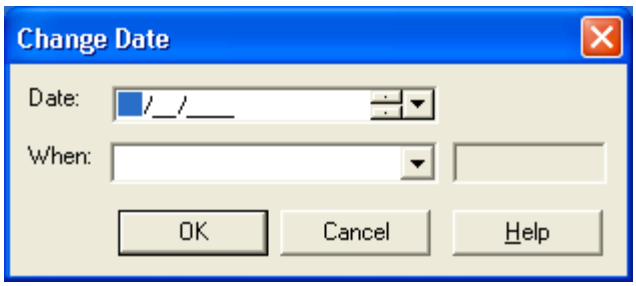
- Transfer Order (Internal-Outpatient): a service request used to move patients to outpatient clinics, satellite clinics, and day hospitals

2. Once the patient's location corresponds to the desired specimen collection/label printing site, the serial specimen orders on "hold" should be accessed under the Orders tab. Normally, the test orders have the date of the expected collection. In CRIS, lab labels do not print until the expected date of collection. Therefore, to force the labels to print on a different date, it is necessary to change the date of the orders before releasing them.
   - On the Orders tab, pick the Release button. All orders currently on "hold" will appear in a separate dialog box. They are sorted by date/time of entry, and include the name of the requesting prescriber.



Screen 104: Release Orders - Serial Labs

- Select the orders to be released.
- Select Change Date, and another dialog box will appear.



Screen 105: Change Date screen

- Fill in today's date and select OK.
- Orders will be released, with the order requisitions and lab labels printing at the patient's current registered location.

3. If the patient's location was temporarily modified to facilitate the label and order requisition printing, it is imperative that the location be returned to the original location via the appropriate transfer order. If this isn't done, order requisitions, other lab labels, reports, etc. will continue to print at the current registered location.
4. Specimen tubes may be labeled and sorted as appropriate for the serial collection. Please refer to the relevant lab policies for this process.
5. When the patient arrives on the scheduled date, use the prepared labeled tubes. Record the date/time of collection and any additional information as needed for proper processing, and send the specimens to the designated lab.
   NOTE: Lab will also accept racks of tubes with standard admission labels for these tests. The LIS barcode labels should be sent to the lab along with the serial specimen racks - the lab will then re-label with the barcode labels. So, the serial test orders could actually be released when the patient arrives at the CC; the barcode labels would not be needed until that time.

ADT Orders (Pass, Transfer and Discharge)

- Transfer (Internal and External, except for transfer to the OR), Discharge-Routine, and Pass orders are entered as conditional orders.
- Transfer (Internal, to the OR), Discharge-AMA/AWOL, and Discharge–Expiration orders are not entered as conditional orders.
- Nurses manually activate (start) and complete (close) conditional ADT orders. There is no automatic completion of ADT medical orders. In contrast, ADT service requisitions will auto-complete immediately.
- ADT orders are maintained on the worklist in CRIS. To complete an ADT order, the nurse marks as it as done on the worklist.
- MIS automatically suspends active orders when a patient is transferred to another unit or level of care. In CRIS, there is no automatic suspension of orders. Nurses are responsible for manually suspending all active orders at the point of transfer.
    - Nurses do not independently 'unsuspend' medical orders. It is a Prescribers' responsibility to unsuspend or direct nursing to unsuspend orders.
- Nurses will suspend all active orders when a patient leaves on pass. Prescribers are responsible for including explicit direction in the pass order regarding which orders the nurse can unsuspend when a patient returns from pass.
- Bed assignment is done by nursing in CRIS (rather than MIS), using a specific service requisition. The service requisition auto-completes immediately after the nurse enters it.
- OR/PACU nurses can move patients within the OR area and back to the unit of origin or ICU (if preplanned) using a service requisition.
- Outpatients can be moved between outpatient locations, including the OR, using a service requisition entered by nurses. This will facilitate

communication of orders and test results, as well as printing in the patient's current location.

Discontinue/Cancel orders

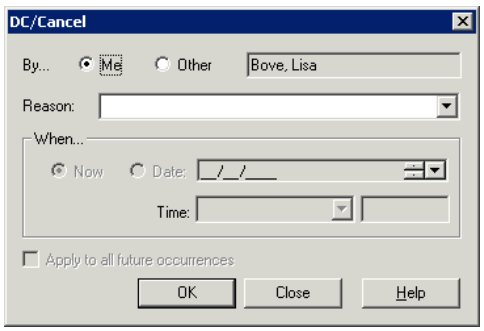
If you want to stop an order, you can discontinue or cancel it. Orders that have already started and are no longer required are discontinued. For example, if a patient no longer needs vital signs every two hours, you would want to discontinue to vital signs order and enter a new vital signs order with a different frequency. Orders that have not yet been started, and that you don't want carried out are canceled. For example, if you order medication for the wrong patient, you can cancel the order before it is filled.

You use the **Discontinue/Cancel Orders** dialog box to discontinue or cancel multiple orders, and the **DC/Cancel** dialog box to discontinue or cancel single orders.

Note: For repeat orders, both the master order and its occurrences are displayed in the **Discontinue/Cancel** dialog box. If you select the master order, all its occurrences are automatically checked and the check boxes are disabled. When you discontinue or cancel a repeat order, a message displays, asking if you want to discontinue or cancel this occurrence or all future occurrences of the repeat order.

To discontinue/cancel a single order

1. From the Orders tab, select the order or order set that you want to discontinue/cancel or discontinue/reorder.
2. Right-click on the order and select **Discontinue/Cancel** from the shortcut menu. The **DC/Cancel** dialog box opens.



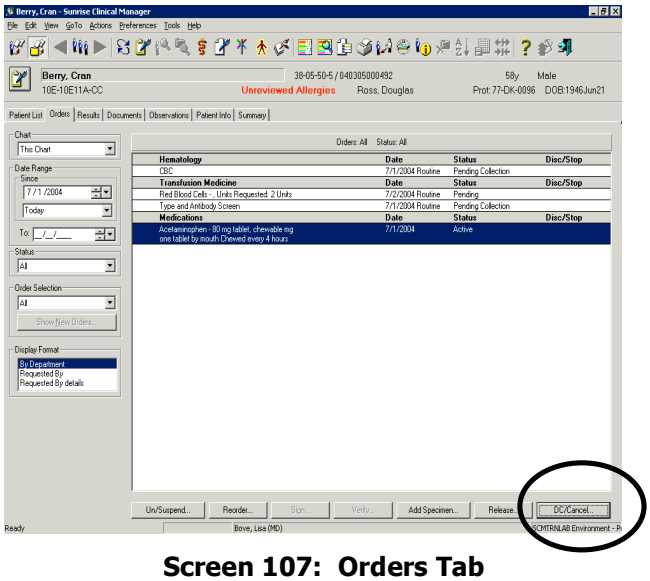
Screen 106: DC/Cancel Dialog box

3. Select whether you are discontinuing/canceling the order on behalf of yourself or another provider. If you select **Other**, the **Requested By** dialog box opens; specify the provider's name and click **OK**.

4. Provide a reason for the discontinuing/canceling in the **Reason** field, or select a pre-defined reason from the drop-down list.
5. Select when you want the order to cease—either **Now** or a particular date and time.
6. Click **OK**.

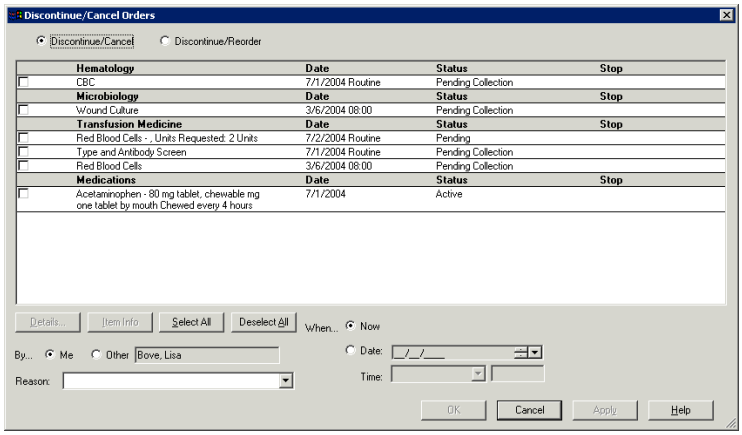
To discontinue/cancel multiple orders

1. Form the Orders tab, click the DC/Cancel button.



Screen 107: Orders Tab

The **Discontinue/Cancel Orders** dialog box opens with **Discontinue/Cancel** selected. All orders that can be discontinued or canceled are listed.



Screen 108: DC/Cancel Orders Dialog box

2. Select whether you are discontinuing or canceling the order on behalf of yourself or another care provider. If you select **Other**, the **Requested By** dialog box opens.

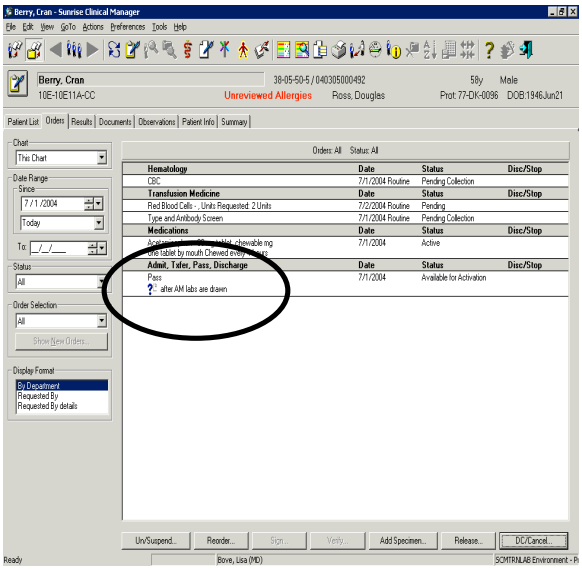
3. Do one of the following
    a. To discontinue or cancel a few orders in a short list of orders, click the check boxes of the orders you want to discontinue or cancel.
    b. To discontinue many orders in a lengthy list of orders, click **Select All**, then uncheck the check boxes of the orders you don't want to discontinue or cancel.
4. In the **Reason** field, enter why you are discontinuing the order(s), or select a predefined reason from the drop-down list.
5. Specify when you want the order(s) to be discontinued or canceled. You can select **Now** to have the order(s) discontinued immediately, or you can specify a future date and time. To specify the date, type in a date, or click the calendar arrow and select a date from the calendar. The **Time** field activates after you click **Date**.
6. If you want to discontinue the order(s), but not exit the dialog box, click **Apply**. If you want to discontinue the order(s) and exit the dialog box, click **OK**. In the **Display** window, the status of the order(s) you discontinued changes to Canceled.

Activate Conditional Orders

After a condition has been met for a conditional order, you can activate the order. For example, if a test is to be performed once a patient returns from a procedure, when the patient returns, you can activate the test order.

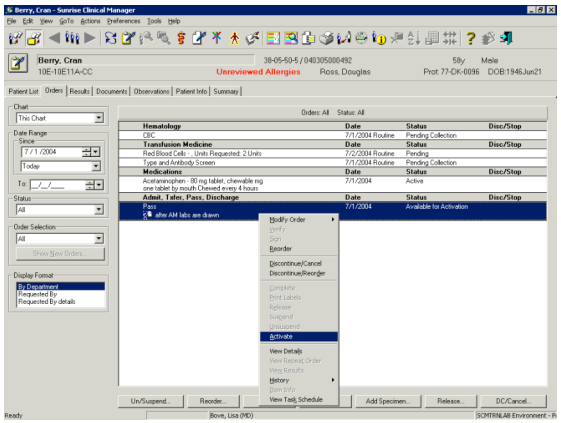
To activate a conditional order

1. Select a conditional order. (A conditional order has a **Conditional Order** icon next to it.)



Screen 109: Conditional Order Icon

2. From the **Actions** or shortcut menu, select **Activate**.



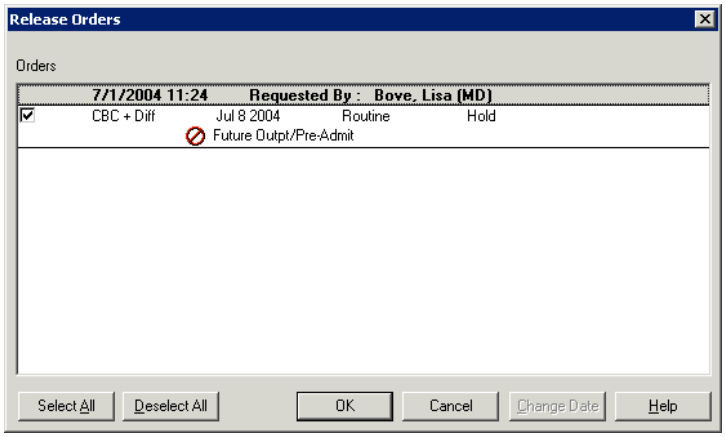
Screen 110: Activate Conditional Order

Release Orders

The **Release Orders** dialog box allows you to release one or more hold orders at one time. When you release a batch of orders, they are processed for alerts and for date and scheduling conflicts.

Note: When you release a repeat order, all orders in the repeat series are released.

If the order is conditional or pending verification, the first order in the repeat series is not sent to the ancillary department until the order is activated or verified.

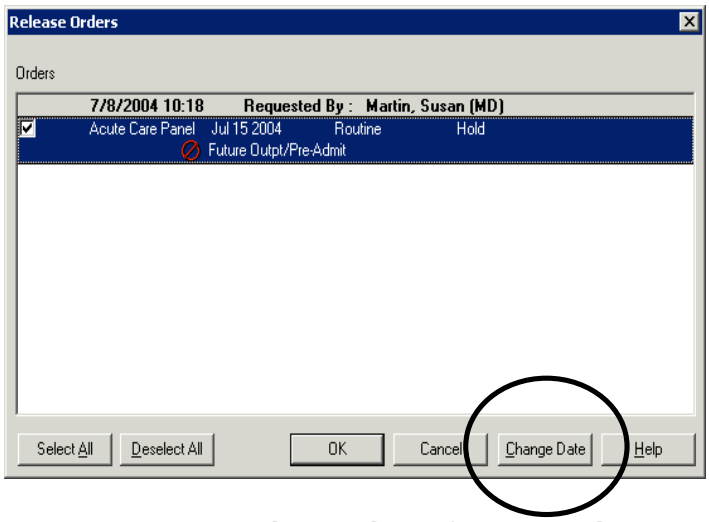


Screen 111: Release Orders Dialog box

To release a single hold order

1. From the Orders tab, right-click on a hold order and select **Release**. The **Release Orders** dialog box opens with the information for the selected order.
2. Click the check box to the left of the order you want to release.

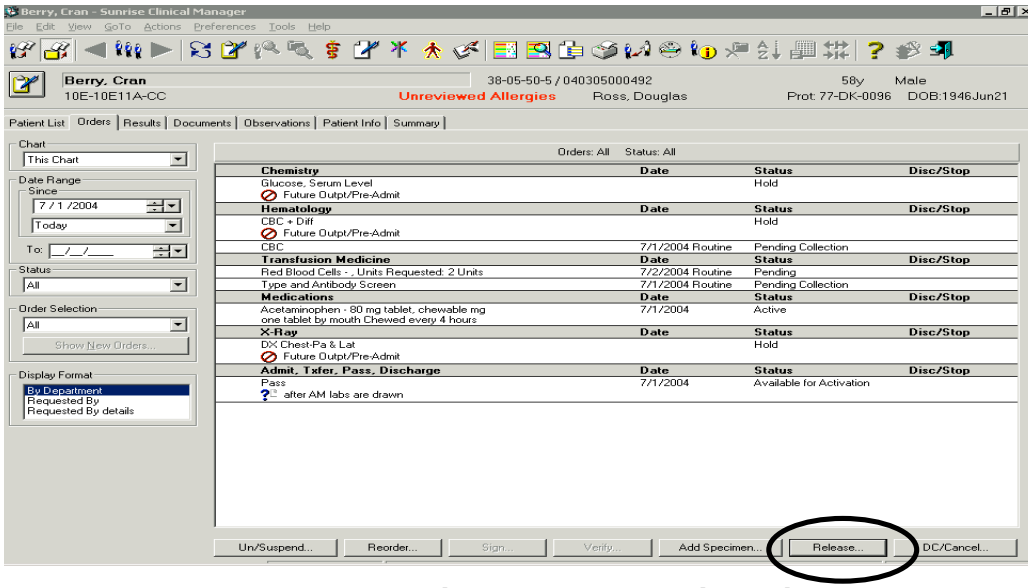
a. If you want to change the date of the order, click on the order to highlight it.
b. Click Change Date.
c. Enter the corrected date for the order.
d. Click OK.



Screen 112: Change date of Future order

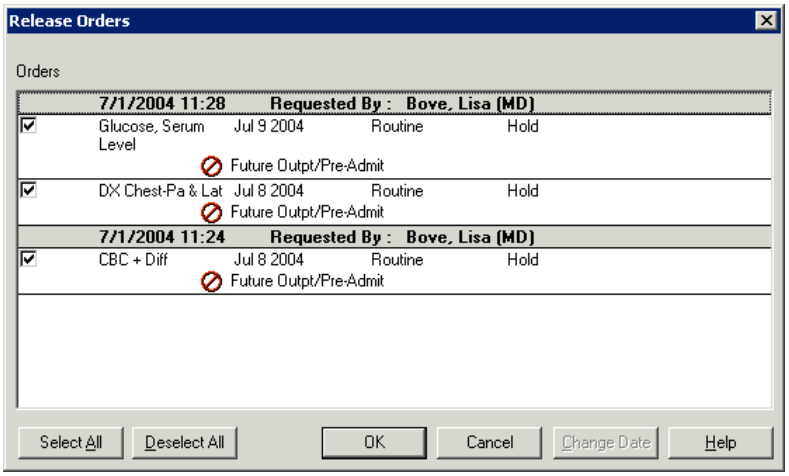
3. Click **OK** to release the order.

To release multiple hold orders



Screen 113: Release Button on Orders tab

1. From the Orders tab, click the **Release** button on the **Orders** chart section. The **Release Orders** dialog box opens, showing all the hold orders you can release. Each order is checked, indicating that it is selected.



Screen 114: Release Orders dialog box

2. Uncheck any orders you do *not* want to release.
3. Change the date of any orders as necessary. Changing the date for an order also releases the hold for that item. Once a hold order has been released, you cannot return it to a hold status, but you can suspend it.
4. Click **OK**. All checked orders are processed for valid dates.

Complete Orders

Completing an order allows you to indicate that an order has been accomplished. This function is typically used for human interventions. For example, if a clinician places a patient education order for diabetes—after the instruction has been done and the provider feels that the patient understands the information, the provider can mark the order as completed.

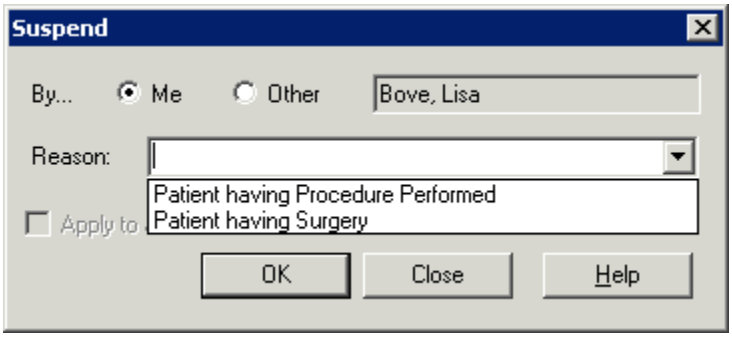
To complete an order

1. Select the order you want to complete
2. Right-click on the order and from the shortcut menu, select **Complete**.

If the **Complete** option is disabled, the order already has a Canceled status, is Suspeneded, or the definition for this order item indicates it cannot be set to Complete.

Suspend and Unsuspend Orders

Suspending an order allows you to put a temporary hold on an order. For example, you might want to suspend a medication order while a patient is nauseated.



Screen 115: Suspend Dialog box

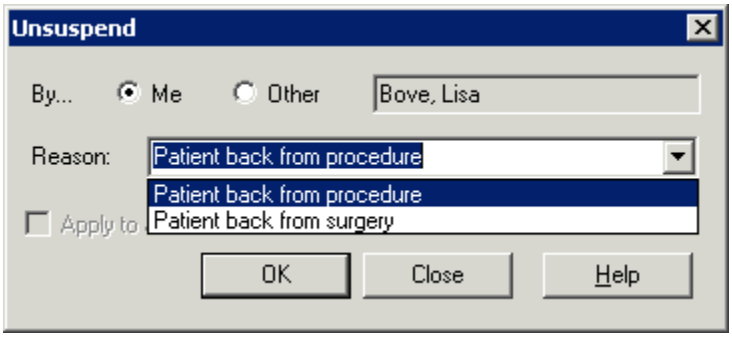
To suspend an order

1. From the Orders tab, right-click the order, and select **Suspend**.
2. In the **Display** window of the **Orders** chart section, a **Suspended Order** icon displays to the left of the order row.

Screen 116: Suspend Icon

3. While the order is suspended, it can be discontinued, canceled, or signed, but cannot have specimen information entered or be marked as complete.
   Note: Not all orders can be suspended.

To unsuspend single orders

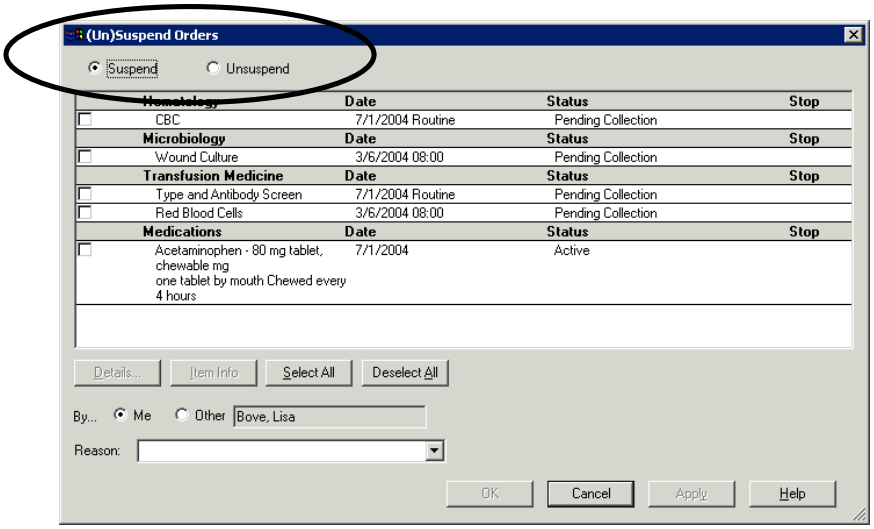


Screen 117: Unsuspend Dialog box

1. From the Orders tab, right-click on the order, and from shortcut menu, select **Unsuspend**.

To suspend or unsuspend multiple orders

You can suspend or unsuspend multiple orders using the **(Un)Suspend Orders** dialog box.

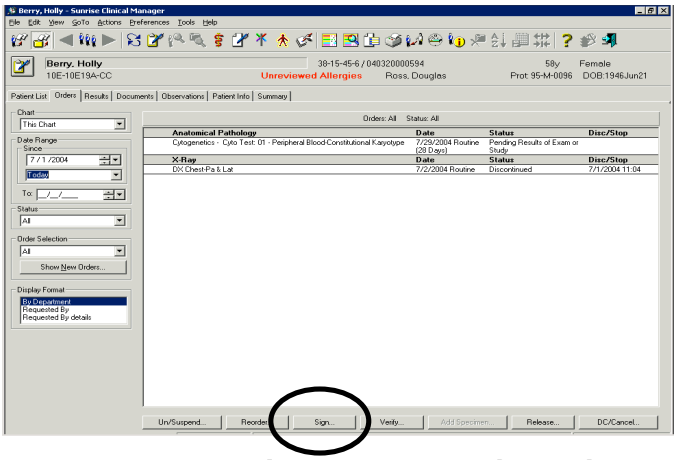


Screen 118: Unsuspend Orders Dialog box

1. Click the **(Un)Suspend** button on the **Orders** chart section. The **(Un)Suspend Orders** dialog box opens.
2. Select **Suspend** or **Unsupend**.
3. Select whether you are suspending or unsuspending the orders on behalf of yourself or another care provider. If you select **Other**, the **Requested By** dialog box opens.
4. Do one of the following
   a. To suspend or unsuspend a few orders in a short list of orders, click the check boxes of the orders you want to suspend or unsuspend.
   b. To suspend or unsuspend many orders in a lengthy list of orders, click **Select All**, then click the check boxes of the orders you don't want to suspend or unsuspend. Suspended orders are indicated with an icon.
5. In the **Reason** field, enter why you are suspending or unsuspending the order(s), or select a pre-defined reason from the drop-down list.
6. If you want to suspend or unsuspend the orders, but not exit the dialog box, click **Apply**. If you want to suspend or unsuspend the orders and exit the dialog box, click **OK**.

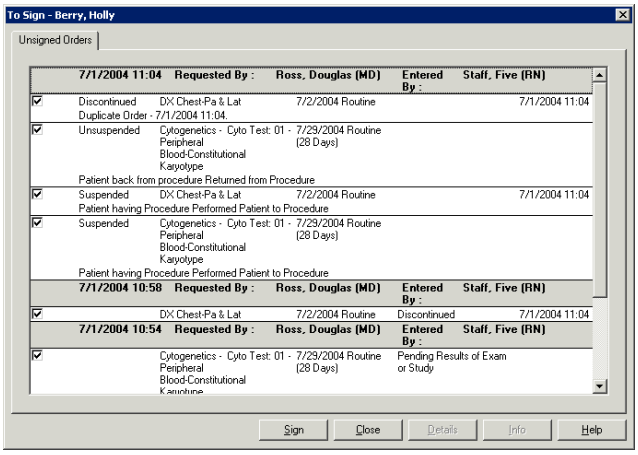
Sign Orders

If any orders require your electronic signature, the **Sign** button is enabled in the **Orders** chart section.



Screen 119: Sign Button on Orders Tab

Orders that are entered, modified, suspended, unsuspended, canceled, or discontinued on behalf of another care provider must be signed. You select the orders you want to sign on the **Unsigned Orders** tab of the **To Sign** dialog box.



Screen 120: To Sign Dialog Box

Note: For repeat orders, only the master order is displayed in the **To Sign** dialog box. You don't need to sign each occurrence of a repeat order.

To sign orders

1. Do one of the following
   a. In the **Orders** chart section, click **Sign**, or from the **Actions** menu, select **Sign**.
   b. From the **Patient List**, double-click the flag in the **To Sign** column.
2. The **To Sign** dialog box opens.
3. Click the **Unsigned Orders** tab. The orders that you can sign for the current patient will display and are checked.
4. Deselect any orders you do not want to sign.

5. Optionally, display the shortcut menu to view status or modification history for the order.
6. Click **Sign**. The **Password Required** dialog box may open.
7. Enter your password and click **OK**.

To view additional details about the orders to be signed

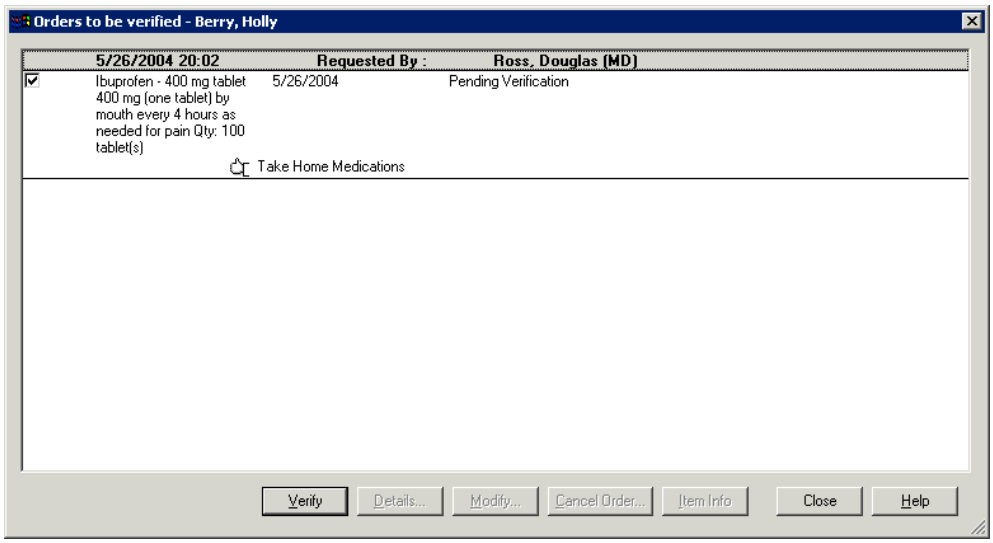
1. On the **Unsigned Orders** tab of the **To Sign** dialog box, select the order for which you want to obtain more information.
2. Choose **Details**. The order form opens in view mode and displays additional information about the order.

To view more information about items within an order

1. On the **Unsigned Orders** tab of the **To Sign** dialog box, select the order for which you want to obtain item information.
2. Click **Item Info** to display additional information on this item, if your enterprise has provided this information.

Verify Orders

If any orders require verification, the **Verify** button in the **Orders** chart section is enabled and a flag displays in the **To Verify** column of the **Patient List**. All medication orders entered must be verified by a pharmacist.



Screen 121: Verify Orders Dialog box

To verify orders

1. Do one of the following

   a. In the **Orders** chart section, from the **Actions** or shortcut menu, select **Verify**.
   b. From the **Patient List**, double-click the flag in the **To Verify** column.
2. The **Orders to be Verified** dialog box opens. All orders that you can verify for the current patient are checked.
3. Deselect any orders you do not want to verify.
3. Click **Verify**.

To view additional details about the orders to be verified

1. In the **Orders to be Verified** dialog box, select the order about which you want to obtain more information.
2. Click **Details**. The order form opens in view mode and displays additional information about the order. In this mode, you cannot change any information.

Chapter IX: View Documentation

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Documents Tab Overview

You maintain and review patient care documentation in the **Documents** chart section. You also can access the document entry function.

The **Display** window is where the documents appear, either in **Summary** format a grid format with the categories and documents down the left side and the dates across the top, or in **Report** format a hierarchical tree structure with the documents listed below their category and item names. The **View Control Panel**, on the left side of the screen, allows you to select your criteria for displaying documents, including the display format.

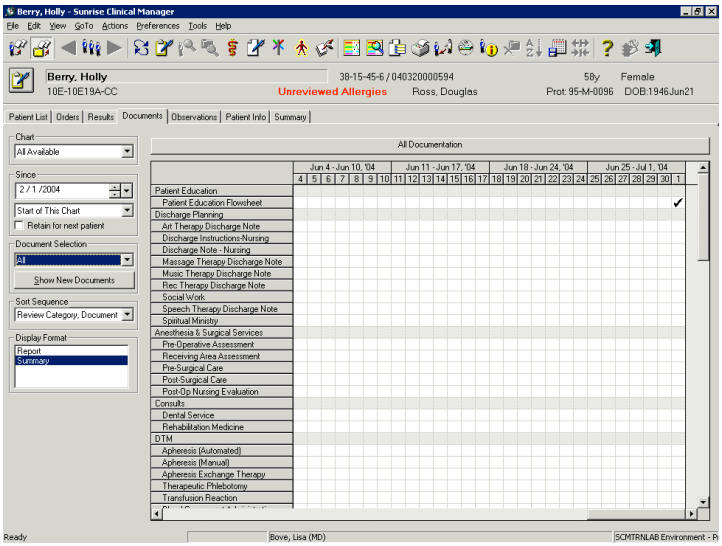
Most documents are displayed by a department sort. Discharge planning documents, however, all display in a separate header.

Documents Chart Section

You can quickly retrieve and view documents, and filter the documents you want to see. You can also set personal preferences for viewing documents.

The **Display** window is where the documents appear, either in **Summary** format – a grid format with the categories and documents down the left side and the dates across the top, or in **Report** format - a hierarchical tree structure with the documents listed below their category and item names.

The **View Control Panel**, on the left side of the screen, allows you to select your criteria for displaying documents, including the display format.



Screen 122: Documents Tab

The **Function** buttons are enabled in the **Report** display format and are as follows:

- **New Document Icon -** Opens the **Document Entry Worksheet**, where you can enter documents for the selected patient.
- **View Documents – In report display format o**pens the **Document Details** dialog box, where you can view the contents of the document.

View new documents from the Documents tab:

- On the **View Control Panel**, click the **Show New Documents** button.
- The **New Documents** dialog box opens. If you want to acknowledge viewing the documents, check the **Clear Flag** button. The flag will be removed from the **New Documents** column in the **Patient List**. If you don't want to remove the flag, for example, if you haven't finished reviewing all the documents, click the **Don't Clear** Flag button.

Filters – Documents tab

Definitions

- **Chart**: **All Available** refers to all information for all visits. **This Chart** is limited to this visit.
- **Since**: Used to specify a date range for viewing. When you know exact dates, enter the start date in the **Since** field. If there is an end date, enter the date in the **To** field. You can also use pre-defined timeframes from the drop-down list such as one week ago or one month ago. You should not use both options at the same time. Note: If a time frame is used it will change the Since date.
- **Document Selection**: This option lets you view **ALL** information by department or category. Other categories are also available:
    - Anesthesia & Surgical Services
    - Consults
    - Discharge Planning
    - DTM
    - Nursing
    - Nutrition
    - Patient Education
    - Pharmacy
    - Rehabilitation Medicine
    - Respiratory Therapy
    - Social Work
    - Spiritual Ministry

- **Display Format:** This option gives you multiple ways to view information which may appear as a **Report** or **Summary**.

Apply filters

To view documents for:

- The current chart only
  1. In the **Chart** drop-down list on the View Control Panel, select **This Chart**.
- All available charts
  1. In the **Chart** drop-down list on the View Control Panel, select **All Available**.

To select the date range for viewing Documents:

3. In **Date Range** group box in the **View Control Panel**, do one of the following to provide a **Since** date:
   a. In the **Since** field, enter a specific date.
   b. Use the increase/decrease arrows to change the date one day, month, or year at a time.
   c. Click the calendar arrow and select a date. Select the day after you have selected the month and year.
   d. Select a pre-defined option from the drop-down list, such as Start of This Chart.
2. Do one of the following to provide a **To** date:
   d. In the **To** field, enter a specific date.
   e. Click the increase/decrease arrows to change the date one day, month, or year at a time.
   f. Click the calendar arrow and select a date.

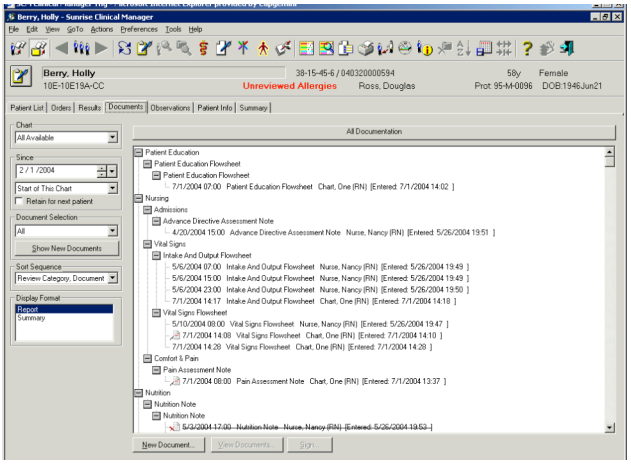
To view Documents of a particular status:

- In the Status drop-down list on the View Control Panel, select the desired filter.

To view particular types of Documents:

- In the **Documents Selection** drop-down list on the View Control Panel, select the desired filter.

Report View **-** Displays document sorted by date and time, and each document with the associated order as its header.

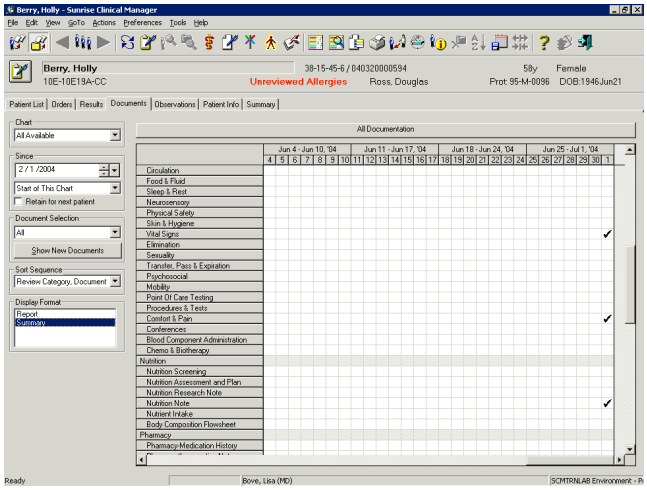


Screen 123: Document Report View

When you double-click a cell in the spreadsheet, the selected Documents display in **Report** view, and include the performed date/time, all numeric and textual information, the result reference range (if available), and the abnormality.

Summary View

The **Summary** view displays an overview of documents for a selected patient, based on the options you have selected in the **Chart**, **Since**, and **Document Selection** sections in the **View Control Panel**. The **Summary** view does not provide detailed document information, but rather whether or not specific documents exist for a given date. The information displays in a grid with dates at the top and result categories on the left side.



Screen 124: Document Summary View

Remove Filter

Once a filter is applied, you can remove it or change to another filter. To remove a filter, change the selection back to **All**.

New Documents

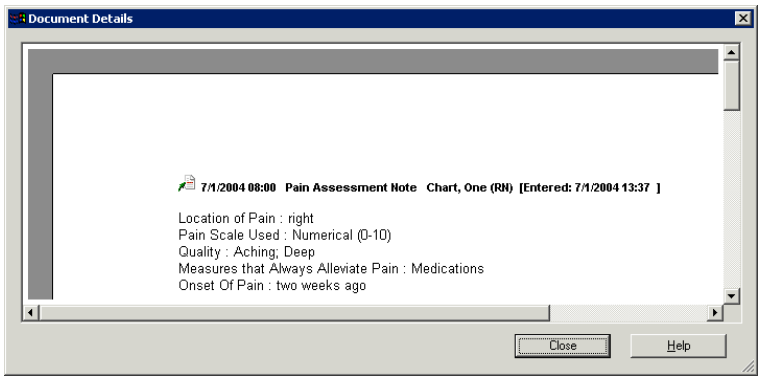
To view new Documents from the Documents tab:

1. Click the **Show New Documents** button. The **New Documents** dialog box will display.
2. To clear the flag, click **Clear Flag** on the **New Documents** dialog box. Otherwise, click **Don't Clear Flag**.

View Document Details

You can view document details in one of the following ways:

- From the Documents tab, right-click on a document and select View Document Details.
- From the Documents tab, click the View Documents button.



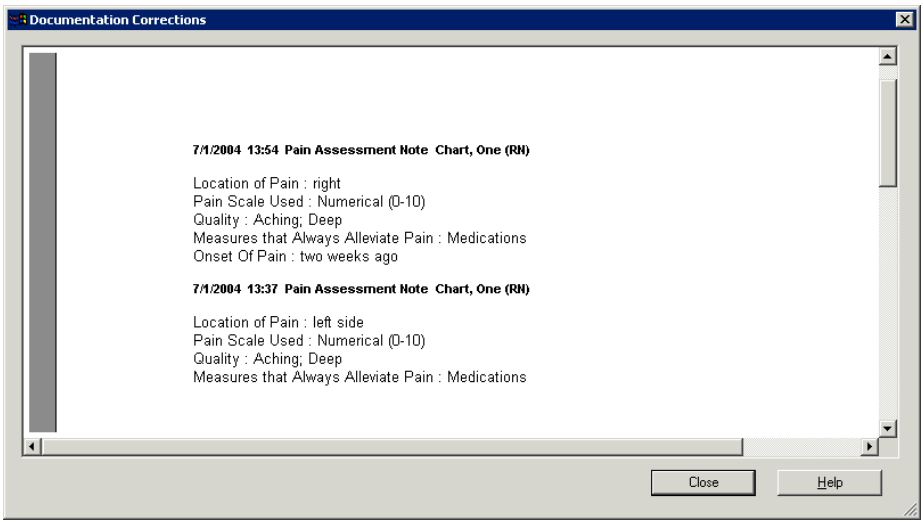
Screen 125: View Document Details window

View Corrected Documents

You can view documents that have been corrected – both the original documentation and the corrected documentation.

