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Chapter 1: Overview of SEER*DMS

The Surveillance, Epidemiology, and End Results (SEER) Program is an initiative sponsored by the National Cancer Institute (NCI) to collect cancer incidence and related information from population-based cancer registries. Participating registries are required to obtain information on all cancers occurring in their area from a variety of hospitals, pathology laboratories, radiology facilities, physician offices and other facilities. Data collected by the registries are submitted to the NCI and other organizations. This information contributes to national surveillance data on cancer incidence and forms the sole source of population-based estimates of U.S. cancer survival and prevalence.

The SEER Data Management System (SEER*DMS) provides support for all core cancer registry functions -- importing data, editing, linkage, consolidation, and reporting. The individual SEER Registries actively participated in the requirements analysis and design of SEER*DMS. It was determined that despite the variety, number, and complexity of the registries' processes and corresponding functional requirements, a centrally designed data management system could be employed by the various SEER Registries. SEER*DMS improves cost efficiency and reduces duplication of effort in terms of system maintenance and administration. Furthermore, the centralized system design and development improves data quality and consistency, increases efficiency, and increases the sharing of knowledge and experience among registries.

This chapter provides an introduction to SEER*DMS and an overview of the system's support of registry operations. It includes a summary of the system's core components with references to relevant chapters in this manual or other technical documents.

In this chapter, you'll learn about

- SEER*DMS Reference Materials
- SEER*DMS Database
- Getting Started
- SEER*DMS Workflow and Worklist
- Loading Data into SEER*DMS
- Determining Reportability
- Special Studies
- Matching and Consolidating
- Visually Editing and Resolving Patient Set Errors
- Death Clearance and Follow-up
- Maintaining Contact Information for Physicians and Organizational Representatives
- Other Management Tools
- Reports and Data Extracts
- Managing System Accounts and Roles
- System Administration

SEER*DMS Reference Materials

The SEER*DMS Web Portal (<https://seer.cancer.gov/seerdms/portal>) is a secure website that enables NCI-SEER, IMS, and registry staff to share information related to the SEER*DMS project. SEER*DMS reference materials, data dictionaries, system and database diagrams, Change Control Board (CCB) news and information, sample reports, and other information are available on this site. Registry-specific materials are available in restricted-access folders. The registry-specific materials include registry-specific database documentation, technical references, diagrams of hardware architecture, and real-time access to graphs showing resource utilization by the SEER*DMS servers at the registry.

The Help menu within SEER*DMS provides access to the SEER*DMS User Manual, detailed descriptions of the registry-specific configuration settings and algorithms, the version history, and access to technical support. The User Manual describes the features of SEER*DMS and provides step-by-step instructions for using the system. The Help menu items include documents describing configuration settings for the major system modules: AFL algorithms, Auto-build, Auto-consolidation, Edits, Field Mappings, Imports, Matching, Polishers, Record Coding, and Screening. The Version History contains a detailed list of changes made for each release of SEER*DMS.

The SEER*DMS Technical Reference describes the database configuration and system infrastructure. This reference includes definitions for all of the system's configuration parameters.

The System > Administration feature of the SEER*DMS application allows you to monitor system logs, review source code related to registry-specific settings and algorithms, and view SQL used in SEER*DMS system reports.

SEER*DMS Database

The SEER*DMS Web Portal is the most comprehensive resource of documentation related to the SEER*DMS database. The following materials are available online:

- Description of each table in the database
- Diagrams showing table relationships

The Field Mappings section of the SEER*DMS Help menu is a searchable tool that provides:

- Mapping of database fields to the labels used in SEER*DMS
- Mapping of database fields to NAACCR items

A basic overview of the SEER*DMS database structures related to patient data is provided in:

- Chapter 2: Records and Patient Sets

Getting Started

SEER*DMS allows the user to interact with the registry's Oracle database through an interface displayed in a Web browser. This design reduces maintenance of individual workstations by providing a mechanism for simultaneously delivering system upgrades to all registry desktops.

Instructions for getting started with SEER*DMS are described in:

- Chapter 3: Using SEER*DMS

Workflow and Worklist

The workflow is the back-bone of SEER*DMS. It is a configurable infrastructure that controls the flow of data through the system and identifies tasks that must be completed by registry staff. A record entering the workflow is initially processed in a series of automatic tasks. If human attention is required in order to complete a task, a manual task is initiated. Once a person completes the manual task, the record continues to the next automatic task. The record moves from automatic to manual tasks as necessary, until all required processes are complete.

The SEER*DMS worklist provides a view of automatic tasks that are currently running and manual tasks that require attention. The manual tasks displayed in the worklist are the staff's "to do list". Users can select tasks or managers can assign tasks to users, depending on registry policy.

Step-by-step instructions are provided in:

- Chapter 4: Using the Worklist

Loading Data into SEER*DMS

Data files may be uploaded using the SEER*DMS interface or auto-loaded from a specified network location. In addition, SEER*DMS includes data entry screens that allow a user to enter data using the keyboard.

Step-by-step instructions are provided in:

- Chapter 5: Importing Data Files
- Chapter 6: Data Entry

Determining Reportability

SEER*DMS uses a combination of automatic and manual workflow tasks to determine a record's reportability. The workflow can be configured to determine reportability automatically, based on local eligibility criteria, or it can be configured to defer screening decisions to registrars performing manual screening tasks.

When a record enters the system, an automated task checks the record for errors based on SEER and local edits. The edit logic, an error message, and a severity level are defined for each edit in system configuration files. "Critical" is the severity level assigned to edit errors that must be resolved in order for the system to store the data. "High" is assigned to edit errors that must be resolved prior to screening the record for reportability. Edits are assigned a high severity level if the error must be resolved immediately (e.g., to facilitate rapid case ascertainment for special studies), or the data items are required to determine reportability. A Resolve Record Errors task is created when errors with a critical or high severity level are encountered. The record errors must be resolved in order for the record to enter the screening phase of the workflow.

Step-by-step instructions are provided in:

- Chapter 7: Edit Errors
- Chapter 8: Resolving Record Errors
- Chapter 9: Screening for Reportability

Special Studies

In SEER*DMS, "Special Studies" consist of user-defined criteria to determine the eligibility of incoming records for the purpose of rapid case ascertainment. The criteria specified for a Special Study are applied to the record as it moves through the workflow's auto-screening task. The criteria may define a record as "in the study", "out of the study", or "possible data for the study". In addition, you may use the SEER*DMS editor to manually assign records or patient sets to a special study.

Information and instructions related to Special Studies are provided in:

- Chapter 28: Special Studies

Matching and Consolidating

A “patient set” is a packet of data in the SEER*DMS database which includes all data associated with a particular patient. These data include patient demographics, information on all reportable tumors, admissions information, diagnostic procedures, treatment information, and text documentation. An incoming record for a reportable cancer is matched against the database to determine if it needs to become a new patient set or become part of an existing patient set. Once the matching process is complete, the record is either consolidated with an existing patient set or used to create a new patient set. If two non-reportable records match each other but do not match an existing patient set, the records can be manually screened to determine if a combination of data from the two records can be consolidated to create a new patient set.

Information and instructions related to matching and consolidation are provided in:

- Chapter 10: Matching Incoming Records to Existing Data
- Chapter 11: The Patient Set Editor
- Chapter 12: Consolidating Data
- Chapter 15: Re-screening of Non-reportable Records⁸

Visually Editing and Resolving Patient Set Errors

Quality control of data involves the review of edit errors identified by the computerized edits and a visual review of data fields. It is recommended that, whenever possible, changes be made to the patient set and not to the record. In SEER*DMS, the Visual Edit Patient Set task enables registrars to visually review data for a new patient, when a patient set is auto-created from a single abstract record. Consolidation tasks enable registrars to visually review incoming data as they consolidate the data with other data previously loaded into the system. The edit errors identified by the computerized edits may be resolved in these tasks, or the patient set may be saved with errors and forwarded to a Resolve Patient Set Errors task.

Information and instructions related to editing and resolving patient set errors are provided in:

- Chapter 7: Edit Errors
- Chapter 12: Consolidating Data
- Chapter 13: Visual Editing
- Chapter 14: Resolving Patient Set Errors

Death Clearance and Follow-up

“Follow-up” refers to the surveillance processes used to gather new information about a patient regarding treatment outcomes and survival. Death clearance is a combination of follow-up and casefinding processes. The purpose of death clearance is to link death certificate records with the registry database to determine deaths among registrants and to identify deaths from cancer among persons previously unknown to the registry. SEER*DMS provides mechanisms for facilitating and monitoring follow-up and death clearance processes.

Information and instructions related to these topics are provided in:

- Chapter 16: Follow-up
- Chapter 17: Death Clearance

Maintaining Contact Information for Physicians and Organizational Representatives

SEER*DMS maintains information about organizations and facilities that collaborate with the cancer registry and contact information for physicians and representatives of collaborative organizations. The organization and contact lists are referenced throughout SEER*DMS when selecting values for data fields, tracking data and follow-back sources, and managing abstracting assignments.

Information and instructions related to these topics are provided in:

- Chapter 18: The Organization and Facility List
- Chapter 19: The Contact List

Other Management Tools

SEER*DMS provides management tools for monitoring and assigning casefinding leads; for managing and processing follow-back needs; and for submitting and tracking requests to facilities for records. In addition, SEER*DMS includes a mechanism to search the database based on patient identifiers. The search utility is useful in support of a variety of management tasks.

Information and instructions related to these topics are provided in:

- Chapter 20: Searching for Records and Patients
- Chapter 21: Managing Abstracting Assignments
- Chapter 22: Follow-back
- Chapter 23: Submitting a Request to a Facility for Records

Reports and Data Extracts

SEER*DMS includes a variety of integrated reports which summarize registry activities, track data through the system, and provide other quality control information. Extracts for SEER and NAACCR data submissions are also integrated within SEER*DMS. All reports and extracts available in SEER*DMS are documented in Appendix A: SEER*DMS System Reports.

In addition, external reports and data extracts may be generated that query the SEER*DMS database using any of a variety of software packages. External reports and extract programs must be maintained by registry staff.

Information and instructions related to integrated reports and extracts are provided in:

- Chapter 24: Creating Reports and Extracting Data
- Appendix A: SEER*DMS System Reports

Managing System Accounts and Roles

Registry managers and/or system administrators are responsible for creating SEER*DMS user accounts and enabling system permissions by assigning roles to those accounts.

Information and instructions related to these topics are provided in:

- Chapter 25: Managing User Accounts
- Chapter 26: Managing System Roles

System Administration

SEER*DMS is a Web-based application that interacts with the registry's Oracle database. The registry's information technology (IT) staff are responsible for a variety of tasks related to maintaining the integrity and security of the database, providing ad hoc programming support to registry staff, and maintaining the hardware systems that support SEER*DMS.

Information and instructions related to system administration are provided in:

- Chapter 27: System Administration

Chapter 2: Records and Patient Sets

In the SEER*DMS database, patient data are stored in “records” and “patient sets.” Records contain the source data submitted to the registry, including medical data submitted by reporting facilities and follow-up information provided by non-medical organizations. Each record contains a single report of data, for example, a NAACCR record contains data from a single abstract. Patient sets contain all data associated with a particular patient. Each patient set contains the data consolidated from the patient’s source records and linkage information to enable access to the source records. Patient set data fields contain the consolidated and/or summarized values of the linked source records, and values that were derived or computed by SEER*DMS polishers. Original data values are maintained in record data fields (and in an archived copy of the imported data file).

In this chapter, you’ll learn about

- Records
 - Linked and Unlinked Records
- Patient Sets
 - Cancer/Tumor/Case (CTC)
 - Summary Treatment (Summary TX)
 - Treatment Procedures (TX and TXr)
 - Facility Admission
 - SEER Course
 - Incoming and Linked Records
 - Auto-building Patient Sets and CTCs
- Audit Logs
- Finding Patient Data in SEER*DMS
- SEER*DMS Databases: Production, Warehouse, and Test

Records

In the SEER*DMS database, the record table contains the source data submitted to the registry. Records are created in the database when data are loaded from files or entered manually (as described in *Chapter 5: Importing Data Files* and *Chapter 6: Data Entry*).

Each record travels through the workflow, triggering the automated and manual “tasks” that must be performed to process the data. The path of a record through the workflow is determined by the record’s type. The specific workflow path of each record is documented in diagrams provided in the *Workflow Diagrams by Record Type* section of the SEER*DMS Web Portal (<https://seer.cancer.gov/seerdms/portal>). The following is a list of all record types supported by SEER*DMS; some record types may not be available in your registry’s configuration.

- **Health Record** – An initial abstract record submitted by a medical facility in a registry-defined layout. Health records move through the main portion of the workflow which involves editing, screening, matching, and consolidating tasks. If no match is found for a reportable health record, a new patient set will be created.
- **NAACCR Abstract** – An initial abstract record submitted by a medical facility in the NAACCR record layout or Iowa Transmit record layout (a multi-line format with one line in the NAACCR format followed by optional lines for expanded text fields). NAACCR Abstract records move through the main portion of the workflow which involves editing, screening, matching, and consolidating tasks. If no match is found for a reportable NAACCR Abstract record, a new patient set will be created.

- **NAACCR Modified Record** – An abstract record that was modified and re-submitted to the registry. This record is identical in format to the NAACCR record (the record type field is coded with an 'M').
- **NAACCR Update** – The NAACCR short format record used to submit field-specific corrections to data previously submitted to the registry. SEER*DMS matches the record to existing patient set data but does not specifically attempt to match the update record to the original NAACCR record. If SEER*DMS identifies possible matches but cannot identify a definite match, a manual matching task will be created. If SEER*DMS identifies a patient set that is an exact match, SEER*DMS attempts to auto-consolidate the data. A manual Consolidate FUP task will be created if the system cannot complete the auto-consolidation.
- **Death Certificate** – A data record containing death certificate data items. These data are used to update follow-up variables for existing patients. If a death certificate indicates a new reportable cancer, an Abstract Facility Lead is created. If an abstract can not be obtained, death clearance follow-back procedures are performed.
- **Death Notice** – Contains information published in public death notices. These records are used to update follow-up variables for existing patients. In the workflow, Death Notice records move through the edits, screening, and matching task. If no match is found, they are held to be re-matched at a later time.
- **Casefinding** – Data obtained from medical reports which identify new potential cases. These records trigger the creation of Abstract Facility Leads. If an abstract is never obtained, a new CTC or patient set can be built from a casefinding record.
- **Follow-up Only** – Data reported by a facility indicating a history of cancer. These data may provide follow-up information for existing patient sets. In the workflow, Follow-up Only records move through the automatic edit checks and the auto-matching task. If no match is found, they are held to be re-matched at a later time.
- **Follow-up Transmit** – A short record containing follow-up information (date, contacts, current address, etc) for patients previously reported by the facility.
- **HL7 E-Path** – Electronically transmitted pathology reports in the NAACCR HL7 Version 2.3.1 E-Path Standard. These records trigger the creation of Abstract Facility Leads. If an abstract is never obtained, a new CTC or patient set can be built from the HL7 record.
- **Health Index Record** - Data from hospital listings such as diagnostic index, discharge logs, or surgery logs. These data are used for quality assurance related to casefinding and may provide follow-up and treatment data that are consolidated into existing patient sets.
- **ME Cohort** – Data from the Hawai'i component of the US Public Health Service's Multi-ethnic Cohort (MEC) Study which are linked annually to the Hawai'i Tumor Registry data.
- **Registry Update** – A registry-defined record used to submit field-specific corrections to data previously submitted to the registry. SEER*DMS matches the record to existing patient set data but does not specifically attempt to match the update record to the original abstract record. If SEER*DMS identifies possible matches but cannot identify a definite match, a manual matching task will be created. If SEER*DMS identifies a patient set that is an exact match, SEER*DMS attempts to auto-consolidate the data. A manual Consolidate FUP task will be created if the system cannot complete the auto-consolidation.
- **Short Health Record** – A SEER*DMS short health record is a partial or incomplete abstract. A partial abstract may include some patient demographic information, complete or partial histopathology information, treatment information, or other information not sufficient to complete a full case abstract. Typically, these records provide additional information regarding follow-up, treatment, and admissions related to a previously abstracted case. In rare situations, a short health record may contain the only data related to a case and may be used to build a new CTC.

- **Supplemental** – Follow-up information received from non-medical organizations. These data are matched to the database and used in passive follow-up procedures. Typically, data from supplemental imports are not stored in the record table of the database. The data are matched against the database and used to update patient set data via automated tasks. Updates made to patient set data are recorded in the patient sets' audit logs. In general, supplemental data are only stored if a manual matching or consolidation task is required to process the data. However, some registries choose to store certain types of supplemental data.

Record type is a general classification that can be assigned to various kinds of data provided in multiple file formats. For example, the Supplemental record type is used for department of motor vehicle, CMS/HCFA, and voter registration data. Health Records may come from multiple sources (including your registry's abstracting tool) and in different file formats. Specific file layouts are defined in registry-specific configuration files. For information about your registry's configuration, please refer to Imports section of the SEER*DMS Help menu, the System Files section of System Administration, and your registry's *SEER*DMS Technical Reference: Registry-specific Information*.

In SEER*DMS, records provide a mechanism for storing and accessing the original data values submitted to the registry. Record data do not have to be error-free; records may have null data fields or fields with errors. Problems with the data are generally resolved in the patient set data fields at the time of consolidation. This is a new concept for most cancer registry data editors. In general, it is recommended that registry staff do not change record data fields except to correct errors that prevent the record from being processed in SEER*DMS (see *Chapter 7: Resolving Record Errors* for more information). All changes are documented in the record's audit log which includes the original data value for each field that was modified. In addition, the original data files are archived and can be accessed by your registry's system administrators.

Linked and Unlinked Records

A "link" is an association between a source record and a patient set. The link is established after the record has been matched against the database. Based on the outcome of the matching process, the incoming record will either be linked to an existing patient set during consolidation or linked to a newly created patient set. These processes are briefly described below. Complete details are provided in your registry's workflow diagrams (see the Documentation section of the SEER*DMS Web Portal).

- If the incoming record matches an existing patient set, the record is linked to the patient set and the data from the record are consolidated with the data in the existing patient set. This involves a combination of manual and automated processes that are determined by record type, reportability, and registry-defined workflow algorithms.
 - For example, an abstract record for a reportable cancer and its matching patient set are forwarded to a manual Consolidate task. In this task, a registrar uses the tools in the Patient Set Editor to complete the consolidation by linking the incoming record and incorporating its data into the summarized patient set data fields.
 - On the other hand, a non-reportable Death Certificate record is linked and consolidated to a matching patient set in an automated task as part of the passive follow-up process. A manual Consolidate FUP task is only created if discrepancies between the record and patient set prevent auto-consolidation. In most registry configurations, records that follow a passive follow-up route through the workflow include Supplemental, Death Notice, non-reportable Death Certificates, and Follow-up Only records.
- Supplemental data are only stored in the record table if a manual matching or consolidation task is required to process the data. If a record is created, the record is linked and consolidated to a matching patient set as part of the passive follow-up workflow. If there is

no need to create a record, the changes are made to the patient set in an automatic consolidation task. The following information is recorded in an audit log entry: ID of the import in which the data were loaded, name of the data file, line number in the file, original and new value of each data field that was changed.

- If an abstract record contains reportable data for a new patient, a new patient set is auto-built using the record data and the record is linked to the newly created patient set. NAACCR Abstract and Health Records contain abstracted medical data and are used to auto-build patient sets.
- "Unlinked" records are records that are not consolidated into a patient set, including:
 - Records that have entered the system but are in the initial tasks of the workflow and have yet to be matched.
 - Records that do not match an existing patient set and do not contain enough data to create a patient set. In most registry configurations, only abstract records are used to create patient sets as they enter the workflow. A patient set can be manually created from unlinked, reportable Casefinding, Death Certificate, or Short Health records using the record editor or by executing one of the build system tasks (see *Chapter 28: System Administration*).

The Patient Set Editor provides access to all linked records, enabling users to review the raw data that contributed to the summarized and consolidated Patient Set.

Patient Sets

A "patient set" is a packet of data in the SEER*DMS database which includes all data associated with a particular patient. These data include patient demographics, information on all reportable cancers, admissions information, diagnostic procedures, treatment information and text documentation. A "patient set" also includes direct links to the original records that contributed to the patient set data.

Cancer/Tumor/Case (CTC)

Cancer/Tumor/Case (CTC) refers to an instance of the disease of interest. Generally speaking, a Cancer/Tumor/Case is a neoplasm with topography, histology, and behavior codes that meet the SEER, local or special study case reporting guidelines. While this is usually a cancer or a tumor, some code combinations are not truly tumors and others are arguably not cancer. Case is sometimes used interchangeably with "tumor" or "cancer" but case can also be used to refer to a person in the database.

In the documentation, we sometimes use "tumor" instead of CTC, usually within a standard data item name. We may also use "cancer" or "tumor" or "case" to refer to an instance of a disease that has not yet been registered in the database.

In the SEER*DMS database, CTC is the name of a data entity within a patient set. All diagnostic, staging, and treatment data for a reportable neoplasm are stored in a CTC. The CTC data include summarized treatment information, as well as data regarding each admission and treatment for that particular CTC. A patient set may include multiple CTCs, one for each primary cancer diagnosed for the patient.

Summary Treatment (Summary TX)

Summary treatment fields are stored in the CTC table of the database and displayed on the Summary TX page of the patient set editor. These fields contain the consolidated treatment values and associated dates for the treatments related to the CTC. SEER*DMS applies an algorithm to arrive at a suggested summary treatment value for each treatment modality (i.e., surgery,

chemotherapy, radiation). A summarized date of therapy is also provided. The suggested summary value may or may not be the best value when combinations of treatment are being consolidated. For example; two single agent chemotherapy entries may be consolidated to either a single agent chemotherapy summary treatment or multi-agent chemotherapy.

Visual editing and confirmation is required to ensure the best summary treatment values are entered into the consolidated patient set data. When a case is consolidated, all treatments (TX) for a given CTC should be carefully reviewed. A review flag must also be set to confirm that all of the treatment data (including dates) have been reviewed and confirmed for best values.

Treatment Procedures (TX and TXr)

CTC treatment data are stored in the *treatment_procedure* table of the database and displayed on TX and TXr pages of the patient set editor. The Facility ID number associated with the place of treatment is listed next to the page link in the patient navigation box. For example, TX (2344) indicates that this treatment was reported by and administered at facility FAC-2344.

TXr is typically used to identify a treatment that was reported by one facility, but given at a different facility. TXr may also be used for registry-specific designations, for example, it is also used to identify treatment procedures with Previous Flag = Yes in SEER*DMS MDCSS.

If the treatment facility is known, the facility number of both the reporting facility and the treatment facility will appear following the TXr. For example, TXr (6431~2344) indicates that according to a cancer report submitted by facility FAC-2344, this treatment was given at facility FAC-6431. A code of 9999 indicates that the facility is unknown. For example, TXr (9999~2344) indicates that according to a record submitted by facility FAC-2344, this treatment was given at an unknown facility. If the reporting facility field is blank for TXr data, ???? will be displayed in the navigation (this is not possible if the definition of TXr is limited to "a treatment reported by one facility, but given at another").

When treatment data are incorporated into a CTC from a NAACCR abstract record, TX and TXr pages are created if there are treatment data in the NAACCR summary fields that are not included in the NAACCR hospital fields. A TX data page is created from the NAACCR RX hospital fields. A TXr data page would be created for the data stored in the NAACCR summary fields that is additional to the hospital information. The performing hospital for the TXr data is set to the "unknown" facility code which is usually FAC-9999.

Facility Admission

The Facility Admission data catalogues information gathered from each patient encounter at a given facility. If a patient has multiple admissions or encounters at the same facility, the facility may provide admission data for each encounter. These data are stored in the *facility_admission* tables of the database.

SEER Course

SEER requires that all treatment administered during the first course of therapy be included for each reported case. See the *SEER Program Coding and Staging Manual* for definitions of first course of therapy. Some registries also collect information on subsequent therapy. This could be treatment for recurrence of cancer or for disease progression. SEER*DMS allows the registry to identify the treatment course and will distinguish between treatment courses when deriving suggested best values for treatment. The default value for treatment course is first course of therapy.

Incoming and Linked Records

When a patient set is viewed during a consolidation task, records are listed as either “incoming” or “linked”. An incoming record is a record which is a tentative match to the patient set. The record is currently being processed in the workflow. It was selected during a Match-Consolidate task for consolidation with the patient set data. If the match is confirmed during the consolidation task, the record will be linked to the patient set and the data will be consolidated. For more information please refer to *Chapter 12: Consolidating Data*.

Auto-building Patient Sets and CTCs

An entire patient set or components of an existing patient set must be created when new reportable data are incorporated into the database. For example, a new patient set must be created when it is determined that data for a reportable cancer are related to a new patient. A new CTC must be created within an existing patient set when it is determined that data matching an existing patient represents a new, reportable tumor.

To reduce the work involved in creating a new patient set, SEER*DMS auto-builds patient set components based on record data. The transfer of record data to the patient set is automated, when possible. The values of the appropriate data fields are auto-filled, as determined by registry-specific algorithms which are specified for each record type. For some fields, the value is copied directly from a record field to a corresponding patient set field. The values of other patient set data fields are imputed based on multiple fields in the record, or by recoding the value of a single field in the record. The field mappings and recoding algorithms are documented in the *SEER*DMS Technical Reference: Registry-Specific Information*.

These are the circumstances under which auto-building occurs:

- A reportable abstract record does not match an existing patient set. The system auto-builds a new patient set based on that record. A single CTC is created within the patient set. Within that CTC, the number of auto-built admissions and treatments will vary based on the record type and the amount of data available on the record.
- A reportable abstract record matches a patient already in the database, but describes a cancer for which that patient has no CTC. During the Consolidate task, a CTC is auto-built when the record is linked to a “New CTC” in the patient set. Within that CTC, the number of auto-built admissions and treatments will vary based on the record type and the amount of data available on the record.
- A reportable record matches an existing patient and CTC, but describes a new facility admission or treatment relevant to this CTC. In this case, the system attempts to auto-build new facility and treatment data fields for that CTC.

SEER*DMS auto-builds patient set data fields using data from a single record. If multiple records for a new patient are consolidated, the patient set data fields are auto-built from one of the records when the Consolidate task is started. SEER*DMS selects an abstract record (NAACCR Abstract, NAACCR Modified, or Health Record) to use for auto-building. If there are two or more abstract records, the abstract record that was first loaded into SEER*DMS is used. The other incoming records are then consolidated with the new patient set.

Audit Logs

Whenever a record or patient set data field is changed by a user or the system, an entry is made in an audit log. A separate audit log is maintained for each record and patient set in the system. The information in the audit log includes the user or process which modified the data, comments related to the change, the date and time of the modification, and the original and modified value of

each data field that was changed. A user may provide separate comments for the individual data items or one comment for all data items changed within a single session.

When the audit log is displayed in the record or patient set editor, the changes are grouped by events. Events include workflow tasks, system tasks, and other processes that modify patient data. The audit log events in SEER*DMS are:

- **Ad-hoc Editing** – The change was made by a user who edited the data while accessing the data via the patient lookup, a worklist task was not involved.
- **AFL Update** – Changes made to an AFL were incorporated into the record that triggered the AFL. At this time, reportability is the only field that is changed via this process. The record's reportability is changed to auditable when the AFL status is set to "Not a Reportable Cancer".
- **AFUP Update** – Patient set data were updated when a response to Active Follow-up (AFUP) was entered.
- **Auto-Build Pat Set** – A single audit log entry is made when a patient set is auto-built from a record.
- **Auto-Coding** - A change was made to a record as it entered the workflow. Registry-specific coding algorithms are implemented in this automated workflow task.
- **Auto-Consolidation** - The change was made during an automated process to consolidate incoming data. Typically, this would involve the consolidation of follow-up data. In most registry configurations, the consolidation of other data is performed in manual tasks.
- **Auto-Screening** – The change was made during the automated screening task. This task sets the reportability status of an incoming record.
- **Consolidate** - The change was made by a user who edited the data during a Consolidate worklist task.
- **Consolidate FUP**- The change was made by a user who edited the data during a Consolidate FUP worklist task.
- **Data Entry** – One audit log entry is made when a record is saved in a data entry session.
- **Direct Database Update** – Record or patient set data were modified by an external script (audit log entries are not created by all external scripts).
- **Edits Sys Task** – The change was made by a SEER*DMS "polisher" which executed after the Patient Set Edits system task completed. A polisher is a background utility that, according to SEER or registry-defined algorithms, imputes data values based on values in other fields.
- **Image Data Entry** – Record data were updated during a manual Image Data Entry task. An Image Data Entry task is created for each image record imported via the autoloader.
- **Initial Conversion** – The change was made during an automated process to load data from the legacy system.
- **Link AFL Source** – This event indicates that a record was auto-linked to a patient set. The record that initiated an AFL is auto-linked to a patient set when its AFL is closed by an abstract linked to the patient set.
- **Mass Change** – Changes were made as specified in a mass change import. The Import ID is listed with the event information.
- **Rapid Follow-up** – Patient set data were updated during an automated Rapid Follow-up worklist task.
- **Resolve Pat Set Errors** – The change was made by a user who edited the data during a Resolve Patient Set Errors worklist task.
- **Resolve Record Errors** - The change was made by a user who edited the data during a Resolve Record Errors worklist task.

- **Screening** - The change was made by a user who edited the data during a Screening worklist task.
- **Visual Edit Pat Set** – The change was made by a user who edited the data during a Visual Edit Patient Set worklist task.

Finding Patient Data in SEER*DMS

You may use the SEER*DMS Patient Lookup or toolbar Quick Search to search the database for data related to a specific patient, or to search for a specific record or patient set by ID. Select **View > Patients** to access the Patient Lookup:

The screenshot displays the SEER*DMS Patient Lookup interface. At the top, there is a user bar showing 'User: coyle' and a 'Lookup:' field. Below this is a navigation bar with 'View', 'Manage', and 'System' menus. The main search area is divided into sections: 'Standard' (Name (L,F,M), Facility, Data Type), 'ID Lookup' (DOB), and 'Advanced' (SSN, Sex, Race). An 'Exclude' dropdown is set to 'dead > 8 years'. A 'Data Type' dropdown menu is open, listing various options. At the bottom of the search area are 'Search', 'Clear', and 'Create AFL' buttons.

SEER*DMS uses registry-specific matching algorithms to compare the patient information specified in the Matching Criteria to patient sets and records in the database. The **Standard** search provides a way to find all available data related to a specific patient. The **Advanced** search and **ID Lookup** enable you to review a particular set of records or patient sets or to review a sample of data for research or quality control purposes.

If your system permissions allow you to view or edit patient data, the **Lookup** search box will be displayed in the SEER*DMS User Bar. This provides a shortcut to the Patient Lookup for searches by Patient Set ID, Record ID, AFL ID, Import ID, date of birth (MM-DD-YYYY), name ("last name" or "last name, first name"), and SSN (dashes must be included, otherwise the system will assume that a numeric field is a patient set or record ID).

This screenshot shows the SEER*DMS User Bar. It includes a user bar with 'User: coyle' and a 'Lookup:' field. Below the user bar is a navigation bar with 'View', 'Manage', and 'System' menus.

Chapter 20: Searching for Records and Patients contains detailed instructions for using the Patient Lookup and Quick Search.

SEER*DMS Databases: Production, Warehouse, and Test

The Oracle database that is accessed via the production version of the SEER*DMS application is referred to as the "live database" or "production database". This database contains up-to-the-minute changes made by the registry's editing or coding staff.

The "data warehouse" is a read-only version of the live database which is created nightly. To reduce load on the production database, it is recommended that external applications query the data warehouse unless the query requires updates made since the previous night. The data warehouse contains all tables in the live database, the NAACCR mart, and materialized views which are optimized for extracts, reporting, and other analysis. Views are aggregated, sometimes summarized, copies of data that are specifically structured for dynamic queries and analytics.

The "test server" database contains the data accessed by the test server's version of SEER*DMS. This database is updated on an ad hoc basis by registry IT staff. A registry system administrator executes a reload script that loads a snapshot of the production database from the previous night

(the data are loaded from the same snapshot as the data warehouse). If you log into the test server and save a change, that change will immediately be reflected in reports and SQL queries that use the Test Server Database. However, there is no data warehouse associated with the test server. Therefore, you cannot use the extracts within the test server's application (SEER*DMS extracts use data from the data warehouse which is only available for the production database). In addition, some internal SEER*DMS reports require the data warehouse and will not be available.

The SEER*DMS Web Portal (<https://seer.cancer.gov/seerdms/portal>) is the most comprehensive resource of documentation related to the SEER*DMS databases. The following materials are available online:

- *Description of each table in the database*
- *Mapping of database fields to the labels used in SEER*DMS*
- *Mapping of database fields to NAACCR items*
- *Diagrams showing table relationships*
- *NAACCR Mart and NAACCR Extract Documentation*

Chapter 3: Using SEER*DMS

SEER*DMS uses an HTML-based interface displayed via a Web browser. Mozilla Firefox (version 2.0 or later) or the web browser in the Mozilla Suite (version 1.7.13 or later) are the only browsers currently supported. Reports generated by SEER*DMS are designed to be viewed and printed as PDF files. Adobe Reader is required to view or print reports (version 7.0 or later is recommended).

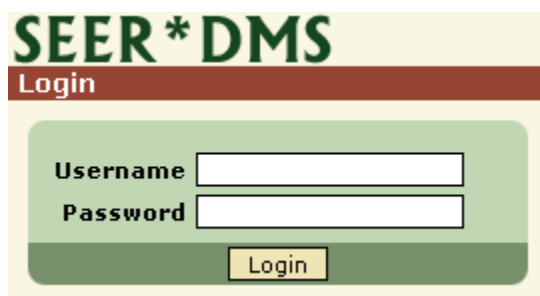
In this chapter, you'll learn about

- Logging into SEER*DMS
- Changing Your Password
- Using the Home Page
- Worklist Summary
- SEER*DMS Menus
- SEER*DMS Dos and Don'ts
- Page and Calendar Tools
- Setting Account Preferences
- Adding and Editing News Items
- Automatic Logoff Due to Inactivity
- Viewing More Information on Your Screen
- Viewing Two Screens at Once
- Searching for Text
- Browser Navigation Settings
- Display Recommendations
- Recommended Firefox Options

Logging into SEER*DMS

To access SEER*DMS, direct your web browser to the address provided by your registry's system administrators. In most cases, a shortcut will be available on your desktop. A system administrator must set up a SEER*DMS account for each new system user. Once your account is created, a username and randomly generated password will be e-mailed to you. (When the system is first installed at your registry, usernames and passwords will be assigned and provided to you during training.)

When you access SEER*DMS, the **Login** page will be displayed as shown below. Note: The colors used in SEER*DMS are determined by the Color Scheme selected in your Account settings.



The screenshot shows the SEER*DMS login interface. At the top, the text 'SEER*DMS' is displayed in a large, bold, green font against a yellow background. Below this, a dark red horizontal bar contains the word 'Login' in white. The main area of the page is light green and features two white input fields with black borders. The first field is labeled 'Username' and the second is labeled 'Password'. Below these fields is a yellow button with the word 'Login' in black text.

Enter your **Username** and **Password**. Click **Login**. Once you have successfully logged in, the Home page will be displayed. If this is your first login or your password was reset, you should immediately change your password. Do not continue to use a password that was assigned to you or sent via e-mail. Please refer to the *Changing Your Password* section of this chapter.

If your login attempt is unsuccessful:

- User names and passwords are case sensitive. Make certain **Caps Lock** is turned off.
- Contact your supervisor to determine whether your account has been deactivated, or if you are subject to a login restriction.
- If you have forgotten your password, contact a system administrator to reset your password. A new, randomly generated password will be e-mailed to you. You should immediately log in and change your password to something you will remember.

Login restrictions:

- If you are unable to log in to SEER*DMS, your account may be subject to a **Business Hours Restriction**. This restriction blocks access to the system outside of the registry's standard hours of operation. Your registry's system administrators have the ability to specify the standard business hours in the system configuration settings.

It is strongly recommended that you log off SEER*DMS when you are not using the system. If you do not log off, confidential data may be displayed on your monitor or be accessible from your computer. Save your current work, if necessary. To log off, click the **Logoff** link which appears in the top right corner of each page. Your session will be ended and the Login page will be displayed.

Changing Your Password

When logging in for the first time or when your password is reset, you should change your assigned or randomly generated password to a secure password that is easy for you to remember.

SEER*DMS provides access to confidential data. It is your responsibility to protect and maintain your password according to registry policy. If you forget your password, a system administrator can reset it. Your password will be set to a random string and you will be notified of the change via e-mail. Log in with the new password and immediately change your password.

To change your password:

1. Click the Account link in the User Bar at the top right corner of the page.
2. Enter your Old Password.
3. Enter a New Password. All passwords must be at least six characters in length. Security measures to protect the confidentiality of patient data must include the use of strong system passwords. Your password should:
 - a. Include symbols, digits, and letters of both upper and lower case. You should use at least one symbol or character in a position other than the first or last character.
 - b. Be significantly different from passwords that you have used in the past.
 - c. Not include your name, your username, your child's name, or your pet's name.
 - d. Not be a common word or name.
4. Re-enter your new password in the Verify Password field.
5. Click Save. Your new password will be effective immediately.

Your password may also be reset by an administrator for security reasons. In this case, an e-mail containing your new password will be automatically sent to the e-mail address associated with your account. You should immediately log in and change this password as described above.

Using the Home Page

Each time you log in to SEER*DMS, you will start at your personalized **Home** page. This page is your gateway to the specialized tools and features in the system. At any time, you can return to the home page by clicking the SEER*DMS logo in the banner or selecting **View > Home**.

- A summary of the worklist is displayed on the left side of the home page. The links and counts are described in the Worklist Summary section of this chapter.
- The **Latest News** section displays News items posted by registry staff.
- The version of the SEER*DMS software is displayed at the bottom of every SEER*DMS screen. The date and time of the build are displayed in parentheses.
- The **SEER*DMS Logo**, **User Bar**, and **Toolbar** appear at the top of every page in the system.
 - Click the **SEER*DMS Logo** to return to the home page from any page in the system.
 - The **User Bar** includes your user name, access to your Account Preferences, and the Logoff link. If you have a system permission to view or edit patient data, it will also include the "Lookup" search box. Please refer to *Chapter 20: Searching for Records and Patients* for information about the toolbar quick search and other searching techniques.
 - The name of the current page is displayed in the left side of the **Toolbar**. The Toolbar also includes menus that provide access to all pages and features in the system (see the *SEER*DMS Menus* section of this chapter).
 - To avoid the loss of effort when using these features, follow the guidelines specified in the *SEER*DMS Dos and Don'ts* section of this chapter.

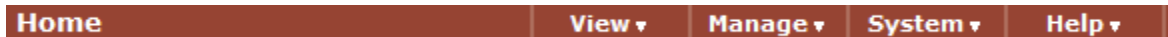
Worklist Summary

	<p>A personalized worklist summary is displayed on the left side of the home page. My Tasks summarizes the tasks assigned to you and provides shortcut links to those tasks. Click Worklist to view a list of all tasks assigned to you. Click one of the task types in My Tasks to view tasks of that type that are assigned to you.</p> <p>The number of tasks currently assigned to you is displayed to the left of the task type. For example, in the sample shown on the left, two Consolidate tasks are assigned to the user. Clicking on the Consolidate link in this sample will bring up a filtered Worklist showing the two Consolidate tasks which are currently assigned to this user.</p>
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<p>Unassigned Tasks</p> <ul style="list-style-type: none"> 338 Consolidate 479 Consolidate FUP 4579 Match-Consolidate 60 Resolve Patient Set Errors 22 Resolve Record Errors 2 Supplemental Match 	<p>The Unassigned Tasks list on the Home page summarizes the unassigned tasks that you are permitted to access, and provides shortcut links for each type of task. The number of tasks per type is displayed to the left of each link.</p> <p>Clicking on the Resolve Record Errors link in this sample will bring up a filtered Worklist that displays the 22 unassigned Resolve Record Errors tasks.</p>
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SEER*DMS Menus

A **Toolbar** is displayed on every page in SEER*DMS.



The name of the current page is always displayed on the left of the toolbar. On the right, the toolbar displays pull-down menus which you can use to navigate the various features of the SEER*DMS system. Some menu items are only displayed if the user has the system permission associated with the menu item. A full list of menu options is shown below.

- **View**
 - Home
 - Worklist (*Chapter 4: Using the Worklist*)
 - Patients (*Chapter 20: Searching for Records and Patients*)
 - Contacts (*Chapter 19: Maintaining the Contact List*)
 - Facilities (*Chapter 18: Maintaining the Facility List*)
 - Reports (*Chapter 24: Creating Reports and Extracting Data*)
- **Manage**
 - Abstract Facility Leads (*Chapter 21: Managing Abstracting Assignments*)
 - Active Follow-up (*Chapter 16: Follow-up*)
 - Follow-back (*Chapter 22: Follow-back*)
 - Record Request (*Chapter 23: Submitting a Request to a Facility for Records*)
 - Special Studies (*Chapter 28: Special Studies*)
- **System**
 - Staff (*Chapter 25: Managing User Accounts*)
 - Roles (*Chapter 26: System Roles*)
 - Import (*Chapter 5: Importing Data Files and Chapter 6: Data Entry*)
 - Tasks (*Chapter 27: System Administration*)
 - Edits (*Chapter 7: Edit Errors*)
 - Administration (*Chapter 27: System Administration*)
- **Help**
 - User Manual
 - Registry-defined configuration settings and algorithms
 - Version History
 - Support (*Technical Support* section of *Chapter 27: System Administration*)
 - About SEER*DMS

SEER*DMS Dos and Don'ts

Since SEER*DMS is a Web-based system, you will modify data and access features on system "pages". You must use the page buttons to exit pages that enable you to make modifications to patient or system data. These buttons include "Save & Exit", "OK", "Close", and "Cancel". If you use the links or menus in the User Bar or Toolbar to go to another page, changes made on the current page will not be saved. Likewise, if you exit a page by using your browser's navigation controls, unsaved changes will not be saved. This may be a new concept for some users. If you use the Internet, you have probably become accustomed to this behavior. For example, if you are purchasing airline tickets on an Internet site but change your mind before clicking "Buy", going to another Web site will void the incomplete transaction.

Do

- Use the links, buttons, and menus located in the body of the page to complete the current task. If you have made changes that must be saved, do not use the navigation in the SEER*DMS logo, User Bar, or Toolbar to exit a page.
- Click the SEER logo to return to the home page, but only if you saved any changes made on the current page or do not wish to save them.
- Use the links and menus in the User Bar and Toolbar to access system features, but only if you have already saved changes made on the current page or do not wish to save them.

Don't

- Don't use any browser controls to navigate. Never use the Back button, Forward button, or enter a URL in the address box. The *Setting Browser Preferences* section of this chapter provides more information about the browser controls to avoid; and methods for hiding navigation features that you should not use.
- Don't use the backspace key unless you are editing a field. In a browser application, backspace is a shortcut for the browser's Back button.
- Don't use the links or menus in the User Bar or Toolbar when you have made changes that must be saved. (Help > User Manual is the exception to this rule. The SEER*DMS Help System opens in a separate window, your work will be unchanged and will continue to be displayed in the original window.)
- Don't click the SEER*DMS logo to return to the home page when you have made changes that must be saved.


Note: SEER*DMS is a Web-based application that is maintained on a server located within the registry. The system is not connected to the Internet. Access to the system from remote locations is controlled by a firewall configuration designed, installed, and maintained by registry IT staff.

Page and Calendar Tools

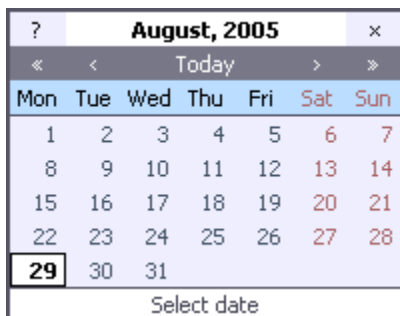
The lists in SEER*DMS, such as the Worklist, often contain too many results to fit on the screen all at once. In these cases, the list will be broken into several pages. Use the Page Selection links displayed at the top or bottom of the list to navigate the list, as in the example below.

[[First/Prev](#)] [1](#), [2](#), [3](#), [4](#), [5](#), [6](#), [7](#), [8](#) [[Next/Last](#)]

Click **Prev** or **Next** to advance one page back or forward. Click **First** or **Last** to move to the beginning or end of the entire list. Click an individual page number to jump to a specific page. A maximum of eight page numbers will be displayed; there may be additional pages that are not listed. Additional page numbers will be displayed when you click the eighth page in the current set.

The calendar tool can be used to enter a correctly formatted date in the field adjacent to a calendar icon: 

Click on the icon to bring up a calendar of the current month. The calendar will open with the current date highlighted, as shown below.



To browse by month, use the < and > buttons at the top of the calendar. Use the << and >> buttons to browse by year. Use the mouse to click a specific date. This date will be automatically formatted and displayed in the adjacent date field.

To close the calendar without selecting a date, click the x button in the upper right corner.

Setting Account Preferences

To modify your account information:

Click the **Account** link in the User Bar at the top right corner of the page.

You may edit the **First Name**, **Last Name**, and **E-mail** address fields. These are required fields and cannot be blank. **Note:** Your username cannot be modified.

Add or modify your phone number and street address, if appropriate.

You may change to one of several **Color Schemes** available in SEER*DMS.

If you add a **Signature**, it will be displayed in e-mail communications sent via SEER*DMS.

To change your password:

- Enter your **Old Password**.
- Enter a **New Password**. All passwords must be at least six characters in length.
- Re-enter your new password in the **Verify Password** field.

Click **Save**.

Adding and Editing News Items

System permissions: *news_add, news_edit, news_delete*

To make an announcement to the entire registry staff, you can add a news item to the Home page. The **Latest News** list displays messages in the order in which they are added, with the most recent item appearing at the top of the page. All SEER*DMS users can view the news list, but system permissions are required to add, edit, or delete news.

To add a News Item:

1. Select the Add Item link at the top of the Latest News list.
2. Enter a Title for your news item. This field can hold a maximum of 100 characters.
3. Enter the text of your message in the Body field. You may enter up to 4000 characters in a news item.
4. Click Save. Your message will appear at the top of the news list.

To edit a News Item:

1. Click the Edit link displayed below the news item's title bar.
2. In the Edit News Item page, you can edit the text of the Title and Body.
3. Click Save to save your changes.

To delete a News Item:

1. Click the Delete link displayed below the news item's title bar.
2. SEER*DMS will query you to confirm that you really want to delete the item. Click OK to delete the item or click Cancel to return to the Home page.


To send an email to the author of a news item:

1. Click the Author's Name displayed below the news item's title bar.
2. SEER*DMS will open your email client software and create a blank message addressed to the author of the news item. Complete and send the email message.

Automatic Logoff Due to Inactivity

SEER*DMS will automatically end your session and log you off after a long period of inactivity. The last screen that you viewed will continue to be displayed on your monitor and may include confidential patient data. Therefore, it is strongly recommended that you use the logoff link to end your session when not using the system.

The system is initially configured to end your session after two hours of inactivity; however, the length of time can be changed per request of registry management. (It is recommended that this time period not be set to a value less than one hour, to avoid the loss of unsaved work.)

Note: Moving the mouse and entering text do not constitute activity between the browser and the SEER*DMS server. Until you click a button, link, or  lookup to perform an action or access another page, your session will be considered inactive.

After automatic logoff, any open SEER*DMS pages will continue to be displayed as long as your browser is open. If you click on any button or link in the SEER*DMS window, the system will attempt to restore your session after prompting you for your username and password. However, any unsaved changes to a record or patient set may be lost.

Viewing More Information on Your Screen

The data pages in SEER*DMS often contain too many data items to display on your monitor without scrolling. If you would like to view more information on your screen at one time, you may want to consider the following:

- The Firefox and Mozilla browser's have a "Full Screen" feature that enables you to hide toolbars and controls that use valuable screen real estate. Press F11 to view SEER*DMS in full screen. Your Windows taskbar and browser menu will be hidden, and a larger number of data fields will be displayed. Press F11 again to restore the Windows taskbar and browser menu.
- Monitors commonly use a landscape orientation. However, many flat LCD monitors can be pivoted to portrait orientation. If you view data pages in portrait orientation, a substantially larger number of fields will be displayed without scrolling.
- SEER*DMS requires a minimum resolution of 1024x768. Using a higher resolution will reduce the scrolling when editing data pages, but is not required.

Viewing Two Screens at Once

SEER*DMS supports the viewing of two pages during a single session. The second page will open in either a new Window or Tab, depending on your Firefox option settings. If you are using a single monitor, it is recommended that you set Firefox to open new pages in a new tab within a single Window (multiple Windows may be hidden on a single monitor). If you are using dual monitors, it is recommended that you set Firefox to open new pages in a new Window and move the newly opened Window to the other monitor.

*To open a second SEER*DMS page:*

1. "Middle-click" a link or menu item in SEER*DMS. To "Middle-click", you may either click your mouse wheel or press CTRL as you click. The page will open as a new tab or new Window depending on the settings in your Firefox options.
2. Or right-click a menu item or link in SEER*DMS. A menu will be displayed. Select Open Link in New Window or Open Link in New Tab.

To set the default method used by Firefox to open new pages:

1. From the Firefox Tools menu, select Options.
2. Click the Tabs icon at the top.
3. It is recommended that you set **New pages should open in:**
 - a. If you are using dual monitors, select a new window.
 - b. If you are using a single monitor, select a new tab. You should also check When I open a link in a new tab, switch to it immediately.
4. Click OK to save and exit. All of the Tabs settings are described in the Firefox help system.

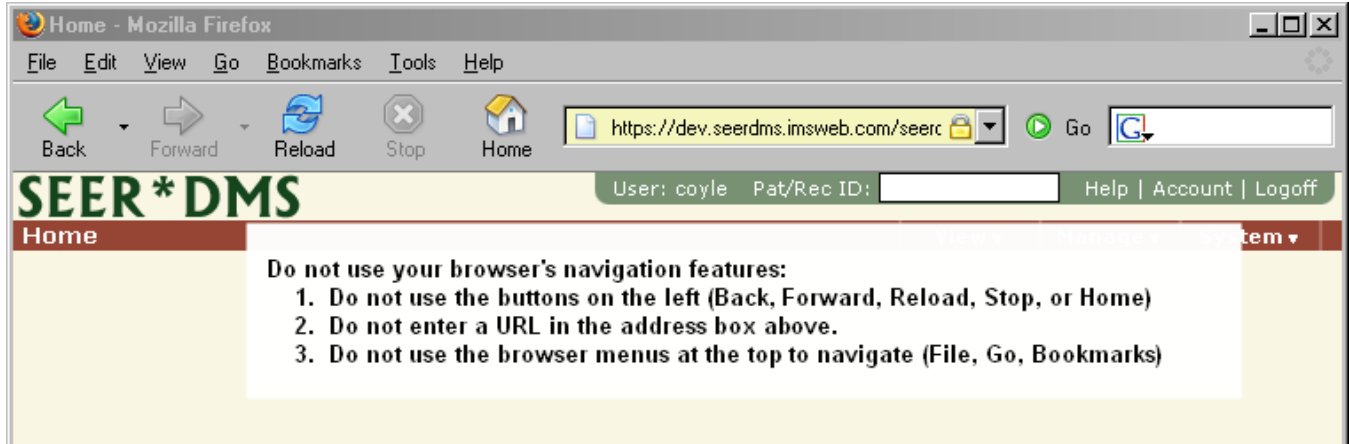
Searching for Text

In Firefox, CTRL-F can be used to search any window. This is a great tool to use when searching for a field in the Patient Set Editor or when searching for text in a popup window.

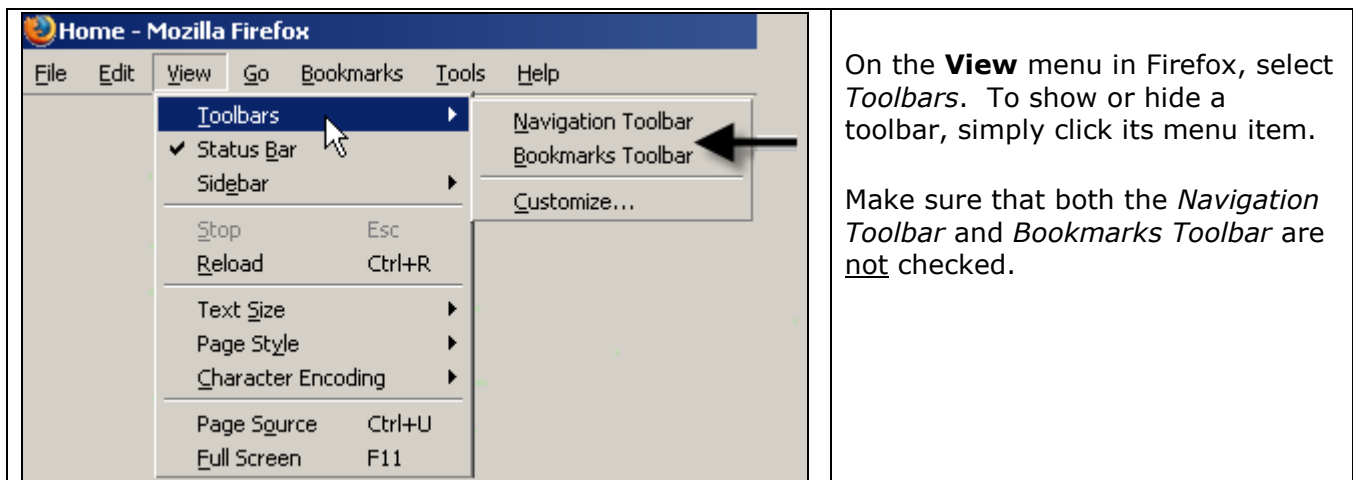
1. Press CTRL-F
2. Enter the search text in the bottom part of the window. The first occurrence of the text will be highlighted.
3. Click Find Next to go to the next occurrence of the search string or click Highlight All to see all matches.

Browser Navigation Settings

The following diagram shows SEER*DMS in a window that includes the browser's navigation controls. The browser menus appear under "Home - Mozilla Firefox" at the top of the page. Navigation buttons (Back, Forward, Reload, Stop, and Home) and the address box are shown just under the menus.



You should *not* use the browser's navigation buttons to change pages in SEER*DMS. It is recommended that you hide the browser icons to provide additional space for SEER*DMS and to avoid using the buttons inadvertently. These buttons change your page view, but SEER*DMS does not recognize these commands and your work will not be saved.



On the **View** menu in Firefox, select *Toolbars*. To show or hide a toolbar, simply click its menu item.

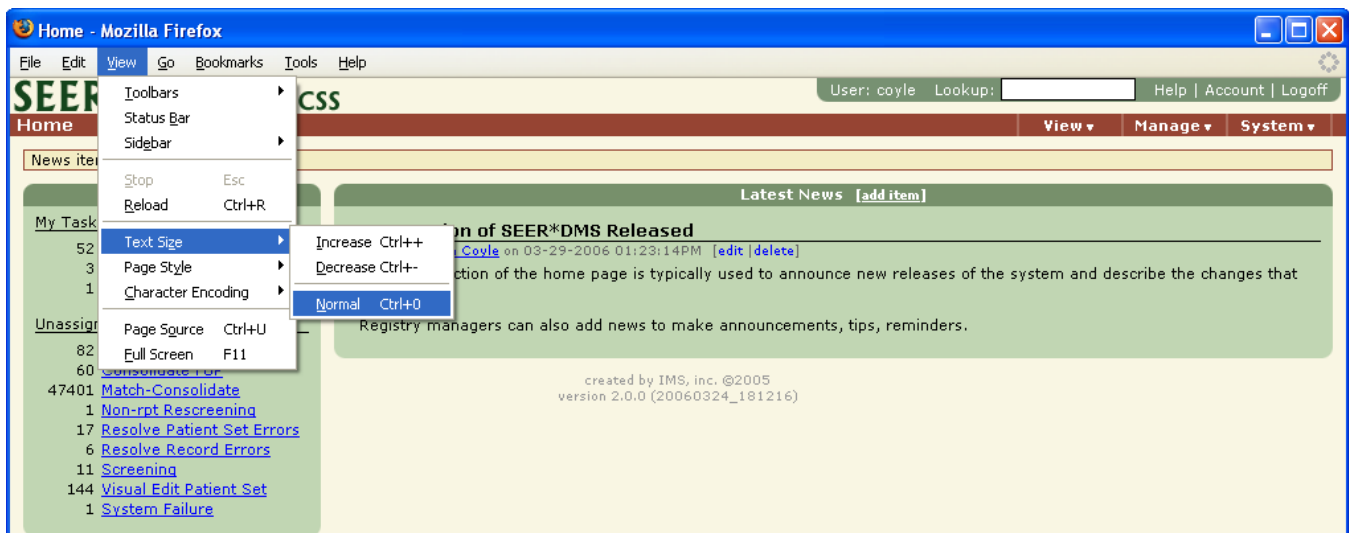
Make sure that both the *Navigation Toolbar* and *Bookmarks Toolbar* are not checked.

Display Recommendations

SEER*DMS requires a minimum resolution of 1024x768. Using a higher resolution will reduce the scrolling when editing data pages, but is not required. The browser's default or "normal" text size should be used. Images, buttons, and text may be misaligned if the Text Size is increased.

To set the text to Normal in Firefox:

1. From the Firefox View menu, select Text Size.
2. Click Normal.



Recommended Firefox Options

As is true of most Web browsers, Firefox “remembers” passwords and information entered into a form in order to provide suggestions when completing similar forms in the future. For increased security of the confidential patient data in SEER*DMS, you should disable the option to save passwords. To avoid entering one patient’s data into another patient’s form, you should disable the browser options to remember information previously saved in forms. Recommendations for options related to new pages were discussed in the *Viewing Two Pages at Once* section of this chapter (the instructions are included here to enable you to set all Firefox options at one time).

*To set the Firefox options as recommended for SEER*DMS:*

1. From the Firefox Tools menu, select Options.
2. Tabbed browsing allows you to display multiple SEER*DMS pages within a single window. However, dual monitor configurations would benefit from displaying multiple pages in separate windows. Click the Tabs icon at the top.
 - a. It is recommended that you set **New pages should open in:**
 - i. If you are using dual monitors, select **a new window**.
 - ii. If you are using a single monitor, select **a new tab**. You should also check **When I open a link in a new tab, switch to it immediately**.
3. SEER*DMS uses Javascript to display popup windows. To ensure that the Text, DX Info, and other popups are displayed when open:
 - b. Click the **Content** icon at the top.
 - i. Verify that **Enable Javascript** is checked.
 - ii. Click the **Advanced** button for **Enable Javascript**. Check the box that says **Raise or Lower Windows** and click **OK**.
4. Click the Privacy icon at the top. In the History section, uncheck Remember what I enter in forms and the search bar.
5. Click the Security icon and uncheck the Remember passwords for sites box.

Chapter 4: Using the Worklist

The SEER*DMS workflow provides a configurable means to direct the flow of records and other system data through the appropriate automatic and manual tasks. The workflow controls the path of a record through the editing, screening, matching, and consolidation tasks with the ultimate goal of incorporating it into the patient set data.

A record entering the workflow is initially processed in a series of automatic tasks. If human attention is required in order to complete a task, a manual task is initiated. Once a staff member completes the manual task, the record continues to the next automatic task in the workflow. The record moves from automatic to manual processes as necessary, until it completes its journey through the workflow.

The SEER*DMS worklist provides a view of the automatic tasks that are currently running and the manual tasks that require attention. The manual tasks displayed in the worklist are the staff's "to do list". Users can select tasks to complete or managers can assign tasks to users, depending on registry policy. The automatic tasks are displayed in the worklist to allow you to track the flow of data and, in rare situations, cancel automatic processes.

A unique Task ID is assigned to the first task created when a record enters the workflow. As that record moves from task to task, the Task ID remains the same. The same Task ID is retained until the record exits the workflow.

In this chapter, you'll learn about


- Data Shown in the Worklist
- Sorting the Worklist
- Searching or Filtering the Worklist:
 - Searching for a Record or Patient Set in the Worklist
 - Filtering by User Assignment, Task Type, Task Age, and Other Data Items
- Following Data through the Worklist
- Assigning, Releasing, or Rerouting Tasks
- Opening a Task Assigned to You
- Opening an Unassigned Task
- Terminating Manual Tasks
- Restarting Workflow Activity
- Viewing or Aborting Automatic Tasks
- System Failure Tasks
- Printing the Worklist
- Worklist Tasks
- Workflow Reports

Data Shown in the Worklist

There are many ways to access the worklist; the route you take only affects the default values set in the filter. Once you go to the worklist, you will be able to adjust the filters to create an appropriate list of tasks. Your account's system permissions determine which tasks you will be able to view and access.

To view all worklist tasks assigned to you, select **View > Worklist** or click the **Worklist** link on the Home page. To view tasks of a certain type that are assigned to you, use the shortcut links in the **My Tasks** section of the Home page. To view tasks of a certain type that are unassigned, use the shortcut links in **Unassigned Tasks**.

The following data columns are shown in the worklist:

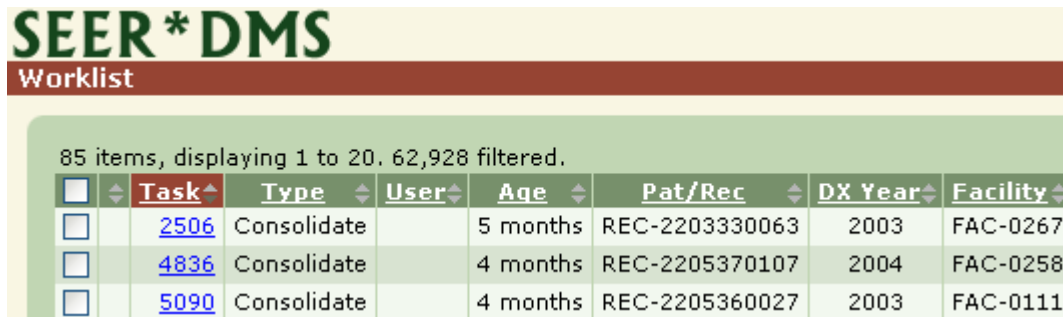
- **Task** – Unique ID assigned to the series of processes used to move the data through the workflow (the same ID is maintained as a record moves from one type of task to another)
- **Type** – Type of workflow task, as described in the *Workflow Tasks* section of this chapter
- **User** – The user assigned to this task
- **Age** – Length of time since the task was created (shown if Show Age is checked). Age is reset when the data move forward to a new task type.
- **Date** – Date the task was created (shown if Show Age is unchecked). Date is reset when the data move forward to a new task type.
- **Pat/Rec** – ID of the Patient Set or Record ID that is the focus of the task. If the processing of a record triggered the task and the record is not yet linked to a patient set, the Record ID will be shown. Once the record is linked to a Patient Set, the Patient Set ID will be shown. Click the Information Icon  next to the record's or patient set's ID to see values of key fields.
- **Reg** – Region. This column is only displayed if your registry's implementation of SEER*DMS is configured to support multiple regions.
- **Dx Year** – Year of diagnosis. If a record is the focus of the task and year of diagnosis is not available or not applicable for that record, this column will contain the screening year, year of admission, or year of last contact as determined by the type of data. A date from the incoming record is used if the record has not yet been linked to a patient set. Once the record is linked to a patient set, the date of diagnosis for a CTC is used. If the Patient Set has multiple CTCs and all CTCs are submissible, this will be the date of diagnosis of the CTC to which the task's original record is linked. Otherwise this column will contain the year of diagnosis for the earliest diagnosed, non-submissible CTC. Year is populated in this manner to enable you to identify tasks that must be completed for the next submission.
- **Facility** – Reporting facility
- **Site** – Cancer site. The site coded on the incoming record is used if the record has not yet been linked to a patient set. Once the record is linked to a patient set, the site and year of diagnosis are based on a CTC in the patient set. Refer to the description of Dx Year for description of the CTC that is selected.
- **Information** – A text field displaying additional task-specific data items (Patient Name, Record Type, etc.)

The worklist often contains too many results to fit on the screen all at once. In these cases, the list will be broken into several pages. Use the Page Selection links to view the rest of the list, or use the Filter controls to search or limit the list.

When you open a worklist item, the task is assigned to you to prevent two users from inadvertently working on the same task. Once assigned, tasks may be rerouted to other users or designated as unassigned. The steps and account permissions required to reroute or release tasks are described in *Assigning, Releasing, and Rerouting Tasks*.

Sorting the Worklist

In SEER*DMS, a table is sorted by the column with a highlighted column header (highlighted in red in the example below; other colors are used in different color schemes). In the example below, the worklist is sorted by Task ID. The up arrow next to "Task" indicates that the table is sorted in ascending order. To sort the worklist by any of the data items, click on the corresponding column heading. To reverse the sort order, click the column header again.




85 items, displaying 1 to 20. 62,928 filtered.

