UTAH EMS

POLARIS

Prehospital OnLine Active Reporting Information System

User Manual

Bureau of Emergency Medical Services
Utah Department of Health

April 14, 2009
Rev. 1.5

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Revision Log

Rev.	Date	Description
1.5	Apr. 14, 2009	Added documentation of Advanced Search, pg. 33, per interface change.
1.4	Jan. 1, 2009	Updated Obtaining a User Account, pg. 10, Logging On, pg. 12, and Changing E-mail Address, User ID, and/or Password, pg. 15 to reflect changes in the Utah-ID login service; expanded documentation of Analysis, pg. 48; added Automating Data Imports/Exports section, pg. 52.
1.3	Aug. 1, 2008	Updated Support Contacts, pg. 6; updated browser list in System Requirements, pg. 8; updated documentation of limitations in Disconnected Mode per interface change, pg. 17; updated documentation of Multiple Selection Lists per interface change, pg. 19; consolidated and updated documentation per interface change of Vitals and Exams into Assessments, pg. 25, and of Procedures and Medications into Treatments, pg. 26; updated documentation of Billing page per interface change, pg. 27; updated documentation of PCR Linkage per interface change, 28; updated screenshot in Searching for PCRs per interface change, pg. 31; documented “Preview” button in Viewing/Printing PCRs per interface change, pg. 33; updated documentation and screenshot in Importing/Exporting Data in NEMSIS XML Format per interface change, pg. 34; updated documentation of Finding a User per interface change, pg. 38; updated documentation of Yearly Statistics, Other Destinations, Stations, Vehicles, and Devices in Agency Demographics per interface change, pg. 41; created basic documentation of Analysis, pg. 48.
1.2	Jul. 1, 2007	Added Roles section, pg. 40; added documentation of “Home” tab per interface change, pg. 13; added documentation of who is recorded as the creator of a disconnected mode PCR per interface change, pg. 17;

		changed archived/expired PCR policy from 90 days after incident to 60 days after starting PCR, pp. 28.
1.1	Jan. 1, 2007	Updated documentation of “Click if Exam Completed” button per interface change, pg. 25; changed how Incident Number is populated in PCR Linkage, pg. 28.
1.0	Sep. 1, 2006	Initial Publication

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General Information

System Overview

Prehospital OnLine Active Reporting Information System (POLARIS) is a prehospital data collection system that helps EMS agencies comply with the data reporting requirement in Utah Administrative Rule R426-7. POLARIS complies with the National Emergency Medical Services Information System (NEMSIS) data standard.

POLARIS enables EMS professionals to create and submit patient care reports (PCRs) for patients to whom they provide medical services during emergency responses within the state of Utah. PCRs are made available to receiving hospitals for the purpose of aiding the in-hospital care of emergency patients. POLARIS also enables EMS professionals and researchers to analyze the EMS activity within their jurisdictions in efforts to improve the quality of care.

POLARIS is owned and operated by the Bureau of Emergency Medical Services, Division of Health Systems Improvement, Utah Department of Health, in conjunction with services provided by the Utah Department of Technology Services. The Bureau of EMS owns rights to POLARIS source code and is responsible for ongoing development.

POLARIS is available free of charge to all prehospital agencies and hospitals licensed or designated to operate in Utah. POLARIS is one option among many systems that agencies can choose to use. Agencies can use any commercial software that is compliant with the NEMSIS Gold level standard; POLARIS; or POLARIS in combination with commercial software.

References

NEMSIS

This user manual references the National Emergency Medical Services Information System (NEMSIS) standard, which is implemented by POLARIS. Information about NEMSIS is available online at www.nemsis.org.

Support Contacts

User Account Help

POLARIS uses Utah-ID, a state government login service, for managing user accounts. For help with user account problems, such as password recovery, contact the Utah-ID help desk:

Utah-ID Help Desk
Phone: 801-538-3440 or 800-678-3440
Web Site: dts.utah.gov/servicedesk/

General Help

For help with all other issues, contact the Bureau of EMS:

POLARIS Support
E-mail: polaris@utah.gov
Phone: 801-273-6666 or 800-284-1131
Web Site: health.utah.gov/ems/data/polaris/

Project Manager

The POLARIS project manager is Joshua Legler:

Joshua Legler
Data Manager
Email: jlegler@utah.gov
Phone: 801-273-6668

Acronyms and Abbreviations

NEMSIS: National Emergency Medical Services Information System

NHTSA: National Highway Traffic Safety Administration

PDF: Portable Document Format

POLARIS: Prehospital OnLine Active Reporting Information System

Utah-ID: Utah's state government login service

XML: eXtensible Markup Language

Conventions Used in this Manual

This manual uses the following conventions:

Instructions are written like this. They tell you step-by-step how to do something in POLARIS.