To view corrected documents

1. In **Report** view, select the document for which you want to see the edits.
2. Right-click on the document and select **View Corrections** from the shortcut menu. The **Documentation Corrections** dialog box opens in view mode; you can view the information, but not edit it.



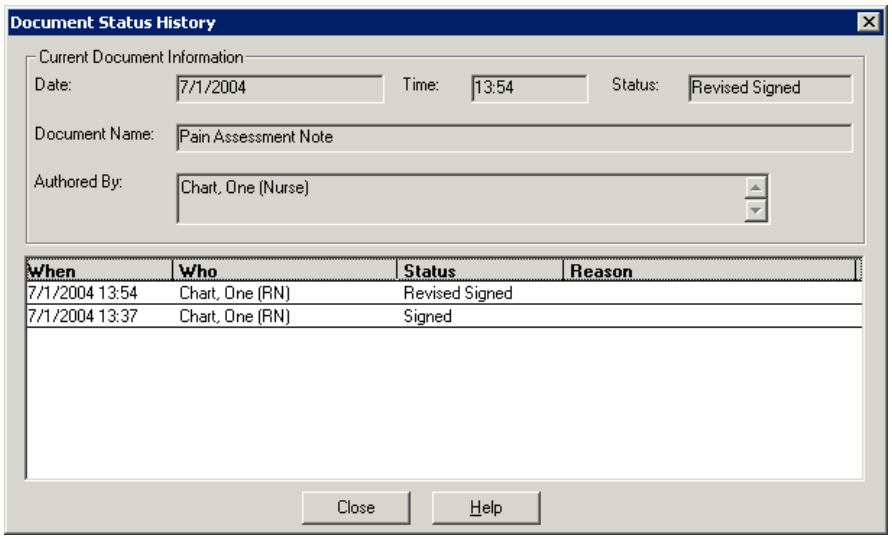
Screen 126: Document Corrections window

View Status History of a Document

You use the **Document Status History** dialog box to see the status changes a document has gone through.

To view the status history of a document:

1. In **Report** view in the **Documents** chart section, select the document for which you want to view the status history.
2. From the shortcut menu, select **Status**, then **History**.



Screen 127: Document Status History window

Personalizing Your Document Tab View

Change and save time scale for viewing Documents

You can change the time scale for the dates in the **Summary View** on a per-patient basis. There are up to four options:

- Days
- Weeks
- Months
- Years

Note: Depending on the date specified in the **Since** field, some of the selections in the **Actions** menu may be disabled. For example, if the value in the **Since** box is less than one month, **Months** and **Years** are disabled. If the value in the **Since** box is more than 6 months (such as a year ago), **Days** is disabled.

To change the time scale:

1. Display the **Documents** chart section.
2. In the View Control Panel, select **Summary** from the **Display Format** list.
3. In the **Since** group box, select or enter how far back you want to display Documents.
4. From the **Actions** menu, select **Modify Time Scale** and then choose the interval you want. You can save the time scale for viewing a patient's Documents in the **Summary** view of the **Documents** chart section. The time scale remains as you have selected for that patient, until you select and save a different interval.

To save the current time scale:

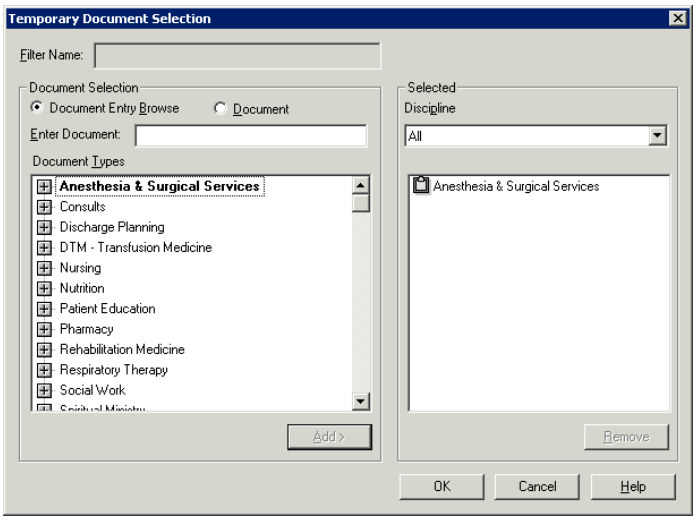
1. Do one of the following:
   a. Click the **Save Time Scale** icon on the toolbar.
   b. From the Preferences menu, select **Save Time Scale**.
2. The Save Time Scale icon displays at the top left corner of the Display window to indicate that you have saved a time scale.

Creating a temporary document selection filter

The **Temporary Document Selection** dialog box allows you to select Documents to be displayed in the view on a one-time or temporary basis. This filter is cleared and not saved after you log off or select another filter.

To create a temporary selection filter:

1. From the **Document Section** filter, select **<Temporary Selection…>.** The **Temporary Result Selection** window displays.



Screen 128: Temporary Documents Selection Window

Setting your preferences for viewing Documents

The **Personal Documents View Options** dialog box allows you to set up customized, personal preferences for the **Documents** chart section. By setting your preferences, you can see the information important to you in the **Documents** chart section. The three tabs in this dialog box allow you to:

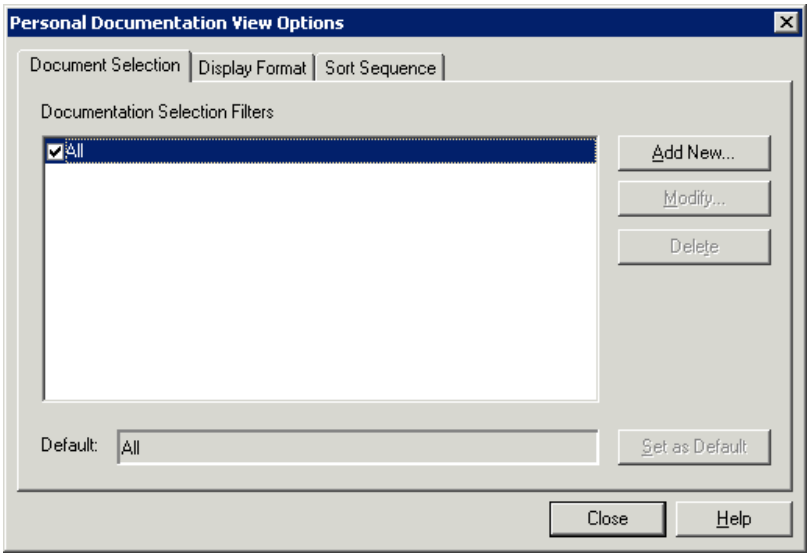
- Create and maintain filters for the types of Documents you want to view (**Document Selection** tab).
- Create graph filters (**Graph Selection** tab).
- Specify the default Document selection filter and display format for the chart section (**Display Format** tab).

Documents Selection Tab

The **Document Selection** tab of the **Personal Documents View Options** dialog box displays the current Document selection filters. In this dialog box, you can add, change, or delete filters, and choose a default filter for when you display the **Documents** chart section. If you do not choose a default filter, the filter **All** (which cannot be deleted or modified) is the default. You can create a new filter and make it the default, or you can make an existing filter the default.

To add a Document selection filter:

1. From the **Preferences** menu, select **Documents**. The **Personal Documents View Options** dialog box opens.
2. Click the **Document Selection** tab.
3. To create a new filter, click **Add New**. The **Add New Documents Selection Filter** dialog box opens.

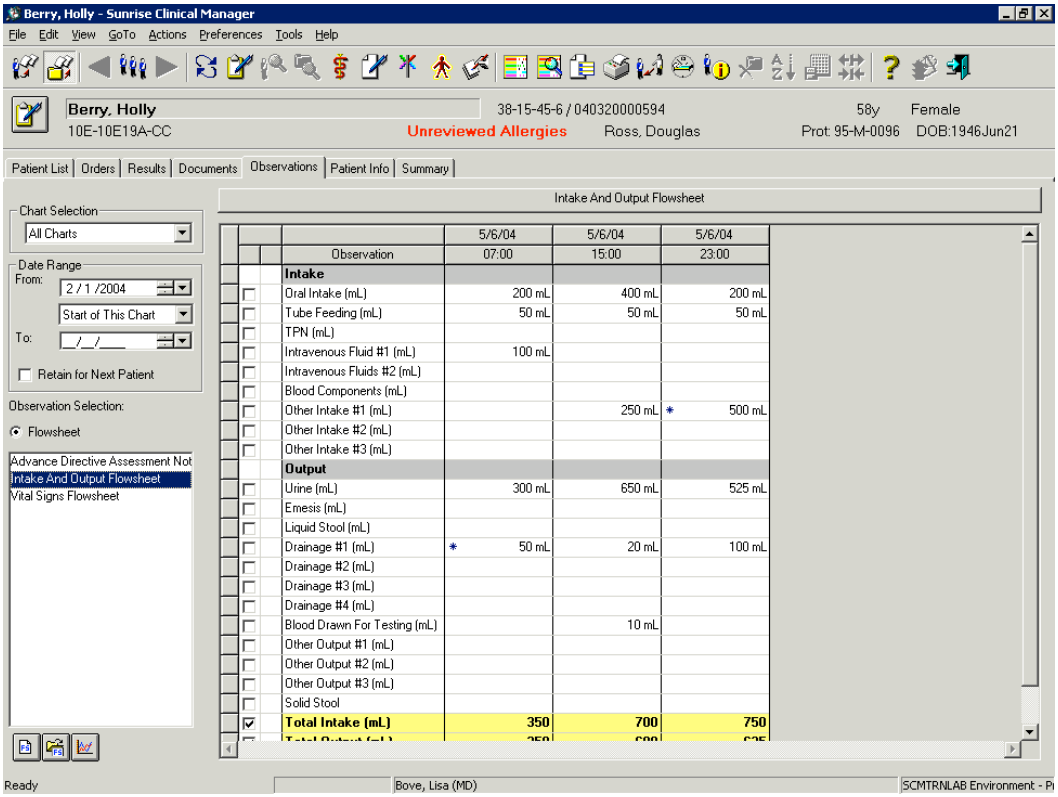


Screen 129: Add New Documents Filter Window

4. Type a name for your new Documents filter in the **Filter Name** field.
5. In the **Document Selection** group box, do one of the following:
    c. Click **Document Browse**. The **Browse** shows a tree structure of Document groups and items. Select the group or item you want included in the filter. To select sequential groups or items, hold down Shift and click on each choice. To select non-sequential groups or items, hold down Ctrl and click on each choice.
    d. Click **Document Item**. Enter part or the entire name of the item you want to include in the filter. When you enter part of the name and pause, an alphabetical list of items that begin with the characters you entered displays in the browse window.
6. Select a category or item and click **Add** to place the selected item(s) in the **Selected** list. To delete any groups or items from the **Selected** list, select the category or item and click **Remove**.
7. Click **OK** to return to the **Document Selection** tab.
8. If you want to make the new filter the default, click **Set as Default**.
9. Click **Close** to save the filter and return to the **Documents** chart section. The new filter appears in the **Document Selection** drop-down list in the **View Control Panel**. If you selected the filter as the default, it will be used the next time you log on and display the **Documents** chart section.

Observation Tab Overview

The **Observations** chart section is where you view flowsheet documents and the observations that are contained in them. It is comprised of the **View Control Panel** and the **Display** window.



Screen 130: Observations tab

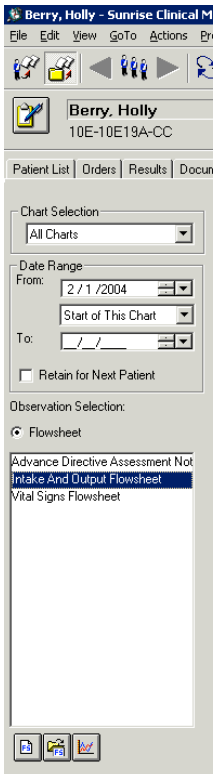
The **View Control Panel**, to the left of the **Display** window, is where you set your criteria for displaying observations.

The **Display** window displays observations in the form of numbers, text, and graphs, based on the type of observation and the display format you select. Two display formats are available:

- The **Trend** view displays dates across the top and observation items and their modifiers down the side in a grid format. The **Trend** view is similar to the **Trend** view in the **Results** chart section.
- The **Graph** view displays selected data elements from the **Trend** view in graphic format. These graphs are similar to the ones you can view in the **Results** chart section.

Filters – Observation tab

The **View Control Panel** is where you specify the observations you want to view, and the format in which you want to display them in the **Display** window of the **Observations** chart section.



Screen 131: Observations tab View Control Panel

- **Chart Selection**: **All Charts** refers to all information for all visits. **This Chart** is limited to this visit.
- **Date Range**: Used to specify a date range for viewing. When you know exact dates, enter the start date in the **From** field. If there is an end date, enter the date in the **To** field. You can also use pre-defined timeframes from the drop-down list such as one week ago or one month ago. You should not use both options at the same time. **Note**: If a time frame is used it will change the Since date.
- **Observation Selection**: All the Flowsheets that have been entered for this patient are listed in this section. The highlighted flowsheet is displayed. To display another flowsheet, click on the flowsheet name from this list.
- **Icons**: Three icons display at the bottom of the View Control Panel.

Screen 132: Flowsheet View Control Panel Icons

- The fist icon opens the Flowsheet Manager to allow you to select a new flowsheet.
- The second icon opens the highlighted flowsheet to allow you to document a new column.
- The third icon toggles the view between the flowsheet view and the graph view.

Viewing Observations from the Observations tab

The **Flowsheet** view displays observations in a grid or spreadsheet format. The dates and times that observations were recorded are displayed in ascending order. The most recent data is at the far right side. You can resize the column widths. Each column of observation entries represents an "instance" of the flowsheet document.

- If an observation contains text, you can highlight the cell to display the text in a separate window.
- If an observation has been edited, it is marked with a sheet of paper icon.
- If an observation has been canceled, it is displayed in strikeout text.
- If an observation has a comment attached, it is marked with a comment icon.
- If an observation can't be selected, it is displayed in gray text.

You can do the following in the Flowsheet view:

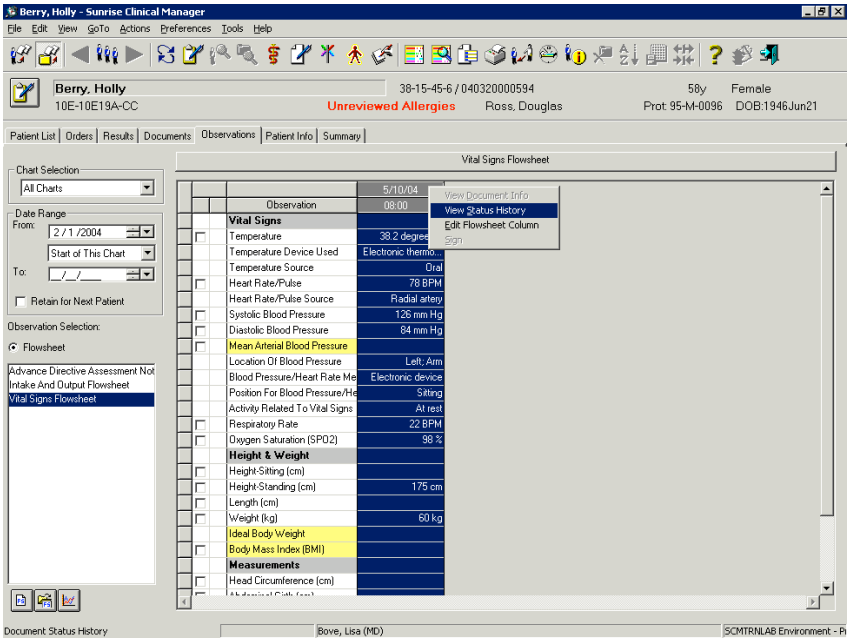
- View the status history of a flowsheet document.
- View corrected observations.
- Discontinue a flowsheet.

Viewing the Status History of a Flowsheet

You can use the **Document Status History** dialog box to see the status changes a flowsheet document has gone through. You can select his option directly from the Observations tab view.

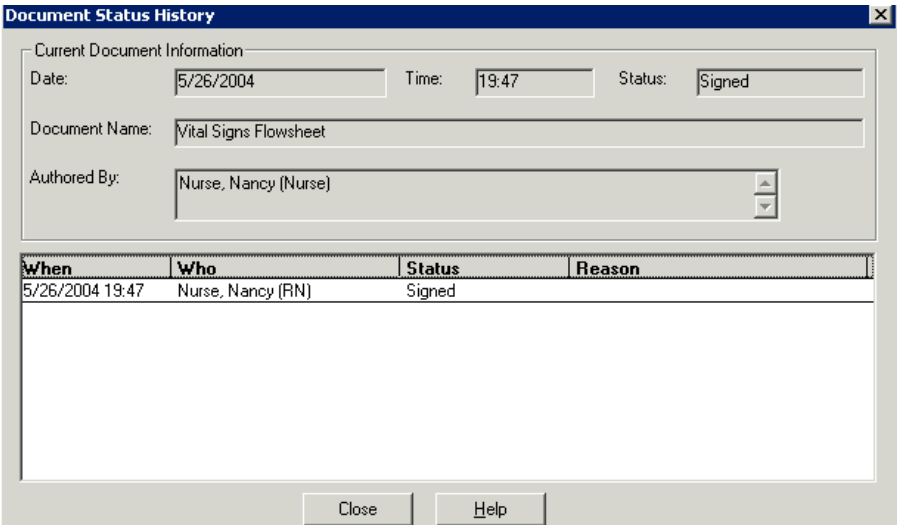
To view status history of a flowsheet from the Observations tab

1. Display the flowsheet by selecting it from the **Observation Selection** panel.
2. Right-click on the column header.



Screen 133: View Status History from Observations tab

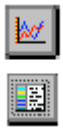
3. Select **View Status History** from the short-cut menu.



Screen 134: Document Status History window

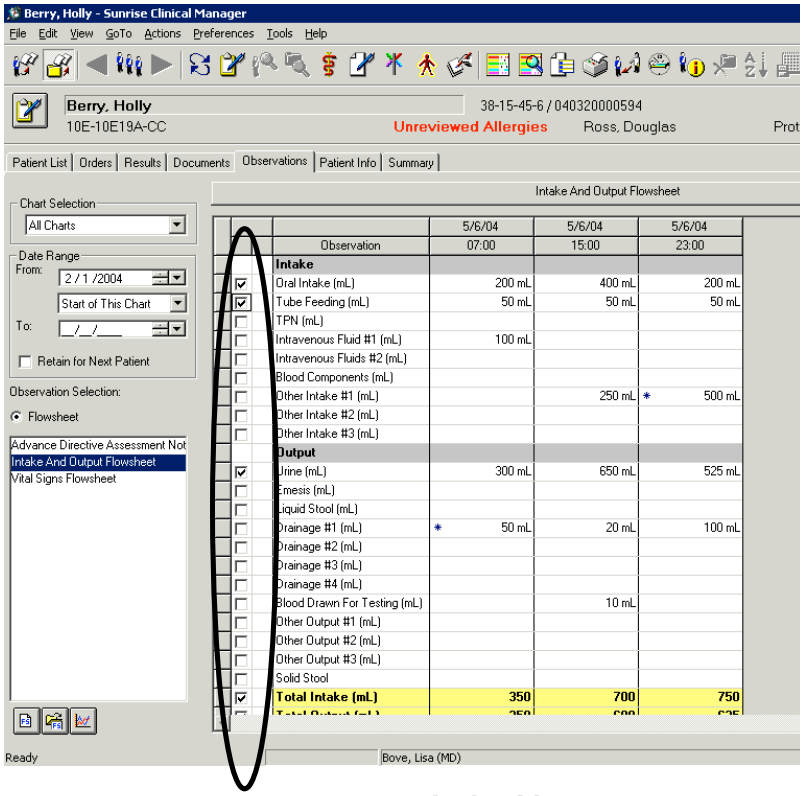
Graph Flowsheet Data

You can view observations in a graph format when you click the **Graph/Trend** icon in the **View Control Panel** of the **Observations** chart section. The icon toggles between Graph and Trend View.



Screen 135: Flowsheet & Graph Icons

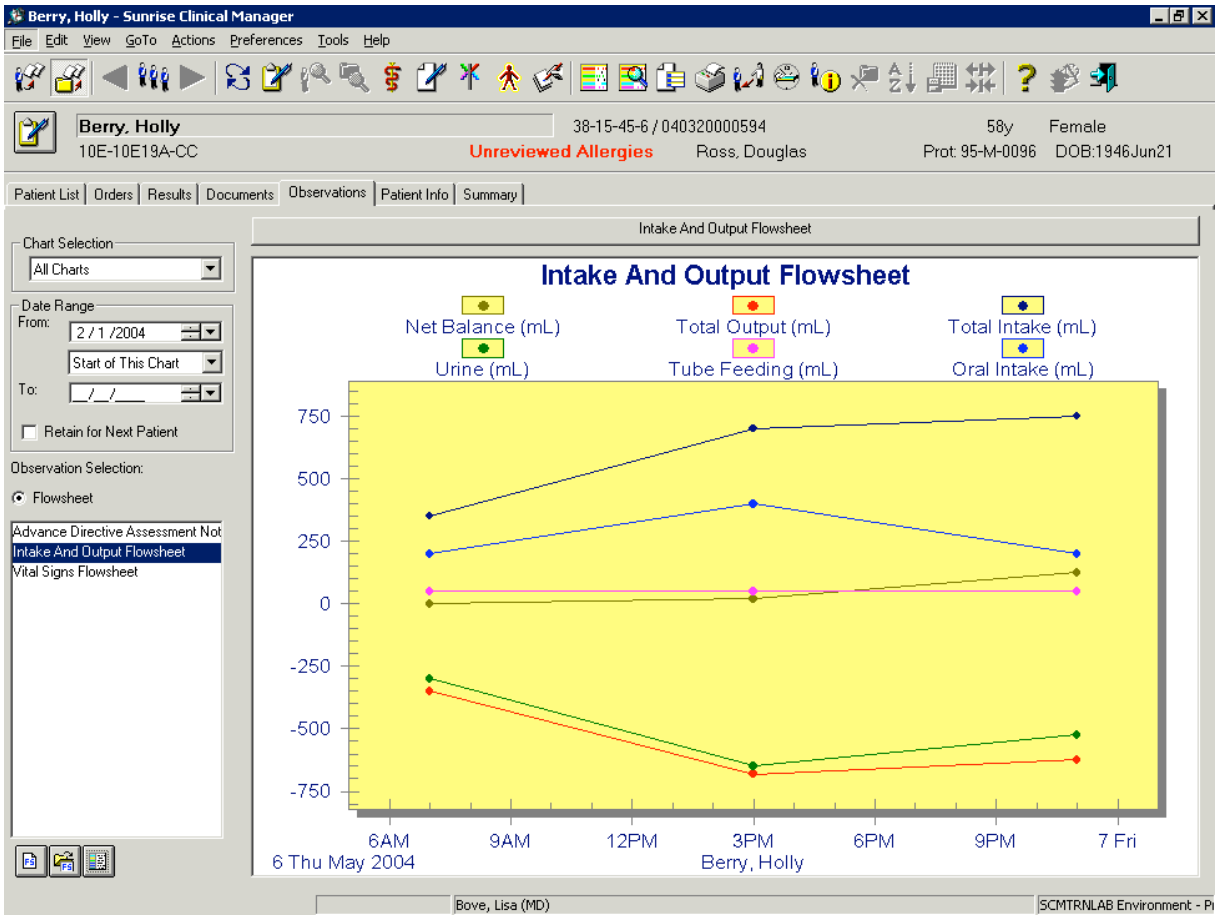
A check mark indicates that the observation item can be graphed. You can uncheck the box if you don't want an observation to appear on the graph.



Screen 136: Graph checkboxes

To graph Flowsheet elements

1. From the Observations tab, select the desired flowsheet from the Flowsheet Selection list.
2. Click the checkboxes for the data elements to graph.
3. Click the Flowsheet icon in the lower, right corner of the control panel.
   Note: This icon toggles between Graph and Flowsheet depending on which view you are on.



Screen 137: Graphed flowsheet data

4. Click the Graph icon to return to the flowsheet trend view.

Chapter X: Enter and Maintain Documents

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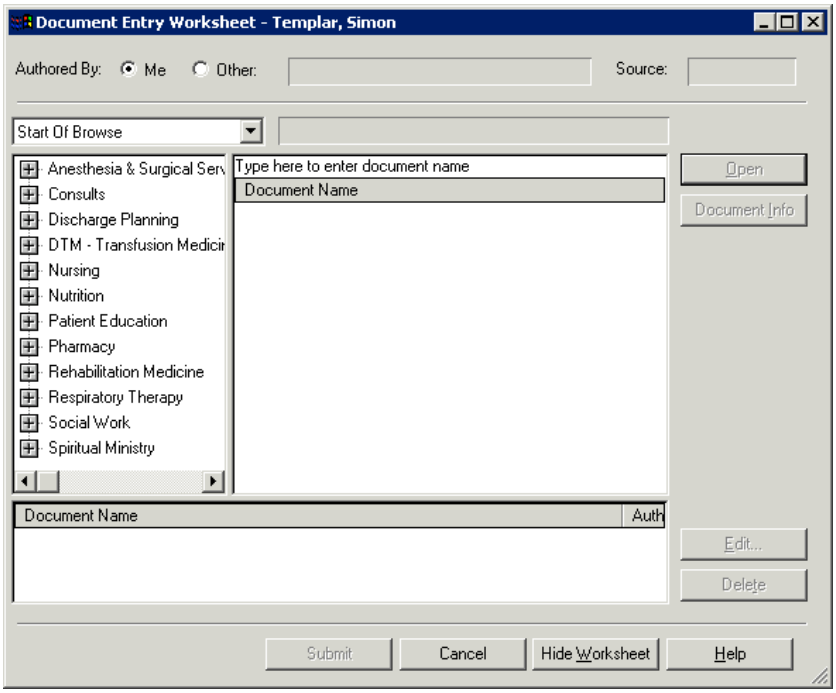
Document Entry Worksheet

You enter documents using the **Document Entry Worksheet**. The types of documents you can enter are:

- Free-text entry document that you create by entering text in a text box.
- Flowsheet that you use to record patient observations in a grid format.

The **Document Entry Worksheet** contains a two-pane **Document Browse**, where you locate the type of document you want to enter, and a **Document Summary** window, where you can review documents before you submit them. The worksheet, and each window within it, is resizable using the standard Windows resizing functions.

When you select a document to enter, a **Free Text Entry** dialog box**,** or the **Flowsheet Manager** opens. Your security rights for entering documents determine the types of documents that display in the browse.



Screen 138: Document Entry Worksheet

Select documents

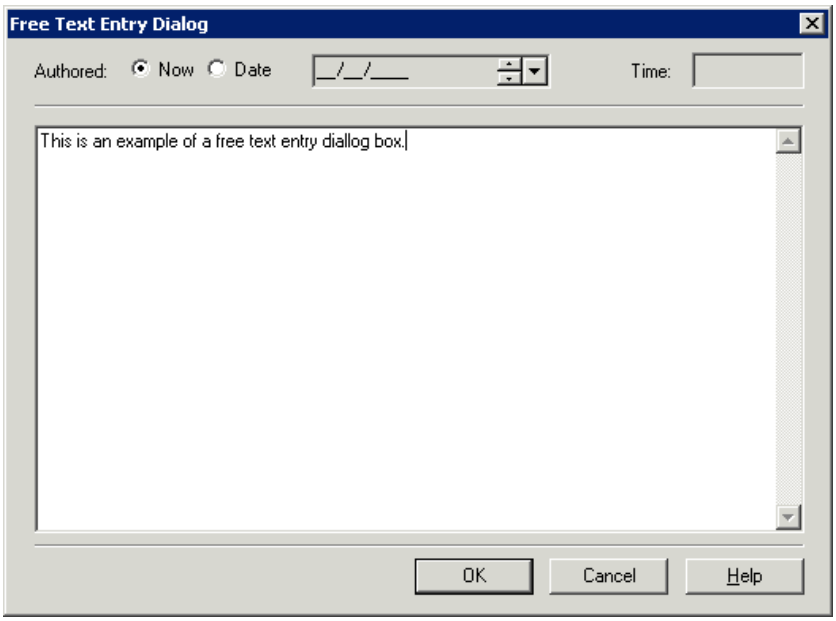
1. Open the **Document Entry Worksheet** using one of the following methods:
   a. On the toolbar, click the **Enter Document** icon.
   b. From the **GoTo** menu, select **Document Entry Worksheet**.
2. Locate a document in one of the following ways:

a. Select **Start of Browse** and navigate through the tree to locate the document category you want. When you select a category in the left pane, the right pane lists all the documents in the category.
b. Select **Manual Entry** and enter part of the document name in the **Type here to enter document name** field and pause. CRIS displays all the documents that start with the characters you typed.

3. In the right pane of the **Document Browse**, double-click the document name, or select the document and click **Open**. If the document is defined as a free-text document, the **Free Text Entry** dialog box opens. If the document is defined as a flowsheet, the **Flowsheet Manager** opens.

Enter Free Text Notes

Free-text documents are those composed of text in a free-form format. In a text window, you type the information you want to convey, creating paragraphs where appropriate. You can enter textual and numeric information, such as a brief progress note.



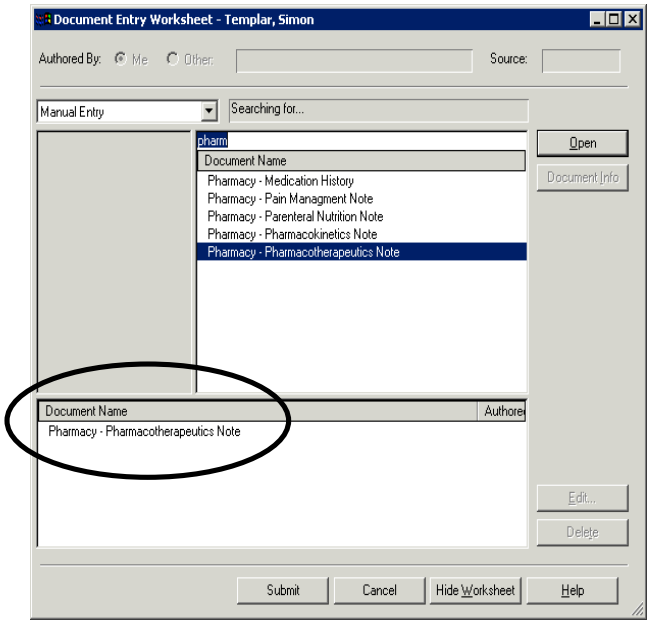
Screen 139: Free Text Entry Dialog box

To enter a free text note:

4. Type your comments in the text window.
5. Click **OK** to return to the **Document Entry Worksheet**. The new document is listed in the **Document Summary** window.
6. When you are done, click **Submit** to submit all the documents in the **Document Summary** window. The document is submitted.

Edit un-submitted documents

You can edit a document before or after you submit it. Free text documents that have not yet been submitted are listed in the **Document Summary** window of the **Document Entry Worksheet**.



Screen 140: Document Summary window

To edit an un-submitted free text document

1. In the **Document Summary** window, select the document you want to edit.
2. Click **Edit**. The **Free Text Entry** dialog box for the selected document opens.
3. Change or add to the existing text and click **OK**. You return to the **Document Entry Worksheet**.
4. Click **Submit** to record the document in the patient's chart.

Delete an un-submitted document

You can delete a document before you submit it. After you submit a document, you can edit or cancel the document, but not delete it. Documents that have not yet been submitted are listed in the **Document Summary** window of the **Document Entry Worksheet**.

To delete an un-submitted document

1. In the **Document Summary** window of the **Document Entry Worksheet**, select the document you want to delete.
2. Click **Delete**. The document is removed from the **Document Summary** window.

Enter Flowsheets

You can use flowsheets to record observations in CRIS. Flowsheets are collections of clinical observations that are repeated on a regular basis, and displayed in a grid format. They represent the most common type of documents used by nurses and other ancillary care providers to record patient care. The ability to add data to a particular flowsheet is determined by the security rights for the document.

The **Flowsheet Manager** is a resizable dialog box; you can also change the size of the panes within the dialog box using the standard Windows resizing functions. The shape and size is saved when you close the **Flowsheet Manager**. Observation names are listed down the left side, and observation values are displayed in the scrolling date/time columns.

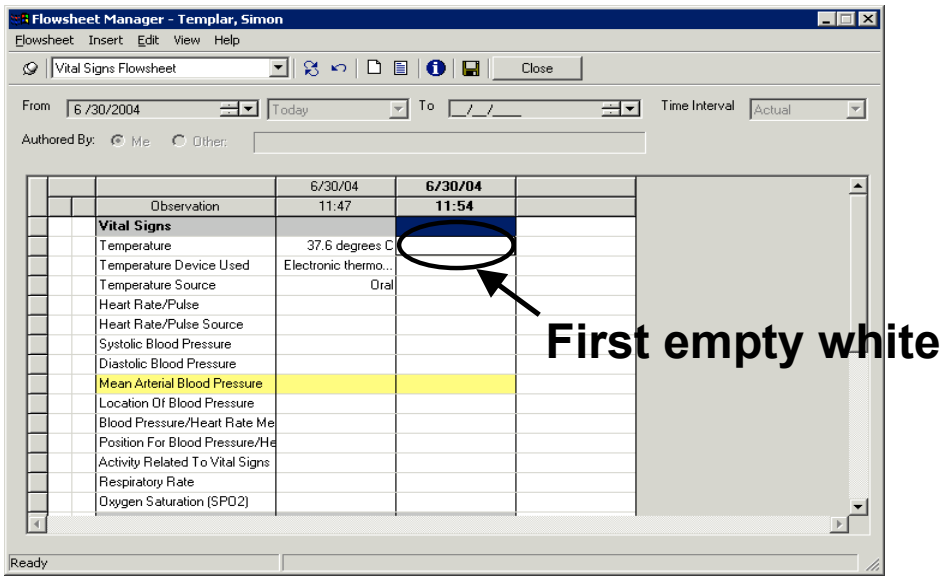
Each column of observations on the **Flowsheet Manager** represents a separate "instance" of a flowsheet document. You can create new columns of entries by highlighting the empty column at the far right side of the grid.

You can perform the following functions in the **Flowsheet Manager**:

1. Add a new column of observation entries.
2. Add, edit and view comments for an observation.
3. Edit or cancel existing observation entries.
4. Access facility-defined observation information (drop-down lists).

To open the Flowsheet Manager from the Document Entry Worksheet:

1. Select a flowsheet from the **Document Browse**.
2. In the **Document Entry Worksheet**, click **Open**. The **Flowsheet Manager** displays.

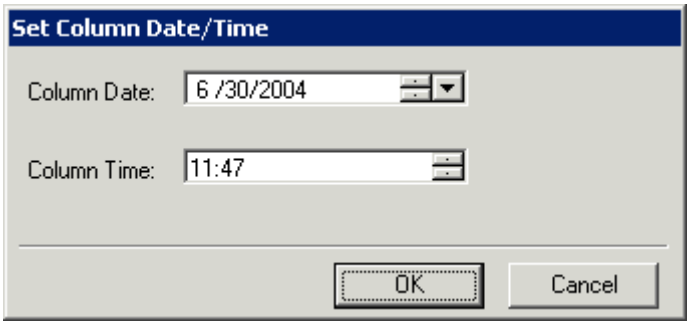


Screen 141: Flowsheet Manager

Add a new column of observations

Each column of observations on the **Flowsheet Manager** represents a separate "instance" of the flowsheet document. You can create a new column by highlighting the empty column at the far right side of the grid.

When you first click in any cell of an empty column, the current date and time are displayed. You can set the time for task completion using a shortcut menu - you can either select an actual time, listed in 15-minute increments from the current time, or set an exact day and time in the **Set Column Date/Time** dialog box.



Screen 142: Set Column Date/Time Dialog box

Change the date or time of the Flowsheet Column

3. Right-click on the time column header.
4. From the shortcut menu, select **Set Date/Time**. The **Set Column Date/Time** dialog box opens.
5. Enter the desired date and/or time for the column.
6. Click **OK**. The date and time you entered are displayed at the top of the column.

Documenting in a flowsheet

In a flowsheet, there are multiple ways to enter information. Begin by selecting the cell where you want to document. Leave blank any cells that don't apply. Examples of the different types of entry methods are:

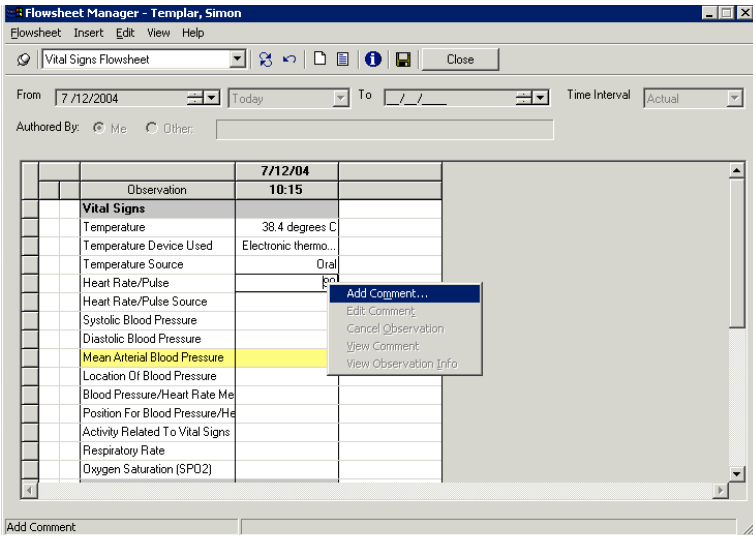
- Type-in fields are empty text boxes that allow you to enter up to 250 text or numeric characters.
- Numeric-only fields are empty cells where you can **ONLY** type numeric characters (e.g. 100). The unit of measure is added by the system where applicable (e.g. mL).
- Restricted Single-Select Lists require you to select only one option from the list displayed.
- Suggested Single-Select Lists allow you to either select an option from the list and/or type in additional data. **NOTE**: You may need to expand your column to enter the additional information.
- Restricted Multi-Select Lists have check boxes that allow you to select one or more options from the list displayed.
- Suggested Multi-Select Lists have check boxes that allow you to select one or more options from the list displayed and/or type in additional data. **NOTE**: If you must add additional data, type your data first, then click the applicable checkboxes.

7. To move from cell to cell within the flowsheet,
    a. Either click on the next cell where you want to enter documentation or
    b. Press the up and down arrows to move to another cell. **NOTE**: The right and left arrow keys move from column to column.
8. After you have entered all the information into the flowsheet. Click the Save icon.
9. Click Close to close the Flowsheet Manager.

Add a comment to a flowsheet

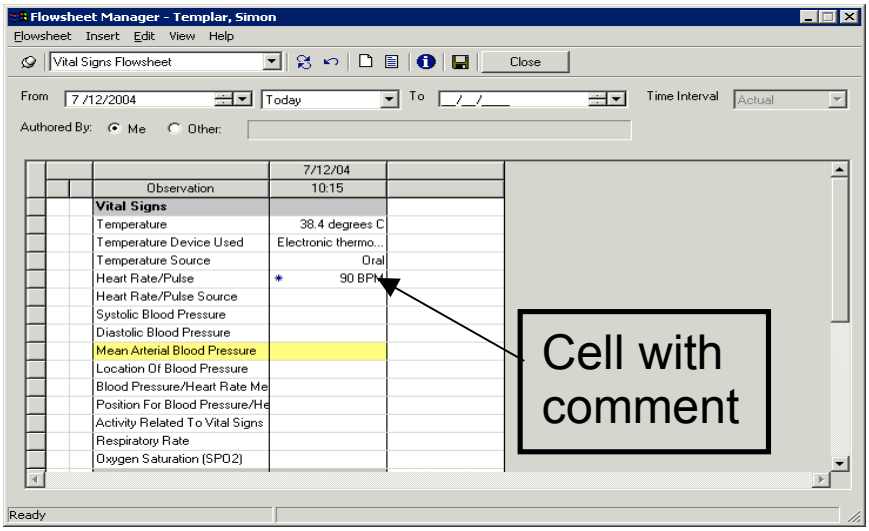
Some flowsheets may not contain all the observations you need for your patient. In this case, there are generically named observations available in specific flowsheets for documenting information on items not listed. For example: in the Intake and Output flowsheet there are observations named Drainage #1, Drainage #2. Comments are used to specify what type of drainage you are documenting.