<input type="checkbox"/>	Task ↑	Type	User	Age	Pat/Rec	DX Year	Facility
<input type="checkbox"/>	2506	Consolidate		5 months	REC-2203330063	2003	FAC-0267
<input type="checkbox"/>	4836	Consolidate		4 months	REC-2205370107	2004	FAC-0258
<input type="checkbox"/>	5090	Consolidate		4 months	REC-2205360027	2003	FAC-0111






Searching or Filtering the Worklist


System permissions are required to view and access certain task types (refer to the *Worklist Tasks* section of this chapter for more information.)

To search for a task related to a specific patient, record, or patient set:

1. Select **View > Worklist**, or click the **Worklist** link on the Home page.
2. By default, only your tasks are displayed. If you would like to search all tasks:
 - a. Remove the text in the **User(s)** filter.
 - b. Check **Show Unassigned**.
3. If you know the record or patient set ID, enter it into the **Pat/Rec ID(s)** filter. To enter multiple IDs, click the down arrow  to expand the filter.
4. To search by patient name:
 - a. If you would like to search for a specific patient by name, enter search text into the **Information** filter. If you enter *John Smith*, tasks related to patients named either John or Smith will be returned. If you use quotes and enter "Smith, John", only tasks related to patients named John Smith will be returned.
 - b. **Tip:** To find tasks for patients whose names start with an M, enter "; M" into the **Information** filter. You must include the quotes in your search text.
5. Click **Apply**.
6. If you cannot find the data in the worklist, the record or patient set may have completed its journey through the workflow. If you searched by Record ID, the task will not be listed unless the record is still the focus of the task. Once the record is linked to a Patient Set, the Patient Set ID becomes the focus ID. To determine whether the record is still in the workflow, use the Patient Lookup to find the record and open it in the editor. If the record is involved in a worklist task, SEER*DMS will post a message at the top of the page and include a link to view the task. Detailed instructions for using the Patient Lookup are provided in *Chapter 20: Searching for Records and Patients*.

To filter the worklist:

1. Use the **Type(s)** filter to search for tasks by task type. Scroll through the list in the Type(s) filter and click the relevant task type. To select more than one type, hold down the CTRL key and click each desired type. To deselect a type, click it a second time while holding the CTRL key. The entries in the Type(s) filter are described in *Worklist Tasks*.
2. If you would like to search for a specific task and you know its ID, enter the ID into the **Task ID(s)** filter. To enter multiple IDs, click the down arrow  to expand the filter.
3. If you would like to search for specific data, enter one or more IDs into the **Pat/Rec ID(s)** filter. To enter multiple IDs, click the down arrow  to expand the filter.
4. To search for tasks related to data loaded on a specific day or in a particular import, enter the **Import ID** or click the Lookup icon  to select the Import ID from a list. You may enter two or more IDs separated by a space.
5. Use the **User(s)** filter and **Show Unassigned** box to display tasks based on assignment:
 - a. To show tasks assigned to a particular user, enter the full user name in the **User(s)** filter. You may enter two or more user names separated by a space.
 - b. To show tasks assigned to all users, remove all text from the **User(s)** filter. Blank in any filter selects all values for the field.
 - c. If you are *only* interested in unassigned tasks, enter *unassigned* in the **User(s)** filter. You must also check the **Show Unassigned** box as described in step 3. (**Tip:** Any text that is not a registered username will work. For example, enter "X" in the User(s) filter and check Show Unassigned. When you click Apply, SEER*DMS will attempt to show tasks assigned to user X and the unassigned tasks. Since there is no user X, only unassigned tasks will be listed.)
 - d. To include unassigned tasks, check the **Show Unassigned** box. If you are only interested in tasks that are currently assigned to a SEER*DMS user, leave this box unchecked (and set the User(s) filter as described in step 2).
6. Use the **Information** filter to search by text displayed in the Information column, such as patient name or record type. The data items displayed in the Information column vary by task type and are documented in the chapters related to each specific task. To match a complete phrase, enclose it in quotes (e.g., "Smith, John"). If you enter *John Smith* or *Smith, John* without quotes, tasks related to patients named either John or Smith will be returned (the list could include names such as John Smith, John Doe, and William Smith).
7. **Age** and **Date** are two expressions of the same attribute, the time that the task was created. The worklist allows you to filter on this attribute using date filters. By default, the worklist displays task Age instead of the exact date and time the task was created. To display Date instead of Age, uncheck the **Show Age** box. To specify a date range, enter values in the **From** and **To** filters. Use the *MM-DD-YYYY* format, or click the Calendar  icon. You may enter an open-ended range to include all dates prior to or later than a specific date.
8. Use the **DX Year** filter to search for tasks by year of diagnosis. You may specify a range of years (e.g., *2002-2004*) or use a comma to select separate years (e.g., *2002, 2004*).
9. Use the **Facility** filter to display tasks involving records and patient sets corresponding to a specific reporting facility. Enter the Facility ID or click the Lookup icon  to select the facility from a list.

10. Use the **Site** filter to search tasks by cancer site. Click the Lookup icon  to select a single code from a list or type one or more codes into the box (separate the codes by commas or spaces). You may enter a partial string. For example, enter C50 to search for site codes of C500 through C509.
11. Use the **Data Type** filter to search for tasks by the type of data that is the focus of the task. You may select one record type or patient set. Once a record moves through the workflow and is linked to a patient set, the patient set will be the focus of the task. If a task involves multiple records, the records other than the focus record are not considered when searching by record type.
12. Use the **Reportability** filter to search for record tasks with a specific value for reportability. Once the record is linked to a patient set, the patient set becomes the focus of the task. The Reportability filter cannot be used to search for Patient Set tasks (Visual Edit Patient Set, Resolve Patient Set Errors, for example).
13. If the filters are set appropriately, click **Apply**. Click **Reset** to restore default settings.

Following Data through the Worklist

A Task ID is assigned when an incoming record triggers the initial task in the workflow. As the record moves from task to task, the same Task ID is maintained. This remains true until the record completes its journey through the workflow. At that point, there will be no tasks in the workflow with that Task ID.

The Worklist Filter provides a mechanism for searching the Worklist by several fields, including task ID, patient set ID, and the record ID of unlinked records (once a record is linked to a patient set, you must search by the patient set ID). Filtering by Task ID, if known, is the fastest and most effective way to follow a record through the workflow. Therefore, it is recommended that you take note of the Task IDs as you do your work.



To facilitate tracking by Task ID, SEER*DMS shows the Task ID at the top of the page during a task.



When you finish a task, a message is displayed at the top of the Worklist, notifying you that the data have been updated and reminding you of the Task ID.

To follow data as you complete a task:

1. Take note of the Task ID. You may copy the task number to the Windows clipboard (highlight the text on the screen with your cursor and press Ctrl-C), or write it down.
2. Use the Worklist Filter to determine where the data are now. Select **View > Worklist**, or click the **Worklist** link on the Home page.
3. By default, only tasks assigned to you are displayed. The record or patient set may have moved forward in the workflow to a task that is not assigned to you. To search among your tasks, tasks assigned to others, and unassigned tasks:
 - a. Remove the text in the **User(s)** filter.
 - b. Check **Show Unassigned**.

4. Enter the worklist task ID in the Task ID(s) filter. (If you copied the number to your clipboard, click your mouse in the Task ID(s) filter and press CTRL-V to paste the text into the filter.)
5. Click **Apply**. If the task is not found in the worklist, all workflow tasks required to process the record or patient set were completed.

Assigning, Releasing, or Rerouting Tasks

Requires system permission: *worklist_task_reassignment*

When a user opens an unassigned task, the task is assigned to that user's account and will be listed in the **My Tasks** section of their Home Page. Other users cannot access the task unless the task is released or rerouted.

Assigned tasks can be rerouted to a different user or released. The Release feature resets the task to unassigned; the Reroute feature changes the assignment from one user to another. Tasks can only be rerouted to a user with the appropriate system permissions.

To reroute or release an open worklist task:

1. To assign the selected task(s) to another user, select **Task > Reroute**.
 - a. Set the **Action** to *Reroute to user*, and select a user name from the pull-down list. The list will only include users who have the system permissions required to open all of the selected tasks.
 - b. Enter text into the **Comment** box. This text will be included in the e-mail notification sent to the user receiving the task.
2. To designate the task(s) as unassigned, select **Task > Release**.
3. If you have the *system_administration* permission, *Terminate* and *Restart* will be included on the Task menu (Restart will only be available in tasks related to records, not patient sets). These actions should be used with care (see the *Terminating Tasks* and *Restarting Tasks* sections of this chapter for more information).

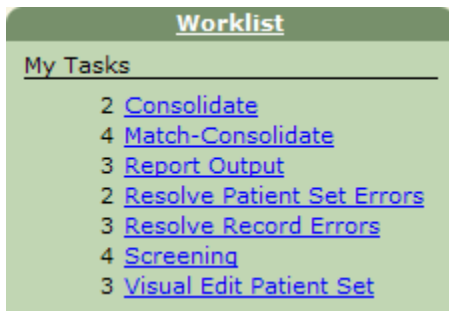
To use the Worklist to assign, release, or reroute worklist tasks:

1. Select **View > Worklist** or click the **Worklist** link on the Home page.
2. To release or reroute a specific user's tasks, enter their username in the **User(s)** filter.
3. To modify tasks of a certain type, or to modify a specific task, use the filters to limit the list (as described in the *Searching or Filtering the Worklist* section of this chapter.)
4. Select the task or tasks:
 - a. To select a single task, check the box to the left of the Task ID.
 - b. To select two or more tasks, use one of the following methods:
 - i. To select specific tasks, check the box to the left of each Task ID. You can only select tasks on the same page with this method.
 - ii. To select all tasks displayed on the current page, check the box on the top left of the page, adjacent to the **Task** column heading.
 - iii. To select all tasks on all pages of the filtered worklist, click **Modify All** and skip ahead to Step 6.

5. Click **Modify**.
6. Set the **Action**:
 - a. To assign the selected task(s) to a user, set the **Action** to *Reroute to user*, and select a user name from the pull-down list. The list will only include users who have the system permissions required to open all of the selected tasks.
 - b. To designate the task(s) as unassigned, set the **Action** to *Release*.
 - c. If you have the *system_administration* permission, *Terminate* and *Restart workflow activity* will be listed as possible Actions. These should be used with care (see the *Terminating Tasks* and *Restarting Tasks* sections of this chapter for more information).
7. Enter text into the **Comment** box. This text will be included in the e-mail notification related to this action.
8. Click **OK**.
9. Each rerouted task will be assigned to the selected user. SEER*DMS will send an e-mail notification to the user, listing the Task ID for each task that is now assigned to that user. Each released task will be designated as unassigned.

Opening a Task Assigned to You

The **My Tasks** section of the Home page summarizes the worklist tasks assigned to you. Only tasks appropriate for your system permissions will be displayed. The number of tasks assigned to you is displayed to the left of the task type. Use the shortcut links to access the worklist; the worklist will be filtered to show the tasks of that type that are assigned to you.



To open a task assigned to you:

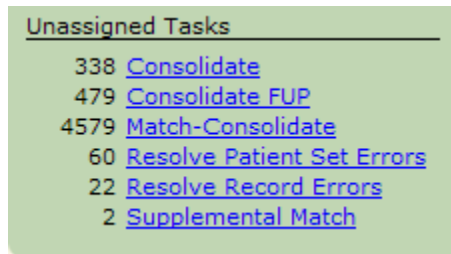
1. Open the worklist:
 - a. To view all the tasks assigned to you, select **View > Worklist** or click the **Worklist** link on the home page.
 - b. To view assignments of a certain task type, click one of the shortcut links in the **My Tasks** box on the home page. (Note: If there is only one task of that type, that task will open automatically.)
2. To reduce the list further, enter search criteria in the filter controls. (See *Searching or Filtering the Worklist* for instructions.)
3. Click **Apply**.
4. To sort the worklist by the data in a column, click on the column heading.

5. To open a task, click on the ID number in the **Task** column. Once you open a task, it is assigned to you and will remain assigned to you until you complete the task or the task is released or rerouted.

Opening an Unassigned Task

System permissions are required to view and access certain task types. (See *Worklist Types* for more information.)

The **Unassigned Tasks** box on the Home page summarizes the unassigned tasks that you are permitted to access, and provides shortcut links for each type of task. Use the shortcut links to access the worklist; the worklist will be filtered to show the tasks of that type that are unassigned.



To open an unassigned task:

1. Select **View > Home**, or click the **SEER*DMS logo** to view the Home page.
2. To view the unassigned tasks of a certain type, click one of the shortcut links in the **Unassigned Tasks** box. (Note: If there is only one task of that type, that task will open automatically.)
3. To reduce the list further, enter search criteria in the filter controls. (See *Searching or Filtering the Worklist* for instructions.)
4. To sort the worklist by the data in a column, click on the column heading.
5. To open a task, click on the ID number in the **Task** column. Once you open a task, it is assigned to you until you complete, release, or reroute it.

Terminating Manual Tasks

System permissions: *system_administration*

You may use the terminate feature to end manual worklist tasks. Instructions for ending automated tasks are provided in the *Viewing or Aborting Automatic Tasks* section of this chapter. The terminate feature should be used with extreme care when modifying tasks that relate to the processing of patient data. The task is ended without forwarding the record or patient set to subsequent processes in the workflow. Terminate is an appropriate method for removing tasks that are unrelated to the processing of patient data, for example, Report Output tasks.

To terminate manual worklist task(s):

1. Select the task or tasks. To search for a task in the worklist, use the Worklist filters as described in the *Searching or Filtering the Worklist* section of this chapter.
2. Specify the tasks to be terminated by checking the box to the left of each Task ID.
3. Click **Modify**.

4. Set the **Action** to *Terminate*.
5. Click **OK**.
6. Click **OK** to confirm. The tasks will be removed from the workflow. SEER*DMS will send an e-mail notification to you.

Restarting Workflow Activity

System permission: *system_administration*

You may use the restart workflow feature to terminate a task and resubmit the focus record to the beginning of the workflow. If a patient set is the focus of a task, the workflow activity cannot be restarted. Therefore, a record cannot be resubmitted to the workflow once it has been linked to a patient set. Only the task's focus record is resubmitted to the workflow. Other records involved in the task are not affected.

Modifications previously made to the record will be retained. Therefore, a record may trigger a Resolve Record Errors task when first loaded but not trigger the task when resubmitted (if the relevant data items were changed).

To restart the workflow activity of incoming record(s):

1. Filter the worklist so that the tasks of interest are displayed in the worklist (see the *Searching or Filtering the Worklist* section of this chapter).
2. Select the task(s) by checking the box to the left of each Task ID.
3. Click **Modify**.
4. Set the **Action** to *Restart workflow activity*.
5. Click **OK**.
6. Click **OK** to confirm when prompted. The selected tasks will be ended and the focus records will be sent to the beginning of the workflow, triggering new tasks. The new workflow tasks will be assigned new Task IDs. SEER*DMS will send an e-mail notification to you indicating the number of records that were resubmitted to the workflow.

Viewing or Aborting Automatic Tasks

System permission: no special permissions are required to view automatic tasks; *system_administration* is required to abort automatic tasks.

When SEER*DMS performs an automated process, an automatic task will appear in the worklist. These items allow users to track the progress of automatic tasks through the workflow, and view additional information about an item, if necessary.

SEER*DMS will run most automated processes quickly, and remove the item from the worklist as soon as the task is completed. However, if a process is taking longer than expected, a user may need to cancel the operation by ending the task as described in *Terminating Tasks* section.

To access an automatic task in the worklist:

1. Select **View > Worklist**, or click the **Worklist** link on the Home page.
2. Only your tasks are displayed. Some automated tasks are assigned to the user who initiated the process. For example, Run Report tasks are assigned to a user. Other

automated tasks are unassigned. To view all automated tasks, clear the search text in the **User(s)** filter and check the **Show Unassigned** box.

3. Scroll down the list in the **Type(s)** filter. Automatic task types are displayed at the bottom of the list in grey. Select one or more task types to display.
4. Click **Apply**. The worklist will be filtered to display only the selected automatic task types. (The Task IDs for automatic worklist tasks are displayed in grey.)
5. Click the Task ID to view additional information about an item.
6. If you determine that this operation needs to be canceled, click **Abort Task**. Otherwise, click **Close** to return to the worklist.

System Failure Tasks

System permission: the permission required to perform the task is also required to view a System Failure spawned by that task; no permissions are assigned to automated tasks for processing records moving through the workflow.

A System Failure task will be created if SEER*DMS is unable to perform a process. Open the task to view the name of the workflow activity, the time and date that the activity was started, and the runtime exception generated. If you determine that the failure was due to a temporary problem such as a database deadlock, you may **Retry** the activity. If you believe that a system flaw caused the problem, report the System Failure to the SEER*DMS technical support team.

Printing the Worklist

You may print a list of the tasks displayed in the worklist. The list will include all tasks currently selected in the Filter settings. It is recommended that you filter the worklist prior to printing to avoid an excessively large print job. There are several reports related to tasks in the worklist and worklist tasks that have been completed. See the *Workflow Reports* section of this chapter for more information.

To print the worklist:

1. Select **View > Worklist**, or click the **Worklist** link on the Home page.
2. Use the **Filter** controls to select the worklist items that you would like to print. (See *Searching or Filtering the Worklist* for more information.)
3. Click **Print**. SEER*DMS will generate a system report in a PDF file (RPT-040A).
4. Depending on your browser settings, you may be prompted to **Open** or **Save** the report. If so, click **Open**. The PDF will open in an Adobe Acrobat window.
5. Use the Adobe controls to print or save the worklist report; and close the Adobe window.

Worklist Tasks

The task types shown in the worklist are listed in the following tables. Each manual task is initiated when an automated task cannot be completed without human intervention. The Automated Tasks listed here are the tasks which are triggered by a system user but completed in automated processes, for example, when starting a System Task.

Manual Tasks	Function
Consolidate	Combine data from incoming records with data previously loaded into the system (<i>Chapter 12: Consolidating Data</i>).
Consolidate FUP	Resolve conflicts encountered during the automated consolidation of follow-up information (<i>Chapter 16: Follow-up</i>).
Image Data Entry	Enter record data stored in an image file
Import Review	Review a pre-load analysis of an import in order to identify potential errors prior to loading the records into the workflow (<i>Chapter 5: Importing Data Files</i>).
Match-Consolidate	Review possible matches identified for an incoming record (main workflow path). Determine whether the record should be consolidated with an existing Patient Set, or refers to a new Patient Set (<i>Chapter 10: Matching Incoming Records to Database</i>).
Non-rpt Rescreening	Review two records that match each other but do not match any reportable records or patient set data. This task is only created if the two matching records are both auditable (not reportable); or if one is auditable and the other is supplemental. Verify the match and determine if the combined data should be used to create a patient set (<i>Chapter 15: Re-screening of Non-reportable Records</i>).
Report Output	Access the output of a report that ran offline (<i>Chapter 24: Creating Reports and Extracting Data</i>).
Resolve Patient Set Errors	Resolve errors identified in the final automated review of the patient set (<i>Chapter 14: Resolving Patient Set Errors</i>).
Resolve Record Errors	Resolve errors which must be resolved prior to screening (<i>Chapter 8: Resolving Record Errors</i>).
Screening	Screen an incoming record for reportability (<i>Chapter 9: Screening for Reportability</i>).
Supplemental Match	Review possible matches for data that follows the supplemental workflow path. This task is only created if the supplemental match algorithm includes weighted, possible match results.
Visual Edit Patient Set	Review a new patient set that was auto-created from an incoming record (<i>Chapter 13: Visual Editing</i>).
System Failure	View information about a process that failed to complete.

Automated Tasks	Function
Automatic Patient Edits	Recalculates the edit errors for a cohort of Patient Sets (<i>Chapter 14: Resolving Patient Set Errors</i>).
Execute Build Task	Builds CTCs from non-abstract records (<i>Chapter 27: System Administration</i>).
Execute Import	Loading imported data (<i>Chapter 5: Importing Data Files</i>)
Execute Import Analysis	Performing the pre-load analysis of an import in order to identify possible potential errors prior to loading the records into the workflow (<i>Chapter 5: Importing Data Files</i>).
Execute System Task	Executing one of the utilities or "tasks" that implement processes in batch mode (<i>Chapter 27: System Administration</i>).
Run Extract Report	Create data file for a system extract (<i>Chapter 24: Creating Reports and Extracting Data</i>).
Run Report	Generating output of a system report (<i>Chapter 24: Creating Reports and Extracting Data</i>).
Other Automatic Activities	This allows you to search for other automated tasks not specifically listed in the filter.

Workflow Reports

These SEER*DMS system reports can be used to monitor data and tasks in the workflow.

Report ID	Title	Description
RPT-003A	Tasks for Unlinked Records with Closed AFLs	Lists workflow tasks for unlinked records which are associated with closed AFLs.
RPT-061A	Workflow Location of Imported Records	For each record imported at a specified time, this report lists the current location of the record in the workflow. It is paged by the import data file which contained the original record.
RPT-062A	Workflow Tasks by Facility and Year of Diagnosis	Workflow tasks by source facility and diagnosis year.
RPT-075A	Number of Open Worklist Tasks by Data Type	Number of open, manual workflow tasks by year of diagnosis and data type.
RPT-075A	Number of Open Worklist Tasks by User	Number of open, manual workflow tasks by user account (total, number of unassigned tasks, and number assigned to each user).
RPT-082A	Number of Workflow Tasks Completed (by Task)	The number of workflow tasks completed in a specified time period. This report includes a list of users for each type of task.
RPT-082B	Number of Workflow Tasks Completed (by User)	The number of workflow tasks completed by each user in a specified time period. This report lists the number of tasks per user.
RPT-084A	Summary of Data Entry and Ad hoc Editing	The number of Records and Patient Sets imported via data entry and modified via ad hoc editing.

Chapter 5: Importing Data Files

Data files may be imported using the SEER*DMS interface or auto-loaded from a specified network location. All data files must adhere to file specifications documented in the Imports section of the Help menu.

For most record types, the imported data are stored in the record table of the SEER*DMS database and can be viewed within the SEER*DMS record editor. Each record enters the workflow and initiates the automated and manual tasks which are required to process the data. You may specify the Import ID in the Patient Lookup, Worklist, or Import Manager to search for the records or to determine whether the records have completed the workflow. The Import Manager also provides summary information about each import and access to the source data files.

Supplemental import data are only stored in the record table if a manual task was necessary to match or consolidate the data. If the automatic matching task does not identify any potential matches, the supplemental data are not retained at all. If SEER*DMS is able to consolidate the data without a manual task, the patient set is updated; and the Import ID, filename, and line number are recorded in the patient set's audit log.

In this chapter, you'll learn about

- Import Manager
- Importing Data Files within SEER*DMS
- Auto-Loading Data Files
- Import Summary Information
- Reviewing Field Frequencies
- Import Review Task
- Identifying Records that Could Not be Loaded
- Notifying the Source Facility of Problems with Data Files
- Import Info Page
- Finding Records and Tasks Related to an Import
- Reports Related to Data Imports

Import Manager

Requires system permission: *import_electronic* or *import_manual*

Use the Import Manager to locate records loaded in a particular import, to view or download a copy of the source data files, or to determine the current workflow location of each record in an import.

To access the Import Manager, select **System > Imports**. The following data columns are shown in the Import Manager:

- **Import ID** – A unique ID assigned to each import. Click the ID to view details about the import as described in the *Import Summary Information* section of this chapter.
- **Import Date** – Date and time that the import was initiated.
- **Facility** – The facility selected by the user or set in the autoloader configuration file for this import. This facility is used by default as the record's default reporting facility when the reporting facility is not available on the record.
- **User** – The user who initiated the import. "seerdms" will be listed as the user for autoloader imports and data migrated at the time of deployment.



- **Records** – The number of records imported. This value will be zero until the Import Review task is completed and the data are successfully loaded.
- **Type** – The import’s Media Type is displayed in this column. The possible values are Files, Data Entry, or blank (migrated data).
- **Comment** – The import-wide comment entered on the same page as contact when starting a new import or entered in the <> tag in the autoloader XML.
- **Action** – Click Lookup in the Action column to search the database for records loaded in the import. A maximum of 500 records will be listed. Use RPT-009A to generate a complete list of the records loaded in an import.

Importing Data Files within SEER*DMS

Requires system permission: *import_electronic* and *contact_view*

You may use the SEER*DMS interface to import data files from any local or network disk drive that you can access. The files will be uploaded through your Web browser and are subject to HTTP size limitations. Use the auto-load feature to import data files that exceed these limitations.

To import data files using the SEER*DMS interface:

1. Select **System > Imports** to access the Import Manager.
2. Click **New Import**.
3. Use the  lookup for the **Facility** field to specify the import facility. You also have the option of specifying a **Contact** at that facility.
4. Set the **Media Type** to *Files*.
5. You may enter a **Barcode** or import reference number, if applicable.
6. You may enter notes regarding the import in the **Comments** field.
7. Click **Next**.
8. If a Data Exchange Agreement (DEA) between the registry and facility is defined, you will have the option to indicate whether the data in the import are related to the agreement. The DEA fields in Contacts and Imports are for tracking purposes only. Use these fields according to your registry’s policies.
9. In the **Add File** section, click **Browse**. Explore to the appropriate folder and select a file.
10. Select the **File Type**. Click the  information icon to review the layout for that file type.
11. You may enter a **Comment** regarding this specific file.
12. Click **Add**. SEER*DMS will determine if the file was loaded before. If the file is a duplicate, a warning message will be displayed. To remove the file from the import, click the **Remove** link in the **Action** column. (SEER*DMS will allow you to over-ride the warning and load a duplicate file. Use this feature cautiously and only after consultation with registry managers and technical support staff).
13. Repeat steps 9-12 for each file which is being imported from this facility. Each file will be listed in the **Current Files** section as it is added.
14. Click **Import**.

15. SEER*DMS will analyze the data files and create a manual Import Review task prior to storing the data in the database. Refer to the *Import Review Task* section of this chapter for instructions on completing this task. The Import Review Task provides an error summary and frequencies of all data fields. Once you review these statistics, you will have the option of loading the data or terminating the import for some or all data files.

Auto-Loading Data Files

SEER*DMS can be configured to automatically load data files stored in designated locations on the network. On a regular basis, an automatic workflow task imports all files in the auto-loader directories. The frequency of the directory scan is controlled by registry-defined configuration parameters. The auto-loader allows the registry to accept routine transmissions from sources such as ePath without human intervention; and provides a mechanism for loading files that exceed HTTP size limitations. Please refer to the *SEER*DMS Technical Reference* for more information in configuring the auto-loader.

SEER*DMS will analyze the data file and create a manual Import Review task prior to loading the data into the database (refer to the *Import Review Task* section of this chapter for detailed instructions). The task provides an error summary and a listing showing the frequency of each value for all data fields. Once you review these statistics, you will have the option of loading the data or terminating the import for some or all data files.

SEER*DMS checks auto-loaded data files to determine if the files were previously loaded. If a duplicate file is copied to an auto-load directory, the file will not be loaded and email notification will be sent to the user specified in the auto-loader configuration.

Import Summary Information

The following information is listed for each file on the Import Info page and in Import Review tasks.

- **Filename** – Click the filename to open or download the file.
- **Records** – The total number of records in the data file.
- **Errors** – The number of records which cannot be evaluated due to errors in the record layout, fields which define the record type, or key fields required when the data are loaded into the record table. In an Import Review task, the number of errors will be a hyper link if the value is greater than zero. Click the value to open the Import File Problems popup and review a sample of records which cannot be loaded due to layout problems. SEER*DMS performs a limited amount of error checking at this point. This error count will not identify invalid values in all data fields. You must review the frequencies shown at the bottom of the page to verify data values.
- **Duplicate** – If two records within the same file are exact duplicates, one will be loaded and the other will be counted here. This count also includes records which cannot be loaded because they are exact duplicates of records loaded in an earlier import (based on hash maps). It also includes records which are not exact matches but provide the same data as previously loaded records. Non-exact duplicates may have differences in non-essential fields but provide the same data in key fields. In most registries, the check for non-exact duplicates is only applied to death certificate records.
- **Ignored** – To reduce the number of extraneous supplemental records in the database, some data types are evaluated to determine if they provide useful data. A record that is deemed as not useful is “ignored” (it is not processed further and is not loaded into the record table). In some registries, a pre-load matching algorithm is applied to specific types of supplemental records. A record processed in this match is ignored if it does not match a patient in the database. The number of ignored records also includes records which are not loaded because of a rule in the importer algorithm for the specific record type. For

example, some supplemental record types are ignored if social security number is null (e.g., this rule applies to HCFA and CMS records in some registries). To review the pre-load matching algorithms and importer rules used in your registry, please refer to *SEER*DMS Technical Reference: Registry-specific Information*.

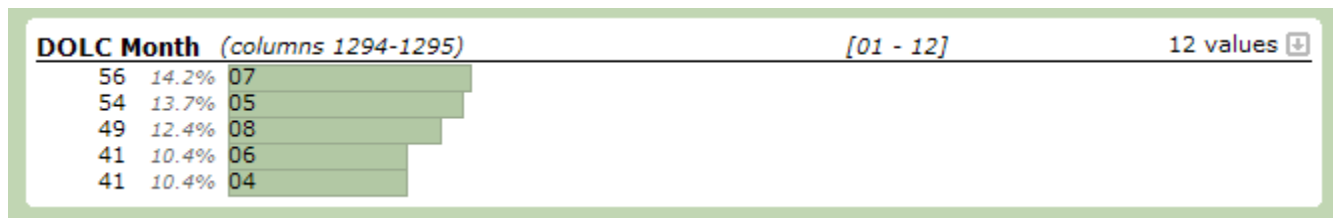
- **Valid** – The number of records which can be loaded. Valid = (Records – (Errors + Duplicates + Ignored)). If you complete the import, this is the number of new rows that will be created in the record table and the number of records that will enter the workflow.
- **File Type** – The import file type.

Reviewing Field Frequencies

Requires system permission: *import_resolution*

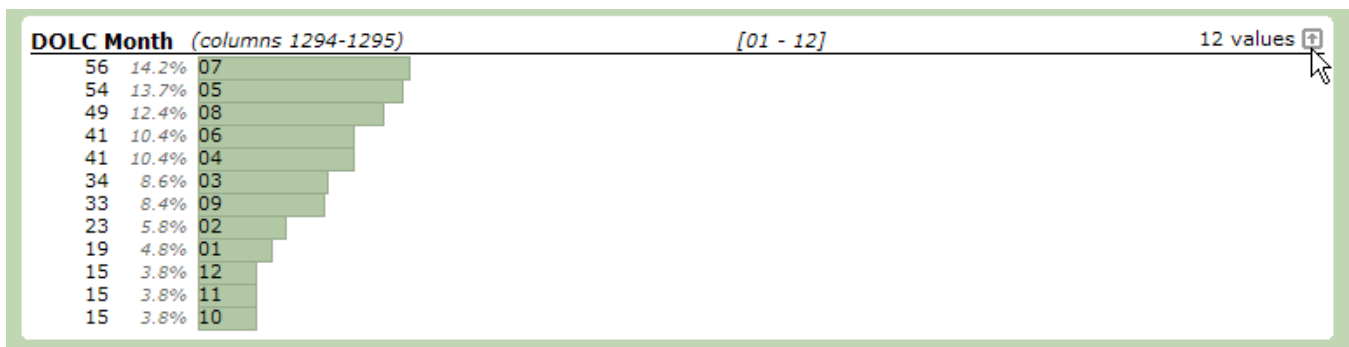
It is critical that data which are imported into the system are valid. Some import files need to be pre-processed, while others can be imported as-is. If there were problems with the data preparation, either at the sending facility or within the registry, an invalid import file could incorrectly modify a large volume of system data. This type of problem is very difficult to remedy once the data are loaded into SEER*DMS; each record immediately begins to move through the workflow and affect changes in patient set data. It is the responsibility of registry staff to define and implement comprehensive quality control procedures to prevent import errors. This should include but not be limited to the review of input field frequencies to identify invalid or unacceptable values. Field frequencies for each file are displayed on the Import Review and Import Info screens.

When an import is displayed, the Statistics section lists frequencies each data field in an import file. If multiple files are included in the import, a drop-down list allows you to switch from one file to another. The fields are listed in alphabetical order. You may use the linked letters at the top of the list to view fields which begin with that letter or use Firefox search tools to search for a fieldname or column position.



The figure above shows the type of information shown for each data field. The following describes the information that is displayed and the text actually used in the example above.

- **Field name** - shown in bold above the line: *DOLC Month*
- **Column position** – shown in parentheses next to the field name: *(columns 1294-1295)*
- **Range of values** - shown in brackets above the line in center: *[01 - 12]*
- **Number of different values** – only shown if there are more than five different values for the field. The number of different values ("*12 values*" in the example) is displayed on the far right of the page, just above the line. Up and down arrows enable you to toggle the display to show all values or hide all but the top five values. The figure below shows all twelve values for the example.
- **Statistics and bar chart** - For each value encountered for the field: the number of records, percent of records, and value. The value is shown within a histogram bar. In the example, 56 records have a value of "07" for DOLC Month. 56 equals 14.2% of the number of valid records in the file. Note: frequencies are not shown if the number of differing values exceeds display limitations. For example, it would be impractical to show a frequency for street address which would be unique for every record.



Import Review Task

Requires system permission: *import_resolution*

Once an import is initiated, SEER*DMS will analyze the data files and create a manual Import Review task prior to loading the data into the database. The Import Review Task provides an error summary and a listing showing the frequency of each value for all data fields.

To complete the Import Review tasks:

1. Click the **Import Review** link in the **My Tasks** section of the worklist summary on the home page.
2. Click the Task ID to open the task. At this stage, the files have been checked for errors and analyzed to create frequencies of values in all data fields. The records have not been loaded into the system.
3. Carefully review number of records listed for Records, Errors, Duplicates, Ignored, and Valid in the Import Files section of the page. Each of these fields is described in the previous section.
4. Follow steps 5 and 6 for each file with errors.
5. If an incorrect file type was specified for the file:
 - a. Select the correct **File Type**. An asterisk is displayed next to the original File Type selected when the import was initiated. The field frequencies shown in Statistics are based on the layout of the File Type that is displayed with the asterisk.
 - b. Set **Action** to *Accept*.
6. If the file type is correct but the file has errors:
 - a. Click the value displayed in the errors column.
 - b. Review the error messages. You must determine whether you want to reject all records in the file or import the records that did not cause errors. (Note: Once an error is encountered, the first record with the error and all subsequent records will be displayed in red.)
 - c. Click **Close** to close the Import File Problems window.
 - d. Set the appropriate **Action** for this file.

- i. If you would like to contact the reporting facility and obtain a replacement for a file with errors, select *Reject* to reject all records in the file (records in other files will not be affected).
 - ii. If all errors are caused by duplicate records, you may use *Re-import valid only* to accept the non-duplicate records. If there are other types of errors, only use this action if you have the technical resources to identify the records with errors. You should attempt to obtain corrected versions of these records, as described in the *Identifying Records that were Not Loaded* section of this chapter.
7. To close the Import Review task:
 - a. If an Action is specified for each file, click **Import** to load the acceptable data and exit the task. If the data cannot be loaded or a new file type was selected for a file, a second Import Review task will be created and assigned to you. Otherwise, the records will begin entering the workflow. Automated and manual tasks related to the records will be created in the worklist. You may specify the Import ID in the Patient Lookup, Worklist, or Import Manager to search for the records or to determine whether the records have completed the workflow. System reports provide additional information regarding the imported data.
 - b. If you would like to close the Import Review task without importing any of the files:
 - i. To request new files from the source facility and retain the Import Problems task as a reminder, follow the instructions in *Notifying the Source Facility of Problems with Data Files*. If you suspect the error was in a pre-processing step, request a new file from your data processing department.
 - ii. Click **Reject All**.
 - c. To exit without removing the task from the workflow, click **Cancel**. The task will be assigned to your user account.

Identifying Records that Could Not Be Loaded

As described in *Resolving Problems with Imported Data Files*, it is possible to load partial files. This will commonly be used to ignore duplicate records within a file, but may also be used to ignore records with other errors. If a partial file is loaded, it is the responsibility of the registry's technical staff to identify and obtain corrected versions of the records that were "ignored" (not loaded).

To identify the records that were not loaded, compare a list or extract of records to the original data file submitted by the reporting facility. SEER*DMS includes a system report that provides a list of the records loaded from each data file (RPT-009A). Alternatively, you may use a similar query in an external application to create a data extract.

Provide a list of the records with errors to the reporting facility and request replacement records. If you wish the request to be tracked within SEER*DMS, you may use the Record Request feature described in *Chapter 23: Requesting Records*.

Notifying the Source Facility of Problems with Data Files

Requires system permission: *import_resolution*

While performing an Import Review task, you may use the Query feature to request new data files or report errors to the organization representative.

1. Open the task as described in the *Import Review Task* section of this chapter.

2. Click **Query**. You will be able to use any communication method, provided that the relevant contact information is defined for the representative in the Contacts list. (See *Chapter 19: The Contact List* for more information.)
3. To send an e-mail:
 - a. Set **Type** to E-mail.
 - b. Click **To**, **CC**, or **BCC** to change the recipients.
 - i. Enter text in the **Search** filter to find a specific person.
 - ii. Check **To**, **CC**, or **BCC** for each contact, as appropriate. Only one contact may be selected as the main recipient (To).
 - iii. Click **Save** to exit the recipient page and continue composing the e-mail message.
 - c. Enter text into the **Message** box (do not include confidential information).
 - d. If you would like to attach the problematic data file, click **Attach File**. Do not attach files containing confidential data unless the file is encrypted. (SEER*DMS does not provide a mechanism for encrypting data files or e-mail messages.)
 - e. Click **Send**.
4. To print a letter to be faxed or mailed:
 - a. Set **Type** to either Fax or Letter.
 - b. Enter the text for the body of the letter into the **Message** box.
 - c. Click **Print** to create a PDF file.
 - d. Review the contents of the letter. If necessary, close the Acrobat window and return to the Communication page to make revisions.
 - e. Use the Acrobat controls to print the letter.
5. To contact the representative by phone:
 - a. Set **Type** to *Phone*.
 - b. The contact's phone number will be displayed on the screen as a reference while you make the call. The message box is not relevant to phone communications.
 - c. If you are unable to reach the contact, you may want to make a note to remind yourself to try again later or use an alternate method of contact. Or, click **Cancel** to cancel all changes made in this Import Problems task. The task will remain in the worklist assigned to you.
 - d. Once you have successfully completed the call, click **OK**.

Import Info Page

Requires system permission: *import_electronic* or *import_manual*

You may use the Import Info page to view or download the source data files, view a summary of open worklist tasks related to the imported records, search the database for a sample of records loaded in the import, view field frequencies or summary statistics.

The information described below is displayed on the Import Info page. The statistics section is described in the *Reviewing Field Frequencies* section of this chapter.

- **Import ID** – A unique ID assigned to each import. This ID can be used throughout SEER*DMS to find data loaded in a particular import and is displayed when editing a record.
- **Contact** – The contact selected by the user or set in the autoloader configuration file for this import.
- **Facility** – The facility selected by the user or set in the autoloader configuration file for this import. This facility is used by default as the record's default reporting facility when the reporting facility is not available on the record.
- **Type** – The import's Media Type is displayed in this column. The possible values are: Files, Data Entry, or blank (migrated data).
- **Barcode** – Barcode or reference number entered by the user who imported the data.
- **Import Date** – Date and time that the import was initiated.
- **User** – The user who initiated the import. "seerdms" will be listed as the user for autoloader imports and data migrated at the time of deployment.
- **Records** – The number of records imported. This value will be zero during initial pre-load tasks. The value will be zero until the Import Review task is completed and the data are successfully loaded.
- **Comment** – The import-wide comment entered on the same page as contact when starting a new import or entered in the <> tag in the autoloader XML.
- **Import Summary** – This summary shows the total number of records in all data files and the number that were imported (sum of "Valid" for all data files). The difference equals the sum of records with errors, duplicates, and ignored records. Click the **Imported Records** link to view a sample of the records via the Patient Lookup (limited to 500 records).
- **Worklist Summary** – A count for each type of worklist task involving records loaded in this import. You may click the task type to view or open the tasks via the worklist.
- **Import Files** – This section shows an error summary for each file loaded in this import. See the *Import Summary Information* section of this chapter for a description of the statistics displayed in this section. Click the filename to open or download the data file.

Finding Records and Tasks Related to an Import

When source data submitted to the registry are imported, the data are assigned unique IDs (with a "REC-" prefix) and are stored in the record table of the SEER*DMS database. In some registries, a pre-load matching algorithm is used for supplemental data types and the non-matching supplemental records are not stored in the database. Refer to your registry-specific Technical Reference and workflow diagrams to determine if all imported supplemental data are stored.


Each imported record travels through the workflow, triggering the automated and manual "tasks" that must be performed to process the data. There are a variety of tools in SEER*DMS for determining the current location of a record in the workflow and the end result of the workflow processing. Use these tools to determine whether there are open tasks related to the records and if the records have been consolidated into the patient set data.

To view a summary of open tasks related to the import:


1. Select **System > Import**. The most recent imports will be listed on the first page of the manager. The pages of the managers include all data entry sessions, autoloader data, and data loaded in the system interface. You may use the filters to search for a specific import. The filters correspond to the fields described in the *Data Shown in the Import Manager* section of this chapter.

2. Click the **Import's ID**.
3. The **Worklist Summary** on the right side of the screen will be recalculated.
4. Click one of the links to view or access the tasks via the worklist.

To search the worklist for open tasks related to the import:

1. Select **View > Worklist**, or click the **Worklist** link on the Home page.
2. Use the **Import** filter to display tasks related to records loaded in a specific import. Enter the Import ID or click the Lookup icon  to search for the Import ID by facility, date, and/or user.
3. Some filters are pre-set when you enter the worklist. To ensure that all tasks related to records in this import are listed:
 - a. Do not select a value in the task Type(s) filter.
 - b. Set the **User(s)** filter to blank.
 - c. Check **Show Unassigned**.
4. Click **Apply**.
5. The results will only include record-based tasks for records loaded in the import. When a record moves through the workflow and is linked to a patient set, the focus of the task switches from the record to the patient set. The task would no longer be shown in a list of tasks related to the Import ID. Use RPT-061A to obtain a complete list of tasks initiated by records in an import.

To review a sample of records loaded in a specific import:

1. You may initiate your search from the Import Manager or the Patient Lookup:
 - a. To search from the Import Manager:
 - i. Select System > Import Manager.
 - ii. Click the **Lookup** link listed for the import of interest.
 - iii. A Patient Lookup search will be executed using the import's ID as a search field. All other search fields are ignored when an Identifier Search field is used.
 - b. To initiate the search from the Patient Lookup:
 - i. Select **View > Patients**.
 - ii. Click **ID Lookup** in the left navigation bar.
 - iii. Use the  lookup to specify an **Import ID**.
 - iv. Click **Search**
2. The search results will be limited to a sample of 500 records from the import.

Reports Related to Data Imports

Select **View > Reports** to review the current list of system reports provided in SEER*DMS. The reports listed below are the system reports related to data imports that were included in SEER*DMS when this manual was printed. If you require information regarding imported data that is not included in a system report, you may generate an external report. See *Chapter 24: Creating Reports and Extracting Data* and *SEER*DMS Data Dictionary* for more information.

Report ID	Title	Description
RPT-009A	Imported Records	A list of records imported into SEER*DMS on a specified date. You may select a specific facility, if appropriate.
RPT-061A	Workflow Location of Records	For each record imported at a specified time, this report lists the current location of the record in the workflow.
RPT-070A	Import Summary	Number of records loaded per imported data file.

Chapter 6: Data Entry

The SEER*DMS import feature provides access to data entry screens that allow you to enter data using the keyboard. This feature is used to key in data printed on paper forms. You may also wish to enter data based on images of scanned documents (referred to as "image files" in SEER*DMS). However, image files are typically imported rather than manually attached to a record in a data entry session. When an image file is imported, SEER*DMS automatically attaches the image to an "empty" record and creates a manual Image Data Entry task that enables the user to enter data in critical fields. Please refer to *Chapter 5: Importing Data Files* for instructions related to image files.

A record created via data entry is forwarded into the workflow processes designated for its record type, following the same path as if it were loaded from a data file. However, in many registries, Review Flags may be set during data entry but cannot be set in data stored in a file. If the person performing data entry sets a Review Flag to "reviewed", edits associated with the flag will not trigger a Resolve Record Errors task when the record moves forward in the workflow. Registry managers must define standard operating procedures for those who manually enter new data; and must evaluate edits applied to record data.

In this chapter, you'll learn about


- Starting a Data Entry Session
- Using the Record Editor
- Entering Values for the Data Fields
- Keyboard Functions for Data Entry
- Printing a Record in SEER*DMS
- Clearing Unsaved Data
- Reports Related to Data Entry

Starting a Data Entry Session

Requires system permission: *import_manual* and *contact_view* and *rec_edit*

You may enter a set of records from the same source facility during a single data entry session.

To start a data entry session:

1. Select **System > Imports**.
2. Click **New Import**.
3. Use the  lookup for the **Contact (Facility)** field to specify the person who provided the data. If the person is affiliated with more than one organization, select the appropriate facility for this import. Contacts and facilities are described in *Chapter 19: The Contact List* and *Chapter 18: The Organization and Facility List*.
4. Set the **Media Type** to *Data Entry*.
5. Enter the reference **Barcode** if applicable for this import.
6. You may enter notes regarding the import in the **Comments** field.
7. Click **Next**.


Follow the instructions in the *Using the Record Editor* section of this chapter to complete the data entry session. As each record is saved, SEER*DMS will assign a unique record ID and forward the record to the initial processing tasks in the workflow.

Using the Record Editor

After initiating the data entry session as described in the previous section, SEER*DMS will display a record editor similar to the one shown below.

Use the links in the **Record Navigation Box** to access each page of record data. The number of pages and the layout of the fields in the body of each page vary by record type.

The following items are displayed in the **Info Box** during a data entry session:


- **Import ID** – A unique identifier assigned to all records entered in the same data entry session or imported in the same set of files. An Import ID will be assigned when you complete the data entry session. The Import ID can be used to generate reports regarding the records entered during a data entry session (see *Reports Related to Data Entry*).
- **File Type** – This field is only relevant for records imported from data files. This field is not applicable to records entered via data entry or records migrated into SEER*DMS when the system was first deployed. If *N/A* is displayed for file type, click the Information Icon  for the import to determine whether the Media Type is Migration or Data Entry.
- **Source** – The facility specified as the source of the data.
- **Record Type** – A drop-down list of the types of records that can be entered manually.

The **body** of the record editor displays the content for the currently selected page. The layout of the fields in the body of the page varies by record type. The NAACCR record type is consistent in all registry configurations, other record types vary. A variety of controls are used on the data pages to edit specific fields; these are described in the *Entering Values for the Data Fields* section of this chapter.

Entering Values for the Data Fields

Requires system permission: *import_manual* and *contact_view* and *rec_edit*


To enter values for the data fields:

1. Select the appropriate **Record Type** from the drop-down list provided in the **Info** box on the left side of the screen.
2. The editor displays data fields in different colors to highlight fields that generated an error based on SEER and local edits. At this point, errors may be indicated for missing data fields. You should limit your attention to entering the raw data provided on the paper records; errors should be addressed during visual editing tasks. *Chapter 7: Edit Errors* contains more information on the edits and the color codes used in the record editor.
3. Enter values for all data fields provided on the paper record:
 - a. Enter data into the fields on the current page. You may use your mouse or keyboard controls to move from field to field. The cursor may be difficult to see when it is the first character in a data entry box. Therefore, the field in which the cursor is currently located will be highlighted in green.
 - b. You may enter text directly into fields; for some fields you may use a lookup  to select a value from a list. See the *Keyboard Functions for Data Entry* section of this chapter for more information.
 - c. If entering data for a record with multiple pages, use the links in the Record Navigation Box to move between pages.
 - d. If the paper record does not provide a value for a field, leave the field blank.
4. If you mistakenly enter data for a record that you do not want to save, you may clear the data entry pages. For instance, you may use this feature if you realize that you are entering data for a record that you previously entered. Refer to the *Clearing Unsaved Data* section of this chapter for instructions.
5. Click **Save** when you have entered all available data for the record.
6. Enter **Comments** regarding the data entry session, if appropriate. Your comments will be accessible on this record's Audit Log page in all subsequent tasks.
7. Click **Save & Next** to complete data entry for this record. A record ID will be assigned and displayed at the top of the page.
8. Enter data for the next record on the blank data entry screen that is displayed. Repeat data entry steps until all records are entered. You may enter data for different record types during a single data entry session.
9. After the last record has been entered and saved, click **Cancel** to end the data entry session.

Keyboard Functions for Data Entry

The table below lists keyboard functions that can be used to modify fields in the editor.

Use your mouse to go directly to a field or use the following keystrokes:	
Use	To
Tab	Go to the next field
Shift + Tab	Go to the previous field

To edit a data field, type the new value into the text box or use the following controls:	
Use	To
Click 	Open a lookup table to select a value from a list of the field's valid values. For some lookups, you will also be able to define new values (e.g., add a new physician or facility).
Ctrl + C	Copy to clipboard
Ctrl + V	Paste from clipboard to cursor location
Ctrl + X	Cut - deletes highlighted text and copies it to the clipboard
Ctrl + A	Select all text (highlight without using the mouse)
Home and End	Go to beginning or end of current field

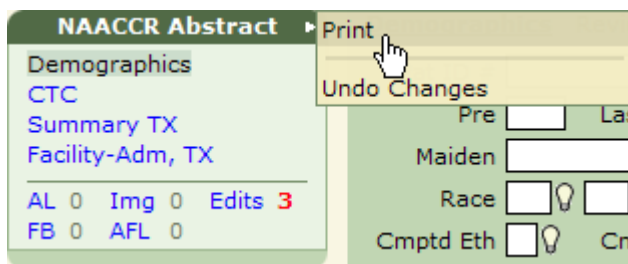
Printing a Record in SEER*DMS

Requires system permission: *rec_read_only* or *rec_edit*

Use the print feature to create a PDF report showing the current entries for all data fields. The report will include fields from all pages of the record. You may print a record during a data entry session, when a record is opened in the editor during a worklist task, or when an unlinked record is opened from the Patient Lookup. You may also print a linked record when it is viewed in the patient set editor.

To print a record:

1. Click the  menu indicator in the Record Navigation Box to open the record menu:



2. Select **Print** to create and open a PDF file.
3. Use the Adobe controls to save or print the report.
4. Close the Adobe window.

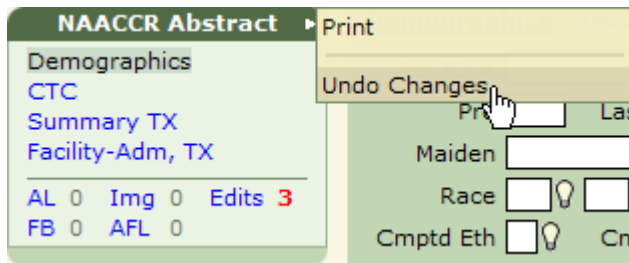
Clearing Unsaved Data

Requires system permission: *import_manual* and *rec_edit*

If you have mistakenly entered data for a record that you do not want to save, use the undo feature to clear the data entry pages. You may use this feature if you realize that you are entering data for a record that you previously entered.

To clear unsaved data:

1. Click the  menu indicator in the Record Navigation Box to open the record menu:



2. Select **Undo Changes**.

Reports Related to Data Entry

In SEER*DMS, a data entry session is considered to be a single, manual import. Therefore, each record saved during a data entry session is assigned the same Import ID. The Import ID can be used to generate reports regarding imported data files or data entry sessions. System reports related to data imports are listed in the table below. If you require additional information regarding imported data, you may query the database using the record's Import ID or Date Loaded; or query fields stored in the *Submission_file* table. See *Chapter 24: Creating Reports and Extracting Data* for further instructions; refer to the *SEER*DMS Data Dictionary* for information related to the database tables.

Report ID	Title	Description
RPT-009A	Imported Records	A list of records in a specific import or a listing of records imported on a specific date.
RPT-061A	Workflow Location of Imported Records	For each imported record, this report lists the current location of the record in the workflow.
RPT-070A	Import Summary	Filenames, number of records, and comments for imports in a specified time period.
RPT-084A	Summary of Data Entry and Ad hoc Editing	The number of records and patient sets imported via data entry and modified via ad hoc editing. This report shows frequencies by user for a specified time period.

Chapter 7: Edit Errors

Computerized edits are automated processes that test the validity of data fields. The following sets of edits are integrated into SEER*DMS: SEER Edits, SEER Extended Edits, edits defined by and for the local registry, and system edits that enforce database integrity.

- The SEER Edits cover fields submitted to SEER and represent the edits implemented in the SEER*Edits software.
- The SEER Extended edits were developed by the NCI to extend edits beyond those fields sent to the SEER Program. The extended edits are available to all SEER*DMS registries and validate fields that are not required to be transmitted to SEER.
- Registry edits are defined and maintained by registry staff. These would include edits to validate registry-specific fields, edits to implement validation not covered by SEER edits, and registry-specific versions of SEER edits (the registry may decide to vary the logic of a SEER edit by creating a registry-defined edit and disabling the SEER edit).
- System edits are edits to enforce database constraints. The SEER*DMS system edits enforce database integrity of fields common to all SEER*DMS registries. The SEER*DMS Registry system edits enforce database integrity of registry-specific fields.

SEER, SEER Extended, and all system edits are maintained and deployed by the SEER*DMS development team. Registry staff are responsible for defining and maintaining registry-specific edits that are not system edits. The SEER*DMS Edits Manager provides an interface for adding, modifying, and deleting registry edits.

SEER*DMS data screens indicate the edits that failed and the fields associated with those edits. It is recommended that, whenever possible, changes be made to the patient set and not to the record. Therefore, only errors that must be resolved prior to screening should be resolved in record data fields (see *Chapter 8: Resolving Record Errors*). All other errors should be resolved when the data are incorporated into a patient set. Patient set edit errors may be resolved in ad hoc editing or when performing a worklist task. Patient Set tasks are described in detail in *Chapter 12: Consolidating Data*, *Chapter 13: Visual Editing*, and *Chapter 14: Resolving Patient Set Errors*.

A patient set exits the workflow when all edits are cleared. However, a Resolve Patient Set Errors task is not created if an edit error is introduced because of data modifications made via ad hoc editing or Mass Change imports.

Edits are executed each time a user opens, validates, or saves a record or patient set in SEER*DMS. Edits are also executed whenever an automated process updates a patient set (this includes updates via Mass Change imports). The *Patient Set Edits System Task* can be used to execute the edits on all patient sets or a cohort of patient sets. The primary purpose of this task is to ensure that new or modified edits have been applied prior to generating an extract or report that is dependent on submissibility or edit frequencies.

In this chapter, you'll learn about

- Viewing Edit Documentation
 - Viewing Edit Documentation while Editing Data
 - Using the Edits Help Page
- Using the Edits Manager
- Understanding Edits in SEER*DMS
- Defining and Maintaining Registry Edits
- System Task to Execute Edits in Patient Sets
- Reports Related to Edits
- Color Codes Used in SEER*DMS Editors

Viewing Edit Documentation


SEER*DMS provides four ways to view documentation related to edits:

- As you are editing or viewing a record or patient set, you may use the Edits page of the SEER*DMS editor to view edit documentation for each failed edit (see the *Viewing Edit Documentation while Editing Data* section of this chapter for instructions).
- All system users have access to the Help menu which includes an Edits section. You may use the Edits Help page to search for an edit by edit ID, group, severity level, and/or search text (see the *Using the Edits Help Page* section of this chapter for instructions).
- If you have the *system_administration* permission you may use the Edits Manager to view documentation and source code for all edits. You may also use the Edits Manager to modify registry-defined edits. (See the *Using the Edits Manager* and *Defining and Maintaining Registry Edits* sections of this chapter for instructions.)
- If you have the *system_administration* permission, you can search the XML configuration files in which the SEER, SEER Extended, and system edits are defined. Refer to the *System Administration Page* section of Chapter 27 for instructions to access the system files. The edit system files are named according to the edit group. Once you select the XML file, use the Firefox search tools to find a particular edit.

Viewing Edit Documentation while Editing Data

All users with permission to view or edit record or patient set data may view documentation for edits that fail during that editing session.

To view information related to an edit that failed for a particular patient set or record:

1. Open the record or patient set in the SEER*DMS editor.
2. Click **Edits** in the left navigation section of the editor.
3. Click the Information Icon  shown next to the Edit ID.
4. The edit's ID, message, severity level, group, and list of entities will be displayed in a popup window. These components are described in the *Understanding Edits in SEER*DMS* section of this chapter.

Using the Edits Help Page

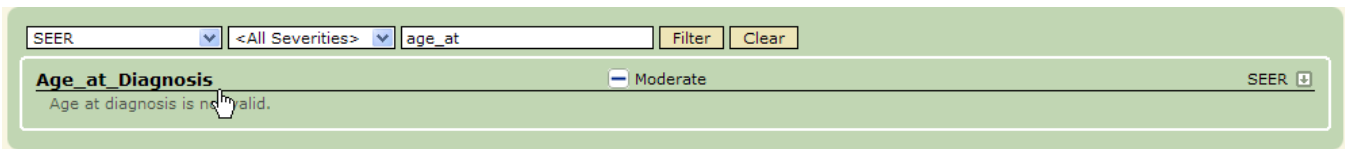
Requires system permission: *none* (all users have access to the help pages)

To search the Edits Help page for documentation related to an edit:

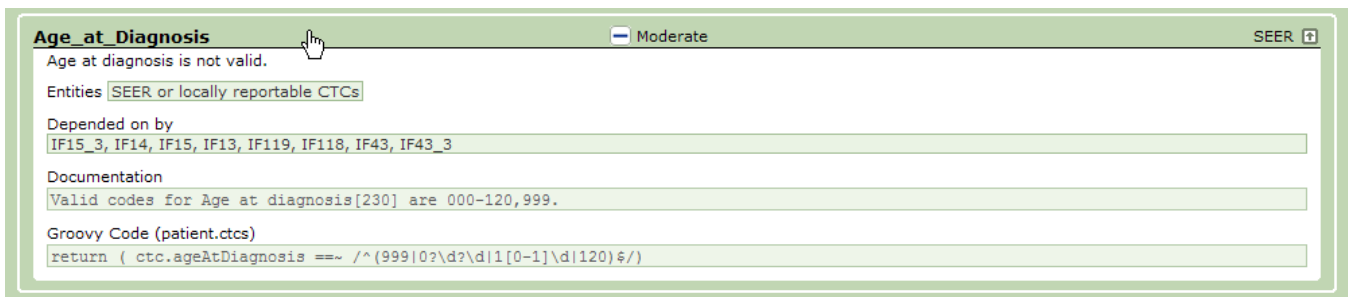
1. Select **Help > Edits**.
2. By default, all edits will be listed. You may use the filter to search by Edit Group, Severity Level, and/or text used in the message, ID, or source code.
 - a. Use the first drop-down menu to search by **Edit Group**.

- i. **All Groups** – This is the default setting.
 - ii. **<Your Registry's Name>** - Edits in this group are defined and maintained by registry staff.
 - iii. **SEER** – These are the edits implemented in the SEER*Edits software package to validate fields submitted to SEER.
 - iv. **SEER*DMS** – SEER*DMS edits enforce database integrity of fields common to all SEER*DMS registries.
 - v. **SEER*DMS Registry** – SEER*DMS Registry edits enforce database integrity of registry-specific fields (fields in the *patient_registry*, *ctc_registry*, *record_registry*, and other *_registry* tables in the database).
 - vi. **SEER-Extended** - Edits developed by NCI and IMS for the SEER*DMS registries to validate fields that are not required in data submitted to SEER.
- b. Use the second drop-down menu to search by **Severity Level**. Each edit is assigned a severity level of low, moderate, high, or critical. Please refer to the *Understanding Edits in SEER*DMS* section of this chapter for a detailed explanation of edit severity levels.
 - c. Enter text in the *keyword* box to search for text in the edit message, ID, or Groovy source code.
 - d. Click **Filter** to apply the search criteria. You may use **Clear** to reset the filter to the default values (All Edit Groups, All Severity Levels, and no search text).

The following example shows the result of using the filter to find Edit Group = SEER, Severity Level = All, and search text = *age_at*.



Click the edit's ID to expand the display of the edit information on your screen, as shown below. The edit's Message is listed first, followed by Entities, Dependencies, Documentation, and the Groovy source code. See the *Understanding Edits in SEER*DMS* section of this chapter for a description of each component.




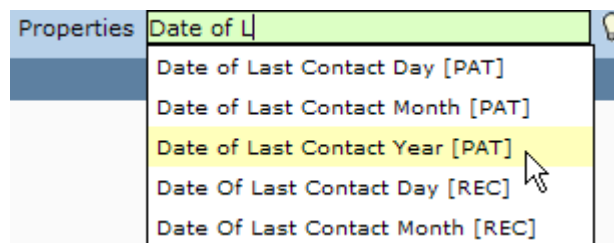
Using the Edits Manager

Requires system permission: *system_administration*

Use the Edits Manager to search for an edit or view a list of edits based on search criteria. If you are modifying or deleting an edit, follow the steps below to search for the edit and then refer to the *Defining and Maintaining Registry Edits* for further instructions.

To filter the list of edits in the Edits Manager:

1. Select **System > Edits**.
2. By default, all edits will be listed. You may use the filters to search by Edit ID, Edit Group, Severity Level, database Properties, Data Type, and text used in the message, ID, or source code.
3. The **Edit ID** is the edit's name or label (examples: IF104, SEER_IR09, Age_at_Diagnosis). Use the **Edit ID** filter to search for an edit based on a complete or partial Edit ID.
4. Use the **Group** filter to limit the list to the edits in a particular group. The edit groups are listed below.
 - a. **<Your Registry's Name>** - Edits defined and maintained by registry staff.
 - b. **SEER** – These are the edits implemented in the SEER*Edits software package to validate fields submitted to SEER.
 - c. **SEER*DMS** – These are system edits that enforce database integrity of fields common to all SEER*DMS registries.
 - d. **SEER*DMS Registry** – These are system edits that enforce database integrity of fields specific to your registry.
 - e. **SEER-Extended** - Edits developed by NCI and IMS for the SEER*DMS registries to validate fields that are not required in data submitted to SEER.
5. Use the **Severity** filter to search for edits based on severity level. Each edit is assigned a severity level of low, moderate, high, or critical. Please refer to the *Understanding Edits in SEER*DMS* section of this chapter for a detailed explanation of edit severity levels.
6. Use the **Properties** filter to search for edits which reference a specific database field in the Groovy source code. You may click the Lookup icon  to search for a field; or enter text directly into the filter (SEER*DMS will display a list of properties that match your text as you type). The text used in the Properties lookup is the Description shown on the Field Mappings help page.



7. Use the **Data Type** filter to search for edits based on the tables used in the edits' Entities.
8. Use the **Info** filter to search by text included in the Edit ID or Message.
9. If the filters are set appropriately, click **Apply**.
10. Click the ID of an edit to view or modify the edit's logic, message, or documentation. The specific components of an edit are described in the *Understanding Edits in SEER*DMS* section of this chapter.
11. If you would like to restore the default filter settings, click **Reset**.

Understanding Edits in SEER*DMS

The components of SEER*DMS edits are described below.

Edit ID

A unique identifier assigned to each edit. You must specify an ID for a new registry edit (1-50 alphanumeric characters may be used).

Guidelines for specifying an ID for a registry edit:

- Use your registry's two-character abbreviation as a prefix for all registry-defined edits (AK, CN, CT, DT, HI, IA, LA, NM).
- If you are creating an edit designed to replace or supplement a SEER Edit, the ID should consist of your registry's prefix followed by the SEER Edit ID (e.g., DT_IF29, IA_IF02).

Group

In SEER*DMS, edits are organized into five groups:

1. SEER Edits validate fields submitted to SEER. These edits were developed and are maintained by the developers of the SEER*Edits software.
2. SEER Extended Edits are defined and maintained by SEER for the SEER*DMS registries. These edits validate fields that are supported by SEER*DMS, but not required to be transmitted to SEER.
3. Registry Edits are defined and maintained by registry staff. These would include edits to validate registry-specific fields, edits to implement validation not covered by SEER edits, and registry-specific versions of SEER edits (the registry may decide to vary the logic of a SEER edit by creating a registry-defined edit and disabling the SEER edit).
4. SEER*DMS edits enforce database integrity of fields common to all SEER*DMS registries
5. SEER*DMS Registry edits enforce database integrity of registry-specific fields. The SEER*DMS development team creates these edits, if necessary, when registry-specific fields are added to the database.

Entities

When defining an edit, you must specify the database entities to which the edit will be applied. The available entities include complete database tables, for example, some edits may be run against all patient sets (entity = patients). Other entities are subsets of database structures (for example, edits may be run against "CTCs with sequence = 1" or "CTCs needing review").

Registry staff may not add or remove entities to the list. The list of available entities is defined by the SEER*DMS development team when the system is configured for the registry.

Guidelines for specifying Entities for registry edits:

- Record Edits: Select an entity related to Records ("Records" may be the only appropriate entity or your registry may have entities that define subsets of records).
- Patient Set Edits: Based on the fields used in the edit's logic, select an entity related to the database table at the lowest level of the patient set hierarchy.
 - Identify the database table used for each field used in the logic of the edit.
 - Refer to the Simplified DB Model of the Patient Set provided in the Database Documentation section of the SEER*DMS Web Portal.