Keyboard keys are written like This. They indicate keys that you can press on your keyboard to make something happen.

System Summary

System Configuration

POLARIS is a Web-based system. It can be accessed by authorized users from any computer with an Internet connection. POLARIS is hosted in state-owned computer facilities on redundant, load-balanced hardware. The computer facilities are physically secured, and the servers that power POLARIS are protected behind a network firewall. The POLARIS servers are dedicated solely to prehospital data and are not shared by any other systems.

System Requirements

POLARIS is Web-based, so system requirements are minimal:

- Computer hardware: Any recent model computer manufactured within the last five years or so.
- Operating System: Any system in which a Web browser can be installed, including all network-capable versions of Windows, Macintosh, Linux, BSD, Unix, etc.
- Web Browser: POLARIS has been tested extensively in Microsoft Internet Explorer versions 6 and 7 and Mozilla Firefox versions 1, 2 and 3. Most other browsers will work as long as they support cookies and Javascript. It is recommended that you allow “polaris.utah.gov” in your pop-up blocker to avoid problems when using online help or the narrative. If you notice something in POLARIS that does not work in your browser, please notify the Bureau of EMS.
- Network connection: Any Internet connection. A high-speed connection is recommended (cable, DSL, T1, Wi-Fi, etc.), but POLARIS will also work over slower connections (dial-up, cellular data, etc.). If using POLARIS’s disconnected mode feature, you do not need to be connected to the Internet while filling out a PCR, but you must be able to connect to the Internet to initially load the PCR and to submit it, and for all other activities within POLARIS (see Creating a New PCR in Disconnected Mode, pg. 17).

Emergency Contingencies

As a Web-based system, POLARIS is housed in secure state-owned computer facilities. POLARIS uses load balancing and redundancy to ensure that the system supports demanding uptime requirements and doesn’t lose data. If demand increases, more servers can be added to the server pool.

If one server has problems, either at the database or application level, POLARIS will continue to function as traffic is balanced to other servers within the load-balancing pool. If service in the Salt Lake City data center is interrupted, POLARIS will respond by using an off-site backup server housed in state-owned computer facilities outside of the Salt Lake area. Additionally, server-level backups are made according to schedule, so each server used by POLARIS can be restored to operation in case of hardware failures.

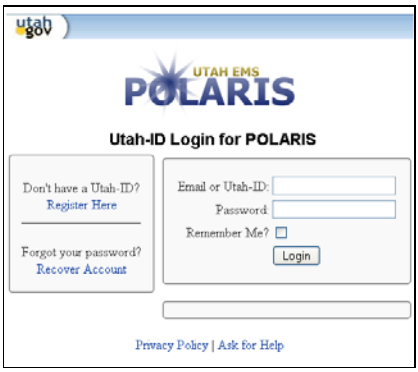
You may occasionally experience an error message in POLARIS. An error message affects only you. It does not mean that the overall POLARIS system is down or having problems. Try to log back in and continue your work. If you encounter an error message repeatedly, contact the Bureau of EMS for assistance (see Support Contacts, pg. 6).

Getting Started

Obtaining a User Account

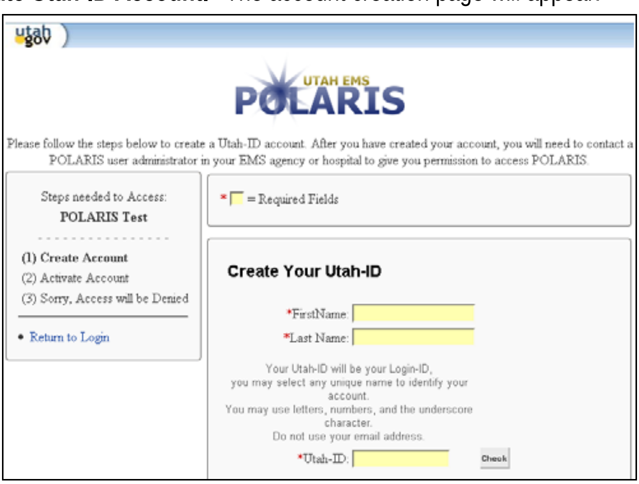
Web-based access to POLARIS is controlled by Utah-ID. Utah-ID is a single sign-on user authentication service used by many state applications in Utah. All POLARIS users must have Utah-ID accounts before they can be granted access to POLARIS. If you work for the state of Utah or have an e-mail address that ends with “utah.gov” or “state.ut.us,” then you already have a Utah-ID user account. To obtain a user account, do the following:

Open a Web browser and go to the following Web site address: polaris.utah.gov. The Utah-ID login page will appear.