1. After data has been entered into a flowsheet cell, right click on that cell and select **Add Comment**.



Screen 143: Add comment to a cell

2. The **Add New Comment** window displays. Enter description for observation.
3. Click **OK** to close the comment window.
4. To save your flowsheet, click the **Save** icon. **Note**: Once you save the flowsheet an "*" will display in that cell indicating there is a comment.



Screen 144: Cell with comment

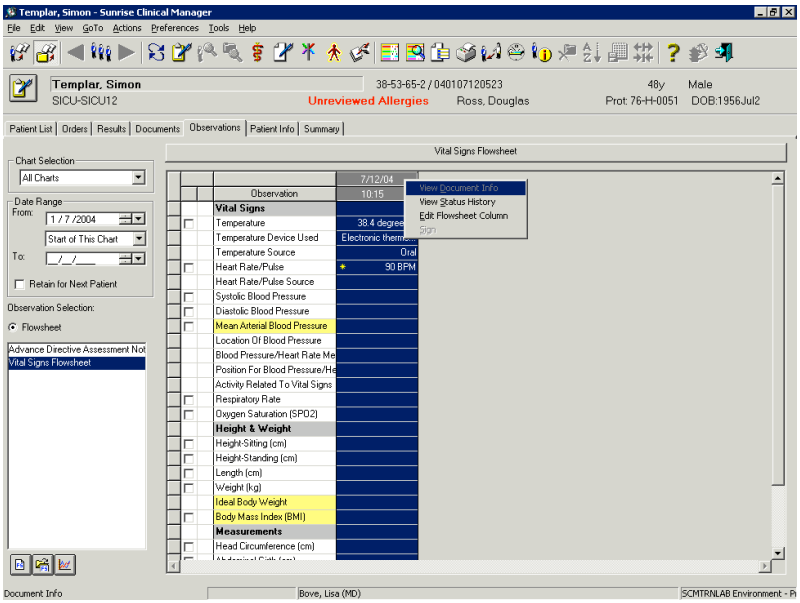
Edit observation values

You can change the value of an observation after you have saved it. Observations that have been edited are indicated with a paper icon in the **Flowsheet Manager**.

Screen 145: Flowsheet Cell Edit Icon

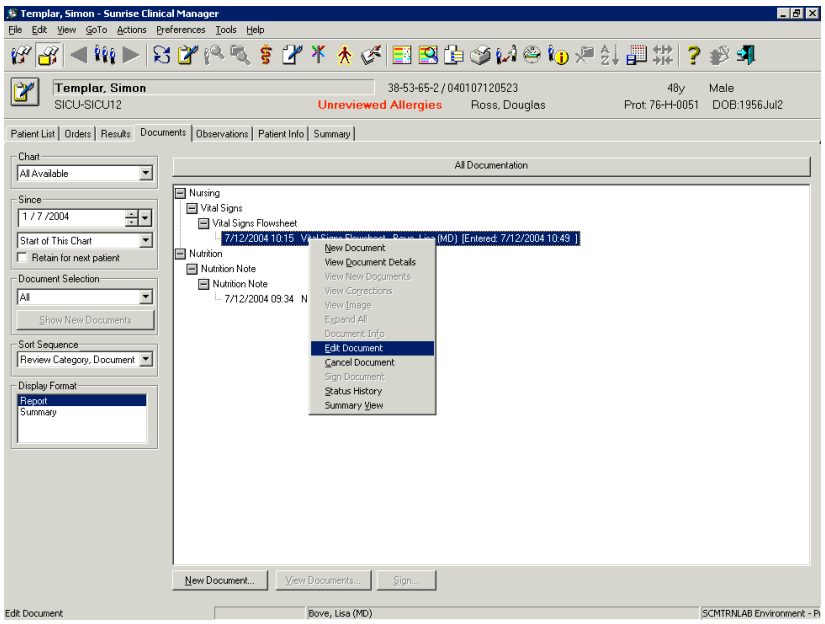
To edit an observation value:

1. You can switch to Edit mode in two ways
    a. From the Observations tab, right-click on the desired column. Select **Edit Column** from shortcut menu.



Screen 146: Edit flowsheet from Observation tab

    b. From the Documents tab, right-click on the desired flowsheet entry.



Screen 147: Edit flowsheet from Documents tab

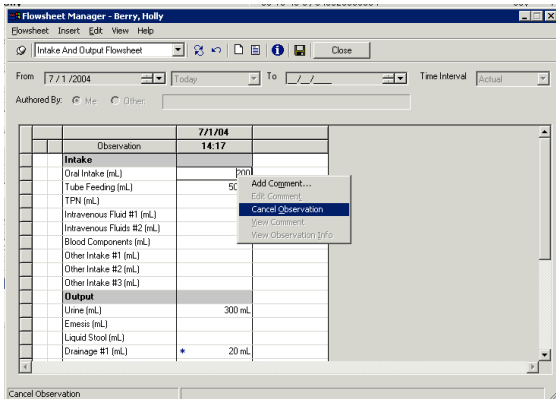
2. Select the observation you want to edit and enter the desired value.
3. **Save** the flowsheet.

Cancel Observations

You can use the Cancel Observation dialog box to cancel an observation in the Flowsheet Manager. You must be in Edit mode to cancel an observation. The reason you enter is displayed in the Observation Status History dialog box. After you cancel an observation, it is displayed in strike-out text in the Flowsheet Manager.

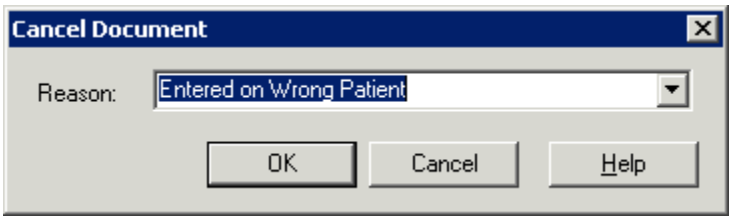
To cancel an observation:

1. To switch to Edit mode, right-click on the desired column and select **Edit Column** from the shortcut menu.
2. Right-click on the observation cell you want to cancel and select **Cancel Observation** from the shortcut menu. The **Cancel Observation** dialog box opens.



Screen 148: Cancel Observation

3. In the **Reason** drop-down list, select the reason you want to cancel the observation.
4. Click **OK**. The observation is displayed in strike-out text to indicate it has been canceled.



Screen 149: Cancel Document Dialog box

To cancel a document:

1. From the Documents tab, right-click on the document you want to cancel.
2. From the shortcut menu, select **Cancel Document**. The **Cancel Document** dialog box opens.
3. In the **Reason** drop-down list, select the reason you want to cancel the document.
4. Click **OK**.

Edit Submitted Documents

You can edit a document either before or after you submit it. If you have the appropriate security rights, you can edit a submitted document. A document that has been edited is indicated by a **Corrected Document** icon to its left.

Screen 150: Edit Document Icon

When a document has been edited, CRIS considers it a new document again; the **New Docs** flag appears in the **Patient List**.

To edit a submitted document:

1. In the **Report** view, select the document you want to change.
2. Right-click on the document and from the shortcut menu, select **Edit Document**. The associated **Free Text Entry** or **Flowsheet** dialog box opens.
3. Make your changes to the document.
4. Click **OK**. A **Corrected Document** icon appears next to the document.

Documents Available in CRIS by Department are provided on the next three pages.

Anesthesia & Surgical Services

DASS Pre-Operative Nursing Assessment
DASS Receiving Area Assessment
DASS Pre-Surgical Care Note
DASS Post-Surgical Care-Minor Surgery
DASS Post-Surgical Care-Neurosurgery
DASS Post-Surgical Care-Oncology/Eye
DASS Post-Surgical Care-Vascular Line
DASS Post-Op Nursing Evaluation Note

Consults

Dental Service Consult

Discharge Planning (all disciplines)

Art Therapy Discharge Note
Discharge Instructions Note - Nursing
Discharge Note - Nursing
Massage Therapy Discharge Note
Music Therapy Discharge Note
Recreation Therapy Discharge Note
Social Work Resource/Discharge Plan
Speech Language Path Discharge Report
Spiritual Ministry Discharge Note

DTM - Transfusion Medicine

Apheresis (Automated) Note
Manual Apheresis/Phlebotomy Note
Apheresis Exchange Therapy Note
Transfusion Reaction Investigation Note
Blood Component Admin - Apheresis
Blood Component Administration - Nursing
Blood Component Administration – Surgery

Nutrition

Nutrition Screening Note
Nutrition Assessment and Plan
Nutrition Research Note
Nutrient Intake Flowsheet
Body Composition Flowsheet
Nutrition Note
Nutrition Co-Sign Note

Patient Education

Patient Education Flowsheet

Pharmacy

Pharmacy - Medication History
Pharmacy - Pharmacotherapeutics Note
Pharmacy - Pharmacokinetics Note
Pharmacy - Pain Managment Note
Pharmacy - Parenteral Nutrition Note

Rehabilitation Medicine

General
Rehabilitation Medicine Encounter Note
Art Therapy
Art Therapy Service Note
Art Therapy Treatment Note
Art Therapy Short-Term Treatment Note
Art Therapy Discharge Note
Massage Therapy
Massage Therapy Service Note
Massage Therapy Treatment Note
Massage Therapy Short-Term Tx Note
Massage Therapy Discharge Note
Medical Section
Rehabilitation Medicine Consultation
Music Therapy
Music Therapy Service Note
Music Therapy Treatment Note
Music Therapy Short-Term Treatment Note
Music Therapy Discharge Note
Physical Disabilities Branch
Human Movement Disorders (HMD) Note
Oral Motor Function (OMF) Note
Physical Therapy
Physical Therapy Note
Occupational Therapy
Occupational Therapy Note
Recreation Therapy
Recreation Therapy Assessment
Recreation Therapy Service Note
Recreation Therapy Treatment Plan
Recreation Therapy Treatment Note
Rec Therapy Short-Term Treatment Note
Recreation Therapy Discharge Note
Recreation Therapy Note
Speech Language Pathology
Speech Language Pathology Note
Speech Language Pathology Interim Note
Speech Language Path Discharge Report

Respiratory Therapy

- Assessment (RT)
- Aerosol Therapy Flowsheet
- Bronchial Hygiene Therapy Flowsheet
- Gas Therapy Flowsheet
- Non-Invasive Ventilation Flowsheet
- Invasive Ventilation Flowsheet
- Hemodynamic Monitoring Flowsheet
- Procedure Note (RT)
- ABG Note
- EEG Note
- Respiratory Therapy Note

Social Work

- Social Work Screening Note
- Social Work Preadmission Assessment Note
- Social Work Psychosocial Assessment
- Social Work Reassessment Note
- Social Work Treatment Plan & Outcomes
- Social Work Interdisciplinary Consult
- Social Work Progress Note

Spiritual Ministry

- Spiritual Ministry Assessment

Nursing

Admissions
- Advance Directive Assessment Note
- Admission Assessment Note

Respiratory
- Respiratory Observation Flowsheet

Circulation
- VAD-Central Assessment Note
- VAD-Peripheral Assessment Note
- VAD Observation Flowsheet
- Circulation Observation Flowsheet
- Holter Monitoring Note

Food & Fluid
- Food & Fluid Needs Assessment Note
- Food & Fluid Needs Observation Flowsheet

Elimination
- Elimination Observation Flowsheet

Neurosensory
- Neurological (Specialty) Assessment
- Neurosensory Assessment Note
- Neuro Vital Signs Flowsheet
- Seizure Assessment Note

Sleep & Rest
- Sleep Assessment Note
- Sleep Observation Flowsheet

Physical Safety
- Missing Person Note
- Restraint/Seclusion Log-Behavioral Hlth
- Restraint Log-Medical/Surgical & ICU
- Physical Injury Assessment Note
- Physical Safety Room Search Note
- Pre Restraint/Seclusion Assessment Note
- Physical Safety Observation Flowsheet
- Post Seclusion And Restraint Note

Mobility
- Mobility Observation Flowsheet
- Mobility Assessment Note

Comfort & Pain
- Pain Assessment Note
- Patient Controlled Analgesia Flowsheet
- Pain Observation Flowsheet

Skin & Hygiene
- Skin & Hygiene Observation Flowsheet
- Extravasation Note

Sexuality
- Sexuality (Female) Assessment Note
- Sexuality (Male) Assessment Note

Psychosocial
- Psychosocial - Mental Status Assessment
- Psychosocial-Substance Abuse Assessment
- Psychosocial Observation Flowsheet
- Psychosocial - History Note
- Psychosocial - Growth & Development Note
- Suicide Risk Assessment Note

Vital Signs
- Vital Signs Flowsheet
- Intake And Output Flowsheet
- Arm Span Measurement Note
- 3/10 Height Measurement Note

Blood Component Administration
- Blood Component Administration - Nursing

Chemo & Biotherapy
- Chemo/Biotherapy Administration Note
- Cell Product Administration Note

Conferences
- Telephone Contact Note
- Care Conference Note

Point Of Care Testing
- Bedside Glucose Monitoring
- Point Of Care Testing Results Flowsheet
- Skin Test Result Note
- Urine Specific Gravity Results Flowsheet

Procedures & Tests
- Apheresis Note - 2J
- Hemodialysis Procedure Note
- Insulin Pump Flowsheet
- Insulin Pump Note
- Post Procedure Observation Flowsheet
- Pre Procedure Checklist
- Endoscopy Visit Note
- Endoscopy Gastric Analysis Note
- Endoscopy Procedure Note
- Liver Biopsy Procedure Note
- Bronchoscopy Procedure Note

Transfer, Pass & Expiration
- OR Transfer Note
- Expiration Note
- Pass Note

Chapter XI: View Patient Information

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Scope of Data Entered

Some data entered will carry across all patient visits and will not need to be re-entered. This information has a scope of All Available (AKA General). For example, in the Patient Info Tab Comments, Prosthesis, Special Needs, Protocol Appts, and VAD Line Hx have a scope of General.

Some data entered will be limited to the current visit and will need to be re-entered each time the patient returns to NIH. This information has a scope of This Chart. For example, in the Patient Info Tab Comments, Advance Directives, Interpreter and Other have a scope of This Chart.

You can also view entered data for this visit (This Chart) verses all visits (All Available) in the Documents and Observations Tab by changing the filter.

- Charts will remain open (available for you to enter data) for 60 days after in patient discharge
- Charts will remain open (available for you to enter data) for 90 days for deceased patients.

Patient Information Tab

Documentation entered in the **Patient Information Tab** is used as a tool to communicate information with multiple departments. This function is used to view, enter and edit information. There are five data entry options available to you.

- Allergies
- Comments
- Care Provider
- Significant Event
- Height/Weight

Additional data displays that interfaces from MIS. This includes:

- Health Issues – the protocol number will come from MIS
- Address/Phones/Contacts – this data will be entered on admission and maintained in MIS.
- Demographics/Visit Data - this data will be entered on admission and maintained in MIS
- Financial/Employer – no data will display in the these fields
- Visit History - this data will be entered on admission and maintained in MIS

Summary View Description	Information Displayed
Alerts	Displays acknowledged and unacknowledged alerts for the selected patient. You can select details to view more information.
Allergies/Comments	Top portion of the window displays allergies documented for a patient. The bottom portion of the window displays both interfaced and entered data. Interfaced data includes: chief complaint, citizen information, mother and father's name, occupation, patient's maiden name. Data to be entered includes: advance directive information, interpreter, prosthesis, other, protocol appointments, special needs, VAD line history and local contact information.
Care Providers	Displays all physicians/providers directly related to the care of a patient (i.e. Admitting Physician, Ordering Physician, Consultant)
Health Issues	Displays the patient protocol (s).
Significant Events	Displays consents, isolation status, transfusion history, immunization history and tracheostomy.
Address/Phones/Contacts	Displays interfaced addresses, phone numbers and emergency contact data.
Demographics/Visit Data	Displays patient's address and visit data information interfaced from MIS.
Financial Employer	No data will be displayed.
Visit History	Displays history of visits (past and present) for a patient.

Table 10: Patient Info Summary Views

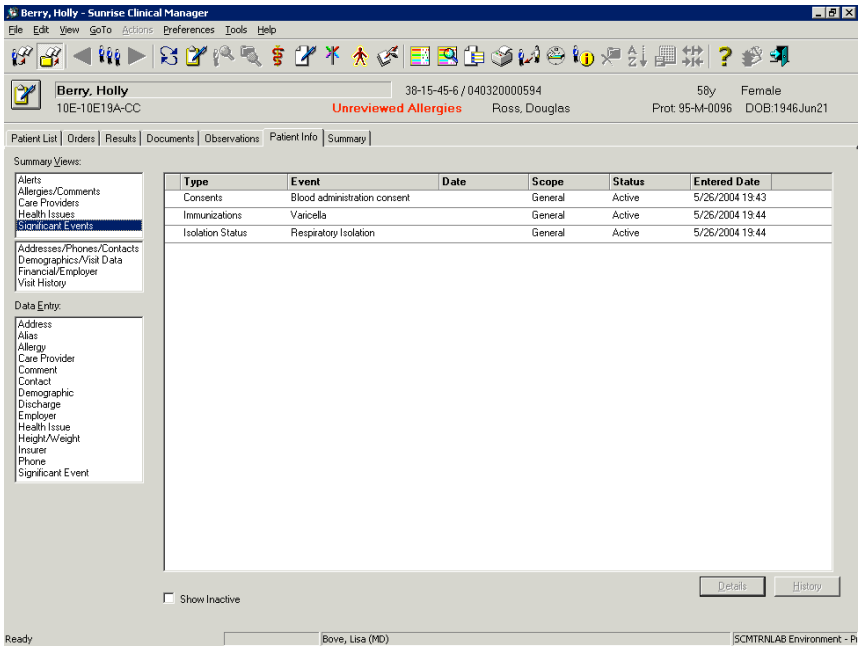
Patient Info Chart Section

The **Patient Info** chart section contains functions to help you view, edit, add, delete, or discontinue patient information related to demographics, visits and visit history, allergies, health issues, patient contacts, address and telephone numbers, discharge dates, height and weight, care providers, comments, and significant events.

Patient information can enter CRIS in one of two ways:

- From an interface to an admitting system (ADT).
- Directly, using CRIS.

To display the **Patient Info** chart section, click the **Patient Info** tab, or from the **GoTo** menu, select **Chart Section**, then **Patient Info**.

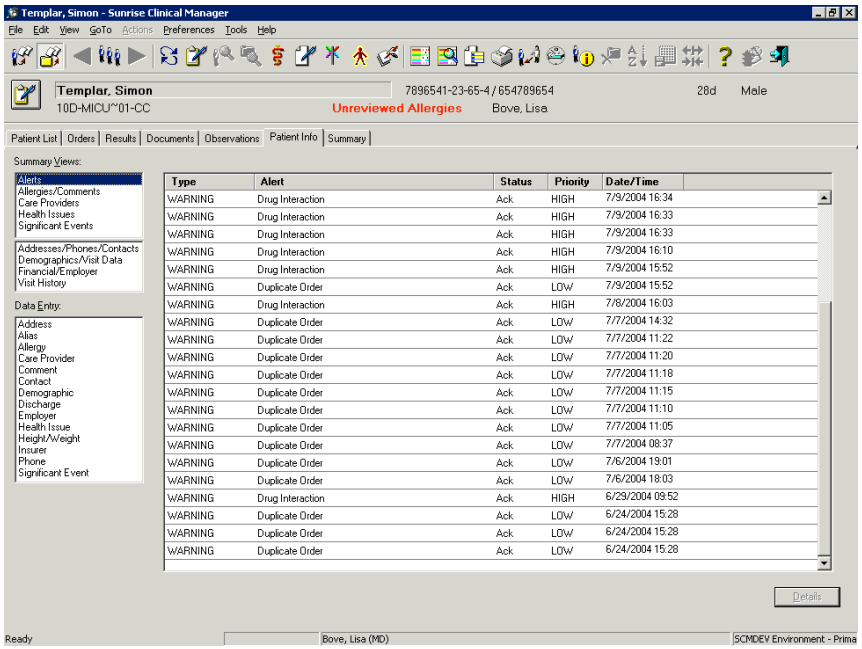


Screen 151: Patient Info tab

The **Patient Info** chart section contains a list of **Summary** views. You can click on a summary view to display a summary of the information you are interested in. If you want more detailed information or want to change the information, you can select an item in a summary view and click **Details**. You can click on one of the **Data Entry** options to view or change patient information.

View Alerts

You can display **Alerts** for the selected patient by clicking on the **Alerts** summary view in the **Patient Info** chart section.



Screen 152: Alerts Summary View

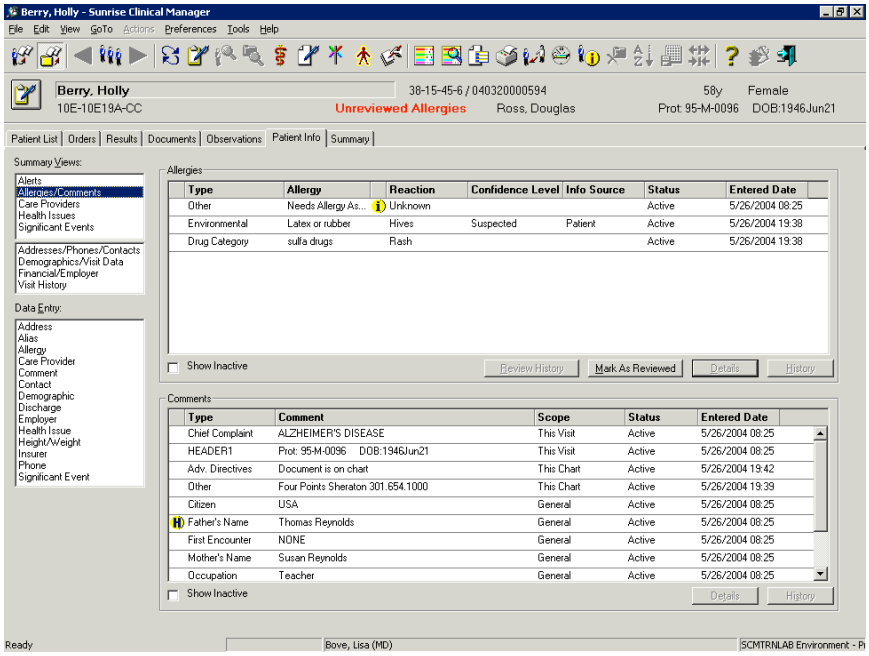
View Allergies and Comments

The top half of the **Allergies/Comments** summary view displays all active allergies that have been entered for the patient.

An icon in front of the **Reaction** column indicates that there is additional information to view about the allergy.

Screen 153: Information Icon

The bottom half of the **Allergies/Comments** summary view displays all active comments that have been entered for the patient.



Screen 154: Allergies/Comments Window

Allergies are considered general in scope, meaning that they will display in any chart for the patient.

If an allergy or comment has been changed, an icon displays when you display the **Allergies/Comments** section in the **Patient Info** chart section. You can select the allergy or comment and click **History** to open the **Modification History** dialog box.

Screen 155: History icon

To view an allergy:

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click an allergy, or select an allergy and click **Details**. The **Allergy Details** dialog box opens.
3. View or change information about the allergy in the **Allergy Details** dialog box.
4. Click **OK**.

To view a comment:

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.

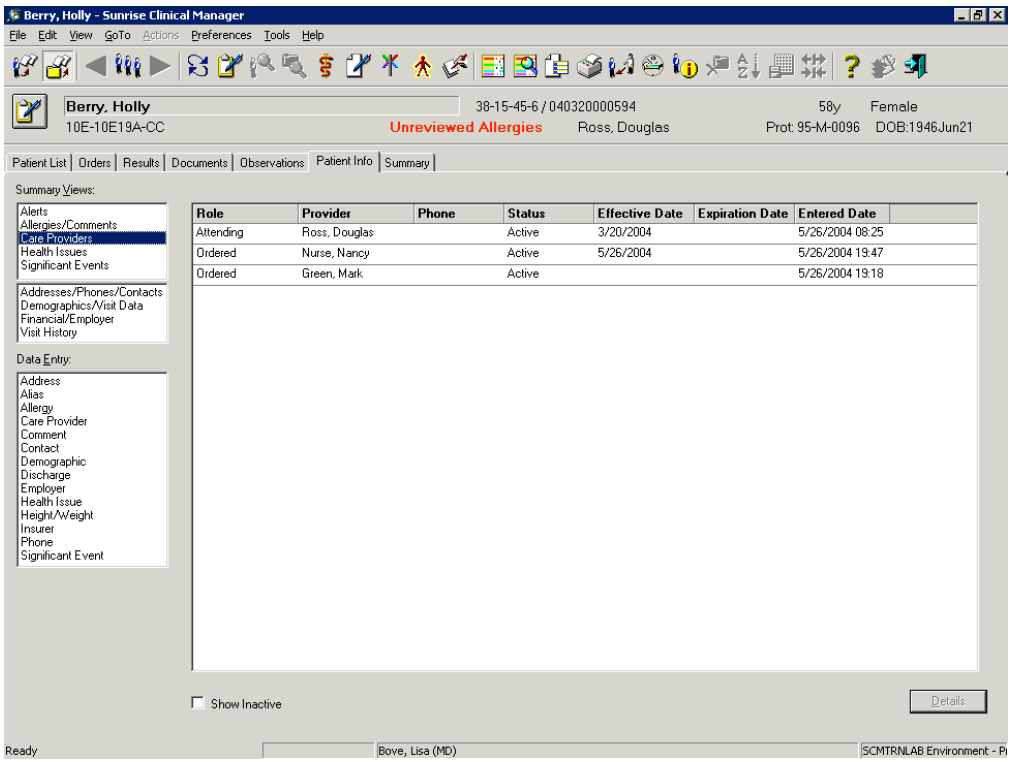
2. Double-click a comment, or select a comment and click **Details**. The **Comment Details** dialog box opens.
3. View or change the comment in the **Comment Details** dialog box.
4. Click **OK**.

To view allergy history information:

1. From the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Select an allergy, and click **Review History**. The **Allergy Review History** dialog box opens.
3. Review the information and click **Close**.

View Care Provider Information

You can display care providers by clicking on the **Care Providers** summary view in the **Patient Info** chart section.

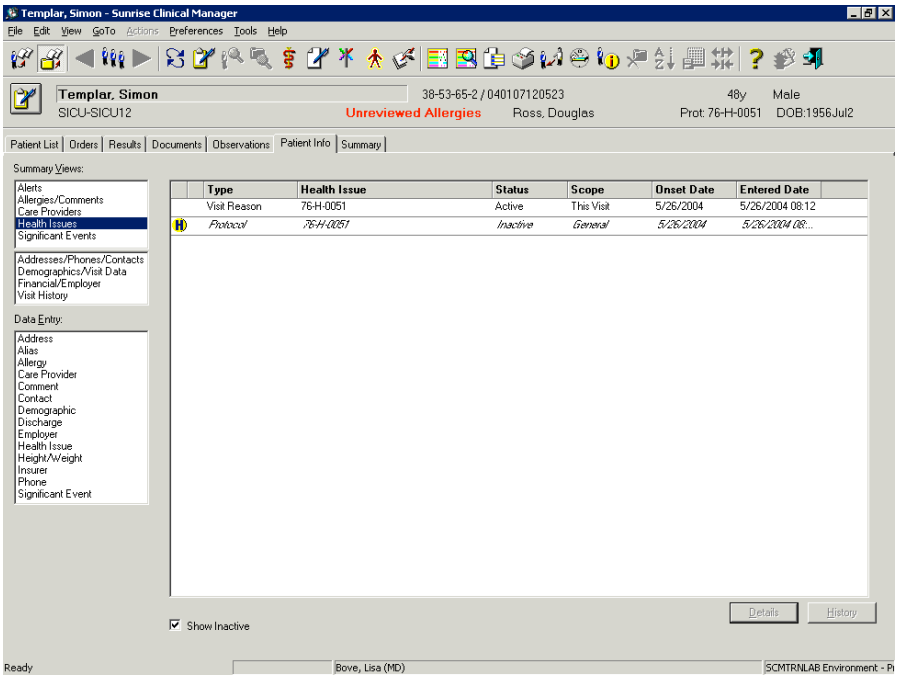


Screen 156: Care Providers Summary View

View Health Issues

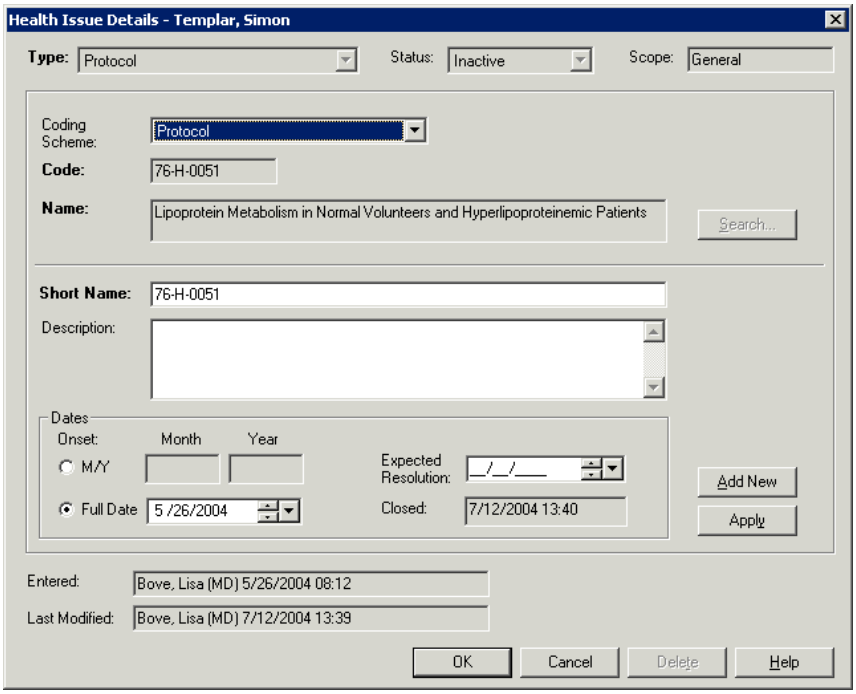
You can display health issues sorted by status and type, by clicking on the **Health Issues** summary view in the **Patient Info** chart section.

If a health issue has been changed, an icon displays when you display the **Health Issues** section in the **Patient Info** chart section.



Screen 157: Health Issues Summary View

You can select the health issue and click **History** to open the **Modification History** dialog box.



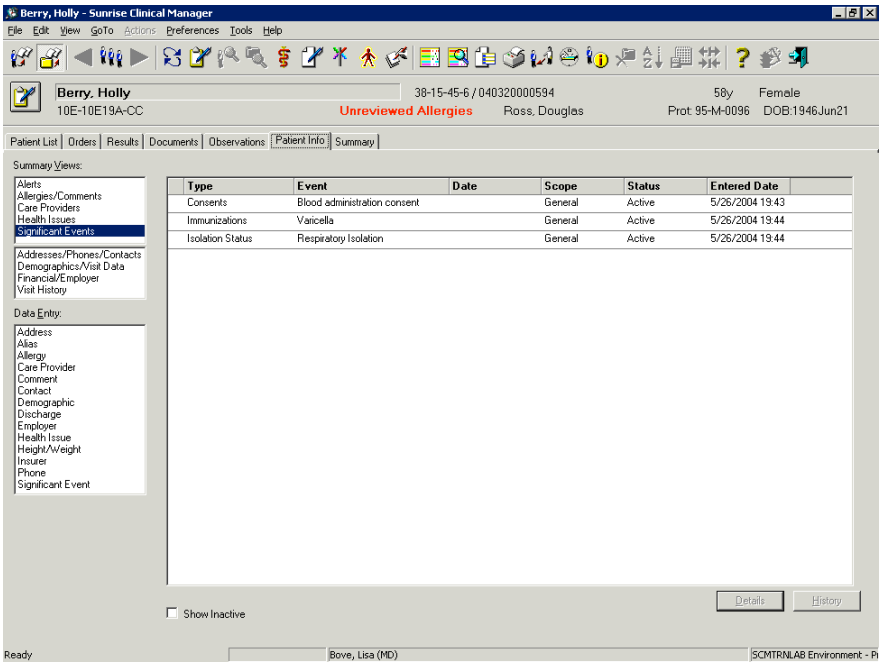
Screen 158: Health Issues Detail window

View Significant Event Information

You can display a list of the patient's significant events (such as Immunization History) by clicking on the **Significant Events** summary view in the **Patient Info** chart section.

If a significant event has been changed, an icon displays when you display the **Significant Events** section in the **Patient Info** chart section.

You can select the significant event and click **History** to open the **Modification History** dialog box.



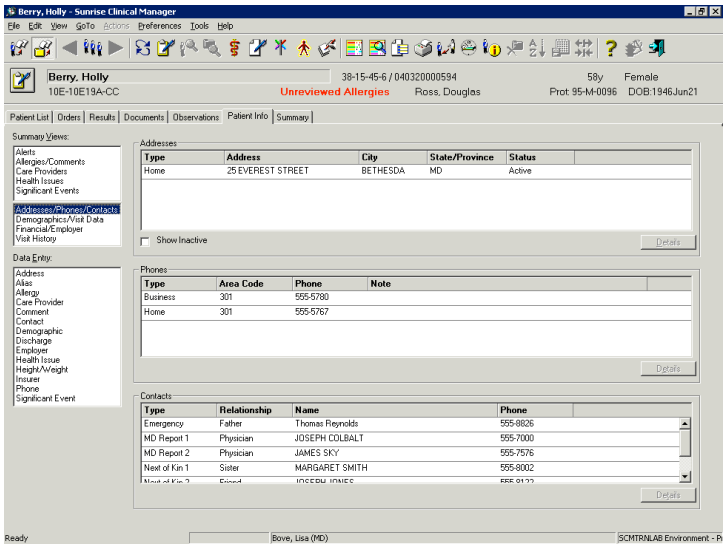
Screen 159: Significant Events Summary View

View Addresses, Phone Numbers and Contact Information

The top part of the **Addresses/Phones/Contacts** summary view displays the patient's addresses.

The middle part of the **Addresses/Phones/Contacts** summary view displays the patient's phone numbers.

The bottom part of the **Addresses/Phones/Contacts** summary view displays the patient's contacts.

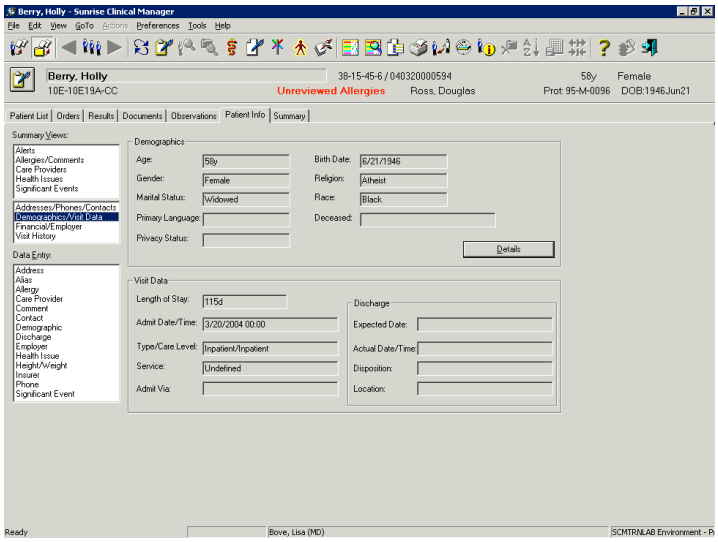


Screen 160: Address, Phone and Contacts Summary View

View Demographic and Visit Data Information

The top half of the **Demographics/Visit Data** summary view displays demographic information about the patient, including the patient's age, gender, marital status, primary language, birth date, religion, and race.

The bottom half of the **Demographics/Visit Data** summary view displays information about the patient's visit data, including length of stay, admit date and time, and discharge information.

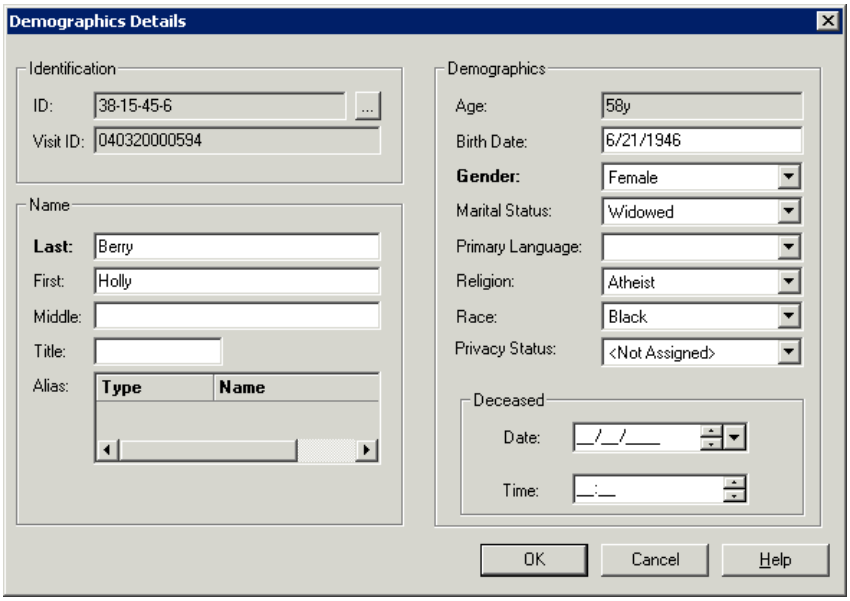


Screen 161: Demographics & Visit Data Summary View

View Visit History Information

You can display information on the patient's visit history by clicking on the **Visit History** summary view in the **Patient Info** chart section.

You can click **Details** to view the details of a visit.



Screen 162: Visit History Summary View

The Summary Chart Section

The **Summary** chart provides a quick overview of selected patient information. This information can be useful if you are seeing a patient for the first time, or are becoming familiar with your patient assignment.

Berry, Holly - Sunrise Clinical Manager

File Edit View GoTo Actions Preferences Tools Help

Berry, Holly 38-15-45-6 / 040320000594 58y Female
10E-10E19A-CC Unreviewed Allergies Ross, Douglas Prot: 95-M-0096 DOB:1946Jun21

Patient List | Orders | Results | Documents | Observations | Patient Info | Summary

Active Allergies

Type	Allergy	Reaction	Entered D
Other	Needs Allergy Assessment	Unknown	5/26/2004
Environmental	Latex or rubber	Hives	5/26/2004
Drug Category	sulfa drugs	Rash	5/26/2004

Active Health Issues

Type	Health Issue	Onset Date	Entered D
Visit Reason	95-M-0096	4/19/2004	5/26/2004
Protocol	95-M-0096	4/19/2004	5/26/2004

Active Comments

Type	Comment	Scope	Entered Date
Chief Complaint	ALZHEIMER'S DISEASE	This Visit	5/26/2004 (
HEADER1	Prot: 95-M-0096 DOB:1946Jun21	This Visit	5/26/2004 (
Adv. Directives	Document is on chart	This Chart	5/26/2004
Other	Four Points Sheraton 301.654.1000	This Chart	5/26/2004
Citizen	USA	General	5/26/2004 (
Father's Name	Thomas Reynolds	General	5/26/2004 (
First Encounter	NONE	General	5/26/2004 (
Mother's Name	Susan Reynolds	General	5/26/2004 (
Occupation	Teacher	General	5/26/2004 (

Active Medications

Name	Summary	Stop Date
Morphine Sulf...	2 mg/mL 2 mg by intravenous push o...	
Acetaminophen	80 mg tablet, chewable mg‖one table...	
5% Dextrose ...	1000 ml by intravenous infusion‖Pota...	
Digoxin	0.125 mg tablet‖0.125 mg (one tablet...	