- Determine the lowest level table used in the edit's logic.
- Select an entity related to that table.
- For example, an edit comparing age at diagnosis and age at birth uses the CTC and Patient tables. The CTC table is at a lower level in the patient set hierarchy than the patient table. Therefore, you should select an entity related to the CTC table.
- If your edit requires an entity that is not listed, submit a change request via the SEER*DMS Technical Support Squish project.

Message

The edit message is the text that is displayed in the patient set or record editor when the edit fails. The Edit ID and Message are shown when you hover over a field involved in the failed edit. The edit messages are also displayed in all edit reports. The maximum length for an edit message is 500 characters.

Guidelines for defining Messages for registry edits:

- The edit message should reflect the logic of the edit and should be written in language that is easily understood by data editors.
- It is recommended that the message text includes "review required" if the edit is associated with a review flag.

Severity

Each edit is assigned a severity level of low, moderate, high, or critical. The severity level is used to determine whether the data can be saved, whether a manual task is required, and to prioritize the edits for the user performing editing tasks.

Record edits are assigned a high severity level if the data item is required in order to screen the record for reportability or special studies. Therefore, a record edit with a high severity level will trigger a Resolve Record Errors task. If a record only has fields with low or moderate edit errors, the fields are flagged but the record moves forward in the workflow and is screened for reportability. If a record has one or more fields with high or critical edit errors, the record is sent to a manual Resolve Record Errors task for review prior to reportability screening.

Edits with a critical error level must be resolved in order to save the record or patient set. The critical error level is typically reserved for edits that check values to determine if they violate database constraints. For example, a critical edit error would occur if an "A" were entered in a field that requires a numeric value. *Note: It is technically possible to configure the edits to use the critical error level for other purposes. However, it is recommended that you only assign the critical error level to edits that check for database constraints.*

Guidelines for setting the severity level of a registry edit:

- You should rarely define an edit as critical. Typically, the SEER*DMS development team will define a critical edit, if necessary, when a registry-specific data field is added to the database. Remember that your editing staff will not be able to save their changes if the changes generate a critical error.
- Record Edits:
 - Set the severity level to High if you want SEER*DMS to create a Resolve Record Errors task when a record fails this edit.
 - Set the severity level to High if the edit is tied to the record reviewed flag for the purpose of initiating follow-back. A manual Resolve Record Errors task will provide a user with the opportunity to create the follow-back, set the reviewed flag, and save the record. The record would then move forward in the workflow.

- If you want the edit to flag fields as having a problem but do not want a Resolve Record Errors task created, set the severity level to either low or moderate. Registry policy dictates when to use low versus moderate.
- Patient Set Edits:
 - Registry policy dictates whether to assign a severity of low, moderate, or high to a patient set edit.
 - For SEER and SEER*DMS edits, the low severity level typically indicates that a review flag will over-ride the edit.
 - The severity levels of failing edits do not affect the workflow routing of patient sets. If a patient set is saved with edit failures in a Visual Edit Patient Set or Consolidate task it will move to a Resolve Patient Set Errors task, regardless of the severity level of the failing edits.

Dependencies

SEER*DMS uses “dependencies” to conditionally execute an edit based on the success of other edits. Typically, a dependency is added to an edit to ensure that a valid value is provided for a required field. For example, several SEER edits require age at diagnosis. These edits are not executed if the “*age_at_diagnosis*” edit fails.

There are two sets of dependencies for each edit. An edit is not executed if any of the edits listed in its “Depends on” section fail. Similarly, if the edit fails then none of the edits in the “Depended on by” section will be applied.

To view examples, review the dependencies for the following SEER edits: Age_at_diagnosis (Age at diagnosis is not valid), IF118 (Age, Primary Site, Histology conflict), IF13 (Age, Birth Date and Date of Diagnosis conflict).

Dependencies can only be defined between edits within the same group. For example, a registry edit can only depend on registry edits and cannot depend on SEER edits.

Groovy Code

SEER*DMS edits are implemented in Groovy, a scripting language for the Java platform. The Internet has several Groovy references including the Groovy home page at <http://groovy.codehaus.org>. You do not need to be fluent in Groovy to add or modify edits. SEER*DMS edits use a small subset of the Groovy syntax. A working knowledge of regular expressions and Groovy logic statements are all that is needed to add and modify edits in SEER*DMS. To define a new edit, it is recommended that you copy-and-paste the definition from an existing edit and use that code as a template.

Guidelines for writing the Groovy code for a registry edit:

- An edit error is triggered if the code returns FALSE for the record or patient set. The edit passes if the code returns TRUE.
- Use the Groovy code of a similar edit as a template.
- If you copy-and-paste the Groovy code of a SEER, SEER*DMS, or SEER Extended edits, verify that an appropriate entity is available. If your edit requires an entity that is not listed, submit a change request via the SEER*DMS Technical Support Squish project.
- The Available Contexts are displayed at the bottom of the page. Your Groovy code may include references to any of the Available Contexts. Refer to the SEER*DMS Web portal for tutorials on using contexts in registry edits.

Contexts

A context is a Java naming system. In SEER*DMS, contexts are used to define arrays, hash tables, and functions used by the edits. For example, there are a large number of contexts defined for the SEER*Edits. Primarily, these represent data tables required by the SEER Edits logic. Registry staff may not add or modify contexts in the current version of SEER*DMS.

Documentation

An edit's documentation is descriptive text that is more comprehensive than the edit message. If available, the edit documentation is displayed in the edit popup shown in the patient set and record editor. Edit documentation is also displayed in the detailed edit report (RPT-064D).

Documentation from the SEER*Edits software is displayed in SEER*DMS for the SEER Edits. Registry staff are responsible for writing and maintaining documentation for the registry edits.

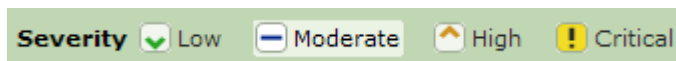
Defining and Maintaining Registry Edits

Requires system permission: *system_administration*

The instructions below provide an overview of the steps required to add, delete, or modify an edit. Refer to the *Understanding Edits in SEER*DMS* section of this chapter for specific guidelines when selecting values for each component of the edit.

To define a new registry edit:

1. Select **System > Edits**.
2. Click **Add Edit**.
3. Set all components shown on the **General** tab (specific guidelines are provided in *Understanding Edits in SEER*DMS*).
 - a. Enter the **Edit ID**.
 - b. Select one item listed in the **Entities** drop-down list.
 - c. Click the **Severity** level that you wish to assign to this edit. Highlighting is used to identify the current selection. In the example below, the Severity level is Moderate.



- d. Enter the **Message** text.
 - e. An edit is not executed if any edit listed in the **Depends on** section fails. To add an edit to the Depends On section:
 - i. Click **add dependency**
 - ii. Use the filter to search for the edit. Dependencies can only be defined between edits within the same group. Therefore, only registry edits will be listed.
 - iii. Click the **Edit ID**.
4. On the **Definition** tab, enter **Groovy** source code to define the logic of the edit. The Definition tab also includes a list of the Available Contexts. These Contexts are defined by the SEER*DMS development team, as needed. Your Groovy code may include references to any of the Available Contexts. Contexts are organized by the edit groups. A Context is

directly available to edits within the Context's group. However, edits in other groups may reference Contexts in other groups. Refer to the SEER*DMS Web portal for tutorials on using SEER edit contexts in registry edits.

5. On the **Documentation** tab, enter detailed documentation related to the new edit.

To delete a registry edit:

1. Select **System > Edits**.
2. Use the filters to find the edit as described in the *Using the Edit Manager* section of this chapter. To search for registry-defined edits, set the Group filter to your registry's name. (SEER, SEER Extended, SEER*DMS, and SEER*DMS Registry edits cannot be deleted.)
3. Click the edit's **ID**.
4. Review the list of edits that depend on this edit (listed under the *Depended on By* heading). Determine whether this edit must be retained in order for those edits to function properly; or if the listed edits require modifications due to this edit being deleted.
5. If you determined that the edit can be deleted, **delete edit**. (This link is shown in the upper right corner of the screen for Registry Edits. It is not displayed for SEER, SEER Extended, SEER*DMS, or SEER*DMS Registry edits).

The screenshot shows the SEER*DMS Edit Editor interface. At the top, there is a navigation bar with 'SEER*DMS' on the left and 'User: coyle', 'Lookup:', 'Account | Logoff' on the right. Below this is a red navigation bar with 'Edit Editor' and menu items 'View', 'Manage', 'System', and 'Help'. The main content area has tabs for 'General', 'Definition', 'Documentation', and 'History'. The 'General' tab is active, showing the following fields:

- Edit ID:** IA001, with a 'change id' link.
- Group:** Iowa
- Entities:** Patients (dropdown menu)
- Severity:** Low (checked), Moderate (highlighted), High, Critical
- Message:** Please review all patient demographic information. Demographic Review Flag must be set to 1 to confirm completion.
- Depends on:** This Edit does not depend on any other edits.
- Depended on by:** There are no Edits that depend on this edit.

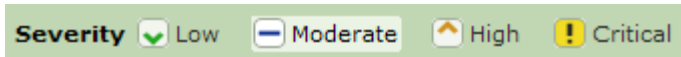
In the top right corner, there is a 'delete edit' link. A callout box points to it with the text: 'Click this link to delete a Registry-defined edit. This is not available for SEER, SEER Extended, SEER*DMS, or SEER*DMS Registry edits.'

Another callout box points to the 'Moderate' severity level with the text: 'Moderate is the Severity level for this edit. An edit's severity level is shown in a highlighted box.'

At the bottom of the form, there are 'Save' and 'Cancel' buttons.

To modify a registry edit:

1. Select **System > Edits**.
2. Use the filters to find the edit as described in the *Using the Edit Manager* section of this chapter. To search for registry-defined edits, set the Group filter to your registry's name. (SEER, SEER Extended, SEER*DMS, and SEER*DMS Registry edits cannot be modified.)
3. Click the edit's **ID**.
4. Set all components shown on the **General** tab (refer to *Understanding Edits in SEER*DMS* for more specific guidelines).
 - a. To modify the Edit ID, click **change ID**.
 - b. Select one item listed in the **Entities** drop-down list.
 - c. Click the **Severity** level that you wish to assign to this edit. Highlighting is used to identify the current selection. In the example below, the Severity level is Moderate.



- d. If you will be modifying the edit logic, update the **Message** text to reflect the changes.
 - e. An edit is not executed if edits listed in the **Depends on** section fail.
 - i. To add an edit to the Depends On section, click **add dependency**. Use the filter to search for the edit. Dependencies can only be defined between edits within the same group. Therefore, only registry edits will be listed. Click the **Edit ID**.
 - ii. To delete an edit from the Depends on section, click the **remove** link associated with the edit. The remove link is shown in the right-most column of the table.
 - f. Edits listed in the **Depended on by** section will not execute if the edit being modified fails. This section is shown for your information, but cannot be changed on this screen. The edits listed in this section depend on the edit that you are currently modifying. You must consider how your modifications will impact these edits.
5. On the **Definition** tab, modify the **Groovy** source code as needed. The Definition tab also includes a list of the Available Contexts. These Contexts are defined by the SEER*DMS development team, as needed. Your Groovy code may include references to any of the Available Contexts. Contexts are organized by the edit groups. A Context is directly available to edits within the Context's group. However, edits in other groups may reference Contexts in other groups. Refer to the SEER*DMS Web portal for tutorials on using SEER edit contexts in registry edits.
 6. On the **Documentation** tab, modify the detailed documentation to reflect the changes that you made to the logic.
 7. Click **Save**.
 8. Enter a comment describing your changes. These comments will be displayed in the edit's History table that is displayed wherever edit information is shown.

System Task to Execute Edits in Patient Sets

All edits are executed each time a patient set is opened, validated, or saved in the SEER*DMS editor. The Patient Set Edits system task enables you to re-execute the edits on patient sets in the database. You may run the edits on all patient sets or on a cohort defined by year of diagnosis. Use the Patient Set Edits task to ensure that new or modified edits are evaluated.

A polisher is a system utility that derives, calculates, or assigns data field values. For example, polishers are used to derive collaborative stage variables; assign census tract based on address; and calculate the age at diagnosis based on date of birth and date of diagnosis. When a patient set is opened, saved, or validated, a polisher will be executed if the value of a related data item changes. Occasionally, you may need to execute a polisher on a large number of patient sets. The Patient Set Edits task enables you to run selected polishers as well as the edits.

Polishers are assigned to "classes". Classes are simply categories used in SEER*DMS to define when the polishers are executed during various system processes. A polisher may belong to multiple classes. The Polishers help page lists the polishers and the classes to which they belong.

The Patient Set Edits task has an option to execute the Edit Polishers. Edit polishers are polishers in the "Pre-Edits" and "Post-Edits" classes (the polishers in these classes are listed on the screen when you open the Patient Set Edits system task). These are polishers that need to be run with the Patient Set Edits task during the initial migration of data to SEER*DMS. The edit polishers rarely need to be run as a group after deployment.

A polisher may need to be executed with the Patient Set Edits task when a new version of SEER*DMS is released that includes a change to that polisher. The Patient Set Edits task allows you to select one to three "extra" polishers. All of the standard polishers (polishers in the "Validation" class) can be executed with the Patient Set Edits task.

To re-execute the edits for some or all patient sets in the database:

1. Click **System > Tasks**.
2. Click the **Patient Set Edits** link.
3. To limit the edits to data by year of diagnosis, enter the **Start Year**. Patient sets with a diagnosis date during or after this year will be considered.
4. If you would like to define an end range, enter an **End Year**. If the end date is not specified, today's date will be used by default.
5. To include data with unknown year of diagnosis, set **Include Unknown Year** to Yes.
6. If you wish to execute all polishers in the Pre-Edit and Post-Edit classes, set **Edit Polishers** to Yes. It is recommended that this option be set to *No* unless there is a specific need related to the transitioning of data into SEER*DMS.
7. You may execute one to three individual polishers with the Patient Set Edits using the **Extra Polisher** drop-down menus. These are polishers in the Validation class (as listed on the Polishers help page).
8. You may enter text related to this task in the **Comment** field. The comment for the last execution of the task is stored in the database (utility_history table).
9. Click **Start**.

The edits will be re-evaluated for each patient set in the cohort. In order to avoid creating an inordinate number of worklist tasks, a Resolve Patient Set Errors task will *not* be created for each patient set with an edit error. If the logic of a new or modified edit is implemented incorrectly, it could erroneously create an edit error for a large number of patient sets. Therefore, you must use reports rather than tasks to identify the patient sets with errors and to evaluate the error levels in the patient set data. Two system reports, RPT-064A and RPT-064B, are available for identifying the edit errors that were triggered and the patient sets that are involved:

Reports Related to Edits










Select **View > Reports** to access the system reports provided with SEER*DMS. The reports listed below are the edit reports available in SEER*DMS when this manual was printed.

Report ID	Title	Description
RPT-064A	Frequency of Edit Errors in Patient Set Data	Use this report to evaluate the error levels in the patient data. Set the parameters to generate frequencies of errors in all patient sets when verifying modifications that you made to edits or when you run the Patient Set Edits system task.
RPT-064B	Patient Sets with Edit Errors	A listing of Patient Sets with a failure related to a particular edit or a sample for all failing edits.
RPT-064C	SEER*DMS Edits	ID, Message, Severity, and Group of all edits available in SEER*DMS.
RPT-064D	Detailed Listing of SEER*DMS Edits	Lists all components of edits, including the Groovy code, entities, history, and documentation.

Color Codes Used in SEER*DMS Editors

The SEER*DMS record and patient set editors display data fields in different colors to highlight fields that contain errors, and fields that have been modified but not validated or saved. Although you can readily see the fields that require attention on data pages, it is recommended that you review the list of errors and related data fields on the Edit Errors page prior to making changes to a record or patient set. Refer to the chapter related to your specific task for further instructions.

If two or more edits are related to a field, the edit with the highest severity level will determine the color.

 1981	White indicates that the field does not have an error and has not been changed since the last save.
 XXXX	Dark red with white text indicates that the field triggered a Critical Error . The value can not be stored in the system due to database constraints. Critical Errors will only be seen in patient sets, since database constraints are not applicable to record data.
 0000	Medium red with black text indicates that the field triggered an error with a High severity level. In patient set data, the value may not be valid for this field or an inter-field edit may have detected a conflict with other fields. In record data fields, this indicates that an error was detected that must be resolved prior to screening. The record will not move past the Resolve Record Errors task until all errors with a severity level of high are resolved.
 9999	Light red indicates that the field has an error with a Low or Moderate severity level. The value may not be valid for this field or an inter-field edit may have detected a conflict with other fields. Low and moderate errors should not be resolved when editing records, these editing tasks should be performed when consolidating the patient data.
 1980	Orange indicates that a field with an error was modified, but the change has not been validated against the SEER and local edits. Fields are validated when the record is saved or the Validate button is clicked. Once validated, this field will turn to yellow if the error was corrected or to a shade of red if the field still contains an error.
 1990	Yellow indicates that the field that did not have an error and was changed. The patient set or record has not been saved since the change was made. Once validated, this field will turn to a shade of red if there is an error.
 1980	Blue with a black border indicates that the field was changed by a Polisher.
 0000	Blue with no border indicates that the field is read-only and was changed by a Polisher. <i>Note: Some fields are modified when another field is changed.</i>
 DOE, JOHN	Read-only fields that have not been changed are shown in a lighter shade (the color is determined by the color scheme that you are using).

Chapter 8: Resolving Record Errors

When a record enters the workflow, an automated task checks the record for errors based on SEER and local edits. When the edits are configured in the system, a severity level is assigned to each edit (see *Chapter 7: Edit Errors*). The severity levels for the local edits are registry-defined; however, certain guidelines should be followed. "Critical" should be assigned to edit errors that must be resolved in order for the system to store the data, that is, errors that indicate a violation of database constraints. Since records are stored in a text format, these constraints only apply to patient set data. For this reason, you should not encounter critical errors in record data fields. "High" should be assigned to edit errors that must be resolved prior to screening the record for reportability. These would include errors related to data fields that are required to determine reportability; and errors that, according to registry policy, must be resolved as quickly as possible. For example, errors related to data fields required for rapid case ascertainment initiatives should be given a severity level of high.

A record with a high or critical error is forwarded to a Resolve Record Errors task for review. Although this task provides full editing functionality, you should limit your attention to errors with high or critical severity levels. The purpose of this task is to move the record forward in the workflow through the screening and matching processes. Other editing tasks should be performed when the data are consolidated into a patient set (see *Chapter 14: Resolving Patient Set Errors*).

In this chapter, you'll learn about

- Opening a Resolve Record Errors Task
- Understanding the Record Editor
- Correcting Errors in a Record
- Editing a Data Field
- Saving Changes to a Record
- Undoing Changes
- Rerouting a Resolve Record Errors Task
- Requesting Follow-back Information

Opening a Resolve Record Errors Task

Requires system permission: *rec_edit*

Resolve Record Errors tasks enable you to resolve edits that must be resolved at an early stage in the workflow, prior to screening. This involves resolving edits with a high or critical severity level.

To open a Resolve Record Errors task:

1. Click a **Resolve Record Errors** link in the worklist summary on the home page. To open a task assigned to you, click the link listed in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. To search for the task in your tasks and unassigned tasks:
 - a. Enter your user name in the **User(s)** filter.
 - b. Check the **Show Unassigned** box.
3. To search by other criteria, enter values into the filter controls (see *Chapter 4: Using the Worklist* for more information). If you made changes to the filter settings, click **Apply**.
4. Click the task **ID** to open the Resolve Record Errors task.

Understanding the Record Editor


When you open a Resolve Record Errors task, the record will be displayed in an editor similar to the one shown below. The format of the data pages and fields vary by record type and registry.

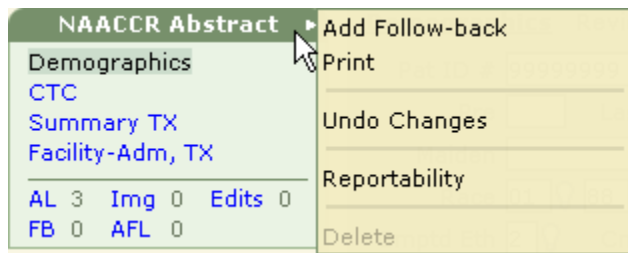
Record Navigation Box

You can use the links in the navigation box to:

- View each page of record data. The number of pages varies by record type.
- Review the records's **Audit Log (AL)**. Each change made to a record data field is documented in the audit log. The information in the audit log includes the user or process which modified the data, comments related to the change, the date and time of modification, and the original and modified value of each data field that was changed. For more information about audit logs, please refer to *Chapter 2: Records and Patient Sets*.
- Submit a request to the reporting facility for **Follow-back (FB)** information related to the record data. Please refer to the *Requesting Follow-back Information* section of this chapter.
- View, add, or delete **Image Files (IMG)** containing data related to the record. These images may contain the original data submitted to the registry.
- Review the status and outcome of each **Abstract Facility Lead (AFL)** associated with the record. Refer to *Chapter 21: Managing Abstracting Assignments* for more information.
- View and/or resolve the **Edits** triggered by data fields in the record, as described in the *Correcting Errors in a Record* section of this chapter.
- View any Special Studies to which this record is assigned. Add or remove the record from a special study. Refer to *Chapter 28: Special Studies* for more information.

Record Menu

In the navigation box, the arrow  next to the record type provides access to the record menu. Click the arrow to open the menu, as shown below.





The record menu allows you to:

- **Add Follow-back** – Submit a request to the reporting facility for more information related to the record (see the *Requesting Follow-back Information* section of this chapter).
- **Print** – Create a printable version of the record data in a PDF file.
- **Undo Changes** – Reload the last version of the record that was saved; this “un-does” or reverses changes that you have made but have not saved (see the *Undoing Changes* section of this chapter).
- **Reportability** – View the reportability status. The reportability status will always be unknown during a Resolve Record Errors task; it will be screened for reportability in a subsequent step in the workflow (see *Chapter 9: Screening for Reportability*).
- **Delete** – Delete the record from the database. This is a true and permanent delete; the record is physically removed from the database. This menu item is only active if your account has the *system_administration* permission; and the menu item is disabled if the record is linked to a patient set or is involved in a worklist task. To delete a record in a Resolve Record Errors task, you must first terminate the task.

Info Box

The Info Box is shown whenever an unlinked record is displayed in the editor. The following items are included:

- **Import ID** – A unique identifier associated with records imported in the same set of files or entered in the same data entry session. Click the Information Icon  next to the ID for details including the name of the file containing the original source data for this record (if multiple files were included in the import, this record’s file will be shown in bold).
- **File Type** – If this file was loaded from a file, the file type will be displayed. *N/A* indicates that the record was either entered in a data entry session or migrated into SEER*DMS when the system was first deployed. Click the Information Icon  to determine the Media Type (Files, Migrated Data, or Data Entry).
- **Source** – The ID of the record’s source or reporting facility. For some record types, this field is the facility specified when the file was imported and cannot be changed. For other record types, the facility is an editable field on the record (Rpt Hosp).
- **Reportability** – The reportability value set during a manual or automatic screening task. Records are not screened for eligibility until severe and critical errors are resolved, therefore this value will always be unknown in Resolve Record Errors tasks.
- **Patient ID** – The ID of the consolidated Patient Set. Since the record has not yet been linked to a Patient Set, “unlinked” will be shown in this field during Resolve Record Errors tasks.

- **Date Added** – Time stamp indicating the time that this record was loaded into SEER*DMS. This field shows the date and time of the import, data entry session, or migration.
- **Date Last Modified** – Time stamp indicating the last time this record was saved by a user or modified by an automatic system task.

Text Viewer

Click **View Text** to open a popup window that displays all the text fields in the record. The Text Viewer provides a convenient method for viewing all the text fields at once, and enables you to view a data page and the supporting text fields at the same time. You may need to resize your browser window to edit a field on a data page while displaying the Text Viewer.

Data Header

The Data Header contains a read-only display of patient and tumor fields which may assist in correcting severe or critical errors. If an edit is required in one of these fields, click the link for the appropriate data page and edit the field in the Body of that page. The header is only shown when multiple pages are used to display the record and you are not viewing the first page.

Body

The body of the record editor displays the content for the currently selected page. The layout of the fields in the body of the page varies by record type. The NAACCR record type is consistent in all registry configurations, other record types vary. A variety of controls are used on the data pages to edit specific fields; the process is described in *Correcting Errors in a Record*.

Save, Validate, Cancel

The Save, Validate, and Cancel buttons enable you to:

- **Save** – Save intermittent changes or to save changes when exiting. The Review Changes page will be displayed. Your changes will not be saved in the database until you review and confirm the modified data fields. For specific instructions, please refer to the *Saving Changes to a Record* section of this chapter.
- **Validate** – Execute polishers and the SEER and registry-defined edits. The edits are executed when you first open the record in the editor. After making changes to data fields, click Validate to see if your changes have resolved errors or generated additional errors.
- **Cancel** – Exit the editor without saving any unsaved changes. Changes that you saved during the editing session will be retained.

In order to reduce the need to scroll, the Save, Validate, and Cancel buttons are displayed in two places in the record editor. The buttons are available at the bottom of each data page and above the navigation box on the left side of the editor. Although the buttons are displayed as part of each data page, they affect all pages. When you click Save or Validate, the data on all pages will be saved or validated. Click Cancel to exit the editor without saving changes made on any page.

Correcting Errors in a Record

Requires system permission: *rec_edit*


The purpose of a Resolve Record Errors task is to resolve edits that prevent the record from moving through the screening process in the workflow. Edit errors with a severity level of critical and high must be resolved prior to screening the record for reportability. Edit errors of lesser severity may also be indicated. You are encouraged to only correct the critical and high errors. All other editing tasks should be performed when the data are consolidated into a patient set. In general, the majority of changes should be made to patient set data fields and as few changes as possible should be made to data fields in the source records.

Review each error prior to making changes to a data field. To evaluate and correct the problem, you must determine if a single field is causing the error or if an inter-field edit has identified a conflict between multiple fields.

To review and correct the errors in a record:

1. Follow the instructions in the *Opening a Resolve Record Errors Task* section of this chapter.
2. Click the **Edits** link in the record navigation box.
3. Review and resolve all edits that fail. A Resolve Record Errors task will only involve edits that prevent the record from moving forward in the workflow and edits designated by registry management as requiring immediate attention. Edits with a severity level of critical or high must be resolved in order to move the record forward in the workflow. The following symbols are displayed next to the error in the **S (Severity)** column:

 **Critical** – exclamation point is used to alert you to critical errors

 **High** – directional symbols indicate the relative severity level of the other levels, the up arrow is used for a high severity level

 **Moderate** – flat indicates a moderate severity level

 **Low** – a down arrow indicates a low severity level

*Tip: If you hold your mouse over any symbol in SEER*DMS, the symbol's meaning will be displayed.*

4. Review the following data listed for each error:
 - a. **Rule Set** – SEER, SEER Extended, and registry-defined sets of edit rules are implemented in SEER*DMS. In addition, SEER*DMS applies system edits (SEER*DMS and SEER*DMS Registry rule sets in SEER*DMS) which enforce database constraints. SEER Extended are edits developed and implemented by the SEER Program but not incorporated in the standard SEER Edits. The extended edits may include fields that are not required to be transmitted to SEER.
 - b. **Error ID** – Edit name or identifier.
 - c. **Error Message** – A brief description of the edit error.
 - d. **Action** – This column contains an **Info** link that enables you to view documentation for the edit. The documentation includes the edit logic, data fields, and revision history.
5. The **Page** column provides a link to a data page containing at least one of the data fields causing the error. Click the link in the **Page** column to find and edit the fields. All fields validated by an edit may not be shown on the same page, use the links in the Record Navigation box to go to other data pages.
6. Review the fields with an error severity level of high or critical. As described in *Chapter 7: Edit Errors*, these errors will be highlighted in dark red. Hold your mouse over the field's value to view a listing of the edit errors associated with the field. If additional information is required as you make your determination:
 - a. Use the **View Text** link to open a popup window displaying the supporting text.


- b. If the original data was provided in image files, use the **Img** link to confirm codes and review the text provided in the image.
 - c. Use the links in the Record Navigation Box to review fields on other data pages.
7. If you are able to resolve the error:
- a. Depending on the field, you may either enter a value directly into the data field or use a lookup control to select the value. See *Editing a Data Field* for a more detailed description of methods for modifying fields in the record editor.
 - b. The color of the edited field will change when you move to another field (see *Chapter 7: Edit Errors* for a description of the color codes used in the editor).
 - c. Click **Validate** to run the edits and to determine if your change has corrected the error. If the color of the field still indicates an error, hold your mouse over the field to review the error message.
8. If you are *unable* to resolve the error, follow the standard operating procedures defined by your registry's management. For example:
- a. For some edits, like edits related to physicians, the proper course of action may be to add a follow-back need about the data item and set the record's review flag to Reviewed (the review flag is usually on the top of the first page in the editor). Confer with your manager to determine your registry's policy related to setting the review flag.
 - b. If information from the reporting facility is required to resolve an error, follow the instructions provided in the *Requesting Follow-back Information* in this chapter.
 - c. If you encounter a problem that you can not resolve, follow the instructions provided in *Rerouting a Resolve Record Errors Task*.
9. If you have made a number of changes, you should save your work periodically. You must save your changes when completing a task. When you are ready to save your changes to the record, follow the instructions in *Saving Changes to a Record*.

Editing a Data Field

Requires system permission: *rec_edit*

The keyboard functions that can be used to modify fields in the editor are listed below. Once you modify a field, it will be highlighted based on the color code described in *Chapter 7: Edit Errors*.

Use your mouse to go directly to a field or use the following keystrokes:	
Tab	Go to the next field
Shift + Tab	Go to the previous field

To edit a data field, type the value into the text box or use these controls:	
Click 	Open a lookup table to select a value from the field's valid values. You may also define new values for some lookups (e.g., physicians).
Ctrl + C	Copy to clipboard
Ctrl + V	Paste from clipboard to cursor location
Ctrl + X	Cut – deletes highlighted text and copies it to the clipboard
Ctrl + A	Select all text (highlight without using the mouse)
Home and End	Go to beginning or end of current field

Saving Changes to a Record

Requires system permission: *rec_edit*

Two primary steps are required to save changes in the SEER*DMS editor. Clicking the Save button on the data pages or in the left navigation box will open a page to Review Changes. The changes are not actually saved until you review and confirm your changes.

Review the following methods for saving changes and for exiting the task. When saving any changes, you should enter any relevant comments regarding changes made during the task. The comment box at the top can be used to add general comments pertaining to the task. Comment fields next to the revised data elements can be used to add specificity. The general and data field comments will be stored and displayed in the record's audit log.

To save a record and continue editing:

1. Click **Save**.
2. Enter comments to document your changes.
3. Click the **Save** button at the bottom of the Review Changes page.

If you have not resolved all errors with a severity level of high or critical, but you would like to complete the task at a later time:

1. Click **Save**.
2. Enter comments to document your changes.
3. Click **Save & Exit**. The Resolve Records Task will remain in your worklist.

If you have resolved all errors with a severity level of high or critical:

1. Click **Save**.
2. Enter comments to document your changes.
3. Typically, you should check the **Forward to next workflow task on Save & Exit** box and allow the record to proceed to screening. In a Resolve Record Errors task, this should only be unchecked when you are waiting for follow-back information that you would like to obtain prior to screening the record.
4. Click **Save & Exit**.

Undoing Changes

Requires system permission: *rec_edit*

You may use the Undo Changes menu item to undo all *unsaved* changes, that is, to reload the data from the database. Any changes that you made and saved will not be reversed. However, all changes are documented in the Audit Log. If you need to reverse a saved change, manually edit the field and enter the original value as noted in the Audit Log.

To undo changes:

1. Click the menu indicator next to the record type. The record menu will be displayed.
2. Select **Undo Changes**.

3. Click **OK** to confirm.

Rerouting a Resolve Record Errors Task

Requires system permission: *rec_edit* and *worklist_task_reassignment*

If you are unable to resolve the errors with a severity level of high or critical, release the task from your account as dictated by the policies defined by your registry. You may be instructed to forward the task to your manager or to a coworker with a particular expertise. Or you may be instructed to release the task, that is, designate the task as unassigned so that other users can open the task.

To reroute or release an open Resolve Record Errors task:

1. To assign the selected task(s) to a user, select **Task > Reroute**.
 - a. Set the **Action** to *Reroute to user*, and select a user name from the pull-down list. The list will only include users who have the system permissions required to open all of the selected tasks.
 - b. Enter text into the **Comment** box. This text will be included in the e-mail notification sent to the user receiving the task.
2. To designate the task(s) as unassigned, select **Task > Release**.

To use the worklist to reroute or release a Resolve Record Errors task assigned to you:

1. Click the **Resolve Record Errors** link in the list of **My Tasks** on the home page.
2. Use the worklist filters to search for the task, if necessary. Enter search text in the **Information** filter as appropriate for your needs. The following information is listed in this field for Resolve Record Errors tasks:
 - a. Record Type.
 - b. Patient Name.
 - c. Rule IDs for edits that resulted in errors.
3. Click **Apply**.
4. Check the box next to the task to be rerouted. Click **Modify**.
 - a. To assign a task to another user:
 - i. Set **Action** to *Reroute to user*.
 - ii. Select from the **to user** list (only users with *rec_edit* permission will be listed).
 - iii. Enter text into the Comment field. This text will be included in an e-mail message sent to the user to whom the task is assigned.
 - b. To release a task to the unassigned Worklist, set **Action** to *Release*.
5. Click **OK**.

Requesting Follow-back Information

Requires system permission: *rec_edit* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a "follow-back need". If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need for the record. Your request will be maintained with the record, allowing all users to review pending follow-back issues when reviewing the record data. After submitting the follow-back need, you may continue editing or save the record in a Resolve Record Errors task that can be continued at a later time. Methods for saving the record and exiting the task are described in the *Saving Changes to a Record* section of this chapter.

You will receive an e-mail notification when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.

SEER*DMS enables users to access patient data via two routes: 1) the data can be modified while completing a worklist task, or 2) the record or patient set may be edited directly, outside the context of a task. If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the record to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the record with the new information, use the Patient Lookup to search for the record. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Chapter 9: Screening for Reportability

SEER*DMS uses a combination of automatic and manual workflow tasks to determine whether a record meets the eligibility criteria for SEER and local agencies. The workflow can be configured to determine reportability automatically, based on registry-defined algorithms, or it can be configured to defer screening decisions to registrars performing manual screening tasks. At this point in the workflow, records are also screened for special study eligibility (see *Chapter 28: Special Studies*). A manual screening task is generated when the automatic screening task cannot determine reportability; or according to your registry's screening algorithms, the reportability value calculated by the auto-screener requires review; or the record was identified as a "possible" match for a special study.

Use the worklist to reassign, track, and review open screening tasks according to your needs. For example, you may want to release or reroute tasks assigned to a user who is on leave. Further, a periodic review of the manual screening tasks could be helpful in evaluating the efficiency of your auto-screening configuration. Specific instructions are provided in *Chapter 4: Using the Worklist*.

In this chapter, you'll learn about

- Reportability Settings in SEER*DMS
- Opening a Screening Task
- Setting the Reportability Status
- Determining Special Study Eligibility
- Requesting Follow-back Information
- Viewing a Record's Reportability Status

Reportability Settings in SEER*DMS

The possible values for the reportability flag are described below. The criteria used to define each value are defined in the registry's configuration settings. Further, "Auditable" and "Non-reportable" may not be used by all registries or for all record types.

Automatic and manual screening tasks will set a record's reportability status to one of the following values (some values may not be used in your registry):

- **Reportable** – The record contains data related to an eligible case as defined by your registry's criteria. The record continues through the workflow, ultimately becoming part of a patient set in the database.
- **Auditable** – The record contains cancer-related data but is not a reportable case. The record is retained for use in casefinding audits. SEER*DMS processes the record to obtain potential follow-up information. If the record matches an existing patient set, the record should be linked at the patient level but not to a CTC. The automatic screening task may be configured to forward all auditable records to manual screening for review.
- **Non-reportable** - The record contains data for a disease that is of no interest to your registry. It is not reportable and not to be included in audits. For example, this may be a medical record that was erroneously included in a data file sent by a facility. SEER*DMS processes the record to obtain potential follow-up information. If the record matches an existing patient set, the record will be linked at the patient level but not to a CTC. The automatic screening task may be configured to forward auditable abstract records to manual screening for review.
- **Unknown** – The record has not yet passed through automatic screening or the reportability status could not be determined due to missing or invalid data. The record is forwarded or maintained in a manual screening task.

- **Not applicable** – The record is not a medical record and does not require screening, for example, it may be a record from the department of motor vehicles or voter registration. This value is set in an automatic task which determines record type; records with this setting are not screened for reportability.

Opening a Screening Task

Requires system permission: *screening*

To open a screening task:

1. Click a **Screening** link in the worklist summary on the home page. To open a task assigned to you, click the link in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. Typically, there is a sense of urgency associated with Screening tasks. This is particularly true to facilitate rapid case ascertainment for special studies. Enter search criteria in the worklist filters to find high priority tasks.
 - a. If you wish to review all pending screening tasks, clear the **User(s)** filter and check **Show Unassigned**.
 - b. To search for records that are candidates for a special study, enter "Possible special studies" in the **Information** filter.
 - c. In order for the automatic screening task to calculate a value for reportability, the record must meet all criteria defined in the Auto-Screener rules. For example, a valid value for site is required. If the record fails any of the Auto-Screener Rules, a message describing the problem is written in the Information Column. To search for tasks with a specific auto-screener failure, enter search text in the **Information Filter**. Select **Help > Screening** to view documentation for each screening algorithm. The Auto-Screener Rules are included with this documentation. (Note: If there is a Special Study message in the Information Column, the Auto-Screener message will not be displayed.)
3. If you made changes to the filter settings, click **Apply**.
4. Click the task ID to open the screening task.

Once you open the task, the record will be displayed in a specialized version of the record editor. Although you can review edit errors and change data fields, it is assumed that the edit errors will be handled during an editing task. For the purpose of screening, you will be reviewing data fields to determine reportability and special study eligibility; and using the controls on the left side of the page (shown below) to set the values.

Screening (Task 2725038)

Auto-screener result for SEER/local reportability: Non-reportable
 Possible special studies: Lung Study

Casefinding

Standard Fields

AL 3 Img 0 Edits 0

FB 0 AFL 1 SS 1

Info

Import ID
IMP-6334 ⓘ

File Type
Casefinding 2005

Source
FAC-0086

Patient ID
unlinked

Date Added
07-21-2006 04:20:08PM

Date Last Modified
08-07-2007 05:23:25PM

Reportability

Status
Unknown ⓘ

Modify

Task type and ID are displayed in the red toolbar followed by a message indicating the results of the auto-screening task and the special study screener (the special study message is only displayed if the record is a possible match for at least one study).

Click **SS** to define whether the record is in a special study.

The current **Reportability** status is shown here. Click **Modify** to change this value.

Setting the Reportability Status

Requires system permission: *screening*

To set the reportability status for a record:

1. Follow the instructions in the *Opening a Screening Task* section of this chapter. The status of reportability is displayed in the Reportability box in the left navigation panel. This value will be unknown if there is an auto-screener failure or if the auto-screener result (displayed at the top of the page) is a value that requires review according to registry policies.
 - a. If the reportability status is unknown, you must review the record and set reportability. Proceed with step 2.
 - b. If the status is a value other than unknown, the auto-screener was able to define a value for reportability and this screening task was generated for the sole purpose of evaluating the record for Special Studies (see the *Determining Special Study Eligibility* section of this chapter).
2. Review the record to ascertain reportability:
 - a. Click the links in the **Record Navigation** box to review fields on other data pages.

- b. Click **View Text** to open a popup window showing all text fields at once. You can then move the popup window so that you can view the data page and the supporting text fields at the same time. Click **Close** to exit the Text Viewer.
 - c. To review a printed copy of the record, select **Print** from the record menu.
3. If you are able to ascertain reportability for this record, set the reportability status field:
 - a. Click **Modify** in the **Reportability** section of the left navigation panel.
 - b. Select a **Reportability** value from the drop-down list.
 - c. If you have selected *Auditable* or *Non-Reportable*, enter text in the **Reason** box. This documentation is useful for the purpose of casefinding audits.
4. If the record was identified as a possible match for a special study, follow the instructions in the *Determining Special Study Eligibility* section of this chapter.
5. Use one of the following methods to close this task:
 - a. If the reportability status is set to a value other than Unknown and the screening process is complete, end the task and allow the record to move forward in the workflow:
 - i. Click **Save**.
 - ii. Verify that **Forward to next workflow task on Save & Exit** is checked. This box must be checked to move the record to the next task in the workflow.
 - iii. Click Save & Exit.
 - b. If further information is required, submit a request for follow-back information (see the *Requesting Follow-back Information* section of this chapter).
 - i. Click **Save**.
 - ii. To keep the record in a screening task, do not check the **Forward to next workflow task on Save & Exit** box (this box will be unchecked automatically unless you selected a tentative value for reportability status).
 - iii. Click **Save & Exit**.
 - iv. If you require assistance, you may reroute the screening task to your manager or a colleague by following the instructions in *Chapter 4: Using the Worklist*.

Determining Special Study Eligibility

Requires system permission: *study_rec_edit*

To define whether a record should be included in a special study:

1. Follow the instructions in the *Opening a Screening Task* section of this chapter.
 - a. If the record was identified as a "possible" match for a special study, a message will be displayed at the top of the page and the value next to the SS link will be greater than zero. Proceed with step 2.
 - b. If there is no message related to special studies, the automatic task was able to determine eligibility for all studies. This screening task was generated for the sole purpose of setting SEER/local reportability. Refer to the *Setting the Reportability Status* section of this chapter for further instructions.
2. Review the record data.

3. If you believe the record was incorrectly flagged as a possible match for a study, delete the study from the record (for example, if a prostate record was identified as a possible match for a lung study).
 - a. Click the **SS** link in the navigation box on the left side of the screen.
 - b. Click the **Delete** link for the study. You should inform registry management that the initial criteria for the Special Study may be incorrect.
4. Define whether the record is eligible for the study:
 - a. Click the **SS** link in the navigation box on the left side of the screen.
 - b. Click the **Edit** link in the Action column for the study.
 - c. Based on registry policies, set the **Inclusion** status to:
 - i. **In** – The record fulfills eligibility requirements for the study.
 - ii. **Out** - The record met initial screening criteria for the study, but upon review, it was determined that the record is ineligible. For example, the physician did not give approval for the patient's inclusion, or the patient declined to participate.
 - iii. **Possible** – Unable to make a definite determination of the record's eligibility at this time.
 - d. If you know of a study-specific ID for this record, enter the value in **Participant ID**.
 - e. You may document your changes by adding a comment.
 - f. Click **Update**.
5. Refer to the **Reportability** box within the left navigation panel.
 - a. If the reportability status is a value other than unknown, end the task and allow the record to move forward in the workflow.
 - i. Click **Save**.
 - ii. Verify that Forward to next workflow task on Save & Exit is checked.
 - iii. Click **Save & Exit**.
 - b. If the reportability status is unknown and you can determine and set reportability, follow the instructions in the **Setting the Reportability Status** section of this chapter.
 - c. If the reportability status is unknown but you are not authorized to set reportability, save your changes. You should then modify the task so that it is no longer assigned to you.

- i. Click **Save**. No changes will be listed on the Review Changes page. Changes to Special Study settings are not included in the record's audit log.
- ii. Click **Save** on the Review Changes page. You will remain in the Screening task.
- iii. To assign the selected task(s) to another user, select **Task > Reroute**. Set the **Action to Reroute to user**, and select a user name from the pull-down list. The list will only include users who have the system permissions required to open all of the selected tasks. Enter text into the Comment box. This text will be included in the e-mail notification sent to the user receiving the task.
- iv. To designate the task(s) as unassigned, select **Task > Release**.

Requesting Follow-back Information

Requires system permission: *screening* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a "follow-back need". If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. Your request will be associated with the record, allowing all users to review pending follow-back issues when reviewing the record data. If the information is required to ascertain reportability, you should save the record in a Screening task so that the task can be completed at a later time. Otherwise, you should set the reportability status and move the record forward in the workflow. Methods for saving the record and exiting the task are described in the *Setting the Reportability Status* section of this chapter.

You will receive an e-mail notification when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.

SEER*DMS enables users to access patient data via two routes: 1) the data can be modified while completing a worklist task, or 2) the record or patient set may be edited directly, outside the context of a task. If you suspended a Screening task pending the receipt of follow-back information, you must re-open and complete the task to allow the record to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the record with the new information, use the Patient Lookup to search for the record. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Viewing a Record's Reportability Status

If you are editing an unlinked record, the reportability status is displayed in the Info box of the record editor.

Record Editor

Save Validate Cancel

NAACCR Abstract

- Demographics
- CTC
- Summary TX
- Facility-Adm, TX
- AL 3 Img 0 Edits 0
- FB 0 AFL 0

Info

Import ID
IMP-3468

Import Type
NAACCR 10.2 Full Abstract

Source
FAC-0086

Reportability
Reportable

Patient ID
unlinked

Date Added
02-16-2006 04:51:00PM

Date Last Modified
04-13-2006 12:55:09PM

View Text Demographics (NAACCR Abstract REC-3002271947)

Demographics Reviewed

Pat ID # 00000000

Pre M Suf SSN 999999999

Maiden

Race 01 Place 999 Birth Dt 08 29 1961 Sex 1 Religion

Cmptd Eth 0 Race Cod Curr Race Cod Orig

Follow-up

DOLC 06 08 2005 Vital Status 1 Autopsy 0 Surv Quality 9

FU Source 0 Next FU Src 2 SEER Type FU FU Src Cntl Unusual FU Mth

Follow Reg 999999999 Lst FU Hosp

DC State DC File # Death Place 997

COD 0000 COD Rev # 0

Current Address

Num 5 Dir E Street MAIN Type ST Dir

Suppl

City Cnty Code 001 State MD Zip 99999

Phone

Follow-Up Contacts

PAT-10773464

Demographics
CTC 00 (C505)

AL 2 Img 0 Edits 0
FB 0 AFL 0 SS 0
AFUP 0 Cmt 1

Linked (1)

FAC-0089 (1)

NAACCR Abstract C 00

REC-3002154300 / Reportable

To view the reportability status of a linked record in the patient set editor, hold your mouse over the Record Type. The Record ID and reportability status will be shown in a box just below type.

When record type is displayed in the Patient Lookup or a Match-Consolidate task, the Type field will include an icon indicating the record's reportability status:

- N Non-reportable
- A Auditable
- U Unknown (the record has not yet been screened)
- N/A Not applicable; the record type is not screened (e.g., supplemental records)

No icon is displayed if the record is reportable.

The icons are also displayed in the Type column of search and match results tables. If an icon is not displayed next to the record type, the record is reportable:

Score	Type	ID	Last Name
506	Health Record	REC-1203760609 ⓘ	DOE
506	Casefinding	REC-187324 ⓘ	DOE
506	Death Certificate N	REC-3001075471 ⓘ	DOE
506	Death Certificate N	REC-3001102494 ⓘ	DOE

The icons are also shown next to the Type field for the Incoming Record of a Match-Consolidate task. In the first example shown below, the record is auditable.

SEER*DMS MDCSS User: coyle Lookup: Help | Account | Logoff

Match-Consolidate (Task 90584) View ▾ Manage ▾ System ▾

Incoming Record

ID: REC-3002150232	Type: NAACCR Abstract A	SSN: 999-99-9999	Site: C778: Lymph nodes of multiple
Facility: FAC-0086 : County General Medical Center	DOB: 08-29-1961	DX Date: 01-15-2004	Histology: 9663
Last Name: DOE	VS: 1 : Alive	Behavior: 3: Malignant Primary	Laterality: 0: Not Paired
First Name: JOHN	Sex: 1 : Male		
Middle Name:	Race: 01 : White		
Maiden:	Alias:		

[Follow-back](#)

In the example below, the record is reportable (no icon is displayed):

SEER*DMS MDCSS User: coyle Lookup: Help | Account | Logoff

Match-Consolidate (Task 90584) View ▾ Manage ▾ System ▾

Incoming Record

ID: REC-3002150232	Type: NAACCR Abstract	SSN: 999-99-9999	Site: C778: Lymph nodes of multiple
Facility: FAC-0086 : County General Medical Center	DOB: 08-29-1961	DX Date: 01-15-2004	Histology: 9663
Last Name: DOE	VS: 1 : Alive	Behavior: 3: Malignant Primary	Laterality: 0: Not Paired
First Name: JOHN	Sex: 1 : Male		
Middle Name:	Race: 01 : White		
Maiden:	Alias:		

[Follow-back](#)

Chapter 10: Matching Incoming Records to Database

In SEER*DMS, matching is a combination of automated and manual processes which determine whether a set of data is for the same patient as other data in the database. Matching algorithms are applied to several system functions, including: determining whether an incoming record contains data for an existing patient set; implementing searches in the patient lookup; and, in some registry configurations, determining whether a record is an algorithmic duplicate based on selected data fields.

This chapter describes the matching processes which are used to determine whether an incoming record contains data related to an existing patient set (linkage matches). Please see *Chapter 20: Searching for Records and Patients* and the *SEER*DMS Technical Reference* for information related to other uses of matching algorithms.

In this chapter, you will learn about

- Automatic Matching
- Manual Review of Match Results
- Opening a Match-Consolidate Task
- Evaluating the Possible Matches
- Modifying the Reportability Status of the Incoming Record
- Requesting Follow-back Information
- Supplemental Matching Task

Automatic Matching

“Automatic matching” refers to the execution of the registry-specific algorithms that compare the patient information on an incoming record to data that were previously loaded into the database. Typically, several automated linkage-matching algorithms are defined for a registry. These algorithms are associated with the various types of records loaded into SEER*DMS. The matching algorithms can be reviewed within SEER*DMS by selecting Matching from the Help menu (see *Chapter 29: Registry Management and SEER*DMS*).

Records that follow the passive follow-up branch of the workflow are auto-matched using registry-defined algorithms specific to passive follow-up. For these records, a Supplemental Match Task is created if two or more patient sets are identified as “perfect” matches; or there are no perfect matches but at least one patient set is a possible match. The fields and criteria used to define a “perfect” and “possible” match are specified by the registry management. Some registries do not define “possible” matches for data used only for passive follow-up.

For each record processed in the main branch of the workflow, an automatic matching task attempts to identify patient sets and unlinked records that match the incoming record (the incoming record is not matched against unlinked records that have not yet been screened). For records that contain medical data but are not automatically used to create a patient set, a manual Match-Consolidate task is only created if possible matches are identified by the auto-match task. This enables a registrar to confirm or reject the possible matches. If the incoming record is an abstract record, a manual Match-Consolidate task is always created. The manual task is created regardless of the results of the automatic match to ensure that the match is refreshed prior to further processing of the abstract record.

The matching algorithms are re-executed when the Match-Consolidate task is opened. All available data are matched against, including data that were loaded subsequent to the initial match. The refreshing of the match guarantees that all appropriate data are included in consolidation; and ensures that new patient sets are not created from a single record when other data are available

for consolidation. This helps to reduce redundancy in worklist tasks and prevent the creation of duplicate patient sets.

Once a record completes the automated matching process, the next workflow task is determined by the results of the automatic match algorithm, the record's type, and reportability status. The following table shows the typical path for a record as it leaves the auto-match task in the main workflow.

Workflow Path of a Record as it Leaves the Automatic Match Task (Main workflow only, this does not apply to the automated Match FUP task)		
Match Results	Incoming Record	Next Step
Automated match task identified records or patient sets that may match incoming record.	Reportable or auditable records which are not NAACCR Modified or NAACCR Update records	A Match-Consolidate Task is created to allow a manual review of the possible matches that were identified.
The automated match task identified a single Patient Set that definitely matches the incoming modify or update record.	NAACCR Modified or NAACCR Update (regardless of reportability status)	Automated Consolidate FUP task is performed. If consolidation problems are encountered, a manual Consolidate FUP is created to enable someone to review and consolidate the data.
The automated match task did not identify a patient set that is a definite match but did identify unlinked records that may match; or 2 or more patient sets were identified as possible matches to the modify or update records.	NAACCR Modified or NAACCR Update (regardless of reportability status)	A Match-Consolidate Task is created to allow a manual review of the possible matches that were identified.
No matches were identified by the automatic matching task.	Reportable NAACCR Abstract or Health Records; NAACCR Modified records	A Match-Consolidate Task is always created for reportable abstract records. The match is refreshed when this task is opened. This ensures that the incoming record has been matched against all appropriate data, including data that were loaded subsequent to the initial match.
	NAACCR Update	An AFL is created
	Auditable NAACCR abstract or Health records; non-abstract records that are reportable	Exits the workflow but is retained in the database and held for matching to data loaded in the future.
N/A	Non-reportable records other than NAACCR Modified and NAACCR Update	Records that are screened in the main workflow and are not reportable are not processed in this automatic match task. They are diverted to the passive follow-up branch of the workflow for matching.

Manual Review of Match Results

A manual Match-Consolidate task is created when a manual review of the automatic match results is required, as described in the *Automatic Matching* section of this chapter. During this task, the user either selects matching data for consolidation or specifies that there are no matches. The record then moves forward in the workflow to a step that is determined by record type and reportability status. The following two tables describe the path of the record as it leaves the Match-Consolidate task.

When a user selects one or more matches and clicks Consolidate to end a Match-Consolidate task....		
Incoming Record	Matching Record(s)	Next Workflow Task
Reportable abstract record (NAACCR, NAACCR Modified, and Health Records are abstract records)	One or more records of any type; or a patient set	Consolidate
Reportable non-abstract record	One or more records that include a reportable abstract record; or a patient set	Consolidate
Auditable record of any type	One or more records that include a reportable abstract record; or a patient set	Consolidate
Reportable non-abstract record	One or more records – none of which are a reportable abstract record	Warning that there isn't enough data to create a patient set. Cannot be consolidated. If there is no available abstract record or patient set, select No Matches.
Auditable record of any type	A single record that is not a reportable abstract record	Non-Rpt Record Rescreening


When a user clicks No Matches to end a Match-Consolidate Task...	
Incoming Record	Next Workflow Task
Reportable abstract record	Auto-build a patient set. In some registry configurations, a Visual Edit Patient Set task will be created to enable a manual review of the data. In other configurations, the record will exit the workflow or enter a Resolve Patient Set Errors task, if appropriate.
Auditable record of any type	Exits the workflow but is held for future matching
Reportable Casefinding record	An AFL is auto-created; the Casefinding record exits the workflow but is held for future matching (see Chapter 21: Managing Abstracting Assignments)
Reportable Death Certificate record	The record is forward to Death Clearance processes (see Chapter 17: Death Clearance)
Reportable Record of any other type (Short Health, Death Notice, NAACCR Update)	Exits the workflow but is held for future matching

Opening a Match-Consolidate Task

Requires system permission: *match*

Open a Match-Consolidate task to review the records and patient sets that were determined to be “possible” matches by the automatic matching task.

To open a Match-Consolidate task:

1. Click a **Match-Consolidate** link in the worklist summary on the home page. To resume a task assigned to you, click the link listed in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. To search for the task in your tasks and unassigned tasks:
 - a. Enter your user name in the **User(s)** filter.
 - b. Check the **Show Unassigned** box.
3. To search for a specific task, enter search criteria in the Worklist filters. Common filters to use when searching for a Match-Consolidate task are:
 - a. **Task ID(s)** – the complete task ID must be entered.
 - b. **Information** – enter full or partial search text related to fields in the Information column. In Match-Consolidate tasks, this includes record type, patient name and text indicating the results of the automatic match task as described below.
 - i. No Matches – The auto-match did not find any Patient Sets or Records matching the incoming record.
 - ii. X Perfect – The auto-match calculated a perfect match score of 1000 for X Patient Sets and/or Records.
 - iii. X Possible - The number of Patient Sets and/or Records that produced a matching score greater than zero but less than 1000.
 - c. **Tip:** To find Match-Consolidate tasks for patients whose names start with an M, try entering “; M” into the **Information** filter. You must include the quotes in your search text.
 - d. The following filters refer to data items in the incoming record:
 - i. **Data Type** – select a Record Type from the drop-down list. This only refers to the focus record’s type and not the type of records that are possible matches.
 - ii. **Record ID(s)** – a full or partial ID may be entered.
 - iii. **Facility** – a full or partial ID may be entered. Use the  lookup to select an ID.
 - iv. **DX Year(s)** – Year of diagnosis. Use a hyphen to select a range of years (e.g., 2002-2004). Use a comma to select separate years (e.g., 2002, 2004).
4. If you made changes to the filter settings, click **Apply**.
5. Click the task ID to open a Match-Consolidate task. Refer to the *Evaluating the Possible Matches* section of this chapter for further instructions.

Evaluating the Possible Matches

When you open a Match-Consolidate Task, a brief summary of the incoming record and the results of the automatic matching task match will be displayed as shown below.

SEER* DMS MDCSS User: coyle Lookup: Account | Logoff

Match-Consolidate (Task 95634) Task View Manage System Help

Incoming Record

ID: REC-3002154488 ⓘ	Type: NAACCR Abstract	SSN: 222-22-2222	Site: C502: Upper-inner quadrant of breast
Facility: FAC-0089 : William Beaumont Hospital - Troy	DOB: 08-29-1961	DX Date: 01-07-1998	
Last Name: DOE	Sex: 2 : Female	Histology: 8500	
First Name: JANE	Race: 01 : White	Behavior: 3: Malignant Primary	
Middle Name: M	VS: 1 : Alive	Laterality: 1: Right	
Maiden: <input type="text"/>	Alias: <input type="text"/>	DOLC: 08-12-2004	

[Follow-back](#)

Matches

4 items. Matched in < 1 second.

Score	Type	ID	Last Name	First Name	M	DOB	SSN	Sex	Race	DOLC	VS	Tasks
1000	Patient Set	PAT-05637292 ⓘ	DOE	JANE	M	08-29-1961	222-22-2222	2	01	05-01-2007	1	
1000	Casefinding	REC-113389 ⓘ	DOE	JANE	M	08-29-1961	000-00-0000	2	99			
1000	Casefinding	REC-119901 ⓘ	DOE	JANE	M	08-29-1961	000-00-0000	0	00			
559	Patient Set	PAT-05995693 ⓘ	DOE	JANE	A	01-01-1960	333-33-3333	2	01	12-13-2006	1	

Matched using [Record Linkage](#)

[Consolidate](#)
[No Matches](#)
[Refresh](#)
[Close](#)

Possible Matches

Patient sets and unlinked records identified by the automatic task as possible matches will be displayed at the bottom of the page. Data fields that match the incoming record are displayed in bold font. By default, the matches are sorted to show the most likely matches first. The score serves solely as a ranking mechanism and is based on registry-specific weighting schemes. The score is based on weighted rules which either consider a single data field or a combination of fields. Click the value listed for a match's score to view the criteria used to calculate the value.

Matches

4 items. Matched in < 1 second.

Score	Type	ID	Last Name	First Name	M	DOB	SSN	Sex	Race	DOLC	VS	Tasks
1000	Patient Set	PAT-05637292 ⓘ	DOE	JANE	M	08-29-1961	222-22-2222	2	01	05-01-2007	1	
1000	Casefinding	REC-113389 ⓘ	DOE	JANE	M	08-29-1961	000-00-0000	2	99			
1000	Casefinding	REC-119901 ⓘ	DOE	JANE	M	08-29-1961	000-00-0000	0	00			
559	Patient Set	PAT-05995693 ⓘ	DOE	JANE	A	01-01-1960	333-33-3333	2	01	12-13-2006	1	

Score	Searched	Found	Description
1000			SSN, Last Name (Patient or Alias or Maiden), First Name (Patient or Alias)

Matched using [Record Linkage](#)

[Consolidate](#)
[No Matches](#)
[Refresh](#)
[Close](#)


Matching Algorithm

The matching algorithm may involve fields that are not displayed such as maiden name and alias. If the score is high but fields are not shown in bold, you may review additional data fields by clicking the record or patient set IDs. To review a description of the matching algorithm, click the name of the algorithm shown below the matches. In the example above, you would click Record Linkage to view the matching algorithm that was used.

The primary fields used in the automatic matching task are displayed in the list of possible matches; these include name, social security number (SSN), date of birth (DOB), sex, race, vital status (VS), and date of last contact (DOLC).

"Patient set" or the record type of the possible match is shown in the **Type** column. If the record is reportable, no symbol is displayed next to the record type. An **[N]** next to record type indicates that the record is non-reportable. An **[A]** indicates that the record has a reportability status of auditable. An **[N/A]** indicates "not applicable", that is, the record type does not require screening (e.g., supplemental records are not screened for reportability).

To complete a Match-Consolidate task:

1. When the Match-Consolidate task is opened, the automatic match is refreshed so that the record is matched against the most recent data.
2. If the automatic matching task identified possible matches:
 - a. Compare the incoming record to the possible matches. Keep in mind that the list may include false positives as a result of missing data fields and the limitations of computerized matching techniques.
 - b. You may review additional data fields on the incoming record and on records and patient sets that are listed in the possible matches. Click the Information Icon  next to the record's or patient set's ID to see values of key fields. To browse all pages of the record or patient set, click the record's or patient set's ID. This is only available to users with system permissions enabling read and/or write access to the matching data (*rec_read_only*, *pat_read_only*, etc). Each system permission is described in *Chapter 26: Managing System Roles*.
 - c. If data fields required to determine a match are missing or incomplete, click Follow-back to submit a request for additional information from the reporting source. (Refer to the *Requesting Follow-back Information* section of this chapter for further instructions.)
 - d. If necessary, you may edit data fields in the incoming record or in records or patient sets listed in the possible matches. If you make any changes to data involved in this task, click **Refresh** to refresh the screen and match.
3. If the automatic matching task does not identify any possible matches, or if you conclude that the incoming record does not match any of the patient sets or unlinked records in the list of possible matches, click **No Matches**. SEER*DMS will close the Match-Consolidate task and the record will continue to the next task in the workflow, as appropriate for the record type. If the record is an abstract record, a new patient set will ultimately be created. Other types of records will be processed via casefinding, death clearance, or follow-up processes.
4. If you conclude that one or more items in the list of Matches contain data for the same patient as the incoming record:
 - a. Check the box next to the ID of each data item that matches the incoming record.
 - b. Click **Consolidate**. The next step will vary depending on the data involved:
 - i. A reportable abstract or a patient set is required for consolidation. If the incoming and matching data include at least one reportable abstract record or patient set, a manual Consolidate task will be created in the workflow. If you have the *consolidate* system permission, the Consolidate task will open automatically (see *Chapter 12: Consolidating Data* for instructions). If you do not have the consolidate permission, an unassigned task will be created in the worklist.
 - ii. If the incoming record was not a reportable record and it matched to one or more records that could not be used to build a patient set, a manual Non-Rpt Rescreening task will be created. This task allows for the manual review of two non-reportable records that match each other but do not match any reportable records or patient set data. Verify the match and combine the data if appropriate. Refer to *Chapter 15: Re-screening of Non-reportable Records* for instructions.
 - iii. The data can be consolidated if the record is being consolidated into an existing patient set or there are sufficient data to create a new patient set. If a patient set


or reportable abstract are not available, the following message will be displayed at the top of the page: "*Cannot create Consolidate task: A reportable abstract or patient set is required to consolidate these data at this time. Click No Matches to end the task; the records will remain in the database for future matching.*" Click **No Matches**. The incoming record will be retained in the database. A new patient set will be created when a reportable abstract record is loaded.

Modifying the Reportability Status of the Incoming Record

Requires system permission: *match* and *rec_edit*

If you determine that the incoming record of a Match-Consolidate task is incorrectly designated as reportable, you may manually modify the record's reportability status. Typically, a record's reportability status is set by an automatic screening task using a registry-defined algorithm. The reportability status may have been set by a SEER*DMS user in a manual screening task. The manual screening task is generated for any record that, according to your registry's policies, must be reviewed in order to ascertain reportability. If you determine that a record's reportability status was set incorrectly, you should notify a registry manager. The registry-defined screening algorithm may need to be modified, or new manual screening procedures may need to be employed.

To modify the reportability status of the incoming record for a Match-Consolidate task:

1. Click the **ID** in the Incoming Record section to open the record editor.
2. In the navigation box on the left side of the editor, hold your mouse near the arrow  next to the record type. The record menu will be displayed. Select **Reportability**.
3. Select a **Reportability** value from the drop-down list.
4. If you have selected *Auditable* or *Non-Reportable*, enter text in the **Reason** field. This documentation is useful for the purpose of casefinding audits.
5. Save your changes.
 - a. Click **Save**.
 - b. Enter comments to document your changes.
 - c. Click **Save & Exit**. You will be returned to the Match-Consolidate task.
 - d. Click **Refresh** to refresh the screen and match. The icon displayed next to the record's type will indicate the new value for reportability status (no icon is shown if the record is reportable).
6. Complete the Match-Consolidate task as described in the *Evaluating Possible Matches* section of this chapter.