Click “Register Here.” A message will explain that you will not gain access to POLARIS by creating an account; however, you must create an account before you can be given access to POLARIS.

Click “Create Utah-ID Account.” The account creation page will appear.

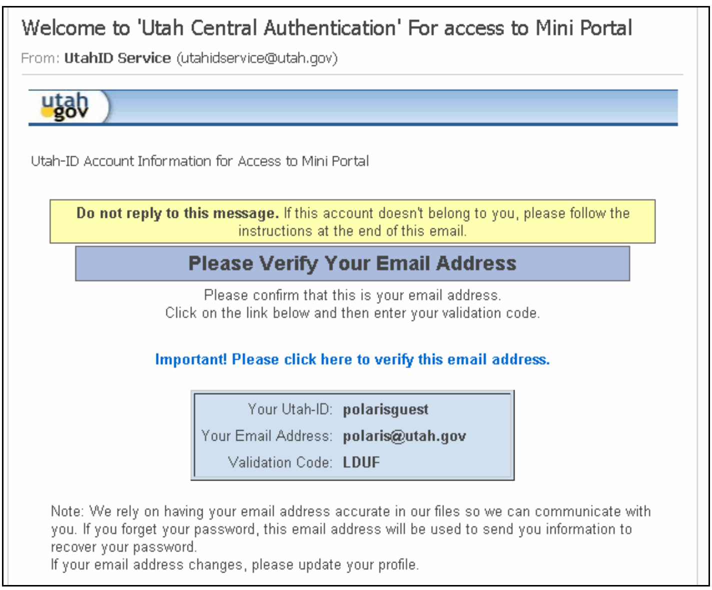


Fill out the asterisked information. It is recommended that you use your Utah EMS ID as your Utah-ID user ID. If you do not have an EMS ID, then enter any user ID. You must have an e-mail address in order to obtain a Utah-ID user account. If you do not have an e-mail address, you can sign up for a free e-mail account from services such as Hotmail, Yahoo! Mail, or Gmail. You will never receive unsolicited e-mail as a result of obtaining a Utah-ID user account; however, occasional POLARIS status messages and announcements may be sent to the e-mail address that you provide.

Click "Create." Your account will be created and instructions for validating your account will be shown. At this point, someone can grant you access to POLARIS, but when you have access to your e-mail, you should continue the account setup process.

Log in to your e-mail.

Look for a message from "UtahID Service" (utahidservice@utah.gov) with the subject of "Welcome to 'Utah Central Authentication' For access to Mini Portal." If you don't find the message in your inbox, look in your junk mail or spam folder. If you still don't find the message, then switch back to the Utah-ID activation page and click "Mail New Validation Code" to have Utah-ID re-send the e-mail message, or contact the Utah-ID Help Desk (see Support Contacts, pg. 6) and ask for your "Utah-ID validation code" to be re-sent.



The e-mail message will contain a four-letter validation code and a link.

Click on the link contained in the e-mail message, or switch back to the Utah-ID activation page in your Web browser. The Utah-ID login page may appear.

If the login page appears, Enter either your e-mail address or your Utah-ID that you chose during the account creation process. Then enter the password that you chose during the account creation process. Click "Login." The account maintenance page will appear.

Enter the four-character confirmation code that you received in the e-mail message and click "Activate." Your Utah-ID account creation is complete.

Ask the user administrator in your agency to grant you access to POLARIS. Give the user administrator your name and/or user ID exactly as you entered them during the account creation process, so that he/she can look you up.

To log in to POLARIS, you will need to remember your e-mail address and/or user ID, and your password. If you choose to write down your password, please protect it as you would protect other sensitive information, such as your credit card, social security card, or driver license; do not leave it where others can see it, such as next to a computer. Do not share your password with anyone—each POLARIS user needs to have their own user account. When your user account is used, every activity within POLARIS is logged as having been done by you.