Ready | Bove, Lisa (MD) | SCMTRNLAB Environment - P

Screen 163: Summary Tab

Chapter XII: Enter and Maintain Patient Information

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Patient Information Data Entry Overview

The **Patient Info** chart section contains a list of **Data Entry** options. You can click on an option to add new, or in some cases, maintain specific patient information.

The data entry options are primarily used to add new patient information. To edit existing information, you can select data in the **Summary View** and click **Details** to display the corresponding **Details** dialog box. You can use the **Details** dialog boxes to edit, discontinue, and delete information. Some information will only be modify via the MIS system and then interfaced into CRIS. Only the items that can directly entered into CRIS will be addressed in this section.

Maintain Allergy Information

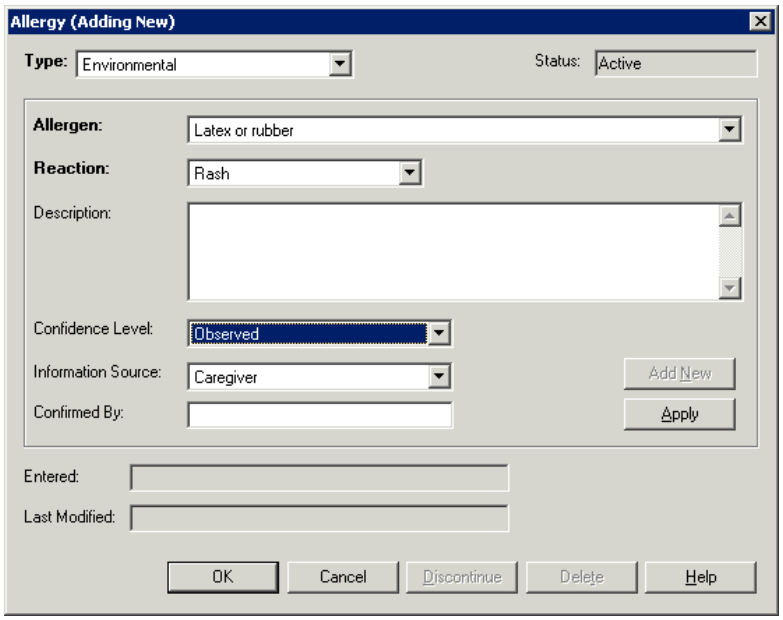
You can add patient allergies by clicking the **Allergy** data entry option in the **Patient Info** chart section. For example, if you've been informed that a patient has a penicillin allergy, you would first check to see if the allergy has been entered by looking at the **Allergies/Comments Summary View**.

To add an allergy

1. In the **Patient Info** chart section **Data Entry** list, select **Allergy**. The **Allergy (Adding New)** dialog box opens.
2. Select a **Type** from the drop-down list.
3. Select an **Allergen** from the drop-down list.
4. Select a **Reaction** from the drop-down list.
5. If desired, enter a **Description** of the allergy.
6. If desired, select a **Confidence Level** from the drop-down list.
7. If desired, select an **Information Source** from the drop-down list.
8. If desired, enter the name of the person who confirmed the allergy in the **Confirmed By** field.
9. Click **OK**.

To edit an allergy

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click an allergy, or select an allergy and click **Details**. The **Allergy Details** dialog box opens.
3. Make the desired edits. Note that you cannot edit the **Type** or **Allergen**.
4. Click **OK**.



Screen 164: Allergy Details Dialog Box

To discontinue an allergy

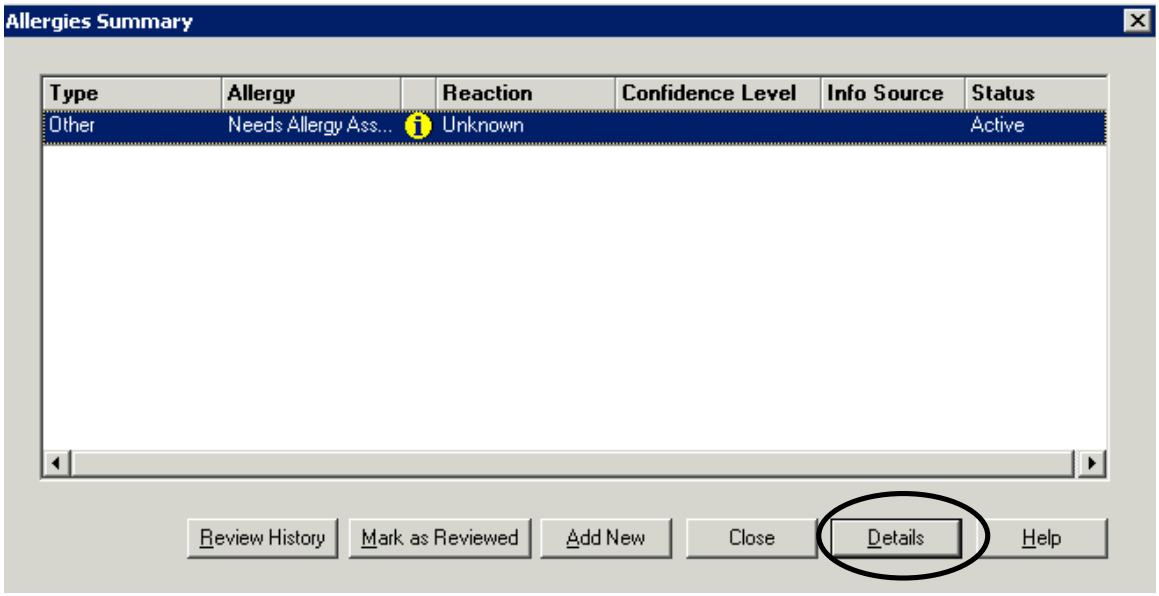
1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click an allergy, or select an allergy and click **Details**. The **Allergy Details** dialog box opens.
3. Click **Discontinue**.
4. Click **OK**. The status of the allergy changes to **Inactive**.

To delete an allergy

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click an allergy, or select an allergy and click **Details**. The **Allergy Details** dialog box opens.
3. Click **Delete**. A confirmation message displays.
4. Click **OK**.

Needs Allergy Assessment

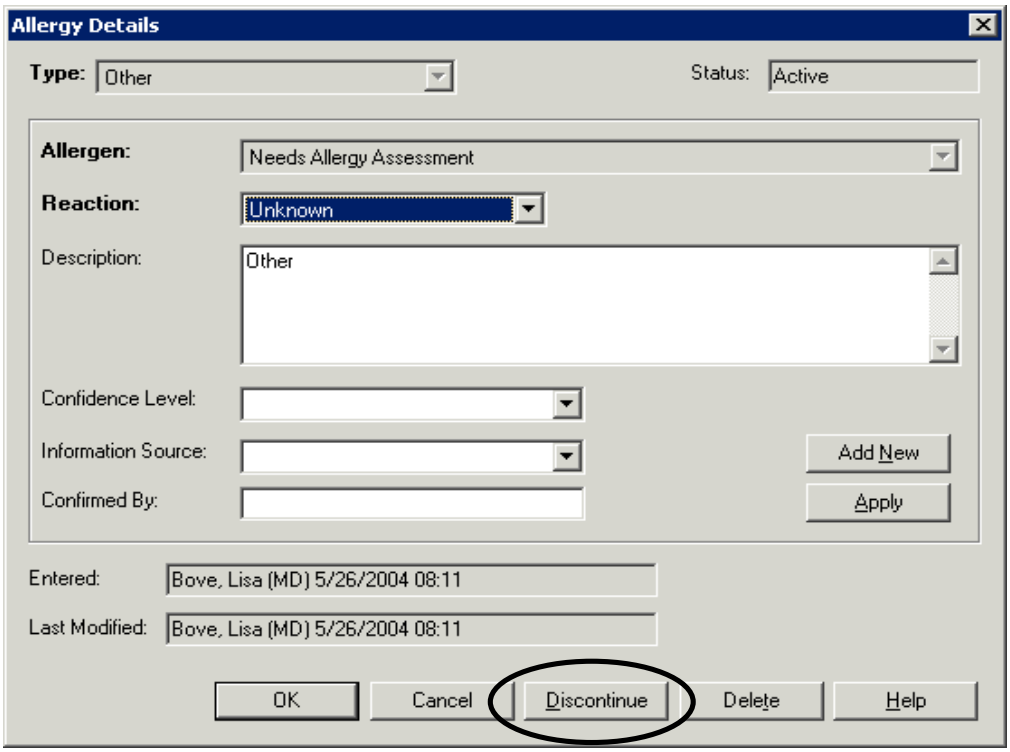
All patients migrated from MIS to CRIS will have an allergy called **Needs Allergy Assessment**. This was added to the patient's record during data migration and needs to be updated the first time a patient is seen after CRIS is live. The Needs Allergy Assessment allergy should be discontinued and actual patient allergies added.



Screen 165: Needs Allergy Assessment window

To discontinue the Needs Allergy Assessment allergy

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click the Needs Allergy Assessment allergy and click **Details**. The **Allergy Details** dialog box opens.

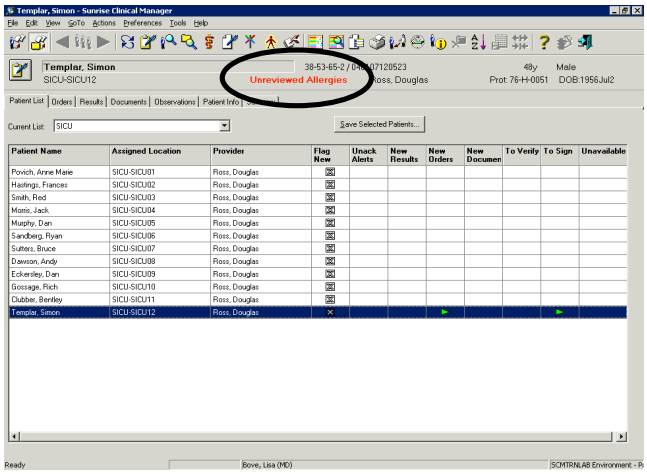


Screen 166: Allergies Detail window

3. Click **Discontinue**.
4. Click **OK**. The status changes to **Inactive**.
5. Add patient allergies as needed.

Mark Allergies Reviewed

Once allergies have been discussed with the patient, they can be marked as reviewed.



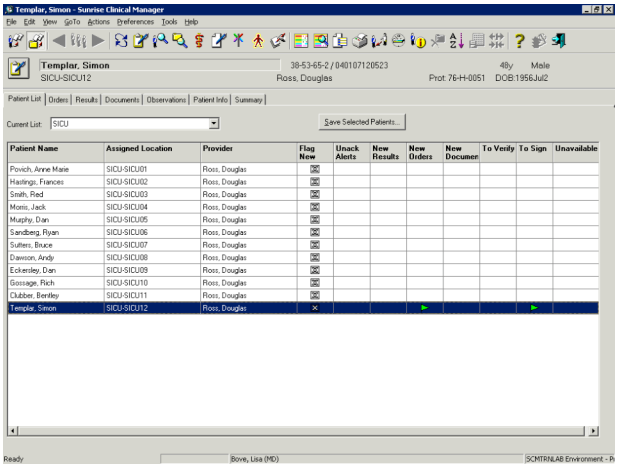
Screen 167: Unreviewed Allergies

To mark all new allergies as reviewed

Do one of the following:

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**, and click **Mark as Reviewed**.
2. In the **Allergies Summary** dialog box, click **Mark as Reviewed**.

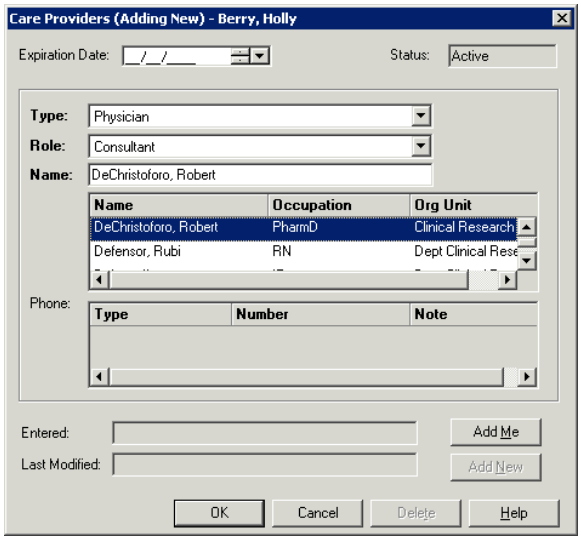
Once an allergy is reviewed, the patient header changes.



Screen 168: Reviewed Allergies

Maintain Care Provider Information

You can add care provider information by clicking the **Care Provider** data entry option in the **Patient Info** chart section. You can add new care providers, or add yourself as a care provider.



Screen 169: Add a Care Provider

To add a new care provider to a single patient

1. In the **Patient Info** chart section **Data Entry** list, select **Care Provider**.
2. The **Care Providers (Adding New)** dialog box opens.
3. Select a care provider **Type** from the drop-down list.
4. Select a care provider **Role** from the drop-down list.
5. Enter the care provider **Name**. As you enter each letter of the name, a list of matching names displays in a list below the **Name** field. If the name you want is in the list, you don't have to finish typing it. Select the name from the list. The care provider's phone numbers display.
6. Click **OK**.

To add yourself to the list of active care providers

1. In the **Patient Info** chart section **Data Entry** list, select **Care Provider**. The **Care Providers (Adding New)** dialog box opens.
2. Choose your provider **Role**.
3. Click **Add Me**. Your name and phone numbers display.
4. Click **OK**.

To discontinue a care provider

1. In the **Patient Info** chart section **Summary Views** list, select **Care Providers**.
2. Double-click on a care provider name, or select a care provider name and click **Details**. The **Care Provider Details** dialog box opens.
3. Enter an **Expiration Date**.
4. Click **OK**. The care provider status changes to **Inactive**.

To delete a care provider

1. In the **Patient Info** chart section **Summary Views** list, select **Care Providers**.
2. Double-click on a care provider name, or select a care provider name and click **Details**. The **Care Provider Details** dialog box opens.
3. Click **Delete**. A confirmation message displays.
4. Click **OK**.

Maintain Comment Information

Comments are similar to general information in MIS. Some comments will be interfaced into CRIS from Admissions, which appear in all capital letters. You can add other comments concerning the patient as needed. There are seven data entry types available to you:

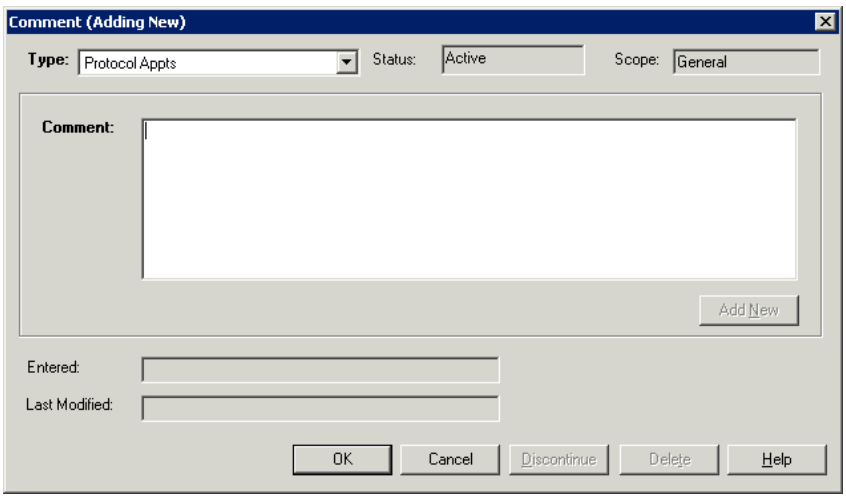
- Advance Directives
- Interpreter
- Other
- Prosthesis
- Protocol Appts
- Special Needs
- VAD Line Hx

You can add comments by clicking the **Comment** data entry option in the **Patient Info** chart section.

Comment Type	Comment Field	Scope	Multiple Entries	Entered By
Adv. Directives	Enter the of type of Advance Directive	This chart	Yes	Nursing staff following documentation
Chief Complaint	Admitting Diagnosis	General		Interfaced
Citizen	Citizenship	General		Interfaced
Father's Name	Patients fathers name	General		Interfaced
First Encounter	Date of first encounter	General		Interfaced

Comment Type	Comment Field	Scope	Multiple Entries	Entered By
Header 1	Displays in header, top portion of screen. To be used for Protocol Number ONLY at this time. (Need to limit rights)	This chart		Interfaced
Header 2	Displays in header only if selected. No designated use at this time.	This chart		
Interpreter	Enter primary language, interpreter contact phone number, appointments, arrangements	This chart		Entry by Nursing, Anesthesia, Social Work
Mother's Name	Patients mothers name	General		Interfaced
Occupation	Normal occupation	General		Interfaced
Other	Any other general comments or communications not covered under other categories	This chart	Yes	Nursing
Prosthesis	Enter any device patient has or is using	General	Yes	Entry by Rehab, Nursing
Protocol Appts	Scheduled tests or appointments that are not otherwise noted on the Orders Summary.	General	Yes	Entry by Prescribers, study coordinators and research nurses
Pt Maiden Name	Patients maiden name	General	No	Interfaced
Special Needs	Enter any special needs, disabilities etc	General	Yes	Entry by Nursing
VAD Line Hx (Also, entered in Clin Doc)	Suggested content to be entered into the description field as follows: Type of VAD (tunneled, percutaneous, implanted), Insertion date and location, Access/reaccess date, Type of access needle, Special dressing requirements, Sutured in place, Line complications (unable to draw back, pertinent imaging studies, interventions performed for clotted ports)	General	Yes	Entry by Nursing and VAD Service staff

Table 11: Comment Types



Screen 170: Comment Details Dialog Box

To add a comment

1. In the **Patient Info** chart section **Data Entry** list, select **Comment**. The **Comment Details (Adding New)** dialog box opens.
2. Select a comment **Type** from the drop-down list.
3. Enter the comment.
4. Click **OK**. The new comment displays in the **Allergies/Comments Summary Views** list.

To edit a comment

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click a comment, or select a comment and click **Details**. The **Comment Details** dialog box opens.
3. Edit the comment.
4. Click **OK**.

To discontinue a comment

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click a comment, or select a comment and click **Details**. The **Comment Details** dialog box opens.
3. Click **Discontinue**.
4. Click **OK**. The status of the comment changes to **Inactive**.

To delete a comment

1. In the **Patient Info** chart section **Summary Views** list, select **Allergies/Comments**.
2. Double-click a comment, or select a comment and click **Details**. The **Comment Details** dialog box opens.
3. Click **Delete**. A confirmation message displays.
4. Click **OK**.

Maintain Height/Weight Information

Height and weight should be entered into the Vital Signs flowsheet. Once saved into this flowsheet, height and weight will be copied into the **Height/Weight** data entry option in the **Patient Info** chart section.

CRIS has two BSA formulas. If the patient is 18.0 years or younger, the Pediatric BSA formula is used. If the patient is older than 18.0 years, the Standard BSA formula is used. If the age of the patient cannot be determined due to a missing birth year, then the Standard BSA formula will be used.

The following formulas are used to calculate body surface area:

- Standard BSA = Height0.725 × Weight0.425 × 0.007184
- Pediatric BSA = Square Root (Height × Weight / 3600)

Height is measured in centimeters; weight in kilograms and the result (BSA) is in square meters in both formulas. The BSA is rounded to two decimal places.

This height and weight will be used for drug calculations during order entry unless modified by the ordering Prescriber.

Maintain Significant Event Information

You can capture major events called Significant Events that can be viewed across visits and will not need to be re-entered. There are five data entry types available to you.

- Consents
- Immunizations
- Isolation Status
- Tracheostomy History
- Transfusion History

You can add significant events by clicking the **Significant Event** data entry option in the **Patient Info** chart section. Some of the types will have a scope of **General** (such as Immunization History or Surgical Procedures), and some of which will have a scope of **This Chart** (such as Critical Incidents).

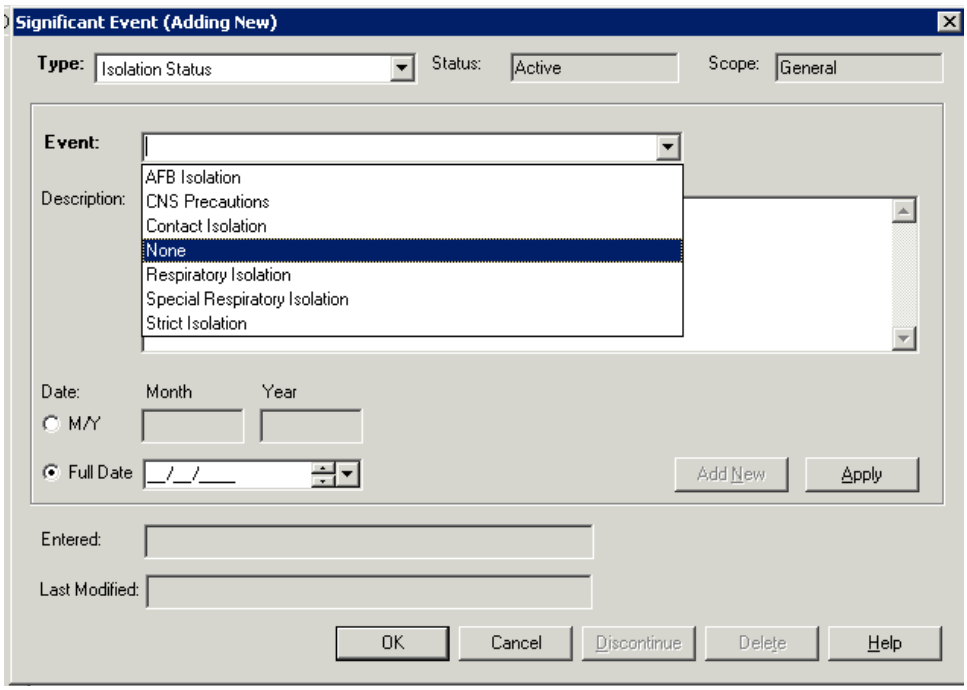
Significant Event Type	Event/Description	Scope	Entered By
Consents	Used for entering type of consent and dates signed. Pull down menu options (events): • Blood administration consent • Notification of information practices • Protocol consent Additional information to be entered in the Description Field	General	Entry by Nursing
Immunizations	Used to enter patient's immunization status. Pull down menu options (events): • DPT • H Influenza • Hepatitis A • Hepatitis B • Influenza • MMR • Oral Polio • Other • Pneumococcal • Varicella Additional information to be entered in the Description Field	General	Entry by Nursing
Isolation Status (Will also be placed as an order by Epidemiology)	Used to enter patient's isolation status. Pull down menu options (events): • AFB Isolation • CNS Precautions • Contact Isolation • None • Respiratory Isolation • Special Respiratory Isolation • Strict Isolation Additional information to be entered in the Description Field	General	Entry by Epidemiology and Nursing (if needed)
Tracheotomy	Free Text	General	Health care provider
Transfusion History	Used to enter patients transfusion history	General	Entry by DTM and

Significant Event Type	Event/Description	Scope	Entered By
(This also occurs in more detail in Clin Doc)	information. Pull down menu options (events): o Allergic Reaction o Anaphylactic Reaction o Febrile Nonhemolytic Reaction o HLA Matched Platelet Restrictions o Other o Patient Antibodies o Pre-Medication o Prior Transfusion o Refusal of Blood Products o Septic Reaction o Washed Blood Restrictions Additional information to be entered in the Description Field		Nursing

Table 12: Significant Event Types

To add a significant event

1. In the **Patient Info** chart section **Data Entry** list, select **Significant Event**.
2. The **Significant Event Details** dialog box opens.
3. Select a significant event **Type** from the drop-down list.
4. Choose an **Event** from the drop-down list, or enter text about an event.
5. Enter a **Description** of the event, if desired.
6. Enter the **Date** the significant event occurred. You can enter a partial or full date.
7. Click **OK**.



Screen 171: Significant Events Dialog Box

To edit a significant event

1. In the **Patient Info** chart section **Summary Views** list, select **Significant Events**.
2. Double-click a significant event, or select a significant event and click **Details**.
3. The **Significant Event Details** dialog box opens.
4. Make the desired edits. Note that you cannot edit the **Type** or **Event**.
5. Click **OK**.

To discontinue a significant event

1. In the **Patient Info** chart section **Summary Views** list, select **Significant Events**.
2. Double-click a significant event, or select a significant event and click **Details**.
3. The **Significant Event Details** dialog box opens.
4. Click **Discontinue**.
5. Click **OK**. The status of the significant event changes to **Inactive**.

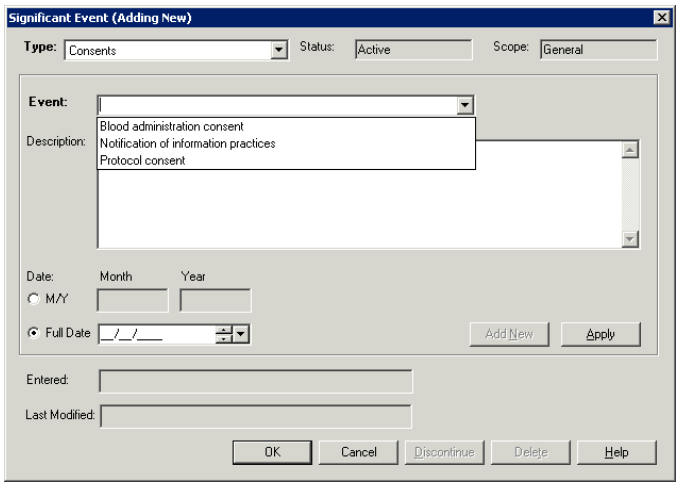
To delete a significant event

1. In the **Patient Info** chart section **Summary Views** list, select **Significant Events**.

2. Double-click a significant event, or select a significant event and click **Details**.
3. The **Significant Event Details** dialog box opens.
4. Click **Delete**. A confirmation message displays.
5. Click **OK**.

Enter consent information as a Significant Event

Consent information is entered in the Patient Info Significant Event section.

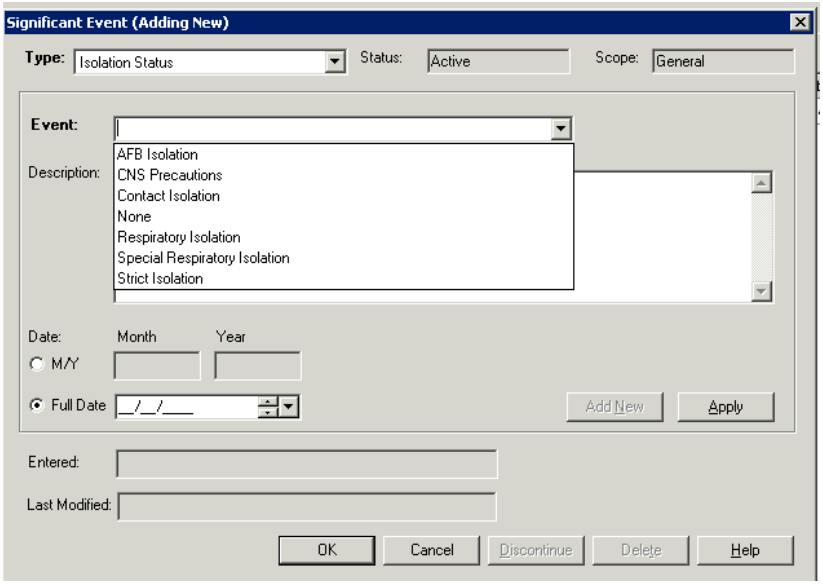


Screen 172: Enter consent information

1. In the **Patient Info** chart section **Data Entry** list, select **Significant Event**.
2. The **Significant Event Details** dialog box opens.
3. Select the **Type *Consents*** from the drop-down list.
4. Choose a consent **Type** from the drop-down list, or enter text about an event. Options include
   a. Blood administration consent
   b. Notification of information practices and
   c. Protocol consent.
5. Enter additional information about the consent into the **Description** field, if desired.
6. Enter the **Date** the consent was signed. You can enter a partial or full date.
7. Click **OK**.

Enter isolation status as a Significant Event

The Epidemiology Service staff member enters the isolation status under Significant Events after the isolation order is reviewed for appropriateness.

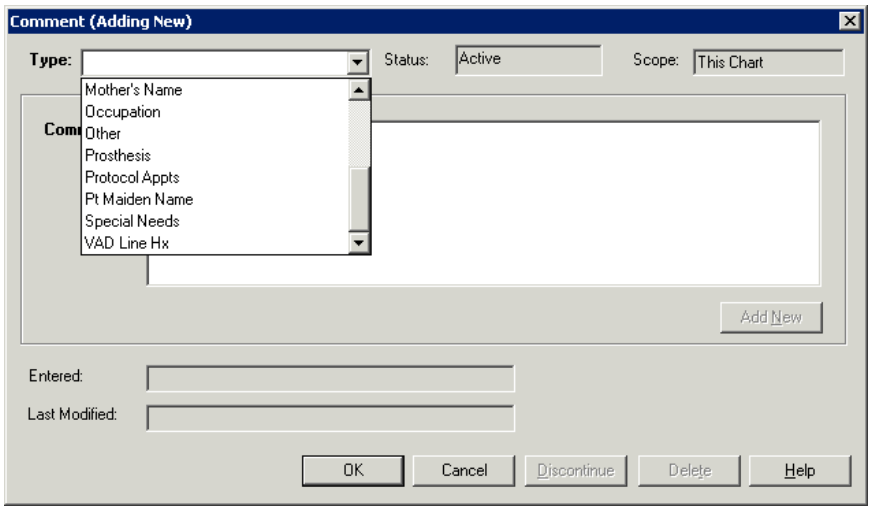


Screen 173: Isolation documentation

1. In the **Patient Info** chart section **Data Entry** list, select **Significant Event**.
2. The **Significant Event Details** dialog box opens.
3. Select the **Type *Isolation Status*** from the drop-down list.
4. Choose an isolation **Type** from the drop-down list, or enter text about an event.
5. Enter additional information about the consent into the **Description** field, if desired.
6. Enter the **Date** the isolation was ordered. You can enter a partial or full date.
7. Click **OK**.

Enter VAD line history as a Comment

VAD line history information is entered in the Patient Info Comments section.



Screen 174: Enter VAD Line History

1. In the **Patient Info** chart section **Data Entry** list, select **Comment**. The **Comment Details (Adding New)** dialog box opens.
2. Select the comment **Type *VAD Line Hx*** from the drop-down list.
3. Enter any significant information about into the **Comment** field.
4. Click **OK**.

Chapter XIII: Worklists

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Overview

A worklist is an organizational tool that allows you to rapidly view a list of tasks that need to be performed for a patient or list of patients, and to quickly indicate which tasks have been completed within a particular time frame - usually a work shift. You use the **Worklist Manager** to view and interact with worklists.

When an order is entered, one or more tasks that need to be performed are generated. These tasks form the basis of the worklist. For example, an order for Penicillin 500 mg PO Q6H starting now and ending in 10 days would eventually generate 40 tasks (one for each administration - 4 times per day for 10 days).

The Worklist Manager contains tasks, which are generated from orders. Task cells contain various colors and icons to indicate the task status. You work with the following kinds of tasks in the Worklist Manager:

- **Scheduled** (for example, Penicillin 500 mg PO Q6H)
- **Manual Schedule** (for example, Ancef 1 Gm IM, 1 hr before surgery)
- **Continuous** (for example, D5W with 40 meq KCL/L @ 60 ml/hr)
- **PRN** (for example, Demerol 50 mg IM PRN for pain)
- **Conditional** (for example, FiO2 to 50% if pO2 less than 60)

Medications, respiratory therapy treatments and ADT orders will generate tasks on the Worklist Manager in Phase 1.

You can change the way the information is displayed in the Worklist Manager by selecting **Scheduling**, **Status**, and **Date** and **Time** options and clicking **Update**. When you do this, the Worklist Manager display is updated, but your changes are not saved when you exit the Worklist Manager. Anytime you change the Worklist Manager view, you should click the Update button or the Refresh Icon.

To open the Worklist Manager:

1. Do one of the following:
    a. Click the **Worklist Manager** icon on the toolbar.
    b. From the **GoTo** menu, select **Worklist**.

Screen 175: Worklist Manager Icon

Continuous - The medication information cell is cyan with a black diamond. A cyan bar indicates the medication start and stop time. No black diamonds display in the time-grid cells

PRN - The medication information cell is magenta with no symbol. A magenta trough displays in the time-grid cells starting at the first possible administration time

Conditional - The medication information cell is purple with a question mark. No color or symbols display in the time-grid

Discontinued Medication - The medication information cell is white with a line through the text. A line displays through the symbol in the time-grid.

Overdue - The medication information cell and the overdue scheduled time cells are red with a black diamond

Manually scheduled - The medication information cell is blue with a black diamond. No color or symbols display in the time-grid

Unscheduled - The medication information cell is yellow with a black diamond. No black diamonds display in the time-grid cells. A yellow bar indicates the medication start and stop time

Scheduled – The medication information cell and the scheduled time cells are yellow with a black diamond

Screen 176: Worklist Manager

Charting Medications

All medication orders will be entered in the Pending Verification status. Pharmacy will verify all medications. This will give them the opportunity to review all the alerts and dosing, and add the Pharmacy specific data to the order prior to dispensing and allowing the medication to be administered. Medications will not display on the medication worklist until pharmacy verifies the orders.

The Medication Worklist uses symbols to represent actions taken on a medication. Various colors are used to designate the medication and IV schedule type (see table below). Your current view may not include every scheduled type.

Schedule Type	Grid	Description
Scheduled Has predefined administration times	Yellow	The task description cell and the scheduled time cells are yellow with a black diamond.
Unscheduled Does not have a defined first administration time. Once the first dose is given, subsequent administration times are defined.	Yellow bar	The task description cell is yellow with a black diamond. No black diamonds display in the time-grid cells. A yellow bar indicates the medication start and stop time.
Variable Schedule Has variable predefined administration times (e.g. every four to six hours)	Green trough	The task description cell is green. A green trough displays in the time-grid cells starting at the first possible administration time.
Overdue The administration time has passed.	Red	The task description cell and the overdue scheduled time cells are red with a black diamond.

Schedule Type	Grid	Description
Manually scheduled The administration time is determined based on the patient needs or an event, such on arrival to the OR.	Blue 5% Albumin Inj 25	The task description cell is blue with a black diamond. No color or symbols display in the time-grid.
PRN Administered as needed	Magenta Trough	The task description cell is magenta with no symbol. A magenta trough displays in the time-grid cells starting at the first possible administration time.
Continuous Administered continuously	Cyan (light blue) Bar	The task description cell is cyan with a black diamond. A cyan bar indicates the medication start and stop time. No black diamonds display in the time-grid cells
Conditional Administered based on an event, (e.g., a change in a lab value)	Purple Acetaminophen 3	The task description cell is purple with a question mark. No color or symbols display in the time-grid.
Completed All ordered doses have been charted as given or not given	White ✓ Amikacin Inj 250 r	The task description cell is white with a checkmark. All completed doses display with a checkmark and your initials (if given) or a red x (if not given).
Discontinued/ Canceled The order has been discontinued or canceled.	White ~~Digoxin 0.125 mg~~	The task description cell is white with a single line through the cell. All future doses display with a line through the black diamond in the time-grid cells.

Table 13: Worklist Schedule Type with Color-Coding and Symbols

Different types of medications are charted differently.

1. When you chart a PO (by mouth) medication as given, no additional information will be required.
2. When you chart an IV, IM or Subq medication as given, additional information is needed such as site or IV rate. When you mark as given,

an additional window will display to allow you to enter the required documentation.

When the medication is ordered, the frequency drives the type of schedule. The table that follows shows the translation of the frequency to a schedule.