Requesting Follow-back Information

Requires system permission: *match* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a "follow-back need". If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. Your request will be maintained with the data record, allowing all users to review pending follow-back requests when reviewing the record data. If you cannot complete the Match-Consolidate task until you receive the information, you may close the Match-Consolidate task and complete it at a later time.

You will receive e-mail notification when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.

SEER*DMS enables users to access patient data via two routes: 1) the data can be modified while completing a worklist task, or 2) the record or patient set may be edited directly, outside the context of a task. If you suspended a Match-Consolidate task pending the receipt of follow-back information, you must re-open and complete that task to allow the record to move forward in the worklist. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. Specific instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Supplemental Matching Task

Records that follow the passive follow-up branch of the workflow are auto-matched using registry-defined algorithms specific to passive follow-up. For these records, a Supplemental Match Task is created if two or more patient sets are identified as "perfect" matches; or there are no perfect matches but at least one patient set is a possible match. The fields and criteria used to define a "perfect" and "possible" match are specified by the registry management. Some registries do not define "possible" matches for data used only for passive follow-up.

The supplemental matching algorithms only match the incoming record against patient sets; unlinked records are not considered. The Supplemental Match Task uses the same controls and layout as the Match-Consolidate Task. The passive follow-up processes are described in *Chapter 16: Follow-up*.

To summarize, the Supplemental Match Task and the Match-Consolidate Task differ in three ways:

1. The Supplemental Match Task is part of the passive follow-up branch of the workflow. The incoming record will not be used to create a new CTC or Patient Set. It will be used to provide more current follow-up data. The Match-Consolidate Task is part of the main branch of the workflow designed for medical records that will be used to update or build CTCs and Patient Sets. Records are routed to one task or another based on record type and reportability status, as specified in registry-defined algorithms. Refer to the workflow diagrams provided with the *SEER*DMS Technical Reference* for more information.
2. In the Match-Consolidate Task, the incoming record is matched against unlinked records and patient sets. The only data not considered in this match are unlinked records that have not yet been screened for reportability. In the Supplemental Match Task, the incoming record is only matched against patient sets.
3. The auto-match algorithms related to these tasks are defined separately.

Chapter 11: The Patient Set Editor

In the SEER*DMS database, a “patient set” is used to store all data pertaining to the same patient. These data include patient demographics, information on all reportable cancer/tumor/cases (CTC), associated admissions, diagnostic and treatment procedures, and follow-up information. Data summarized or consolidated from the source records are stored in patient set data fields. The patient set also includes direct links to the source records that contributed the data. Refer to *Chapter 2: Records and Patient Sets* for more information related to patient set and record data.

When a patient set is opened, either from a database search or as part of a workflow task, it is displayed in the patient set editor. The patient set editor provides access to the consolidated patient set data fields and allows users to review data on the source records. The editor enables users to view all information in the database associated with an individual patient, to resolve edit errors, and to modify data fields in response to follow-back queries.

Although it is possible for two users to open the same patient set simultaneously, SEER*DMS prevents a user from overwriting changes made by another user. If data fields are changed by the system or another user while you are reviewing a patient set, you will not be allowed to save changes to that patient set. You will be notified that the data have been changed and will be able to reload the patient set. It is also possible to open a patient set that is associated with a pending worklist task. When you open the patient set, SEER*DMS will display a warning message and provide a link to related worklist tasks. To avoid the duplication of effort, you should review the tasks prior to making changes. For more information, please review the *Saving the Patient Set* section of this chapter.

The features and tools of the patient set editor are described in this chapter. Step-by-step instructions for applying these tools to specific worklist tasks are provided in: *Chapter 12: Consolidating Data*, *Chapter 13: Visual Editing*, and *Chapter 14: Resolving Patient Set Errors*.

In this chapter, you’ll learn about



- Features of the Patient Set Editor
 - Demographic Information Viewer
 - Diagnostic Information Window
 - Text Viewer
 - Show Differences
 - Viewing the Logic of Integrated Edits
 - Polishers
- Resolving Edit Errors
- Linking and Unlinking Records
- Identifying and Removing Duplicate Patient Sets
- Printing Record or Patient Set Data
- Undoing Changes
- Saving Changes to a Patient Set
- Requesting Follow-back Information

Features of the Patient Set Editor

When a patient set is opened in SEER*DMS, the data are displayed in an editor similar to the one shown below. The patient set's Demographics page is shown when you first open the patient set.

The screenshot shows the SEER*DMS Patient Set Editor interface. At the top, there is a header with 'SEER*DMS CTR' and user information 'User: coyle'. Below this is a navigation bar with 'Patient Set Editor' and menu options 'View', 'Manage', 'System', and 'Help'. The main content area is titled 'Demographics (PAT-22621202)' and contains various data entry fields. On the left, a navigation box lists 'PAT-22621202' with sub-links for 'Demographics', 'CTC 01 (C187)', 'CTC 02 (C421)', 'AL 5', 'Img', 'Edits', 'FB', 'AFL', 'SS', 'AFUP', 'Cmt 2', and 'Linked (2)'. Below the navigation box are links for 'FAC-0314 (1)' and 'FAC-1000 (1)'. The main form includes fields for 'Pre', 'Last', 'First', 'Cur Marital', 'Type', 'License #', 'Race', 'Hispanic', 'Birth Place', 'Birth Dt', 'Sex', 'SSN', and 'Cnt'. A 'Show Differences Tool' button is located near the SSN field. Annotations with arrows point to the navigation box and the 'Show Differences Tool' button.

You can use the links in the navigation box on the left to:

- View each page of patient set data (Demographics and CTC pages). Links to all CTC pages are displayed when you click CTC).
- Review the patient set's **Audit Log (AL)**. Each change made to a data field is documented in the audit log. Audit log entries include the user or process which modified the data, the worklist task or system event in which the change was made, comments related to the change, the date and time of modification, and the original and modified value of each data field that was changed. For a description of each event that may be listed in the audit log, refer to *Chapter 2: Records and Patient Sets*.
- View, add, or delete **Image Files (IMG)** containing data related to the patient set. These images may contain the original data submitted to the registry.
- View and/or resolve the **Edits** triggered by data fields in the patient set, as described in the *Resolving Edit Errors* section of this chapter.
- Review or submit a request to the reporting facility for **Follow-back (FB)** information. Please refer to the *Requesting Follow-back Information* section of this chapter.
- Review or submit an **Abstract Facility Lead (AFL)** to indicate that an abstract record is needed for the patient (see *Chapter 21: Managing Abstracting Assignments*).
- View **Special Studies (SS)** to which this record is assigned. Add or remove the patient set from a special study (*Chapter 28: Special Studies*).
- View a history of communications initiated via **Active Follow-up (AFUP)** and information related to the most recent AFUP Need for the patient (see *Chapter 16: Follow-up*)
- View or add to the **Comments (Cmt)** stored in the patient set. The comments include notes added by system users and messages auto-generated by SEER*DMS.
- The source records can be accessed within the **Linked** section. To see the types of records or view record data from a specific facility, click the down arrow  adjacent to the facility ID. To expand the list for all facilities, click the down arrow  adjacent to "Linked". You may then click one of the record types to access the record data.
- In a consolidate task, the patient set navigation box will also include a separate list of **Incoming Records** to distinguish new records from records that were previously linked. Please refer to *Chapter 12: Consolidating Data* for more information on linking records.

The title bar includes the name of the current page (Demographics in the example above), patient set or record ID, and links to tools for viewing, comparing, and consolidating data. Links to the **Demo Info**, **DX Info**, and **Text** viewers are provided on the left side of the title bar; a link to the

Show Differences tool is on the right side of the title bar. The Text viewer allows you to review the supporting text fields for each CTC. Demo Info and DX Info enable you to compare demographic and diagnostic information in the patient set with data in the source records. The Show Differences tool allows you to compare data fields on source records to the same fields in the patient set, and to copy values from record data fields to the appropriate fields in the patient set.

A **Data Header** is displayed at the top of many patient set data pages, as shown below. Data fields, including patient identifiers and vital status, that can be edited on the Demographics page are displayed in the header as a reference when viewing other data pages. When you are working on a CTC data page, the data header will include the primary site, histology, date of diagnosis, and other fields defining the CTC. If an edit is required in any of the fields in the data header, use the links in the patient set navigation box to access the relevant data page and edit the field.

SEER*DMs MDCSS User: coyle

Visual Editing: Patient Set (Task 90204)

Save Validate Cancel Demo Info | DX Info | Text Summary TX (PAT-10391870)

PAT-10391870

Demographics
 CTC 00 (C569)
 Summary TX
 Facility (0086)
 SEER Course 1
 TX 1 (0086)
 TX 2 (0086)

AL 1 Img 0 Edits 2
 FB 0 AFL 0 Cmt 1
 Linked (2)

Name: DOE, JANE **SSN:** 123-45-6789 **DOB:** 08-29-1961 **R:** 01 **S:** 2 **DOLC:** 01-21-2005 **V:** 1 **FUP:**
Site: C569 **Laterality:** 4 **Hist:** 8460 **Behav:** 3 **Grade:** 3 **Seq:** 00 **DX Date:** 09-08-2004

Summarized Diagnostic Procedures

DX Proc 73-87
 DX/Stg (NonCA) 00

Breast/Prostate Scr
 Prostate Scr/BX Appr Scr/BX Othr Scr/BX Palp Scr/BX 1st Dct

SEER Course 1

When viewing a data page, patient identifiers and other fields not shown on the current page are displayed in the Data Header.

Demographic Information Viewer

The Demographic Information viewer enables you to compare demographic data fields from all source records including records linked to the patient set and, if in a Consolidate task, incoming records being considered for consolidation. This tool provides a convenient mechanism for verifying that all data pertain to the same patient and for evaluating data discrepancies. If you are viewing the Demographics Information during a Consolidate task, the new records being consolidated into the Patient Set are listed in the Incoming Records section at the top.

Demographic Information															
Type	Facility	First	Mid	Last	Suf	Maiden	Alias	SSN	DOB	Sex	Med Rec #	Race	Birth Place	Hisp	Marit
Incoming Records															
NAACCR Abstract	FAC-0089	JANE	L	DOE				444-34-4444	08-29-1961	2	1111111	01 88 88 88 88	999	0	2
Patient Set															
Health Record	FAC-0086	JANE		DOE				444-44-4444	08-29-1961	2	177777790	01 88 88 88 88	999	0	2
Casefinding	FAC-0089	JANE		DOE				000-00-0000	08-29-1961	2	1111112	00			0
NAACCR Modified	FAC-0089	JANE	L	DOE				444-44-4444	08-29-1961	2	1111111	01 88 88 88 88	999	0	2
Short Health Record	FAC-0283	JANE		DOE				444-44-4444	08-29-1961	2	1777777	00 88 88 88 88		9	9
Short Health Record	FAC-0283	JANE		DOE				444-44-4444	08-29-1961	2	1777777	00 88 88 88 88		9	9
Supplemental [N/A]	FAC-1000	JANE	L	DOE				444-44-4444	08-29-1961	2		99 99 99 99 99			

Accept Reject

Diagnostic Information Window

Use the Diagnostic Information window to review basic diagnostic data items for each CTC in the Patient Set. By default, values for source records are hidden during ad hoc editing and Resolve Patient Set Errors tasks. You may click Show Records to review values from the source records.


Diagnostic Information										Show Records
ID	DX/Scr Dt	Site	Lat	Hist	Beh	Gra	Seq	Site Title	Hist Title	
CTC 01	03-23-1963	C509	2	8140	3	9	01			
CTC 02	03-23-1970	C509	1	8140	3	9	02			
CTC 60	11-21-1978	C443	0	8070	3	9	60			

Apply Close

In a Consolidation task, use the Diagnostic Information window to review diagnostic data items from all source records associated with the patient set. The consolidated values for each CTC are shown in bold, just above the record(s) that are linked to that CTC.

Diagnostic Information													
ID	Type	Facility	DX/Scr Dt	Site	Lat	Hist	Beh	Gra	Seq	Site Title	Hist Title		
Unlinked Records													
REC-3003088103 * ...	Health Record	FAC-0004	08-10-2005	C445	3	8743	3	9	00	SKIN, BACK	SUPERFICIAL SPREADIN...		
				CTC 00	08-10-2005	C445	2	8720	3	9	00	SKIN, BACK	MELANOMA
REC-3002944014 ...	Health Record	FAC-0120	08-10-2005	C445	2	8720	3	9	00	SKIN, BACK	MELANOMA		
Patient													
REC-3002101766 ...	Casefinding	FAC-0130	08-10-2005	C445	3	0001	3	9		BACK, SKIN	UNKNOWN		
* Incoming Record													
<input type="button" value="Apply"/> <input type="button" value="Close"/>													


The linkage of a record can be set or modified within the Diagnostic Information window. If you are consolidating newly received record data into the patient set, you will use this tool to link the record to an existing CTC, auto-build a CTC from the record, or link the record at the patient level (see *Chapter 12: Consolidating Data* for instructions). If at a later time you determine that a record was linked inappropriately, you may also use the Diagnostic Information window to unlink the record or assign the link to another CTC or to the patient set. If you change the linkage of a record, you must manually review and modify the consolidated CTC data fields (refer to the *Linking and Unlinking* section of this chapter for instructions).

Close popup windows (DX Info or Text Viewer) before exiting the editor or opening another patient set. The popup windows will not auto-close when you exit the editor; the data will not auto-update when you open a new patient set. To prevent confusion, it is particularly important to close the DX Info and Text Viewer windows since patient identifiers are not displayed in these windows. To close the DX Info window, you may either click the  in the top right corner or the **Close** button at the bottom of the viewer.

Text Viewer

The Text Viewer provides a convenient method for viewing text and other supporting data. If the patient set has more than one CTC, select a CTC from the drop-down list. All text fields for that CTC will be shown at once, in a read-only format. The pull-down menu also enables you to select the source records linked to the patient set.

Text Viewer	
CTC 00 (C445)	
<div style="border: 1px solid black; padding: 2px;"> CTC 00 (C445) </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> PAT-10789510 </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> CTC 00 (C445) </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Incoming Records (1) </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> FAC-0004 </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Health Record </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Linked Records (2) </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> FAC-0120 </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Health Record (CTC 00) </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> FAC-0130 </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Casefinding (Pat) </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Micro Desc </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Supp Rpt Add </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;"> Comments </div> <div style="border: 1px solid black; padding: 2px;"> Full Text </div>	<div style="border: 1px solid black; padding: 2px;"> SKIN, BACK </div> <div style="border: 1px solid black; padding: 2px;"> MELANOMA </div> <div style="border: 1px solid black; padding: 2px; margin-top: 10px;"> IMPRESS: STG 1B DZ (T1B N0 M0), REC WLE W/1CM MARGINS. FINAL DX COMMENT: N/A </div>

You may display both the Text Viewer and a data page in the editor at the same time (you may need to resize the windows or show one on a separate monitor). To close the Text Viewer, either click the  in the top right corner or the **Close** button at the bottom of the viewer (not pictured). Close the Text Viewer before exiting the editor or accessing another patient set in the editor.







Show Differences

The Show Differences feature of the editor allows you to review discrepancies between each record and the patient set. If an incoming record contains more current or complete information, the Show Differences tool enables you to update the patient set by copying the data from the record. The features of Show Differences are described below. Additional instructions are provided in *Chapter 12: Consolidating Data*.

Demo Info DX Info Text		Demographics (PAT-06920542)		Hide Differences
Show Empty Fields		Patient Set		SH REC-2205040308 (CTC 00) ▼
	FAC-0048 ←	Lst FU Hosp	FAC-0288	
	11 ←	FU Src Cntl	99	
	10 ←	FU Src (DT)	02	
Current Address				
	E ←	Dir Pre	E	
	123 ←	Num	111	
	MAIN ←	Street	BEACH	
	←	Dir Post		
	RD ←	Type	RD	
	ANYTOWN ←	City	UNK CITY	
	222 ←	Cnty Code	999	
	PA ←	State	FL	
	22222 ←	Zip	11111	
	←	Suppl		
	←	Country		
Alternate Address				
	←	Dir Pre		
	←	Num		
	←	Street		
	←	Dir Post		
	←	Type		
	←	City		
	←	Cnty Code		
	←	State		
	←	Zip		
	←	Suppl		
	←	Country		
Supporting Text				
		Remarks Txt		
MALIG NEOPLASM OF UIQ BREAST 8/5/03: CONSULT W/ DR DOE: PLAN TO GIVE CHEMO (SHORT COURSE OF AD RIA & CTX TO LIMIT RISK OF RECURRENCE)		CTC 00	8-5-03 RT CONS:L BRST INFILTR DUCTAL CA GRADE 3. S/P BX, RE-EXC, SENTI NEL NODE DISSECT. PLAN:CHEMO, THEN RT. 1-22-04 RT F/U:FINISHED CHEMO(SEE OTHER F /U)	
Save		Validate		Cancel

1. The Show Differences link is in the title bar of data pages that display fields from multiple records (Demographics and CTC).
2. Show Differences displays values from the patient set on the left and values from a record on the right (as shown in the figure above). By default, the first incoming record is shown

on the right. A drop-down menu on the top right allows you to choose which record you wish to compare to the patient set (an abbreviation showing the type of record, the record ID, and the entity to which it is linked are listed in the drop-down menu). Once you select a record, fields are shown if they differ and are not blank in the record data. You may include fields with blank values in the records by clicking Show Empty Data. Once shown, you may click Hide Empty Data to toggle the display of these fields.

3. To assist in your review of discrepancies in the data, supporting text fields are displayed at the bottom of the Show Differences page.
4. If there are no discrepancies between the non-blank data fields in the record and the patient set data fields, *No Differences* will be displayed in the top section of the page.
5. Records and patient sets do not have the same set of data fields. To allow you to compare record data to patient set data, SEER*DMS auto-builds patient set fields from the record data. The process of auto-building is described in *Chapter 2: Records and Patient Sets*.
6. In some cases, groups of fields are displayed if the value of any field within that group differs between the patient set and the record. This enables you to review supporting information when reviewing data discrepancies. Data fields shown in groups include data related to: census tract, course of treatment, the medical practitioner care fields, address, aliases, cause of death, and informants.
7. An arrow  is displayed next to each patient set field, pointing from the record toward the patient set. This arrow moves data from the record into the patient set and overwrites the values in the patient set. You may also paste or type values directly into patient set fields. For some fields, a plus sign  is displayed to allow you to append the text from the record's data field to the text in the patient set field. The record ID and facility ID are automatically inserted prior to text that is copied or appended using the  and .
8. The patient set includes multiple instances of certain data: multiple addresses, multiple sets of informant data fields, etc. If there are differences between the record and the patient set in fields that have multiple instances, you may either overwrite the patient set fields or create new instances in the patient set. Consider the example in the diagram above. If you determine that the address in the record represents a second address for the patient, click the arrows  next to the alternate address fields to add that information to the patient set. If you determine that this is the patient's current address, click the arrows  next to the current address fields to overwrite the values in the patient set.

Viewing the Logic of Integrated Edits

The fields involved in an edit and the logic of the edit are documented in SEER*DMS Help menus and in the Record and Patient Set Editors. Select Help > Edits to use the searchable Edits Manager. The Edits Manager may be used by all users to review the edits implemented in SEER*DMS. Users with the system_administration permission may use the manager to review, add, or modify edits.

In the Patient Set Editor, click the **info** link on the Edit Errors page to view the fields and logic of a failed edit. To view this information for other edits, select **View Edits** from the patient set menu. Select a rule set and a rule ID from the drop-down lists. A page similar to the one shown below will be displayed.

Edits

Rule Set: SEER
 ID: SEER_Record_Number
 Date Modified: 01-25-2005
 Name: SEER Record Number
 Message: SEER Record Number [2190] not valid
 Fields:

- SEER Record Number [2190]

 Criteria: SEER Record Number[2190] is a unique sequential number assigned by the SEER participant to each record for the patient (01 to nn). Blanks are also allowed prior to submission.

Modifications

Date	Description
04-28-1993	SEER Record number must be greater than 00.
01-25-2005	Blanks allowed prior to submission.

Close

Polishers

A polisher is a background utility that, according to SEER or registry-defined algorithms, imputes data values based on values in other fields. A polisher executes when the value of one of the fields changes. All changes made by polishers are documented in the patient set's Audit Log. The fields associated with a polisher and the polisher's algorithm are documented within SEER*DMS. Select Help > Polishers to use a searchable interface to review documentation related to polishers. To view documentation for a polisher within the Patient Set Editor, select **View Polisher** from the patient set menu. Select a polisher from the drop-down list. A page similar to the below will be shown.

Polishers

Name: Age at Diagnosis
 Fields:

- Birth Date YYYY
- Birth Date MM
- Birth Date DD
- DX Date YYYY
- DX Date MM
- DX Date DD
- CTC Deleted

 Description: For each of the non-deleted CTC, calculates the age at diagnosis of the patient according to the date of birth and the date of diagnosis.
 If the year (of birth or diagnosis) is missing, unknown, or has an invalid value, the age is set to unknown (999). Otherwise it is calculated using the month and day parts of the date (of birth or diagnosis) only if they contain a valid value.

Close

The patient set menu allows you to **Force Polish**, that is, run all polishers despite the fact that the fields were not changed. This feature should be used with caution. All polishers will execute and, therefore, there may be unexpected changes in fields unrelated to your editing task. If you use Force Polish, you must carefully review the list of changes displayed when you save the Patient Set. If an undesirable change was made to the data, you should either correct the data manually or reverse the changes before saving (see the *Undo Changes* section of this chapter).

Resolving Edit Errors


Requires system permission: *pat_edit*; other permissions that may be necessary to resolve all edit errors include: *pat_edit_overrides*, *pat_end_task*


To check modified fields for errors without leaving the current page, click **Validate**. SEER*DMS will re-run the automated patient set edits and highlight any new or recurring errors. If a modified field does not contain any errors, it will be highlighted in yellow (see *Chapter 7: Edit Errors* for a description of the color codes used in the editor). The edits are also executed each time you go to a different data page or click the **Save** button.

Review each error prior to making changes to a data field. To evaluate and correct the problem, you must determine if a single field is causing the error or if an inter-field edit has identified a conflict between multiple fields.

To review and correct edit errors in a patient set:

1. To view all errors, click the **Edits** link in the Patient Navigation box.
2. The following symbols are displayed next to each error in the **S (Severity)** column:

 **Critical** – exclamation point is used to alert you to critical errors


 **High** – directional symbols indicate the relative severity level of the other levels, the up arrow is used for high

 **Moderate** – flat indicates moderate severity level

 **Low** – a down arrow indicates a low severity level

Note: In SEER*DMS, if you hold your mouse over any symbol its meaning will be displayed.

3. The following information is listed for each error:
 - a. **Rule Set** – SEER, SEER Extended, and registry-defined sets of edit rules are implemented in SEER*DMS. In addition, SEER*DMS applies system edits (SEER*DMS and SEER*DMS Registry) which enforce database constraints. SEER Extended Edits were developed by the SEER Program but have not been incorporated into the standard SEER Edits. The extended edits may relate to fields that are not required to be transmitted to SEER.
 - b. **Error ID** – Edit name or identifier.
 - c. **Error Message** – A brief description of the edit error.
 - d. The **Page** column provides a link to a data page containing at least one of the fields causing the error.
 - e. **Action** – Click the **info** link to view full documentation for the edit including the edit logic, data fields that are involved, and revision history.
4. Click the link in the **Page** column to find and edit the fields. All fields validated by an edit may not be shown on the same page, use the links in the Patient Set Navigation box to go to other data pages.



5. A data field is highlighted in a shade of red if it is associated with an edit that has been triggered. Hold your mouse over the field's value to view a listing of the edit errors associated with the field.
6. If you are able to resolve the error:
 - a. Depending on the field, you may either enter a value directly into the data field or use a lookup control to select the value.
 - b. The color of the edited field will change when you move to another field (see *Chapter 7: Edit Errors* for a description of the color codes used in the editor).
 - c. Click **Validate** to run the edits and to determine if your change has corrected the error. If the color of the field still indicates an error, hold your mouse over the field to review the error message.
7. There are several edit errors that can be overridden using data fields displayed in the **Override** section of each CTC data page or by setting **Reviewed** data fields.
 - a. SEER and NAACCR overrides are implemented as data fields displayed in the **Override** section of each CTC page. Each override is associated with a specific edit. If you hover your cursor over an override's label, the NAACCR fieldname for the flag is listed. If the field overrides SEER edits, the edit IDs will also be shown.
 - b. Registry-specific and SEER Extended edits that warn of discrepancies in patient information can be overridden by setting the **Reviewed** data field on the Demographics page to *Yes*. For example, a SEER Extended edit generates a warning if gender and first name do not agree.
 - c. Registry-specific and SEER Extended edit errors of CTC data that are warnings can be overridden by setting the **Reviewed** field on the CTC page to *Yes*.
 - d. There are three treatment review flags on the summary treatment data page. Each is associated with a set of data fields; for example, the **Radiation Review** field is associated with the radiation fields in the summarized treatment data. If the values of the associated data fields trigger the need for review, an edit error is generated and **review** is displayed next to the **Summary TX** link in the navigation box and next to the data fields on the page. You must review those fields to ensure that the summary values are correct. To view treatment data fields from all treatment pages in one window, click the multi-page icon  that is displayed next to each review field. If changes are required, enter new values into the data fields on the Summary TX data page. Set the flag to *Reviewed*.
8. If information from a reporting facility is required to resolve an error, follow the instructions provided in the *Requesting Follow-back Information* section of this chapter.
9. If you encounter a problem that you can not resolve:
 - a. If you are editing the data via a worklist task, select Task > Reroute to assign the task to another user (see in *Chapter 4: Using the Worklist* for specific instructions).
 - b. If you are not editing the data in the context of a worklist task, take note of the Patient Set ID so that you can seek assistance from another editor or return to the patient set after researching the problem.
10. If you have made a number of changes, you should save your work periodically. You must save your changes when completing a task. When you are ready to save your changes, follow the instructions in the *Saving Changes to a Patient Set* section of this chapter.

Linking and Unlinking Records

Requires system permission: *pat_edit*

If you are consolidating data from an unlinked record that is new to this patient set, please follow all steps described in *Chapter 12: Consolidating Data*. Use the instructions below to make corrections when a saved patient set includes a record that was linked inappropriately. Prior to making a change, review the data on the record to determine if the record and patient set data pertain to the same patient. Use the Demo Info tool to review patient identifiers from all records in one pop-up window. In the same manner, manually review all CTC data to determine how the record should be linked. Use the DX Info tool to view a list of diagnostic data fields stored in the patient set and in the source records.

To modify a record's link or to unlink a record completely:

1. If a record is linked inappropriately, thoroughly review the relevant patient set and/or CTC data fields to determine whether you must also manually modify some data fields. Use the Audit Log as a reference. You may also want to print the patient set prior to changing the links.
2. When you have completed your review, you may either use the record's menu or the DX Info tool to modify the record's link. The following instructions involve the use of the record's menu.
 - a. Open the record in the editor. Click the down arrow  adjacent to the ID of the facility that provided the record or expand the list of all records by clicking the arrow at the top of the Linked section. Then click the appropriate Record Type label in the navigation box. (Tip: If there are multiple records of the same type, the record's ID and reportability status are displayed when you hover over the Record Type.)
 - b. Review the data displayed in the editor to verify that you selected the correct record.
 - c. Click the  menu indicator that is displayed next to the record's type to open the record menu.
 - i. To completely disassociate the record from this patient set, select **Unlink**. The record will be sent into the workflow at the point of matching. It will follow the workflow route designated for a record of its type.
 - ii. To link the record to an existing CTC, select the appropriate **CTC** from the **Move To** sub-menu (sequence number is displayed for each CTC listed in the menu).
 - iii. If you wish to use the record to create a new CTC, select **New CTC** from the **Move To** sub-menu. This menu item will not be available if the system is unable to build a CTC from a record of its type. If you are creating a CTC from a non-abstract record, you should perform the appropriate Casefinding and Death Clearance processes prior to creating a new CTC from the record.
 - iv. To link the record at the patient set level, select **Patient** from the **Move To** sub-menu. If the incoming record is not an abstract record and is for a new CTC, you should temporarily link the record at the patient level and defer creating the new CTC until an abstract is received. Later, when the abstract record is received and used to build the new CTC, you can reassign this link to the CTC. This will minimize the level of effort required to consolidate the data for the new CTC.
3. Once the record's link is moved, the new linkage will be indicated next to the record's type in the navigation box:

- a. If the record is linked to a CTC, "C *NN*" will be displayed. This indicates that the record is now linked to the CTC that has a central sequence number equal to *NN*. SEER*DMS attempts to set the sequence number appropriately, based on the central sequence number coded in the record and the number of CTCs in the patient set. If you have multiple CTCs with the same sequence number, you should review the CTCs and manually adjust the sequence numbers.
 - b. If the record is linked at the patient level, P will be displayed.
 - c. If the record is unlinked, an X will be displayed.
4. If you created a new CTC in step 2, determine whether any records linked at the patient level need to be linked to the new CTC. In the patient set navigation box, the labels for newly created CTCs are shown in bold type.
 5. Perform a thorough review of the patient set data, including the data pages of all CTCs that were affected by the change. You must determine whether any admissions or treatments need to be manually deleted from the original CTC. If you have unlinked a record completely, you should verify that the patient's follow-up information has been modified appropriately.
 6. Save your changes by follow the instructions in the *Saving Changes to a Patient Set* section of this chapter.


Identifying and Removing Duplicate Patient Sets

Requires system permission: *pat_edit*, and *pat_delete*

Execute RPT-066A to generate a listing of patient sets which are potential duplicates (see *Chapter 24: System Reports and Extracts* for instructions to execute and open SEER*DMS reports). An editor should use the Patient Lookup to search for patient sets listed on the report and determine whether the patient sets are truly duplicates. **Tip:** Try using CSV format for the report if you would like to copy-and-paste Patient Set IDs into the Patient Lookup.

If the report's matching algorithm falsely identified a patient set as a duplicate, indicate that it is a false positive using the Patient Matches section of the patient set editor. If two patient sets exist for the same patient, follow the steps to consolidate all of the patient's data into one of the patient sets and delete the other.


To indicate that two patient sets identified as "duplicates" are not true duplicates:

1. Open one of the Patient Sets.
2. Click the  menu indicator in the patient navigation box to open the patient set menu.
3. Select **Patient Matches** from the Patient Set menu. If you have reviewed both Patient Sets and have determined that they are not duplicates, set **Action** to *Not a Match*. The two patient sets will no longer be identified as a pair of potential duplicates when you run RPT-066A.
4. Save your changes by follow the instructions in the *Saving Changes to a Patient Set* section of this chapter.

To combine data from two patient sets and remove one of the duplicates:


1. Review all data and compare the data pages in the two patient sets. To view two patient sets at one time, use the browser's controls to open a second window or tab. You may also wish to print the patient sets before consolidating the data.

2. Select a patient set to retain. Ultimately, you will want to retain the patient set that has the most and/or best data. In making this decision, you should consider the following:
 - a. The length of time that each patient set has existed in the system. If one of the patient sets was created recently, it may have been created from one or two records. If a patient set was created some time ago, it may be the consolidation of data from a large number of records. The sequence of the patient set IDs and the auto-generated messages stored in the patient set's Comments are useful in determining the history of the patient set. (To review the comments, click CMT in the patient set navigation box.)
 - b. The number of records linked to each patient set. In patient sets created within SEER*DMS, this provides a rough measure of the amount of data consolidated into the patient set. However, source records may not be available for patient sets that were migrated to SEER*DMS from the registry's previous data management system.
 - c. Compare the audit logs of both patient sets. A patient set's audit log documents all changes made to patient set data fields, including changes made by registry staff and those made in automated processes. The number of changes made manually by registry staff may impact your selection of the "best" patient set to retain. Print the audit logs for future reference.
3. The next step involves unlinking all source records from the unwanted patient set. Ultimately, you will be linking these records to the other patient set. To unlink all source records from the unwanted patient set:
 - a. Verify that the unwanted patient set is displayed in the editor.
 - b. For each record listed in the Linked record section of the navigation box:
 - i. Click the Record Type label to open the record in the editor.
 - ii. Record each ID on paper or in a text editor. You will need this information to verify that all records are ultimately consolidated into the other patient set.
 - iii. Click the menu indicator next to the record's type to open the record menu.
 - iv. Click **Unlink**.
4. To prevent additional data from being consolidated into the unwanted patient set, mark the patient set as deleted:
 - a. To open the patient set in the editor, click **Demographics** in the patient set's section of the navigation box.
 - b. Click the menu indicator next to the patient set ID to open the patient set menu.
 - c. Click **Delete Patient Set**. The patient set and all of its CTCs will be marked as deleted. This is a reversible delete. However, the patient set and each CTC would need to be undeleted individually.
5. Save your changes to this patient set and exit the editor (see the *Saving Changes to a Patient Set* section of this chapter).
6. Each record will be moved into the workflow at the point of a matching task (the exact matching task will vary by record type). In order to consolidate the records into the retained patient set, search the worklist for manual tasks initiated by these records. (Note: It may take a few minutes for the auto-match to be completed.)
 - a. To view the worklist, select **View > Worklist**.


- b. Check the **Show Unassigned** box.
 - c. To search for one record, type or copy its ID into the **Pat/Rec ID(s)** filter.
 - d. To search for multiple records, click the down arrow  to expand the **Pat/Rec ID(s)** filter. Type or copy the IDs into the text box.
 - e. If there are no worklist tasks related to the records that you unlinked, use the Patient Lookup to search for the retained patient set. The record may have been of a type that allowed SEER*DMS to auto-consolidate the data.
7. Open and complete one of the tasks:
 - a. If one or more Match-Consolidate tasks were created, open and complete any one of those tasks. When selecting a Match-Consolidate task, it does not matter which task you select. All of the patient's records should be available for consolidation. After completing the match, SEER*DMS will auto-close the other tasks. Instructions for completing the Match-Consolidate task are provided in Chapter 12: Consolidating Data.
 - b. If there are no Match-Consolidate tasks and there is a Consolidate FUP task, open and complete that task.
 8. Verify that each record that was unlinked from the deleted patient set has been linked to the retained patient set, if appropriate. Refer to the list of Record IDs created in step 3.
 9. Once you have linked and consolidated data from all available source records, you must incorporate any data from the deleted patient set that was not loaded from a record. This includes data that was migrated and data that was entered manually. Even though the patient set was deleted, you may open it in the patient set editor to view or print it. If you wish to view both patient sets, use the browser's controls to open two windows or tabs.

Printing Record or Patient Set Data

To print the patient set data fields:

1. If you are not viewing a page of the patient set data, click **Demographics** in the patient set navigation box.
2. Click the  menu indicator in the patient navigation box to open the patient set menu.
3. Select **Print**.

To print data fields on an incoming or linked record:


1. Click the record's link (**Record Type**) in the navigation box.
2. Open the record menu by clicking the  menu indicator that appears next to the Record ID.
3. Select **Print**.

Undoing Changes

Requires system permission: *pat_edit*

You may use the Undo Changes menu item to undo all *unsaved* changes by reloading the patient set from the database. Any changes that you had saved will not be undone. However, all changes are documented in the Audit Log. If you need to reverse a saved change, manually edit the field and enter the original value as noted in the Audit Log.

To reload the patient set from the database and undo changes made since your last save:

1. Click the  menu indicator in the patient navigation box to open the patient set menu.
2. Select **Undo Changes**.
3. Click **OK** to confirm.

Saving Changes to a Patient Set

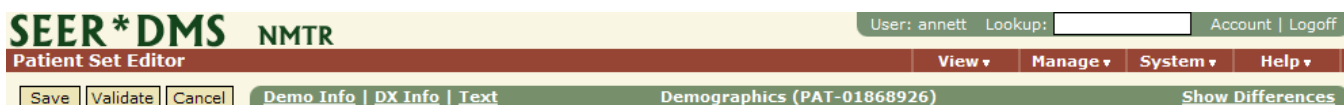
Requires system permission: *pat_edit*

Use the steps below to save changes to a patient set that you are editing in an ad hoc editing session. If you are editing data in the context of a worklist task, you must consider issues related to the flow of data in the worklist. If you are saving patient set data within a worklist task, please refer to one of the following chapters: Chapter 12 if you are saving data in a Consolidate task; Chapter 13 for Visual Editing tasks; or Chapter 14 if saving a Resolve Patient Set Errors task.

To save changes to the patient set:

1. Click **Save**.
2. Enter comments to document your changes. Enter general comments in the box at the top of the Review Changes page. Comment fields next to the revised data elements can be used to add specificity. The general and data field comments will be stored and displayed in the patient set's audit log
3. Save your changes:
 - a. If you would like to continue editing after saving, click the **Save** button at the bottom of the Review Changes page.
 - b. If you would like to exit the editor, click **Save & Exit**.

Warning: If you exit the editor using controls on or above the menu bar, all unsaved changes will be lost. The menu bar is shown in red in the figure below. The menus (View, Manage, System) and the controls in the User Bar (Search, Help, Account, Logoff) will take you to other system components without prompting you to save your changes. Please refer to *SEER*DMS Do's and Don't's in Chapter 3: Using SEER*DMS*.



Requesting Follow-back Information

Requires system permission: *pat_edit* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a "follow-back need". If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. It will be added to a bundle of requests to the same facility.

Periodically, a manager will review, edit, and send the follow-back requests to a physician or other representative at a facility. Subsequently, the manager will process the facility's responses.

You will receive an e-mail when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As

determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the needs.

If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the data to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the patient set with the new information, use the Patient Lookup to search for the patient set. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Chapter 12: Consolidating Data

One of the primary functions of a central cancer registry is to consolidate cancer data from multiple reporting facilities for the same patient. This involves combining data received on multiple records into one comprehensive data set. In SEER*DMS, the consolidated data for a registrant are stored in a single packet of data known as a "patient set." The consolidation process may involve consolidating data from multiple records and creating a new patient set, or consolidating data from one or more records into an existing patient set.

The SEER*DMS Patient Set Editor includes features specifically designed for consolidating data. You will use the Show Differences feature to compare data fields on the incoming record to the same fields in the patient set. To save time and avoid potential keying errors, you will also use this tool to copy values from fields in the record to the appropriate fields in the patient set. While reviewing the patient set data pages, you may review data values from multiple records at one time. Finally, you will be able to review a log of the changes already made to the patient set and document the changes that you make to the data. The features of the Patient Set Editor used specifically for consolidation are described in this chapter. If you haven't already, you should review the general description of the editor provided in *Chapter 11: The Patient Set Editor*.

The Patient Set Editor is an extremely flexible tool. It does not impose a specific sequence of steps or restrict the methods that you use to consolidate data; however, it is recommended that you follow the practices and guidelines described in this chapter. First, you must confirm that all data pertain to the same patient. Second, incorporate the data into the appropriate section of the patient set. Once you have linked the incoming data and updated the summarized patient set data, you may either resolve data errors or you may save the consolidated patient set and allow the errors to be resolved in a Resolve Patient Set Errors task (these procedures are determined by registry policies).

"Consolidate" tasks in SEER*DMS involve the consolidation of medical data from reportable records. A separate discussion of the manual and automatic tasks to consolidate follow-up data obtained on motor vehicle records, non-reportable death certificates, and other supplemental records can be found in *Chapter 16: Follow-up*.

In this chapter, you'll learn about

- Data Consolidation in SEER*DMS
- Opening a Consolidate Task
- Overview of the Consolidate Task
- Verifying the Patient Match
- Linking the Incoming Records
- The Show Differences Feature
- Consolidating Demographics Data
- Selecting a Record to Build a Patient Set
- Consolidating CTC Data
- Requesting Follow-back Information
- Saving Changes
- Undoing Changes

Data Consolidation in SEER*DMS

When consolidating data in SEER*DMS, you will perform these basic steps:

1. **Confirm that the data are for the same person.** Data should not be consolidated until it is determined that the data to be combined are for the same person. This determination is made during matching tasks and is either confirmed or rejected in the consolidate task.
2. **Link the incoming records to data in the patient set.** You must review each record to determine whether the data are related to a CTC previously defined for this patient or represent a new CTC. Records may be linked to a CTC or linked at the patient level. SEER*DMS provides tools to facilitate your review and link the data.
3. **Update the demographic page of the patient set with data from the incoming records.** The Show Differences feature allows you to review discrepancies between each record and the patient set. If an incoming record contains more current or complete information, use Show Differences to copy data from the record to the patient set.
4. **Update the CTC data with the best record data.** Click **View Text**. Review all text before proceeding (you may want to leave the window open or print a copy).
 - a. **Review and edit data on the patient set's CTC data page.** If you determine that the record contains more complete or accurate information, manually edit or use Show Differences to copy data from the record to the patient set. Do not set the Review flag on this page until all treatment and facility data for the CTC are reviewed. The CTC review flag also affects warnings on facility, treatment, and summary treatment pages.
 - b. **Review newly created Facility pages and new admissions on existing pages.** Review data and resolve edits for new admissions in the patient set data. Links to new pages are shown in bold. If new admissions were added to an existing Facility page, the Facility link would not be shown in bold. Check the data for each facility that provided an incoming record.
 - c. **Review newly created Treatment data pages (TX and TXr links).** Resolve edit errors, compare coded data to supporting text, and review associated admission data. Links to newly created TX and TXr pages are shown in bold.
 - d. **Review and resolve edit errors that are not associated with review flags.** Typically, most edits would have been resolved as you reviewed demographics, CTC, facility, and treatment data pages. The remaining edits should be related to review flags which ensure that the summary treatment data are reviewed. It is important to confirm that all edits affecting treatment data have been resolved prior to reviewing the summarized treatment data. If you do not know how to resolve an edit or do not have the appropriate permissions to do so, you will have the opportunity to save the patient set with edit errors. They will be resolved in a Resolve Patient Set Errors task later.
 - e. **Review the summary treatment data (Summary TX link).** Review the summarized data that the polishers set for each treatment modality. If the polisher could identify missing or conflicting data, the review flag associated with the treatment modality will be set to 0 (Needs Reviewed) and an error will be generated to ensure that you review the data. If changes are required in the underlying treatment data, the summarized data will be updated and require a second review.
5. **Save the Patient Set and Exit the Consolidate Task.** Once you consolidate the data, save the patient set and allow it to move forward to the next task in the workflow. If you save a patient set with edit errors, it will be forwarded to a Resolve Patient Set Errors task.

Opening a Consolidate Task

Requires system permission: *consolidate* and *pat_edit*; other permissions that may be involved are: *pat_delete*, *pat_undelete*, *pat_edit_overrides*

Data are not consolidated unless it is determined that the data are for the same person. This process begins in automated and manual matching tasks, and continues with a final confirmation in the Consolidate task. Since matching is a prerequisite to consolidation, the manual matching task is known as "Match-Consolidate". The match is refreshed when the Match-Consolidate task is opened to ensure that the incoming record was matched against all appropriate data, including data that were recently loaded. (see *Chapter 10: Matching Incoming Records to Existing Data*.)

The person performing the Match-Consolidate task selects records and/or a patient set to consolidate. If that person has the Consolidate system permission, a Consolidate task will be created, opened, and assigned to that user. If the user does not have the Consolidate permission, an unassigned Consolidate task will be created in the worklist.

To start a Consolidate task by completing a Match-Consolidate task:

1. Follow the instructions in *Chapter 10: Matching Incoming Records to Existing Data* to begin a Match-Consolidate task and review the possible matches.
2. If you conclude that one or more items in the list of Matches contain data for the same patient as the incoming record:
 - a. Check the box in the left column for each data item that matches the incoming record.
 - b. Click **Consolidate**. The next step will vary depending on the data involved:
 - i. A reportable abstract or a patient set is required for consolidation. If the incoming and matching data include at least one reportable abstract record or patient set, a manual Consolidate task will be created in the worklist. If you have the *consolidate* and *pat_edit* permissions, the Consolidate task will open automatically. To continue, please review the information provided in the *Overview of the Consolidate Task* section of this chapter.
 - ii. If the incoming record was not a reportable record and it matched to one or more records that could not be used to build a patient set, a manual Non-Rpt Rescreening task will be created. This task allows for the manual review of two non-reportable records that match each other but do not match any reportable records or patient set data. Verify the match and combine the data if appropriate. Refer to *Chapter 15: Re-screening of Non-reportable Records* for instructions.
 - iii. The data can be consolidated if the record is being consolidated into an existing patient set or there are sufficient data to create a new patient set. If a patient set or reportable abstract are not available, the following message will be displayed at the top of the page: "Cannot create Consolidate task: A reportable abstract or patient set is required to consolidate these data at this time. Click No Matches to end the task; the records will remain in the database for future matching." Click **No Matches**. The incoming record will be retained in the database. A new patient set will be created at a later time, when a reportable abstract record is loaded.

To open a Consolidate task in the worklist:

1. Click a **Consolidate** link in the worklist summary on the home page.
2. Use the worklist filters to search for the task, if necessary. Click **Apply**.
3. Click the task ID to open a Consolidate task.


Overview of the Consolidate Task

A Consolidate task enables you to combine data received on multiple records into one comprehensive data set, i.e., the patient set. You may be creating a new patient set by consolidating data from multiple incoming records; or you may be consolidating incoming data from one or more records into an existing patient set.

You will use a specialized version of the Patient Set Editor to complete the Consolidate task. The navigation on the left-hand side of the editor is modified to provide information and access to various data, including the incoming records, the patient set data, and records that were previously linked to the patient set (if any exist). If incoming records are being consolidated to create a new patient set, a patient set will have been auto-built from one of the incoming abstract records. This provides a starting point for creating the consolidated patient set. If you would prefer to build the patient set from a different record, refer to the instructions in the *Selecting a Record to Build a Patient Set* section of this chapter. For more information regarding auto-build, please refer to *Chapter 2: Records and Patient Sets*.

The navigation section of a Consolidate task has three sections as displayed in the diagrams on the following pages. Codes and other visual cues are used to convey information in these navigation sections as described below.

The following codes are displayed next to the IDs of the records involved in the Consolidate task:

1. P - The record is linked at the patient level (non-health records are auto-linked at the patient level during passive follow-up processing). P indicates that the record did not provide data specifically related to an existing CTC. Death certificate, casefinding, and short health records may be linked at the patient level, temporarily, even though they indicate a new cancer. You will link the record to the CTC that is created when the abstract is received. If no abstract is received, you will be able to use the record to create a CTC that is an CFO, DCO, or SHO case.
2. C *NN* - The record is linked to the CTC with a central sequence number equal to *NN*. If this is an incoming record that was used to auto-build the patient set, this code will be displayed in a box (as shown in the table of examples on the following page). Otherwise, it will be shown on a white background.
3.  - The record has yet to be linked. This icon will only be displayed for incoming records. All records must be linked to a CTC or the patient set to complete the consolidation.

Site and facility information are indicated as follows:

1. The site code is displayed next to the CTC label in the patient set navigation box. For example, CTC 01 (C649) indicates that the sequence number of 01 and the site is C649. Laterality, if not zero or blank, is displayed with the site code (e.g., C508-1).
2. The ID of the reporting facility is displayed above the incoming records from that facility. The incoming records are sorted by facility.
3. The numeric segment of a facility ID is displayed in parentheses next to the links for TX and Facility/Admission data pages in the patient set. For example, TX (0120) indicates that the treatment data were reported by FAC-0120. If a treatment procedure was not performed at the reporting facility, the IDs for both facilities will be displayed. For example, TX (0120 ~ 0026) indicates that FAC-0026 reported a treatment that was performed at FAC-0120.

Sample Navigation Boxes in Consolidate Tasks

These examples illustrate the type of information displayed in the navigation boxes of a Consolidate task.

<div style="background-color: #e0f0e0; padding: 5px;"> <p>Incoming (1)</p> <p>FAC-0089</p> <p>NAACCR Abstract ?</p> <p>Demographics</p> <p>CTC</p> <p>Summary TX</p> <p>Facility-Adm, TX</p> <hr/> <p>AL 5 0 Edits 0</p> <p>FB 0 AFL 0 SS 0</p> </div> <div style="background-color: #e0f0e0; padding: 5px; margin-top: 5px;"> <p>PAT-05458644</p> <p>Demographics</p> <p>CTC 00 (C508-1)</p> <hr/> <p>AL 12 0 Edits 0</p> <p>FB 0 AFL 0 SS 0</p> <p>AFUP 0 Cmt 1</p> <p>Linked (5)</p> <p>FAC-0086 (2)</p> <p>FAC-0283 (1)</p> <p>FAC-1000 (2)</p> </div>	<p>Overview: A record received from FAC-0089 was loaded into SEER*DMS. The record contains data for a registrant in the database, i.e., it matches an existing patient set.</p> <p>Incoming (1): In this task, a single incoming record is being consolidated with an existing patient set. Since there is only one incoming record, the Incoming section provides direct links to that record's data pages. The reporting facility (FAC-0089) is displayed above the record's type. The ? icon next to the record type indicates that the incoming record has not yet been linked.</p> <p>Pat-05458644: The patient set ID is shown as the header of the Patient Navigation box. You may click on the links in this box to view the patient set data. The page currently being displayed is the patient set's Demographics page (as indicated by the shading of the word Demographics). This patient set includes one CTC that has C508 coded for site and 1 coded for laterality (cancer of the right breast).</p> <p>Linked (5): At some point prior to this Consolidate task, five records were consolidated into this patient set. Two records were received from FAC-0086, one from FAC-0283, and two from FAC-1000. To see the record type or view record data from a facility, click the down arrow ▾ adjacent to the facility ID. To expand the list for all facilities, click the down arrow ▾ adjacent to "Linked (5)".</p>
<div style="background-color: #e0f0e0; padding: 5px;"> <p>Incoming (2)</p> <p>FAC-0089</p> <p>NAACCR Abstract C 00</p> <p>FAC-0143</p> <p>Death Cert ?</p> </div> <div style="background-color: #e0f0e0; padding: 5px; margin-top: 5px;"> <p>New Patient</p> <p>Demographics</p> <p>CTC 00 (C343-1)</p> <hr/> <p>AL 0 0 Edits 21</p> <p>FB 0 AFL 0 SS 0</p> <p>AFUP 0 Cmt 1</p> <p>Linked (0)</p> <p>No Records</p> </div>	<p>Overview: Two records received from two facilities (FAC-0089 and FAC-0143) were loaded into SEER*DMS. The records did not match a patient set in the database, but matched each other. These records provide data for a new patient.</p> <p>Incoming (2): Data from two records for the same patient are being consolidated into a new patient set. Patient set data was auto-built from the record that has "C 00" next to it (the CTC for the base record is displayed in a box). The other record has not yet been linked, as indicated by the ? icon. If you click a record type, the navigation for that record will expand so that you can access the data pages for that record. If you hold your cursor over a record type, the record ID and reportability status will be displayed.</p> <p>New Patient: A patient set ID has not yet been assigned; therefore "New Patient" is displayed as the header of the Patient Navigation box. You may click on the links in this box to view other patient set data pages (the shading of Demographics indicates that it is the current page being displayed). This patient set includes one CTC that has C343 coded for site and 1 for laterality.</p> <p>Linked (0): Since this is a new patient set, the patient set was never saved with linked records. Records will not appear in this box until they are linked and the patient set is saved.</p>

Incoming (1)

FAC-1001

NAACCR Abstract ?

Demographics

CTC

Summary TX

Facility-Adm, TX

AL 3 Img Edits

FB AFL SS

PAT-04607201

Demographics

CTC 00 (C539)

AL 5 Img Edits

FB AFL SS

AFUP1 Cmt 1

Linked (0)

No Records

Overview: One record received from FAC-0086 was loaded into SEER*DMS. The record matched a migrated patient set in the database.

Incoming (1): This consolidation involves combining a single incoming record with an existing patient set.

PAT-04607201: The patient set ID is shown as the header of the Patient Navigation box.

Linked (0): There are no records in SEER*DMS linked to this patient set. This patient's data were entered and consolidated in the registry's prior data management system. The consolidated data were loaded into SEER*DMS when the registry switched to the new system, but the source records were not linked. Sufficient linkage information may not have been available in the migrated data; or the source records may be older and may not be available in electronic format. This situation cannot occur in patient sets created in SEER*DMS and only affects migrated patient sets.

Verifying the Patient Match

Requires system permission: *consolidate* and *pat_edit*

Matches are initially selected in the Match-Consolidate task. The first step of the Consolidate task is to review additional data fields to confirm that the data to be combined are for the same person.

To verify the patient match for incoming records in a Consolidate task:

- The Demographic Info window is displayed when you first open a Consolidate task. The values of demographic data fields from each record are displayed. New records being consolidated into the Patient Set are listed in the Incoming Records section at the top. A record field is highlighted if the value differs from the value in the Patient Set. The exception is Medical Record Number; it is highlighted if there is a discrepancy between any records from the same facility.

Demographic Information															
Type	Facility	First	Mid	Last	Suf	Maiden	Alias	SSN	DOB	Sex	Med Rec #	Race	Birth Place	Hisp	Marit
Incoming Records															
NAACCR Abstract	FAC-0089	JANE	L	DOE				444-34-4444	08-29-1961	2	1111111	01 88 88 88 88	999	0	2
Patient Set															
		JANE	L	DOE				444-44-4444	08-29-1961	2		01 88 88 88 88	999	0	2
Health Record	FAC-0086	JANE		DOE				444-44-4444	08-29-1961	2	177777790	01 88 88 88 88	999	0	2
Casefinding	FAC-0089	JANE		DOE				000-00-0000	08-29-1961	2	11111112	00			0
NAACCR Modified	FAC-0089	JANE	L	DOE				444-44-4444	08-29-1961	2	1111111	01 88 88 88 88	999	0	2
Short Health Record	FAC-0283	JANE		DOE				444-44-4444	08-29-1961	2	1777777	00 88 88 88 88		9	9
Short Health Record	FAC-0283	JANE		DOE				444-44-4444	08-29-1961	2	1777777	00 88 88 88 88		9	9
Supplemental [N/A]	FAC-1000	JANE	L	DOE				444-44-4444	08-29-1961	2		99 99 99 99 99			

- Review all discrepancies in the data fields and determine if the records contain data for the same patient as each other and the patient set.
 - If the records are for the same patient, click **Accept** to close the popup window. Refer to the *Consolidating Demographic Data* section of this chapter for further instructions.

- b. If any of the incoming records are for a different patient, click **Reject**. The Consolidate task will be canceled. You will be returned to the match portion of the Match-Consolidate task. The patient set will be unchanged.

An incoming record may be rejected during subsequent steps in the consolidation process using the Reject item on the record's menu. However, data from the record may have been incorporated into the patient set. You may need to edit data fields manually to remove that data.

The Reject All item in the record menu is equivalent to rejecting the match in the Demo Info popup. The Consolidate task will be canceled and you will be returned to the match portion of the Match-Consolidate task. If the focus record that triggered the original Match-Consolidate task is rejected, the task must be canceled so that the focus record can be rematched. Therefore, Reject All is the only option for rejecting the focus record.

Linking the Incoming Records

Requires system permission: *consolidate* and *pat_edit*;

In the SEER*DMS database, a *Cancer/Tumor/Case (CTC)* is a packet of data related to a single incident cancer; all diagnostic, staging, and treatment data for a reportable tumor are stored in a CTC. The CTC includes summarized treatment information, as well as data regarding each admission and treatment procedure. A patient set may include multiple CTCs, one for each primary cancer diagnosed for the patient.

You must review each incoming record to determine whether the data are related to a CTC previously defined for this patient or represent a new CTC. If the data on the record are related to an existing CTC, you will link the record to that CTC. If the data are for a new CTC, you can create a new CTC based on the record. The data entities in the new CTC will be auto-built based on values in the record. If the incoming record is not an abstract record and is for a new CTC, you should temporarily link the record at the patient level and defer creating the new CTC until an abstract is received. Later, when the abstract record is received and used to build the new CTC, you can reassign this link to the CTC. This will minimize the level of effort required to consolidate the data for the new CTC.


To link a record to the appropriate data structure in the patient set:



1. If you have not verified that all data being consolidated are for the same person, refer to the *Verifying the Patient Match* section of this chapter.
2. Click **DX Info** in the title bar of the page to open the Diagnostic Information window.

Diagnostic Information											
ID	Type	Facility	DX/Scr Dt	Site	Lat	Hist	Beh	Gra	Seq	Site Title	Hist Title
Unlinked Records											
REC-3003088103 * ...	Health Record	FAC-0004	08-10-2005	C445	3	8743	3	9	00	SKIN, BACK	SUPERFICIAL SPREADIN...
CTC 00											
			08-10-2005	C445	2	8720	3	9	00	SKIN, BACK	MELANOMA
REC-3002944014 ...	Health Record	FAC-0120	08-10-2005	C445	2	8720	3	9	00	SKIN, BACK	MELANOMA
Patient											
REC-3002101766 ...	Casefinding	FAC-0130	08-10-2005	C445	3	0001	3	9		BACK, SKIN	UNKNOWN
* Incoming Record											
										Apply	Close

3. The Diagnostic Information displays diagnostic data fields from all unlinked incoming records, records previously linked to a CTC, and records previously linked at the patient level. The consolidated values for each CTC are shown in bold, just above the record(s)

that are linked to that CTC. If the entire window (including the Apply and Close buttons) is not displayed, enlarge the window so that you see all records and the window's buttons.

4. Compare the diagnostic information of the first unlinked record to the CTC and patient set data fields (you may also click the Record ID to view additional fields). When you complete your review, click the  icon next to the record's ID. A drop-down menu will be displayed.

Diagnostic Information							
ID	Type	Facility	DX/Scr Dt	Site	Lat	Hist	
Unlinked Records							
REC-1205330188 *	Health Record	FAC-0105	04-26-2005	C349	2	8140	
CTC 00			12-19-2001	C508	1	8523	
REC-1202220193 ...	Health Record	FAC-0105	12-19-2001	C508	1	8523	

- a. If you determine that the incoming record should be linked to an existing CTC, select that CTC.
 - b. If the incoming records represent one new CTC and a reportable abstract record is available, use one abstract record to create the CTC. **Warning:** A CTC will be created for each record for which you select "New CTC". Do not apply "New CTC" to multiple records if you are trying to link them to the same, new CTC.
 - i. If one of the incoming records is a reportable abstract record, select New CTC.
 - ii. Click the **Apply** button at the bottom of the window to create the CTC. You will then be able to link other incoming records to that new CTC, if appropriate.
 - c. If the incoming record is not an abstract record, you should temporarily link the record at the patient level and defer creating the new CTC until an abstract is received. Later, when the abstract record is received and used to build the new CTC, you can reassign this link to the CTC.
 - d. Click **Apply**. If the record is linked to a CTC, "C *NN*" will be displayed next to the record type in the record navigation box. This indicates that the record is linked to the CTC that has a central sequence number equal to *NN*. If the record is linked at the patient level, P is displayed. SEER*DMS attempts to set the sequence number appropriately, based on the central sequence number coded in the record and the number of CTCs in the patient set. If you have multiple CTCs with the same sequence number, you should review the CTCs and manually adjust the sequence numbers.
5. If you created a new CTC in step 4, determine whether other records need to be linked to the new CTC. Review records previously linked at the patient level as well as incoming records that remain unlinked. In the patient set navigation box, the labels for newly created CTCs are shown in bold type.

The Show Differences Feature

In a consolidate task, you can use the Show Differences feature to compare data fields on a record to the same fields in the patient set. To save time and avoid potential keying errors, you can also use this tool to copy values from fields in the record to the appropriate fields in the patient set.

Before consolidating demographic or CTC data, review the features of the Show Differences tool:

1. Show Differences can be accessed via a link in the title bar of the data page. It is only available on data pages that display fields from multiple records (Demographics and CTC).
2. Show Differences displays values from the patient set on the left and values from a record on the right. By default, the first incoming record is shown on the right. A pull-down menu on the top right allows you to choose which record you wish to compare to the patient set (an abbreviation showing the type of record, the record ID, and the entity to which it is linked are listed in the drop-down men). By default, fields are only shown if they differ and are not blank in the record data. You may include fields with blank values in the records by clicking **Show Empty Fields**. Once shown, you may click **Hide Empty Fields** to toggle the display of these fields.

Demo Info | DX Info | Text Demographics (PAT-06920542) Hide Differences

[Show Empty Fields](#)

Patient Set		SH REC-2205040308 (CTC 00) ▾
FAC-0048 ←	Lst FU Hosp	FAC-0288
11 ←	FU Src Cntl	99
10 ←	FU Src (DT)	02

Current Address

E ←	Dir Pre	E
123 ←	Num	111
MAIN ←	Street	BEACH
←	Dir Post	
RD ←	Type	RD
ANYTOWN ←	City	UNK CITY
222 ←	Cnty Code	999
PA ←	State	FL
22222 ←	Zip	11111
←	Suppl	
←	Country	





Alternate Address

←	Dir Pre	
←	Num	
←	Street	
←	Dir Post	
←	Type	
←	City	
←	Cnty Code	
←	State	
←	Zip	
←	Suppl	
←	Country	

Supporting Text

Remarks Txt		
MALIG NEOPLASM OF UIQ BREAST 8/5/03; CONSULT W/ DR DOE: PLAN TO GIVE CHEMO (SHORT COURSE OF AD RIA & CTX TO LIMIT RISK OF RECURRENCE)	CTC 00	8-5-03 RT CONS:L BRST INFILTR DUCTAL CA GRADE 3. S/P BX, RE-EXC, SENTI NEL NODE DISSECT. PLAN:CHEMO, THEN RT. 1-22-04 RT F/U:FINISHED CHEMO(SEE OTHER F /U)

Save Validate Cancel

3. To assist in your review of discrepancies in the data, supporting text fields are displayed at the bottom of the Show Differences page.
4. If there are no discrepancies between the non-blank data fields in the record and the patient set data fields, *No Differences* will be displayed in the top section of the page. The Supporting Text section of the page is always shown.
5. Records and patient sets do not have the same set of data fields. To allow you to compare record data to patient set data, SEER*DMS auto-builds patient set fields from the record data. The process of auto-building is described in *Chapter 2: Records and Patient Sets*.
6. In some cases, groups of fields are displayed if the value of any field within that group differs between the patient set and the record. This enables you to review supporting information when reviewing data discrepancies. Data fields shown in groups include data related to: census tract, course of treatment, the medical practitioner care fields, address, aliases, cause of death, and informants.
7. An arrow  is displayed next to each patient set field, pointing from the record toward the patient set. This arrow moves data from the record into the patient set and overwrites the values in the patient set. You may also paste or type values directly into patient set fields. For some fields, a plus sign  is displayed to allow you to append the text from the record's data field to the text in the patient set field.
8. The patient set includes multiple instances of certain data; there are multiple addresses, multiple sets of informant data fields, etc. If there are differences between the record and the patient set in fields that have multiple instances, you may either overwrite the patient set fields or create new instances in the patient set. Consider the example shown above in the Show Differences diagram. If you determine that the address in the record represents a second address for the patient, click the arrows  next to the alternate address fields to add that information to the patient set. If you determine that this is the patient's primary address, click the arrows  next to the primary address fields to overwrite the values in the patient set.

Consolidating Demographics Data


Requires system permission: *consolidate* and *pat_edit*

After verifying the patient match, begin the consolidation process by resolving discrepancies between the patient information on the demographics page of the patient set with the same data fields in the incoming records. If you are consolidating multiple records to create a new patient set, the patient set fields will contain data from the record used to auto-build the patient set.

If you determine that a record contains more complete or accurate information, update the patient set with the best data. The Show Differences feature enables you to compare data fields on each incoming record with the fields in the patient set, and it provides a convenient method to copy values into the appropriate patient set fields.

To consolidate the demographics data:

1. Confirm the patient match and link each record to the patient set as described in the *Verifying the Patient Match* and *Linking the Incoming Records* sections of this chapter.
2. If you are not viewing the patient set's Demographics page, click **Demographics** in the patient set navigation box.
3. Click the **Show Differences** link in the title bar of the Demographics page. (This link changes to Hide Differences when clicked, allowing you to toggle back and forth.)


4. If there are no discrepancies between the non-blank data fields in the record and the patient set data fields, *No Differences* will be displayed in the top section of the page. (The Supporting Text section of the page is always shown.)
5. Review each field that is listed. If you determine that the data provided on the incoming record is more current or complete, click the arrow  to overwrite the patient set field with the new data. You may also paste or type values directly into the patient set fields.
6. Select the next incoming record in the drop-down list. Review the differences for each of the incoming records.
7. Click **Hide Differences** when you finish consolidating the data on the Demographics page.

Selecting a Record to Build a Patient Set

If incoming records are being consolidated to create a new patient set, a patient set will be built from one of the incoming abstract records. If there are two abstract records for the same case, SEER*DMS chooses one based on dates. You may determine that a different abstract record has more detailed information, for example, it may have more staging information. You may be able to reduce data entry and save time by building the patient set from the other abstract record.

If you would prefer to build the patient set from a different record, you may re-build the patient set. Any changes that you entered manually will be lost. The consolidate task will essentially start over and the patient set will be built from the record that you choose.

To re-build a patient set using a different abstract record:

1. In the left navigation panel, click the record type for the record that you wish to use to build the patient set.
2. Click the  menu indicator to open the record's menu.
3. Select **Re-build Patient Set**


Consolidating CTC Data




Once you link a record to a CTC, SEER*DMS will use the record data to create TX (treatment), TXr (treatment reportedly given at a different facility), and Admissions data fields. The SEER*DMS polishers will then update the Summary TX data fields based on all available TX and TXr data, including the treatments created from the newly linked record.

As outlined in the following instructions, you will use Show Differences to review and resolve discrepancies between the record and patient set values on the CTC data page. You will then visually edit the newly created TX and TXr data pages; and review the newly created Admissions. If you make changes to the TX and TXr data, the polishers will refresh the Summary TX data fields. Finally, you will review the summarized treatment data generated by the polishers.

To consolidate data on an incoming record into a CTC:

1. Confirm the patient match and link each record to the patient set as described in the *Verifying the Patient Match* and *Linking the Incoming Records* sections of this chapter.
2. Review the Incoming Records section of the navigation box to determine which CTCs require consolidation of data from the new records (a linkage indicator is displayed next to each record type, e.g., "C 00").

3. In the patient set navigation, click the link for the first CTC to which an incoming record is linked. Review and edit the data on the main CTC page. If you determine that the record contains more complete or accurate information, manually edit or use Show Differences to copy data from the record to the patient set:
 - a. Click **Show Differences** in the title bar of the CTC data page. (This link changes to Hide Differences when clicked, allowing you to toggle back and forth.) To consolidate the data on the main CTC data page:
 - i. Select the first record in the drop-down list that is linked to this CTC.
 - ii. If there are no discrepancies between the non-blank data fields in the record and the patient set data fields, *No Differences* will be displayed in the top section of the page. (The Supporting Text section of the page is always shown.)
 - iii. Review each field that is listed. If you determine that data provided on the incoming record is more current or complete, click the arrow  to overwrite the patient set field with the new data. You may also paste or type values directly into patient set fields.
 - iv. Repeat the process of reviewing and updating the CTC data page for each incoming record that is linked to this CTC. Use the drop-down list to select each record.
 - b. Click **Hide Differences** when you finish consolidating the data on the CTC page.
4. Note: Do not set the Review flag on the main CTC page until all treatment and facility data for the CTC are reviewed. The CTC review flag also affects warnings on facility, treatment, and summary treatment pages.
5. Review data and resolve edits for new admissions in the patient set data. Be sure to look for newly created Facility pages and new admissions on existing pages. If a new page was created, the Facility link in the left navigation box will be shown in bold. If new admissions were added to an existing Facility page, the Facility link will not be bold. To be sure that you review all new data, check for new admissions from each facility that provided an incoming record.
6. Review newly created Treatment data pages (TX and TXr links). Links for newly created pages will be shown in bold. Resolve edit errors, compare coded data to supporting text, and review associated admission data (if an admission is related to the treatment, a link to the admission will be displayed on the treatment page in the Adm FAC-ID field). SEER*DMS polishers use the data on the TX and TXr pages to update the consolidated Summary TX data. Therefore, it is important to review and visually edit these data prior to completing the consolidation of the Summary TX page. If you would like to view the source record during this review, the record type of the source record is displayed as a link on the right side of TX and TXr pages.
7. Review and complete the consolidation of the summary treatment data page:
 - a. Click the Summary TX link in the left navigation box. Review the summarized data that the polishers set for each treatment modality. If the polisher could identify missing or conflicting data, the review flag associated with the treatment modality will be set to 0 (Needs Reviewed) and an error will be generated to ensure that you review the data.

- i. Review the summarized Surgery Treatment data. Click the  multi-page icon next to the Surgery Review field. A popup window will open that displays the contributing data on the TX and TXr data pages. You may move the popup window so that you can see the summarized and contributing data at the same time.
 - ii. Modify the Summary Treatment fields, as necessary. When you complete the process for Surgery Treatment data, set the Surg Rev flag to 1 (Reviewed). As you work, you can re-open the popup window at any time by clicking the  icon.
 - iii. The values of the SEER Course 1 dates and the Summarized Diagnostic Procedures are automatically set by the polishers. Therefore, these fields are read-only and cannot be modified by the user.
 - iv. Repeat this process for the Radiation and Systemic sections. There is a separate review flag for each. To change the set of fields shown in the popup window, you may either use the drop-down menu in the popup or click the  icon next to the appropriate variable.
8. When you have reviewed all data pages, return to the main CTC page and set the CTC Review flag to reviewed.
 9. Repeat steps 2 through 8 for each CTC that requires consolidation.

Requesting Follow-back Information

Requires system permission: *consolidate* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a "follow-back need". If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. It will be added to a bundle of requests to the same facility. Note: If you are creating a new patient set by consolidating record data, you must submit the follow-back needs using the record navigation.

Periodically, a manager will review, edit, and send a batch of follow-back requests to a physician or other representative at a facility. Subsequently, the manager will process the facility's responses.

You will receive an e-mail when a response to your request is processed and the need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.

If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the data to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the patient set with the new information, use the Patient Lookup to search for the patient set. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Saving Changes

The following describes the procedures to save patient set data during a Consolidate task.

Save Changes and Exit the Task

If you have finished consolidating the data:

1. Click **Save**.

2. Enter comments to document your changes.
3. Check the **Forward to next workflow task on Save & Exit** box.
4. Click **Save & Exit**. If there are edit errors in the patient set, it will be forwarded to a Resolve Patient Set Errors task. If there are no errors, the patient set will complete the workflow and will be accessible via the Patient Lookup, but not the worklist.

Save Changes and Continue Editing

This option is available if you are consolidating data into an existing patient set. If you are creating a patient set from two or more records, you must use the Save & Exit feature to save changes.

To save changes to the patient set and continue consolidating:

1. Click **Save**.
2. Enter comments to document your changes.
3. Click the **Save** button at the bottom of the Review Changes page.

Save Changes and Keep the Consolidate Task in your Worklist

If you have made changes but are unable to complete the consolidation, you may save the task without forwarding the data to the next task in the workflow. This option is only available if you are consolidating data into an existing patient set. A Consolidate task cannot be saved for a patient set that does not yet exist in the database.

If you would like to save changes, but need to continue the task at a later time:


1. Click **Save**.
2. Enter comments to document your changes.
3. Uncheck the **Forward to next workflow task on Save & Exit** box. When saved, the patient set will remain in a Consolidate task assigned to you. You will only be able to save this data in a Consolidate task if you are consolidating data into an existing patient set.
4. Click **Save & Exit**.

Undoing Changes

Requires system permission: *pat_edit*

If you made changes that you do not want to save, use the undo feature. This will reverse all unsaved changes made during the consolidation process. If consolidating data into an existing patient set, the values of the patient set data fields will be reloaded from the database. In addition to reverting changes made to data fields, the linking of records and all other modifications will be reverted. If you rejected a record during the task, that change was saved immediately and is not reverted by the undo feature. If you wish to consolidate that record into this patient set, you would need to find the record and rematch.

To reload the patient set from the database and revert changes in a Consolidate task:

1. Hold your mouse near the  menu indicator in the patient navigation box. The patient set menu will be displayed.
2. Select **Undo Changes**.
3. Click **OK** to confirm.

Chapter 13: Visual Editing

In SEER*DMS, all data for a registrant are ultimately stored in a single packet of data known as a "Patient Set." Each Patient Set contains the data consolidated from the patient's source records and linkage information to enable access to the source records. Patient set data fields contain the consolidated and/or summarized values of the linked source records, and values that were derived or computed by SEER*DMS polishers. Original data values are maintained in record data fields.

Quality control of new data involves the review of edit errors identified by the computerized edits and a visual review of data fields. Primarily, these reviews are performed during one of the following worklist tasks:

- The Visual Edit Patient Set task enables registrars to visually review data when a new patient set is created from an incoming record or records. This task will also be created if a patient set is auto-created from a death certificate, casefinding, or short health record using one of the Build CTC system tasks.
- Consolidation tasks enable registrars to visually review incoming data as they consolidate the data with other data previously loaded into the system.

The errors identified by the computerized edits may also be resolved in either of these tasks, or the patient set may be saved with errors and forwarded to a Resolve Patient Set Errors task.

In this chapter, you'll learn about

- Opening a Visual Edit Patient Set Task
- Visually Editing Patient Set Data
- Saving Changes to a Patient Set
- Undoing Changes
- Requesting Follow-back Information

Opening a Visual Edit Patient Set Task


Requires system permission: *vis_edit_pat* and *pat_edit* are required; *pat_edit_override* is needed if all edits are to be resolved in this task

Unassigned Visual Edit Patient Set tasks are created by the Build CTC system tasks that may be periodically used to build CTCs from casefinding, death certificate, short health, or other records that may be used to build CTCs. However, most Visual Edit Patient Set tasks are created at the conclusion of the manual Match-Consolidate task. This occurs when no matches are found for the incoming record and the record can be used to create a new patient set. If the user reviewing the match has the *vis_edit_pat* and *pat_edit* system permissions, the Visual Edit Patient Set task will be opened automatically at the end of the Match-Consolidate task. Otherwise, the task will be available as an unassigned task in the worklist.

Once any Visual Edit Patient Set task is opened by a user, it is assigned to that user's worklist. Follow the steps below to open a Visual Edit Patient Set task that was created and stored in the worklist.

To open a Visual Edit Patient Set task in the worklist:

1. Click a **Visual Edit Patient Set** link in the worklist summary on the home page. To resume a task assigned to you, click the link listed in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. To search for the task in your tasks and unassigned tasks:

- a. Enter your user name in the **User(s)** filter.
- b. Check the **Show Unassigned** box.
3. To search for a specific task, enter search criteria in the Worklist filters. Common filters to use when searching for a Visual Edit Patient Set task are:
 - a. **Task ID(s)** – The complete task ID must be entered.
 - b. **Pat/Rec ID(s)** – A full or partial patient set ID may be entered.
 - c. **Facility** – A full or partial ID may be entered. Use the lookup  icon to search for a facility ID.
 - d. **DX Year(s)** – Use the DX Year filter to search for tasks by year of diagnosis. Use a hyphen to select a range of years (e.g., 2002-2004). Use a comma to select separate years (e.g., 2002, 2004).
 - e. **Information** – In a Visual Edit Patient Set task, this filter can be used to search by patient name. To match a complete phrase, enclose it in quotes (e.g., "Smith, John"). If you enter *John Smith* or *Smith, John* without quotes, tasks related to patients named either John or Smith will be returned (the list could include names such as John Smith, John Doe, and William Smith).
4. If you made changes to the filter settings, click **Apply**.
5. Click the task **ID** to open a Visual Edit Patient Set task.


Visually Editing Patient Set Data

Requires system permission: *pat_edit*

To create a new patient set, SEER*DMS auto-builds the patient set data fields from the record data. Values are copied from record data fields to the corresponding patient set data fields, or values are computed from related record data field(s). The process of auto-building is described in the *SEER*DMS Technical Reference*. When you open a Visual Edit Patient Set task, the patient set data will be displayed in an editor similar to the one shown below (only a partial page is shown in the example).

To visually edit the patient set data:

1. The patient set data are presented on multiple pages in the editor. You can use the links in the navigation box to move from page to page as you edit. Three indicators are used to show which page is being displayed:
 - a. The title of the page includes the page name and the patient set or record ID.

- b. In the patient set navigation box, the name of the current page is shaded.
 - c. In the patient set navigation box, a lighter background is used to indicate if the patient set or the linked record is being displayed. In the example above, a lighter shade of green is used for the patient set's section of the navigation box.
2. Start with the first page of the patient set data. If you are not viewing the patient set's Demographics page, click **Demographics** in the patient set navigation box.
 3. SEER*DMS facilitates the visual editing process by providing a convenient mechanism to review supporting text fields as you edit the data. To view the supporting text fields as you edit, click the **Text** link to the left of the page title. The Text Viewer pop-up window will open. You may need to resize or move the main and/or pop-up windows to edit a field on a data page while displaying the Text Viewer. To close the pop-up, click the Close button or click the  in the upper right corner of the window.
 4. Review the data on the current page and modify data fields, as necessary. More specific instructions for changing the value of individual data fields are provided in *Chapter 11: The Patient Set Editor*.
 5. Review and resolve edit errors in the patient set. Specific instructions for correcting the errors are provided in *Chapter 14: Resolving Patient Set Errors*. You have the option of resolving all errors during the Visual Edit Patient Set task or forwarding the patient set to a Resolve Patient Set Errors task. (Note: Whenever you are editing patient set data, ignore edit errors in record data fields. In the patient set editor, record data fields are displayed in read only mode by default. The errors should be resolved in the patient set data fields.)
 6. In the patient navigation box, click the CTC link. Move through and visually edit each page of CTC data (CTC, Facility, each TX and TXr page, Summary TX) by repeating steps 3-5. Review the notes entered by other registrars and system messages in the Comment page. Whenever editing patient data, you may enter notes on the Comment page as appropriate.
 7. Once you have visually edited data on all pages, save your changes and exit the task according to the instructions in the *Saving Changes to a Patient Set* section of this chapter.

Saving Changes to a Patient Set

Requires system permission: *pat_edit*

When you complete a Visual Edit Patient Set task, the patient set is either forwarded to a Resolve Patient Set Errors task, or it exits the workflow. If all edit errors were resolved during the editing process, the final automated checks are performed and the patient set exits the workflow. A task related to the patient set will not exist in the worklist until new data for the patient enters the system, initiating a matching or consolidation task. To update or view the patient set, use the patient lookup feature to search the database (see *Chapter 20: Searching for Records and Patients*).

Review the following methods for saving changes and for exiting the Visual Edit Patient Set task. When saving the patient set, enter general comments in the box at the top of the Review Changes page. Comment fields next to the revised data elements can be used to add specificity. The general and data field comments will be stored and displayed in the patient set's audit log.

To save changes to the patient set and continue editing:

1. Click **Save**.
2. Enter comments to document your changes.

3. Click the **Save** button at the bottom of the Review Changes page.

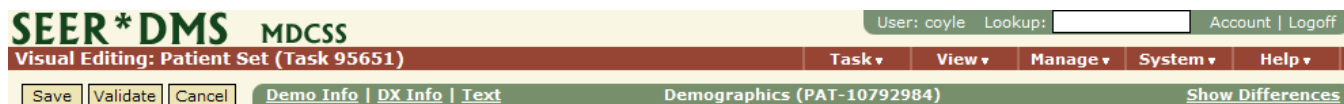
If you would like to save changes, but need to continue the task at a later time:

1. Click **Save**.
2. Enter comments to document your changes.
3. Uncheck the **Forward to next workflow task on Save & Exit** box. When the patient set is saved, it will remain in a Visual Edit Patient Set task assigned to you.
4. Click **Save & Exit**.

If you have finished editing the patient set:

1. Click **Save**.
2. Enter comments to document your changes.
3. Check the **Forward to next workflow task on Save & Exit** box.
4. Click **Save & Exit**. If there are edit errors in the patient set, it will be forwarded to a Resolve Patient Set Errors task. If there are no errors, the patient set will complete the workflow and will be accessible via the Patient Lookup, but not the worklist.

Warning: If you exit a task using controls on or above the menu bar, any changes that you have made will be lost. The menus (View, Manage, System) and the controls in the User Bar (Lookup, Account, Logoff) will take you to other system components without prompting you to save your changes. (Help > User Manual is the exception to this rule. The SEER*DMS User Manual opens in a separate window, your work will be unchanged and will continue to be displayed in the original window.) Please refer to *SEER*DMS Do's and Don't's in Chapter 3: Using SEER*DMS*.



Undoing Changes

Requires system permission: *pat_edit*

You may use the Undo Changes menu item to undo all *unsaved* changes by reloading the patient set from the database. Any changes that you have saved will not be undone. However, all changes are documented in the Audit Log. If you need to reverse a saved change, manually edit the field and enter the original value as recorded in the Audit Log.

To reload the patient set from the database and undo changes made since your last save:

1. Click the menu indicator in the patient navigation box to open the patient set menu.
2. Select **Undo Changes**.
3. Click **OK** to confirm.

Requesting Follow-back Information

Requires system permission: *pat_edit* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a “follow-back need”. If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. Your request will be maintained with the record or patient set, allowing all users to review pending follow-back issues when reviewing the data. After submitting the follow-back need, you may continue editing or save the record in a Visual Edit Patient Set task that can be continued at a later time. Methods for saving the record and exiting the task are described in the *Saving Changes to a Patient Set* section of this chapter.

You will receive an e-mail notification when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.

If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the data to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the patient set with the new information, use the Patient Lookup to search for the patient set. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Chapter 14: Resolving Patient Set Errors

Whenever a patient set is created or modified, SEER*DMS checks the data for errors based upon SEER and local edits (refer to *Chapter 7: Edit Errors* for more information). The error check is performed each time a patient set is saved or validated. If edits are revised, the edit errors may be refreshed for a cohort of patient sets in the database (as described in the *Re-executing Edits in Patient Sets* section of this chapter).

Patient set errors may be resolved while editing or consolidating patient set data. If a patient set is saved with errors when a visual editing or consolidation worklist task is completed, a Resolve Patient Set Errors task is created. This allows the registry to separate activities specifically related to resolving errors from editing and consolidation, if desired.

This chapter includes general instructions for resolving patient set errors and includes specific instructions for accessing Resolve Patient Set Errors tasks. If you are correcting errors during an editing or consolidation task, refer to the chapters in this manual regarding the Visual Edit Patient Set, Consolidate, or Consolidate FUP tasks for additional information.

The Resolve Patient Set Errors task is the last manual step in the workflow. Once this task is completed, the patient set will not be accessible from the worklist unless new data for the patient enters the system that requires consolidation. To update or view the patient set, you will need to use the patient lookup feature to search the database. For more information, see *Chapter 20: Searching for Records and Patients*.

In this chapter, you'll learn about

- Opening a Resolve Patient Set Errors Task
- Correcting Errors in a Patient Set
- Saving Changes to a Patient Set
- Undoing Changes
- Requesting Follow-back Information
- Re-executing Edits in Patient Sets



Opening a Resolve Patient Set Errors Task

Requires system permission: *pat_edit*

After a Consolidate, Consolidate FUP, or Visual Edit Patient Set task is completed, any patient set containing one or more edit errors is forwarded to a Resolve Patient Set Errors task. Depending on your registry's workflow configuration, the Resolve Patient Set Errors task may be unassigned or it may be assigned to the same user who completed the editing or consolidation task.

To open a Resolve Patient Set Errors task:

1. Click a **Resolve Patient Set Errors** link in the worklist summary on the home page. To start or resume a task assigned to you, click the link listed in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. To search for the task in your tasks and unassigned tasks:
 - a. Enter your user name in the **User(s)** filter.
 - b. Check the **Show Unassigned** box.

3. To search for a specific task, enter search criteria in the Worklist filters. Common filters to use when searching for a Resolve Patient Set Errors task are listed below. Descriptions of all worklist filters can be found in *Chapter 4: Using the Worklist*.
 - a. **Task ID(s)** – The complete task ID must be entered. To enter multiple IDs, click the  adjacent to the filter. You may then type multiple IDs into the text box.
 - b. **Pat/Rec ID(s)** – A full or partial patient set ID may be entered. To enter multiple IDs, click the  adjacent to the filter. You may then type multiple IDs into the text box.
 - c. **DX Year(s)** – the date of diagnosis for a CTC in the Patient Set. If the Patient Set has multiple CTCs and all are submittible, this will be the date of diagnosis of the CTC to which the task's original record is linked. Otherwise this column will contain the year of diagnosis for the earliest diagnosed, non-submittible CTC. Year is populated in this manner to enable you to identify tasks that must be completed for the next submission. You may enter a single year of diagnosis, multiple years separated by commas (*2004, 2006*), or a range of years using a hyphen (*2003-2006*).
 - d. **Information** – Enter full or partial search text related to fields in the Information column. In a Resolve Patient Set Errors task, this includes patient name and the number of edit errors. To match a complete phrase, enclose it in quotes (e.g., *"Smith, John"*). If you enter *John Smith* or *Smith, John* without quotes, tasks related to patients named either John or Smith will be returned (the list could include names such as John Smith, John Doe, and William Smith).
4. If you made changes to the filter settings, click **Apply**.
5. Click the Task ID to open the Resolve Patient Set Errors task.


Correcting Errors in a Patient Set


Requires system permission: *pat_edit*; other permissions that may be necessary to complete the task include: *pat_edit_overrides*, *pat_end_task*

Review each error prior to making changes to a data field. To evaluate and correct the problem, you must determine if a single field is causing the error or if an inter-field edit has identified a conflict between multiple fields.

To review and correct edit errors in a patient set:

1. Open the patient set in the editor by opening a worklist task or using the Patient Lookup to access the patient set directly.
2. To view all errors, click the **Edits** link in the Patient Navigation box.
3. The following symbols are displayed next to each error in the **S (Severity)** column:

 **Critical** – exclamation point is used to alert you to critical errors


 **High** – directional symbols indicate the relative severity level of the other levels, the up arrow is used for high

 **Moderate** – flat indicates moderate severity level

 **Low** – a down arrow indicates a low severity level

Note: In SEER*DMS, if you hold your mouse over any symbol its meaning will be displayed.

4. The following information is listed for each error:
 - a. **Rule Set** – SEER, SEER Extended, and registry-defined sets of edit rules are implemented in SEER*DMS. In addition, SEER*DMS applies system edits (SEER*DMS and SEER*DMS Registry rule sets in SEER*DMS) which enforce database constraints. SEER Extended Edits were developed by the SEER Program but have not been incorporated into the standard SEER Edits. The extended edits may relate to fields that are not required to be transmitted to SEER.
 - b. **Error ID** – Edit name or identifier.
 - c. **Error Message** – A brief description of the edit error.
 - d. The **Page** column provides a link to a data page containing at least one of the fields causing the error.
 - e. **Action** – Click the **info** link to view full documentation for the edit including the edit logic, data fields that are involved, and revision history.
5. Click the link in the **Page** column to find and edit the fields. All fields validated by an edit may not be shown on the same page, use the links in the Patient Set Navigation box to go to other data pages.
6. A data field is highlighted in a shade of red if it is associated with an edit that has been triggered. Hold your mouse over the field's value to view a listing of the edit errors associated with the field.
7. If you are able to resolve the error:
 - a. Depending on the field, you may either enter a value directly into the data field or use a lookup control to select the value. See *Chapter 11: The Patient Set Editor* for instructions in modifying data in the patient set editor.
 - b. The color of the edited field will change when you move to another field (see *Chapter 7: Edit Errors* for a description of the color codes used in the editor).
 - c. Click **Validate** to run the edits and to determine if your change has corrected the error. If the color of the field still indicates an error, hold your mouse over the field to review the error message.
8. There are several edit errors that can be overridden using data fields displayed in the **Override** section of each CTC data page or by setting **Reviewed** data fields.
 - a. SEER and NAACCR overrides are implemented as data fields displayed in the **Override** section of each CTC page. Each override is associated with a specific edit. If you hover your mouse over an override's label, the NAACCR fieldname for the flag is listed. If the field overrides SEER edits, the edit IDs will also be shown.
 - b. Registry-specific and SEER Extended edits that warn of discrepancies in patient information can be overridden by setting the **Reviewed** data field on the Demographics page to *Yes*. For example, a SEER Extended edit generates a warning if gender and first name do not agree.
 - c. Registry-specific and SEER Extended edit errors of CTC data that are warnings can be overridden setting the **Reviewed** field on the CTC page to *Yes*.

- d. There are three treatment review flags on the summary treatment data page. Each is associated with a set of data fields; for example, the **Radiation Review** field is associated with the radiation fields in the summarized treatment data. If the values of the associated data fields trigger the need for review, an edit error is generated and **review** is displayed next to the **Summary TX** link in the navigation box and next to the data fields on the page. You must review those fields to ensure that the summary values are correct. To view treatment data fields from all treatment pages in one window, click the multi-page icon  that is displayed next to each review field. If changes are required, enter new values into the data fields on the Summary TX data page. Set the flag to *Reviewed*.
9. If information from a reporting facility is required to resolve an error, follow the instructions provided in the *Requesting Follow-back Information* section of this chapter.
10. If you encounter a problem that you can not resolve, reroute the task using the instructions in *Chapter 4: Using the Worklist*.
11. If you have made a number of changes, you should save your work periodically. You must save your changes when completing a task. When you are ready to save your changes, follow the instructions below for *Saving Changes to a Patient Set*.

Saving Changes to a Patient Set

Requires system permission: *pat_edit*

The Resolve Patient Set Errors task is the last manual step in the workflow. If you complete the task and forward the patient set into the workflow, the final automated checks will be performed and the patient set will exit the workflow. The patient set will be accessible via the Patient Lookup, but not the worklist (until new data for the patient enters the system, initiating a new Match-Consolidate task).

Typically, all patient set errors must be resolved in order to complete the Resolve Patient Set Errors task. If edit errors remain in the patient set and you have the *pat_end_task* system permission, you will have the option of ending the task and removing the patient set from the workflow. You may re-open the patient set in an editor at anytime; however, there will not be a task in the worklist to "remind" you to resolve errors. To update or view the patient set, you will need to use the patient lookup feature to search the database. For more information, see *Chapter 20: Searching for Records and Patients*.

Review the following methods for saving changes and for exiting the task. When saving the patient set, enter general comments in the box at the top of the Review Changes page. Comment fields next to the revised data elements can be used to add specificity. The general and data field comments will be stored and displayed in the patient set's audit log.

To save changes to the patient set and continue editing:

1. Click **Save**.
2. Enter comments to document your changes.
3. Click the **Save** button at the bottom of the Review Changes page.

If edit errors remain in the patient set, but you need to complete the task at a later time:

1. Click **Save**
2. Enter comments to document your changes.

3. Verify that the **Ignore Edit Errors and Forward to Next Workflow Task on Save & Exit** box is unchecked. When the patient set is saved, it will remain in a Resolve Patient Set Errors task.
4. Click **Save & Exit**. The task will remain in your worklist.

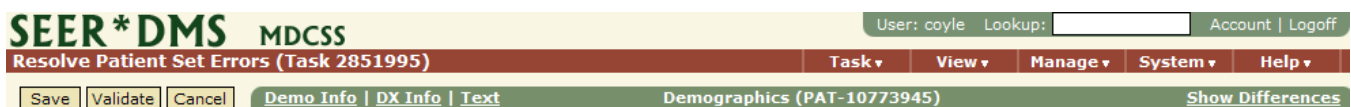
If you have resolved all errors, end the task and allow the patient set to complete the workflow:

1. Click **Save**.
2. Enter comments to document your changes.
3. Verify that the **Forward to next workflow task on Save & Exit** box is checked.
4. Click **Save & Exit**.

To save a patient set with errors and remove it from the worklist (the pat_end_task system permission is required):

1. Click **Save**
2. Enter comments to document your changes.
3. Check the **Ignore Edit Errors and Forward to Next Workflow Task on Save & Exit** box.
4. Click **Save & Exit**.

Warning: If you exit a task using controls on or above the menu bar, any changes that you have made will be lost. The menus (View, Manage, System) and the controls in the User Bar (Lookup, Account, Logoff) will take you to other system components without prompting you to save your changes. (Help > User Manual is the exception to this rule. The SEER*DMS Help System opens in a separate window, your work will be unchanged and will continue to be displayed in the original window.) Please refer to *SEER*DMS Do's and Don't's in Chapter 3: Using SEER*DMS*.




Undoing Changes

Requires system permission: *pat_edit*

You may use the Undo Changes menu item to undo all *unsaved* changes by reloading the patient set from the database. Any changes that you had saved will not be undone. However, all changes are documented in the Audit Log. If you need to reverse a saved change, manually edit the field and enter the original value as noted in the Audit Log.

To reload the patient set from the database and undo changes made since your last save:

1. Click the  menu indicator in the patient navigation box to open the patient set menu.
2. Select Undo Changes.
3. Click **OK** to confirm.

Requesting Follow-back Information

Requires system permission: *pat_edit* and *fb_initiate*

In SEER*DMS, a request for follow-back information is referred to as a “follow-back need”. If you determine that additional information must be obtained from the reporting facility, you should submit a follow-back need. It will be added to a bundle of requests to the same facility.

Periodically, a manager will review, edit, and send the batch of follow-back requests to a physician or other representative at a facility. Subsequently, the manager will process the facility’s responses.

You will receive an e-mail notification when a response to your request is processed and the follow-back need is closed. You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.

If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the data to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the patient set with the new information, use the Patient Lookup to search for the patient set. Instructions for submitting follow-back requests and processing the responses are provided in *Chapter 22: Follow-back*.

Re-executing Edits in Patient Sets

All edits are executed each time a patient set is opened, validated, or saved in the SEER*DMS editor. The Patient Set Edits system task enables you to re-execute the edits on patient sets in the database. You may run the edits on all patient sets or on a cohort defined by year of diagnosis. Use the Patient Set Edits task to ensure that new or modified edits are evaluated.

Instructions for executing the Patient Set Edits system task are provided in the *Chapter 7: Edit Errors*.

Chapter 15: Rescreening of Non-reportable Records

After being screened for reportability, incoming records that are determined to be non-reportable but auditable continue to the Match-Consolidate task. A patient set cannot be created from a single "auditable" record, but if an appropriate match is found, the record may ultimately be incorporated into the patient set data. If the incoming record matches a patient set or a reportable abstract record, a manual Consolidation task is created. A manual task to reconsider the reportability of the data is created in the rare instance of an auditable abstract record matching a record that is not a reportable abstract record (Non-rpt Rescreening task). See *Chapter 9: Screening for Reportability* for a description of the reportability settings in SEER*DMS.

In this chapter, you'll learn about

- Incorporating Non-reportable Record Data into Patient Sets
- Initiating a Rescreening Task
- Completing a Rescreening Task

Incorporating Non-reportable Record Data into Patient Sets

When a user selects one or more matches during a Match-Consolidate task, the next step in the workflow is determined by the data type and reportability of the incoming and matching data. If the incoming record matches a patient set, the record is consolidated into that patient set. If no patient set is available and an abstract record is included in the data to be consolidated, an attempt will be made to build a patient set. However, a patient set can only be built if a reportable abstract is available; or if combining the data from an auditable abstract with another record of any type provides reportable data. The Non-Rpt Rescreening task is a manual task that enables a registrar to determine if an auditable abstract can be combined with other data to create a patient set. This task is created if the following criteria are true:

- The incoming record is determined to match one and only one record. It does not match a patient set or multiple records.
- Neither the incoming record or matching record is a reportable abstract record
- Either the incoming record or matching record is an auditable abstract record.

The table on the following page shows all possible outcomes of a Match-Consolidate task when Consolidate is clicked, that is, when data are found in the database that match the incoming record. For information related to the creation and completion of the Match-Consolidate task, see *Chapter 10: Matching Incoming Records to Database*.

When you select 1 or more matches & click Consolidate to end a Match-Consolidate task:

Incoming Record	Matching Record(s)	Next Workflow Task
Reportable abstract record (NAACCR, NAACCR Modified, or Health Record)	One or more records of any type; or a patient set	Consolidate
Reportable non-abstract record	One or more records that include a reportable abstract record; or a patient set	
Auditable record of any type	One or more records that include a reportable abstract record; or a patient set	
Reportable non-abstract record	An auditable abstract record	Non-rpt Rescreening
Auditable abstract record	A single record that is not a reportable abstract record	
Reportable non-abstract record	One or more records – none of which are a reportable abstract record; no patient set	A warning message will be displayed indicating that there are insufficient data to create a patient set . Click No Matches. The incoming record will be held for matching.
Auditable abstract record	Two or more records which do not include a reportable abstract record; no patient set	
Auditable non-abstract record	A single record that is not a reportable abstract record	

Initiating a Rescreening Task

Requires system permissions: *match, screening*

A Non-rpt Rescreening task is created when auditable data are chosen for consolidation in a Match-Consolidate task, as described in the previous section of this chapter. In the Match-Consolidate task, data from the incoming record are displayed in the top part of the screen and potential matches are displayed at the bottom. The reportability status of each record is indicated by an icon next to the record's type. If the record is reportable, no symbol is displayed. **N** indicates non-reportable; **A** indicates auditable. **N/A** indicates "not applicable" (does not require screening, e.g., supplemental records are not screened).

The screenshot shows the SEER*DMS MDCSS Match-Consolidate interface. At the top, the user is logged in as 'coyle'. The main header indicates the task is 'Match-Consolidate (Task 94500)'. Below this, the 'Incoming Record' section displays details for a patient with ID REC-3002154398, Type NAACCR Abstract (marked with an 'A' icon), and Facility FAC-0089: Memorial Hospital. The patient's name is JANE DOE, DOB is 08-29-1961, and SSN is 123-45-6789. The 'Matches' section shows one match with ID REC-3002225240, Last Name DOE, First Name JANE, DOB 08-29-1961, and SSN 123-45-6789. The match is marked with a '1000' score and a 'Casefinding' type. At the bottom, there are buttons for 'Consolidate', 'No Matches', 'Rematch', and 'Close'.

The Match-Consolidate task is described in *Chapter 10: Matching Incoming Records to Database*.

A Non-rpt Rescreening task is created in a Match-Consolidate task when:

1. The incoming record is an auditable abstract record. NAACCR Abstract, NAACCR Modified, and Health Records are abstract records.
2. You select a single record in the list of possible matches. The matching record is not a reportable abstract record.
3. You click Consolidate. A Non-rpt Rescreening task will be created to enable you to review the reportability of the combined data.
4. If you have the *screening* system permission, the Non-rpt Rescreening task will open automatically. If you do not have the *screening* system permission, an unassigned task of this type will be created in the worklist.
5. If you determine that the combined data are reportable, you will be able to move the data forward to be consolidated into a new patient set. Please review the *Completing a Rescreening Task* section of this chapter.

To open a Non-rpt Rescreening task in the worklist:

1. Click a Non-rpt Rescreening link in the worklist summary on the home page. To resume a task assigned to you, click the link listed in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. To search for the task in your tasks and unassigned tasks:
 - a. Enter your user name in the **User(s)** filter.
 - b. Check the **Show Unassigned** box.
 - c. To search by other criteria, enter values into the filter controls (see *Chapter 4: Using the Worklist* for more information).
 - d. If you made changes to the filter settings, click **Apply**.
3. Click the Task ID to open a Non-rpt Rescreening task.

Completing a Rescreening Task

Requires system permission: *screening*

The Non-rpt Rescreening task displays all data fields from the two matching records in a split-screen view, as shown below. The data fields for the incoming record are displayed on the left of the screen, and the data fields for the matching record are displayed on the right. This format enables the user to view the records side by side, and to determine whether these records in combination can be used to create a reportable patient set.

Determine the Reportability of the Record Data

REC-607067 ⓘ	REC-1490861 ⓘ
NAACCR Abstract	Record Type
St. Francis Medical Center	Casefinding
	Facility Name
	St. Francis Medical Center
	Pat ID #
DOE	
JANE	Last
	DOE
	First
	JANE
	M
123456789	SSN
	123456789
C447	Site
	C447
2	Laterality
8070	Hist(O3)
	8070
3	Behav(O3)
	3
3	Grade
	3
	Hist(O2)
	Behav(O2)
SKIN, LT CALF	Site Title
	SITEDESC: CALF
SQUAMOUS CELL CARCINOMA, POORLY DIFF	Hist Title
	SCC

To screen the records for reportability:

1. Review the demographic fields to verify that both records are for the same patient. If you would like to view additional data fields, click the Record ID for each record to view the entire record.
2. If the records do not refer to the same patient, reject the match:
 - a. Click **No Match**. SEER*DMS will close the Non-rpt Rescreening task and return to the Match-Consolidate task.
 - b. If you have the *match* system permission, the Match-Consolidate task will open automatically. Reconsider the list of Possible Matches and complete the Match-Consolidate task. If the wrong record was inadvertently selected as a match, check the appropriate matches and click **Consolidate**. If you conclude that the incoming record does not match any of the patient sets or unlinked records in the list of possible matches, click **No Matches**.
3. If the records do refer to the same patient, review the data to ascertain if it can be used to build a reportable patient set. If you need to review text or other data fields not displayed, click the Record ID for each record to view the entire record.
 - a. If you determine that the combined data are reportable and should be used to build a patient set, click **Reportable**. A manual Consolidate task will be created in the workflow. If you have the *consolidate* system permission, the Consolidate task will open for your consideration. If not, an unassigned Consolidate task will be added to the worklist. For further instructions, refer to *Chapter 12: Consolidating Data*.
 - b. If the data are non-reportable, click **Non-Reportable**. The current task will end and the two records will no longer be considered as possible matches. The incoming record will be removed from the workflow. It will be retained for future matching. Since it is auditable, it will also be stored in the SEER*DMS database for use in casefinding audits.

Chapter 16: Follow-up

The term follow-up refers to the process whereby a registry continues to monitor the status of a patient's health at periodic intervals. Data fields concerning patient vital status, date of last contact, treatment, and recurrence are updated to maintain accurate surveillance information.

Follow-up data are obtained through active and passive methods. Active follow-up refers to the process of identifying patients whose follow-up information is out of date and contacting someone who can provide more recent information. This may involve contacting the patient, a physician, family member, or other informant. SEER*DMS provides mechanisms for facilitating active follow-up as discussed in the *Active Follow-up* section of this chapter.

Active follow-up procedures can be very time and cost-intensive. Effective passive follow-up processes can significantly reduce the time and effort required to obtain current follow-up information for patients. Passive follow-up refers to the process of updating follow-up information during the linkage of data, including patient data submitted by reporting facilities as well as non-medical data provided by other organizations. Non-medical data are imported as supplemental records and include department of motor vehicle, CMS/HCFA, voter registration, and other data available to the registry. The types of supplemental data that are linked will vary by registry.

Passive follow-up processes are embedded directly into the SEER*DMS workflow as described in the Overview of Passive Follow-up section of this chapter.

In this chapter, you'll learn about

- Passive Follow-up:
 - Overview of Passive Follow-up
 - Overview of the Consolidate FUP Task
 - Opening a Consolidate FUP Task
 - Resolving Discrepancies in Follow-up Data
 - Saving & Exiting the Consolidate FUP Task
- Active Follow-up
 - Overview of Active Follow-up
 - Identifying Patients for Active Follow-up
 - Searching or Filtering the AFUP List
 - Data Shown in the AFUP Manager
 - Assign Patients to a Communication Group
 - Active Follow-up Reports
 - Update Follow-up Data
 - Update Follow-up Data for a Batch of Patient Sets
 - Modifying AFUP Status for a Batch of Patient Sets

Overview of Passive Follow-up

Passive follow-up processes are embedded directly into the SEER*DMS workflow. Automated tasks update follow-up fields when a record is a definite match to a patient set based on deterministic algorithms. These tasks are described below.

- **Rapid Follow-up Task.** To reduce delays in obtaining follow-up data from records that require manual consolidation, the Rapid Follow-up task incorporates follow-up data prior to the full consolidation of the records. This only occurs for records which are processed in the main branch of the workflow and are a definite match to the patient set. The fields that are

changed and the record's ID are documented in the patient set's audit log. The record continues to the weighted auto-match task followed by a manual match task. It is ultimately linked to the patient set in a consolidate task.

- **Auto-consolidation of Non-medical Records.** Automated tasks in the follow-up branch of the workflow link the records when the patient set fields are updated. The records are matched to patient set data in the Match FUP task or in a pre-load matching task (the matching task that is used is determined by record type and registry rules). The record is processed based on the outcome of the match.
 - If the record is a match to two or more patient sets, the matching determination will be made manually in a Supplemental Match worklist task. The record will then follow the same path as described for the situations below.
 - If the record is a match to a single patient set, data fields in the patient set are updated based on registry-defined algorithms. The fields would include but would not be limited to date of last contact, vital status, and follow-up source (refer to your registry's auto-consolidation rules for more information). An entry is made in the patient set's audit log documenting that the record was linked and any modifications made to data fields. If automatic updates cannot be completed due to a discrepancy between the record and patient set data, a registrar will be able to review the data and resolve the discrepancy in a manual Consolidate FUP task.
 - If no match was found in the Match FUP task, the record is retained in the database and may be used for passive follow-up later. If no match was found by the pre-load matching task, the record is not loaded and no further processing is performed.

Overview of the Consolidate FUP Task

In most registry configurations, records that follow the passive follow-up route through the workflow include Supplemental, Death Notice, Health Index, non-reportable Death Certificate, and Follow-up Only records. In this branch of the workflow, a Consolidate Follow-Up (FUP) task is created when a record cannot be auto-consolidated into a matching patient set. This occurs when data on the incoming record conflict with data in the matching patient set. For example, a Consolidate FUP task will be created if a supplemental record indicates that a patient was alive on a given date, but the patient set data indicate that the patient had died prior to that date. Refer to the *Overview of Passive Follow-up* section of this chapter for a more complete description of the tasks leading to a Consolidate FUP task.

In the Consolidate FUP task, a failure code and message are displayed at the top of the patient set editor indicating the auto-consolidation issues that require attention. The failure code is shown before the colon (DOLC in the example below). The message lists the conflicts in the incoming record and patient set data fields, as shown in the examples below.

```
Auto-consolidation issues :  
DOLC: Vital Status and DOLC conflict (VS is 'dead' in pat set, but 'alive' in record; and DOLC is later in record than pat set). (REC-3002324855)
```

```
Auto-consolidation issues :  
FILE-NUM: DC State File Number differs in record and patient set. (REC-3002319222)  
COD: Cause of Death information differs in record and patient set. (REC-3002319222)  
NAME: First Name differs in record and patient set. (REC-3002319222)  
DOB: Year of Birth differs in record and patient set. (REC-3002319222)  
NAME: Last Name differs in record and patient set. (REC-3002319222)
```

The list of failure messages varies by registry to accommodate registry-specific fields and registry-defined auto-consolidation rules. A complete list of the failure codes and messages are provided in the *Auto-Consolidation* section of the *SEER*DMS Technical Reference: Registry-specific Information*.

To complete a Consolidate FUP task, you must perform the following steps:


1. **Confirm that the data are for the same person.** Data should not be consolidated until it is determined that the data to be combined are for the same person. Use the Demo Info tool to confirm the match, as described in the *Resolving Discrepancies in Follow-up Data* section of this chapter.
2. **Resolve discrepancies between the patient set and record data.** The Show Differences feature allows you to review discrepancies between the record and the patient set. If the incoming record contains more current or complete information, Show Differences enables you to update the patient set by copying the data from the record. See the *Resolving Discrepancies in Follow-up Data* section of this chapter for instructions.
3. **Review and Resolve Edit Errors.** SEER*DMS gives you the option of resolving some or all edit errors during the consolidation task, or saving the consolidated patient set and allowing the errors to be resolved in a Resolve Patient Set Errors task.
4. **Save the Patient Set and Exit the Consolidate FUP Task.** Once you have resolved the conflicts between the follow-up data and the patient set, you may save the patient set and allow it to move forward to the next task in the workflow.

The Consolidate FUP task is performed in the patient set editor, and the navigation tools used to complete the task are the same as those used in a Consolidate task. For additional information about these features see *Chapter 11: The Patient Set Editor* and *Chapter 12: Consolidating Data*.

Opening a Consolidate FUP Task


Requires system permission: `consolidate_fup` and (`pat_edit_demographics` or `pat_edit`)

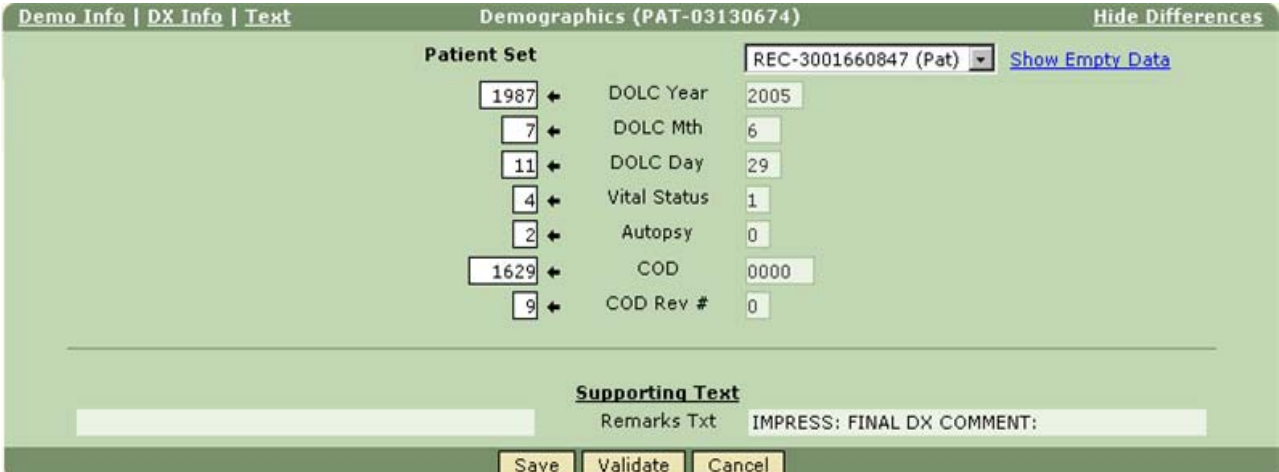
To open a Consolidate FUP task in the worklist:

1. Click a **Consolidate FUP** link in the worklist summary on the home page. To resume a task assigned to you, click the link listed in **My Tasks**. To open an unassigned task, click the link listed in the **Unassigned Tasks**.
2. To search for a task in your tasks and unassigned tasks:
 - a. Enter your user name in the **User(s)** filter.
 - b. Check the **Show Unassigned** box.
3. To search for a specific task, enter search criteria in the Worklist filters. Common filters to use when searching for a Consolidate FUP task include:
 - a. **Task ID(s)** – The complete task ID must be entered.
 - b. Filters for data items in the record that triggered the Consolidate FUP task:
 - i. **Pat/Rec ID(s)** – Enter the record's ID (REC-NNNNN format).
 - ii. **Facility** – Enter an ID or use the  lookup to select a facility.
 - iii. **Information** – Enter full or partial search text related to fields in the Information column. In Consolidate FUP tasks, this column displays: the record type of the incoming record, the patient's name, and the failure code or codes. The failure codes indicate which fields in the record conflict with the patient set.
4. If you made changes to the filter settings, click **Apply**. Click a task **ID** to open a Consolidate FUP task.

Resolving Discrepancies in Follow-up Data

Requires system permissions: *consolidate_fup* and (*pat_edit_demographics* or *pat_edit*)

1. The incoming record is auto-linked at the patient level. The Demographic Information will be displayed when you open the Consolidate FUP task. Verify that the incoming record contains data for the same patient.
 - a. Data from the Incoming Record are displayed in the top section. A field will be highlighted in red if its value differs from the values in the Patient Set fields. Medical Record Number will be highlighted in red if its value differs from Medical Record Number from other records for the same facility.
 - b. Consolidated patient set data fields are displayed in bold in the first row of the Patient Set section. These are followed by values from the records that are linked to the patient set.
 - c. Review all discrepancies in the data fields and confirm that the incoming record matches the patient set.
 - i. If the incoming record is for the same patient, click **Accept** and continue with step 2 to consolidate the data.
 - ii. If the record does not pertain to the same patient, click **Reject**. The Consolidate FUP task will be canceled. The incoming record will be retained in the database as an unlinked record; it can be rematched at a later time. The patient set will be unchanged.
2. If the record contains data for the same person as the patient set, use the Show Differences tool to resolve discrepancies between the record and patient set. If you are not on the Demographics page of the Patient Set, click the **Demographics** link in the Patient Set section of the navigation box.
 - a. Click the **Show Differences** link in the title bar of the Demographics data page. (This link changes to Hide Differences when clicked, allowing you to toggle back and forth.)
 - b. Show Differences displays values from the patient set on the left and values from the record on the right. If you determine that data provided on the incoming record is more complete or more accurate, click the arrow  to overwrite the patient set field with the new data. You may also copy or type values directly into patient set fields.



The screenshot displays the 'Demographics (PAT-03130674)' interface. At the top, there are navigation links: 'Demo Info | DX Info | Text' and a 'Hide Differences' button. Below this is a 'Patient Set' section with a dropdown menu showing 'REC-3001660847 (Pat)' and a 'Show Empty Data' link. The Patient Set fields are as follows:

Patient Set	Field	Value
1987	DOLC Year	2005
7	DOLC Mth	6
11	DOLC Day	29
4	Vital Status	1
2	Autopsy	0
1629	COD	0000
9	COD Rev #	0

Below the Patient Set is a 'Supporting Text' section with a 'Remarks Txt' field containing the text 'IMPRESS: FINAL DX COMMENT:'. At the bottom, there are three buttons: 'Save', 'Validate', and 'Cancel'.

- c. If you do not have sufficient information to determine which set of data is correct, you should submit a request for more information. See *Chapter 22: Follow-back* for instructions to add a follow-back need for this task.
- d. Click **Hide Differences** to return to the data page.
3. Review and resolve edit errors, as dictated by registry policy. SEER*DMS gives you the option of resolving edit errors during the consolidation task, or saving the consolidated patient set and allowing the errors to be resolved in a Resolve Patient Set Errors task.
4. When you are ready to save your changes, follow the instructions in the *Saving and Exiting the Consolidate FUP Task* section of this chapter.

Saving & Exiting the Consolidate FUP Task

When saving your changes and exiting the task, you should enter any relevant comments regarding changes made during the task. The comment box at the top can be used to add general comments pertaining to the task. Comment fields next to the revised data elements can be used to add specificity. The general and data field comments will be stored and displayed in the patient set's audit log.

To save your changes and exit the Consolidate FUP Task:

1. Click **Save**.
2. Enter comments to document your changes.
3. Click **Save & Exit**. If there are edit errors in the patient set, it will be forwarded to a Resolve Patient Set Errors task. If there are no errors, the patient set will complete the workflow and will be accessible via the Patient Lookup, but not the worklist.

Overview of Active Follow-up

The following summarizes the steps involved in using SEER*DMS to manage the registry's active follow-up processes. These steps are explained in greater detail in subsequent sections of this chapter.

1. **Execute the system task to identify patients for active follow-up.** This task uses registry-specific algorithms to determine which patients require active follow-up. These criteria are based on vital status, date of last contact, and whether the patient's follow-up status is monitored by the registry. If a patient set meets the task's criteria, the patient set's AFUP status will be set to open and the patient set will be added to the list of patients requiring follow-up on the SEER*DMS AFUP Manager page.
2. **Review the list of patients on the AFUP Manager page. Close the AFUP for selected patients, as appropriate.** In some registries, the system task's criteria include patients who are not routinely followed by the registry. For example, it may be registry policy that patients who only have non-reportable cancers are not followed on a regular basis. These may be flagged as requiring active follow-up because there are times when they are actively followed. If this is not one of those times, use the filters in the AFUP Manager to select those patients and close their AFUPs.
3. **Group Patient Sets based on the method of communication that will be used to obtain follow-up information.** In this step, you will assign a Communication ID to each group of patients who fall into the same communication category. The communication category determines the type of letter, form, or listing that will be used to obtain follow-up information. As an example, you may assign a specific Communication ID to patients who

will be followed via physician letters; or you may assign a Communication ID to patients who will be followed via a particular site-specific form. The Communication IDs will be used by external reports that generate the letters and forms; these are implemented via external reports to give the registry complete control over the number, type, and content of the follow-up reports.

4. **Generate reports, letters, and listings based on the communication IDs assigned in step 3.** Typically, the external reports will be designed to accept a Communication ID as a parameter. Execute each external report using the appropriate Communication ID.
5. **Wait for a response to letters sent to physicians, facilities, patients, and informants.** As you wait, be aware that a patient's follow-up status may be closed if data received at the registry updates follow-up fields. A patient's AFUP status will automatically be set to closed if the patient's vital status is changed from alive to dead; or the date of last contact is set to a date that is more recent than the AFUP DOLC Cutoff used in step 1.
6. **Indicate whether a response was received and enter all data received.** Update the patient data based on information received and indicate that the communication was successful. In order to refine the registry's communication strategies, you should also track unsuccessful and inappropriate communication methods.

Identifying Patients for Active Follow-up

Requires system permission: *system_administration*

The "Identify Patients for AFUP" system task uses registry-specific algorithms to determine whether a patient requires active follow-up. These criteria are typically based on vital status, date of last contact, and whether the patient's follow-up status is monitored by the registry (e.g., non-reportable cases may not be followed by some registries).

If a patient set meets the task's criteria, the patient set's AFUP status will be set to open and the patient set will be added to the list of patients requiring follow-up on the SEER*DMS AFUP Manager page. You may use the AFUP Manager to facilitate and track communications to the patients, their physicians or other contacts. The AFUP Manager also enables you to enter follow-up data as it is received (see the *Using the AFUP Manager* section of this chapter). An AFUP is closed when the patient's vital status and date of last contact indicate that the need has been fulfilled. This may occur when data are changed via data processed in passive follow-up processes or data received as a result of active follow-up procedures.

To designate Patient Sets for active follow-up:

1. Select **System > Tasks**.
2. Click the **Identify Patients for AFUP** link.
3. Enter a date in **DOLC Cutoff** that defines whether a patient set requires active follow-up. A patient set will be considered if the patient set's value for vital status is alive and the date of last contact is prior to this date.
4. Click **Recalculate** to view the number of patient sets that meet the criteria. If the number of patients sets is unacceptably high based on registry policy, adjust the DOLC Cutoff and recalculate.
5. You may enter text related to this task in the **Comment** field. The comment from the last execution of the task is stored in the database (utility_history table).




6. Click **Start**. SEER*DMS will create an AFUP Need for each patient set which matches the registry's active follow-up criteria. Once the task completes, the follow-up staff may use the AFUP Manager to initiate follow-up procedures for these patients.






Searching or Filtering the AFUP List

Requires system permission: *afup_manager*

A Patient Set is listed in the AFUP Manager if its AFUP Status was set to *Open* during the execution of the Identify Patients for AFUP system task. Please verify that the system task was executed with the appropriate options prior to using the AFUP Manager.

To search or review Patient Sets flagged for active follow-up:

1. Select **Manage > Active Follow-up**.
2. No Patient Sets are shown when you first open the AFUP Manager. To use the default filter settings and view all Patient Sets currently flagged as requiring follow-up, click **Apply**.
3. To search for AFUPs by Patient Set or AFUP ID, enter the IDs into the **Patient ID(s)** filter. The PAT- or AFUP- prefixes may be entered, but are not required. To expand the filter so that more than one ID can be entered, click the  adjacent to the ID filter. You may type or paste as many IDs as you wish. Separate one ID from the other by entering a space or by pressing **Enter**. (Note: The AFUP ID consists of the numeric portion of the Patient Set ID appended to the AFUP- prefix. This ID is for display purposes only. It is used in the AFUP Manager to make it clear that clicking the ID opens the AFUP page and not the Patient Set itself.)
4. To search for AFUPs related to a particular communication, enter the Communication ID into the **Comm ID(s)** filter. To expand the filter so that more than one ID can be entered, click the  adjacent to the ID filter. You may type or paste as many IDs as you wish. Separate one ID from the other by entering a space or by pressing **Enter**.
5. To select a set of AFUPs based on the DOLC Cutoff Date used by the system task to identify patients for active follow-up, select a value in the **Cutoff Dt** filter.
6. If you wish to view a list of AFUPs that have yet to be sent, check the **Exclude Sent** box. Use this control to view AFUPs that were never assigned to a communication group.
7. The date of last contact (DOLC) filter allows you to search on DOLC month, day, and year separately. For example, if you wish to limit the list to patients with December as their month of last contact enter 12 in the first box. To search for patients with a certain year of last contact, enter the value in the third box. To search for patients with the same full date of last contact, enter values in all three boxes.
8. Use the **Age at DX** filter to search for Patient Sets by age of diagnosis. You may specify a range of values (e.g., 0-20 for patients 20 and younger). If a Patient Set has multiple CTCs, the age at diagnosis for each CTC is considered.
9. Use the **Year of DX** filter to search for Patient Sets by year of diagnosis. You may specify a range of years (e.g., 2002-2004) or use a comma to select separate years (e.g., 2002, 2004). If a Patient Set has multiple CTCs, the year of diagnosis for each CTC is considered.
10. To limit the list to Patient Sets with a particular value for **Do Not Contact**, use the  lookup to select the appropriate value.

11. To search by facility admissions, use the  lookup or enter an ID for Admitting Facility. The list will be limited to Patient Sets with an admission to the facility.
12. To search for patients by the facility specified as their last follow-up hospital or to search for patients with an unknown follow-up hospital, use the  lookup or enter an ID in the **Last FU Hosp** filter.
13. To search for patients by the physician specified as their last follow-up physician or to search for patients with an unknown last follow-up physician, use the  lookup or enter an ID in the **Last FU Phys** filter.
14. To limit the list to Patient Sets with at least one CTC that is reportable to SEER or local agencies, select the appropriate value in the **Reportable** filter. Site
15. Use the **Site** filter to search for Patient Sets by cancer site. You may use the Lookup icon  to select a single code from a list, type one or more codes into the box (separate the codes by commas or spaces), or enter a range of values. You may also enter a partial string. For example, enter C50 to search for site codes of C500 through C509. If a Patient Set has multiple CTCs, the site of each CTC is considered.
16. Use the **Histology** filter to search for Patient Sets with at least one CTC that has a particular value for histology. You may specify a range of values (e.g., *800-8999*) or use a comma to select separate years (e.g., *8000, 8500*). If a Patient Set has multiple CTCs, it will be included if at least one of those CTCs meets the criteria for histology.
17. To search by behavior, use the  Lookup or enter a value in the **Behavior** filter. You may also enter a range of values. If a Patient Set has multiple CTCs, it will be included if at least one of those CTCs meets the criteria for behavior.
18. If the filters are set appropriately, click **Apply**. Click **Reset** to restore default settings and clear all filters.

Data Shown in the AFUP Manager

The following data columns are shown in the AFUP Manager:

- **AFUP ID** – The AFUP ID consists of the numeric portion of the Patient Set ID shown with an AFUP- prefix. This ID is used in this column of the AFUP Manager to make it clear that clicking the ID opens the AFUP page (clicking an ID shown in the PAT-NNNNNN format will open the Patient Set editor).
- **Last Name** – The patient's last name.
- **First Name** – The patient's first name.
- **DOLC** – The current value of date of last contact stored in the Patient Set.
- **FU Hosp** – The facility defined as the Last Follow-up Hospital in the Patient Set.
- **FU Phys** – The person defined as the Last Follow-up Physician in the Patient Set.
- **Cutoff DT** – The DOLC Cutoff date specified for the Identify Patients for AFUP system task that determined that this Patient Set requires active follow-up. If a Patient Set met the AFUP criteria in multiple executions of the task, the most recent value is shown.
- **Created DT** – The date that the Identify Patients for AFUP system task was executed and determined that this Patient Set requires active follow-up. If a Patient Set met the AFUP criteria in multiple executions of the task, the most recent value is shown.

- **Latest Com** – The most recent communication group to which this Patient Set was assigned. Click the Communication ID to view or enter data received in response to the communication.

Assign Patient Sets to a Communication Group

Requires system permission: *afup_manager*

To assign a Communication ID to a set of Patient Sets:

1. Select **Manage > Active Follow-up**.
2. No Patient Sets are shown when you first open the AFUP Manager. To use the default filter settings and view all Patient Sets currently flagged as requiring follow-up, click **Apply**.
3. Enter search criteria in the filters to select the Patient Sets that will be assigned to a single Communication Group. Select Patient Sets that will use the same report to generate the appropriate mailing, forms, or listing. Instructions for using the filters are provided in the *Searching or Filtering the AFUP Manager* section of this chapter.
4. Select the Patient Sets:
 - a. To select all Patient Sets on all pages of the filtered AFUP Manager, click **Send All**.
 - b. To select a single Patient Set, check the box to the left of the AFUP ID. Click **Send**.
 - c. To select two or more Patient Sets, use one of the following methods:
 - i. To select specific Patient Sets, check the box to the left of each AFUP ID. You can only select Patient Sets on the same page with this method.
 - ii. To select all Patient Sets displayed on the current page, check the box on the top left of the page, adjacent to the **AFUP ID** column heading. If you would like to exclude a Patient Set, click the checkbox to de-select it.
 - iii. Click **Send**.
5. Provide the information that your external report requires to generate the mailing, forms, or listing to obtain follow-up data for the selected patients.
 - a. Use the **Communication Type** field to set the *RECIPIENT_TYPE* field in the communication table. Consult the documentation for your report to determine which value should be used. For example:
 - i. If the report generates a mailing addressed to a single facility or physician, set **Communication Type** to *Facility/Physician*. Enter a value for physician, facility, or both.
 - ii. If the report uses physician or facility information stored in the Patient Sets but requires a default value for either field, set **Communication Type** to *Facility/Physician*. Enter a value for physician, facility, or both. The report would use this information if the field(s) were missing for a patient.
 - iii. If the report generates a mailing addressed to the patients or only uses data within each Patient Set, select *Patient Communication*.
 - b. Enter a unique **Report ID** that identifies the external report for this communication. (The current version of SEER*DMS does not support internal AFUP reports.)
6. Click **OK**.

7. SEER*DMS will create a new communication entry. The new Communication ID will be displayed at the top of the screen and an AFUP Report Request will be sent to you via email. Use the information in the email to generate the external report or forward the report request to the appropriate person at your registry.

Active Follow-up Reports

Registry staff must create external reports that generate mailings, forms, and listings related to the registry's active follow-up procedures. Each report should accept a Communication ID as a parameter. The Communication ID defines the cohort of patients for the report and provides other information such as recipient type, facility (if applicable), and physician (if applicable). Samples of SQL and detailed descriptions of the database tables and fields relevant to AFUP reports are provided on the SEER*DMS portal. The samples include queries that select demographic patient set fields as well as queries that select CTC-level data fields.





Update Follow-up Data

Requires system permission: *pat_edit* or *pat_edit_demographics* or *afup_manager*

A patient's AFUP status will automatically be set to *closed* if the patient's vital status is changed from alive to dead; or the date of last contact is set to a date that is more recent than the AFUP DOLC Cutoff. The AFUP status will be modified whether the patient's data were updated via ad hoc editing, during a manual worklist task, in an automated passive follow-up task, or via tools specifically designed for active follow-up. Instructions for modifying data field via ad hoc editing and worklist tasks are provided in other chapters of this manual. The following describes methods for updating follow-up data using AFUP features. These tools provide a convenient method to update the fields and track the effectiveness of registry active follow-up procedures.

To update patient follow-up data:

1. If you are entering information for a number of patients and the information was received in response to a particular Communication, please refer to the *Updating Follow-up Information for a Batch of Patient Sets* section of this chapter. In batch mode, you will be able to update date of last contact and vital status for a number of patients. If you need to modify other fields or are entering information that is unrelated to a communication, continue with step 2.
2. You may access the Active Follow-up page for a patient set via the Patient Set Editor or the AFUP Manager:
 - a. To access the Active Follow-up page of a Patient Set via the Patient Set editor:
 - i. Open the patient set by entering the Patient Set ID in the Lookup box on the SEER*DMS toolbar (or you may use any of the search features described in *Chapter 20: Searching for Records and Patients*).
 - ii. Click the **AFUP** link in the Patient Set's navigation box on the left side of the screen. The status of the most recent AFUP is listed at the top. A history of the communications used to obtain follow-up information is displayed in the Communication History section of the page.
 - iii. If the Patient Set's AFUP status is open and you wish to view or modify AFUP information, click **Edit**.
 - b. To access the Active Follow-up page via the AFUP Manager:

- i. Use the filters to find the Patient Set (see *Searching and Filtering the AFUP List* for detailed instructions).
 - ii. Click the link in the **AFUP ID** column for the Patient Set.
3. If you are entering information received as the result of a specific communication effort:
 - i. Select the communication's ID in the **COM-ID** drop-down list. Fields related to that communication will automatically be set in the Follow-up Info section of the page.
 - ii. Set the **Status** of the communication to *Success*. The manager of follow-up will use this information to evaluate the effectiveness of the registry's active follow-up procedures.
 - iii. **Date Received** will automatically be to today's date. You may override this value if the data arrived at the registry on a previous date. Click the Calendar icon  to modify the date, if necessary.
 - iv. You may enter a comment related to the communication, if you wish.
4. Changes that you save on this form will be used to update fields in the Patient Set, as described below. You may update the following fields:
 - a. **DOLC** – The Patient Set's current value for date of last contact is shown. You may enter a more recent date. If you enter a date that is earlier than the current value, the Patient Set's field will not be changed.
 - b. **VS** – The Patient Set's current value for vital status is shown. If your follow-up information indicates a change in vital status, enter the new value. A change will be made in the Patient Set if the date of last contact is the same or later than the current date in the Patient Set.
 - c. **Follow-up Source Central** – To specify the source of the follow-up data, enter the appropriate value in the **FUP Src CntI** field. You may either enter a code or use the  lookup to select a code.
 - d. **Do Not Contact** – If your information indicates a new values for the Do Not Contact field, you may enter it here.
 - e. **FU Phys** – If your information indicates a new follow-up physician, you may enter the physician's ID or use the  lookup to select an ID.
 - f. **FU Hosp** –If your information indicates a new follow-up hospital, you may enter its facility ID or use the  lookup to select an ID.
5. Click **OK**. Changes to fields on the AFUP form will only be accepted if the date of last contact is the same or later than the current value in the Patient Set.