Coded Frequency Translation Table	
Frequency	**Schedule**
2 hour post prandial	Every 1 day at 10:00 AM 2:00 PM 7:00 PM
3AM	Every 1 day at 3:00 AM
7AM, 1PM, and 7PM	Every 1 day at 7:00 AM 1:00 PM 7:00 PM
8AM & 7PM	Every 1 day at 8:00 AM 7:00 PM
8AM and 2PM	Every 1 day at 8:00 AM 2:00 PM
8AM, 2PM, and 8PM	Every 1 day at 8:00 AM 2:00 PM 8:00 PM
after meals and at bedtime	Every 1 day at 9:00 AM 1:00 PM 6:00 PM 10:00 PM
before meals	Every 1 day at 7:00 AM 11:00 AM 4:00 PM
before meals and at bedtime	Every 1 day at 7:00 AM 11:00 AM 4:00 PM 10:00 PM
between meals	Every 1 day at 10:00 AM 2:00 PM
every 12 hours	Every 1 day at 9:00 AM 9:00 PM
every 16 hours	Start when task is first administered
every 18 hours	Start when task is first administered

Coded Frequency Translation Table	
Frequency	**Schedule**
every 2 hours	Every 1 day at 12:00 AM 2:00 AM 4:00 AM 6:00 AM 8:00 AM 10:00 AM 12:00 PM 2:00 PM 4:00 PM 6:00 PM 8:00 PM 10:00 PM
every 2 to 3 hours	Every 2 to 3 hr
every 24 hours	Every 1 day at 8:00 AM
every 3 hours	Every 1 day at 12:00 AM 3:00 AM 6:00 AM 9:00 AM 12:00 PM 3:00 PM 6:00 PM 9:00 PM
every 36 hours	Start when task is first administered
every 4 hours	Every 1 day at 1:00 AM 5:00 AM 9:00 AM 1:00 PM 5:00 PM 9:00 PM
every 4 to 6 hours	Every 4 to 6 hr
every 48 hours	Start when task is first administered
every 6 hours	Every 1 day at 12:00 AM 6:00 AM 12:00 PM 6:00 PM
every 72 hours	Start when task is first administered
every 8 hours	Every 1 day at 6:00 AM 2:00 PM 10:00 PM

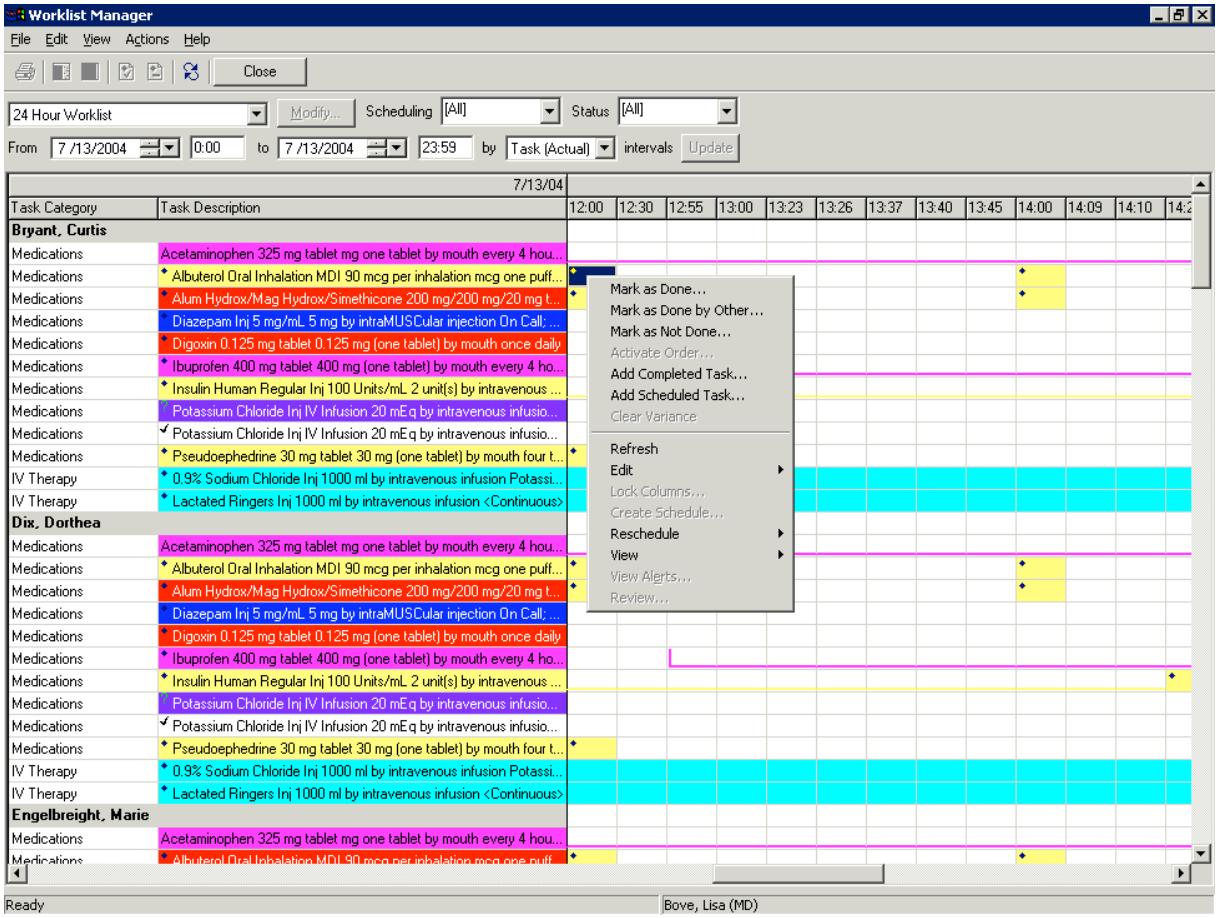
Coded Frequency Translation Table	
Frequency	**Schedule**
every day	Every 1 day at 8:00 AM
every morning	Every 1 day at 8:00 AM
every other day	Every 2 day at 8:00 AM
five times daily	Every 1 day at 6:00 AM 10:00 AM 2:00 PM 6:00 PM 10:00 PM
four times daily	Every 1 day at 8:00 AM 12:00 PM 6:00 PM 10:00 PM
four times daily after meals	Every 1 day at 9:00 AM 1:00 PM 6:00 PM 11:00 PM
four times daily before meals	Every 1 day at 7:00 AM 11:00 AM 4:00 PM 9:00 PM
four times daily with meals	Every 1 day at 8:00 AM 12:00 PM 5:00 PM 10:00 PM
On Call	Schedule task manually on worklist
once daily	Every 1 day at 8:00 AM
once daily after a meal	Every 1 day at 9:00 AM
once daily after breakfast	Every 1 day at 9:00 AM
once daily after dinner	Every 1 day at 6:00 PM
once daily after lunch	Every 1 day at 1:00 PM
once daily at bedtime	Every 1 day at 10:00 PM
once daily before a meal	Every 1 day at 7:00 AM
once daily before breakfast	Every 1 day at 7:00 AM
once daily before dinner	Every 1 day at 4:00 PM
once daily before lunch	Every 1 day at 11:00 AM
once daily in the morning	Every 1 day at 8:00 AM
once daily with a meal	Every 1 day at 8:00 AM
once daily with bedtime snack	Every 1 day at 10:00 PM
once daily with breakfast	Every 1 day at 8:00 AM

Coded Frequency Translation Table	
Frequency	**Schedule**
once daily with dinner	Every 1 day at 5:00 PM
once daily with lunch	Every 1 day at 12:00 PM
one time dose	One time task
three times daily	Every 1 day at 8:00 AM 12:00 PM 6:00 PM
three times daily after meals	Every 1 day at 9:00 AM 1:00 PM 6:00 PM
three times daily before meals	Every 1 day at 7:00 AM 11:00 AM 4:00 PM
three times daily with meals	Every 1 day at 8:00 AM 12:00 PM 5:00 PM
twice daily	Every 1 day at 8:00 AM 6:00 PM
5W-CC	Every 1 day at 8:00 AM 4:00 PM
twice daily after meals	Every 1 day at 9:00 AM 6:00 PM
twice daily before meals	Every 1 day at 7:00 AM 4:00 PM
twice daily with meals	Every 1 day at 8:00 AM 5:00 PM
with meals and snacks	Every 1 day at 8:00 AM 12:00 PM 5:00 PM 10:00 PM

Table 14: Code Frequency table

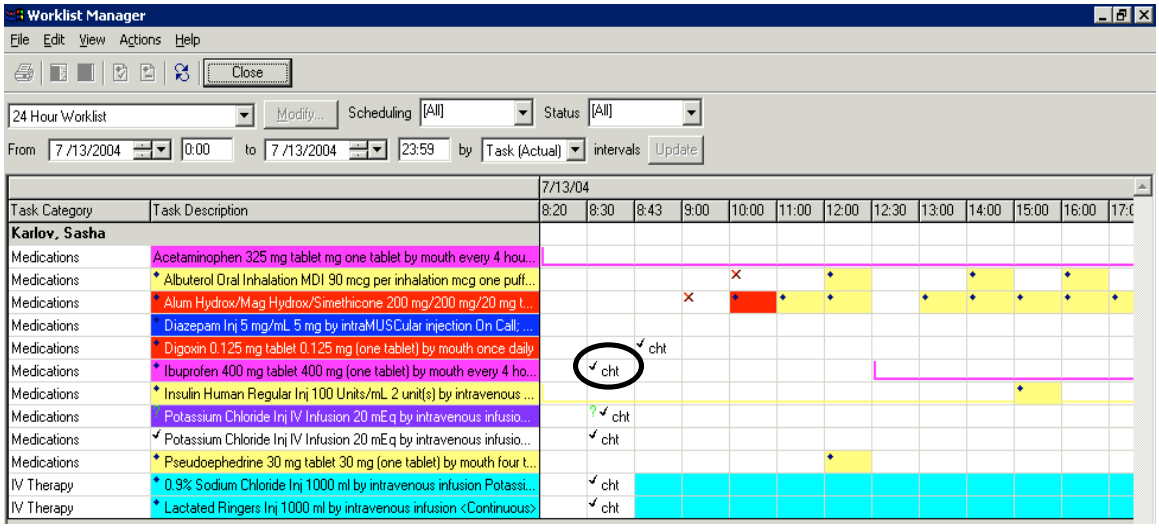
Document a scheduled medication as given

1. Right-click on the grid cell representing the medication and the scheduled time of administration (marked with yellow highlight and a black diamond).



Screen 177: Mark as given

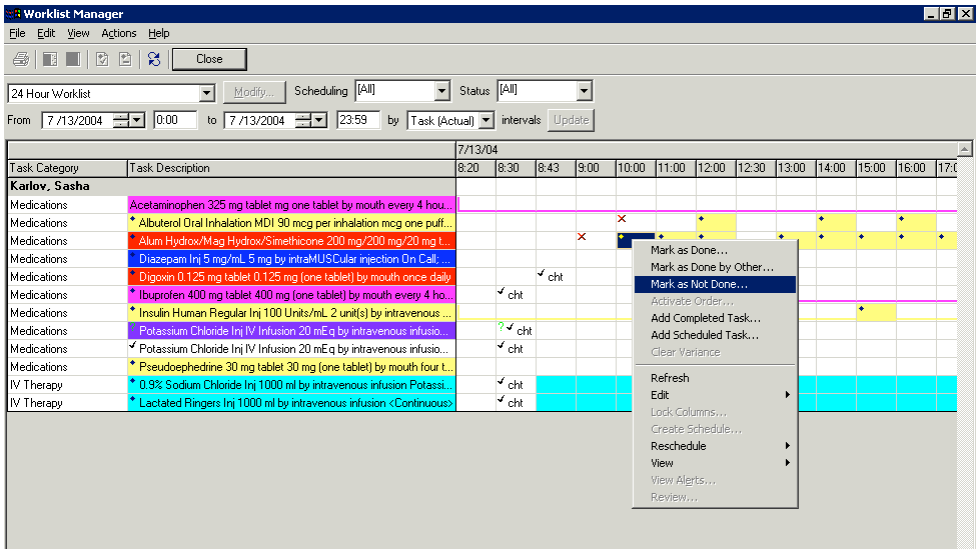
2. Select **Mark as Done**.
3. The Medications Notations window may display. Complete the form as necessary. If you are documenting this medication at a different date and time than when it was administered, document the actual administration date and time.
4. Click **OK**. The medication will be marked as given. Your initials will display next to a checkmark.



Screen 178: Charted as given PO medication

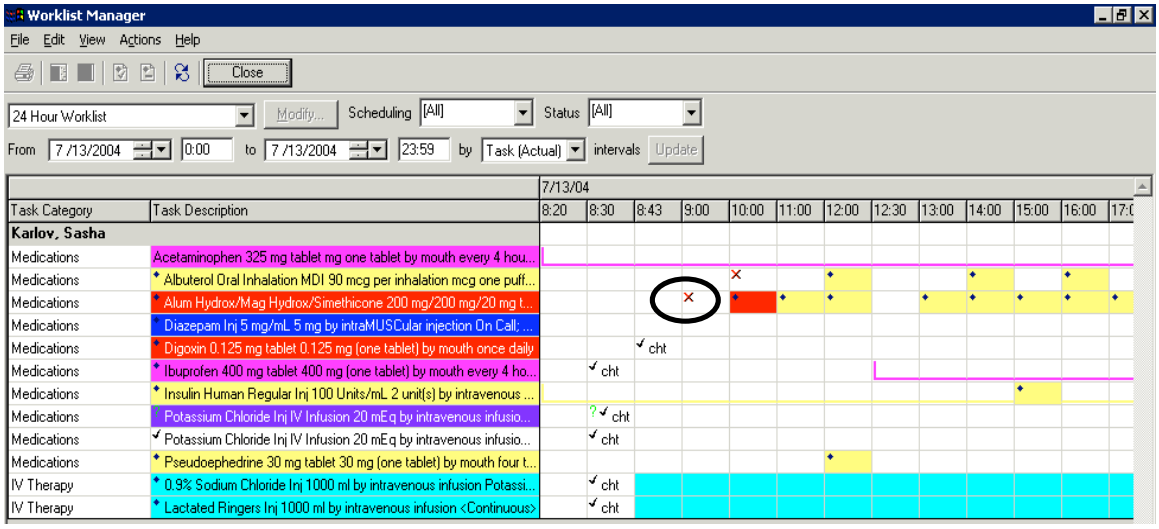
Document a scheduled medication as not given

1. Right-click on the cell representing the medication and the scheduled time of administration (marked with yellow highlight and a black diamond).



Screen 179: Mark as Not Given

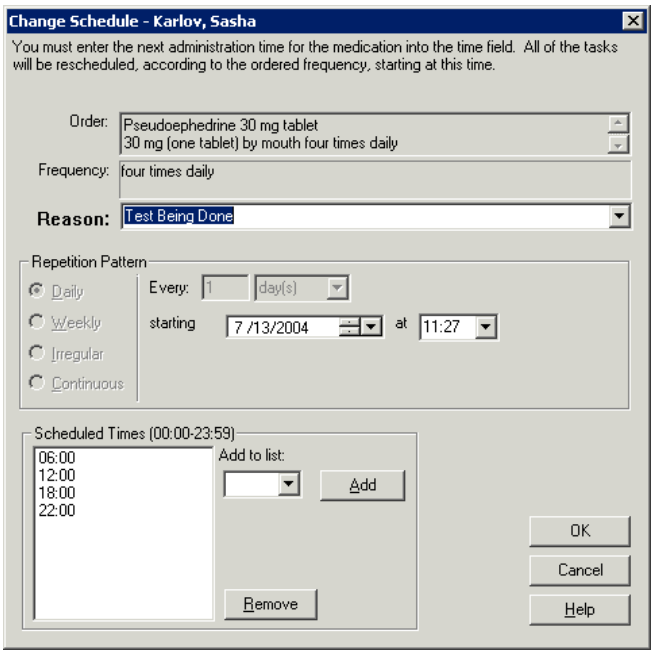
2. Select **Mark as Not Done**. The Task Not Done dialog box displays.
3. Select the appropriate reason from the list.
4. Click **OK**. The medication will be marked as not given. A red X will display in the cell.



Screen 180: Not Given Icon

Change the schedule for a scheduled medication

1. Right-click on the cell representing the medication and the scheduled time of administration (marked with yellow highlight and a black diamond).
2. Select **Reschedule – All Instances**. The Change Schedule Window displays.



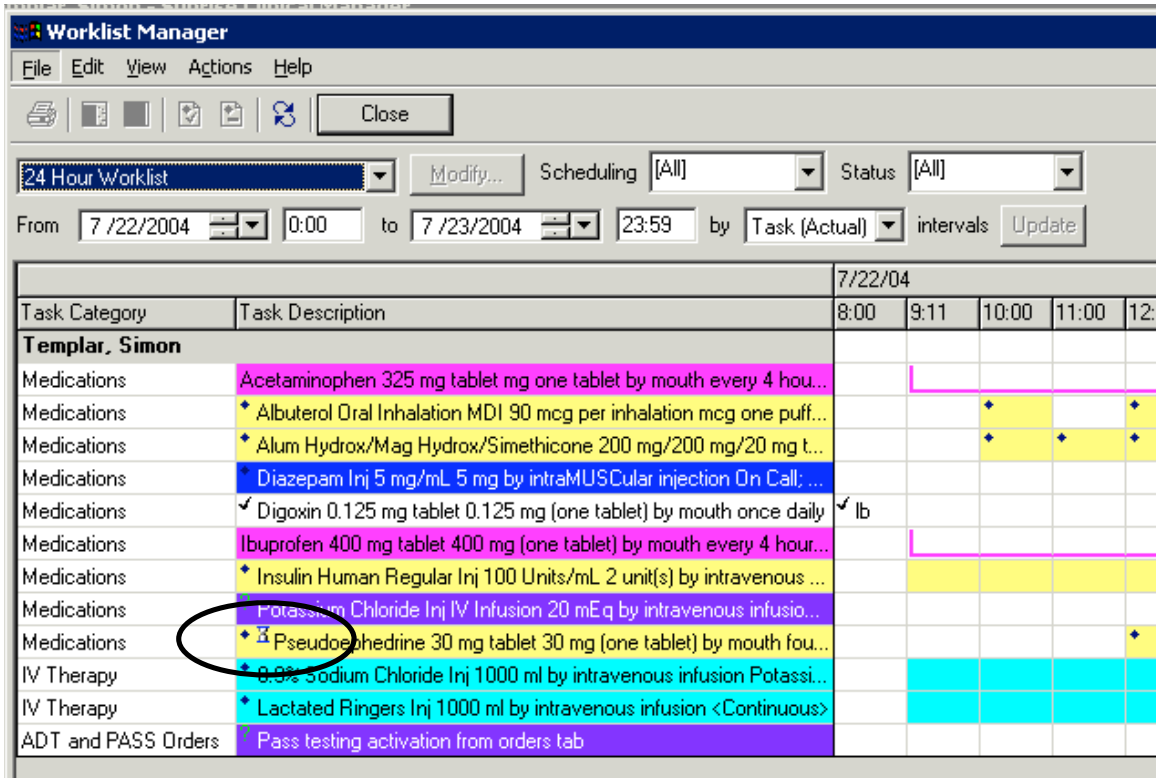
Screen 181: Change Schedule window

3. Click the **Reason** field drop-down arrow. Select an appropriate reason from the list.
4. Select a new start date and/or time for the first instance.
5. Click **OK**.

6. Click the **Refresh** icon. The medication will be rescheduled.

Screen 182: Refresh Icon

Sometimes when you re-schedule a medication, the system will display an hour glass symbol in the task description field. This means that the re-scheduling of the system is still processing. Clicking Refresh again will complete the reschedule.

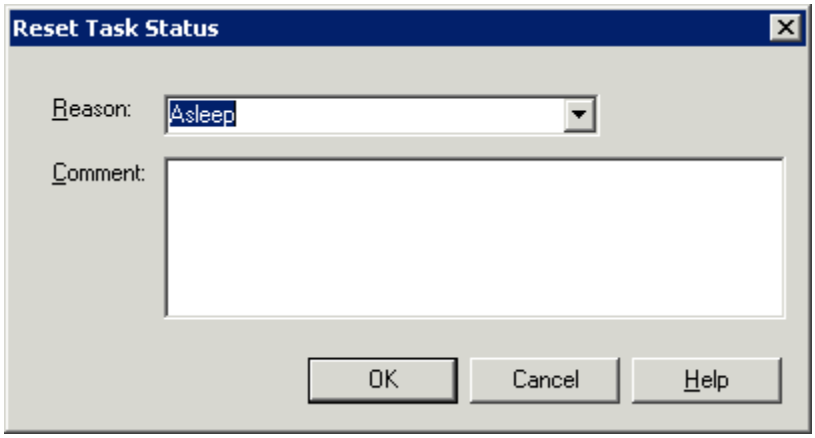


Screen 183: Still Processing icon

Resetting the medication status (Unchart a dose)

You can use this procedure if you have documented the wrong medication or patient to unchart a dose.

1. Right-click on the cell that is documented incorrectly.
2. Select **Edit – Reset-Task Status**. The Reset Task Dialog box displays.

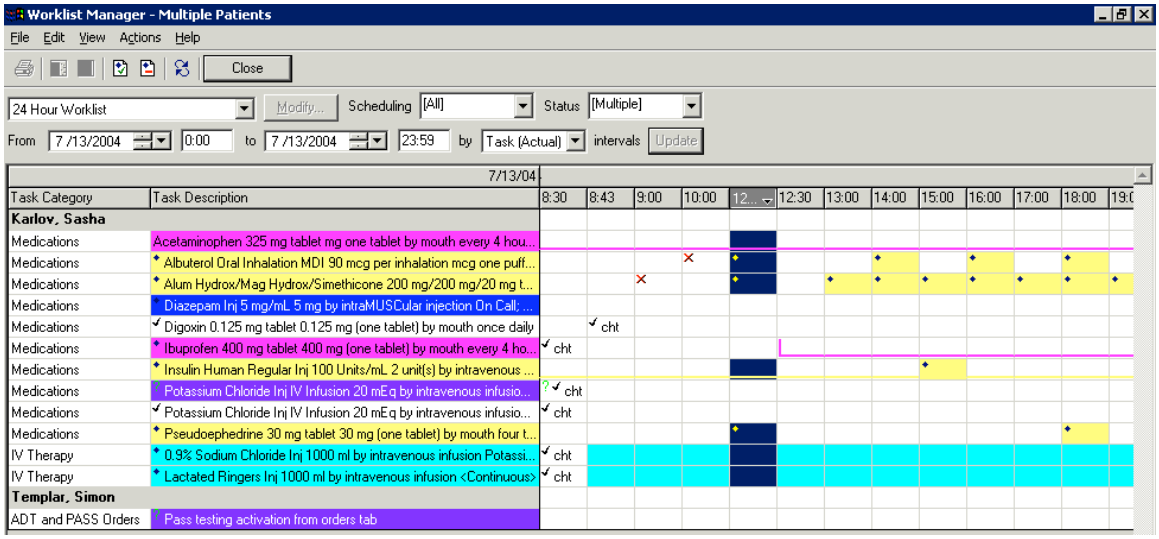


Screen 184: Reset Task Status dialog box

3. Click the **Reason** field drop-down arrow. Select an appropriate reason from the list. You can also type a reason as appropriate.
4. Click **OK**.
5. Click **Refresh**. The medication dose will show as available to be given.
   NOTE: If you reset a scheduled dose, the black diamond will re-display. If you reset a PRN medication the magenta trough will re-display. If you reset a continuous IV, the cyan bar will re-display.

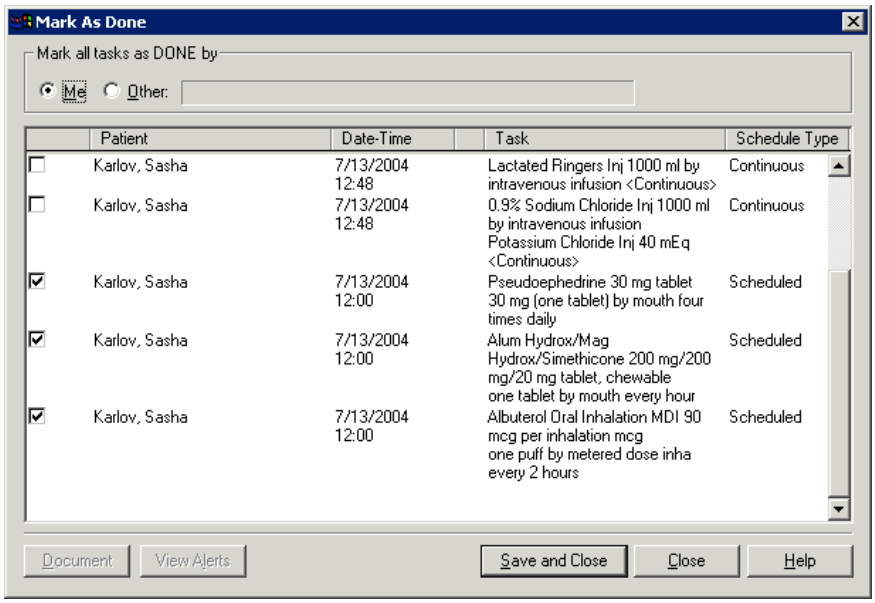
Documenting multiple medications administered at the same time

1. Click on the time interval at the top of the MAR grid. All medications scheduled to be administered in that time interval will be highlighted.



Screen 185: Document Multiple Medications at One Time

2. Right-click on any highlighted cell.
3. Select **Mark As Done**. The **Mark As Done** dialog box appears.

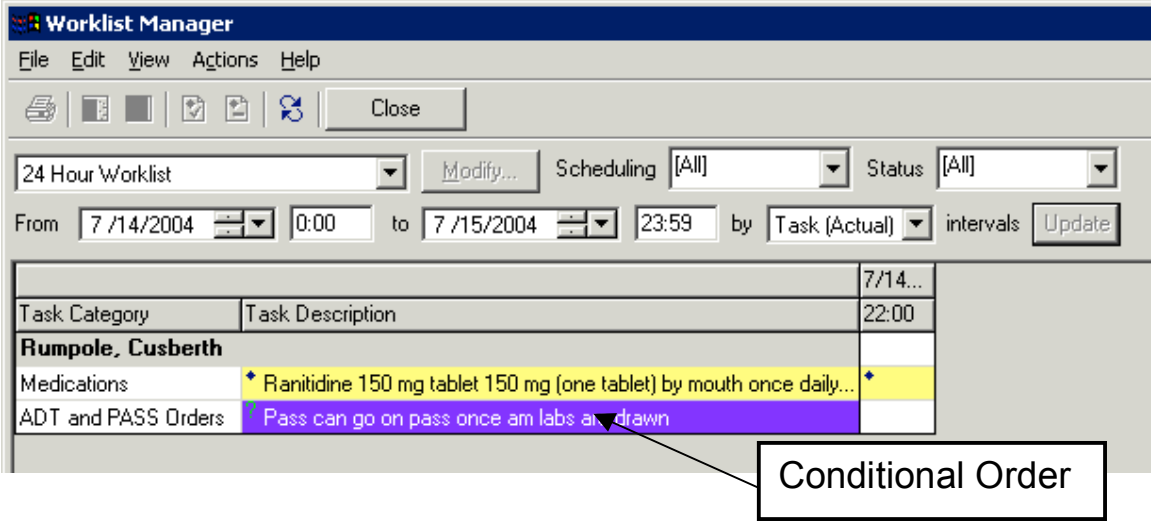


Screen 186: Mark as Done Window

4. Click on the checkbox next to one or more medication to mark as done. If needed, a Medications Notation Window will display.
5. You may enter comments into the **Comments** field.
6. Click **OK**. Repeat steps 2 through 6 for each medication administered at the specified time interval.

Activating a conditional order from the Worklist

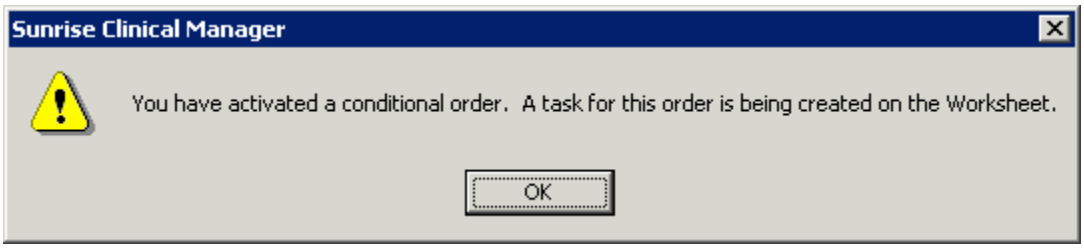
After a condition has been met for a conditional order, you can activate the order. For example, if a medication is to be administered only when the patient's temperature rises above 103°, when the patient's temperature reaches 104°, you can activate the medication order. Conditional orders display with a purple highlight on the Worklist Manager.



Screen 187: Conditional Order on the Worklist

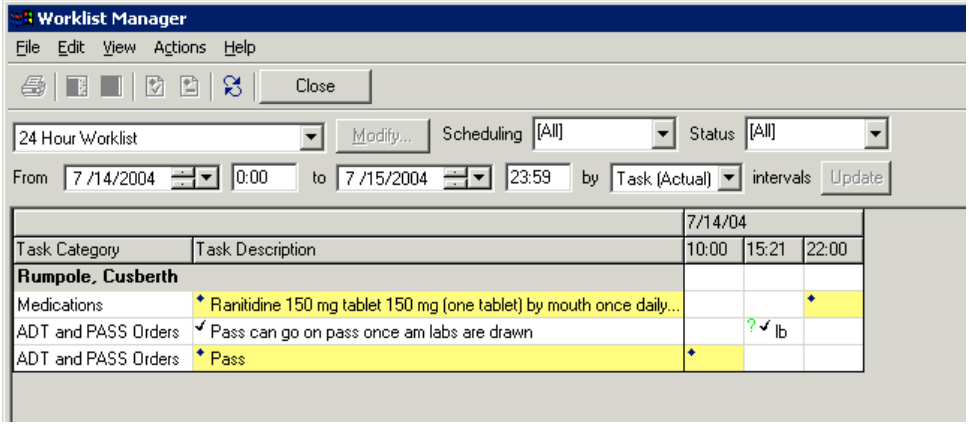
In order to document on a conditional order, the order needs to be activated. To activate a conditional order

1. Right-click on the **Task Description** field.
2. Select **Activate Order**. The Order Entry form displays to allow you to change any information as appropriate.
3. Click **OK**. You will see a message screen telling you that a task will be created on the Worklist.



Screen 188: Conditional order message

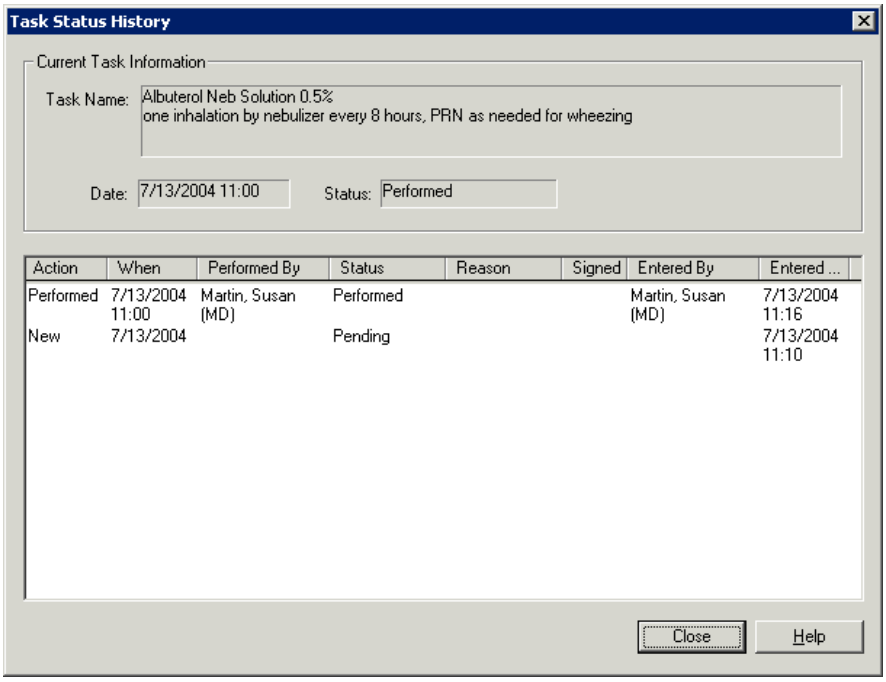
4. Click **OK**. Your initials will display on the current time cell indicating that you activated the conditional order and a new task will be created. You can document on the new task, not the original conditional order.
   NOTE: Some orders can be activated more than once. If this order can be activated more than once, the conditional order will remain on the Worklist. If this order can only be activated one time, it will now be marked complete.



Screen 189: Activated Conditional Order

View the status history of a task

The **Task Status History** dialog box allows you to view a history of all status changes for a task, in reverse chronological order.



Screen 190: Task Status History window

To view the task status history

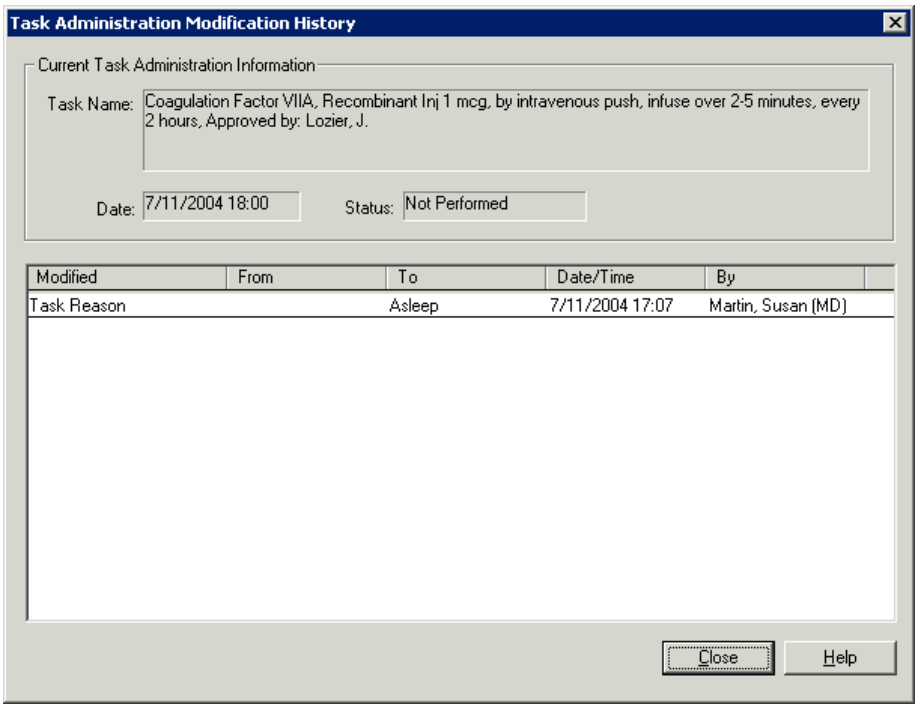
1. Right-click on the cell representing the medication.
2. Select **View – Status History**.
3. Click **Close** when done reviewing the information.

View the modification history of a task

The **Task Modification History** dialog box allows you to view any changes that were made to the document used to record task performance, in chronological order. If the task was rescheduled, the reschedule reason is also displayed.

You can view one of the following types of modification history for tasks:

1. Changes that were made to the schedule in the **Task Modification History** dialog box.
2. Changes that were make to the administration of a task in the **Task Administration Modification History** dialog box.



Screen 191: View Modification History window

To view modification history of a task

1. Right-click on the cell representing the medication.
2. Select **View – Modification History**.
3. Click **Close** when done reviewing the information.

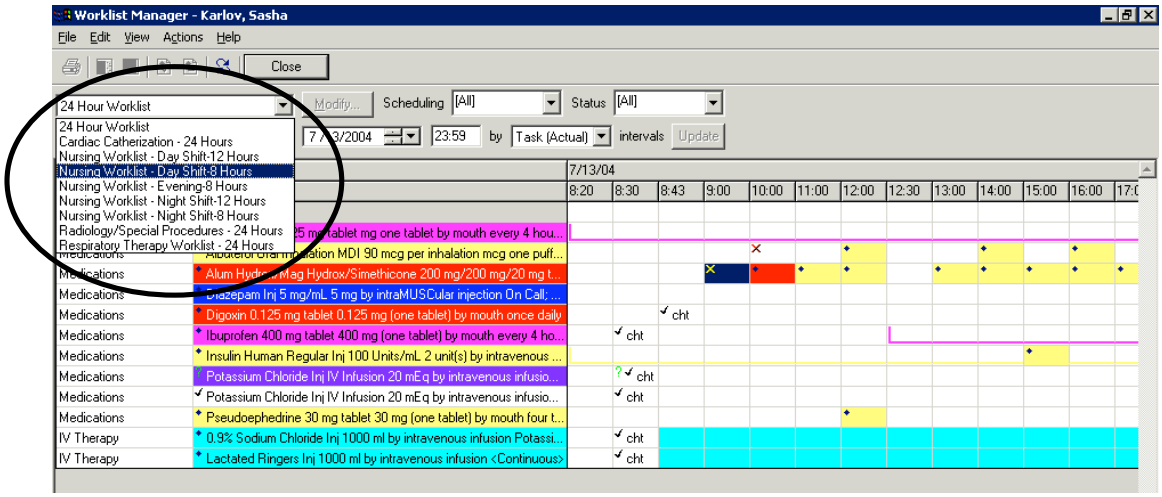
Setting Worklist Filters

You can change the worklist manager view in a number of ways using filters. For example, you can set a filter to see the worklist (medication list) for certain duration of time such as 8, 12, or 24 hr. You can:

1. View a different date and/or time
2. View only medications that are scheduled for your shift

3. View a single patient's medication list – check this based on the default view
4. View only certain medication schedules, such as only prn medications or only scheduled medications
5. View only certain medication statuses, such as overdue medications

To change from the 24 Hour Worklist to one of the pre-defined worklists selections.



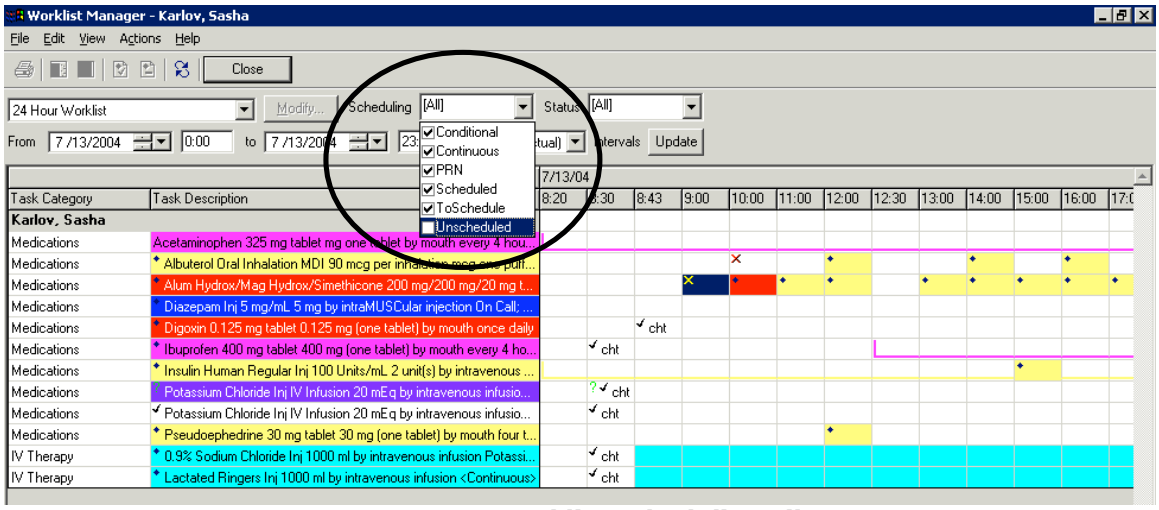
Screen 192: Pre-defined Worklists

1. Click the drop-down arrow next to **24 Hour Worklist** selection list.
2. Select the appropriate worklist.
3. Click **Update** or **Refresh.**

NOTE: The **Update** button is only active when you change the filters in the **Worklist**. Both **Update** and **Refresh** will refresh the display

Limit your worklist view to medications with certain schedule criteria.

1. Click the **Scheduling** field drop-down arrow.

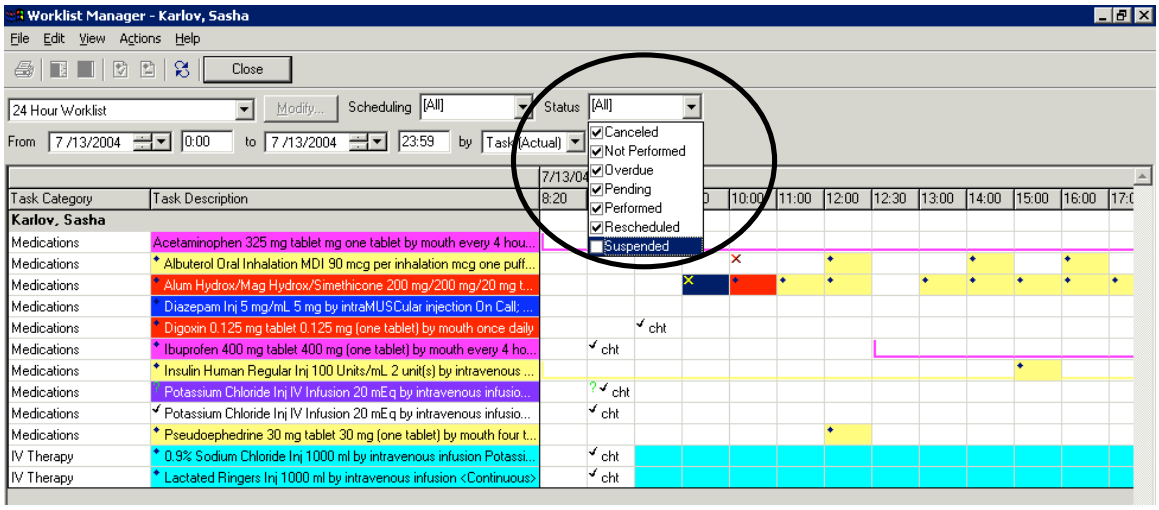


Screen 193: Worklist Scheduling Filter

2. Check or uncheck the appropriate schedule criteria checkbox.
3. Click **Update** or **Refresh.**

Limit your worklist to medications with specific statuses.

1. Click the **Status** field drop-down arrow.

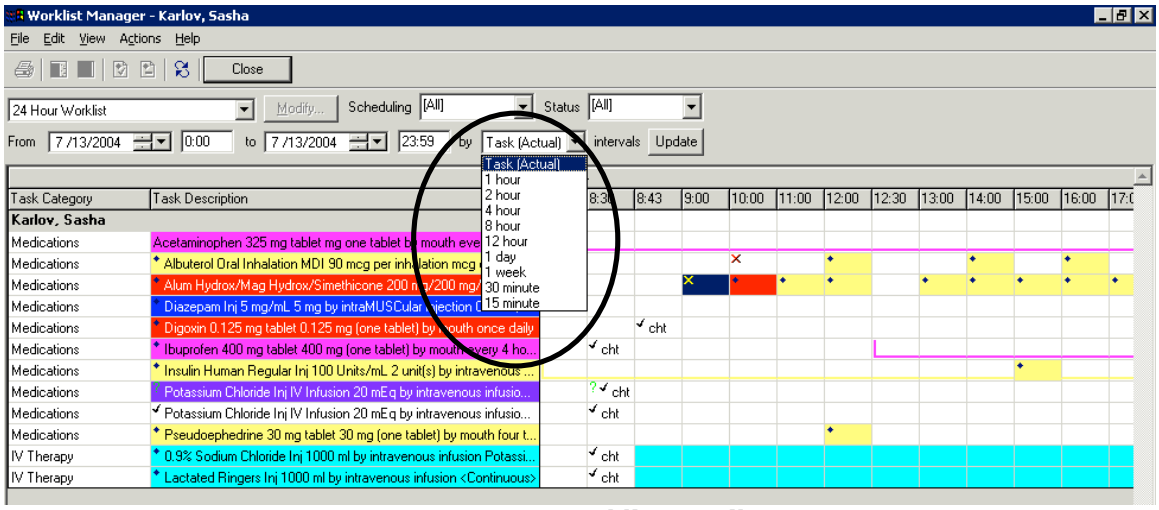


Screen 194: Worklist Status Filter

2. Check or uncheck the appropriate medication status checkbox.
3. Click **Update** or **Refresh**.

Change the time columns display based on the actual time a dose was charted.

1. Click the **by** field drop-down arrow.



Screen 195: Worklist By Filter

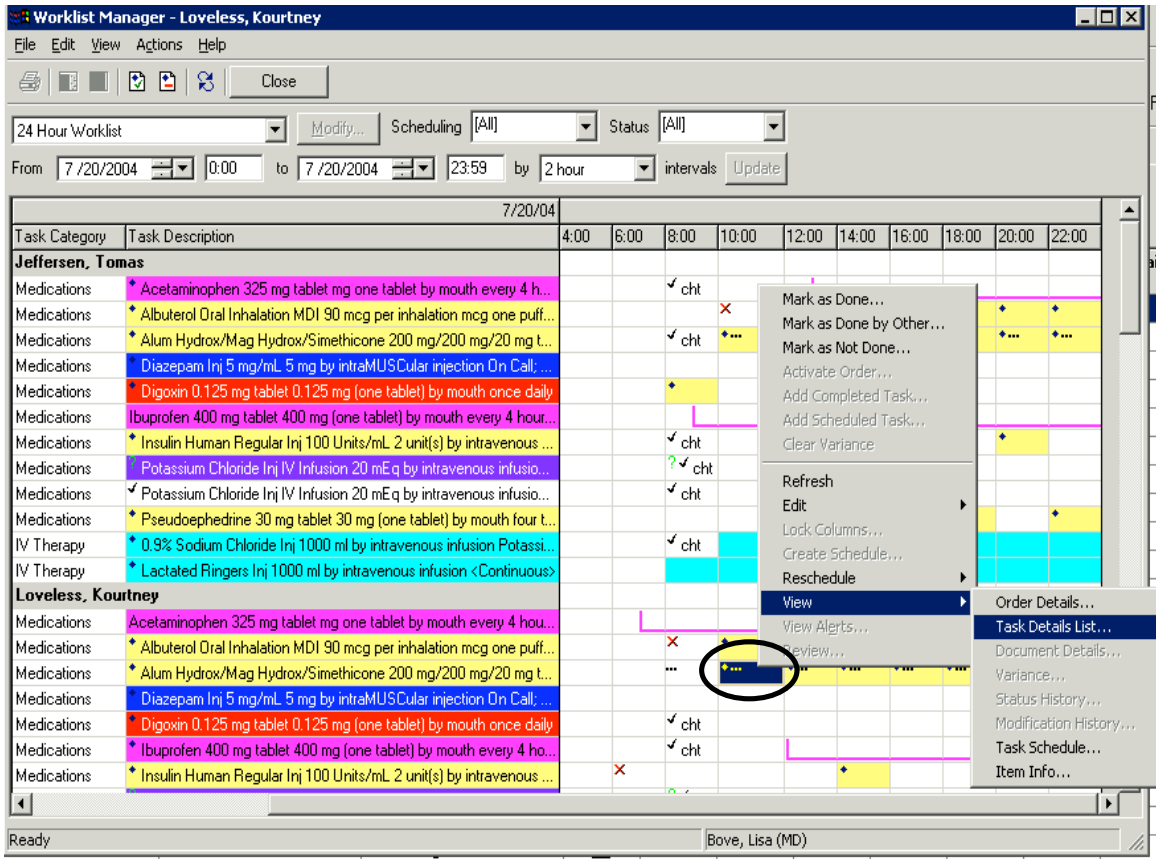
2. Select the appropriate time interval. This will change your view from either every one hour increment or to a column for each time a medication was give.
3. Click **Update** or **Refresh.**

When you have the time column in a setting other than Actual, you may see a notation that tells you that there is more than one occurrence for that medication/ task in that timeframe.

Screen 196: More occurrence information icon

To view the additional occurrences, you can either

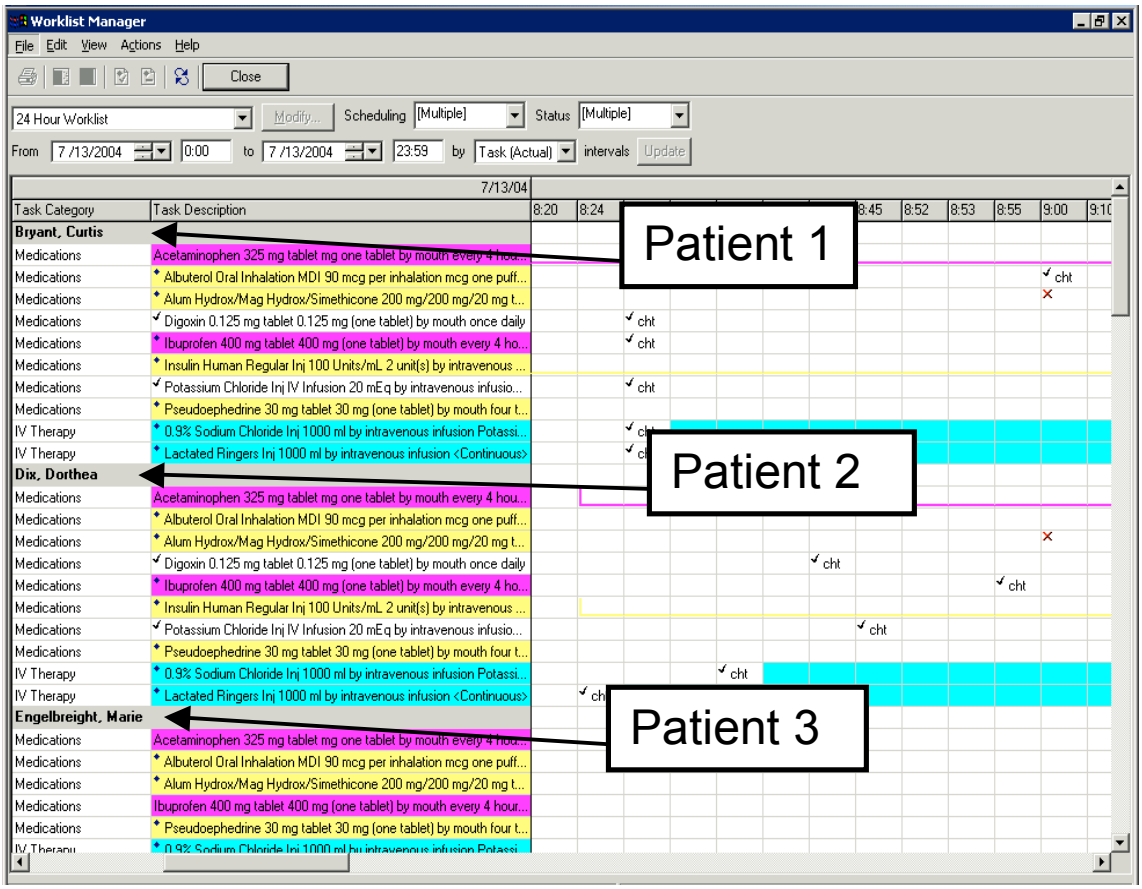
- change to the Actual view or
- right-click and select **View – Task Details** list.



Screen 197: View Details of Occurrences

Working with multiple patients on the worklist

When you open the Worklist Manager, all the patients on your current patient list will be included in the view. Each patient will be listed in the order they are listed on the patient list, followed by their medications.



Screen 198: Worklist Manager with Multiple Patients

The patient's medications are displayed after the patient's name. To view only one patient on the worklist manager at a time, you must create a patient list with just that patient.

Charting ADT Orders

Some ADT orders will display on the worklist:

1. Internal Transfer – Inpatient (except OR)
   - Manually activate order on worklist
   - Marked as done on the worklist by the sending unit when the patient actually leaves the unit.
2. Internal Transfer-Inpatient to OR
   - Marked as done on worklist by transferring unit upon transfer
3. Internal Transfer-Inpatient from OR or PACU to ICU or new Patient Unit
   - Manually activate order on worklist
   - Marked as done on the worklist by OR/PACU upon patient's transfer.
4. External Transfer
   - Manually activate order on worklist when patient leaves CC

    - Marked as done on worklist on receiving unit when patient returns to CC
5. Pass
    - Manually activate order on worklist when patient leaves CC
    - Marked as done on worklist when patient returns to CC
6. Discharge – Expiration
    - Marked as done on the worklist when the patient actually leaves the unit.
7. Discharge AMA/AWOL
    a. Marked as done on the worklist when the patient actually leaves the unit.

Chapter XIV: Reports

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Reports Overview

There are a number of reports available through CRIS. There are two basic types of reports:

- those that are printed on demand and
- those that are printed automatically at either scheduled times of the day or as the result of specific actions taking place within CRIS

Scheduled Reports		
Report Category	**Report Name**	**Report Type**
Admin Reports	Patients on Pass	Documents Review Report
Admin Reports	Inpatients With Held Radiology Orders	Orders by Department View
Consultation Note Summary	Consultation Notes Summary, Visit	Result Report Visit
Document Reports	I & O Totals	Documents Review Report Visit
Document Reports	Rehabilitation Note Summary	
Document Reports	VAD Removal Notification	Worklist Report Scheduled Visit
Documentation	Interdisciplinary Notes Summary	Documents Review Report
MAR	7-Day Medications	Scheduled MAR Visit
Orders	Worklist for an Order Department/Subdepartment sorted by Location	Miscellaneous
Orders Reports	Patients with special instructions in diet order	
Patient List	Daily Discharge List	Patient List by Location
Patient List	Inpatients Admissions List	Patient List by Location

Table 15: Automatic Reports

On Demand Reports		
Report Category	**Report Name**	**Report Type**
Admin Reports	Document Review by Patient List	Document Review RTF
Admin Reports	Document Review Report	Document Review RTF
Admin Reports	Outpatient Summary	Documents Review Report
Admin Reports	Patients on Pass	Documents Review Report
Admin Reports	Positive FAST Assessment Report	
Admin Reports	Protocol History	
Admin Reports	Signatures Report	Orders
Admin Reports	Bed Status	Patient List by Location
Document Reports	Rehabilitation Note Summary	
Documentation	Interdisciplinary Notes Summary	Documents Review Report
Labels	Admission Labels	Labels
Labels	Specimen Labels	Labels
Labels	Specimen Labels	Labels
MAR	Discharge Medication Administration Summary	Discharge MAR
MAR	Medication Administration History for the Current Visit	Medication Administration History
Nursing	Department Worklist	Worklist
Nursing	Pediatric Emergency Drug Sheet (PEDS)	
Orders	Daily Order Summary - List	
Orders	Daily Order Summary - Patient	
Orders	Inpatients with held lab orders	Active Order List
Orders	Order Review List In the Requested by Details View (Current List) & Order RequestedByViewDetails	Active Order List All Patients
Orders	Order Review List In the Requested by View (Current List)	Active Order List All Patients
Orders	Order Summary	Active Order List All Patients
Orders	Order Summary	Active Order List
Orders	Order Summary	

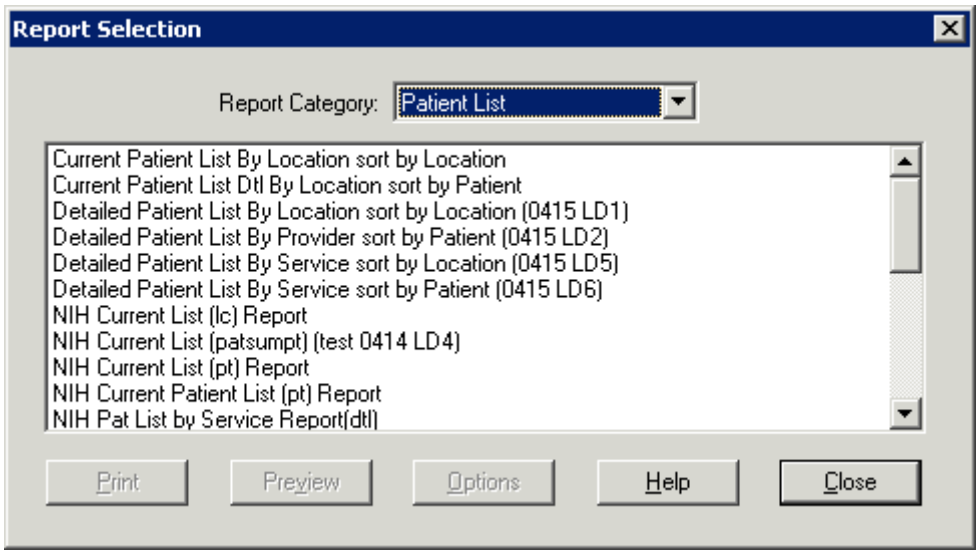
On Demand Reports		
Report Category	**Report Name**	**Report Type**
Orders	Patients with special instructions in diet order	
Orders	Specimen Collection Worklist	Orders
Orders	Unsigned Orders over 72hrs Old	
Orders	Worklist for an Order Department/Subdepartment sorted by Location	Active Order List by Department
Orders	Worklist for an Order Department/Subdepartment sorted by Location	Active Order List
Patient List	Alphabetic InPatient List	
Patient List	Current Patient List by Location, Sorted by Location & Patient List by Provider, Sorted by Location	Patient List by Location
Patient List	Current Patient List by Location, Sorted by Patient & Patient List by Provider, Sorted by Patient	Patient List by Location
Patient List	Detailed Current Patient List by Location, Sorted by Location / Detailed Patient List by Provider, Sorted by Location	Patient List by Location
Patient List	Detailed Current Patient List by Location, Sorted by Patient / Detailed Patient List by Provider, Sorted by Patient	Patient List by Location
Patient List	Detailed Patient List by Service, Sorted by Location	Service List by Location
Patient List	Detailed Patient List by Service, Sorted by Patient	Service List by Patient
Patient List	Inpatient List Under 18 Years	Patient List by Location
Patient List	Religion Worksheet	Religion Worksheet
Results	Consultation Note Summary	Result Report Visit
Results	Results Trend View	Result Trend View
Results	Results Trend View	Result Trend View

Table 16: On Demand Reports

Selecting a Report to Print

The process of printing or previewing reports begins with the **Report Selection** dialog box, where you select the report you want to print. The reports listed depend on the chart section you are using. For example, if you have the **Patient List** displayed, the reports are related to the patient list and to patient visits.

Note: When printing a detailed patient list report, if any patient data is not available, the message, "Patient visit detail is unavailable," prints in the report in lieu of the patient information. An icon indicating unavailable information displays to the left of the patient name in the **Patient List**.



Screen 199: Patient List Report Selection Dialog box

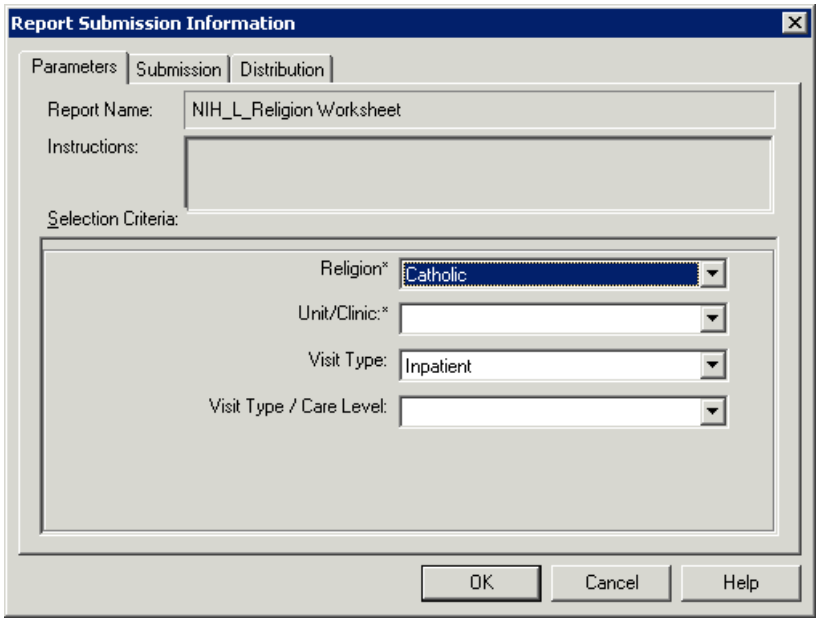
To select a report to print:

1. Do one of the following:
   a. From the **File** menu, choose **Print Reports**.
   b. Click the **Print Report** icon on the toolbar. The **Report Selection** dialog box opens.

Screen 200: Print Reports Icon

2. From the **Report Category** drop-down list, select the type of report you want to print. The reports that fall into the selected category appear in the **Report** list.
3. Select the report you want to print.

4. If necessary, specify the submission criteria for the report. If the report requires that you set submission criteria, you receive a message telling you so when you click **Preview** or **Print**.

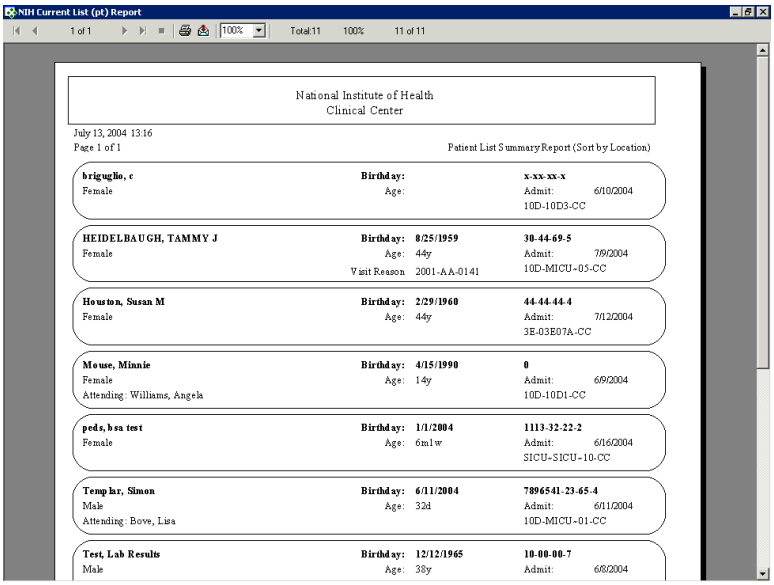


Screen 201: Report Submission Information Dialog box

5. If you want to see how the report will look when printed, click **Preview**. The report will display on your screen.
6. If you want a paper copy of the report, click **Print**.

Previewing a Report

You can preview a report before you print it. This allows you to see how the report will look when printed, or to read the report online instead of printing it.



Screen 202: Report Print Preview

To preview a report:

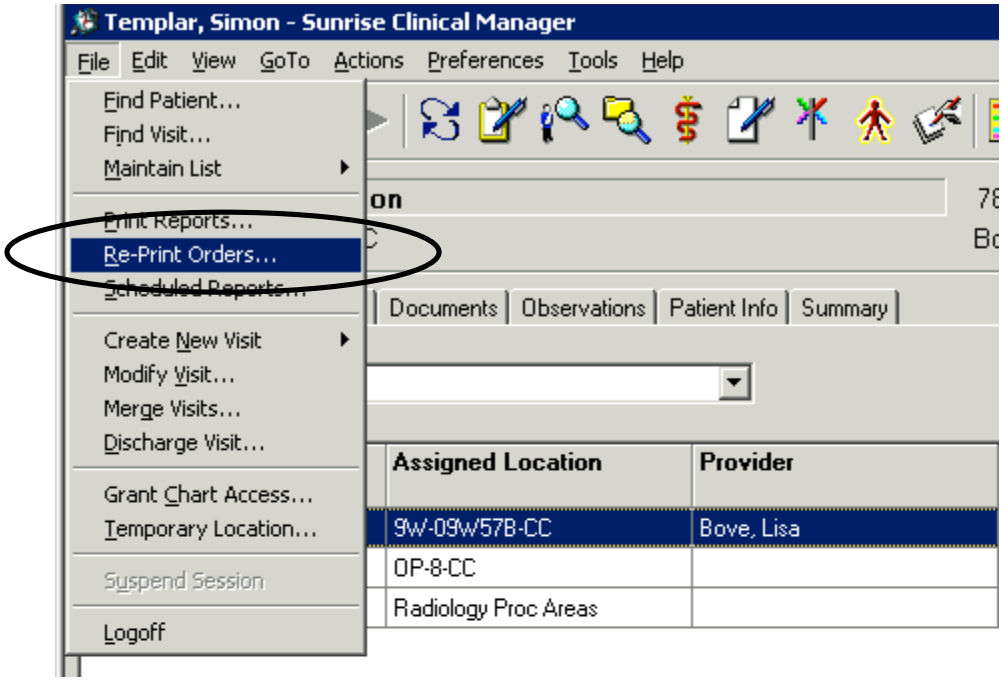
1. From the **File** menu, choose **Print Reports**, or click the **Print Report** icon on the toolbar.
2. In the **Report Category** drop-down list, select a report category containing the type of report you want to print. The category that initially displays in the list depends upon the CRIS chart section you are currently using.
3. In the **Report List**, select a report name.
4. Click **Preview**. If the report allows you to specify the content or distribution, you receive a message prompting you to provide that information. Click **OK**. Then, open the **Report Submission Information** dialog box and enter the requested information on the appropriate tab. The **Preview** screen opens with the report displayed as it will look when printed.
5. To close the **Preview** screen, click the **Close** button in the upper right corner of the window.

Re-Print Order Requisitions

You can reprint orders or specimen labels that have already been submitted to your department or for your patient. You may want to do this, for example, if the printer jammed or if the order request or specimen label was misplaced. The **Reprint Orders** dialog box allows you to reprint submitted orders (both Diagnostic Requisitions and Order Summaries).

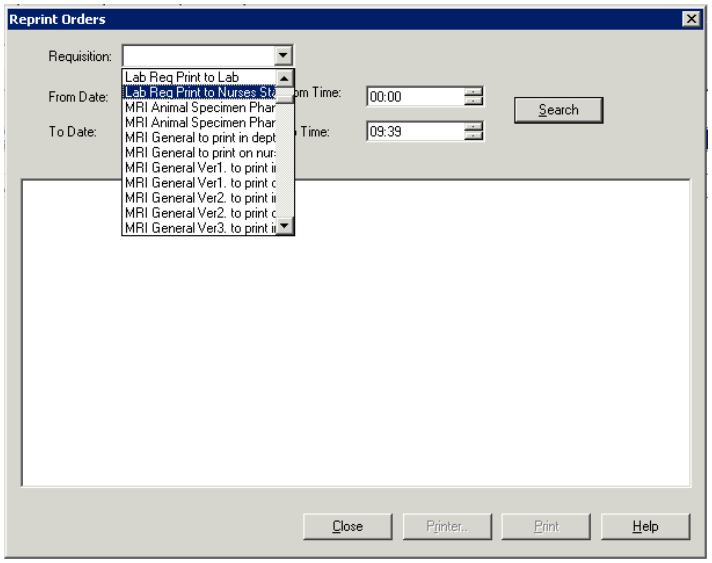
Re-print order Requisitions

1. From the Menu, select **File**, **Re-Print Orders**.



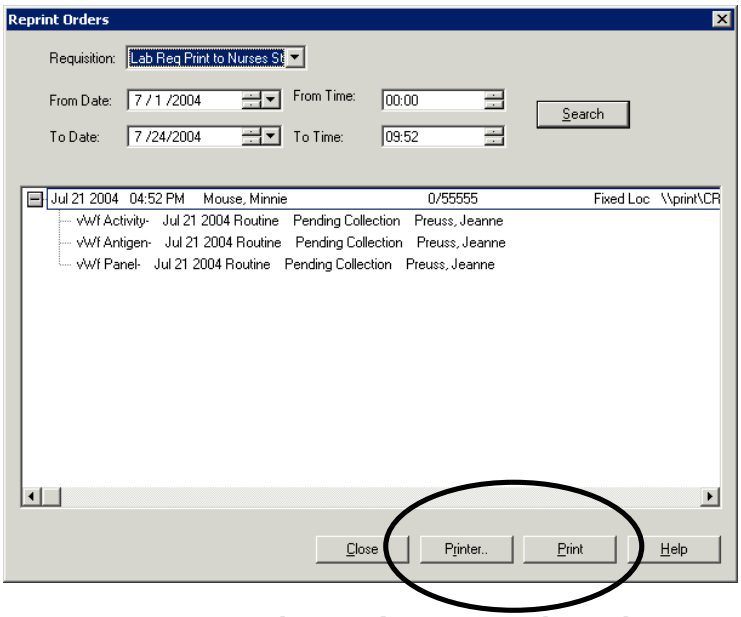
Screen 203: Re-Print orders menu option

2. In the **Requisition** field, select the order requisition that you want to re-print.



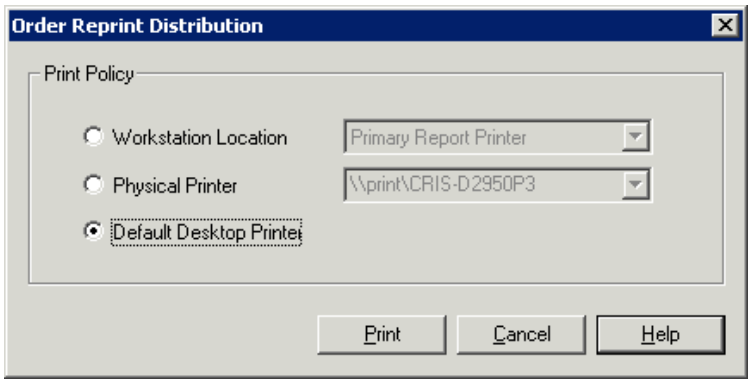
Screen 204: Requisition listing

3. Modify the **From Date** and **To Date,** if needed.
4. Click **Search**.
5. Select the patient for whom you need to re-print orders.



Screen 205: Select patient to re-print orders

6. Click **Print** to print to the default desktop printer or change the printer as needed.



Screen 206: Order Reprint Distribution window

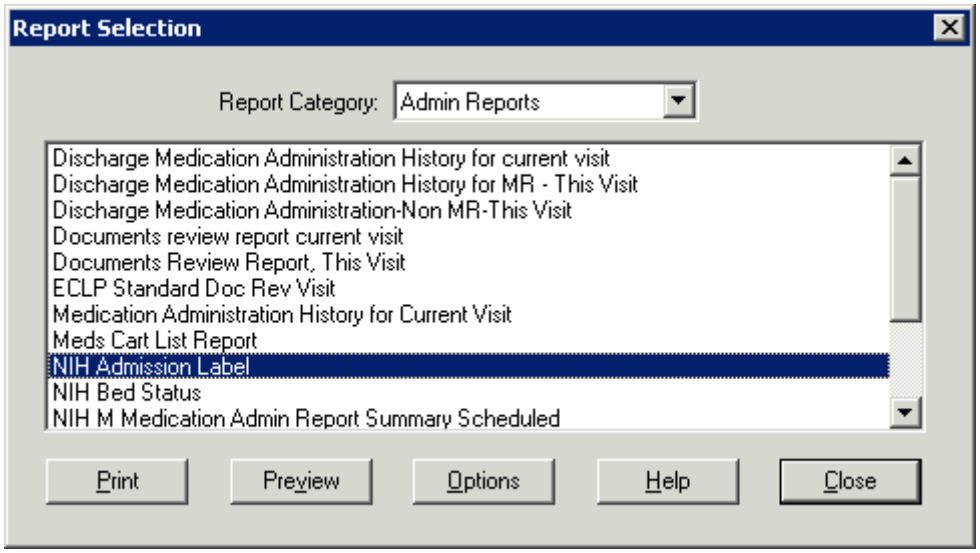
Print Admissions Labels

You can print Admissions labels as needed from CRIS. Use these labels when no bar-coded specimen labels are available.

Note: Labels will print for all the patients on the current list displayed on the Patient Infor screen. If you want labels for only one patient you need to create a temporary list with just that patient. See Chapter V: Working with patient lists for instructions on how to create a temporary list.

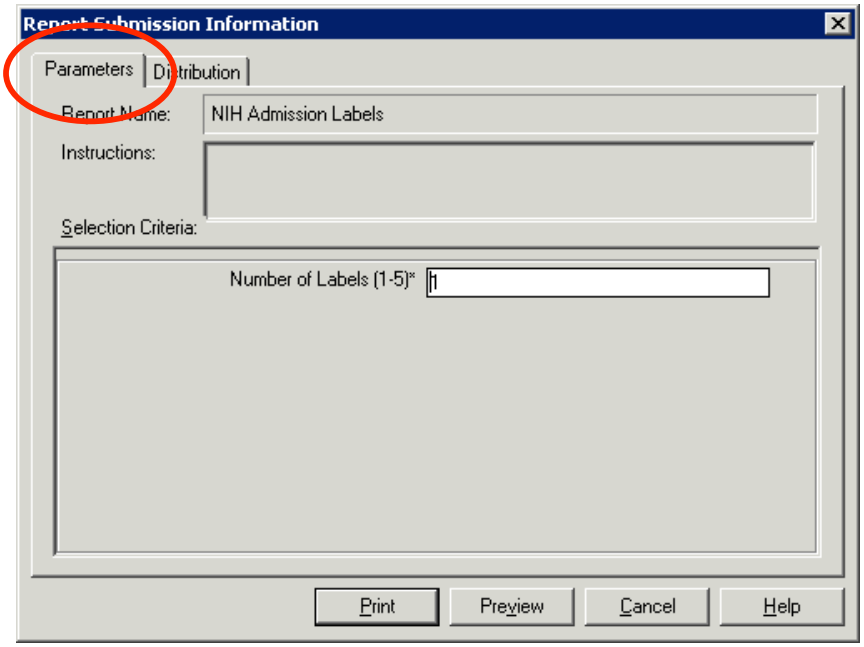
To print and admissions labels

1. Select the Reports icon.
2. Select Admin Reports from the drop down menu.



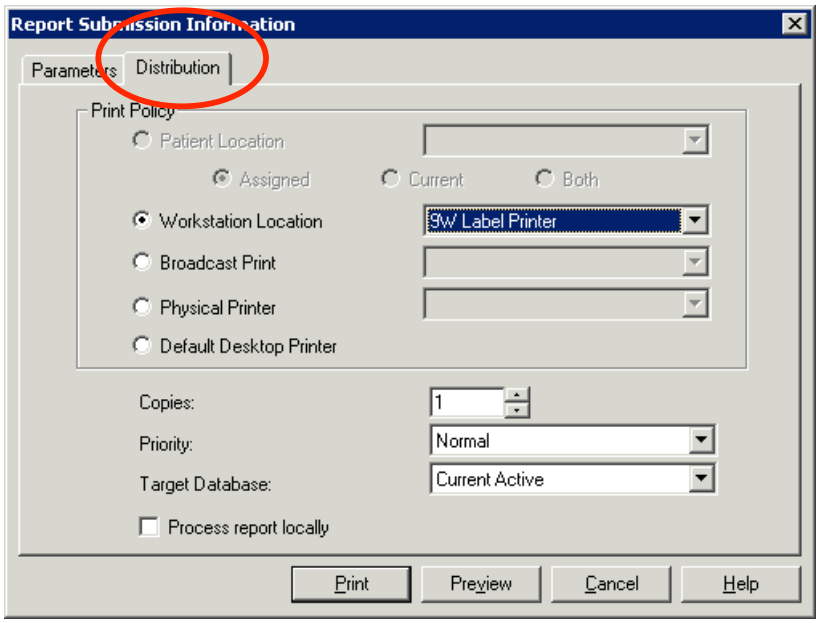
Screen 207: Report Selection window

3. Select NIH Admission Label
4. Under Options, select the quantity (default is 1).



Screen 208: Report Submission Information Window

5. Under Distribution, select the printer - verify the right printer is selected. The system defaults to the primary label printer for the patient location.



Screen 209: Select printer for Admission labels

Chapter XV: Downtime Procedures

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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 both DCRI and The Department of Network Applications (DNA) have in maintaining CRIS, MIS and Ancillary Systems. While DNA is responsible for providing the hardware and network infrastructure, DCRI is responsible for maintaining the CRIS and MIS Systems. Scheduled System downs require coordination between multiple departments and people, when possible the CRIS and MIS System down will occur at the same time. Provided in the guidelines below are: a checklist for planning scheduled system downs, description of the systems that define CRIS and MIS, and the description of the systems affected by CRIS and MIS 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 System Descriptions, Impact During CRIS Downs, & Assigned Responsibilities
Appendix B System Descriptions, Impact During MIS Downs, & Assigned Responsibilities
Appendix C Organizational Role & Assigned Responsibilities
Appendix D Flyers- CRIS Down & MIS Down / List of Manual Forms to Use for Documentation
Appendix E Nursing and Patient Care Related Guidelines For Scheduled Down

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

Approved: _____
Stephen Rosenfeld, MD, MBA
Chief, Dept. of Clinical Research Informatics

Implemented: 6/01
Revised: 10/03; 11/03; 07/04; 8/04

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 down times for systems. When they occur, they are related to maintenance upgrades and/ or system problem solving. The down time 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 Chief of Networking and Server Support and /or the Clinical Systems Architect utilizing DCRI and/ or DNA staff will coordinate time with the following people (See Appendix C for organizational assignments) based on the reason for the system down:

DNA
- Team Leader of Computer Operators

DCRI
- Interface Administrator
- Ancillary System Administrator
- Operational System Lead
- Hospital System Database Manager
- Triage Analyst
- DCRI Clinical System Architect

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

DLM
- Lab Manager
- Lab Information System Administrator
- Back-up Administrator

DTM
- Lab Information System Administrator
- Quality Assurance Specialist
- Transfusion Services Supervisor

Nursing and Patient Care Services (NPCS)
- NPCS Chief
- NPCS Service Chiefs
- NPCS Quality Officer

(Note: Refer to Appendix C for individual's name for the roles listed above)

Nutrition
- Chief Nutrition Department
- Chief of Clinical Nutrition Services
- Assistant Chief of Food Services

Pharmacy
- Deputy Chief
- Pharmacy Liaison

DCRI Interface Administrator and Ancillary System Administrator will notify the Ancillary Departments that utilize interfaces of the proposed time by phone call and then send an email to the IE Notification Email List identifying the date, time and reason for the scheduled down.

B. DCRI Triage Analyst will notify the following people of the down time, utilizing flyers and email:
   - Departmental staff listed above in section 1.1A (reference Appendix C for staff's role and name)
   - Clinical Center Nursing Staff (via the CC- NURS Staff list serv)

Triage Analyst Role

The procedures during the down time are the same whether or not there is less than or greater than 24 hr notification. The communication with users differs as described below.
24 hour advanced notice, during a regular working week, can be communicated by having the Triage Analyst distribute flyers to the Nurse Managers' mailboxes and email the CC nursing staff via the CC-NURS Staff list serv. 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 D & E for sample flyers and nursing guideline packet).

Less than 24 hour advanced notice, during a regular working week, requires the Triage Analyst to email the CC nursing staff via the CC-NURS Staff list serv and distribute flyers, in person, to all units and clinics. During evenings, nights, holidays and weekends, the Nursing

Administrative Coordinator will be contacted as appropriate, via the page operator.

Nurse Manager Mailboxes are located in the following locations:

- 7D nursing corridor - Critical Acute Patient Care Services
- 7D nursing corridor - Adult Pediatric Behavioral Health Services
- 1C243- Ambulatory Care Services (12 clinics)

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://www.cc.nih.gov/nursing/whoweare/orgchart.html

C. DCRI Operational System Lead will instruct CRIS Analyst to put message on the Hospital Services Screen at least 2 days before scheduled down and ensure that CRIS Analyst On-Call is notified.

D. CRIS Analyst On-Call or designee will create an announcement and provide wording and time of system down to DNA's Team Leader of Computer Operators. He/She will also send wording that will be placed on the Hospital Services Screen to the Chief, Networking, Server Support, DCRI Clinical System Architect and Chief, Application Development Section.

E. Chief, Networking and Server Support will send an email to the CC Systems Notifications Email List.

2.0 Schedule System Downs -No Interface Transactions

There are no scheduled maintenance down times. They occur as needed. The best times to perform these needed maintenance activities requiring down time are negotiated with the affected departments. This is defined in section 2.1.

2.1 Communication of Down Time

A. DNA Team Leader of Computer Operators or designee to have Operators overhead page CRIS down 30 minutes before down and at time of down.
B. DNA Team Leader of Computer Operators or designee to have Operators overhead page CRIS is up upon completion of work.

2.2 Time Coordination

Communication between the DCRI Interface Administrator and the Ancillary System Administrator will occur when selecting/ coordinating the scheduled down time. Best Times are:

- DLM 1pm – 3 pm, 1am-3am
- DTM 1am-3am
- DRD prefers after 4pm
- Nursing - prefers 1am; however, during business hours weekdays and weekends, the least disruptive time would be 11am or 4pm.
- Nutrition 1am-3am
- Pharmacy- need to address each down time on a case by case basis
- All Departments 6:30 pm – 8:00 pm

2.3 Notification To Ancillary Departments Of Proposed Down Time

A. DCRI Interface Administrator and Ancillary System Administrator will notify the Ancillary Departments that utilize interfaces of the proposed time through the following means:
   - Phone call
   - E-mail to the IE Notification Email List identifying the date, time and reason for the scheduled down.

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

C. Refer to Appendix E for the affects of down time on clinical departments interactions with patient care units.

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

If the CRIS is down for a prolonged period of time, 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.

Guidelines and manual forms, for ordering and documenting, are available on every inpatient unit and clinic. The nurse managers for the inpatient units and clinic 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 request and call stat results.

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 on call Operational Support Staff.

Manual ordering and documentation forms can be accessed from Medical Records
Monday- Friday 8:30 AM- 5:30 PM.

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

- Ancillary Tests- imaging services/ecg/ dental (NIH- 2353-3)
- Doctor's Orders/ Medical records (STANDARD FORM 508)
- Clinical Laboratory Ordering Record (NIH- 2353-1)
- Inpatient Progress Notes- (NIH-509 or STANDARD FORM 509)
- Outpatient Progress Notes (NIH-532-1)
- Nursing Notes- to be used for inpatients only (STANDARD FORM 510)

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

- CRIS lab labels (if available), are to be used to label any specimens being sent to the lab. These labels include bar coding on them. The coding has a unique identifier of what test needs to be done and is read by the lab system.
- Admission labels (no bar code) – are to be used if there are no CRIS lab labels. These are preprinted with the required patient information.
- Handwritten labels are to be used if admission labels are not available.

4.0 MIS System Downs

MIS is used for Admission Discharge Transfer (ADT) and Clinical Appointment System (CAS) transactions. MIS will send ADT patient information over to CRIS. CAS is the CC appointment scheduling system and will not send information over to CRIS. When possible the CRIS and MIS System down will occur at the same time.

4.1 CRIS Impact when the MIS System is down and CRIS is operational

A. **Any Inpatient Admission**
MIS will not send patient admission information to CRIS as the transaction is interfaced from MIS to CRIS. Admitting a patient must first be initiated through the ADT system before a visit can be created in CRIS. Preadmit orders in CRIS should not be released until the MIS system is operational and the inpatient visit has been created.