Update Follow-up Data for a Batch of Patient Sets

Requires system permission: *afup_manager* and (*pat_edit* or *pat_edit_demographics*)

If you receive a response to a Communication that includes data for multiple patients, you may use the AFUP Manager to open the Communication Response page and enter data for a batch of patient sets. This feature provides a convenient method to update the date of last contact and vital status in a batch data entry mode. It also allows you to indicate whether the communication was successful for each patient or if it failed to yield information for one or more patients. If you wish

to enter additional data for a patient, you may prefer to update a single patient's data on a screen that provides more fields. See the *Update Follow-up Data* section of this chapter for instructions.

To update the follow-up data for a batch of Patient Sets:

1. Select **Manage > Active Follow-up**.
2. Click **Find Comm** to search for the communication.
3. Enter the Communication ID for this set of Patient Sets.
4. Click **Find**. SEER*DMS will list all Patient Sets associated with the communication. The following patient identifiers are shown: Patient Set ID, Social Security Number, and patient name. These are followed by entry fields for date of last contact, vital status, and the communication status (success or failure), and the date that the follow-up data were received.
5. Enter information related to the communication:
 - a. **Received Dt** is automatically set to today's date. You may override this value if the data arrived at the registry on a previous date. Click the Calendar icon  to modify the date, if necessary.
 - b. Enter a value in the **FUP Src Central** field. You may either enter a code or use the  lookup to select a code.
6. If there are 20 or fewer, all Patient Sets will be listed. If there are more than 20, a search box will allow you to search for each Patient Set. You may search by Patient Set ID, Social Security Number, or patient name. Once you enter three or more characters in the search box, the system will begin to display matches. Continue typing until the appropriate Patient Set is displayed. Once the Patient Set is highlighted, you may click or press Enter to add it to the data entry form.
7. Enter data for each Patient Set. Changes that you save on this form will be used to update the Patient Set data fields, as described below. The fields for a patient will be disabled if their AFUP status was set to *Closed* during editing or via automated passive follow-up tasks; they will also be disabled if the status of this communication was modified for the patient. The patients are listed in alphabetical order. Find the correct patient in the list based on patient name, Patient Set ID, Social Security Number. You may update the following fields:
 - a. **DOLC** – The Patient Set's current value for date of last contact is shown. You may enter a more recent date. If you enter a date that is earlier than the current value, the Patient Set's field will not be changed. This form will not allow you to enter a less current value for date of last contact.
 - b. **VS** – The Patient Set's current value for vital status is shown. If your follow-up information indicates a change in vital status, enter the new value. A change will be made in the Patient Set if the date of last contact is the same or later than the current date in the Patient Set.
 - c. **Status** – If this communication successfully yielded information related to this patient, set **Status** to *Success*. This information will be used by a manager to evaluate the effectiveness of follow-up procedures.
 - d. **Received Dt** will automatically be to today's date for all patients whose data are updated.

8. Save your changes:
 - a. If you would like to continue editing after saving, click the **Save** button at the bottom of the Review Changes page.
 - b. If you would like to exit the page, click **Save & Exit**.

Modifying AFUP Status for a Batch of Patient Sets

Requires system permission: *afup_manager*

You may set the AFUP statuses of a batch of patient sets to *closed*. You may want to use this feature to clear the AFUP Manager prior to running the system task to identify patients for the next round of active follow-up. In some registries, the system task's criteria include patients who are not routinely followed by the registry. For example, it may be registry policy that patients who only have non-reportable cancers are not followed on a regular basis. These may be flagged as requiring active follow-up because there are times when they are actively followed. If this is not one of those times, follow the instructions below to select those patients and close their AFUPs.

To set AFUP status to closed for a set of Patient Sets:

1. Select **Manage > Active Follow-up**.
2. No Patient Sets are shown when you first open the AFUP Manager. To use the default filter settings and view all Patient Sets currently flagged as requiring follow-up, click **Apply**.
3. Enter search criteria in the filters to limit the list as needed. Instructions for using the filters are provided in the *Searching or Filtering the AFUP Manager* section of this chapter.
4. Select the Patient Sets:
 - a. To select all Patient Sets on all pages of the filtered AFUP Manager, click **Modify All**.
 - b. To select a single Patient Set, check the box to the left of the AFUP ID. Click **Modify**.
 - c. To select two or more Patient Sets, use one of the following methods:
 - i. To select specific Patient Sets, check the box to the left of each AFUP ID. You can only select Patient Sets on the same page with this method.
 - ii. To select all Patient Sets displayed on the current page, check the box on the top left of the page, adjacent to the **AFUP ID** column heading. If you would like to exclude a Patient Set, click the checkbox to de-select it.
 - iii. Click **Modify**.
5. The number of Patient Sets will be displayed at the top of the page. Select the Action to be applied to these Patient Sets:
 - a. If you wish to clear these Patient Sets from the AFUP Manager, select *Close AFUP & Communications*. The Patient Sets' AFUP status flag will be set to *closed* and all unresolved AFUP communications for these Patient Sets will be failed.
 - b. If you want to fail all unresolved communications for these Patient Sets, select *Close Communications Only*.
6. Click **OK**.

Chapter 17: Death Clearance

Death Clearance is the process of linking death certificate records with the registry database in order to determine all deaths among registrants and to identify deaths from cancer among persons previously unknown to the registry.

When a death certificate record enters the workflow, SEER*DMS attempts to move the record through the editing, screening, matching, and consolidating tasks. If the record is deemed non-reportable, it is used for passive follow-up. If the record is deemed reportable and a registrar confirms that it matches a cancer/tumor/case (CTC) in the system, it is linked to the CTC and consolidated into the patient set data. If the death certificate record indicates a new reportable tumor, an effort will be made to create an abstracting assignment for the case. This involves identifying a facility in order to obtain an abstract, or following back with the physician associated with the death certificate. System reports in SEER*DMS can be used to determine when follow-back is required, and identify the appropriate source of follow-back.

Finally, the remaining reportable death certificate records can be used to create death certificate only (DCO) cases. SEER*DMS provides system reports enabling you to monitor the percentages of death certificate only CTCs submitted each year.

In this chapter, you'll learn about

- Death Clearance and SEER*DMS
- Performing Death Clearance Follow-back
- Reports Related to Death Clearance
- Using the Death Clearance Summary Report (RPT-019A)
- Building DCO Cases
- Monitoring Death Certificate Only Levels

Death Clearance and SEER*DMS

*The steps involved in performing death clearance using SEER*DMS are:*

1. The death data received from a state agency are loaded into SEER*DMS (see *Chapter 5: Importing Data Files* for more information).
2. Each record enters the workflow. Once it moves through registry coding and edit checks, it is screened for reportability. If the record is not reportable, it is used for the purpose of follow-up and is not directly involved in Death Clearance processes. If the record is reportable, SEER*DMS compares the facility coded on the reportable death certificate record to organizations in the Facility List.
 - a. If the facility coded on the record is an organization in the SEER*DMS Facility table and that facility meets registry-defined criteria, an AFL is created. For example, some registries only have an AFL created if the facility is a *hospital* or *hospice*. Please consult your registry's workflow diagram to determine the exact criteria used in your registry.
 - b. An AFL is not created if the facility coded on the death certificate record does not meet the registry-defined criteria. The case will be tracked via Death Clearance reports. External procedures will be used to identify and contact a physician or facility to obtain more information.
3. The death certificate record moves to the matching task in the workflow. A manual Match-Consolidate task will be created for nearly all reportable death certificate records. Reportable death certificate records only exit matching automatically if the auto-match

does not find any matches in the database. Keep in mind that the weighted matching algorithms are often loose and will find "possible" matches based on soundex and other criteria. Tasks related to the current reporting year should be completed prior to performing subsequent Death Clearance processes.

- a. If you determine that one or more items in the list of Matches contain data for the same patient as the death certificate record, click Consolidate. Proceed with step 4.
 - b. If there are no other data for the patient, click No Matches. The death certificate record will exit the workflow. It will be retained in the database, waiting to be processed via Death Clearance procedures. Allow this record to remain in the database as an unlinked record until the weeks prior to submission. Hopefully, the Death Clearance processes will yield an abstract. If an abstract cannot be obtained in time for submission, you will use the record to build a death certificate only CTC.
4. Consolidate the data in the normal fashion, as described in *Chapter 12: Consolidating Data*. The following describes considerations specific to the consolidation of reportable death certificate records.
- a. If the death certificate record represents a new cancer for the patient:
 - i. Link the record to the Patient Set at the patient level ("P"). Do not create a new CTC from this record at this time.
 - ii. Consolidate the follow-up data into the patient set: vital status, date of last contact, causes of death, etc.
 - iii. Because the record is not linked to a CTC, it will continue to be monitored via reports and other mechanisms related to Death Clearance. As described in step 2 above, there will either be an AFL associated with the record or follow-back procedures will be required. This record will be listed on the Death Clearance Summary Report (RPT-019A). If an abstract cannot be obtained in time for submission, use the record to create a death certificate only CTC.
 - b. If the death certificate data pertains to an existing CTC:
 - i. Link the record to the CTC.
 - ii. Consolidate the follow-up and cancer data into the patient set and CTC.
 - iii. If an abstract record from the same facility is linked to the CTC, no further processing is required. If there is no abstract from the same facility linked to the CTC and there is an AFL, the AFL will remain open. If you determine that an abstract is not needed, you may manually close the AFL.
 - iv. This record will not require any further processing related to Death Clearance.
5. The goal is to link each reportable death certificate record to a CTC as a non-DCO case (in other words, to a CTC which includes abstract data). To achieve this goal for as many records as possible, use the tools described below.
- a. Worklist Filters - Find and assign worklist tasks related to death certificate records for the current reporting year. Completing these tasks will yield some linkages and reduce efforts in subsequent steps related to AFLs, abstracting, and follow-back.
 - b. AFL Manager - Assign death certificate AFLs to an abstractor. Once the abstracted data are received, load the abstract records into the system. SEER*DMS will match the imported abstract records against the AFLs and auto-close matching AFLs.

- c. Death Clearance Reports – Use the SEER*DMS Death Clearance Reports to monitor reportable death certificates that are not linked to a CTC. Throughout the year, the number of records should decrease as you complete worklist tasks and receive abstracts. Pay particular attention to death certificates that are not associated with an AFL. Per registry policies and procedures, these records may require follow-back to the physician or facility.
 - d. External Reports and Letters – Generate registry-specific physician letters, hospital listings for death clearance follow-back, and other registry-defined reports and letters.
6. If all data sources are exhausted and the only source of information about the cancer is from the death certificate, a patient set with limited information can be created from the death certificate. In SEER*DMS, you can build a CTC from a death certificate record that indicates a reportable cancer and does not match an existing CTC. For more information, see the *Building DCO Cases* section of this chapter.

Performing Death Clearance Follow-back

If an abstract is required but an appropriate facility could not be identified for the abstracting assignment, you should seek information to identify a facility or obtain additional data related to the case. Typically, this involves sending a letter and/or questionnaire to the physician who signed the death certificate. The letters and questionnaires are implemented in an external report; this implementation provides registry staff with complete control over the initial design and subsequent modifications.

To create a letter addressed to a physician, the external report must be able to associate a physician in the Contacts List with data in the death certificate record. This involves matching a value in the record to the Contact List using the physician license number, National Provider ID (NPI), or other identifier. A physician letter cannot be generated if any of the following situations occurs:

1. The physician indicated on the death certificate does not exist in the Contacts List. This problem can be resolved by adding the physician to the Contacts List.
2. The physician's entry in the Contact List contains a blank or incorrect value for the identifier used to match death certificate records to physicians. Consult registry management to determine which field is being used and set the appropriate value.
3. The physician field on the death certificate record was missing or unknown. If possible, review the image of the death certificate and attempt to identify the physician.

SEER*DMS provides a system report, RPT-020A, to identify death certificate records that require follow-back. The report includes an option to limit the report to records with one of the problems described above (this report assumes physician license number is used for matching; registry IT staff may create an external, custom-version of this report to use a different field). To automate the process as much as possible, review the report and resolve the issues described above, when possible.

When a response to the follow-back inquiry is received, the new information should be processed according to registry guidelines. If you receive data items that you would like to store in the database, you may either enter the data into a new record or into a patient set created from the death certificate record (as described below in *Building DCO Cases*). If a facility can be identified for the purposes of obtaining an abstract, an Abstract Facility Lead should be created and assigned to an abstractor.

Reports Related to Death Clearance

SEER*DMS includes the following system reports related to DCO cases. If you require additional information regarding death certificate data, you may generate an external report. See *Chapter 24: Creating Reports and Extracting Data* and *SEER*DMS Data Dictionary* for more information.

Report ID	Title	Description
RPT-019A	Death Clearance Summary	A listing of all unlinked, reportable death certificate records. This report indicates the status of each record in terms of workflow activity and AFLs.
RPT-020A	Death Certificate Records that Require Follow-back	A list of the death certificate records that require follow-back; a parameter allows you to select only those for which follow-back letters cannot be auto-generated because of missing physician information.
RPT-068B	Frequency of Records for the Build DCOs System Task	Number of records, by facility, that will be built into DCO cases by the Build DCO System Task.
RPT-068C	Candidate Records for the Build DCO System Task	A list of the records that may be built into DCO cases. These are the records that would be used to build a CTC if you ran the Build DCO task.
RPT-119A	Death Certificate Only CTCs, by Year of Diagnosis	Frequencies and percentages of CTCs that are DCO by year of diagnosis. The early years can be collapsed into one year range (typically thru 1972).
RPT-119B	Death Certificate Only CTCs by Source	List of the death certificate only CTCs in the patient set data. These are listed by source (facility, physician, or medical examiner).

Using the Death Clearance Summary Report (RPT-019A)

The Death Clearance Summary Report lists all reportable death certificate records that are not linked to a CTC. Use this report to monitor death certificate records which require processing. The report shows the status of the record in terms of its location in the workflow and AFLs. The following columns are displayed:

- **WT** – Worklist Task. If the death certificate record is the focus of a worklist task, the type of task will be indicated here. This column will be blank if the record has exited the workflow.
- **DC Record** – The Record ID of the death certificate record.
- **Patient ID** – If the record is linked to a Patient Set, the ID is listed. If this column is blank, the record is not linked to a Patient Set.
- **AFL** – ID of the AFL created by the death certificate record.
- **Closing Rec** – The ID of the record that closed the AFL. This would typically be an abstract record or a Short Health record. Other record types may close AFLs in some registries. Please consult your registry's workflow diagram for more information.
- **Name** – Patient name.
- **SSN** – Social Security Number.

- **DOB** – Date of birth.
- **DC #** - Death certificate number.
- **DOLC** – Date of death.
- **COD** – Primary cause of death.
- **FAC** – Facility coded on the death certificate record.
- **ST** – State of death.

It is recommended that you use CSV format for the report. This will allow you to sort and subset the results in Excel. In addition, you will be able to copy-and-paste Record IDs or AFL IDs into the Patient Lookup, AFL Manager, or Worklist filter.

Considerations when reviewing the Death Clearance Summary Report:

1. Review records where AFL is listed as closed and consider the following possibilities:
 - a. A Record ID is not listed in the Abstract column. This indicates that the AFL was closed manually. You should use the AFL Manager to open the AFL. Review the AFL Result field. If it was set to Abstracted when the AFL was closed, you should search to see if there is truly an abstract. Add a comment to the AFL to document your findings. If the death certificate is inappropriately designated as reportable, change the AFL Result to "Not a Reportable Cancer". The record's reportability status will be updated.
 - b. A Record ID is listed in the Abstract column. This indicates that an abstract record entered the workflow and closed the AFL associated with the death certificate record. The death certificate record is listed on this report because it is not linked to a CTC. However, it may be a matter of timing. The Abstract record may be in the workflow. The two records will be consolidated when the abstract's task is completed. Search for these abstracts in the Patient Lookup. A View link will be listed if the record is involved in a worklist task.
2. Review records where a Task ID is listed in the WT (Worklist Task) column. These are death certificate records for the current reporting year with outstanding worklist tasks. These efforts are being monitored and tracked in the worklist. You have the option of excluding these from this report, if you wish.
3. Review records where AFL is listed as open. These records are being monitored and tracked via the AFL Manager. You have the option of excluding these records from the report, if you wish.
4. Review the records where AFL and WT columns are blank. These are reportable death certificate records which are not in the workflow and are not associated with an AFL. You must generate follow-back reports and letters to obtain further information about these cases.

Building DCO Cases

Requires system permission: *rec_build_cfo*

Once Death Clearance procedures have been completed, you may determine that one or more Death Certificate Records should be submitted to SEER or other sources as death certificate only (DCO) cases. Follow the instructions provided below to create a CTC from an individual record. Alternatively, use the Build DCO system task to create CTCs from a set of records (see *Chapter 27: System Administration* for instructions). Whether using the system task or the record editor, a record can only be used to create a DCO case if it is a reportable record, is not the source of an AFL that is closed, and is not in the worklist.

If the record is not linked to an existing patient set, a new patient set will be created. If the record is linked to a patient set but not to a CTC, a new CTC will be created within the patient set.

To build a DCO case from an unlinked death certificate record:

1. Open the record in the record editor.
2. Select **Build Patient Set** from the record menu. This menu item is only available if the record is unlinked and you have the *rec_build_dco* permission. If a patient set cannot be built from this record, an error message will be displayed at the top providing the reason (the record is either in the worklist or is the source of a closed AFL).
3. Click **OK** to confirm.
4. SEER*DMS will create an automated workflow task to create a patient set. When the task completes, a Visual Edit Patient Set task related to the new patient set will be assigned to you.

To build a DCO case from a record linked to a patient set:

1. Search the database for the death certificate record or its associated patient set. You may enter the Patient Set or Record ID into the quick search, or click **View > Patients** to use the Patient Lookup. (See *Chapter 20: Searching for Patients and Records.*)
2. Verify that the record is not already linked to a CTC. If it is linked at the patient level, you may proceed.
3. Click the ID of the record in the patient set navigation box.
4. Select **Move To > New CTC** from the record's menu.
5. SEER*DMS will create a new CTC; you may proceed with visual editing.

Monitoring Death Certificate Only Levels

Requires system permission: *reports*

A SEER*DMS system report is available to analyze the results of death clearance. Report 119A shows the frequencies and percentages of death certificate only CTCs by year of diagnosis.

To create a report of your registry's death clearance rate:

1. Select **View > Reports**.
2. Enter 119A in the search box.
3. Open report specifications page for RPT-119A.
4. If you are monitoring DCO cases for the purposes of a SEER submission, set the **Select** parameter to *SEER-Reportable Only*.
5. The report includes a row of data for each year of diagnosis. If you are only interested in more recent years, combine the early years into one year range by entering a value for the **Group Years Through** parameter. For example, enter 1972 to display a single row for the range of years prior to 1973.
6. Click **Run** or **Run Offline**. (Please refer to *Chapter 24: Creating Reports and Extracting Data* for specific instructions related to running reports and viewing report output.)

Chapter 18: The Facility List

SEER*DMS maintains information about organizations and facilities that collaborate with the cancer registry. The facility list includes the registry itself, organizations that provide data to the registry, and those receiving data or other information from the registry. Each organization is uniquely identified by a Facility ID. The list is referenced throughout SEER*DMS to set facility information in data fields, track sources of data, manage abstracting assignments, and provide a mechanism for follow-back.

You can use the Facility Manager to view or manage the facility list. The Facility Lookup, available throughout the system, provides a convenient mechanism for setting data fields. If you have the appropriate permission settings, you can add facilities using either the manager or the lookup.

In this chapter, you'll learn about

- Accessing the Facility List
- Searching the Facility List
- Adding a Facility
- Modifying Facility Information

Accessing the Facility List








Requires system permission: *facility_view*

To view a list of the facilities defined in SEER*DMS, select **View > Facilities**. All active facilities will be displayed. You may use the filter to find a specific facility or to view a list of facilities meeting your search criteria. The filter is described in the *Searching the Facility List* section of this chapter.

The following data columns are shown.

- **T** – Type of facility (see the list of icons provided below).
- **ID** – The unique "Facility ID" assigned when the facility was added to SEER*DMS. "FAC" is used as a prefix for facility IDs.
- **Name** – The name of the facility.
- **Address** – The street, city, state, and postal code designated for the facility.
- **Phone** – The phone number and extension provided for the facility.
- **Area** – Displays I for in area and O for out of area. The definitions of "in area" and "out of area" are determined by registry policy.
- **S** – The status field indicating whether the facility is active or inactive (see the list of icons provided below).

The **T** column displays each facility's Type:

-  Clinic
-  Doctor Office
-  Hospital
-  Lab
-  Nursing Home
-  Organization
-  Radiation Therapy Unit
-  Treatment Center

No icons are currently used for:

Hospice
Medical Examiner's Office
Other Facility

The **S** column displays the Status of each facility:



Active



Inactive (inactive facilities are displayed if **Hide Inactive** is unchecked)

Typically, the list will contain too many results to fit on the screen all at once and will be broken into several pages. Use the Page Selection links to view the rest of the list, or use the Filter controls to search or limit the list.



Searching the Facility List

Requires system permission: *facility_view*

To search for a facility:


1. Select **View > Facilities**. Active facilities will be listed in alphabetical order. Hide Inactive will be checked by default when you first go to the Facility Manager.
2. To sort the list by a field other than name, click one of the underlined column headers (you cannot sort by address). To reverse the sort order, click the same header again.

Tip: In SEER*DMS, the sort order of a table is indicated by the column headers. A unique color is used for the sort field's column header. An up arrow will be displayed next to the column name if the table is sorted in ascending order; a down arrow will be displayed if the table is sorted in descending order.

3. To search for a facility by its SEER*DMS ID, enter search text into the **FAC-ID(s)** filter. To enter multiple IDs, click the down arrow  to expand the filter.
4. Use the **Text** filter to search for a facility by name, address, National Provider ID (NPI), CoC Facility Identification Number (FIN), Facility Association Number (FAN), or Facility Identifiers used to refer to a SEER*DMS facility by other organizations.
5. To only search the list of active facilities, check **Hide Inactive**. Uncheck this box to include the inactive facilities in your search.
6. Check **Hide Out of Area** to search for facilities that have been classified as "in area"; uncheck this box to search for facilities regardless of their area classification.
7. To search for facilities of a specific type(s), select one or more items in the **Type(s)** filter.
8. Click **Apply**.
9. To view a snapshot of the facility's information, click the information icon  next to the facility ID. To modify fields or to view all fields, click the associated **ID** or **edit** link (these links will only be available if you have the *contact_edit* system permission).
10. To do another search, you may return the filter to its default settings by clicking **Reset**.
11. To send a message to the facility's email address, click the **email** link in the **Action** column (this link will only be available if an email address is defined for the facility).


Adding a Facility

Requires system permission: *facility_add*

Facilities are typically added or modified using the Facility Manager (accessed from the **View > Facilities** menu). Hospitals and other facilities can also be added or modified while editing data or using other parts of the system. The Facility Lookup  is used throughout SEER*DMS to set a data field or filter. If you have the appropriate permissions, you can add or modify a facility while using the lookup.

The Facility Lookup will include an Add button if the user has the *facility_add* permission; the lookup will include an edit link next to each facility if the user has the *facility_edit* permission.

To add a facility in SEER*DMS:


1. Select **View > Facilities**. Or if you are visually editing and need to enter an organization that is not currently a SEER*DMS organization, click the lookup icon  next to the data field to open the Facility popup window.
2. Click **Add** (this button will only be shown if you have the *facility_add* permission).
3. If your registry requires a specific Facility ID for this facility, enter it into the **FAC-ID** field. Otherwise, an ID will be auto-generated when the new facility is saved.
4. Enter **Facility Name** and select the appropriate **Facility Type**. These fields are required.
5. Enter the CoC Facility Identification Number in the **FIN** field, if known.
6. Enter the National Provider Identifier in the **NPI** field, if known.
7. Verify that the **Active** box is checked (default setting).
8. Enter information into the Contact Information section:
 - a. **Primary, Alternate and Casefinding Contacts**. For these fields, SEER*DMS will only allow you to select persons in the Contact List who are designated as an affiliate of the facility. No contacts in the Contact List could possibly be affiliated with this facility because the facility has yet to be saved. Therefore, you cannot specify primary, alternate, or casefinding contacts at this time. Once the organization is saved, you may designate people in the Contact List as affiliates of this facility (see *Chapter 19: The Contact List*). You will then be able to set the facility's contact fields by following the instructions below in *Modifying Facility Information*. The facility's contact fields are not used by SEER*DMS, but are available here for your convenience when contacting the organization.
 - b. Enter information the facility's email address, phone, postal address, and geographical location in the appropriate fields.
 - c. You may enter a **Web Address**, if desired.
9. The remaining data fields are described in detail in the Modifying Facility Information section of this chapter. After following the instructions provided there, click **Save** to create the new facility.


Modifying Facility Information







Requires system permission: facility_edit

The following are instructions for modifying all data items related to a facility. If you are setting a facility's Primary, Alternate, or Casefinding contact, the contact must first be defined in the Contact List as an affiliate of this facility. Use the Contact Manager (select View > Contacts) to verify that the contact is affiliated with this facility (see *Chapter 19: The Contact List*).

To modify a facility:

1. Select **View > Facilities**.
2. Use the **Filter** to search for the facility:
 - a. To search for a facility by its SEER*DMS ID, enter search text into the **FAC-ID(s)** filter. To enter multiple IDs, click the down arrow  to expand the filter.
 - b. Use the **Text** filter to search for a facility by name, address, National Provider ID (NPI), CoC Facility Identification Number (FIN), Facility Association Number (FAN), or Facility Identifiers used to refer to a SEER*DMS facility by other organizations.
 - c. To only search the list of active facilities, check **Hide Inactive**. Uncheck this box to include the inactive facilities in your search. (If you are modifying a facility that is designated as "inactive", you should correct the status setting.)
 - d. If you know the facility' type, you may select it in the **Type(s)** list box.
 - e. Click **Apply**.
3. Click the **ID** of the facility to be modified.
4. Update the fields identifying the facility, as needed.
 - a. **Facility Name** and **Type** are required fields.
 - b. CoC Facility Identification Number is stored in the **FIN** field.
 - c. The National Provider Identifier is stored in the **NPI** field.
5. Verify that the **Active** box is checked for current Facilities. Uncheck this box to deactivate the Facility. If unchecked, the **Inactive Date** will be set to today's date. SEER*DMS Facilities are permanently maintained in the database. Inactive facilities can not be selected as the source facility in an import or as a source of follow-back. However, the ID of an inactive facility can be entered into a hospital or facility data field in patient data.
6. Update fields in the Contact Information section:
 - a. To specify the **Primary** or **Alternate** contact, click the corresponding Lookup link. Use the filter to find and select the contact. You will be able to select from entries in the Contacts table which are affiliated with this facility.
 - b. Enter information the facility's email address, phone, postal address, and geographical location in the appropriate fields.
 - c. You may enter a **Web Address**, if desired.
7. Enter information into the Facility Information fields:

- a. If you wish to track cost and logistical information related to visiting the facility, enter the **Cost to Visit (\$), Mileage from Registry, Season to Visit**.
 - b. Select the appropriate value for the Veteran's Administration (VA) flag. External extracts can access this flag in the NAACCR mart. System extracts use the following logic when interpreting this flag:
 - i. **Not a VA Facility** – do not exclude a CTC from an extract if it includes an admission from a non-VA facility.
 - ii. **VA Only Facility** – exclude data from an extract if the VA exclusion is used and all data are from this facility, other VA Only Facilities, or facilities designated as "Does not Override VA".
 - iii. **Does not Override VA** – use this setting if the facility is not a VA facility, but its data should not impact the VA exclusion criteria for extracts.
 - c. Check **Out of Area**, if appropriate. This field may be used to identify organizations that do not serve the catchment area or to track other boundaries of interest to the registry.
 - d. Check **Under Contract** if the organization is a contract facility.
 - e. If you expect to receive data in specific file formats and wish to track this information, specify the information in the **Rec. Type Expected** field. Click **Add Rec Type** to specify multiple record types.
8. If the facility's type is set to Hospital, update fields in the Hospital Information section. Registry-defined configuration settings and algorithms determine whether these fields are used by SEER*DMS. They may also be used in system reports, external reports, or other external processes. Consult with registry management to determine if these fields are maintained in your registry.
- a. **FAN** - Facility Association Number.
 - b. **Bill/Abstract (\$)** – Cost billed for each abstract record.
 - c. **Subm Schedule** – You may enter text that describes how often you expect data from the hospital (e.g., quarterly, monthly, etc).
 - d. **Reporting** – You may use this field to track whether the facility is required to report data to the registry.
 - e. **Report to State** - You may use this field to track whether the facility is required to report data to the state.
 - f. **ACOS** – Check this field if the hospital is an American College of Surgeons facility.
 - g. **Tumor Registrar** – Check this field if the hospital is a hospital-based tumor registry. This field should be checked if a Reference Date is provided.
 - h. **Reference Date** – Hospital-based registries are required to have complete data for cases diagnosed on or after this date. A date should be provided if Tumor Registrar is checked.
9. If you wish to track relationships between organizations, add facilities to the **Affiliated Facilities** list:
- a. Click **Add Affiliation** in the **Facility Affiliations** section.
 - b. Use the  lookup to select a facility.

- c. To remove a facility from the list, click the  remove icon next to the facility.
10. To add a new casefinding contact:
 - a. Click **Add Contact** in the **Casefinding Contacts** section (not available when adding a facility).
 - b. Use the  lookup to select a representative who will perform casefinding activities at this organization. You will be able to select from entries in the Contacts table which are affiliated with this facility.
 - c. You may enter the **Department** and **Location** within the organization where this person will be casefinding, if appropriate.
 - d. To remove a casefinding contact from the list, click the  remove icon adjacent to it.
11. A facility may be referenced in data submitted by another facility. The referring facility may have its own set of facility codes or IDs. For example, codes identifying hospitals may be included in data from a pathology lab. Use the Facility Identifiers section to define IDs used by one facility to refer to another:
 - a. Click **Add Identifier** in the **Facility Identifiers** section.
 - b. Use the  lookup to select a **Facility** that provides data related to the facility that you are currently editing. (In the example described above, this would be the facility ID of the pathology lab.)
 - c. Enter the code in the **Facility Identifier** box. This is the code or ID used in data to reference the facility that you are currently editing.
 - d. To remove an entry, click the  remove icon next to the Facility Identifier.
12. Use the **Registry-defined Fields** section to define other attributes of any kind. You may use these fields in external reports and utilities that access the database. In some registries, a Registry-defined Field may be used in automated worklist tasks. A field is defined with "key = value" syntax.
 - a. Click **Add a field** in the **Registry-defined Fields** section.
 - b. Enter text for the **Key**. The Key must meet specifications defined by the person responsible for the report or query that uses this field.
 - c. Enter the appropriate **Value** as defined by the specifications for the report or query using this field.
 - d. To remove an entry from this list, click the  remove icon next to the field's **Value**.
13. If your registry has a data exchange agreement with the facility, check the box for **Data Exchange Agreement**. To enter or update the information about the DEA:
 - a. Enter the date that the data exchange agreement went into effect in **Start Date**.
 - b. Enter the **End Date** for the data exchange agreement.
 - c. Use the **Transfer Format, Transfer Schedule, Incoming Info, Outgoing Info, and Comments** to track information according to your registry's guidelines.
14. Click **Save**.

Chapter 19: The Contact List


SEER*DMS maintains system IDs, contact information, and professional affiliations for physicians, representatives of collaborative organizations, and other individuals. These data are used to support numerous tasks and processes; therefore, the maintenance of a current and complete Contact List is essential. The data in the Contact List are used by SEER*DMS to code physician data fields on incoming records. The reporting engine uses contact IDs to identify physicians for follow-back letters, follow-up letters, and reports. Users access the Contact List throughout SEER*DMS to set physician information in data fields and associate organization representatives with data sets or queries. For example, contacts are used to assign a follow-up physician or surgeon during visual editing, to set the data source for an import, and to send queries to organization representatives during follow-back.


There are three system permissions which control access to the Contact List: *contact_add* (create a new contact), *contact_edit* (modify existing contacts), and *contact_view* (read only access to Contact List data).

In this chapter, you'll learn about

- Medical Practitioner and Organization Representatives
- Searching the Contact List
- Adding or Modifying a Contact

Medical Practitioner and Organization Representatives

SEER*DMS enables you to designate a contact as a "Medical Practitioner" and/or a representative of a facility. The Medical Practitioner designation and facility affiliations must be properly maintained to ensure that current data are available in lookups  used throughout SEER*DMS.

- **Medical Practitioner** – You must designate a contact as a Medical Practitioner in order to use the Contacts  lookup to enter the ID into a physician or surgeon data field.
- **Facility Affiliations** – A contact may be associated with one or more facilities. In some screens, SEER*DMS will prompt for a representative of a specific facility. For example, when sending follow-back you are required to select a person affiliated with the facility designated for the follow-back bundle.

Searching the Contact List



Requires system permission: *contact_view*

To search or view the Contact List:

1. Select **View > Contacts**. Active contacts will be listed in alphabetical order by last name.
2. To sort the list by the data in another column, click one of the underlined column headers (you cannot sort by fields such as address or phone number). To reverse the sort order, click the same header again.

Tip: In SEER*DMS, the sort order of a table is indicated by the column headers. A unique color is used for the sort field's column header. An up arrow will be displayed next to the column name if the table is sorted in ascending order; a down arrow will be displayed if the table is sorted in descending order.

3. To search for a contact by their SEER*DMS ID, enter search text into the **PER-ID(s)** filter. To enter multiple IDs, click the down arrow  to expand the filter.


4. To search for a contact by name, National Provider ID (NPI), Physician License number, address, academic degrees, position, or address enter search text into the **Text** filter (partial names and IDs can be used).
5. Use the **Fac-ID(s)** filter to search for contacts based on facility affiliations. Enter an ID or use the  lookup to select a facility. You may enter multiple IDs separated by a space.
6. Check **Physicians Only** to search for contacts who are designated as Medical Practitioners.
7. Check **Hide Inactive** to search for contacts who are designated as active; uncheck this box to search for contacts regardless of their status.
8. Click **Apply**.
9. To view a snapshot of the contact's information, click the information icon  next to the contact's ID. To modify the Contact's data or view all fields, click the associated **ID** or **edit** link (these links will only be available if you have the *contact_edit* system permission).
10. To send an email message to the Contact, click the **email** link in the **Action** column (this link will only be available if an email address is defined for the Contact).

The T (Type) column identifies contacts designated as Medical Practitioners:

 **Medical Practitioner**


The S column displays the Status of each contact:

 **Active**

 **Inactive** (inactive contacts are displayed if **Hide Inactive** is unchecked)


Adding or Modifying a Contact

Requires system permission: *contact_add* or *contact_edit*








Contacts are typically added or modified using the Contact Manager (accessed from the **View > Contacts** menu). Physicians can also be added or modified while editing record or patient set data. The Contacts  Lookup associated with physician and surgeon data fields enables editors to add new physicians to the Contact List. The newly created ID may then be set in the data field.

The Contacts popup will include an Add button if the user has the *contact_add* permission; the popup will include an edit link next to each contact if the user has the *contact_edit* permission.

*To add or modify a SEER*DMS contact:*

1. Select **View > Contacts**. Or if you are editing record or patient set data, click the Contacts  Lookup for the appropriate data field.
2. To create a new contact, click **Add** (this button will only be shown if you have the *contact_add* permission). To modify an existing contact, follow the instructions in the *Searching the Contact List* section of this chapter to find the contact. Click the **edit** link associated with the contact.
3. Enter information into the fields identifying the contact (**Title, First Name, Middle Name, Last Name, Suffix, and Position**). First Name and Last Name are required.

4. Verify that the **Active** box is checked for current Contacts. Uncheck this box to deactivate the Contact. If unchecked, the **Inactive Date** will be set to today's date. SEER*DMS Contacts are permanently maintained in the database. The contact's ID may have been used to code a physician data field. Therefore, you cannot delete a contact but you should deactivate contacts who retired or are no longer affiliated with the registry. SEER*DMS will not allow communications to inactive contacts. However, SEER*DMS does allow you to enter the ID of an inactive Medical Practitioner in a data field.
5. Enter values for the fields in the **Contact Information** section, as described below.
 - a. If known, set the appropriate value for preferred contact **Method**. You are required to provide the corresponding information for the selected method, e.g., if e-mail is the preferred method of contact then a valid e-mail address must be provided. The contact method will be used as the default in SEER*DMS communications to this individual. (The user initiating the communication will be able to select an alternate method, if desired.)
 - b. If the contact prefers to be contacted at a certain time of day, set it in the preferred contact **Time**. SEER*DMS will display this information on the communication page, if Phone is selected as the method of contact for the communication.
 - c. **Phone, FAX, E-mail**, and postal address fields are used for SEER*DMS communications throughout the system, e.g., to send a follow-back query. Enter information for each communication method that you wish to allow for this contact. For example, if you wish to allow SEER*DMS users to send queries to this contact via e-mail then you must specify an e-mail address. SEER*DMS does not provide a method for encrypting e-mail messages, therefore communications that involve confidential data cannot be sent via e-mail. If this contact is to receive confidential information, you must specify a mailing address, fax number, or phone number.
 - d. **Supplemental** address – use this data item to store other information related to address such as the name of a place or facility, a nursing home, or the name of an apartment complex.
 - e. **Additional** – use this data item as specified by registry policies. For example, it may be used to store information defining a region or island.
 - f. You may enter a **Web Address**, if desired.
6. Enter values for the fields in the Roles section, as described below.
 - a. Select the appropriate value for **Abstractor**. This field is used in lookups that provide a list of the abstractors and system reports that monitor abstractor activity.
 - b. If the contact is an editor, check the **Editor** box. This field is not used by SEER*DMS, but may be used by external reports and queries defined by registry staff. Consult with registry management to determine whether this field is used in your registry.
7. If this contact is a physician, check the **Medical Practitioner Designation** box. This designates the contact as a medical practitioner regardless of whether you provide professional credentials and specialties. Once a contact is saved as a medical practitioner, the designation can never be changed. Contacts with this designation are available in the "Medical Practitioners" lookup that is used to select a physician while editing a record or patient set. *Note: you must designate the contact as a Medical Practitioner in order to enter the contact in a physician or surgeon data field.*
8. To define professional credentials and specialties for a medical practitioner:

- a. Enter **Physician License, Academic Degrees**, and National Provider ID (**NPI**), if known. Physician License and NPI may be used in automated worklist tasks. Consult registry management to determine whether these fields are required in your registry.
 - b. To add a specialty, click the **Add Specialties** link. Select a specialty from the drop-down list. This field is not used by SEER*DMS, consult with registry management to determine whether the field is required in your registry.
 - c. To remove a specialty, click the  remove icon.
9. Create a list of the facilities to which this contact is associated. The contact's **Facility Affiliations** must be set to ensure that users can find this contact when using Contact  lookups throughout SEER*DMS.
- a. Click **Add Facility** in the **Facility Affiliations** section.
 - b. Use the  lookup to select a facility.
 - c. The primary affiliation will default to the first facility that you added. Check the button in the **Primary** column to change the value as necessary.
 - d. To remove a facility from the list, click the  remove icon next to the facility.
10. A facility that submits data to the registry may have their own set of IDs for physicians and other persons specified in coded data fields. In some registries, this information is used by SEER*DMS in the automated registry-specific coding task. Use the Facility Identifiers section to define IDs that other facilities may use for this contact.
- a. Click **Add Identifier** in the **Facility Identifiers** section.
 - b. Use the  lookup to select a **Facility**.
 - c. Enter the ID used by the facility in the **Facility Identifier** box.
 - d. To remove an entry from this list, click the  remove icon next to the Facility Identifier.
11. Use the **Registry-defined Fields** section to define other attributes of any kind. You may use these fields in external reports and utilities that access the database. In some registries, a Registry-defined Field may be used in automated worklist tasks. A field is defined with "key = value" syntax.
- a. Click **Add a field** in the **Registry-defined Fields** section.
 - b. Enter text for the Key. The Key must meet specifications defined by the person responsible for the report or query that uses this field.
 - c. Enter the appropriate Value as defined by the specifications for the report or query using this field.
 - d. To remove an entry from this list, click the  remove icon next to the field's **Value**.
12. Click **Save** to save all changes and exit the Contact page.

Chapter 20: Searching for Records and Patients

SEER*DMS provides four search tools to users who have system permissions to view patient data: the quick search using the Lookup toolbar and the three Patient Lookup tabs.

Use the **Lookup** box in the user toolbar to search by a single data field (Patient Set ID, Record ID, AFL ID, Import ID, date of birth, name, or SSN). Use the Patient Lookup to create a search based on multiple search fields (the Patient Lookup can be accessed by selecting **View > Patients** in the SEER*DMS menu). The Patient Lookup's **Standard Search** is based on a limited number of personal identifiers, but can be used to search for patient data in unlinked records as well as data consolidated into patient sets. The **Advanced Search** allows you to define more robust search criteria based on a large number of patient set data fields. However, the Advanced Search is limited to patient set fields and does not consider the values in record data fields. The Patient Lookup's **ID Search** allows you to search for a set of records and/or patient sets using one or more Patient/Record IDs, a single Import ID, or a single Special Study ID.

The Standard Search provides a way to find all available data related to a specific patient. The Advanced and ID Searches enable you to review a particular set of records or patient sets or to review a sample of data for research or quality control purposes.

Once you find the data of interest, you may view or edit the data in the record or patient set editor. However, you must take precautions to ensure that you do not edit data that are being processed by others. To avoid the loss of effort, you should verify that the data are not involved in worklist tasks and are not being edited by another staff member (please refer to the *Direct Editing of Records and Patient Sets* section of this chapter for more information).

In this chapter, you'll learn about

- Standard Search
- ID Lookup
- Advanced Search
- Search Results
- Quick Search
- Direct Editing of Records and Patient Sets

Standard Search

Select **View > Patients** to access the Patient Lookup. The Standard Search tab will be displayed as shown below. The Standard search enables you to search for a patient's data based on personal identifiers (name, DOB, SSN, Sex, Race). The Data Type, Facility, and Exclude criteria can be used to limit the search to a subset of data in the database.

The screenshot shows the SEER*DMS MDCSS Patient Lookup interface. At the top, there is a navigation bar with 'SEER*DMS MDCSS' on the left, 'User: coyle' and 'Lookup:' on the right, and 'Account | Logoff' on the far right. Below this is a red navigation bar with 'Patient Lookup' and four menu items: 'View', 'Manage', 'System', and 'Help'. The main content area is a green form titled 'Standard' with a sidebar on the left containing 'Standard', 'ID Lookup', and 'Advanced' tabs. The form includes several input fields: 'Name (L,F,M)' with three text boxes, 'DOB' with a date picker, 'SSN' with a text box, 'Sex' with a dropdown menu, and 'Race' with a dropdown menu. There are also 'Facility' and 'Exclude' dropdown menus. A 'Data Type' dropdown menu is open on the right, showing options like 'Patient Sets', 'Unlinked Records', 'Casefinding', 'Death Cert', 'Death Notice', 'Follow-up Only', 'HL7 E-Path', and 'Health Status'. At the bottom of the form are three buttons: 'Search', 'Clear', and 'Create AFL'.

Search Fields on the Standard Search Tab

SEER*DMS uses registry-specific matching algorithms to compare the patient information specified in the Standard Search to patient sets and unlinked records in the database (see the *SEER*DMS Technical Reference* for details). A weighted matching scheme may be implemented in the registry-specific algorithm. In weighted matching, a score calculated for each possible match provides a mechanism to sort the results by the likelihood of the match. Entering multiple identifiers quickens the search and increases the score of true matches. It is recommended that you enter information into as many fields as possible or enter a unique identifier, such as Social Security Number. If searching for a patient with a common name, it is particularly important to enter values into as many search fields as are known.

The Standard search fields are listed below.

- **Name (L,F,M)** – Three search fields are provided for searching by patient name. You may enter a full or partial name in any or all of the boxes. The boxes are displayed in the order of last name, first name, middle name. However, you may enter “Last, First” into the first box. SEER*DMS will automatically parse the text into the two fields for the search.
- **DOB** – Enter date of birth in MMDDYYYY or MM-DD-YYYY format. If you only know the patient’s year of birth, enter 99 for day and month (e.g., 99-99-1961). A valid month and year are required when other patient identifiers are not specified (last name or social security number).
- **SSN** – A complete Social Security Number must be entered. The value may be formatted as 999999999 or 999-99-9999.
- **Sex** – A drop-down list enables you to search for data based on a valid code for sex.
- **Race** – A drop-down list enables you to search for data based on a valid code for race. One value for race may be selected.

You must specify a value for at least one of these fields: last name, Social Security Number, or date of birth. The Standard Search is designed to search for data for a specific patient; you cannot use it to generate a generic list of data by sex, race, record type, or facility. To create such a list, you should either use the Advanced Search, as described later in this chapter, or query the database using an external tool. Sample SQL and tips for querying the database are provided on the SEER*DMS Web Portal (<http://seer.cancer.gov/seerdms/portal>).

Limiting the Search

You may specify the records and patient sets to be searched by entering values for facility, data type, and the “exclude” field. Unlike the Search Fields, these criteria are never weighted. They are used to make a definite determination of whether a record or patient set is “in” or “out” of the search results.

- **Facility** – Limit the search to patient sets with admissions or treatments related to a specific facility (the facility may be the reporting or treating facility), or to unlinked records that were provided by the facility. Leave this field blank to search all data regardless of facility.
- **Exclude** – Exclude patient sets and records for patients who have been dead for more than the specified number of years (based on vital status and date of last contact). Leave this field blank to search all data regardless of vital status.
- **Data Type** – Search all patient sets and unlinked records, or limit the search to one or more data types. To include linked records in the search, you must include Patient Sets. The patient set to which the record is linked will be returned. To select more than one data type, hold down the CTRL key and click each desired type. To deselect a type, click it a second time while holding the CTRL key.

Executing the Standard Search

Enter as much information as known into the form and click **Search**. As many as 500 matches will be displayed. The results will be sorted by score with the best matches listed first. The results will include records and/or patient sets which, according to your registry's matching algorithms, yielded a score greater than zero when matched against the search and exclusion criteria. To view the algorithm, click the **Patient and Record Lookup** link shown at the bottom of the screen when results are returned.

You may click an ID to open a record or patient set in an editor. If the data are involved in a worklist task, a **View** link will be displayed in the **Tasks** column. For more information on the data displayed, see the *Search Results* section of this chapter.

To search for a new patient, click the **Clear** button. Patient information that you entered will be removed, the Facility field will be cleared, and the Exclude field will be set to the system default. The Data Type is retained to allow you to search for a specific data type for multiple patients.

Create AFL

Casefinding or abstracting assignments are maintained and tracked in SEER*DMS as Abstract Facility Leads (AFLs). If casefinding information is received via paper records or ad hoc communications with a facility, the database must be searched to verify that the case was not previously abstracted. The Create AFL button is provided on the Patient Lookup to allow the casefinding manager to create an abstracting assignment, as necessary. Please refer to *Chapter 21: Managing Abstracting Assignments* for specific instructions.



ID Lookup


The Patient Lookup's **ID Search** allows you to search for a set of records and/or patient sets using one or more Patient/Record IDs, a single Import ID, or a single Special Study ID.

Select **View > Patients** to access the Patient Lookup. Click **ID Lookup** in the left navigation bar. The ID Lookup tab will be displayed, as shown below.

The screenshot shows the SEER*DMS Patient Lookup interface. At the top, there is a header with the SEER*DMS logo on the left and user information (User: coyle, Lookup: [input field], Account | Logoff) on the right. Below the header is a navigation bar with tabs: Patient Lookup, View, Manage, System, and Help. The main content area is divided into three sections: Standard, ID Lookup (which is currently selected), and Advanced. The ID Lookup section contains three input fields: Pat/Rec ID (with a dropdown arrow), Import ID (with a lightbulb icon), and Special Study (with a lightbulb icon). At the bottom of the form are three buttons: Search, Clear, and Create AFL.

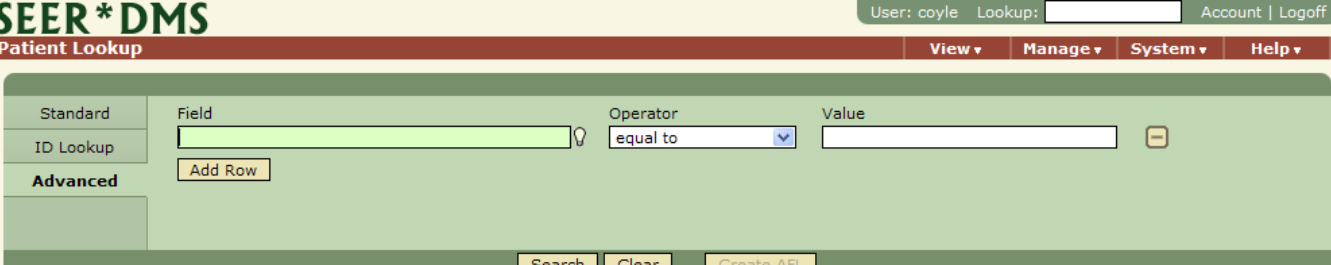
The search fields available on the ID Lookup are listed below. You may search by one of these fields, searches based on combinations of these fields are not supported. Regardless of the field that is used, a maximum of 500 results will be returned. To obtain a list of all data in a large import or special study, use a system report or external query.

- **Pat/Rec ID** – You may search by one or more Patient Set or Record IDs. To enter multiple IDs, click the down arrow  to expand the filter. You may type directly into this field or paste IDs from the Windows clipboard. The "REC-" and "PAT-" prefixes are optional.
- **Import ID** – To search for data loaded in a particular import, enter the Import ID or click the Lookup icon  to select the Import ID from a list. No results will be returned when searching for an import which has an open Import Review task.

- **Special Study** – The short name assigned to a Special Study must be entered. Enter the text directly or click the Lookup icon  to select the study from a list.

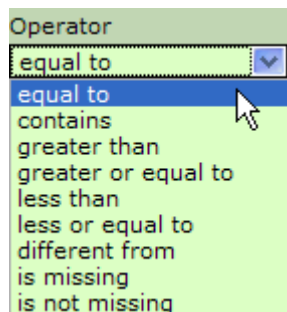
Advanced Search


Select **View > Patients** to access the Patient Lookup. The Standard search tab will be displayed by default. If you wish to use search fields that are not available in the Standard search and your search is limited to Patient Set data, click **Advanced** in the left navigation bar. The Advanced search tab will be displayed, as shown below. You will use the controls on this page to define a search statement based on Boolean logic. The expressions in each row will be ANDed to create the search criteria.



The Advanced Search controls are described below.


- **Field** – The data field to be used in this expression. This includes many, but not all, patient set data fields. The field name is followed by the data entity, for example, "Site [CTC]" indicates the Site field which is part of the CTC data.
- **Operator** – The relational operator to be used in the expression.



- **Value** – A valid value for the data field. The value must be in the format that is used to store the data field in the database. If the field has an associated lookup, the lookup icon will be displayed to the right of the value box and you may use the lookup to select the value.
- **Add Row** - Creates a blank expression row.
- **Remove Row**  icon - Removes unwanted expressions.
- **Search** – Starts the search engine using the statement that you have defined.
- **Clear** – Removes all expression rows.

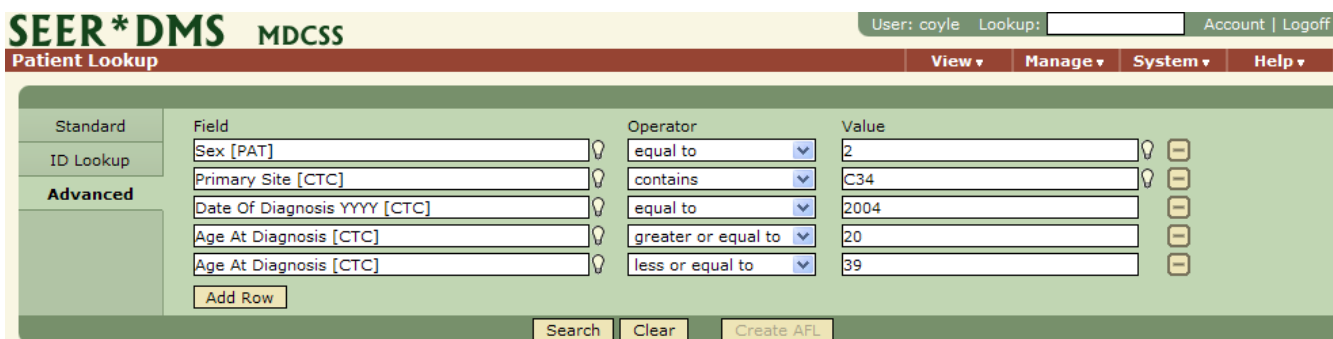
To search the database using the Advanced Search in the Patient Lookup:

1. Select **View > Patients**.
2. If your search is limited to Patient Set data or you wish to use search fields that are not available in the Standard Search, click **Advanced** in the left navigation. You will create a Boolean statement consisting of one or more expressions. The expressions in each row will be ANDed to create the search criteria.

3. To define an expression in each "row" of the statement:
 - a. Select the search **Field** from the large number of patient set fields. To find a field, you may:
 - i. Begin typing text into Field. SEER*DMS will present a list of candidates that match the text that you have entered.
 - ii. Or use the Firefox search tool to find text within the list of available fields. Click the Lookup icon  to view a list of available fields. Click CTRL-F (Firefox shortcut for "Find in this page"). Click "Find Next" in the Firefox toolbar to move to the next match in the list.
 - b. Select a relational **Operator** from the drop-down list.
 - c. Enter a **Value** to be used in the relational expression. The value must be in the format that is used to store the data field in the database. If the field has an associated lookup, the lookup icon will be displayed to the right of the value box and you may use the lookup to select the value.
 - d. To add an expression to the statement, click **Add Row**.
4. When you complete the search statement, click **Search**.
5. The results of your search will be displayed in the Possible Matches section of the page. The result set is limited to 500 items. You may click an ID to open a record or patient set in an editor. If the data are involved in a worklist task, a **View** link will be displayed in the **Tasks** column.

Using a Range of Values for a Search Field

To search for a range of values for a numeric field, add two expression rows (one with the "greater or equal to" operator and the other row with the "less or equal to" operator). In the example shown below, two expressions are used to search for patients with Age At Diagnosis from 20 through 39. To search for a range of cancer codes within the same major site, use the "contains" operator. In the example, "Primary Site [CTC] contains C34" is used to search for patients with a lung cancer diagnosis (C340 through C349).



The screenshot shows the SEER*DMS MDCSS Patient Lookup interface. At the top, there is a header with the logo and user information (User: coyle, Lookup: [input], Account | Logoff). Below the header is a navigation bar with buttons for View, Manage, System, and Help. The main area contains a table for defining search criteria:

Standard	Field	Operator	Value
ID Lookup	Sex [PAT]	equal to	2
Advanced	Primary Site [CTC]	contains	C34
	Date Of Diagnosis YYYY [CTC]	equal to	2004
	Age At Diagnosis [CTC]	greater or equal to	20
	Age At Diagnosis [CTC]	less or equal to	39

At the bottom of the table is an "Add Row" button. Below the table are buttons for "Search", "Clear", and "Create AFL".

Search Results

The columns listed below are shown in the search matches. The value in the table will be shown in bold if it is an exact match to a search field. If the matching algorithm supports partial matches for Social Security Number and Date of Birth, only the matching fragment will be shown in bold. Fields not listed may have been involved in the search. For example, the matching algorithm may compare last name to maiden name or alias last name.

- **Score** – A value calculated by the matching algorithm that allows the results to be sorted by the likelihood of the match. You may click the score to view a summary of the calculation. Results with the highest score are displayed first. Score is shown in all search results but is only relevant to the Standard search which uses a weighted matching scheme. The Advanced and ID searches use a determinant matching scheme; only results with a score of 1000 (match all criteria exactly) are returned for the Advanced and ID searches.
- **Type** – Data type. Patient Set or a record type will be listed. If the match is a record and the record’s reportability status is something other than “reportable”, an icon will be displayed:
 - N Non-reportable
 - A Auditable
 - U Unknown (the record has not yet been screened)
 - N/A Not applicable; the record type is not screened (e.g., supplemental records)
 No icon is displayed if the record is reportable.
- **ID** – Patient Set or Record ID. Click the Information Icon ⓘ next to the record’s or patient set’s ID to see a select set of fields. To browse all pages of the record or patient set, click the record’s or patient set’s ID.
- **Last Name, First Name, M** – Patient’s last name, first name, and middle initial. If the text is an exact match to search criteria, it will be shown in bold. The middle initial column will contain the first character of the middle name field. If additional characters are specified in the middle name field, the initial will be followed by an ellipsis (e.g., M...). Hold your mouse over the text to view the full middle name.
- **DOB** – Date of birth.
- **SSN** – Social Security Number.
- **Sex** – Shown in bold if
- **Race** – Race indicated in the first race field of the patient set or record.
- **DOLC** – Date of last contact.
- **VS** – Vital status.
- **Tasks** – If the data are involved in a worklist task, a **View** link will be displayed in the Tasks column.

Quick Search

Requires system permission: *pat_edit, pat_edit_demographics, pat_read_only, rec_edit, or rec_read_only*

If your system permissions allow you to view or edit patient data, the Lookup search box will be displayed in the SEER*DMS User Bar. This provides a shortcut to the Patient Lookup for searches by Patient Set ID, Record ID, AFL ID, Import ID, date of birth, name, or Social Security Number.



To use the quick search to find a specific record or patient set in the database:

1. Enter the search text in the Lookup box on the SEER*DMS User Bar. If you enter a string consisting of all digits, the search will assume that you are searching by Record or Patient Set ID. The following describes the formats required for each of the quick search fields:
 - a. **Record or Patient Set ID:** You may enter a complete ID or you may enter the numeric portion of the ID and omit the prefix. Search results based on partial ID numbers will not be returned; for example, “REC-1234567” will not be returned if you

search for "123" or "REC-123." If you entered a numeric value without the REC or PAT prefix, SEER*DMS will perform two searches, using search strings created by appending the numeric value to the REC- and PAT- prefixes.

- b. **AFL ID:** A complete ID including the prefix is required (AFL-XXXX format).
 - c. **Import ID:** A complete ID including the prefix is required (IMP-XXXX format).
 - d. **Date of Birth:** MM-DD-YYYY format is required. A valid month and year are required by the Quick Search. You may enter 99 for unknown day.
 - e. **Name:** You may enter "last name" or "last name, first name".
 - f. **Social Security Number:** A complete SSN in the 99-999-9999 format is required.
2. Press Enter.
 3. Review the results of your search:
 - a. If a single record or patient set matched the search criteria, the data will be opened in the editor. If the record is linked to a patient set, the patient set will be opened.
 - b. If the search returns more than one possible match, the results will be displayed in the Matches section of the Patient Lookup page. If necessary, you may refine your search as described in *The Patient Lookup* and *Searching the Database* sections of this chapter.
 - c. If you searched by AFL ID, the AFL Manager will open. The filter will be auto-filled to search for that AFL. If an AFL with that ID exists, it will be listed on the page.
 4. If you need to edit the record or patient set data, you must make certain that the data are not being modified by other staff members. Further instructions are provided below in the *Direct Editing of Records and Patient Sets* section.

Direct Editing of Records and Patient Sets

Requires system permission: *pat_edit, pat_edit_demographics, pat_read_only, rec_edit, or rec_read_only*

SEER*DMS enables users to edit records or patient sets accessed via the Patient Lookup. This feature is designed primarily to facilitate the processing of follow-up information. However, it creates the possibility that two users may open the same record or patient set simultaneously. It is also possible for you to open a record or patient set that is currently being processed in an automatic task, or that is involved in a manual task. Prior to editing data that you access via the Patient Lookup or Quick Search, please review the information below and follow the appropriate steps to avoid having your or another user's changes overwritten.

If you attempt to modify data that has been modified by another user or process:

Two users may open and edit the same record or patient set. If this happens simultaneously, the first person to attempt to save the data will be able to successfully save their changes. If the other person attempts to save changes, SEER*DMS will generate an error message indicating that the record or patient set has been modified since the data were loaded in the editor. SEER*DMS will post an error message with instructions:

- Error: These data have been modified by another person or process; your changes cannot be saved. Print the data if you need a listing of your current values. Reload the data by selecting Undo Changes from the menu. You should review the revision history in the audit log prior to re-entering and saving your edits.

- The same message will be displayed if the data were modified by a process after you opened the editor but before you saved the data. In either situation, you should review the audit log to determine which user or process modified the data and what changes were made. You may continue editing, if appropriate.

If you attempt to modify data involved in a worklist task:

If a record or patient set included in the search results is involved in a worklist task, a **View** link will be displayed in the **Tasks** column. The data will remain in that task until the task is opened and completed; editing the data outside of the task will not move the data forward in the workflow.

If you open a record or patient set that is involved in a worklist task, SEER*DMS will post a warning message and provide a link to review the task. It is generally recommended that you access and edit data in the context of a pending task, if one exists. You should certainly review the task prior to making changes, to ensure that you and another staff member are not duplicating efforts or editing the same data simultaneously.

Chapter 21: Managing Abstracting Assignments

Casefinding or abstracting assignments are maintained and tracked in SEER*DMS as Abstract Facility Leads (AFLs). As a record or patient set is processed, an AFL is auto-created if SEER*DMS detects, per registry-defined algorithms, that further information must be abstracted from medical records. SEER*DMS also allows ad hoc AFLs to be created manually, for example, to initiate a lead based on a phone conversation with a facility's representative.

An AFL is closed automatically when an abstract record enters the system that matches the AFL based on registry-defined criteria. SEER*DMS will also review all open AFLs related to a patient each time a patient set is saved. Each AFL created by a record linked to the patient set will be reviewed. The AFL will be auto-closed if the AFL's source record meets criteria defined by the registry. The auto-close rules used in your registry are documented on the AFL help page (select AFL from the help menu).

Several system reports are available in SEER*DMS to monitor casefinding completeness. If you determine a case should be submitted to SEER or other sources as a Death Certificate Only (DCO) or Casefinding Only (CFO) case, you may build a CTC from the record (see *Creating a CTC from a Non-abstract Record* for more information).

In this chapter, you'll learn about

- Relevant Terms
- Understanding Abstract Facility Leads in SEER*DMS
- Abstract Facility Leads Created in Automated Tasks
- Manually Creating an Abstract Facility Lead
- Assigning Leads to an Abstractor
- Tracking Abstracting Assignments
- Printing AFLs
- Updates to AFL Data Fields
- Modifying AFLs
- Creating a CTC from a Non-abstract Record
- Casefinding Reports

Relevant Terms

The following terms will be used throughout this chapter:

Abstract Facility Lead (AFL)

In SEER*DMS, an AFL is a mechanism for assigning and tracking a request to abstract a case. The processes to create, track, and close AFLs are described in this chapter.

Casefinding Record

A record submitted to the registry containing medical data from pathology reports. These data may indicate a new case or identify the need for an abstract related to an existing case. Therefore, an incoming Casefinding record often triggers the creation of an Abstract Facility Lead. If an abstract is never obtained, a new CTC can be built from a Casefinding record (see the *Creating a CTC from a Non-abstract Record* section of this chapter). The specific file types that are processed as "Casefinding" in the workflow are listed on your registry's workflow diagram. For example, HL7, and other import file types may contain casefinding data and follow the workflow path defined for Casefinding Records.

Health Index Record

A record type that is typically used to store data from a hospital's diagnostic index records or discharge logs. These data are used for quality assurance related to casefinding; and may provide follow-up and treatment data that are consolidated into existing patient sets. If a Health Index record indicates the need for an abstract, an AFL is auto-created.

NAACCR Update Record

The NAACCR short format record used to submit field-specific corrections to data previously submitted to the registry. If a NAACCR Update record cannot be matched to a CTC, an abstract facility lead is auto-created.

Death Certificate Record

A data record containing death certificate data items. These data are used to update follow-up variables for existing patient sets. If a death certificate indicates a new reportable cancer, an AFL is created. If an abstract can not be obtained, death clearance follow-back procedures are performed as described in *Chapter 17: Death Clearance*.

Short Health Record

A record type used by some registries that contains medical data, but is not a complete abstract. Typically, these records provide additional information regarding follow-up, treatment, and admissions related to a previously abstracted case. An AFL may be auto-created if an abstract record is not linked to the same CTC as the short health record. Short health record is the only record type that is used for both AFL auto-creation and AFL auto-close algorithms. The exact algorithms vary by registry and are described on the AFL help page (select AFL from the Help menu).

Understanding Abstract Facility Leads in SEER*DMS

The following describes the overall process for assigning and tracking abstract facility leads (AFLs).