New orders and/or documentation entered while MIS is down need to follow the procedures for manual entry until the CRIS system and MIS system are both 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. The patient can physically transfer to another unit for care; however, the order requisitions and labels will continue to print in the patient's location identified in CRIS prior to MIS going down. Staff will need to communicate with the new location and forward order requisitions and labels accordingly.

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

5.0 Unscheduled System Downs

5.1 Down Initiation

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

5.2 Communication of Down Time

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

contacting DCRI or DCRI contacting Computer Operation staff. These individuals make the decision whether or not users need to be notified.

B. DNA Team Leader of Computer Operators or designee will have the NIH Page Operators overhead page CRIS down.

C. Involved departments are notified specifically by DCRI or DNA. Judgment is used in contacting other affected departments, based on the situation of the down time.

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

E. DNA Team Leader of Computer Operators or designee sends an email to the IE Notification Email List identifying the reason for the unscheduled down, time the system went down and when it came back. A team of DNA technicians will visit every patient care unit to make sure the central processing unit (CPU) are fully operational following both planned and unplanned down times during business hours. During the evening tour, on weekends and holidays the DNA team will call the patient care units to confirm that the CPU's are operational.

F. DCRI On-Call Operational System Staff will contact and update the Chief, Nursing and Patient Care Services or Designee of the down status of greater than 15 minutes. Note: During evening, nights, holidays and weekends the designee is the Administrative Coordinator.

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

A. Refer to Section 3.0 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 DNA defined Disaster Recovery Plan which can be found in the Data Center Operations Department located in room B1N243.

6.0 System Descriptions, Responsible Parties and Customer Impact

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

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

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

Appendix C – This lists the designated person and contact information for specific roles and responsibilities

Appendix A
Impact on the CRIS Core and/or the MIS System 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 and MIS systems.**
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.**
Impact On MIS	**The affect a down of the System Component on the MIS 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	Impact On MIS	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.	No ADT/CAS User Access to MIS: No ADT/CAS MIS Printouts. No ADT/CAS Interface Transactions.	DNA 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.	N/A	DNA and DCRI Dempsey Dunn Tony Barnes Jon McKeeby
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.	No ADT/CAS User Access to MIS: No ADT/CAS MIS Printouts. No ADT/CAS Interface Transactions.	DNA Joyce Yarington Kelly Neadow Jason Chan
CCAXPENT	Enterprise	Behind NIH/CC Checkpoint Firewall	No Administration Configuration changes to SCM or Installation of New Clients.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCSCMDMUL	SCM Multum Server	Behind NIH/CC Checkpoint Firewall	Loss of drug interaction checking for CRIS Core users.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPCDS	SCM CDS/Order Generation	Behind NIH/CC Checkpoint Firewall	Repeat orders will not get created for CRIS Core orders.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPEXE	SCM HL7 Executive	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT,	N/A	DNA and DCRI Dempsey Dunn Tony Barnes Jon McKeeby

Component Name	Description	Firewall Location	When Component is Down Impact On CRIS Core	Impact On MIS	Responsible Party
			Results, Statuses.		
CCXAPMGR	SCM HL7 Manager	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	N/A	DNA and DCRI Dempsey Dunn Tony Barnes Jon McKeeby
CCXAPMST1	Master	Behind NIH/CC Checkpoint Firewall	No Access To CRIS SCM.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPMST2	Master Server	Behind NIH/CC Checkpoint Firewall	No Access To CRIS SCM.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPPRT1	SCM Print Servers	Behind NIH/CC Checkpoint Firewall	No printing from CRIS Core.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPPRT2	SCM Print Servers	Behind NIH/CC Checkpoint Firewall	No printing from CRIS Core.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPRPT	SCM Report	Behind NIH/CC Checkpoint Firewall	No Printing of Reports.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CCXAPVOCAB	SCM Vocabulary Manager	Behind NIH/CC Checkpoint Firewall	Loss of the ability to process MLM which are rules which check for drug interactions upon the entry of orders.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
CITRIX	Client access for CRIS	N/A	No User Access via CITRIX. Possible thru SCD clients.	Client access for Web/MIS. No ADT/CAS User Access.	DNA 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.	N/A	DNA and DCRI Dempsey Dunn Tim Maloney
Degas	MIS Print Server and	Behind NIH/CC	N/A	No ADT/CAS MIS Printouts.	DNA and DCRI Tadele Yenegeta

Component Name	Description	Firewall Location	When Component is Down Impact On CRIS Core	Impact On MIS	Responsible Party
	MIS Interface Server	Checkpoint Firewall		No ADT/CAS Transactions: All Ancillary Systems-CRIS Core, RIS, LIS, SoftMed, Wristband.	Chris Klein Steve Moore
IBM 3172	Token Ring Access TCP/IP access to Rose	Behind NIH/CC Checkpoint Firewall	N/A	No ADT/CAS User Access to MIS: No ADT/CAS MIS Printouts. No ADT/CAS Interface Transactions. No FTP to/ from ROSE.	DNA and DCRI DNA Operations Myoung Lee Tim Maloney
IE	Interface Engine Server	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	No ADT/CAS Interface Transactions: All Ancillary Systems.	DNA and DCRI Tadele Yenegeta Chris Klein Tony Barnes Jon McKeeby
IE Care Data	Interface Engine Application	Behind NIH/CC Checkpoint Firewall	N/A	No ADT Interface Transactions. CDW, Wristband, PYXIS.	DCRI Tony Barnes Jon McKeeby
IE CloverLeaf	Interface Engine Application	Behind NIH/CC Checkpoint Firewall	No Interface Transactions in or out of CRIS Core: Orders, ADT, Results, Statuses.	No ADT/CAS Interface Transactions: All Ancillary Systems.	DCRI Tony Barnes Jon McKeeby
Lizzy IBM 390	Backup Down Mainframe for MIS At CIT	Behind NIH/CC Checkpoint Firewall	N/A	Backup MIS ADT/CAS Down	DNA Pam Carter Tim Maloney
Mac/MIS	MIS Client for MAC	N/A	N/A	No ADT/CAS User Access via Web/MIS.	DCRI Jose Miletti
MIS Application	Mainframe for MIS	Behind NIH/CC Checkpoint Firewall	N/A	No ADT/CAS User Access to MIS: No ADT/CAS MIS Printouts.	DCRI Tim Maloney

Component Name	Description	Firewall Location	When Component is Down Impact On CRIS Core	Impact On MIS	Responsible Party
				No ADT/CAS Interface Transactions.	
Monet	Domain Name Server used within CC	In front if NIH/CC Checkpoint Firewall	N/A	No ADT/CAS User Access to MIS for users using Monet as name server: Majority ADT/CAS users.	DNA Tadele Yenegeta Chris Klein
Open Connect Application	Talks SNA to TCP/IP to control MIS Access, MIS Printing and MIS Interfaces.	Loaded on Zeus and Degas	N/A	No ADT/CAS User Access to MIS: No ADT/CAS MIS Printouts. No ADT/CAS Interface Transactions.	DNA and DCRI Tadele Yenegeta Chris Klein Myoung Lee Tim Maloney
Operation Client Terminals	Used by operators to monitor and maintain MIS	In front if NIH/CC Checkpoint Firewall	N/A	No ADT/CAS User Access by operators. Users can use different terminal.	DNA Bertram Brown
Rose IBM 390	Mainframe for MIS	Behind NIH/CC Checkpoint Firewall	N/A	No ADT/CAS User Access to MIS: No ADT/CAS MIS Printouts. No ADT/CAS Interface Transactions.	DNA and DCRI Pam Carter Tim Maloney
SCD	Standard Clinical Desktop	N/A	No User Access via Standard Clinical Desktop: Majority of users.	No ADT/CAS User Access via Standard Clinical Desktop. Majority of users.	DNA Bertram Brown
Secure ID	Security Authorization System	In front if NIH/CC Checkpoint Firewall	N/A	No MIS user access to unregistered workstations.	DNA and DCRI Tadele Yenegeta Chris Klein Jose Miletti

Component Name	Description	Firewall Location	When Component is Down Impact On CRIS Core	Impact On MIS	Responsible Party
				No access by support users on-call. No access by operators to interface monitor and control programs on I.E. and Degas.	
SunRay Clients	Client access for CRIS	N/A	No CRIS Core User Access via Sunray. Possible thru CITRIX.	No ADT/CAS Access to MIS User Access via Sunray. Possible thru CITRIX.	DNA Tadele Yenegeta Chris Klein
Token Ring Network (MAU and Nodes)	MIS System Control and	Behind NIH/CC Checkpoint Firewall	N/A	No ADT/CAS Access to MIS:. No ADT/CAS MIS Printouts.	DNA and DCRI DNA Operations Myoung Lee Tim Maloney
Web/MIS	MIS Client for Web	N/A	N/A	No ADT/CAS User Access via Web/MIS.	DCRI Jose Miletti
Zeus	Web MIS Server and MIS User Access Server	In front if NIH/CC Checkpoint Firewall	N/A	No ADT/CAS User Access via Web/MIS or Mac/MIS.	DNA and DCRI Tadele Yenegeta Chris Klein Steve Moore

Appendix B
Impact on Ancillary Systems when the CRIS Core and/or the MIS System are 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.**
Impact When MIS is Down	**The affect to the Ancillary System when MIS 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	Impact When MIS is Down	Responsible Party
CDW	Clinical Data Warehouse – Sybase databases common, cllab, cdr_new	Orders from CRIS and results from Ancillary Systems are not loaded into CDR.	Admissions, transfers and discharges(ADT) transactions from MIS are not loaded into CDR.	DNA and DCRI Tadele Yenegeta Chris Klein Jon McKeeby
RIS	Radiology Information System	Orders are not sent from CRIS and results are not sent to CRIS.	ADT transactions are not sent from MIS.	Harvey McDonald
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 MIS.	Earle Barnes Tony Barnes Chung-Hee Row Kathy Roden Boyd Conley
EKG	EKG System	Orders are not sent from CRIS and results are not sent to CRIS.		DNA and DCRI Barrett Grieb Tony Barnes
SoftMed	Transcription System	Orders are not sent from CRIS and results are not sent to CRIS.	ADT transactions are not sent from MIS.	DNA and DCRI Barrett Grieb Tony Barnes Jon McKeeby
CBORD	Nutrition System	Allergies and Orders are not sent from CRIS to	ADT transactions are not sent from MIS.	DNA and DCRI Dempsey

Ancillary System	Description	Impact When CRIS Core is Down	Impact When MIS is Down	Responsible Party
		CBORD.		Dunn Jim Oseth Tony Barnes Jon McKeeby
MIS	ADT/CAS	ADT transactions from MIS are not sent to CRIS. ADT transactions are not received from CRIS.		DNA and DCRI DNA Operations Tony Barnes Jon McKeeby
PYXIS	Pharmacy Dispensing System		ADT transactions are not sent from MIS.	DCRI Tony Barnes
WristBand/Emboser	WristBand Creation		ADT transactions are not sent from MIS.	DCRI Jon McKeeby
CRIS Core	Order Entry Documentation and Retrieval system		ADT transactions are not received from MIS. ADT transactions from SCM are not sent to MIS.	DNA and DCRI DNA Operations Tony Barnes Jon McKeeby

Appendix C: Organizational Role & Assigned Responsibilities

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

Department of Clinical Research Informatics
Ancillary System Administrator - Tim Fink – (301) 435-8370
Clinical System Architect – Jon McKeeby, D.Sc. – (301) 496-3826
Hospital System Database Manager - Tim Maloney – (301) 496-6976
Hospital System Database Manager - Myoung Lee - (301) 496-6857
Interface Administrator - Tony Barnes – (301) 496-4285
Operational System Lead- Melanie Retzke – (301) 496-6576
Operational System Analyst- Myoung Lee – (301) 496-6857
Nurse Consultant- Jose Miletti – (301) 496-3827
Senior Architect Developer- Steve Moore – (301) 496-8651
System Coordinator- Tom Dawson – (301) 594-9887
Triage Analysts- Rubi Defensor – (301) 435-8516
Triage Analysts- Susy Postal – (301) 594-9468

Department of Network Application
Casper Administrator – Doug Butters – (301) 496-7891
Casper Administrator – Mark Bradley – (301) 451-4682
Chief, Application Development Section – James (Jim) Pitts – (301) 496-7436
Chief, Networking and Server Support - Joyce Yarington – (301) 594-7801
Chief, User Support Section- Bertram Brown – (301) 594-7802
Database Administrator – Jim Oseth – (301) 496-7905
Operation Manager- John Franco – (301) 496-6745
Network Engineer – Jason Chan - (301) 496-8652
Network Engineer - Kelly Neadow – (301) 496-8652
Team Leader of Computer Operators- Pam Carter – (301) 496-3844
Team Leader of Systems Administration - Dempsey Dunn – (301) 496-4712
Systems Administrator – Barrett Grieb - (301) 347-1431
UNIX System Administrator- Chris Klein – (301) 402-0974
UNIX System Administrator- Tadele Yenegeta – (301) 496-9243

Department of Laboratory Medicine
Back-up Administrator- Chung-Hee Row – (301) 496-3386
Lab Manager- Peggy Spina – (301) 496-5668
Lab Information System Administrator-Kathy Roden – (301) 402-0584

Department of Transfusion Medicine
Lab Information System Administrator- Boyd Conley – (301) 496-4506
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-Harvey McDonald - (301) 435-5269

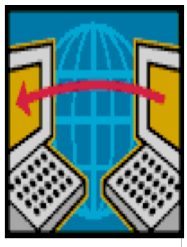
Nursing and Patient Care Services (NPCS)
Chief, Nursing and Patient Care Services- Clare Hastings – (301) 435-3489
Refer to Organizational Chart for individual's name for the roles listed below:
Chief, Ambulatory Care Services- Karen Kaczorowski – (301) 496-2341
Chief, Critical and Acute Care Services- Laura Chisholm – (301) 496-2987
Chief, Adult, Pediatrics and Behavioral Health- Tannia Cartledge – (301) 496-4623
NPCS Quality Officer- Virginia (Ginnie) Daine- (301) 435-6196
Nurse Managers
Nursing Administrative Coordinator
The Organizational chart's URL link is:
http://www.cc.nih.gov/nursing/whoweare/orgchart.html

Nutrition
Chief, Nutrition Department- Dave Folio – (301) 496-4981
Chief, Clinical Nutrition Services- Madeline Michael – (301) 496-3312
Assistant Chief of Food Services- Jennifer Widger – (301) 496-4981

Pharmacy Department
Deputy Chief- Robert DeChristoforo – (301) 496-4363
Pharmacy Liaison- Charles Daniels (Organizational role- Chief, Pharmacy Department)
(301) 496-4363

Appendix D: Example of an CRIS Down time Flyer / List of Manual Forms To Use For Documentation

INTERMITTENT CRIS DOWN (UP TO 4 HOURS)



All Systems (CRIS, Ancillary Systems, The Internet & Intranet) within the Cl inical Center Data Center will experience intermittent down periods.

Purpose: Emergency Security Maintenance
When: Saturday, September 11, 2004 - Sunday, September 12, 2004
Time: 11:59 P.M – 4:00 A.M.

The duration of the Down Time is undetermined; however, the maxi mum down period could last up to 4 hours. Please see the attachment for the approximate time your area will experience the down.

- You can **not** enter orders, document, print or retrieve information during th is down time.
- Systems such as: RIS, LIS, ECG, PACS, CITRIX, PYXIS, Dictation/ Transcription & more will be unavailable.
- 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.

Emergent Lab Order, Please Follow This Procedure:

1. Send the specimen to the lab with A manual Clinical Laboratory O rdering Record Form Or CRIS generated transmittal sheet, if avai lable.
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 Ca re, Nutrition And All Other Clinical Services)
Please use the following forms to manually order or document:

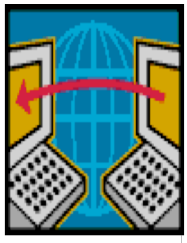
- Ancillary Tests - Imaging Services/ECG/ Dental (NIH - 2353 -3)
- Medical Records/ Doctor's Orders (SF508)
- Clinical Laboratory Ordering Record (NIH 2353 -1)
- Inpatient Progress Notes (SF - 509)
- Outpatient Progress Notes (NIH -532)

You Will Need To Call Departments To Communicate The Orders And Obtain Service.

Thanks For Your Cooperation And Patience!

Appendix D: Example of a MIS Down time Flyer

1 HOUR MIS DOWN (ADT/CAS)



Transactions involving the Admission Discharge Transfer (ADT) an d the Clinical Appointment System (CAS) will be down during this time.

Purpose: Emergency Security Maintenance
When: Sunday, September 12, 2004
Time: 1:00 A.M – 2:00 A.M.

For a patient NOT in the CRIS System:

If **Emergent** Lab Order are needed follow this procedure:

1. Send the specimen to the lab with a manual Clinical Laboratory O rdering Record Form Or CRIS generated order requisition, if available.
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.

Follow The Defined Manual Ordering Process By Service For All Ot her **Emergent** Orders

(Pharmacy, Imaging Services, Transfusion Medicine, Respiratory Ca re, 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)

For a patient IN the CRIS system: who is being transferred to an new location.

1. Orders and labels will continue to print in the patient's CRIS l ocation prior to MIS going down.
2. Send labels and orders to the new location until MIS is operatio nal and the transfer is sent from MIS to CRIS.

You Will Need To Call Departments To Communicate The Orders And Obtain Service.

Thanks For Your Cooperation And Patience!

Appendix E: 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 shutdown time 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 telephone or the Pneumatic Tube Stations.
5. Messenger and Escort will make hourly rounds to DLM to pick up and deliver lab results to PCU's.
6. Medical Record Documentation
   a. 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)
      - Nursing Notes (Standard Form 510)
      - Instructions for Manual Input into Pyxis Medstation

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 and the signature of the Licensed Independent Practitioner (LIP). 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 current the 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

1. During the down-time, use the Nursing Progress Report (Standard Form 510) for documenting patient assessments, etc.

Return of CRIS

1. When the CRIS comes back up:
    a. An LIP or a registered nurse will enter all written, verbal, and telephone orders into CRIS, except emergency lab orders as they will be entered by DLM.
    b. A nurse will:
        i. Request a new Medical Care Plan (MCP) to validate the accuracy of all medical orders entered.
        ii. File the original manual copy of all order forms in the unit chart under "MD Orders."
        iii. 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. Chemo/TPN orders cannot be entered by a RN. 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. Communication with Pharmacy will be via phone and tube systems.
8. Pharmacy will call lab for any emergency results.
9. 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 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 RN, MD or LIP.

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. One (1) order form per patient can be used for multiple DLM requests such as Chemistry, Hematology.
4. 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.

5. 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*. Forms will be distributed to PCUs prior to the shut down. The A/C on duty will have extra forms.
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.

CHS

1. 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.
2. 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)

Orders received during the shut down will require a copy of the manual LIP order sent to the DTM. The RN will be required to call DTM to assure that the order is received. The DTM will call the nursing unit when the blood product is ready for pickup.

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.

1. From the main Menu, select Remove.
2. 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.

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:

"Quick" Computer Shut Down Check List

☐ **Identify Computer Shut Down Area in the nurse's station**

☐ **Assure that you have the required manual forms**
- ☐ **MD order sheets (Standard Form 508)**
- ☐ **Nursing Notes (Standard Form 510)**
- ☐ **Clinical Laboratory Ordering Record (NIH-2353-1- 05-04)**
- ☐ **Chemistry and Hematology Stat report log sheet**
- ☐ **Instructions for manual input into meds pyxis**
- ☐ **Record of patients manually added in Pyxis**

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

☐ **All LIP orders have a date, time and LIP signature**

☐ **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**
- ☐ **Meds, bld/bld 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**

Chapter XVI: Remote Access

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NIH Campus Access

This information applies to any computers that do not have the standard clinical desktop image.

Access is available through the website https://crisaccess.cc.nih.gov

On this website you have the option of using the Citrix web client – use login box on site, or downloading a CRIS specific Citrix client. Instructions are available for OS9, OSX and W2000/XP. These are bundled clients that put a folder/icon on the desktop and will take you right to a Citrix logon and then the CRIS logon.

Ask your IT technical support staff to help with this configuration.

For help on the CRIS application call the
CRIS Support Center, 301-496-8400

Non-NIH Campus Access (Access from Home)

This is coming soon! Check the CRIS web site https://cris.cc.nih.gov for more information on when this will be available and how to access.

Chapter XVII: Protocol Management

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Protocol Consent Form Management in CRIS

This tutorial summarizes the change in documenting the assignment of a patient to a protocol and a new process for forwarding signed protocol consent documentation to the Medical Record Department (MRD). This change in process impacts all end-users of the CRIS system, as well as staff who have previously completed the NIH/MIS Form 54.

The signature page of the completed protocol consent document (Form 2514-1) must be faxed to the MRD at 301 480-3126 upon completion. The original signed protocol consent document must be filed in the inpatient chart for inpatient admissions and forwarded to the MRD for outpatients for filing in the permanent medical record.

Definition of Terms

Form 54/ATV Form – The Form 54 for requesting admissions, travel and vouchers has been replaced by the Admissions, Travel and Voucher System also known as ATV. The ATV system can be found at http://atv.cc.nih.gov. For additional information about the ATV system, contact admissions at 301 496-3141.

Primary Protocol – The primary reason for the patient visit to the Clinical Center. All orders entered into CRIS will be attributed to this primary protocol unless they are included in a protocol order set.

Secondary Protocol – Ancillary protocols specific to a patient visit or spanning multiple visits. Orders entered in CRIS will not be attributed to secondary protocols unless there is an active protocol order set established for that particular protocol.

Generic Protocol - an emergency protocol designation assigned when a patient presents for admission but has no admissions request (Form 54/ATV). This protocol designation is only valid for 72 hours.

Active Protocol – a protocol in which a patient is actively participating

Active Protocol Status Designations

- Unconfirmed – patient assigned to a protocol, but the Medical Record Department has not received a faxed copy of the signature page of a valid, signed protocol consent form (NIH-2514-1)
- Confirmed – medical records has received a faxed copy of the signature page of a valid, signed protocol consent form

- Exemption – patient assigned to designated exemption protocol, or remains on a treatment protocol as a "single patient single use" exemption

Inactive Protocol – a protocol in which a patient is no longer participating or the study has ended.

Inactive Protocol Status Designations

- Removed – an *individual* patient is removed from a protocol because of medical reasons, or because they have completed the protocol.
- Error – the protocol was assigned in error.
- Terminated – protocol completed or ended (e.g. end of study) and *all* patients are removed from the protocol.

Visit Reason – a term in CRIS identifying the primary protocol in the health issues section

Protocol Order Set – a group of orders related to a specific protocol

Onset Date – indicates the actual date the protocol consent document was signed

Entered Date – indicates the date that the consent status was entered and/or updated in the CRIS health issues section of the patient information tab.

Description of the New Process

Placing a New Patient on a Primary Protocol or Changing a Primary Protocol:

1. Complete a Form 54 – now known as an Admissions, Travel and Voucher Request (ATV). This form can be found at http://atv.cc.nih.gov
2. Electronically submit the ATV form to admissions.
3. Admissions will register the patient, assign a medical record number and document the patient's primary protocol number. The primary protocol will display in the CRIS header information for the patient, and under visit reason in the CRIS "Health Issues" section of the "Patient Info" tab.
4. Obtain all required signatures on the last page of the protocol informed consent document (NIH-2514-1)

5. Fax the last page (signature page) of the protocol informed consent to Medical Records at 301 480-3126 as soon as all of the signatures have been obtained.
6. Inpatient Status: File the original protocol consent document in the inpatient chart.
   Outpatient status: Forward the original protocol consent document to the MRD for filing in the permanent medical record.
7. The MRD will update the protocol status and confirm receipt of the consent document in the CRIS under the health issues section of the patient information tab no later than the next business day.
8. For subsequent visits, use the ATV request to change the designation of a primary protocol. NOTE: this will only change the primary protocol for the specified patient. The previous primary protocol will automatically become a secondary protocol. To "inactivate" an existing protocol patient assignment, refer to the section below on "Inactive Protocols".

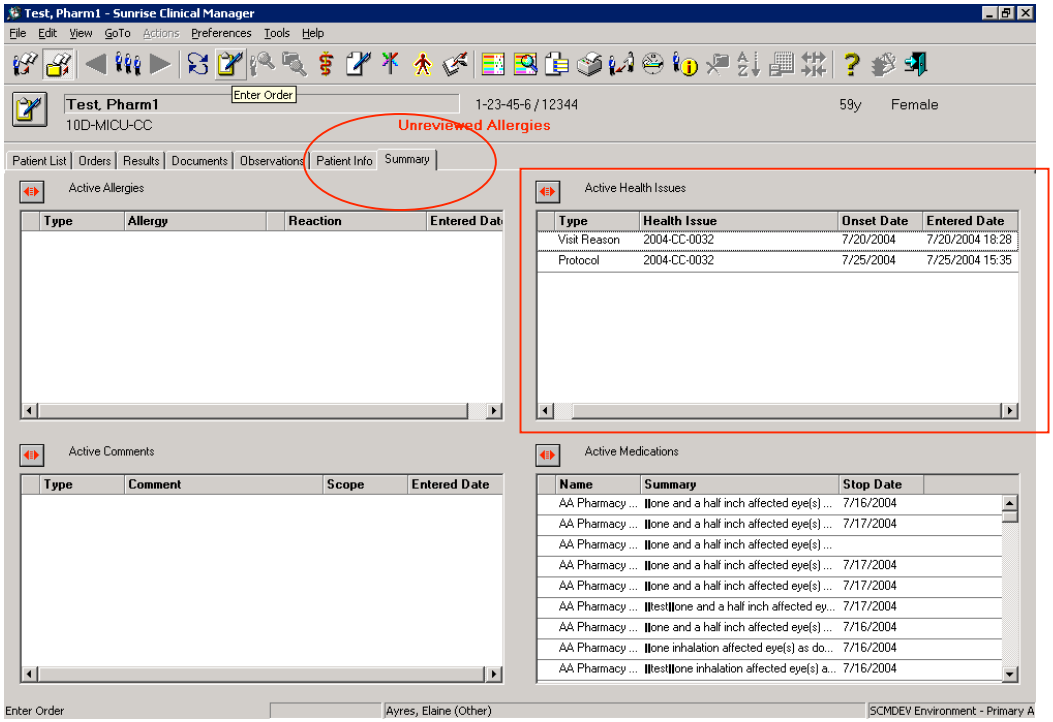
Placing a Patient on a Secondary Protocol:

1. Complete all required signatures on the last page of the protocol informed consent document (NIH-2514-1)
2. Fax the last page (signature page) of the protocol informed consent to the Medical Record Department at 301 480-3126 as soon as all of the signatures have been obtained.
3. Inpatient status: File the original protocol consent form in the in patient chart.
   Outpatient status: Forward the original consent document to the MRD for filing in the permanent medical record.
4. The MRD will update the protocol status and confirm receipt of the faxed signature page of the protocol consent document in the CRIS health issues section of the patient information tab.

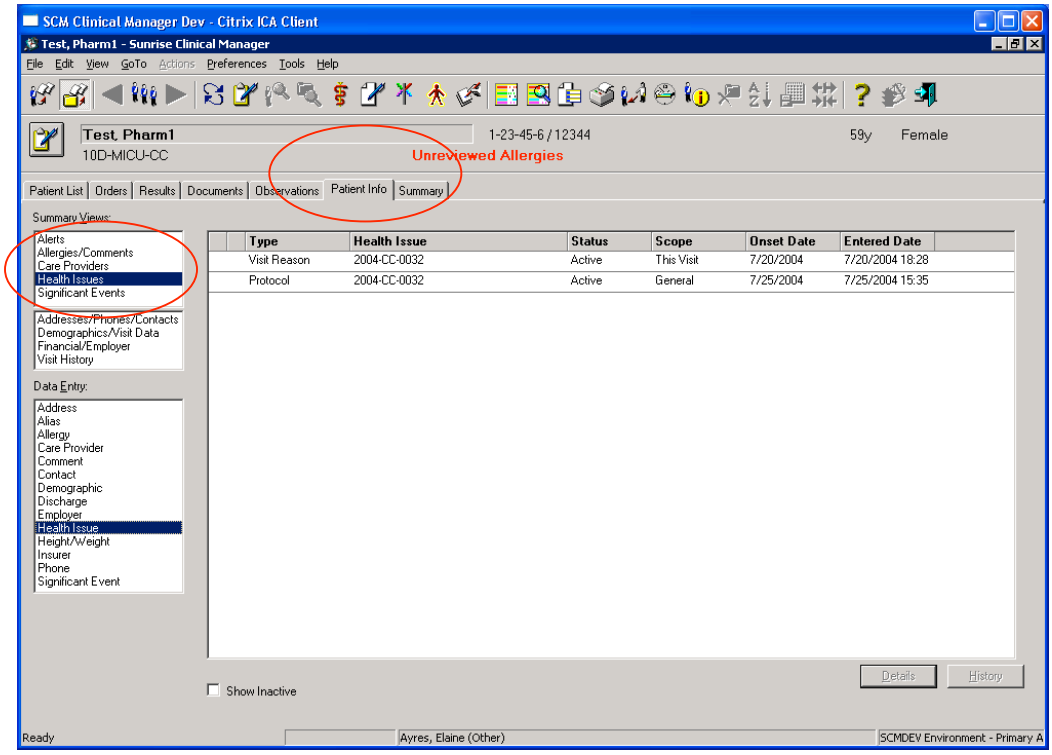
Protocol and Consent Information in CRIS

Viewing Protocol Information, Protocol Status and Consent Form Management in CRIS:

1. Select a patient from the patient list.
2. Protocol information can be viewed under the "Summary" tab under "Active Health Issues".
3. Or the same information can be viewed under the "Patient Info" Tab by selecting the "Health Issues" view.



Screen 210: Sample View of Summary Tab



Screen 211: Sample View of Patient Info Tab

Explanation of Terms on the Health Issues Screen

Type:

Visit Reason – represents the primary protocol. The primary protocol is the reason for the patient visit to the Clinical Center. All orders entered into CRIS will be attributed to this primary protocol unless they are included in a specific protocol order set.

Protocol – represents all other patient protocols, either active or inactive

Health Issues: Lists the protocol number

Status: Designates the status of a protocol for a specific patient.

Active Protocol – a protocol in which a patient is actively participating

Active Protocol Status Designations

- Unconfirmed – patient assigned to a protocol in CRIS, but the Medical Record Department has not received the faxed copy of the signature page from a valid, signed protocol consent form (NIH-2514-1)
- Confirmed – the Medical Records Department has received the faxed copy of the signature page from a valid, signed protocol consent form
- Exemption – will be noted as specific type of exemption by the number assigned:
    - Single Patient Single Use – retains treatment protocol number but protocol status will be noted as "Exemption"
    - Emergency Use IND – Special Exemption Number will be assigned and entered by Medical Records as the Primary Protocol (YR-IC-9980 number)
    - Treatment IND – Special Exemption Number will be assigned and entered by Medical Records as the Primary Protocol (YR-IC-9990 number)

Inactive Protocol – a protocol in which a patient is no longer participating

Inactive Protocol Status Designations

- Removed – an *individual* patient is removed from a protocol.
- Error – the protocol was assigned in error.
- Terminated – protocol completed or ended (end of study) and *all* patients are removed from the protocol.

Scope: Indicates "This Visit" for the primary protocol, and "General" for all other protocols

Onset Date: Actual date that protocol consent form was signed.

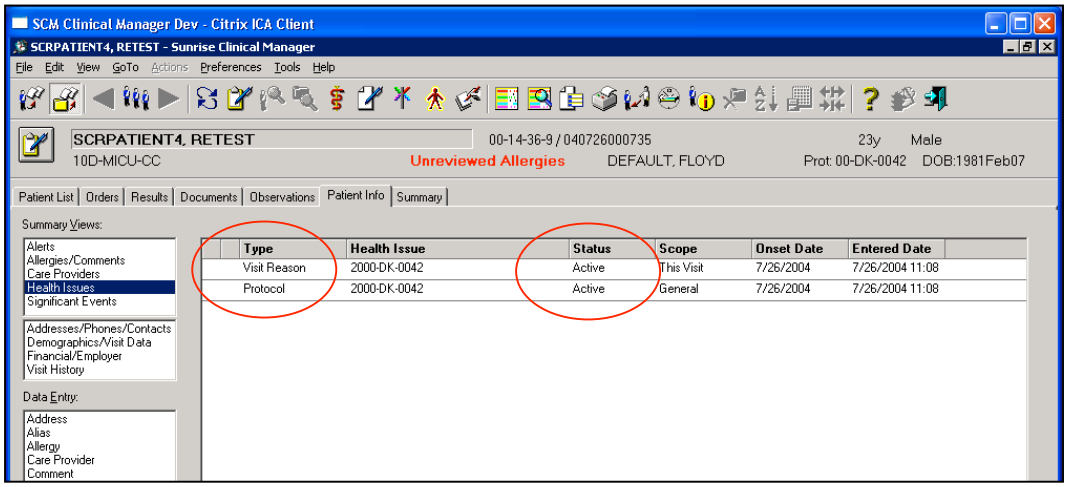
Entered Date: The date that the Medical Record Department entered the consent data into CRIS verifying the receipt of the faxed copy of the protocol consent signature page.

CRIS Documentation of Protocol and Consent Status

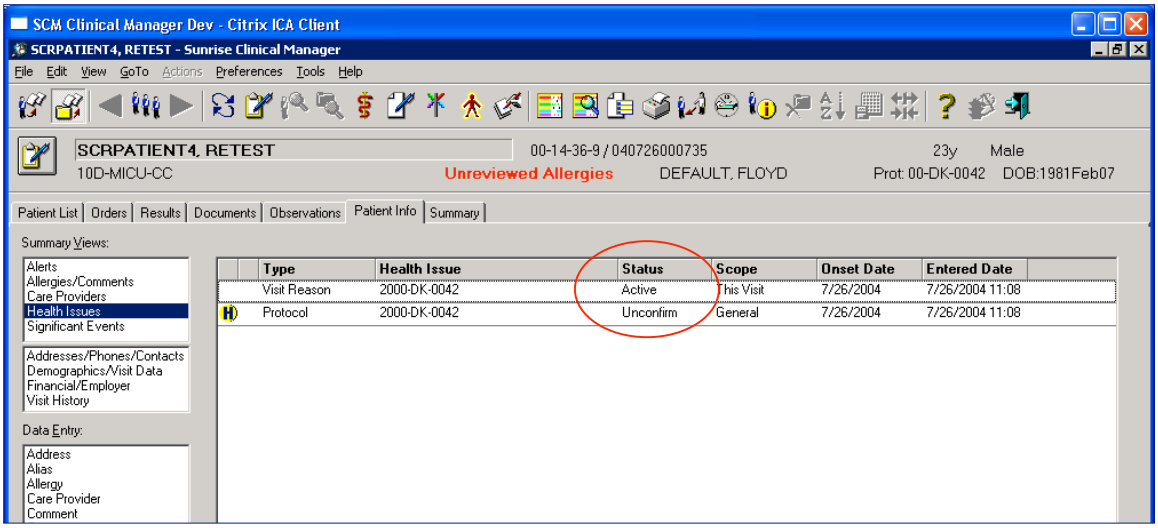
Primary Protocols

A protocol is posted in CRIS when admissions has registered the patient and assigned a patient to a protocol according to the information submitted via the ATV form. The primary protocol is posted twice in CRIS – the "Visit Reason" designates the primary protocol. The "Protocol" will document the consent status.

Prior to the receipt of the faxed copy of the signature page of a valid, signed protocol consent form, MRD will update the protocol status from "Active" to "Unconfirmed" for the protocol.

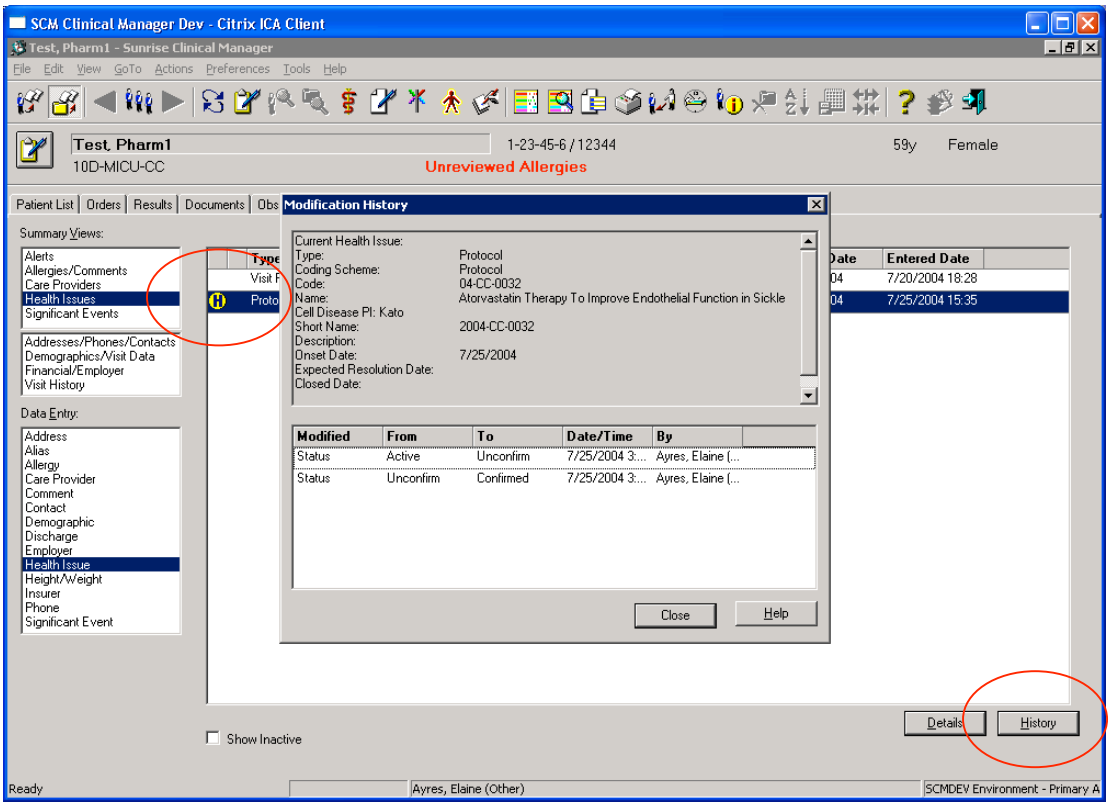


Screen 212: Protocol Visit Types and Status



Screen 213: Change in Status from active to unconfirmed

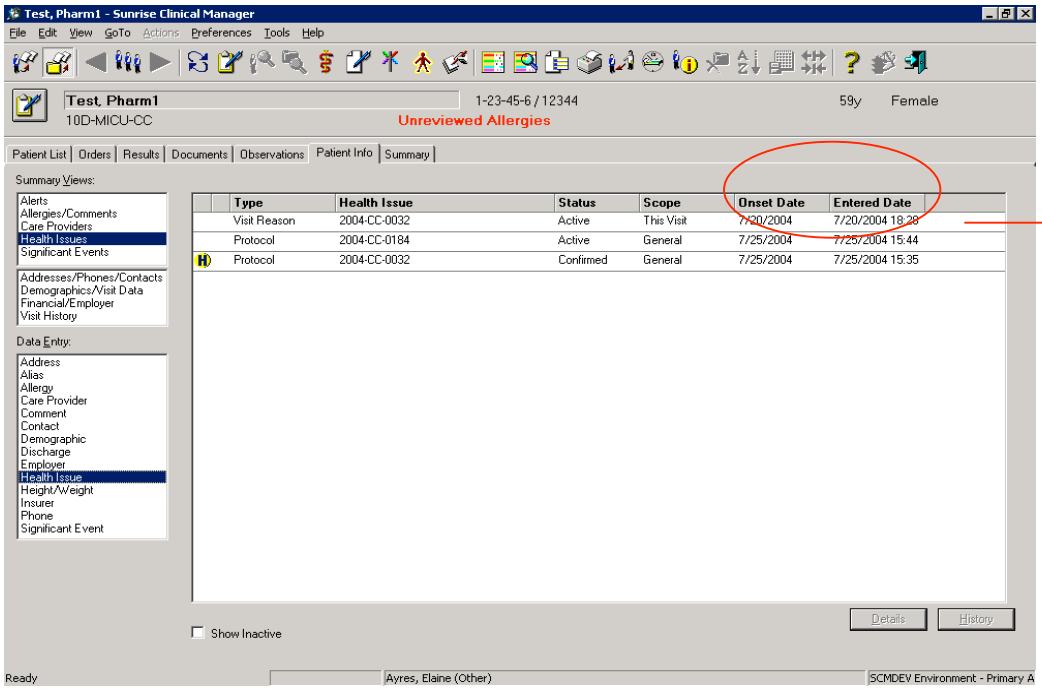
Note the Yellow H next to the protocol. When highlighting a protocol with this "H" icon, the "History" button at the bottom of the screen becomes active. Selecting the History button will display information about the protocol and an audit trail of changes in consent status will appear.



Screen 214: Protocol history display

Placing a Patient on a Secondary Protocol

1. Complete all required signatures on the last page of the protocol informed consent document (NIH-2514-1)
2. Fax the last page (signature page) of the protocol informed consent to the Medical Record Department at 301 480-3126 as soon as all of the signatures have been obtained.
3. Inpatient status: File the original protocol consent form in the in patient chart.
   Outpatient status: Forward the original consent document to the MRD for filing in the permanent medical record.
4. MRD will update the protocol status and confirm receipt of the faxed signature page of the protocol consent document in the CRIS health issues section of the patient information tab.
5. If a patient changes their primary protocol, the former primary protocol will automatically become a secondary protocol.



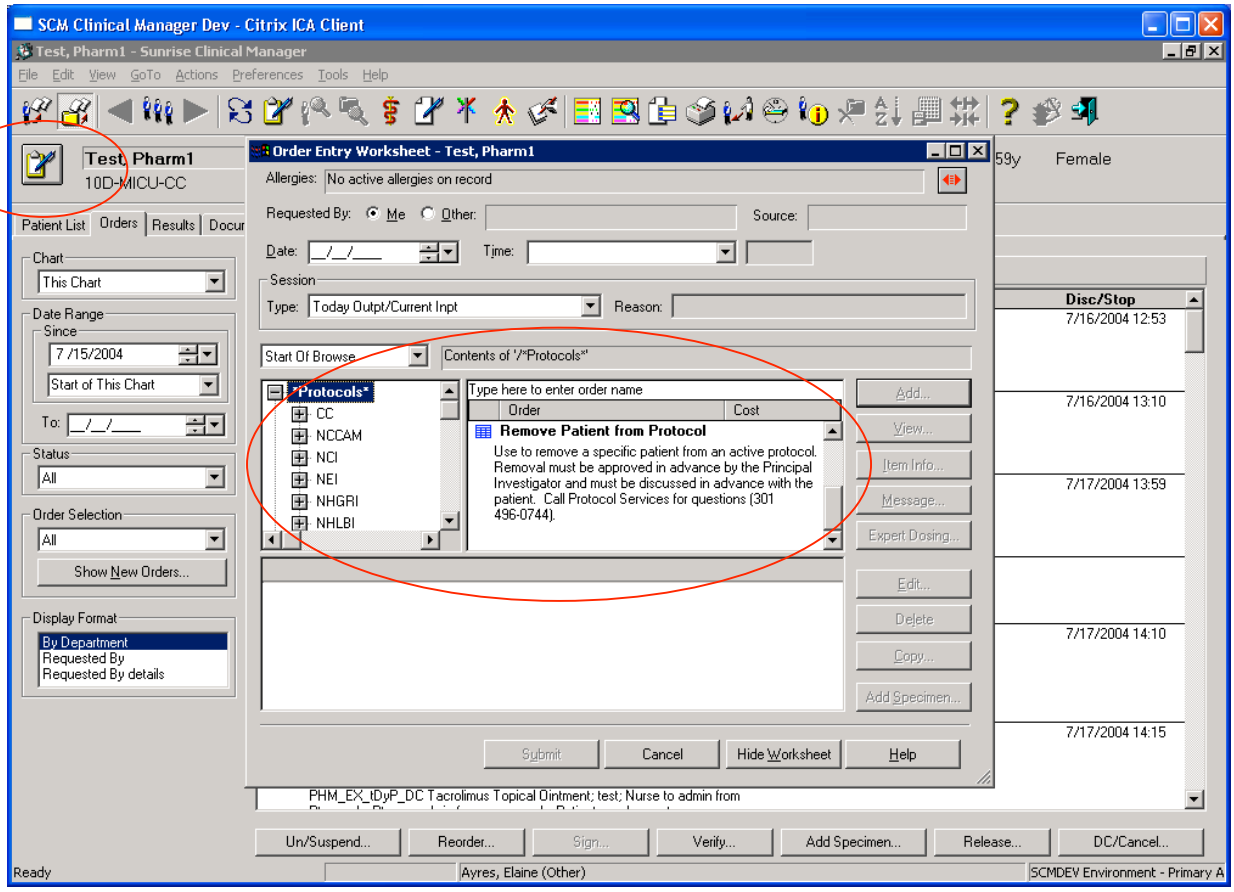
Note addition of new protocol

Screen 215: Onset and expired data

The "Onset Date" indicates the actual date the protocol consent was signed. The "Entered Date" indicates the date that the Medical Record Department entered the consent data into CRIS verifying the receipt of the faxed copy of the protocol consent signature page.

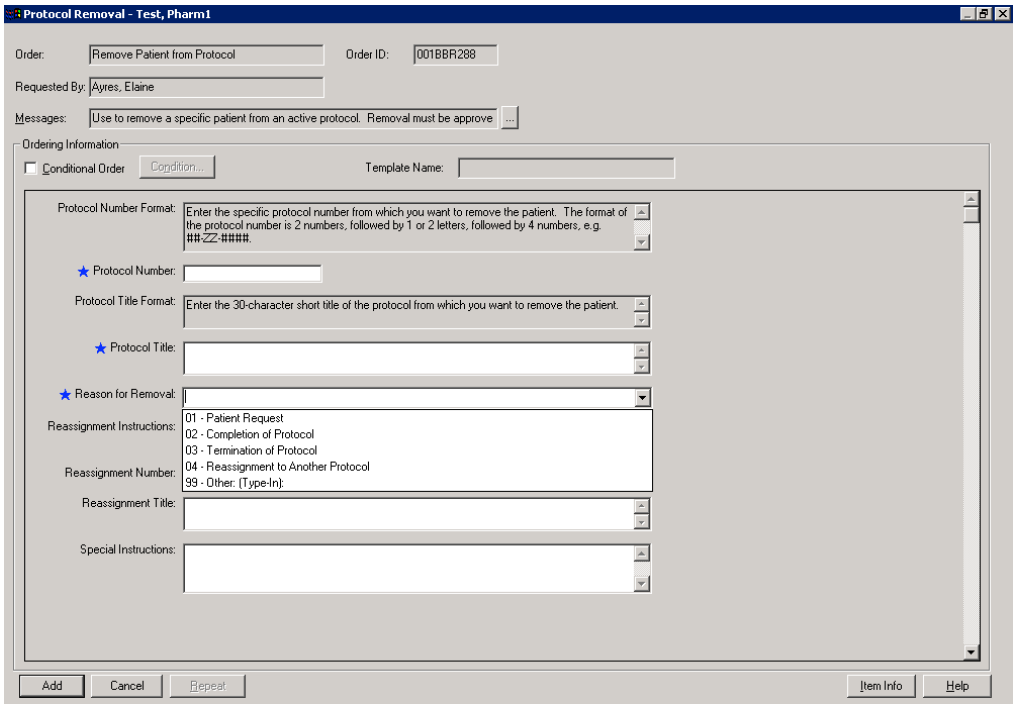
Removing a Patient from a Protocol

1. To remove a patient from a protocol, enter a service request using the Order Entry Worksheet.
2. Make sure a patient selected and click on the Order Entry Icon
3. Expand the protocols order category under Start of Browse
4. Select "Remove Patient from Protocol".



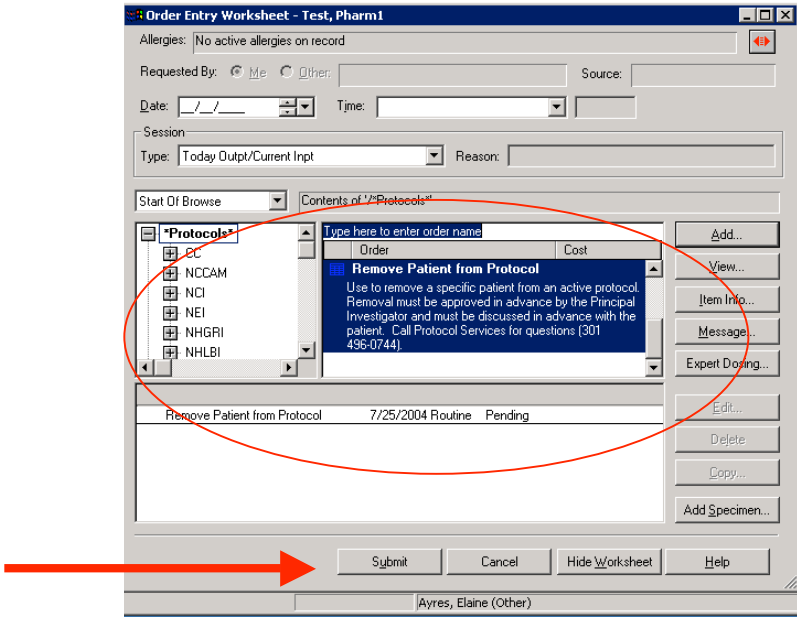
Screen 216: Order entry worksheet display of service requests to remove protocol

5. Within the order form, enter the required information including the protocol number, the protocol title and the reason for removal



Screen 217: Order form

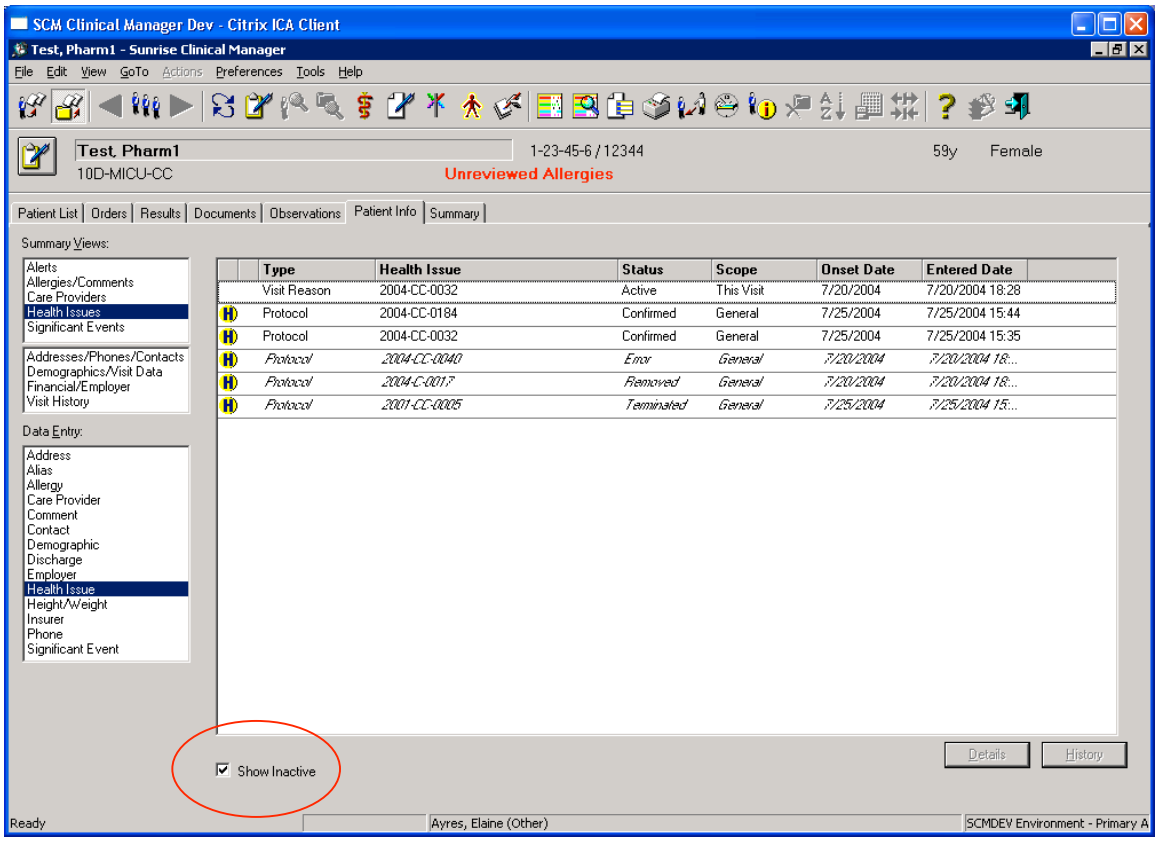
6. Submit the service request. Your request will print as a transmittal in the Medical Records Department. The Medical Records Department will then change the status of the protocol in the health issues section of the patient information tab and that protocol assignment for the selected patient will become inactive.



Screen 218: Submit order

Viewing "Inactive Protocols"

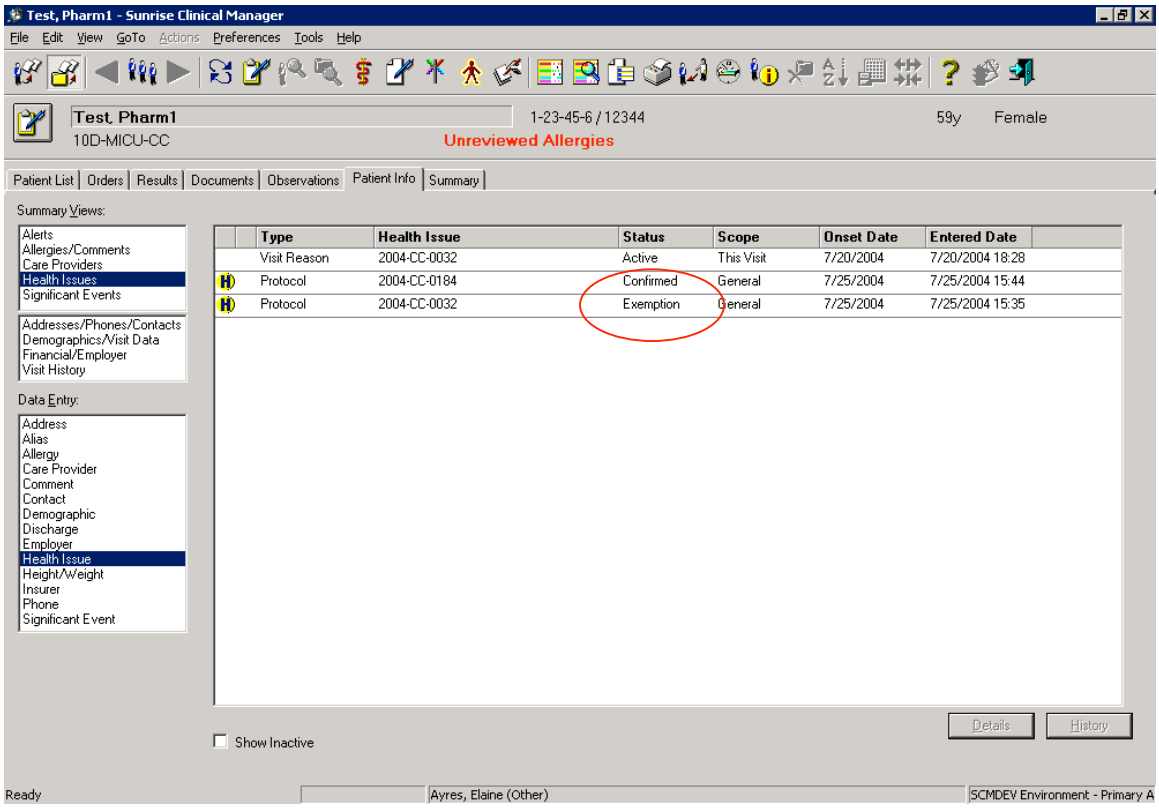
Check the "Show Inactive" box at the bottom left of the patient information screen. Inactive protocols will be added to the display in *italics.* Note that the history is retained for inactive protocols as indicated by the yellow "H" icon.



Screen 219: Inactive status

Placing a patient on a protocol special exemption

The process for placing a patient on a protocol exemption remains the same as described in the M93-1 MAS policy on the Structure and Process of Research Involving Human Subjects at the Clinical Center. Patients enrolled on special exemptions must be approved by the IC Branch Chief, Clinical Director, IRB Chair and Director of the Clinical Center using the Special Exemption Form (NIH-2702). Once the paper form is completed Medical Records will post the protocol status in CRIS in the health issues section of the patient information tab.



Screen 220: Exemption status

Protocol and Consent Status Reports

To ensure validity and accuracy of the data on protocols and consent status in CRIS, each Institute will receive end-of-month reports. Reports will be by protocol and will be provided to the Principal Investigator or their designee. Ad hoc reports will be available by request. For additional information of these reports, please call the Medical Records Department at 301 496-2292.

Appendix A: CRIS Toolbar Icons

Icons on the Patient List Screen	
Patient List	Displays the **Patient List** from other tabs within the patient chart, from which you view status information for all your patients, and from which you can select a patient to view more detailed information.
Previous Patient	Displays the chart of the previous patient selected in the **Patient Lis**t. This icon is only highlighted if you have selected multiple patients, and if you are not presently viewing the first patient in the group. When you click **Previous Patient**, you remain in the same chart section, but switch to the record for the previous patient in the **Patient List**.
Next Patient	Displays the chart of the next patient selected in the **Patient Lis**t. This icon is only highlighted if you have selected multiple patients, and if you are not presently viewing the last patient in the group. When you click **Next Patient**, you remain in the same chart section, but switch to the record for the next patient in the **Patient List**.
Refresh Screen	Updates the **current view**. You can also choose **Refresh Screen** from the **View** menu. It is recommended that you refresh the screen often, to make sure that the **current view** displays the most current information.
Order Entry Worksheet/Enter Order	Both icons open the **Order Entry Worksheet**. The icon on the left opens a blank worksheet. The icon on the right indicates that there are unsubmitted orders.
Find Patient	Opens the **Find Patient** dialog box, allowing you to search for a specific patient by name, ID, Visit ID, facility, location, or provider. After you have found a patient, you can show all visits for that patient and create a special or temporary list.
Find Visit	Opens the **Find Visit** dialog box, allowing you to search for a specific patient by name, ID, Visit ID, facility, location, or provider. You can use the **Find Visit** dialog box to create a list of multiple patients that meet certain criteria - for example, all patients of a certain care provider who were admitted between specified dates.

Document Entry Worksheet/Enter Document	Both icons open the **Document Entry Worksheet**. The icon on the left opens a blank worksheet. The icon on the right indicates that there are unsubmitted documents.
Enter Health Issue	Opens the **Health Issue Details** dialog box, allowing you to enter a new diagnosis or health issue for a patient.
Clinical Path Manager	Opens the **Clinical Path Manager**, allowing you to initiate and review clinical paths outside of order entry.
Worklist Manager	Opens the **Worklist Manager**, allowing you to view a list of tasks that need to be performed for a patient or list of patients, and to indicate which tasks have been completed within a particular time frame.
Task Viewer	Opens the **Task Viewer**, allowing you to view a history of task completion for multiple orders for the currently active patient.
Flowsheet Manager	Opens the **Flowsheet Manager**. The **Flowsheet Manager** looks and works exactly like the **Observations** chart section, however you cannot access the main window controls (for example, the menus and toolbar).
Print Reports	Opens the **Report Selection** dialog box, allowing you to view and/or print reports.
Add Care Provider	Opens the **Care Provider Details** dialog box, allowing you to add yourself or someone else as a care provider for a selected patient. Once a chart is opened, this icon is accessible from all chart sections.
Temporary Location/Bed Status	Opens the **Temporary Locations** dialog box, allowing you to assign and clear temporary locations, view a history of all locations to which the patient has been assigned during this visit, or only their temporary locations, and assign bed status

More Header Info	Opens the **Expanded Header**, allowing you to view more detailed demographic information than is displayed in the standard **Patient Header**.
Remove Patient	Removes selected patients from the **Patient List**.
Sort List	Opens the **List Sort Criteria** dialog box, allowing you to sort the patients in the **Patient List** according to criteria such as name location, admit date and time, and visit status.
Save Time Scale	Saves the time scale for the selected patient. Each subsequent time you display results for this patient, the saved time scale is used. You can change the time scale using the **Modify Time Scale** command on the **Actions** menu.
Logoff	Logs you off of CRIS and opens the **Logon** dialog box.

Appendix B: CRIS Chart Section Icons

Icons in the Results Chart Section	
	Denotes a test result as **High Abnormal**.
	Denotes a test result as **Low Abnormal**.
	Denotes a test result as **High Critical (abnormally very high)**.
	Denotes a test result as **Low Critical (abnormally very low)**.
	Indicates that a result has been modified. Click the icon to open the Updated Results window.
	Indicates that a text result has additional text that is undisplayed. Click the icon to open the Expanded Results window.
Icons in the Orders Chart Section	
	Indicates that the view has been filtered and displays above the Display Window.
	Indicates an order set in the **Requested by** or **Requested by Details** views.
	Indicates a Hold order (Future Outpt/Pre-Admit).
	Indicates a Take Home Medication order.
	Indicates a Suspended order
	Indicates a Conditional order

	Indicates a Master Repeat order
	Indicates a repeat occurrence
	Indicates that the order has been modified.

Icons in the Documents Chart Section

	The **Enter Document** icon opens a blank **Document Entry Worksheet**, allowing you to enter a document. You can also access the **Document Entry Worksheet** from the **GoTo** menu.
	The **Enter Document** icon changes to indicate that there are unsubmitted documents.
	The **Flowsheet Manager** icon opens the **Flowsheet Manager**, allowing you to chart observation parameters using the shortcut menu.
	The **Filter** icon indicates that the view has been filtered.
	The **Modified** icon indicates that the document has been edited.
	The **Unsigned** icon indicates that the document is unsigned.
	The **Canceled** icon indicates that the document has been canceled.

Icons in the Observations (Flowsheet) Chart Section

Each cell on a flowsheet can display icons indicating what kind of data exists for that observation parameter cell.

	Indicates the cell has been edited.
	Comments exist

Worklist Manager Icons and Cell Colors (Med Charting)	
	Worklist Manager icon.
Pending/Yellow	Indicates a pending Scheduled task.
Pending/Blue Ampicilin 500 mg IV;q8h	Indicates a pending Manual Schedule task. This task must first be scheduled using the **Create Schedule** dialog box before it can be marked as done.
Pending/Purple Physical Therapy Consult	Indicates a pending **Conditional** task. If the order can be activated more than once, the **Conditional** task remains purple with the question mark. When there are no more orders to activate, the **Conditional** task turns white and displays with a questions mark.
Pending/Red	Indicates that a task has not been documented as performed or not performed within a facility-defined time frame that can vary by task type, or that a task is Overdue. The task description is also displayed as red if one occurrence is overdue.
	Indicates a comment has been entered for the task.
Complete/White Cefazolin Sodium 1 gm IV	Indicates a task has been performed
Not Performed/White	Indicates a task was marked as not performed.
Canceled/White ~~Ampicilin 500 mg PO;q6h~~	Indicates the task has been canceled because the order was canceled, discontinued or suspended
	Mark as Done Icon
Cyan bar	Indicates a continuous task. When you chart as done, the solid bar disappears up to the documentation time.
Yellow trough	Indicates the tasks that were placed after a scheduled time. The trough allows for documentation during the (trough) time frame.
Yellow bar	Indicates a start when first given task based on the first task occurrence.
Magenta trough	Indicates a PRN task.

Appendix C: Windows Navigation

GUI Actions Using a Mouse		
Term	**Mouse Action**	**Result**
Single Click	Move the mouse pointer to a screen selection item and click the left mouse button.	Selects the item or performs an action.
Double-click	Move the mouse pointer to a screen selection item and click the left mouse button twice in rapid succession.	Performs an action (e.g., opens an information screen).
Drag and drop	Click-and-hold the left mouse button on an object to move (drag) it to a new location; release the mouse button to drop the object.	Moves a selected object to a new location on the screen (e.g., to the archives).
Scrolling 	*Vertical scroll bar* • Click on the arrows to scroll one line at a time. • Click or click-and-hold the down arrow to scroll downward. • Click or click-and-hold the up arrow to scroll upward. • Click on either side of the scroll box to move one page. – Click below the scroll box to move down one page. – Click above the scroll box to move up one page. *Vertical scroll bar (cont'd)* • Drag the scroll box to an approximate location. *Horizontal scroll bar* • Click on the right or left arrows to view additional information.	Some screens display vertical and horizontal bars, which allow you to view longer or wider lists of data, displayed in a window.
Shortcut Menu (Right Mouse Click)	Move the mouse pointer to a screen selection item and click the right mouse button.	Shortcut menu, listing options to perform a particular function. Similar to selecting from the Menu bar.

Other GUI Actions

Term	Action	Result
Menu Bar	Place cursor on word on menu bar and single click OR hold Alt key and press underlined letter in menu option (ie Alt F to open File drop down menu)	Selected drop down menu will open to allow for further selection.
Drop Down Menus	Once the drop down menu is opened (see above), move cursor to highlight desired option and single click OR use up and down arrows to highlight desired selection and press the Enter key	Selected option will process.
Tool Bar	Place cursor over selected button and single click	Selected option will process.
Radio Buttons	Place cursor over selected box and single click	Button will be selected (filled-in)
Checkbox	Place cursor over selected button on Tool Bar and single click	Checkbox will be selected (filled-in)
Status Bar	Requires no specific keystroke or mouse click. User looks at the bottom of window.	The bar at the bottom of the document window that displays information about a command or toolbar button, an operation in progress, or the location of the insertion point.
Help (F1)	Press the F1 key on the keyboard	The Help dialogue box will open.
Help Button	Single click on the Help Button (on the Tool Bar)	The Help dialogue box will open.
Help (Menu)	Single click on the Help menu on the Menu Bar OR press the Alt key and press H.	The Help dialogue box will open.
Minimize Windows	Click on the (–) Box in the upper right corner of a window.	Reduces an application or document window to an icon on the taskbar. To restore the window to its previous size and location, click the application icon on the taskbar
Maximize/ Restore Windows	Click on the (□) box in the upper right corner of a window to maximize OR click on the (⧉) in the upper right corner of a window to restore.	Maximizing enlarges a window to its fullest screen capacity and restoring a window returns the screen to its previous size before it was maximized.

Other GUI Actions		
Term	**Action**	**Result**
Closing Windows	Click on the (X) box in the upper right position OR Click on File (on the menu bar) and click on Close.	The window will close. If appropriate, you will be prompted to save data.
Keyboard Shortcuts - Menus	Open menus using the Alt key and the underlined letter. To move within the open menu, use the up and down arrow keys. To select an option (highlight), press enter.	Open menus without using the mouse
Keyboard Shortcuts – open window	The Tab key will move from field to field and from button to button in open windows. Use the up and down arrows to select options in drop-down fields. To select an option (highlight), press enter.	Select options in a window without using the mouse.

Windows conventions apply to windows in CRIS:

- You can cut, copy, and paste within and between order forms
- You can resize most windows
- You can highlight a group of orders or documents, etc. by
  - Click first, holding shift key down, clicking last
  - Hold control key down, click on individual orders

Appendix D: Tips and Troubleshooting

Refresh

Clicking the **Refresh** icon insures that any new data that has been recorded will be displayed.

For MAC Users

To 'right-click' with a one button MAC mouse, do the following:
Hold the Ctrl key and click with the mouse (Ctrl-Click).

Scroll Wheel Mouse

When using the scroll wheel mouse, the current field (highlighted in blue) will change as you scroll. In the order entry function, this can change your section in the order form instead of moving down the form. Care should be taken when using the scroll wheel mouse.

Can't Find Data

- Click the Refresh icon
- Check the Filters
- Check procedure that was used by the user. (For example, looking for a document in the Orders tab)

Can't Sign-On

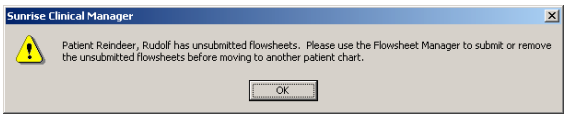
- Verify that the user is using the correct sign-on code and password.
- Verify that other users can sign-on to their computer.
- Move to another workstation (if available).
- Verify that the sign-on code and password are spelled correctly

Blank Screen

- Is the workstation plugged in?
- Is the workstation turned on?
- Is the workstation functioning?
- Check whether the power is on or off.
- Check for loose cable connections.

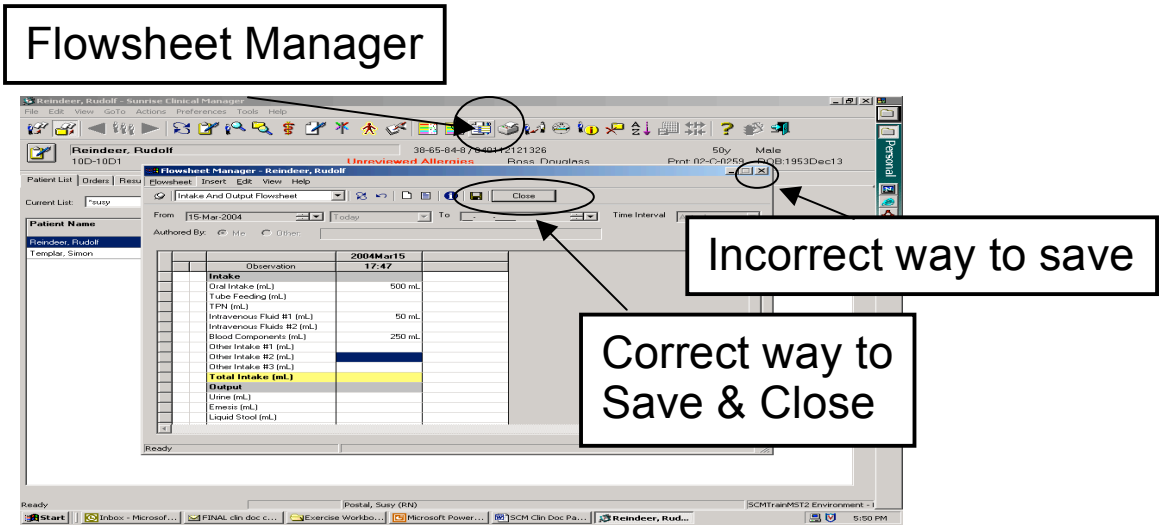
Unsaved Flowsheets

If you close a flowsheet incorrectly by selecting the X instead of the close button, the flowsheet will close without being saved. If you try to document on another patient, you will see this message:



Screen 221: Unsaved Flowsheet message

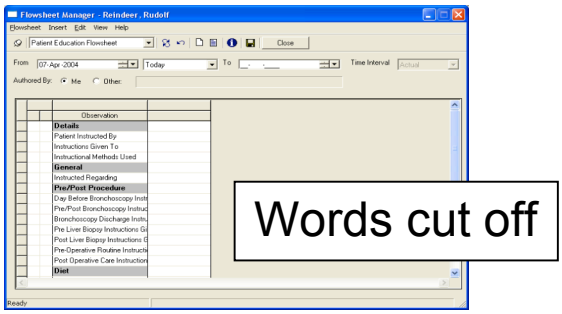
To resolve this, select the flowsheet manager. The unsaved flowsheet will display. Save and close the document correctly by clicking the close button. Now you are ready to move to another patient's chart.



Screen 222: Save Flowsheet

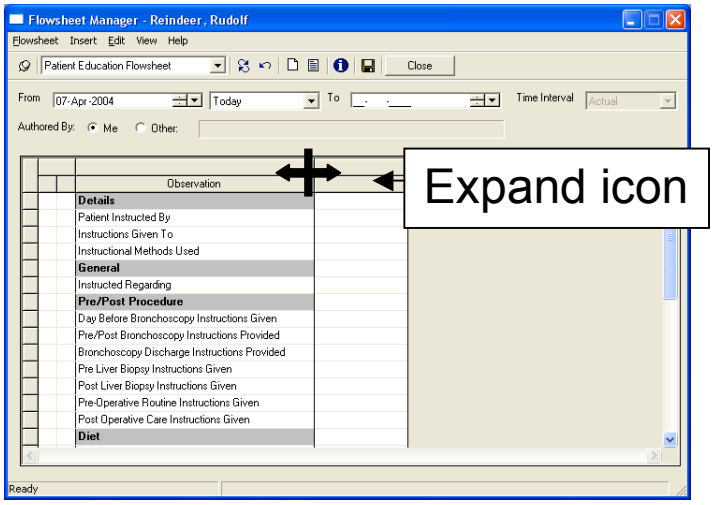
Expanding Columns on a Flowsheet

At times you may find that you can not read all the information in the column.



Screen 223: Flowsheet

To resolve this, widen the columns. Place your curser over the right border of the column. When the cursor changes to a double headed arrow, left-click hold and drag the borders to the right. The column will expand.



Screen 224: Expand Column Icon

CRIS Website

http://cris.cc.nih.gov

Windows Skills Online Tutorial Website

http://www2dev.cc.nih.gov/crc/winnav/WinNav_content.html

Glossary of Terms

A

Activate Conditional Order

A user can enter an order with an attached condition (e.g. if temp > 100) and the order will be placed with a status "available for activation". Once the condition is met, the user has the ability to "activate" the order. When a condition placed on an order when it was submitted has been met, the order is processed using this function.

ADT

Admission, Discharge and Transfer. MIS will continue to be the system used to admit patients and maintain ADT information.

B

BSA

Body surface area

C

Complete Order (MIS)

Removes an order from the Medical Care Plan (MCP) and the current order summary. Some orders will self-complete when charted (e.g. a medication given one time), but others should be completed once they are fulfilled, charted, and no longer needed. No physician authorization required to complete an order.

Conditional Order (CRIS)

A user can enter an order with an attached condition (e.g. if temp > 100) and the order will be placed with a status “available for activation”.

CPOE

Computer Prescriber Order Entry

CPRI

Computer-based Patient Record Institute. Their website is cpri-host.org

CPT
Current Procedural Terminology

CRIS
Clinical Research Information System. This name is also used for the core system replacing MIS functions.

D

Delete Order (MIS)
Removes the order without necessarily stating per 'agent for'.

DICOM
Digital Imaging and Communications in Medicine (standards organization)

Discontinue/Cancel Order (CRIS)
Allows a user to discontinue one or more orders that were appropriate for a time, but no longer are. Also allows a user to cancel orders that were entered for the wrong patient. Note: Cancelled orders can be "Reinstated" when cancelled in error.

E

Eclipsys
Vendor of Sunrise™ Clinical Manager (SCM) which is the CRIS applciations

G

GUI
Graphical user interface. The GUI allows the user to interact with the associated software program and generally consists of pictorial components such as icons, menus, toolbars, etc.

H

HIMSS
Healthcare Information and Management Systems Society There web site is www.himss.org

HIPAA
Health Insurance Portability and Accountability Act

HIS
Hospital Information System

HL-7
Health Level Seven (standards organization). There web site is www.hl7.org

Hold Order (CRIS)
Physicians can enter orders in advance of the patient's admission. These pre-admit orders are then "HELD" in CRIS and must be activated when the patient is admitted. Nurses can activate HELD orders (inpatient only). In CRIS, the term "Suspend" has a totally different meaning than the current MIS description. In SCM an order can be 'suspended', for example if a patient is temporarily transferred off the unit and then once they return and order is needed again, it can be "unsuspended'.

Hold Order (MIS)
Hides orders from active but does not discontinue.

I

ICD
International Classification of Disease

Implementation of Change
While the CRIS Process Integration Team develops plans for implementing the accepted changes, actual implementation is by others identified in the implementation plan, using information passed on to them by the Process Integration Team.

ITIWG
Information Technology Infrastructure Working Group

J

JRP
Joint Requirement Planning

L

LIS
Laboratory Information System

LTD
Live Test Demonstration

M

Marked as Done
Items on the worklist are "marked as done' by the user when the medication is administered, the patient has left on pass or discharge and/or the patient has been transferred. This marks the task as performed. This is in contrast to item status updated to "performed" or "results received" by an interface message, such as lab test.

MIS
Medical Information System

Modify Order (CRIS)
This function is used to add dispensing information to an order. No other modifications are allowed in the system. Users should discontinue and reorder as needed.

Modify Orders (MIS)
Changes a schedule on a medication or an ancillary department order (e.g. QID to Q6H). MIS will discontinue the original order and rewrite the new order with the new schedule.

MSHISM

Maryland Society of Healthcare Information Systems Management (Maryland chapter of HIMSS). Their website is www.mshims.org

N

NCA-HIMSS

National Capital Area HIMSS chapter. Their website is www.himss-nca.org

O

Organizational Process

One of a set of named standard processes identified by the Clinical Center or Institute organization.

P

PACS

Picture Archiving & Communication System

PAM

Project Advisory Meeting

PMT

Project Management Team

Process

Defined sequence of activities performed by people or organizations acting in defined roles to achieve a specified end goal, service, or product.

Process Change Options

In the CRIS Core Process Integration Methodology, change decisions are arrived at only after involving stakeholders in a discussion of possible ways of resolving a group of process issues. This serves several purposes:

- the user view of the issue is usually the most accurate from the standpoint of understanding difficulties in changing work
- practices

- Users are in the best position to create minimum impact solutions when change in inevitable
- Building on concepts which users have helped to develop improves the likelihood that changes will be accepted

Process Issue

Situation that results from implementing some aspect of new CRIS Core functionality requiring a change to a work practice (process change).

Process Issue Resolution

Identifying and taking the necessary steps to ensure that changes in work practices necessitated by implementing CRIS functionality are accomplished with minimum risk to organizational effectiveness. Resolution steps may include obtaining approval of appropriate governance bodies, developing training in new work practices, communicating change expectations to affected groups, developing on-line assistance tools, revising standard policies and procedures, and briefing managers and users. In some cases, resolution may involve changing previous design decisions to accommodate operating practices for reasons of patient safety, regulatory compliance, or operational efficiency.

R

Release Hold Orders (CRIS)

Physicians can enter orders in advance of the patient's admission. These pre-admit orders are then in a "hold" status in SCM and must be activated to remove them from HOLD mode when patient is admitted. In CRIS, the term "Suspend" has a totally different meaning than the current MIS description. In SCM an order can be 'suspended', for example if a patient is temporarily transferred off the unit and then once they return and order is needed again, it can be "unsuspended'.

Renew Order (MIS)

Some accesses may allow for a renewal of an order, typically medication. Keeps the order ongoing.

Reorder (CRIS)

Allows for renewal/reorder of existing order with existing requestor or new requestor and ability to modify order parameters at this time, if necessary.

Reorder (MIS)
Used for supply situations and need for medication replacement.

Restart [Held] Order (MIS)
Orders held must be restarted (active)

RIS
Radiology Information System

S

Signing Orders
Prescriber signs new orders entered on his/her behalf.

Status Orders (MIS)
Action taken to indicate that the test has been done, the results have not. With nursing collected specimens, it prints a requisition.

Suspend Order (CRIS)
Removes the orders from active status due to status change of patient (e.g. an active order that should be stopped when the patient goes on pass). An example would be all orders for a patient may be suspended while the patient is in OR, and later unsuspended when the patient returns to the nursing unit.

Suspend Order (MIS)
Physicians can enter orders in advance of the patient's admission. These pre-admit orders are then "suspended" in MIS and must still be activated to remove them from suspend mode when patient admitted. Nurses can activate suspended orders (inpatient only).