1. **AFLs are created:** Typically, AFLs are created in automated processes as Casefinding, Health Index, NAACCR Update, Short Health, or Death Certificate records move through the workflow (a general description is provided in the *Abstract Facility Leads Created in Automated Tasks* section of this chapter; refer to the AFL help page or your registry's workflow diagram for the exact algorithms used in your registry). An AFL may also be created manually (see the *Manually Creating an Abstract Facility Lead* section of this chapter).
2. **AFLs are assigned to an abstractor:** A registry casefinding manager uses SEER*DMS to create a list of AFLs which can be assigned to an abstractor, in the form of the "Abstracting Assignments" report (see the *Assigning Leads to an Abstractor* section of this chapter). AFLs must be assigned in a group for a single facility. The "Abstracting Assignments" report is printed by clicking the Assignments button in the Abstract Facility Lead manager (see the *Printing AFLs*).
3. **Medical records are abstracted:** The abstractor investigates each assigned lead and indicates any action taken by writing the appropriate code on the "Abstracting Assignments" report. The action codes may be used to track the "result" of the abstracting assignment. The coding scheme includes codes indicating reasons for not abstracting a case and a code to indicate that an abstract was obtained.
 - a. The abstractor uses the registry's abstracting tool to create an abstract record for each reportable case. Records for the abstracted cases are imported into SEER*DMS.

- b. The abstractor returns the assignment report to a casefinding manager; a reason should be indicated for each case that was not abstracted.
4. **AFLs are automatically closed when abstract records are imported:** Imported abstract records move through the workflow. If an abstract record matches an AFL, the lead is closed automatically. Refer to the AFL help page or your registry's workflow diagram for the exact algorithms used in your registry.
5. **AFLs that remain open are reviewed and processed. The AFLs may be manually closed, flagged for further investigation or physician letters, or reassigned:**
 - a. Registry staff use SEER*DMS to manually close AFLs that are no longer needed. This would include leads that were satisfied by an abstract but were not recognized as a match based on the AFL matching algorithm (e.g., if data fields were missing or incomplete), as well as leads that refer to non-reportable events. The abstractor's determination ("not a reportable cancer", "not at hospital", etc) may be indicated in the AFL's result field.
 - b. A casefinding manager reviews the "Abstracting Assignments" report returned by the abstractor. There may be leads that still require an abstract, for example, if the medical records were not available for abstracting. The "Abstracting Assignments" report can be reprinted for this group (see the *Printing AFLs* section of this chapter). The casefinding manager either re-assigns the pending leads to an abstractor; or ungroups the leads to allow them to be re-assigned at a later time.
 - c. The result field may also be used to designate and track open AFLs for which an abstract could not be obtained and require further investigation. For example, when it is determined by the abstractor that the information is based on a pathology report and the patient was not seen at the facility, a casefinding manager may set the result of the lead to Tissue Only. This indicates that an abstract is not required from the facility associated with the AFL; the registry may need to investigate the case further to determine whether an abstract is required from another facility or doctor's office.
 - d. A casefinding manager uses import reports and the Abstracting Assignments report to investigate AFLs that were abstracted but did not match imported abstract records (as determined by the matching algorithm described in the *Algorithms to Auto-close AFLs* section of this chapter).

You may use an AFL's result field to record the determination coded by the abstractor on the Abstracting Assignments report. The valid values for this field are listed below. Registry policies should determine how this field is populated and maintained. In SEER*DMS, the *Abstracted* and *Not a Reportable Cancer* values involve special processing as noted below.

- **Abstracted** – When an abstract record is imported into SEER*DMS, the AFL is closed and the result field is automatically set to abstracted.
- FUP Only
- **Not a Reportable Cancer** – If a closed AFL has a result value equal to "Not a Reportable Cancer", the reportability of the record that triggered the AFL is changed to auditable.
- Tissue Only
- Slide Only
- Not at Hosp
- DOA
- Rad Only
- Recurrence

- Metastases
- Duplicate
- Out of Area
- Prior to Reporting Date
- Consultation Only
- History Of
- Other

Abstract Facility Leads Created in Automated Tasks

An AFL is auto-created when SEER*DMS determines, per registry-defined algorithms, that further information must be abstracted from medical records. In general, an AFL is auto-created if there is an indication that a facility has diagnosed or treated a patient for cancer but an abstract record was not received. The following summarizes events that trigger the auto-creation of an AFL. The exact algorithms used for your registry are described in the Auto-create Rules section of the AFL help page (select AFL from the help menu).

Workflow

Auto-create AFL is an automated task in the workflow. This task creates an AFL if the incoming record meets specific criteria defined by the registry. These criteria are documented on the AFL help page (see the workflow section of the Auto-create Rules).

Patient Set Updates

Rules to auto-create AFLs are applied each time a patient set is saved. For example, there may be a rule to create an AFL if the patient set is saved with a NAACCR update record that is linked at the patient level but contains CTC-related data.

If auto-create rules for patient updates are defined for your registry, they will be documented on the AFL help page.

Final Review of Patient Set Data

The final process in the SEER*DMS workflow involves automated checks of the patient set data. For example, the treatment fields may be checked to determine if additional information is required. If this rule exists for your registry, SEER*DMS would create an AFL if data in the patient set indicates that a treatment was performed at a facility, yet the abstract record was not received.

If auto-create rules for the final patient set review are defined for your registry, they will be documented on the AFL help page.

Manually Creating an Abstract Facility Lead

Requires system permission: *afl_initiate*


Information obtained via paper records or ad hoc communications with a facility can be used to create an Abstract Facility Lead (AFL) manually. You should search the database to verify that this case was not previously abstracted. SEER*DMS applies a matching algorithm to prevent duplicate AFLs from being created (see *Matching Algorithm* on the AFL help page).

*To manually create an AFL in SEER*DMS:*

1. Select **View > Patients**.
2. Enter all known patient information in the search fields.

3. Do not restrict the search by **Data Type**. You may either use the default setting for this field (nothing is selected) or select both Patient Sets and Unlinked Records.
4. Click **Search**. Follow the next step that is appropriate based on the search results.

If you did not find the person in the database, i.e., there are no Patient Sets or records that match:


1. Click **Create AFL** on the Patient Lookup page.
2. The information that you entered to search the database will be auto-filled in the AFL page. Use the  lookup to enter the reporting **Facility**.
3. Fill in as many of the fields as are known. If the data are available, it is particularly important to enter medical record number, first and last name, date of birth, social security number, and event date (date of service). SEER*DMS uses these fields to match AFLs to incoming abstract records. Matched AFLs are automatically closed (see the *Algorithms to Auto-close AFLs* section of this chapter).
4. Click **OK**.

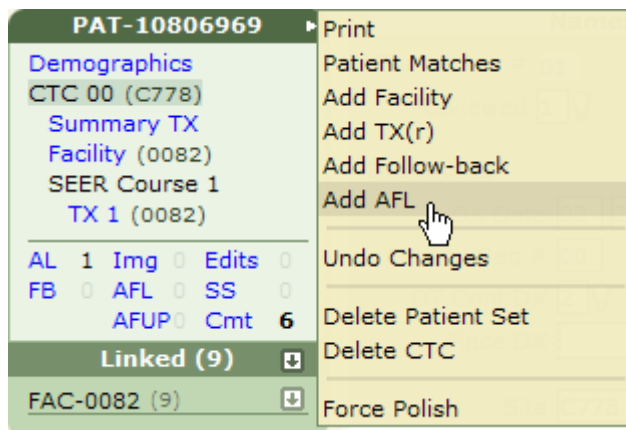
If you find a record for this person, check to see if it fills the casefinding need:

1. Click the Record ID.
2. Compare the casefinding information to the record's data.
 - a. Is this the same person? Check name, date of birth, SSN, and other identifiers.
 - b. Is this the same tumor? Check site and compare the record's admission date to the casefinding event date.
 - c. Is the record's reporting source the same as the facility noted in the new information?
3. If you determined that this is an abstract record related to this casefinding information, there is no need to create a new AFL. You are finished processing this casefinding lead and can either click **Cancel** to return to the Patient Lookup or use the menus or toolbar to access other parts of SEER*DMS.
4. If you determine that the record is not an abstract related to this casefinding lead:
 - a. Click **Cancel** to return to the Patient Lookup page.
 - b. Click the **Create AFL** button on the Patient Lookup page.
 - c. Information that you entered to search the database will be auto-filled in the AFL page.
 - d. Fill in as many of the fields as are known. It is particularly important to enter all known information for medical record number, first and last name, date of birth, social security number, and event date. SEER*DMS uses these fields to match AFLs to incoming abstract records. Matched AFLs are automatically closed (see the *Algorithms to Auto-close AFLs* section of this chapter).
 - e. Click **OK**.

If you find a Patient Set for this person, check to see if an abstract record that fills this casefinding need exists and is linked to the Patient Set:


1. Click the Patient Set ID.
2. Using the CTC links in the Patient Set navigation box, review each CTC.

3. If this casefinding lead is a report from a new facility for an existing CTC:
 - a. Click the appropriate CTC link to select it (**CTC 00** is selected in the figure below).
 - b. Click the  menu indicator next to Patient ID to open the CTC menu. Select **Add AFL**.



- c. Information from the CTC will be auto-filled into the AFL form. Review these fields and make changes, as necessary. The Event Date is auto-filled with the date of diagnosis for the CTC. If the new information includes a more appropriate date, revise this field.
- d. Complete as many additional fields as are known. You must specify a **Facility**.
- e. Click **OK**.

If this casefinding lead represents a new CTC for this patient:

1. Click the **Demographics** link in the **Patient Set** portion of the navigation box. (To verify this, check to see that Demographics is shown on a shaded background.)
2. Click the  menu indicator next to the Patient ID. The Patient Set Demographic's menu will be displayed.
3. Select **Add AFL**.
4. Demographic information from the patient set will be auto-filled into the AFL form. Review these fields and make changes, as necessary.
5. Complete as many additional fields as are known. You must specify **Facility Name**.
6. Click **OK**.


Once you save the new AFL, it will be added to the system as an open, unassigned AFL. Use the AFL Manager to assign this lead to an abstractor.

Assigning Leads to an Abstractor

Requires system permission: *afl_manager*

AFLs must be grouped by facility before they can be assigned to an abstractor. A group may consist of one or more AFLs for a single facility. If the number of AFLs for a facility is too large to assign, smaller groups based on event date should be created. Event date is the date of diagnosis (if available), report date (Casefinding records), date of last contact (Death Certificates), admission date (Health Index records, these would typically be diagnostic index records) or the date of service entered into the Event Date field when the AFL was manually created.

To assign a set of AFLs to an abstractor:

1. Select **Manage > Abstract Facility Leads**.
2. Use the Filter controls to reduce the list:
 - a. You may limit your selection by the type of record that triggered the AFLs. For AFLs related to Casefinding records, select Casefinding in the **Source** filter. For AFLs related to death clearance processes, select Death Cert.
 - b. Click *Open* in the **Status** filter to make it the only value selected in the filter.
 - c. Use the  lookup to select the facility in the **Fac ID** filter.
 - d. If your registry manages data for multiple regions, you may select a value in the **Region** filter. (The filter is not displayed if only one region is defined for the registry).
 - e. If you would like to exclude AFLs which were previously grouped and assigned to an abstractor, check **Exclude Grouped**.
 - f. If an AFL was assigned to and reviewed by an abstractor, the determination made by the abstractor may be listed in the Result field. To select based on this field, select an appropriate value for the **Result** filter. You may multi-select in this filter.
 - g. Click **Apply**. The open AFLs for the selected facility and record type will be shown. The number of AFLs will be displayed at the top left. Determine if this is an appropriate number of AFLs to print and assign.
 - h. If the number of AFLs is too large for one assignment, you may either continue with step 3 and then limit the number to be modified; or you may create a smaller list by filtering on event date. You may specify a closed or open-ended date range using one or both of the Event Date filters.
 - i. To select AFLs with an event date on or after a particular date, enter the date in **Event From**.
 - ii. To select AFLs with an event date prior to and including a particular date, enter the date in **Event To**.
 - iii. To include AFLs within a specified range of years but with unknown month and/or day, check the month and/or day boxes in the **Show unknown dates** section.
 - iv. To include AFLs with unknown year, check the year box in **Show unknown dates** section.
 - v. To review a list that only includes AFLs with unknown event dates, enter a future date in **Event From** and check the year box in the **Show unknown dates** section.
3. Review the AFLs that are displayed. If an AFL has a group ID, the AFL may have previously been assigned to an abstractor. Determine if you wish to assign the AFL in a new group before continuing.
4. To assign all AFLs that are listed or a subset of those AFLs, click **Modify All**. You will be able to specify the number of AFLs in a later step. To assign a specific set of AFLs, check the box to the left of each AFL ID and click **Modify** (you can only check the boxes of AFLs that are on the same page).
 - a. If you wish to limit the number of AFLs assigned in this group, enter a value in the **Maximum Number to Modify** field.


- b. Set **Group Action** to Group.
 - c. Click **OK** to exit the Modify AFLs page.
 - d. You will be prompted to confirm that you wish to create a new group containing the AFLs. Click **OK**. A new Group ID will be assigned to each AFL.
5. To create an Abstracting Assignments listing for the new group, click **Assignments**. A configuration setting defined by registry management determines whether this listing will be presented as a printable PDF report or written to a CSV file that can be opened in Excel.
- a. Depending on your browser settings, you may have the option to Open or Save the listing. If so, click **Open**.
 - b. If the listing is in PDF format, it will open in an Adobe Acrobat window. If it is in CSV format, it will open in Excel.
 - c. Use the Adobe or Excel controls to print and/or save this report. To print, you may need to use a printer that allows you to use 11x17 inch paper and select the correct paper size in Print Setup (specific instructions vary depending on your printer and the version of the printer driver that is installed, please contact your IT staff for further instructions).

Tracking Abstracting Assignments

Requires system permission: *afl_manager*

To track and update the status of leads assigned to an abstractor:

1. Collect the Abstracting Assignments report from the abstractor. The **Action** column of the report should contain a code indicating that the case was abstracted or the reason it was not abstracted.
2. Consult your IT staff to ensure that the abstract records submitted with the report were imported into SEER*DMS. It is important to wait for the records to be imported and processed in order to allow SEER*DMS to automatically close as many leads as possible. You will only need to update the leads that did not match abstract records.
3. Click **Manage > Abstract Facility Leads**.
4. Enter the Group ID printed on the Abstracting Assignments report into the **Group ID** filter. **Tip:** If you are viewing a list of AFLs, the Group ID filter is set automatically when you click the Group ID of one of the AFLs.
5. Set the Status filter.
 - a. If you wish to limit your review to pending AFLs in this group, set the **Status** filter to **Open**. AFLs in the group will not be listed if they were auto-closed when a matching abstract record was loaded and processed. The number of items now displayed in SEER*DMS should be less than the number of AFLs in the printed report. If this is not the case, consult your IT staff to determine if the abstract records were imported.
 - b. Typically, you will only need to review and modify AFLs that remain open to determine if further processing is required or to indicate the reason that an abstract was not obtained. However, if you wish to review all AFLs in the group, set the **Status** filter to **blank**. The list should include all AFLs that were assigned and printed on the report. However, it is possible that some AFLs were ungrouped or re-assigned in another group (you may search for a specific AFL by AFL ID, if necessary).



6. Click **Apply**.
7. As determined by registry policies and procedures, you may use one of the following methods to process AFLs that were not auto-closed during the processing of the imported records. If you wish to document a change to an AFL, process each AFL individually. Otherwise, you may implement these changes on a set of AFLs that you select (steps for selecting sets of AFLs are discussed in the *Modifying AFLs* section of this chapter).
 - a. If an abstract is not necessary or cannot be obtained, set the result field to the appropriate value and close the AFL. Note: If you set result to *Not a Reportable Cancer*, the record that triggered the AFL will be changed from reportable to auditable.
 - b. To request an abstract from a different facility, use the  lookup to specify an ID in the **Facility** field. The AFL will be removed from the current group. Follow the instructions in *Assigning Leads to an Abstractor* to add the AFL to a new group.
 - c. To submit a new request for an abstract from the same facility, you may either ungroup the AFL to allow it to be considered for a new group created at a later time; or you may move a set of AFLs from this group to a new group by setting **Group Action** to *Group*.
 - d. If an abstract record is expected but the data file has not yet been loaded, do not modify the AFL. Consult your IT staff to determine when the data will be loaded.

Printing AFLs

Requires system permission: *afl_manager*

The AFL Manager includes two buttons for printing reports. The **Print** button generates a report (RPT-073A) showing the AFLs currently listed in the AFL manager. The data in this report are the same as those displayed in the AFL Manager, it includes all pages. The **Assignments** button can be used to generate the Abstracting Assignments sheet (RPT-XX013A, where XX is a code indicating the registry). The layout of this report is registry-defined; and it can only be used to generate an assignment sheet for AFLs in the same group.

To print AFLs:

1. Click **Manage > Abstract Facility Leads**.
2. Use one or more of the filter fields to select the AFLs to include on the report:
 - a. To include both open and closed AFLs in the report, set the **Status** filter to blank. Otherwise, select a value for this filter.
 - b. To print AFLs for a single facility, use the  lookup to specify an ID in the **Facility** filter.
 - c. If your registry manages data for multiple regions, you may use the **Region** filter to limit the list. (This filter is not displayed if only one region is defined for your registry.)
 - d. If you are printing AFLs from a single group and know the Group ID, enter the ID in the **Group ID** filter. To enter multiple IDs, click the  adjacent to the filter. You may then type multiple IDs into the text box.
 - e. To print a set of AFLs based on event date, you may specify a closed or open-ended date range using one or both of the Event Date filters.

- i. To select AFLs with an event date on or after a particular date, enter the date in **Event From**.
 - ii. To select AFLs with an event date prior to and including a particular date, enter the date in **Event To**.
 - iii. To include AFLs within a specified range of years but with unknown month and/or day, check the month and/or day boxes in the **Show unknown dates** section.
 - iv. To include AFLs with unknown year, check the year box in **Show unknown dates** section.
 - v. To review a list that only includes AFLs with unknown event dates, enter a future date in **Event From** and check the year box in the **Show unknown dates** section.
3. Click **Apply**.
 4. Create a PDF report file listing the AFLs currently displayed:
 - a. To create a report containing the fields currently shown on your screen, click **Print**.
 - b. To print the Abstracting Assignments report for a single group, click **Assignments**. This report cannot be generated for AFLs that are not grouped or for AFLs that are in multiple groups.
 5. Depending on your browser settings, the report may open automatically or you may need to click **Open**. The PDF will open in an Adobe Acrobat window.
 6. Use the Adobe controls to print or save this report.
 7. Close the Adobe window.

Updates to AFL Data Fields

Requires system permission: *afl_manager*

When an AFL is created, the data fields from the source record or patient set are copied into fields in the AFL. If the record data fields are modified, the data fields in the associated AFL are automatically updated. However, the reverse is not true. If you modify the data fields in the AFL, the fields in the source record are not changed. The only situation in which the record is changed due to a change in an AFL occurs when an AFL is closed with a result of *Not a Reportable Cancer*. In this situation, the reportability of the record is changed to auditable.


Modifying AFLs





Requires system permission: *afl_manager*


After following the steps in *Tracking Abstract Assignments*, you may wish to modify the Status, Result, Grouping, or Letter flag of an AFL. Status indicates whether the AFL is opened or closed. The Result field is used to track the final determination made by the abstractor when they attempted to abstract the case. Typically, this field is used to code the reason given for not obtaining an abstract. The Grouping Status of an AFL may be changed to ungroup an AFL or assign it to a new group. In addition, you have the ability to set a flag that indicates whether a letter is needed. This flag is not used by SEER*DMS but may be referenced by an external report to create letters requesting additional information from a physician or reporting facility.

If you wish to document a change to an AFL, process each AFL individually. Otherwise, you may implement these changes on a set of AFLs that you select.

To modify a single AFL or a set of AFLs:

1. Click **Manage > Abstract Facility Leads**.
2. Use the filters to search for the AFLs that you wish to modify.
 - a. To include both open and closed AFLs in the search, set the **Status** filter to blank. Otherwise, select the appropriate value for this filter.
 - b. To search for an AFL group, enter the Group ID printed on the Abstracting Assignments report into the **Group ID** filter.
 - c. To specify a set of AFLs by ID, enter the IDs into the **AFL ID(s)** or **Pat/Rec ID** filters.
 - i. To expand the filter so that more than one ID can be entered, click the  adjacent to the ID filter. A text box will appear as shown below.

AFL ID(s)	308942	
Pat/Rec ID(s)	348531	
SSN(s)	349272	
Group ID(s)	349659	

- ii. Type the numeric portion of the ID and press Enter (the AFL- and REC- prefixes may be entered, but are not required). You may enter as many IDs as you wish.
- d. To select a set of AFLs based on event date, you may specify a closed or open-ended date range using one or both of the Event Date filters.
 - i. To select AFLs with an event date on or after a particular date, enter the date in **Event From**.
 - ii. To select AFLs with an event date prior to and including a particular date, enter the date in **Event To**.
 - iii. To include AFLs within a specified range of years but with unknown month and/or day, check the month and/or day boxes in the **Show unknown dates** section.
 - iv. To include AFLs with unknown year, check the year box in **Show unknown dates** section.
 - v. To review a list that only includes AFLs with unknown event dates, enter a future date in **Event From** and check the year box in the **Show unknown dates** section.
- e. To search for a specific AFL by patient name, enter text into the **Last Name** and/or **First Name** filters.
- f. To select by facility, use the  lookup to specify an ID in the **Facility** filter. If you are creating a group of AFLs you must select AFLs for a single facility.

- g. To search by region, select a value in the **Region** filter. This filter is only displayed if your registry manages data for multiple regions.
3. Click **Apply**.
 4. Select the AFL(s):
 - a. To select a single AFL, check the box to the left of the Task ID.
 - b. To select two or more AFLs, use one of the following methods:
 - i. To select specific AFLs, check the box to the left of each AFL ID. You can only select AFLs on the same page with this method.
 - ii. To select all AFLs displayed on the current page, check the box on the top left of the page, adjacent to the **AFL ID** column heading.
 - iii. To select all tasks on all pages of the filtered list, click **Modify All** and skip ahead to Step 6.
 5. Click **Modify**.
 6. You may set the following fields for the selected AFLs. Only specify a value for a field if you wish to change that field for the selected AFLs. If you leave a field blank then each AFL will retain its current value for that field.
 - a. Status – AFLs that require processing should be set to *Open*. If no further processing is required, set this field to *Closed*.
 - b. Result - use an AFL's result field to track the determination coded by the abstractor on the Abstracting Assignments report. The valid values for this field are listed below. Registry policies based and tracking procedures should determine how this field is populated and maintained. In SEER*DMS, the *Abstracted* and *Not a Reportable Cancer* values involve special processing as noted below.
 - c. Group Action – To create a new group containing the selected AFLs, set **Group Action** to *Group*. If an AFL is currently in a group, it will be re-assigned to the new group. To remove the current group ID and allow the AFLs to be re-assigned at a later time, set **Group Action** to *Ungroup*.
 - d. Send Letter – this flag is not used by SEER*DMS but may be referenced by external reports that create letters requesting additional information from a physician or reporting facility. You may filter by this flag on the AFL Manager page.
 7. To change a limited number of the AFLs, enter a value in **Maximum Number to Modify**. Using this method, you cannot control the specific AFLs that are modified. This provides a convenient mechanism for limiting the number assigned to a group and should not be used for other purposes.

Creating a CTC from a Non-abstract Record

Requires system permission: `rec_build_cfo`

If you determine that a case should be submitted to SEER despite the fact that an abstract is currently unavailable, you may use the record editor to create a CTC from the non-abstract record. This feature is available for reportable casefinding, death certificate, and short health records. (In this context, casefinding includes any record processed in the workflow as "Casefinding". The specific record types will vary by registry and may include HL7 and other import types). If the

record is not linked to an existing patient set, you may create a new patient set. If the record is linked to a patient set but not to a CTC, you may create a new CTC within the patient set.

Alternatively, system tasks are available to auto-build batches of cases from non-abstract records as described in Chapter 27: System Administration. The Build DCO, Build CFO, Build SHO system tasks incorporate reportable, unlinked records into the Patient Set data as new Patient Sets or new CTCs for existing Patient Sets.

To create a Patient Set from a non-abstract record:

1. Open the record in the record editor.
2. If the record is a casefinding or short health record, select **Build Patient Set** from the record menu. This menu item is only available on unlinked casefinding records and can only be seen by users with the *rec_build_cfo* permission.
3. If the record is a death certificate record, select **Build Patient Set** from the record menu. These menu items are only available on unlinked death certificate records and can only be seen by users with the *rec_build_cfo* permission.
4. Click **OK** to confirm.
5. SEER*DMS will create an automated workflow task to create the patient set. When the task completes, a Visual Edit Patient Set task for the patient set will be assigned to you.

To create a CTC from a non-abstract record:

1. Search the database for the record or its associated patient set. You may enter the Patient Set or Record ID into the quick search, or click **View > Patients** to use the Patient Lookup. (See *Chapter 20: Searching for Patients and Records.*)
2. Verify that the record is not already linked to a CTC. If it is linked at the patient level, you may proceed.
3. Click the ID of the record in the patient set navigation box.
4. Select **Move To > New CTC** from the record's menu.
5. SEER*DMS will create a new CTC; you may proceed with visual editing.

Casefinding Reports

The following reports are available for monitoring the completeness of casefinding. Instructions for generating reports are provided in *Chapter 24: Creating Reports and Extracting Data*. Consult your IT staff to determine if other, external casefinding reports are available at your registry.

Report ID	Title	Description
RPT-003A	Tasks for Unlinked Records with Closed AFLs	This report lists workflow tasks related to AFLs that were manually closed.
RPT-015A	Record Counts by Abstractor	Number of records abstracted by each abstractor for a specified period of time.
RPT-017A	CTC Frequencies by Month of Diagnosis	CTC counts by month of diagnosis for three years.
RPT-018A	CTC Frequencies by SEER Site Recode	CTC counts by SEER site recode for a two-year period.
RPT-019A	Death Clearance Summary	A listing of records that are potential DCOs; includes each record's status related to the workflow and AFLs.
RPT-024A	Abstractor's Report of Active Cases	A reference sheet for abstractors showing the active cases in the database for a facility.
RPT-067B	Frequency of Records for Build CFOs Task	Number of records to be considered by Build CFOs task.
RPT-067C	Candidate Records for the Build CFOs System Task	A list of the records that will be used by the Build CFOs system task.
RPT-068B	Frequency of Records for Build DCOs Task	Number of records to be considered by the Build DCOs system task.
RPT-068C	Candidate Records for the Build DCOs System Task	A list of the records that will be used by the Build DCOs system task.
RPT-089B	Frequency of Records for Build SHOs Task	Number of records to be considered by the Build SHOs system task.
RPT-089C	Candidate Records for the Build SHOs System Task	A list of the records that will be used by the Build SHOs system task.
RPT-080A	Abstract Facility Leads Closed Manually	List of the AFLs which were closed manually on a specified day.

Chapter 22: Follow-back

In SEER*DMS, the term “follow-back” refers to the process of contacting a reporting facility to obtain missing information or to resolve inconsistencies in data received at the registry. In contrast, the term “follow-up” refers to the surveillance processes used to gather new information about a patient regarding treatment outcomes and survival.

While editing, screening, or consolidating data, it may be determined that additional information must be obtained from a reporting facility. An editor can submit a request for follow-back information while they are editing data. The request will be forwarded to the Follow-back Management tool for processing; and it will be maintained with the record or patient set to enable users to review all follow-back inquiries and responses associated with a record or patient set. In some automatic tasks, a request for follow-back information is auto-created when SEER*DMS detects that required data are missing.

The Follow-back Management tool provides a convenient method for processing the follow-back inquiries in batches. Periodically, a registry manager will review, edit, and compile the requests into a single communiqué that is sent to a physician or other representative at a facility. Once a response is received, registry policy will determine whether one staff member is responsible for processing the information, or if the information is distributed to the staff members who submitted the individual requests.

In this chapter, you’ll learn about

- Understanding Follow-back
- Follow-back Needs Created in Automatic Tasks
- Manually Adding a Follow-back Need
- Searching for a Follow-back Bundle
- Reviewing and Sending Follow-back
- Processing a Follow-back Response
- Assigning a Follow-back Need to another Facility
- Re-querying a Facility

Understanding Follow-back

The following describes the mechanisms used by SEER*DMS to facilitate follow-back processes.

Follow-back Need: In SEER*DMS, a request for follow-back information is entered and tracked as a “follow-back need”. A follow-back need can be defined manually while editing, screening, or consolidating data; or it may be created automatically if SEER*DMS detects that required information is missing (this process is indicated as an automatic “Add Follow-back” task on the workflow diagram). To allow for batch processing of requests, SEER*DMS creates groups or “bundles” of requests designated for the same facility. There are two status settings for follow-back needs:

1. **Open** – The need is in a bundle that has not been sent, or it has been sent but the response has not been processed. This status may also be displayed as:
 - **Open (Reassigned)** – This status indicates that the need was assigned to a bundle for another facility after its original bundle was sent. Therefore, it may be sent in both bundles and, therefore, can be tracked in both.

Open (Re-queried) – The follow-back need was sent in a bundle but the issue was not addressed in the facility’s response. It is being resent to the same facility in a different bundle. It will be maintained in both bundles for tracking purposes.

2. **Closed** – The status of the follow-back need was set to closed after a response was received and processed by a manager. Alternatively, a manager may have determined that the inquiry is not necessary and closed the issue (needs closed in this manner are removed from the bundle). This status may also be displayed as:
 - **Closed (Reassigned)** – An open need was assigned to another facility and subsequently closed (it may have been closed in either bundle).
 - **Closed (Re-queried)** – A need was sent but the issue was not addressed in the facility’s response. Therefore, it was assigned to a bundle for the same facility (so that it could be resent). Subsequently, the need was closed.

Follow-back Bundle: A set of follow-back needs intended for a single facility and processed as a group. As needs are created, they are added to a bundle and held for processing. The manager of follow-back periodically reviews, edits, and sends the group to the designated organization. There are three status settings for bundles:

1. **Open** – It has not yet been sent. Other needs for the same organization may be added.
2. **Waiting** – The bundle has been sent but a response has not been received.
3. **Closed** – A manager closed the bundle, or it was automatically closed when all of the individual needs were closed.

Follow-back Needs Created in Automatic Tasks

The final process in the SEER*DMS workflow involves automated checks of the patient set data. SEERDMS checks the patient set to determine if a follow-back need should be created based on registry specific criteria. For example, in some registry configurations, a follow-back need is auto-generated if the date of diagnosis is missing. In this case, the request for follow-back information may be directed to the diagnosing physician to obtain the date. When a follow-back is auto-created, it may be directed to a physician or a facility. To determine whether follow-back needs are auto-generated in your registry’s system, please refer to the *SEER*DMS Technical Reference: Registry-Specific Information*.

Manually Adding a Follow-back Need

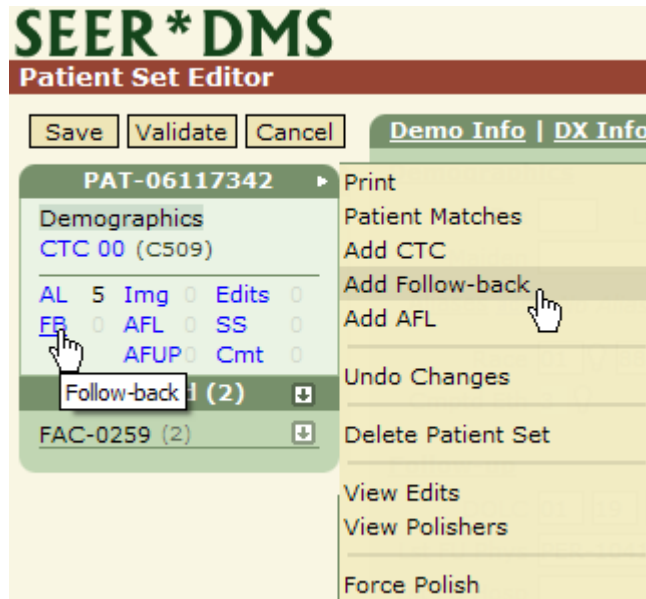
Requires system permission: *fb_initiate*



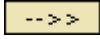

While editing, screening, matching, or consolidating data, you may determine that additional information must be obtained from a reporting facility. Submit a request for follow-back information by adding a “follow-back need”.

To request follow-back information while completing a Match-Consolidate task or editing data:

1. To initiate a request for follow-back information:
 - a. If data fields required to complete a Match-Consolidate task are missing or incomplete, click the **Follow-back** button provided at the bottom of the Incoming Record section. Continue with step 2 of these instructions.

- b. If you would like to submit a request for follow-back information when editing a record or patient set, click the **FB** link in the navigation box and then click **Add Follow-back**. Alternatively, you may select **Add Follow-back** directly from the menu. (The patient set navigation and menu are used as an example in the figure below. The FB link and Add Follow-back menu item are also available when editing a record.)



- i. Click the **FB** link to review other follow-back issues related to this record or patient set. You will then be allowed to submit a new request by clicking **Add Follow-back**. Alternatively, you can go directly to the follow-back form from the data editor by selecting **Add Follow-back** from the menu.
 - ii. Note: you will not be able to add follow-back when creating a new patient set; the patient set must be saved and a patient set ID must be assigned.
2. The Add Follow-back popup will be displayed. You may drag the popup to the side if you wish to refer to data items on the screen as you submit the follow-back need.
 3. Use the  lookup to specify the appropriate facility in the **Facility** field.
 4. Follow-back inquiries may be addressed to a representative of the organization or directly to a physician. To direct your question to a physician, use the  lookup to select the **Physician**. If no physician is specified, a registry manager will select the appropriate organization representative as they process and send this question with others for the same organization.
 5. If appropriate, create a list of data fields related to this follow-back need. The field names will be listed in the communication to the facility.
 - a. Click on an item in the **Available Data Items** box. Use the right arrow  to move your choice to the **Selected Data Items** box. To remove a data field, click on an item in the Selected Data Items box and click the left arrow .
 - b. If selecting more than one data item in either list, use standard Windows techniques to multi-select.

6. Enter text in the **Question** field. This text will be included in the draft letter or fax that is prepared. A registry manager may review and edit the draft prior to sending it to the facility.
7. Enter **Comments** that you wish to make available to SEER*DMS users reviewing this need. These comments will not be included in the communication sent to the facility.
8. Select an **Urgency** level. Normal is the default value. The urgency level of the bundle is set to the highest level of any need. You may use this field to prioritize the processing of follow-back needs and bundles.
9. Click **Save** to submit the follow-back need and return to the record editor, patient set editor, or Match-Consolidate task.
10. If possible, complete the current worklist task. If the requested information is required to complete the task, save any changes that you have made but do not forward the data to the next workflow task (specific instructions for saving data and exiting the task are provided in the task-specific chapters of this manual).

Periodically, a manager will review, edit, and send a batch of follow-back requests to a physician or other representative at a facility. Subsequently, the manager will process the facility's responses. SEER*DMS will automatically notify you when a response from the facility has been received and processed, that is, when your follow-back need is closed by a manager.

You or another staff member may update data fields based on the new information. As determined by registry policy, one staff member may be responsible for processing all follow-back responses, or the information may be given directly to the staff members who entered the follow-back needs.


If you suspended a task pending the receipt of follow-back information, you must re-open and complete the task to allow the data to move forward in the workflow. You must either make changes to data fields based on the new information or verify that the appropriate changes were made. If you completed the task but need to update the record or patient set with the new information, use the Patient Lookup to search for the data (see *Chapter 20: Searching for Records and Patients*).


Searching for a Follow-back Bundle

Requires system permission: *fb_manager*

Use the Follow-back Manager to locate a follow-back bundle so that you may review and edit the needs, send the query, or process information sent by a reporting facility.

To find a follow-back bundle:

1. Select **Manage > Follow-back**.
2. By default, the **Follow-back Manager** displays *Open* bundles and bundles with a status of *Waiting for Response*. To search for a bundle with a specific status, select that status in the **Bundle Status** filter.
3. If you know the ID of the follow-back bundle, enter it in the **Bundle ID(s)** field.
4. Use the **Source** filter to find a bundle assigned to a specific organization. Enter a full or partial facility ID or use the  icon to search for a facility by name.


5. Use the **Sent to** filter to find a bundle addressed to a particular organization representative. Enter an ID, or use the  icon to select the organization representative.
6. To search for a bundle sent or closed during a specific time period, enter dates into the **Sent** or **Closed** filters. Enter all dates in *MM-DD-YYYY* format, or use the Calendar feature to select a date.
7. Click **Apply**.
8. To sort the list by the data in any column, click on the underlined column heading. To reverse the sort order, click the column heading again. An arrow to the right of the header indicates the current sort order.
9. To revert the filter settings to their default values, click **Reset**.


Reviewing and Sending Follow-back

Requires system permission: *fb_manager*

Prior to sending a follow-back bundle, you should review each follow-back need to verify that it is being sent to the appropriate source and that all necessary information is included.

To review and send needs in an open follow-back bundle:

1. Follow the steps in the *Searching for a Follow-back Bundle* section of this chapter.
2. Click the **ID** of the bundle to be sent.
3. All needs included in the bundle are listed at the bottom of the page. Review each need:
 - a. If you wish to view or edit a record or patient set associated with a follow-back need, click the link in the **Pat/Rec** column.
 - b. If a need is assigned to the wrong facility, refer to the *Assigning a Follow-back Need to another Facility* section of this chapter.
 - c. To review or edit the need, click the **ID** of the need.
 - i. Update the text in the **Question** and **Comment** fields as necessary.
 - ii. Use the  lookup to update the **Physician** field as necessary.
 - iii. **Add** or **Remove** data items using the corresponding links.
 - iv. You may change the **Urgency** using the drop down list box. The urgency level of the bundle will be set to the highest level of any need. You may use this field to prioritize the processing of follow-back requests.
 - v. Click **Save**.

- d. If appropriate, you may close the follow-back need without sending it to the facility.
 - i. Click the link in the **ID** column.
 - ii. Change the **Need Status** to *Closed*.
 - iii. Click **Save**. The need is removed from the Follow-back Management tool. It can be seen on the follow-back page of the record or patient set.
4. In the bundle's **Send To** field, specify the person at the facility to receive the query. Click the lookup  icon to search the list of contacts associated with the facility. You will not be able to select an inactive contact or a contact associated with an inactive facility. See *Chapter 19: The Contact List* and *Chapter 18: The Organization and Facility List* for more information.
5. Click **Send Bundle**.
 - a. If a valid address is available for each follow-back need, you will be prompted to confirm that you wish you send the bundle of needs. Click **OK**. The status of the bundle will change from *Open* to *Waiting*. If a valid address cannot be identified for one or more of the needs, an error message will be displayed. If a physician is designated for the need, a valid address must be defined for that physician in the Contact list. If no physician is designated, a valid address must be defined for the organization listed as the bundle's *Source to Query*.
 - b. Click **Print Bundle** to create and open a PDF file containing the follow-back letters. There will be a separate letter for each physician and organization representative listed as a recipient. Use the Acrobat controls to print the letters and mail (or fax) them to the appropriate follow-back sources.
 - c. Click **Save Bundle** to return to the follow-back manager. Note: Do not click Close Bundle to close the page. This closes the needs and is not for exiting the page.


Processing a Follow-back Response

Requires system permission: *fb_manager*

The response to a follow-back inquiry may come in any form -- letter, fax, e-mail, or phone call. As determined by registry policy, you may make necessary edits to relevant data fields or you may provide the follow-back information to a staff member to make the necessary edits. You may provide the follow-back information to your staff by entering it into the follow-back need or in other formats (copies of the letter or fax, for example). Regardless, you should close each need addressed by the response. When it is closed, SEER*DMS will send e-mail notification to the staff member who submitted the need.

To process the response to a follow-back inquiry:

1. Open the appropriate bundle:
 - a. Follow the steps in "Searching for a Follow-back Bundle".
 - b. Click the **ID** of the Bundle.

2. If the respondent is someone other than the addressee, use the Lookup icon  to select the appropriate **Responding Org Rep**.
3. If the response addresses all of the needs and you want other staff members to process the follow-back information:
 - a. Enter a general description of the response in the **Response** field.
 - b. Click **Close Bundle**. Each need will be closed and email notification will be sent to the staff members who submitted the needs. The description that you entered in the response field will be printed in the email.
 - c. If necessary, provide follow-back information specific to each need to your staff members so that they can update the appropriate worklist tasks, records, or patient sets. The staff can search the worklist or database using the record or patient ID provided in the email.
 - d. You are now finished and can skip the remaining steps.
4. If you want to change the record or patient set data based on the follow-back responses, repeat these steps for each need:
 - a. Update the record or patient set data:
 - i. Open the record or patient set associated with a follow-back need by clicking its link in the **Pat/Rec** column.
 - ii. Make the appropriate changes to the record or patient set data fields. If appropriate based on registry policy, scan any documents received from the physician or facility related to this follow-back request. Attach the scanned document to the patient set or record as an Image.
 - iii. Click **Save**.
 - iv. Review your changes and add relevant comments. Click **Save and Exit**.
 - b. Set the status of the follow-back need:
 - i. Click the **ID** of the need.
 - ii. To document your findings, enter text in the **Comment** field.
 - iii. Change the **Need Status** to *Closed*.
 - iv. Click **Save** to exit the Follow-back Need page.
 - c. Follow-back needs are often created during worklist tasks, that is, a staff member working on a task may have required additional information. If the record or patient set was saved in a task to be completed at a later time, you or a staff member must open and complete the task. Refer to the chapter related to the task for further instructions.


5. If you want to provide the follow-back information to your staff by entering it into the follow-back needs, repeat these steps for each need:
 - a. Click the **ID** of the need.
 - b. Enter the response to the need in the **Response** field.
 - c. You may enter relevant text in the **Comment** field.
 - d. Change the **Need Status** to *Closed*.
 - e. Click **Save** to exit the Follow-back Need page.
6. If you are expecting to receive information for needs that are still open, click **Save Bundle**.
7. If the response did not address one of the needs, follow the instructions in *Re-querying a Facility* to re-send the need to the same facility.
8. If a need was inappropriately addressed to this facility, follow the instructions in the *Assigning a Follow-back Need to another Facility* section of this chapter.
9. If you have processed each need in the bundle or wish to auto-close any remaining open needs, click **Close Bundle**. You must close the bundle even if you manually reassigned, re-queried, or closed each need.
10. As a follow-back need is closed, e-mail notification will be sent to the staff member who submitted the need.

Assigning a Follow-back Need to another Facility

Requires system permission: *fb_manager*

If you do not receive a response from the facility, you may submit the request for information to another facility. Any open follow-back need can be reassigned.

To assign a follow-back need to a different facility:

1. Find the bundle that currently contains the follow-back need by following the instructions in the *Searching for a Follow-back Bundle* section of this chapter.
2. Click the **ID** of the Bundle.
3. Click the **ID** of the need.
4. Click the  lookup to select a different **Source to Query**.
5. Verify that that the **Need Status** is set to *Reassigned*.
6. Click **Save** to exit the Follow-back Need page.
7. If there are other open needs in this bundle, you will need to click **Save Bundle** to exit.

Re-querying a Facility

Requires system permission: *fb_manager*

If follow-back information submitted by a facility does not address the issue defined in a follow-back need, use "re-query" to move the need to an open bundle for the same facility. If there are no open bundles for the facility, one will be created.

To resend a follow-back need to the same facility:

1. Find the bundle that currently contains the follow-back need by following the instructions in the *Searching for a Follow-back Bundle* section of this chapter.
2. Click the **ID** of the bundle.
3. Click the **ID** of the need.
4. Change the **Need Status** to *Re-query*.
5. Click **Save** to exit the Follow-back Need page.
6. If there are other open needs in this bundle, you will need to click **Save Bundle** to exit.

Chapter 23: Requesting Records

The SEER*DMS record request feature provides a mechanism for a registry to request either a specific record or a specified set of records from an outside organization, and to track responses received by the registry.

If you need to request records from an organization or facility, the record request feature enables you to generate a letter to send via email, mail, or fax. It can also be used to facilitate communications by phone. The current version of SEER*DMS does not support e-mail encryption, so record requests related to specific patients cannot be sent via e-mail at this time. After you have added a record request to the system, SEER*DMS creates a tracking page for the request. This page can be used to keep track of the imported file(s) which resolve the request.


In this chapter, you'll learn about:


- Using the Record Request Manager
- Creating and Sending a Record Request
- Viewing Tracking Information for a Record Request
- Tracking Receipt of Records
- Resending a Record Request
- Reporting a Deficient Facility to a Supervising Agency

Using the Record Request Manager

Requires system permission: *record_request_add* or *record_request_resolve*

To view a list of record requests:

1. Select **Manage > Record Request**.
2. To sort the list by the data in any column, click on the column heading.
 - **ID** - Record Request ID
 - A GRR prefix denotes a General Record Request, a request for all records of a certain record type for a specified period of time.
 - An SRR prefix denotes a Specific Record Request, a request for records for a specified patient.
 - **Contact** - The ID of the organization representative to whom the request was sent. Click the  information icon to view the contact's name.
 - **Facility** - Facility ID for the request recipient.
 - **Record Type** - The type of record that was requested.
 - **Years** - The year of the Dx Date listed in a Specific Record Request, or the year(s) listed in the From and Through dates of a General Record Request.
 - **Sent By** - SEER*DMS user who submitted the request for records.
 - **Sent Dt** - Date the request was sent.
 - **Date Closed** - The date that the record request was processed and closed.


3. To search for a specific request or limit the list:
 - a. To search for a particular request or group of requests, enter one or more IDs in the **Request ID(s)** filter. Enter SRR to view only Specific Record Request; enter GRR to view only General Record Requests.
 - b. To view requests of a particular record type, click an item in the **Record Type(s)** filter. To display more than one record type, hold down the **CTRL** key and click on each type you wish to search.
 - c. To limit the list of requests by a range of the dates sent, enter beginning and end dates in the **Sent Dt From** and **Sent Dt Through** filters. Use the MM-DD-YYYY format or select a date using the Calendar tool.
 - d. To limit the list of requests by the year of the Dx Date in a Specific Record Request, or the year of the From and Through dates in a General Record Request, enter a value in the **Year** filter.
 - e. To view requests sent to a particular facility, enter a full or partial Facility ID in the **Facility** filter or click the adjacent  lookup icon to select a facility.
 - f. To view requests sent by a specific user, enter a full or partial user name in the **Sent By** filter.
 - g. Check **Hide Closed Request(s)** to search only for open requests; uncheck this box to view all requests regardless of status.
4. Click **Apply**.
5. *Optional:* To restore the default list view, click **Reset**.

Creating and Sending a Record Request


Requires system permission: *record_request_add* and *contact_view*

A Specific Record Request is a request for data regarding a specific patient. A General Record Request is a request for all records of a certain record type for a specified period of time.

To request records for a specific patient:

1. Select **Manage > Record Request**.
2. Click **Add**.
3. Set the **Request Type** to *Specific Patient*.
4. Enter the name of the organization representative to be contacted in the **Name of Contact** field, or click the  lookup.
5. Select the desired **Record Type** from the pull-down list.
6. You must enter either the **Patient Name** or the **Facility Patient ID**.
7. If available, enter **Med Rec #** (medical record number), **Site**, **Histology**, and **Dx Date**.
8. Click **Send**.
9. Follow the instructions below for *Completing a Record Request*.

To request a general set of records:

1. Select **Manage > Record Request**.
2. Click **Add**.
3. Set the **Request Type** to General.
4. Enter the name of the organization representative to be contacted in the **Name of Contact** field, or click the  lookup.
5. Select the desired **Record Type** from the pull-down list.
6. Limit the request to records from a specific time period by entering a start date in the **From** field and an end date in the **Through** field. Use the MM-DD-YYYY date format, or click the calendar icon.
7. Add the **Payment Amount** (\$) for the records, if payment is required.
8. Click **Send**.
9. Follow the instructions below for *Completing a Record Request*.

Completing a record request:

The Communication page will open to the organization representative's preferred contact method, if one is listed in the system. The current version of SEER*DMS does not support e-mail encryption, so record requests for a Specific Patient cannot be sent via e-mail at this time. Communication options are limited by the contact information listed in the system for an organization representative. See *Chapter 19: The Contact List* for more information.

1. A message describing the record request in detail will be automatically generated.
2. If you are sending the record request by mail or fax, set the communication **Type** to Letter or Fax. Click **Print** to create a PDF file that can be saved and/or printed.
3. If you are contacting the organization representative by telephone, set the **Type** to Phone. The representative's phone number will be displayed, and you can record a summary of the call in the **Comments** box.
4. If you are contacting the organization representative by email, set the **Type** to Email. You may use the following fields to complete the email.
 - a. Click either the **To**, **CC**, or **BCC** link to send the email to others as a primary addressee, as a carbon copy, or as a blind carbon copy.
 - b. Click Attach File to attach a file to the message. Do not attach files containing confidential data unless the file is encrypted. (SEER*DMS does not provide a mechanism for encrypting data files or e-mail messages.)
5. You may edit the content of the **Message** as needed.
6. Click **OK** to save the record request and designate the request as Sent. The system will now assume for tracking purposes that you have mailed or faxed the letter, or contacted the representative by phone.
7. Click **Cancel** to exit without saving the request.

Viewing the Tracking Information for a Record Request

Requires system permission: *record_request_resolve*

To view the tracking information for any record request:

1. Select **Manage > Record Request**.
2. Use the **Filter** to search for a request or limit the list. See the *Using the Record Request Manager* section of this chapter for more information.
3. Click on the Request ID of the record request you wish to view, or click the adjacent **edit** link.


Information about the record request is displayed at the top of the page in read-only format. The **Communication History** log at the bottom of the page displays a record of each time the request has been sent, including any **Comments** added from the Communication page.

Tracking Receipt of Records

Requires system permission: *record_request_resolve*

When the requested records are received and imported into SEER*DMS, you need to set the status of the Record Request to *Closed*.

To track the receipt of requested records:

1. Select **Manage > Record Request**.
2. Use the **Filter** to search for a request or limit the list. See the *Using the Record Request Manager* section of this chapter for more information.
3. Click on the Request ID of the record request to be modified, or click the adjacent **edit** link.
4. Click the  lookup to the right of the Import field to bring up a window that displays a list of the **Imports**. The latest imports will be listed first.
5. You may sort this list by clicking any of the underlined column headings.
6. Click the Import ID adjacent to the import that satisfies the request, or click **Cancel** to close the Lookup window.
7. If additional records are needed to resolve this request, leave the Request **Status** set to *Open*, and click **Save** to save your revisions.
8. If all of the requested records have been received, you should close the record request. Set the **Status** to *Closed*, and click **Save**.

Resending a Record Request

Requires system permission: *record_request_resolve*

To resend a record request:

1. Select **Manage > Record Request**.
2. *Optional:* Use the **Filter** to search for a request or limit the list. See *Using the Record Request Manager* for more information.

3. Click on the Request ID of the record request you wish to resend, or click the adjacent **Edit** link.
4. *Optional:* Enter a **Tracking Comment**.
5. Click **Resend**.
 - a. If you are sending the record request by mail or fax, set the communication **Type** to Letter or Fax. A formatted letter describing the record request in detail will be automatically generated. This letter can be edited and printed.
 - b. If you are contacting the organization representative by telephone, set the Type to Phone. The representative's phone number will be displayed, and you can record a summary of the call in the **Comments** box.
6. Click **OK** to designate the request as Resent; click **Cancel** to exit without resending the request.

Reporting a Deficient Facility to a Supervising Agency

Requires system permission: *record_request_resolve*

If an organization or facility fails to respond to a General Record Request, you may be required by local policy to report this deficiency to a supervising agency.

To report a deficient facility to a supervising agency:

1. Select **Manage > Record Request**.
2. *Optional:* Use the **Filter** to search for a request or limit the list. See the *Using the Record Request Manager* section of this chapter for more information.
3. Click on the **Request ID** of the relevant record request, or click the adjacent **edit** link.
4. Click the **Report As Deficient** link (Note: this link is only displayed for general record requests)
5. Review the automatically generated e-mail, and edit it if necessary. The email is automatically addressed to the email address specified in the *system.registry.report-to.state.email* configuration setting.
6. Click the **Attach File** link if you would like to attach any files with the email. Do not attach files containing confidential data unless the file is encrypted. (SEER*DMS does not provide a mechanism for encrypting data files or e-mail messages.)
7. Click **Send**.

Chapter 24: Creating Reports and Extracting Data

SEER*DMS includes an integrated reporting and extract module that enables you to run pre-defined system reports and create standard extracts. You may create external queries to generate custom reports and extracts. Tools such as Perl, Microsoft Access, Crystal Reports, SAS, JWorkbench, and SEER*Stat can be used to generate reports or analyze data extracted from the SEER*DMS database.

Although external applications may be used to access both the live database and the data warehouse, it is strongly recommended that you access the data warehouse unless the analysis absolutely requires data from the live database. Complex or inefficient queries to the live database may affect system performance and affect interaction with the system by registry staff. Registry staff with the appropriate system permissions can read and write data in the live database via the SEER*DMS application. Write-access to the live database through external applications is controlled by Oracle system permissions and should only be granted to registry system administrators. See *Chapter 2: Records and Patient Sets* for descriptions of the live database and data warehouse.

In this chapter, you'll learn about

- Creating Reports
- Data Extracts and Submissions
- Finding a Report or Extract
- Organizing your Reports
- Running a Report or Extract
- Viewing Output of Reports
- Downloading an Extract Data File
- Searching the Worklist for Report and Extract Tasks
- Sending Report Output to another User
- Viewing the SQL for a SEER*DMS Report

Creating Reports

Three methods can be used to create a report using SEER*DMS data:

- Generate one of the SEER*DMS Reports listed in the Report Manager. These include reports which summarize workflow activities, track imported data, list data which fail edits, and provide quality control information.
- Click a Print button or select a Print menu item in the system. Print buttons, links, and menu items are integrated throughout the system. Instructions for generating these reports are provided in the chapters for the related activities.
- Create a custom, external report using any of a variety of software packages to access the SEER*DMS data directly. Reporting tools such as Microsoft Access, Crystal Reports, SAS, etc., can be used to generate reports using data in the live SEER*DMS database or the data warehouse. Sample reports and SQL are available on the SEER*DMS Web Portal (<http://seer.cancer.gov/seerdms/portal>). The development and maintenance of external reports are the responsibility of registry staff. Contact your registry's system administrator for information regarding the external reports available at your registry.

Revisions and additions to reports within SEER*DMS are under the control of the Change Control Board. The Documentation section of the SEER*DMS Web Portal includes a description of each system report and extract. This documentation describes reports in the SEER*DMS Report Manager as well as reports that are integrated as print mechanisms throughout SEER*DMS.

Data Extracts and Submissions

Standard data extracts, such as the SEER submission file, have been integrated into the reporting module of SEER*DMS. In addition, Perl extract scripts which use imbedded SQL queries have been provided as examples of external scripts for creating custom extracts. Ad-hoc extracts can easily be produced using any tool or programming language which can access Oracle or ODBC. These include Crystal Reports, Access, Perl, Python, SAS, and many others.

The SEER*DMS database and data warehouse can be accessed from PC applications. To access the database from Windows-based software, drivers must be installed on your PC to enable connectivity with the Oracle databases. For example, you may install ODBC drivers to enable access to the databases using Crystal Reports or Microsoft Access. Instructions and files required to install ODBC drivers are provided on the SEER*DMS Web Portal. Other applications, such as SAS, may require additional components provided by the vendor.

The SEER*Stat software can be used to generate reports and to generate incidence, survival, and prevalence statistics. Once you extract data to a text file, you may use the SEER*Prep software to create a SEER*Stat database from the data stored in the extract file.

Please contact your registry's system administrator for specific instructions on creating or using external extract programs.

Finding a Report or Extract

System permissions: *reports* is required to access the Report Manager. Certain reports also require *reports_management*; extracts are only listed if the user also has the *extract_create* permission. A report's permission is displayed on its Report Specifications page.

*To find a SEER*DMS Report or Extract:*

1. Select **View > Reports**.
 - a. Reports and extracts are organized into categories. These include a category for reports that you used recently, pre-defined categories, and categories that you create. When you access the Report Manager, SEER*DMS will display the category that you viewed when you last visited the Report Manager. If this is your first time accessing reports, all reports and extracts will be displayed.
 - b. Reports and extracts are listed by ID. Report IDs have an "RPT" prefix; extract IDs use an "EXT" prefix. Registry-specific reports include a 2-character registry code following an RPT prefix (RPT-DT013A, for example).
2. To view a list of reports in a category, click the category name displayed on the left.
3. To search for a report by ID, title, or description, type text in the box labeled **Type to Search** and press the Enter key.

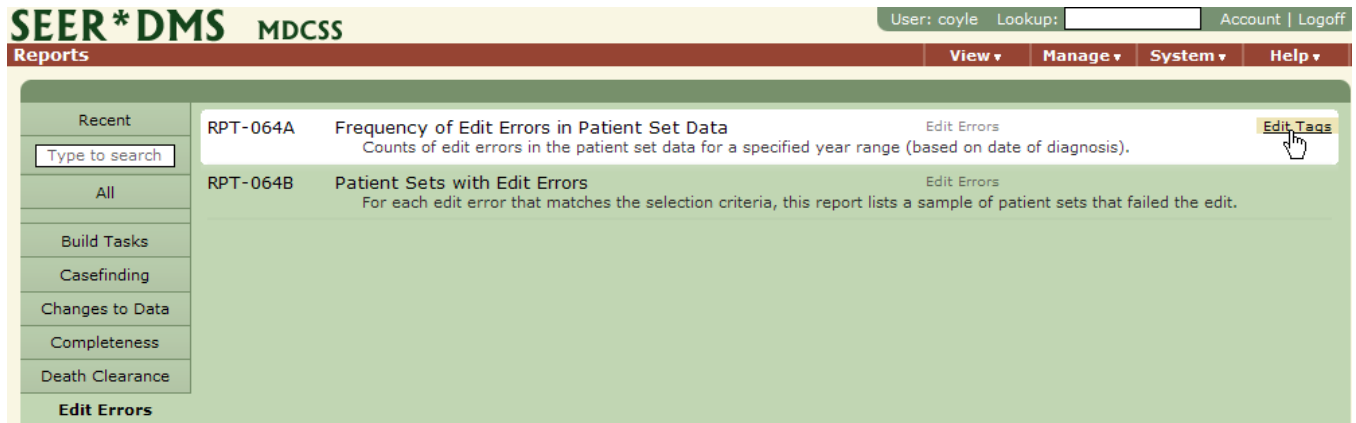
Organizing your Reports

System permissions: *reports*

The report categories are defined by tags associated with the reports. A report's categories or "tags" are listed next to its title in the Report Manager. You may create new categories by adding tags.

To organize reports into your own categories:

1. Click **View > Reports**.
2. Use the search box or category links to find the report (see the *Finding a Report or Extract* section of this chapter).
3. Hover your cursor over a report to select it. Click the **Edit Tags** link shown for the report.



4. To create a new category, click **Specify New Tag**.
5. To add the report to a category that you created previously, click the appropriate tag in the Add Tag list. You may not add a report to a pre-defined category.
6. To remove a report from a category, click the category's tag in the Remove Tag list.

Running a Report or Extract

System permissions: *reports* is required to access the Report and Extract Manager. Certain reports also require *reports_management*; extracts are only listed if the user also has the *extract_create* permission. A report's permission is displayed on its Report Specifications page.

To run a Standard Report or Extract in SEER*DMS:

1. Click **View > Reports**.
2. Use the search box or category links to find the report (see the *Finding a Report or Extract* section of this chapter).
3. Hover your cursor over a report to select it. Click anywhere in the highlighted area to open the report template.

The screenshot shows the SEER*DMS Reports page. On the left is a sidebar with a search box and several menu items. The main area lists two reports. The first report, RPT-064A, is titled 'Frequency of Edit Errors in Patient Set Data' and has a description: 'Counts of edit errors in the patient set data for a specified year range (based on date of diagnosis)'. It includes an 'Edit Errors' link and an 'Edit Tags' link. The second report, RPT-064B, is titled 'Patient Sets with Edit Errors' and has a description: 'For each edit error that matches the selection criteria, this report lists a sample of patient sets that failed the edit.' It also includes an 'Edit Errors' link.

4. You will use the Report Specifications page to define the report's output format and set parameters.
 - a. A detailed description of the report parameters is included in the **Description** section of the page. If you would like to view the SQL of the report, refer to the instructions in the *Viewing the SQL for a SEER*DMS Report* section of this chapter.
 - b. Specifications used previously are available in the **Previous Parameters** section of the page. Click a row to set all specifications to the same values used in a previous run.
5. If you are executing a report:
 - c. Edit the **Title** as necessary. This is the first title line shown in the report. Many reports include sub-titles which are often used to display parameter settings. You may wish to run and review the report to determine the best title.
 - d. Set the **Output Format** to PDF or CSV (Comma Separated Values) based on the following considerations.
 - i. **PDF:** Many of the SEER*DMS reports were designed to be viewed or printed as PDF files. Forms and record printouts should be output to PDF and may not display properly in CSV format.
 - ii. **CSV:** Many of the reports are tabular and can be exported to Comma Separated Values (CSV) format. You may open a CSV file in Excel or in a text editor. The CSV format is recommended if you wish to copy Patient Set or Record IDs from the report and paste them into the ID Lookup (see *Chapter 20: Searching for Records and Patients*). Tables that do not have consistent rows and columns may not export correctly to CSV.
 - e. Use the parameters to customize the report. Typically, parameters are used to specify the cohort or define the sort order.
 - i. If a parameter's label is in bold text, it is required.
 - ii. A blank setting for an optional parameter implies "all possible values" for that field.
 - iii. Some reports have the potential to request large volumes of data from the database. To prevent a report from affecting the response time for other users, SEER*DMS terminates report queries that exceed the time limit or generate a large result set. The thresholds are defined by the *reporting.time-out.minutes* and *reporting.max.rows* configuration settings. SEER*DMS enforces the value for

maximum rows set in the configuration settings unless a report-specific value is specified in the report's XML file. If a report exceeds the time or row limit, the Report Output task will display an error message. You will then have the opportunity to select new parameters to reduce the amount of output.

6. If you are creating an extract data file:
 - a. Edit the **Title** as appropriate. This title will be associated with the Report Output task and can be used to find the task in the worklist.
 - b. Set the extract parameters to meet your needs. If a parameter's label is in bold text, it is required. A blank setting for an optional parameter implies "all possible values". (Note: the filename entered here will be used as the default name when you download the extract file.)
7. Run the report or extract by clicking the appropriate button:
 - a. **Run** – queries the database and creates the report as you wait. (This option is not available for extracts.) If this process is able to complete within a time limit specified in the SEER*DMS configuration, the Report Output task will open automatically. If the time limit is exceeded, the report will automatically be run offline and the Report Output task will be available in the worklist when the task completes.
 - b. **Run Offline** – creates an automated, Run Report workflow task. You will be returned to the Report Manager.
8. To open the report, follow the steps in the *Viewing Output of Reports* section of this chapter. To download the extract data file, follow the steps in the *Downloading an Extract Data File* section of this chapter.

In order to protect the system from a slowdown caused by a large query, SEER*DMS limits the number of report and extract tasks that are processed simultaneously. Additional report and extract tasks are queued and are executed when others complete.

Viewing Output of Reports

Requires system permission: *reports* (certain reports also require *reports_management*)

An automated Run Report worklist task is created when a report is executed. When the report is successfully generated, a manual Report Output task is created and assigned to the user who submitted the report. If the report was executed using the Run command, this Report Output task opens automatically (proceed to step 2 in the instructions below). If a Run Report task fails, a System Failure task is created.

To view the output of a report that you submitted:

1. To view the output from a report that ran offline:
 - a. Click **View > Home** or click SEER*DMS in the top banner to return to the home page.
 - b. Click **Report Output** in the My Tasks section of your worklist summary. If this link is not shown, the report may have failed or may still be running (see the instructions below for *Searching the Worklist for Report and Extract Tasks*).
 - c. If you are searching for a recently generated report, click the **Task** column header to reverse the sort order of the list. This will bring the most recently run report to the top of the list. (The oldest worklist tasks are shown at the top of the list when you first go to the worklist.)

- d. To search for a report by title, enter a full or partial title into the **Information** filter and click **Apply**.
 - e. If the task is not displayed in the list, the report may have failed or may still be running (see the instructions for *Searching the Worklist for Report and Extract Tasks*).
 - f. Click on the Task ID to open the Report Output task.
2. Due to memory limitations in the reporting engine and the impact of exhaustive queries on system response time, SEER*DMS must restrict the execution time and number of result rows generated by each report. The thresholds are defined by the *reporting.time-out.minutes* and *reporting.max.rows* configuration settings. If either limit is exceeded, an error message will be displayed. Click **Edit Specifications** to specify parameters that reduce the number of records, and re-run the report.
 3. Click **View**. You will be prompted to Open or Save the report. Click **Open**. If the output format is PDF, Open the report with Adobe Acrobat. If the output format is CSV, open the report with Excel.
 - a. Use the Adobe or Excel controls to print or save this report.
 - b. Close the Adobe or Excel window.
 4. If you need to correct parameter values or titles, submit a new report:
 - a. Click **Edit Specifications**.
 - b. You may make modifications to the **Title**, **Output Format**, and **Parameter** fields.
 - c. Click **Run** or **Run Offline**. A new task will be submitted. The existing task will remain in the worklist until it is removed. You will be returned to the worklist.
 5. If you will not need to access this Report Output task again, you should remove the task from the worklist to prevent unnecessary clutter. Click **Remove** to permanently delete this task and the PDF or CSV file from the worklist. If you may need to access this Report Output task again, click **Close** to save and return to the worklist.

Downloading an Extract Data File

Requires system permission: *reports* and *extract_create*

An automated Run Extract Report task is created when a SEER*DMS extract is executed. When the task completes, an email is sent to the user who initiated the task and a Report Output task is created and assigned to the user. If a Run Extract Report task fails, a System Failure task is created.

To download an extract data file:

1. Open the Report Output task for the extract:
 - a. Click **View** > **Home** or click SEER*DMS in the top banner to return to the home page.
 - b. Click **Report Output** in the My Tasks section of your worklist summary. If this link is not shown, the extract task may have failed or may still be running (see the instructions below for *Searching the Worklist for Report and Extract Tasks*).
 - c. If you are searching for a recently generated extract, click the **Task** column header to reverse the sort order. This will bring the most recently run report or extract to the

- top of the list. (The oldest tasks are shown at the top when you first enter the worklist.)
- d. To search for an extract by its title, enter a full or partial title into the **Information** filter and click **Apply**.
 - e. If the task is not displayed in the list, the task may have failed or may still be running (see the instructions below for *Searching the Worklist for Report and Extract Tasks*).
 - f. Click the Task ID to open the Report Output task.
2. Review the following items that are provided in the Report Output task:
 - a. **Num Records** – the number of records included in the extract data file. If this value is zero, review the parameters that were specified to determine if an error was made.
 - b. **Filename** – the filename field in the Parameters section contains the text that you entered when you executed the extract. Depending on your browser, you may or may not be prompted for a filename. If not, the file will be saved to your browser's Download folder with this name.
 - c. **Parameters** – verify that the correct parameters were used to create the extract.
 3. If you need to correct parameter values, submit a new extract:
 - a. Click **Edit Specifications**.
 - b. You may make modifications to the **Title** and **Parameter** fields.
 - c. Click **Run Offline**. A new task will be submitted. The existing task will remain in the worklist until it is removed. You will be returned to the worklist.
 4. To download the extract data file:
 - a. Tips for managing downloads in Firefox:
 - i. Typically, the file will be downloaded to a folder that is defined as the "Downloads" folder in Firefox. In the Firefox menus, go to Tools > Options and select the Downloads tab. Verify that the downloaded data will be stored in an appropriate location. Change this location, if necessary. Please refer to the Firefox user's manual for more specific instructions.
 - ii. At any time, you may access your download folder by selecting Tools > Downloads from the Firefox menus.
 - b. Click **Download** on the Report Output Task page. Depending on browser settings and version, the file may be saved to your download folder automatically or you may be prompted to Open or Save the file. If prompted, click **Save to Disk**. If you are not prompted to select a location, the file will be saved in the folder that is defined as the "Downloads" folder in Firefox.
 5. If you will not need to access this Report Output task again, you should remove the task from the worklist to prevent unnecessary clutter. Click **Remove** to permanently delete this task from the worklist and delete the data file from the server. If you may need to access this Report Output task again, click **Close** to save and return to the worklist.

Searching the Worklist for Report and Extract Tasks

Requires system permission: *reports*

Each submitted report or extract task will appear in the worklist as a Run Report, Run Extract Report, Report Output, or System Failure task. When the task is initiated, SEER*DMS creates either a Run Report or Run Export Report task. The results for both are made available in a Report Output task which is assigned to the user who initiated the task. If the task fails, an unassigned System Failure task will be initiated. SEER*DMS users with the *system_administration* permission can access and review System Failure tasks.

To search the worklist for output from report or extract tasks:

1. Click **View > Worklist** or click the Worklist link on the home page.
2. If you are only interested in reports and extracts that you submitted, enter your user name in the **User(s)** filter.
3. Place a check in the **Show Unassigned** filter.
4. Select *Report Output* in the **Type(s)** filter.
5. Click **Apply**.

If a report or extract that you were expecting is not displayed, it may still be running (change the filter to include "Run Report" or "Run Report Extract" tasks in the search).

Sending Report Output to another User

Requires system permission: *worklist_task_reassignment*

Typically, you should distribute reports and extract data by saving the files to disk or providing printed copies of reports. However, SEER*DMS does allow you to reroute Report Output tasks to other users via the same mechanism used to reroute any worklist task. Users must have the appropriate permissions to access the output tasks.

To reroute a Report Output task to another user:

1. Select **View > Home** or click SEER*DMS in the top banner to return to the home page.
2. Click **Report Output** in the **My Tasks** section of the worklist summary. If this link is not shown, the report may have failed or may still be running.
3. If you are searching for a recently generated report, click the **Task** column header to reverse the sort order of the list. This will bring the most recently run report to the top of the list. (The oldest tasks are shown at the top when you first enter the worklist.)
4. To search for a report, enter a full or partial Report ID or title into the Information filter. Click **Apply**.
5. Check the box to the left of the Task ID.
6. Click **Modify**.
7. Set the **Action** to *Re-route to User*.
8. Select a user name from the pull-down list. Only system users with permission to view the report or open the extract will be listed. To view report output, the user must have either

the *reports* or *reports_management* permission; *extract_create* is required to access output tasks related to extracts.

9. Click **OK**.

Viewing the SQL for a SEER*DMS Report

Requires system permission: *system_administration*

XML files containing source code for system reports are included in the System Files segment of the System Administration page. If a report is implemented in SQL, the query will be included in its System File.

To view a SEER*DMS Report's SQL:

1. Click **System > Administration**. The current server log will be shown when you first enter the page.
2. Select **System Files** from the **Name** drop-down list.
3. Select the appropriate XML file from the Reports section of the **Files** drop-down list. Report filenames begin with the report ID (*rpt064A.patient.edit.error.summary.cfg.xml*, for example).
4. Search for the "query" XML tag. If the query type is SQL, the SQL will be displayed within the XML file. If the query type is Java, the source code will not be displayed.
5. SQL for system reports include non-SQL code to implemented report parameters. Refer to the Sample SQL section of the SEER*DMS Web Portal for instructions in modifying the SQL so that it can be used in external applications like SQL Workbench.

Chapter 25: Managing User Accounts

SEER*DMS user accounts prevent unauthorized access to data and system functions, enable e-mail notifications from the system to users, provide a mechanism to assign system roles to individuals, and provide a means to store useful information about the registry staff who use the system.

In this chapter, you'll learn about

- Using the Staff Manager
- Creating a New User Account
- Modifying a User's Contact Information
- Tracking Professional Training and Certifications
- Changing a User's Roles
- Restricting a User's Access to SEER*DMS
- Deactivating or Activating an Account
- Deleting a User Account
- Resetting a User's Password

Using the Staff Manager

Requires system permission: *user_add*, *user_edit*, or *user_delete*

To find a user or view a list of users:

1. Select **System > Staff**.
2. To search for a user or limit the list, use the following Filters.
 - a. Check **Hide Inactive** to search for active users only; uncheck this box to search for users regardless of their status.
 - b. Enter a full or partial username, e-mail address, last name, or first name in the **Search Terms** box.
 - c. Click **Apply**.
3. To sort the list by the data in any column, click on the underlined column heading.
4. To send a message to any individual user, click on the user's **E-mail** address.
5. To view other information related to a user's account, click the **User Name** or the **edit** link for the account.
6. To create a report showing the accounts in the filtered list, click **Print**.
7. To create an email message addressed to all users with active accounts, click **Notify**.


The S column displays the Status of each account.

-  Active
-  Inactive

Creating a New User Account

Requires system permission: user_add

To add a user account to SEER*DMS:

1. Select **System > Staff**.
2. Click **Add**. Default values may be set for some fields as determined by registry configuration settings. (To view the settings for your registry, search for *user.default* in the Configuration section of System Administration).
3. Enter a **User Name** consisting of 2-20 alphanumeric characters. User names are case sensitive; all letters are automatically converted to lower case when an account is saved. Once an account is saved, the User Name can not be modified.
4. Enter the user's **First Name** and **Last Name**.
5. *Optional*: Enter the user's primary **Phone Number**.
6. *Optional*: Enter an alternate number for the user in the **Alt Phone** field.
7. Enter the user's **E-mail** address. SEER*DMS will send system e-mail notifications to this address.
8. *Optional*: Enter a full mailing address using the **Street, City, State/Province, and Postal Code** fields.
9. Place a check in the **Active** box (default setting) to provide this user with immediate access to SEER*DMS, uncheck the box to prevent the individual from accessing SEER*DMS at this time. This setting can be modified at a future time by any user with the *user_edit* permission (see the *Restricting a User's Access to SEER*DMS* section of this chapter).
10. Check the **Access Restricted to Business Hours** box to limit the user's access to the "business hours" defined in your registry's configuration of SEER*DMS. Leave this box unchecked to allow access at any time of day. (To view the settings for your registry, search for *system.business.hours* in the Configuration section of System Administration).
11. You may use the **Offsite User** box to track whether this user has been given remote access to the SEER*DMS server. This field is for tracking purposes only, remote access to SEER*DMS is controlled by the registry's firewall settings.
12. You may use any or all of the fields provided for tracking the user's training and professional certifications. Click the Calendar icon  to modify dates for the following:
 - a. **Training Completed** – Date that registry training sessions were completed.
 - b. **Receipt of Signed Agreement** – Date of the most recently signed data agreement form.
 - c. **CTR Certification** – Certified Tumor Registrar certification date.
 - d. **IRB Training Completed** – Date that the user completed training in IRB regulations.
13. Enable system permissions for the user by assigning one or more roles.
14. Click **Save** to create and save the new account. SEER*DMS will send a message to the user's e-mail address providing the user name and a randomly generated password.

Modifying a User's Contact Information

Requires system permission: *user_edit*

To modify a user's account information:


1. Select **System > Staff**.
2. Use the **Filter** to search the list for a specific user.
 - a. Check **Hide Inactive** to search for an active user; uncheck this box to search for a user regardless of status.
 - b. Enter a full or partial user name, e-mail address, last name, or first name into the **Search Terms** box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Use the text boxes in **Staff Information** to make any necessary revisions to the name, phone numbers, e-mail address, and mailing address. Note: The User Name field of a saved account cannot be modified.
5. Click **Save** to save your revisions.

Tracking Professional Training and Certifications

Requires system permission: *user_edit*

You may track the dates when a staff member has completed registry training, submitted a signed data agreement form, received CTR certification, or completed training in IRB regulations.

To enter or modify dates for training and professional certification:

1. Select **System > Staff**.
2. Use the **Filter** to search the list for a specific user.
 - a. Check **Hide Inactive** to search for an active user; uncheck this box to search for a user regardless of status.
 - b. Enter a full or partial user name, e-mail address, last name, or first name into the **Search Terms** box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Click the Calendar icon  to modify dates for the following fields:
 - a. **Training Completed** – Date that registry training sessions were completed.
 - b. **Receipt of Signed Agreement** – Date of the most recently signed data agreement form.
 - c. **CTR Certification** – Certified Tumor Registrar certification date.
 - d. **IRB Certification** – Date that the user completed training in IRB regulations.
5. Click **Save** to save your revisions.

Changing a User's Roles

Requires system permission: *user_edit*

Roles are sets of system permissions which determine the type of tasks that a user will see in the worklist and control access to specific functions or data. SEER*DMS allows registry managers or system administrators to specify the permissions associated with each role (see *Chapter 26: Managing System Roles*). You may assign one or more roles to a user's account.

To modify the role assignments for a user's account:

1. Select **System > Staff**.
2. Use the Filter to search the list for a specific user.
 - a. Check **Hide Inactive** to search for an active user; uncheck this box to search for a user regardless of status.
 - b. Enter a full or partial user name, e-mail address, last name, or first name into the **Search Terms** box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Only the roles currently assigned to the account will be listed. Click the **edit** link in the Roles title bar to expand the list to include all roles.
5. The roles assigned to the account will be checked and highlighted in the list. To assign a new role to the account, check the box adjacent to the role's name. To remove a role assignment, uncheck the appropriate box.
6. Click **Save** to save your revisions. Changes to the user's system permissions implemented by changing role assignments will not affect the user's current session. The changes will go into effect the next time the user logs in to SEER*DMS. Note: If a user logs off and immediately logs back in, the changes may not have taken effect. A delay of 1-3 minutes between sessions is required.

Restricting a User's Access to SEER*DMS

Requires system permission: *user_edit*

SEER*DMS allows you to restrict a user's access to the business hours defined by your registry in the SEER*DMS configuration file. This restriction does not limit access on holidays that occur during the work week and only restricts *login access* to SEER*DMS. Access to the Login page itself is controlled by the registry's firewall and the user's firewall privileges.

SEER*DMS also allows you to *track* whether a user has offsite access privileges, however, SEER*DMS does not *control* this access. Firewall configuration and privileges are controlled by registry operations that are separate from SEER*DMS.

To set restrictions on a user account or track offsite access:

1. Select **System > Staff**.
2. Use the **Filter** to search the list for a specific user.
 - a. Check **Hide Inactive** to search for an active user; uncheck this box to search for a user regardless of status.
 - b. Enter a full or partial user name, e-mail address, last name, or first name into the Search Terms box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Check the **Access Restricted to Business Hours** box to limit the user's access to the "business hours" defined by your registry. Leave this box unchecked to allow login access at any time of day. (To view the settings for your registry, search for *system.business.hours* in the Configuration section of System Administration).
5. Check the **Offsite User** box if this user has firewall privileges allowing them to access the SEER*DMS server from a remote location. This field is provided for tracking purposes only and has no impact on a user's access.
6. Click **Save** to save your revisions. If you have changed the account to restrict access to business hours only, the change will not affect a user's current session. The change will go into affect the next time the user attempts to login to SEER*DMS.

Deactivating or Activating an Account

Requires system permission: *user_edit*

You may deactivate accounts that are no longer needed or require a temporary shutdown. This is a reversible process, and any account can be reactivated. A history of each account's activity is permanently maintained for the purpose of tracking.

To change the status of a user's account:

1. Select **System > Staff**.
2. Use the **Filter** to search the list.
 - a. Check **Hide Inactive** to search for active users only; uncheck this box to search for users regardless of their status.
 - b. Enter a full or partial username, e-mail address, last name, or first name in the **Search Terms** box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Check the **Active** box to allow this user to access SEER*DMS, uncheck this box to deactivate the account and prevent the individual from accessing SEER*DMS.
5. Click **Save** to save your revisions.

Deleting a User Account

Requires system permissions: *user_edit* and *user_delete*

In order to preserve tracking information, you may not delete an account that has been used to log into the system. See the *Deactivating an Account* section of this chapter to close the account of a staff member who has left your organization.

To delete a user account that has never been accessed:

1. Select **System > Staff**.
2. Use the **Filter** to search the list.
 - a. Check **Hide Inactive** to search for active users only; uncheck this box to search for users regardless of their status.
 - b. Enter a full or partial username, e-mail address, last name, or first name in the **Search Terms** box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Click **Delete** (this button is only displayed if the account has never been used to log into SEER*DMS).
5. Click **OK** to confirm the deletion.

Resetting a User's Password

Requires system permission: *user_edit*

You may reset a user's password in the event of a security concern or if the user cannot remember their password (passwords are encrypted in the database and cannot be viewed by the database administrators).

To reset a user's password:

1. Select **System > Staff**.
2. Use the **Filter** to search the list.
 - a. Check **Hide Inactive** to search for active users only; uncheck this box to search for users regardless of their status.
 - b. Enter a full or partial username, e-mail address, last name, or first name in the **Search Terms** box.
 - c. Click **Apply**.
3. Click the user name for the account to be edited, or click the adjacent **edit** link.
4. Click **Reset Password**. A new password will be randomly generated for the user. An e-mail message will be sent to the user informing them of the new password.

Chapter 26: System Roles & Permissions

System permissions are used in SEER*DMS to control access to specific functions or data. Roles are sets of system permissions. SEER*DMS allows registry managers to create roles as described in this chapter and to assign one or more roles to each user account (see *Chapter 25: Managing User Accounts*).

In this chapter, you'll learn about

- Understanding System Roles and Permissions
- Using the Role Manager
- Creating a New Role
- Modifying a Role
- Printing a Role's Permissions
- Printing or Viewing a Role's User List
- Deleting a Role

Understanding System Roles and Permissions

The table below lists all system permissions in SEER*DMS. The permissions restrict access at three levels:

1. A permission may control access to a full menu or to individual items on a menu. If a user does not have the necessary permission, the menu or menu item will not be visible. For example, users who do not have the *fb_manager* permission will not see Follow-back on the Manage menu.
2. A permission may determine if a user can view or open a specific type of task. For example, users who do not have the *consolidate* permission will not see Consolidate tasks in the worklist, or in the worklist summary on the home page. Consolidate tasks cannot be assigned or re-routed to them.
3. A permission may restrict access to specific buttons or links on a page. For example, users who have the *rec_edit* permission will be able to perform Resolve Record Errors tasks. But, unless their role also includes the *fb_initiate* permission, they will not be able to submit follow-back needs while performing the tasks.

A set of permissions may be required to perform an operation. Consider the consolidation of patient data as an example. If a user has the *consolidate* and *pat_edit* permissions, they will be able to open consolidate tasks and make changes to the patient set data fields as they consolidate. However, they are likely to require other permissions, such as *fb_initiate*, to complete the task.

Permission	A user with this permission has the ability to:	For more information see:
afl_initiate	Create an Abstract Facility Lead (AFL)	Chapter 21: Managing Abstracting Assignments
afl_manager	Assign, track, and update AFLs	
afup_manager	Modify, track, and update active follow-up (AFUP) needs	Chapter 16: Follow-up
afup_update	Limited use of the AFUP Manager. Update a patient's follow-up information in a single AFUP and for the batch of AFUPs in a communication.	
consolidate	Open Consolidate tasks (<i>pat_edit</i> is required to consolidate the data)	Chapter 12: Consolidating Data

Permission	A user with this permission has the ability to:	For more information see:
consolidate_fup	Open Consolidate FUP tasks (pat_edit_demographics or pat_edit is required to consolidate the data)	Chapter 16: Follow-up
contact_add	Add a physician or other contact (contact_edit is also required)	Chapter 19: The Contact List
contact_edit	Edit information for a physician or other contact	
contact_view	View Contact List in read-only mode	
extract_create	Create a data file by executing one of the standard extracts in the reports and extracts manager (View > Reports)	Chapter 24: Creating Reports and Extracting Data
facility_add	Add a facility (facility_edit is also required)	Chapter 18: The Organization and Facility List
facility_edit	Edit a facility	
facility_view	View Facility List in read-only mode	
fb_initiate	Add a follow-back need (in the record or patient set editor)	Chapter 22: Follow-back
fb_manager	Modify, re-assign, or re-query follow-back needs; send follow-back queries and process responses	
import_electronic	Load data files through the SEER*DMS interface	Chapter 5: Importing Data Files
import_manual	Perform data entry	Chapter 6: Data Entry
import_resolution	Open Import Review tasks	Chapter 5: Importing Data Files
lkup_modify	Add or edit codes to lookup lists (the lookups affected differ by registry)	
match	Select or reject matches in Match-Consolidate tasks	Chapter 10: Matching Incoming Records to Database
news_add	Add a news item. You may edit and delete items that you add.	Chapter 3: Using SEER*DMS
news_delete	Delete a news item entered by another user.	
news_edit	Edit a news item entered by another user.	
pat_delete	Delete a Patient, CTC, TX, or TXr (pat_edit is also required)	Chapter 11: The Patient Set Editor
pat_edit	Modify patient set fields other than over-ride flags, perform census tract resolution, use Patient Lookup, open Visual Edit Patient Set tasks	
pat_edit_demographics	Modify fields on demographic and comment pages of a patient set, use Patient Lookup	
pat_edit_overrides	Modify the over-ride flags in a patient set (pat_edit is also required)	
pat_end_task	Forward Resolve Patient Errors task to next workflow task regardless of the number of errors; does not affect submissibility (CTC status)	
pat_lookup_advanced	Use an alternate search algorithm in the Patient Lookup (if more than one algorithm is defined)	
pat_read_only	Access a patient set in read-only mode, use Patient Lookup	
pat_undelete	Undelete a Patient, CTC, TX or TXr (pat_edit is also required)	Chapter 11: The Patient Set Editor

Permission	A user with this permission has the ability to:	For more information see:
rec_build_cfo	Build a CTC from a casefinding record while editing the record	Chapter 21: Managing Abstracting Assignments
rec_build_dco	Build a CTC from a death certificate record while editing the record	Chapter 17: Death Clearance
rec_build_sho	Build a CTC from a short health record while editing the record	
rec_edit	Modify a record; use Patient Lookup	Chapter 8: Resolving Record Errors
rec_read_only	Access a record in read-only mode; use Patient Lookup	Chapter 20: Searching for Records and Patients
record_request_add	Create and send requests to outside organizations for records; view list of current Record Requests	Chapter 23: Requesting Records
record_request_resolve	Send, track, or update record requests in Record Request Manager	
reports	Access and generate standard reports	Chapter 24: Creating Reports and Extracting Data
reports_management	Access and generate management reports	
res_pat_errors	Open Resolve Patient Set Errors tasks (pat_edit is also required to complete the task)	Chapter 14: Resolving Patient Set Errors
res_rec_errors	Open Resolve Record Errors tasks (rec_edit also required to complete task)	Chapter 8: Resolving Record Errors
role_add	Add a new system role	Chapter 26: System Roles & Permissions
role_delete	Delete a system role (role_edit permission is also required)	
role_edit	Edit a system role	
screening	Set reportability status of a record	Chapter 9: Screening for Reportability
study_add	Define a new special study	Chapter 28: Special Studies
study_delete	Delete a special study	
study_edit	Edit a special study	
study_pat_edit	Add or remove a patient set from a special study; edit the patient set's inclusion criteria for a study	
study_rec_edit	Add or remove a record from a study; edit the record's inclusion criteria for a study	
system_administration	Provides control of system processes: execute system administration tasks (System > Tasks); terminate tasks regardless of task assignment	Chapter 28: System Administration
system_errors	View and manage System Error tasks	Chapter 28: System Administration
user_add	Add a new user account	Chapter 25: Managing User Accounts
user_delete	Delete a user account (user_edit is also required)	
user_edit	Edit a user account	
view_management_tasks	Access the Tasks section of the System menu; execute system tasks that do not require the system_admin permission	Chapter 28: System Administration
vis_edit_pat	Open Visual Edit Patient Set tasks (pat_edit also required to edit)	Chapter 13: Visual Editing
worklist_task_reassignment	Re-route or release worklist tasks	Chapter 4: Using the Worklist

Using the Role Manager

Requires system permission: *role_add*, *role_edit*, or *role_delete*

The system roles available in SEER*DMS are defined by registry management and vary from registry to registry.

To view the list of SEER*DMS roles defined for your registry:

1. Select **System > Roles**
2. To sort the list by the data in a column, click on the linked (underlined) column heading.
3. To print the permissions associated with a role, click the **report** link.

The **Last Editor** column shows the user who last edited and saved the role. The **Last Edited** column shows the date and time stamp when it was last saved.

The function of the **copy** link is described in *Creating a New Role*. The **edit** link is described in the *Modifying a Role* section of this chapter.

Creating a New Role

Requires system permission: *role_add*

To create a new role in SEER*DMS:

1. Select **System > Roles**
2. There are two mechanisms for creating a new system role in SEER*DMS:
 - a. To create a role by using an existing role as a template, click the **copy** link adjacent to an existing role. Use this technique if you are creating a role with a similar set of permissions as an existing role.
 - b. To create a role using a blank template, click **Add**.
3. Enter a **Role Name** consisting of 2-30 alphanumeric characters. Role names must be unique.
4. Enter text in the **Description** field. This description will be displayed in the Role Manager and in reports.
5. Check **Allow** for each system permission that is appropriate for this role.
6. Click **Save** to create and save the new role.

The new role will have no impact until the role is assigned to user accounts (instructions are provided in *Chapter 25: Managing User Accounts* chapter).

Modifying a Role

Requires system permission: *role_edit*

To make changes to the name, description, or permissions assigned to a role:

1. Select **System > Roles**
2. Click the role's name or its adjacent **edit** link.

3. Make any necessary modifications to the role's **Name** or **Description**. SEER*DMS uses underlying role IDs to manage the assignments of users to roles. Therefore, changing the name of the role does not affect the accounts of any users. Users that had this role with its old name will continue to have the role with the new name.
4. Check **Allow** for each system permission that is appropriate for this role. Uncheck any permission that is not appropriate.
5. Click **Save** to save your revisions. Changes to the role's permission settings will not affect a user's current session. The changes will go into affect the next time the user logs into SEER*DMS.

Printing a Role's Permissions

Requires system permission: *role_add, role_edit, or role_delete*

To create a report showing the permission settings for a role:

1. Select **System > Roles**.
2. Click the **report** link for the role of interest. The report engine will generate a system report in PDF.
3. Depending on your browser settings, you may have the option to Open or Save the report. If so, click Open. The PDF will open in an Adobe Acrobat window.
4. The report includes a list of the system permissions activated for this role. The report titles include the role name, description, date last modified, and the user name of the person who last modified this role.
5. Use the Adobe controls to print or save this report.
6. Close the Adobe window.

Printing or Viewing a Role's User List

Requires system permission: *role_edit*

To print or view the users who have a specific role:

1. Select **System > Roles**.
2. Click the role's name or its adjacent **edit** link.
3. Click **View Users (n)**, where n = number of active user accounts with this role. The report engine will generate a system report in PDF.
4. Depending on your browser settings, you may have the option to Open or Save the report. Click Open. The PDF will open in an Adobe Acrobat window.
5. The report lists the name and user name for the user accounts which are active and have this role. The "Other Roles" column indicates if this is the user's only role.
6. Use the Adobe controls to print or save this report as necessary for maintaining the user accounts.
7. Close the Adobe window.

Deleting a Role

Requires system permission: *role_delete* and *role_edit*

Caution: Users are assigned system permissions via the role or roles that are assigned to their user accounts. Typically, each user account will have only one role. If you delete a user's only role then you will be removing all system permissions for that user. They will be able to log in and use some functions in the View menu; all other system functions will be disabled for their account.

*To delete a system role in SEER*DMS:*

1. Select **System > Roles**
2. Click the role's name or its adjacent **edit** link.
3. Click **View Users** to generate a report of the user accounts that currently have this role. This report includes a column labeled "Other Roles". Print or save this report so that you can assign alternate roles to users with an "N" in this column.
4. Click **Delete**.
5. Click **OK** to confirm the deletion.

Chapter 27: System Administration

SEER*DMS is a Web-based application that interacts with the registry's Oracle database. The registry's information technology (IT) staff are responsible for a variety of tasks related to maintaining the integrity and security of the database, providing ad hoc programming support to registry staff, and maintaining the hardware systems that support SEER*DMS. The first sections of this chapter provide a broad overview of the duties of the registry system administrators and a cross-reference to more specific information related to these topics.

System Tasks are available within SEER*DMS to execute processes in batch mode. Management and IT staff should develop registry-specific policies and procedures for the use of these utilities. The System Administration page in SEER*DMS allows you to monitor system logs and review registry-specific configuration settings and algorithms.

In this chapter, you'll learn about

- Technical Skills Required to Maintain SEER*DMS
- Overview of IT Responsibilities
- SEER*DMS Technical Support
- System Tasks
 - System Tasks to Build CTCs from Non-abstract Records
 - Patient Set Edits Task
 - Identify Patients for Active Follow-up (AFUP)
 - Task to Purge Death Certificate Records
 - Task to Purge Supplemental Records
 - Task to Rematch Unlinked Records
 - Aborting a System Task
- System Administration Page
 - Configuration
 - Environment
 - Hibernate
 - Logs
 - Memory
 - System Files
 - System Properties
 - Threads

Technical Skills Required to Maintain SEER*DMS

In addition to proficiency in navigating within the MS Windows environment, the collective skill sets of your staff should include the skills described below.

Server Management

The registry's network administrator should have the skills to manage day to day operational issues such as server startup and shutdown, backup and recoveries, etc. Instructions written specifically for your registry's system configuration are posted in the System Administration section of your registry folder on the SEER*DMS Web Portal.

Ability to Write SQL Queries

IT staff must have the ability to write and optimize SQL queries and have a full understanding of the SEER*DMS database structure. If the registry has limited SQL experience, formal SQL training should be considered. The SEER*DMS Web portal (<http://seer.cancer.gov/seerdms/portal>) contains sample SQL as well as links to SQL references. SQL for the system reports is embedded in the report XML that may be viewed via the System Administration page.

Understanding of Data Structures

In order to put the SQL to good use, the IT staff must also have a full understanding of the SEER*DMS database. This would include a mapping to the legacy system, a mapping to the data fields displayed in the SEER*DMS editors, and a complete understanding of all table relationships. Diagrams are available on the SEER*DMS Web portal and data mappings are provided in the Field Mappings section of the Help menu.

Ability to Create Reports using an External Reporting Package

The SEER*DMS application includes numerous reports that were determined to be useful to all registries and could be implemented generically. If the registry requires additional reports, the registry's IT Staff must be able to generate and maintain the reports in an external reporting package that interfaces with the Oracle database.

Proficiency in an External Programming or Scripting Tool

Registry IT Staff must have the ability to restructure data files into SEER*DMS supported file formats and to create registry-specific extracts. To do this in a reliable and repeatable fashion, the IT staff must be able to write and maintain programs or scripts to perform these tasks. For example, registries often need to write ad hoc programs to create text files in the Generic Supplemental Format containing data sent by non-medical organizations. The files sent by these organizations are typically text files in non-standard formats. Any programming tool may be used for this purpose. However, many external programming tasks require connectivity to the Oracle database. Therefore, the IT staff must select and learn to use a tool that can interface directly with the Oracle database.

Several scripts, written in Perl, are delivered with SEER*DMS. If the registry wishes to utilize these scripts, it is the responsibility of the IT staff to maintain, update, or re-write them as necessary.

Overview of IT Responsibilities

The following summarizes the responsibilities of the registry's IT staff. Information and instructions related to these tasks are available in the *SEER*DMS Technical Reference* and various sections of this User's Manual, as indicated below.

1. Maintain valid licenses and maintenance agreements for Oracle, Linux, and any other server-side software required to implement SEER*DMS at your registry. The specific list of software required is provided in the registry-specific section of the SEER*DMS Portal (<http://seer.cancer.gov/seerdms/portal>).
2. Using the SEER*DMS system itself, registry IT staff will:
 - a. Execute the System Tasks described in this chapter. These include Build CFOs, Build DCOs, Patient Set Edits, etc.

- b. Extract data from the SEER*DMS database and save the data in the format required for a data submission or for use in an analytic tool (see *Chapter 24: Creating Reports and Extracting Data*).
 - c. Monitor the system logs displayed in the SEER*DMS System Administration tool and report problems to IMS staff.
 - d. Import data files as described in *Chapter 5: Importing Data Files*.
 - e. Provide technical support to registry staff, as needed. This requires a general knowledge of the system features described throughout this manual and the registry-defined workflow detailed in the SEER*DMS Technical References.
3. Using registry-defined strategies and systems, registry IT staff will:
 - a. Maintain on-site and off-site backups of the SEER*DMS servers.
 - b. Incorporate SEER*DMS servers into the registry-wide disaster recovery plan.
 4. Using an external reporting package such as Crystal reports, IT staff will:
 - a. Create new external reports as requested by registry staff. This will require a working knowledge of SQL and the reporting software.
 - b. Acquire and install the reporting software on the PCs of all registry staff who need to run external reports.
 5. Using Windows tools, registry IT staff will:
 - a. Configure the registry's personal computers and maintain current versions of client software required for SEER*DMS as described in *Chapter 3: Using SEER*DMS*.
 - b. Provide on-site technical support for all PC and network-related issues.
 - c. Write, test, and execute routines to pre-process data files that are not formatted per the registry-defined specifications for SEER*DMS import files.
 - d. Write, test, and execute routines to extract data from the SEER*DMS database according to registry-specific requirements. Standard extracts for SEER, NAACCR, and other submissions are available within the SEER*DMS application.
 - e. Write, test, and execute routines to process extracted data files (running edits, making data files available to staff, submitting data files to NCI and other organizations).
 - f. Monitor external logs and report problems to IMS staff.
 - g. Manage system disaster recovery procedures.
 6. Using an external SQL tool, registry IT staff will:
 - a. Fill ad hoc requests for data, reports.
 - b. Create and maintain registry-defined Oracle tables. A schema is available on the same server as the data warehouse for registry-defined tables. The registry may use this schema to create tables for research, linkage to SEER*DMS data warehouse tables, and other purposes. Tables in this schema cannot be linked to the SEER*DMS production database. Registry staff are responsible for all activities related to the maintenance and use of this schema. This includes the creation of tables, populating tables with values from SEER*DMS data warehouse tables or external sources, deletion of tables, updates

of values within tables, and the quality control of all scripts and programs involved in these tasks.

SEER*DMS Technical Support

Critical issues that inhibit registry operations should be reported immediately to IMS staff. Non-critical issues should first be triaged by the registry's local technical support team.

The registry must appoint a local technical support team who can respond to routine issues. This team should include representatives from IT, editing, and management. The registry team will triage routine technical support issues and perform an initial investigation. If an issue cannot be resolved on site or requires a system change, provide a description of the problem and the results of the investigation to IMS. Unresolved issues and requests for new features should be submitted via the Technical Support Squish project (<https://www.squishlist.com/seerdms/support>).

System Tasks

Requires system permission: *system_administration* enables access to all tasks;
view_management_tasks enables access to tasks that do not change any fields in the database

The Tasks section of the SEER*DMS System menu provides access to utilities or "tasks" that enable you to implement processes in batch mode. For example, the Build DCO system task enables you to auto-build batches of DCO cases from death certificate records as opposed to using the SEER*DMS editor to build each DCO case individually.

The majority of the System Tasks require the *system_administration* permission. Tasks that do not implement a change to any data in the database may only require the *view_management_tasks* permission.

Management and IT staff should develop registry-specific standard operating procedures (SOPs) related to the System Tasks. The SOPs should address these topics: scheduling considerations, procedures that must be completed prior to executing the task to ensure that the task is not executed on data inappropriately (e.g., that all death clearance processes are performed prior to executing the Build DCO system task), and a systematic review of data and relevant reports when the task finishes execution.

The System Tasks enabled in SEER*DMS vary by registry. All system tasks are listed below and are described in subsequent sections of this chapter:

- System Tasks to Build CTCs from Non-Abstract Records:
 - Build CFOs
 - Build DCOs
 - Build SHOs
- Identify Patients for Active Follow-up (AFUP)
- Patient Set Edits
- Purge Death Certificate Records
- Purge Supplemental Records
- Rematch Unlinked Records

System Tasks to Build CTCs from Non-Abstract Records

Requires system permission: *system_administration*

There are three separate, record-specific tasks for building CTCs from reportable, unlinked records. These tasks enable you to submit data to SEER or other sources despite the fact that an abstract is currently unavailable. To reduce the number of CTCs built solely from these records, it is recommended that you follow your registry's Death Clearance and Casefinding procedures prior to executing any of these tasks. Refer to *Chapter 17: Death Clearance* and *Chapter 21: Managing Abstracting Assignments* for further instructions.

- Build CFOs – build CTCs from casefinding, HL7 E-Path, or NAACCR Abstract records with a value of 7 for class of case (NAACCR abstract – class of case 7 is only an option in Hawaii's version of SEER*DMS).
- Build DCOs – build CTCs from death certificate records
- Build SHOs – build CTCs from short health records

If a reportable record is not linked to any Patient Set in the database, a new Patient Set will be created. If the record is linked to a Patient Set but not to a CTC in that Patient Set, a new CTC will be created in that Patient Set. An unassigned Visual Edit Patient Set task will be added to the worklist for each newly created or modified Patient Set.

Alternatively, you may use the record menu in the SEER*DMS editor to create a CTC for each record individually. Instructions are provided in the *Chapter 21: Managing Abstracting Assignments*.

To build CTCs from unlinked, reportable records:

1. Use reports and other means to verify that all appropriate death clearance or casefinding procedures have been completed. Execute system reports and registry-defined external reports to stratify the records by facility or other relevant factors. If necessary, use the appropriate system report to list candidate records and review the records manually. The reports below are available within the system. The following system reports show the number of records that will be considered by each task. Instructions for generating system reports are provided in *Chapter 24: Creating Reports and Extracting Data*.
 - a. Frequency Reports – Use these reports if you are interested in the number of records at a particular facility that will be used to build CFO, DCO, or SHO cases. These reports show an estimate that is not as accurate as the count displayed on the screen when you set the build task's options. However, only a total count is shown in the build task.
 - i. RPT-067B – Frequencies for the Build CFOs task.
 - ii. RPT-068B – Frequencies for the Build DCOs task.
 - iii. RPT-089B – Frequencies for the Build SHOs task
 - b. Record Listings – You may use these reports if you wish to review the individual records being considered by the build tasks.
 - i. RPT-067C – Candidates for the Build CFOs task.
 - ii. RPT-089C – Candidates for the Build SHOs task.
2. To continue with the Build CTC task, click **System > Tasks**.

3. Based on the record-type you wish to use in the build, click the link for the appropriate Build CTC system task. Because of the demand on resources, the task links for the Build tasks will be disabled if any of the Build tasks are currently executing.
4. Set the parameters for the task:
 - a. Enter a value for **Year**. The year parameter is required for all Build CTC system tasks. Registry-specific requirements determine which database field is used for year (e.g., date of diagnosis or screening year for CFO records, date of death for DCO records, date of diagnosis for SHO records). Please refer to the documentation section of the screen to determine the year used for each record type in your registry's configuration.
 - b. If you would like to specify a particular Facility Source, enter the appropriate ID in the **Facility** field. This parameter is not available for the Build DCOs system task.
 - c. You may specify the type of record considered by the Build CFO system task. The specific types of record considered by this task vary by registry. In all registries, casefinding and HL7 E-Path records may be used. NAACCR abstract records with a value of 7 for class of case may also be used in some registries. Consult registry management to determine which types of records should be used in the build.
5. Click **Recalculate** to view the number of records that will be considered by the task.
6. You may enter text related to this task in the **Comment** field. The comment for the last build of each type is stored in the database (*utility_history* table).
7. Click **Start**. SEER*DMS will begin executing the appropriate automated Build CTC task and return you to the System Tasks page.
8. After the task completes, follow the instructions below to review a report showing the results of the task.

SEER*DMS creates an unassigned Visual Edit Patient Set worklist task for each Patient Set created or modified by the build. To find the editing tasks, enter "DCO Build", "CFO Build", or "SHO Build" in the worklist's **Information** filter. To complete these editing tasks, follow your registry's guidelines for editing missing CTC data fields and resolving errors in patient data. The build task also generates a report listing each Patient Set created or modified by the build.

To review a Build Report for any of the Build CTCs System Tasks:

1. Select View > Home.
2. Click **Report Output** in the **My Tasks** section of your worklist summary. If this link is not shown, then the build may have failed or may still be running.
3. If you have a large number of Report Output tasks, use the filter to search for the results of the Build CTC System Task:
 - a. Enter "Build" in the **Information** filter to search for a worklist task related to any of the Build CTC System Tasks. Or you may indicate the specific task by specifying "Build CFOs", "Build DCOs", or "Build SHOs" in the filter.
 - b. Click **Apply**.
4. Click on the **Task ID** to open the Report Output task.
5. Click **View**. Depending on your browser settings, the report may open automatically or you may need to click **Open**. The PDF will open in an Adobe Acrobat window.

6. Use the Adobe controls to print or save this report.

Patient Set Edits Task

All edits are executed each time a patient set is opened, validated, or saved in the SEER*DMS editor. The Patient Set Edits system task enables you to re-execute the edits on patient sets in the database. You may run the edits on all patient sets or on a cohort defined by year of diagnosis. Use the Patient Set Edits task to ensure that new or modified edits are evaluated.

A polisher is a system utility that derives, calculates, or assigns data field values. For example, polishers are used to derive collaborative stage variables; assign census tract based on address; and calculate the age at diagnosis based on date of birth and date of diagnosis. When a patient set is opened, saved, or validated, a polisher will be executed if the value of a related data item changes.

Polisher classes are defined in the registry configuration files. These "classes" are categories which are used to control their execution sequence during system processes, and to determine whether a polisher is available in the Patient Set Edits system task. In the Patient Set Edits task, you have the option of executing the polishers in the "Pre-Edits" and "Post-Edits" classes (the polishers in these classes are listed on the screen when you open the Patient Set Edits system task). Typically, these should not be run when this task is executed and should only be considered during the initial transition of data to SEER*DMS. You also have the option of executing one additional polisher in the "Standard" and "Extra-Edits" polisher classes. In SEER*DMS, the polisher class definitions can be viewed by selecting Configuration from the System Administration page (the *system_administration* permission is required). Additional information related to polishers can be found in the *SEER*DMS Technical Reference*.

To re-execute the edits for some or all patient sets in the database:

1. Click **System > Tasks**.
2. Click the **Patient Set Edits** link.
3. To limit the edits to data by year of diagnosis, enter the **Start Year**. Patient sets with a diagnosis date during or after this year will be considered.
4. If you would like to define an end range, enter an **End Year**. If the end date is not specified, today's date will be used by default.
5. To include data with unknown year of diagnosis, set **Include Unknown Year** to *Yes*.
6. If you wish to execute polishers in the Pre-Edit and Post-Edit classes, set **Run Edit Polishers** to *Yes*. It is recommended that this option be set to *No* unless there is a specific need related to the transitioning of data into SEER*DMS.
7. To execute a single polisher from the "Standard" or "Extra-Edits" classes, select a polisher from the **Extra Polisher** drop-down list.
8. You may enter text related to this task in the **Comment** field. The comment for the last execution of the task is stored in the database (*utility_history* table).
9. Click **Start**.

The edits will be re-evaluated for each patient set in the cohort. In order to avoid creating an inordinate number of worklist tasks, a Resolve Patient Set Errors task will *not* be created for each patient set with an edit error. If the logic of a new or modified edit is implemented incorrectly, it could erroneously create an edit error for a large number of patient sets. Therefore, you must use reports rather than tasks to identify the patient sets with errors and to evaluate the error levels in

the patient set data. Two system reports are available for identifying the edit errors that were triggered and the patient sets that are involved:

- *RPT-064A: Frequency of Edit Errors in the Patient Set Data*- Run this report to evaluate the error levels in the patient data. In order to verify that modifications to edits, polishers or data did not have unexpected results, set the parameters to generate frequencies of errors for all edits in all patient set data.
- *RPT-064B: Patient Sets with Edit Errors* - Run this report to obtain a listing of Patient Sets with an error related to a particular edit.

Instructions for creating reports are provided in *Chapter 24: Creating Reports and Extracting Data*.

Identify Patients for Active Follow-up (AFUP)

Requires system permission: *system_administration*

Registry-specific algorithms are used to identify patient sets for active follow-up (AFUP). These criteria are typically based on vital status, date of last contact, and whether the patient's follow-up status is monitored by the registry (e.g., non-reportable cases may not be followed by some registries).

The "Identify Patients for AFUP" task creates an open 'AFUP Need' for each patient set requiring active follow-up. You may use the AFUP Manager to facilitate and track communications to the patients, their physicians or other contacts. The AFUP Manager also enables you to enter follow-up data as it is received. An AFUP Need is closed when the patient's vital status and date of last contact indicate that the need has been fulfilled. Instructions for using the AFUP Manager are provided in *Chapter 16: Follow-up*.

To populate the AFUP table:

1. Click **System > Tasks**.
2. Click the **Identify Patients for AFUP** link.
3. Enter a date in DOLC Cutoff that defines whether a patient set requires active follow-up. A patient set will be considered if the patient set's value for vital status is alive and the date of last contact is prior to this date.
4. Click **Recalculate** to view the number of patient sets that meet the criteria. If the number of patient sets is unacceptably high based on registry policy, adjust the DOLC Cutoff and recalculate.
5. You may enter text related to this task in the **Comment** field. The comment from the last execution of the task is stored in the database (*utility_history* table).
6. Click **Start**. SEER*DMS will create an AFUP Need for each patient set which matches the registry's active follow-up criteria. Once the task completes, the follow-up staff may use the AFUP Manager to initiate follow-up procedures for these patients.

Task to Purge Death Certificate Records

Requires system permission: *system_administration*

The purpose of the Purge Death Certificate Records system task is to permanently remove unused death certificate records from the system. Typically, this task would be used to delete old, non-reportable records. Consult with registry management and write a query or report to review the

records prior to executing this task. Purge Death Certificate Records will delete records which meet these criteria:

- The record is not reportable.
- The record is unlinked. Linked records may have contributed to patient set data and, therefore, cannot be deleted.
- The record is not the focus of a workflow task. If you need to delete a batch of records which are involved in workflow tasks then you must terminate the tasks prior to using the Purge Death Certificate Records task.
- The record's type and import date meet the specifications that you set in the task's options.

To permanently remove unlinked Death Certificate records from the database:

1. Click **System > Tasks**.
2. Click the **Purge Death Certificate Records** link.
3. Specify the **Date of Death Prior To**. If an Import ID is not specified, the task will delete records with a date of death (*record.date_of_last_contact*) prior to this date or a null value for *record.date_of_last_contact_yyyy*.
4. If an **Import ID** is specified, all records in the import will be considered by the task (the date parameter will be ignored). Records in the import that are linked or in the workflow will not be deleted.
5. You may enter text related to this task in the **Comment** field. The comment from the last execution of the task is stored in the database (*utility_history* table).
6. Click **Recalculate** to view the number of records that will be considered by the task. Determine whether this value is reasonable.
7. Click **Start**.

Task to Purge Supplemental Records

Requires system permission: *system_administration*

The purpose of the Purge Supplemental Records system task is to permanently remove unused records from the system. Typically, this task would be used to delete old records from non-medical sources (DMV, SSA, etc). Consult with registry management and write a query or report to review the records prior to executing this task. Purge Supplemental Records will delete records which meet these criteria:

- The record is unlinked. Linked records may have contributed to patient set data and, therefore, cannot be deleted.
- The record is not the focus of a workflow task. If you need to delete a batch of records which are involved in workflow tasks then you must terminate the tasks prior to using the Purge Records task.
- The record's DOLC and import date meet the specifications that you set in the task's options.

To permanently remove unlinked Supplemental records from the database:

1. Click **System > Tasks**.
2. Click the **Purge Supplemental Records** link.

3. Specify the **DOLC Prior To**. If an Import ID is not specified, the task will delete records with a date of last contact prior to this date or a null value for *date_of_last_contact_yyyy*.
4. If an **Import ID** is specified, all records in the import will be considered by the task (the date parameter will be ignored). Records in the import that are linked or in the workflow will not be deleted.
5. You may enter text related to this task in the **Comment** field. The comment from the last execution of the task is stored in the database (utility_history table).
6. Click **Recalculate** to view the number of records that will be considered by the task. Determine whether this value is reasonable.
7. Click **Start**.

Task to Rematch Unlinked Records

Requires system permission: *system_administration*

The Rematch Unlinked Records system task reloads records into the workflow. Each record enters the matching task in the workflow branch that appropriate for the record type (main workflow or passive follow-up, for example). The record is not sent through the tasks that precede matching: automatic record recoding, record edits, or screening. The value for reportability assigned when the record was first loaded is retained.

Based on the record type and match result, this task may create manual matching or consolidate FUP tasks in the worklist. Consult with registry management prior to executing this task. This task was originally designed to reload records for the purpose of passive follow-up. For example, unlinked supplemental records that did not match a patient in the database when the record was first loaded. However, the task can be used to rematch any type of record.

Records that meet the following criteria will be loaded into the workflow and rematched:

- The record is unlinked.
- The record is not the focus of a workflow task.
- The record's type, reportability, date loaded, and Import ID correspond to the options set in the task.

To rematch unlinked records:

1. Select **System > Tasks**.
2. Click **Rematch Unlinked Records**.
3. Select the **Record Type**. The task can only be run on one type of record at a time.
4. You have the option of rematching records with a specific value for **Reportability**. Leave this option blank to consider all records regardless of reportability.
5. You have the option of restricting the rematch to records **Loaded on or after** a specific date. Leave this option blank to consider all records regardless of date loaded.
6. If an **Import ID** is specified, all records in the import will be considered by the task (the date parameter will be ignored). Records in the import that are linked or in the workflow will not be considered.
7. You may enter text related to this task in the **Comment** field. The comment for the last Rematch Passive Follow-up Records task is stored in the database (utility_history table).

8. Click **Recalculate** to view the number of records that will be considered by the task. Determine whether this value is reasonable.
9. Click **Start**. The records will be loaded into the workflow and matched against the database. Passive follow-up data will be auto-consolidated, if possible. Match-consolidate, Consolidate FUP, Supplemental Match tasks may be created depending on the record type and match result.

Aborting a System Task

Requires system permission: *system_administration*

You may use the worklist to stop the execution of a system task. However, all changes made by the task may not be reversed. Some system tasks that update data perform the updates in batches. Updates that were made before you click Abort Task will not be reversed. You may use reports or query audit logs, the worklist, and other data to determine what was changed. The Patient Set Edits and Build tasks (Build CFOs, Build DCOs, Build SHOs) create a report. For those tasks, the report will still be created and will list the patient sets that were modified.

To abort a System Task:

1. For system tasks, the automatic task will be assigned to you and a link will be shown in the My Tasks section of your home page. Click the Automated task link for the appropriate task type to access the worklist.
2. Click the **Task ID**.
3. Click **Abort Task**.
4. Click **OK** to confirm.

System Administration Page

Requires system permission: *system_administration*

The System Administration page allows you to monitor system logs, review the registry-specific configuration settings and algorithms implemented in SEER*DMS, and access the version history.

To review information provided in the System Administration page:

1. Click **System** > **Administration**. The current server log will be shown when you first enter the page.
2. To view other logs and documents, select a topic from the **Name** drop-down list.
 - a. Configuration – variable definitions in the registry-specific configuration files.
 - b. Environment – environment variables for the SEER*DMS servers.
 - c. Hibernate – technical information for the SEER*DMS development team. This page shows information concerning internal data structures and caching strategies. The Hibernate section may not be displayed in your registry's version of SEER*DMS.
 - d. Logs – Boot and server logs. Use these logs to monitor system activity and to identify the cause of system errors.
 - e. Memory – memory allocation, current usage, and memory pool status indicators.

- f. System Files – the XML files containing the registry-specific implementation of the Edits, Importer, Lookups, Matching, Reports, Screening, Translator, and Workflow. Select a specific file from the Files drop-down list. These files are particularly useful for accessing and reviewing importer algorithms, matching criteria, and report SQL.
- g. System Properties – Linux environment settings (a resource for the SEER*DMS development team)
- h. Threads – list of concurrent system processes that are executing.

Chapter 28: Special Studies

In SEER*DMS, "Special Studies" consist of user-defined criteria to determine the eligibility of incoming records for the purpose of rapid case ascertainment. The criteria specified for a Special Study are applied to records as they move through the workflow's auto-screening task. The criteria may define a record as "in the study", "out of the study", or "possible data for the study". In addition, you may use the SEER*DMS editor to manually assign records or patient sets to a special study.

Special study criteria are applied to incoming records as they move through the automatic screening task. A manual screening task is generated if the record is identified as a "possible" match for the study. Refer to *Chapter 9: Screening* for instructions for setting the special study eligibility in a screening task.

Records are only screened for a special study if they move through auto-screening after the special study is defined. Patient Set data are not auto-screened for special study eligibility. External queries must be used to determine patient set eligibility and eligibility of records screened prior to a study's creation. Mass Change imports or ad hoc editing can be used to modify the special study fields which define whether a record or patient set is associated with one or more studies. Instructions for Mass Change Imports are provided SEER*DMS Technical Reference. Instructions for manually setting special study fields in records and patient sets are provided in the *Manually Defining Special Study Eligibility* section of this chapter.

External queries must be used to extract or analyze data based on special study fields. Sample SQL related to special studies are available on the SEER*DMS Web Portal.

In this chapter, you'll learn about

- Defining a Special Study
- Deleting a Special Study
- Manually Defining Special Study Eligibility

Defining a Special Study

Requires system permission: *study_add* or *study_edit*

To define a Special Study:

1. Special Study selection criteria must be expressed in SQL statements. Write and test the SQL in an external tool (e.g., SQL Workbench) prior to adding the criteria to a special study.
2. Select **Manage > Special Studies**. All active studies will be shown in order by Study ID.
3. To create a new study, click **Add** (this button will only be shown if you have the *study_add* permission). To modify an existing study, click the study's ID. You may search for a study using text in the Study ID, Study Name, and Description fields. To include Inactive Studies in your search, uncheck the **Hide Inactive** box.
4. Enter a **Study ID** consisting of 2-20 alphanumeric characters (the underscore character is also permitted). Study IDs are case sensitive; all letters are automatically converted to lower case when the study is created or modified.
5. Enter a **Study Name** consisting of 1-50 characters of any type.
6. You may enter a longer description of the study in the **Description** field.

7. Use the **Active** checkbox to set the study's status field to the appropriate value. Check this box for active studies. Uncheck this box to change the status to inactive. A record will not be screened for eligibility for inactive special studies; records and Patient Sets cannot be manually added to inactive special studies. External processes could be used to determine eligibility for inactive special studies. Mass Change Imports could be used to set special study flags in inactive studies.
8. If you are creating a new study, you must click **Save** at this point. The study will now be included in the list of studies in the Special Study Manager and in the Special Study section of the record and Patient Set editors. Instructions for adding a record or Patient Set to a special study are provided in the *Manually Defining Special Study Eligibility* section of this chapter.
9. If you are creating a new study, click **Add Criteria**. If you are modifying an existing study, you may either add new criteria or edit existing criteria.
 - a. Enter a comment describing the selection criteria.
 - b. Set the Inclusion level. If a record is screened and meets the criteria, the record will be added to the special study with this inclusion setting.
 - i. **In** – Records meeting the criteria fulfill eligibility requirements for the study.
 - ii. **Possible** – Records meeting the criteria should be reviewed by registry staff to determine study eligibility. If an incoming record meets this criteria, a manual screening task will be created in the worklist.
 - c. Enter text into the **Criteria** text box that completes the SQL statement which begins with the text in Query. Special study screening is only available for record data.
 - d. Click **Validate** to check for syntax errors in the SQL statement. Validate only checks SQL syntax and does not perform any reasonableness checks. As stated before, the SQL must be written and tested in an external tool prior to defining the study.
 - e. Click **Counts** to determine the number of records in the database which currently meet this criteria. This count should match the value that you calculated when testing the SQL. The count includes records that have already been screened. SEER*DMS automatically screens for special study eligibility during the screening worklist task. If you wish to include records that were previously screened, use a Mass Change import or ad hoc editing to set the special study fields for the records.
10. Click **Save** to save the criteria. From this point forward, the criteria will be applied to records as they move through the screening task in the workflow. You will then be able to use external queries to extract or analyze data based on the study inclusion flags
11. Click **Save** to save all changes to the Special Study.

Deleting a Special Study

Requires system permission: *study_delete*

If you delete a special study, all traces of the study are removed from the system. This includes the criteria defined in the study and indicators in records and patient sets related to the study. To re-create the study, you would need to add the study in the manager. You would then need to run external queries to identify data for the study. Finally, you would need to use a Mass Change import or ad hoc editing to set the special study fields for the records or patient sets.

To delete a Special Study:

1. Select **Manage > Special Studies**. All active studies will be shown in order by Study ID.
2. You may search for a study using text in the Study ID, Study Name, and Description fields. To include Inactive Studies in your search, uncheck the **Hide Inactive** box.
3. Click the **ID** of the study to be deleted.
4. Review the study to be certain that you are deleting the appropriate study. Pay particular attention to the Data Summary shown in the upper right corner. As discussed above, several steps would need to be taken to redefine a study which is already populated with records or patient sets.
5. To proceed, click **Delete**.
6. Click **OK** to confirm.

Manually Defining Special Study Eligibility

Requires system permission: (*study_pat_edit* and *pat_edit*) or (*study_rec_edit* and *rec_edit*)

You may open the records and patient sets in the SEER*DMS editor and indicate that the data are associated with one or more special studies. If an unlinked record is flagged for a special study and the record is subsequently linked to a patient set, registry policy dictates whether the person consolidating the data should manually set the special study indicator in the patient set.

To indicate whether data should be included in (or excluded from) a special study:

1. Open the record or Patient Set by entering its ID in the Lookup box on the SEER*DMS toolbar (or you may use any of the search features described in *Chapter 20: Searching for Records and Patients*).
2. Review the record data.
3. Click the **SS** link in the navigation box on the left side of the screen.
4. If you believe the screening algorithm incorrectly identified a record or patient set for a study, click the **Delete** link for the study. You should inform registry management that the initial criteria for the Special Study may be incorrect. The study should only be deleted if your registry criteria indicates that the data should not be designated as In, Out, or Possible for the study.
5. Select the study to add or modify:
 - a. To add the data to a study, click **Add**. Select the **Study ID** from the drop-down list. Inactive studies will not be listed.
 - b. To modify settings for a study, click the **Edit** link in the Action column for the study.
6. Based on registry policies, set the **Inclusion** status to:
 - i. **In** – The record fulfills eligibility requirements for the study.
 - ii. **Out** - The record meets screening criteria for the study, but upon review, you determined that the record is ineligible. For example, the physician did not give approval for the patient's inclusion, or the patient declined to participate.
 - iii. **Possible** – You are unable to make a definite determination of the record's eligibility at this time.

7. If you know of a study-specific ID for this record, enter the value in **Participant ID**.
8. You may document your changes by adding a comment.
9. Save your changes to the fields for this study. If this is a new study, click **Add**. If you are modifying an existing study, click **Update**.
10. To save your changes to the record or patient set:
 - a. Click **Save**.
 - b. If you would like to save these changes but continue editing, click the **Save** button at the bottom of the Review Changes page.
 - c. If you would like to exit the editor, click **Save & Exit**.

SEER*DMS Glossary

Abstract Facility Lead – In SEER*DMS, an Abstract Facility Lead (AFL) is a mechanism for assigning and tracking a request to abstract a case at a particular facility. An AFL is auto-created when an incoming record indicates a reportable cancer that requires an abstract. In most configurations, an AFL is auto-created when a Casefinding, Health Index, NAACCR Update, or Death Certificate record moves through the workflow (refer to your registry's workflow diagram). If the record is reportable, an AFL is auto-created to alert you to the need for an abstract. The AFL is closed automatically when an abstract record enters the system and is matched to the AFL. AFLs can also be created and closed manually. AFLs are described in detail in *Chapter 21: Managing Abstracting Assignments*.

Auditable – A reportability setting of Auditable indicates that a record contains cancer-related data but is not a reportable case. Auditable records are retained for use in casefinding audits. SEER*DMS processes these records to obtain potential follow-up information. See Chapter 9: Screening for Reportability.

Audit Log – SEER*DMS maintains an audit log for each record and patient set in the system. Whenever a record or patient set data field is changed by a user or a system process, an entry is made in the associated audit log. The information in the audit log includes the user or process which modified the data, comments related to the change, the date and time of the modification, and the original and modified value of each data field that was changed. A user may provide comments related to individual data items or provide a general comment for all data items changed within a single session. See Chapter 2: Records and Patient Sets.

Consolidation – The consolidation process involves combining cancer data from multiple reporting facilities for the same patient into one comprehensive data set, known as the "patient set." This process may involve consolidating data from multiple records and creating a new patient set, or consolidating data from one or more records into an existing patient set. See *Chapter 12: Consolidating Data*.

CTC – Cancer/Tumor/Case (CTC) refers to an instance of a reportable disease. Generally speaking, a CTC is a neoplasm with topography, histology, and behavior codes that meet the SEER, local, or special study case reporting guidelines. While this is usually a cancer or a tumor, some code combinations are not truly tumors and others are arguably not cancer. In the SEER*DMS database, a CTC is a data entity within a patient set. All diagnostic, staging, and treatment data for a reportable neoplasm are stored in the CTC table. A patient set may include multiple CTCs, one for each primary cancer diagnosed for the patient. See *Chapter 2: Records and Patient Sets*.

Death Clearance - Death Clearance is the process of linking death certificate records with the registry database in order to determine all deaths among registrants and to identify deaths from cancer among persons previously unknown to the registry. These processes are described in *Chapter 17: Death Clearance*.

Edit Errors – During various workflow processes, SEER*DMS checks records and patient sets for errors based on SEER and registry-defined edits. Errors that are detected can be reviewed in the record or patient set editors and monitored through system reports. A severity level is assigned to each edit in order to trigger specific manual tasks and prioritize errors during editing tasks. See *Chapter 7: Edit Errors*.

Follow-up – The term follow-up refers to the processes whereby a registry continues to monitor the status of a patient's health at periodic intervals. Data fields concerning a patient's vital status, date of last contact, treatment, and recurrence are periodically updated to maintain accurate surveillance information. See *Chapter 16: Follow-up*.

Follow-back – In SEER*DMS, the term “follow-back” refers to the process of contacting a reporting facility to obtain missing information or to resolve inconsistencies in data received at the registry. While editing, screening, or consolidating data, a registrar can submit a request for follow-back information. The request will be forwarded to the Follow-back Management tool for processing, and a copy of the request will be maintained with the record or patient set for system users to review. Periodically, a registry manager will review, edit, and compile follow-back requests into a single communiqué that is sent to a physician or other representative at a facility. See *Chapter 22: Follow-back*.

Follow-back Need – An individual request for follow-back information.

Follow-back Bundle – All the follow-back needs intended for a single facility are bundled together and held for processing. A registry manager will periodically review, edit, and send bundles to the designated organizations.

Patient Set – A packet of data in the SEER*DMS database which includes all data associated with a particular patient. These data include patient demographics, information on all reportable cancers, admissions information, diagnostic procedures, treatment information and text documentation. The patient set also includes linkage information to enable access to the source records. See *Chapter 2: Records and Patient Sets*.

Record – A record contains the source data submitted to the registry. In the SEER*DMS database, these data are stored in the record table. Records are created in the database when data are loaded from files or entered manually. Each record travels through the workflow, triggering the automated and manual tasks that must be performed to process the data. See *Chapter 2: Records and Patient Sets*.

Incoming Record – A record that has entered the workflow and has not yet been consolidated into patient set data is referred to as an incoming record.

Focus Record – The record that triggered the creation of a workflow task is the “focus record” of that task. One incoming record is the focus of Match-Consolidate and Consolidate tasks. Other records that were selected as matches to that record would also be involved in the tasks.

Linked Record – A “link” is an association between a source record and a patient set. When record data are consolidated into an existing patient set or used to auto-build a new patient set, the record is linked to the patient set. The Patient Set Editor provides access to all linked records, enabling users to review the raw data that contributed to the summarized and consolidated Patient Set.

Record Request – The record request feature provides a mechanism for a registry to request either a specific record or a specified set of records from an outside organization, and to track responses received by the registry. See *Chapter 23: Requesting Records*.

Record Type – Record type is a general classification that can be assigned to data provided in multiple file formats. For example, the Supplemental record type is used for department of motor vehicle, CMS/HCFR, and voter registration data. The record type setting dictates the path of an incoming record through the SEER*DMS workflow. The SEER*DMS record types are defined in *Chapter 2: Records and Patient Sets*.

Screening – Screening is the process of determining whether data are reportable to SEER or local agencies. SEER*DMS uses a combination of automatic and manual workflow tasks to determine a record’s reportability. A manual screening task is generated for any record that, according to registry policy, must be reviewed in order to ascertain reportability. See *Chapter 9: Screening for Reportability*.

System Report – SEER*DMS includes an integrated reporting package that enables you to run pre-defined system reports. These include reports that summarize registry activities, track data through the system, and provide quality control information. Some system reports are integrated as print mechanisms throughout SEER*DMS, while others are listed in the Standard Reports table. See *Chapter 24: Creating Reports and Extracting Data*.

Visual Editing – Quality control of new patient set data involves the review of edit errors identified by the computerized edits and a visual review of data fields. In SEER*DMS, the Visual Edit Patient Set task enables registrars to visually review data for a new patient when a patient set is auto-created from a single abstract record. Visual editing is also conducted during consolidation tasks, in which registrars review incoming data as they consolidate it with data previously loaded into the system. See *Chapter 13: Visual Editing*.

Wizard – A utility within a computer system that guides the user through a series of steps to accomplish a task. In SEER*DMS, a wizard interface is used to step the user through the process of uploading data files (see *Chapter 5: Importing Data Files*).

Workflow – The SEER*DMS workflow provides a configurable means to establish the flow of records and other system data through the appropriate automatic and manual tasks. The workflow controls the path of a record through the editing, screening, matching, and consolidation tasks with the ultimate goal of incorporating it into the patient set data. A record entering the workflow is initially processed in a series of automatic tasks. If human attention is required in order to complete a task, a manual task is added to the worklist. Once the manual task is completed, the record continues to the next task in the workflow. See *Chapter 4: Using the Worklist*.

Worklist – The SEER*DMS worklist provides a view of the automatic tasks that are currently running and the manual tasks that require attention. The manual tasks displayed in the worklist are the staff's "to do list". See *Chapter 4: Using the Worklist*.