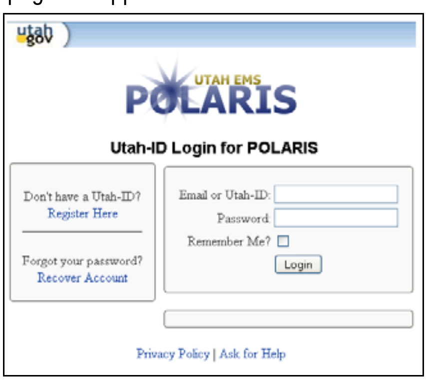
Logging On

You cannot log on to POLARIS until:

- You have created your user account (see Obtaining a User Account, pg. 10), and
- The user administrator in your agency or hospital has assigned your role(s) within POLARIS (if your agency does not yet have a user administrator, contact the Bureau of EMS; see Support Contacts, pg. 6).

To log on to POLARIS, do the following:

Open a Web browser and go to the following Web site address: polaris.utah.gov. The Utah-ID login page will appear.



Enter your e-mail address (or user ID) and password and click "Login" (or press Enter on your keyboard).

If you have roles within multiple agencies or hospitals, the agency selection page will appear.

If the agency selection page appears, then choose the agency under which you want to log in for the current session and click "Continue." To switch to a different agency later, you must log off and log on again, and then select the other agency.

The POLARIS welcome page will appear.

System Menu

The POLARIS system menu is displayed as tabs across the screen near the top. The system menu is visible at all times except when you are working on a PCR, agency demographics, or the analysis suite. To return to the system menu from a PCR, demographics, or the analysis suite, click the "Exit" or "Finish" button.

The items available on the system menu are determined by your roles:

- New PCR: Available to the User role. Click to get to the "Begin PCR" button. See Creating a New PCR, pg. 17.
- Home: Available to all roles other than User. Contains the same information as New PCR but without the "Begin PCR" button.
- Incomplete PCRs: Available to the User, PCR Reviewer, Data Manager, and Biller roles. Click to work with PCRs that have not been marked complete. See Finding Incomplete PCRs, pg. 31.
- Search PCRs: Available to the User, PCR Reviewer, Data Manager, Biller, and Hospital User roles. Click to search for and work with PCRs. See Searching for PCRs, pg. 31.
- Analysis: Available to all roles. Click to use the POLARIS analysis suite. See Analysis, pg. 48.
- Demographics: Available to the Data Manager role. Click to work with agency demographics. See Agency Demographics, pg. 41.
- Data Exchange: Available to all roles except User Administrator and Hospital User Administrator. Click to transfer data between POLARIS and other software. See Importing/Exporting Data in NEMSIS XML Format, pg. 34.

- User Administration: Available to the User Administrator and Hospital User Administrator roles. Click to manage other users' roles in POLARIS. See User Administration, pg. 38.
- Configure Data Elements: Available to the Data Manager role. Click to manage which NEMSIS elements are collected by your agency. See Data Element Configuration, pg. 46.
- Help: Available to all roles. Click to get help with POLARIS and the NEMSIS dataset. See Online Help, pg. 14.
- Log Off: Available to all roles. Click to log off of POLARIS. See Logging Off, pg. 15.

Online Help

POLARIS contains online help to assist you in understanding the NEMSIS data elements and locating them within POLARIS. Online help is available in two locations.

Help Page

The POLARIS Help page contains links to NEMSIS documentation and customer support contacts. To access the Help page, do the following:

Log on to POLARIS (see Logging On, pg. 12).

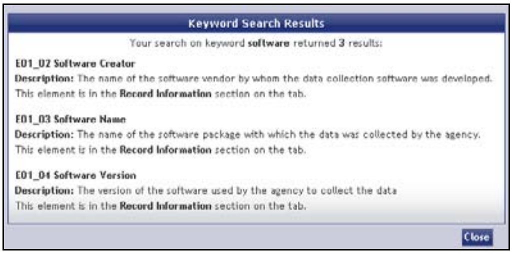
Click "Help" on the POLARIS system menu. The Help page will appear. Use the links or phone numbers on the Help page to get further assistance.

Help Search

A text box located in the top right corner of POLARIS provides quick access to information about NEMSIS data elements and where they are located within POLARIS. The help search is always available except when working on a PCR in disconnected mode. To use the help search, do the following at any time, regardless of where you are in the system:

Enter a word or phrase to look for in the help search box. The more words you enter, the more inclusive your search will be.

Click the "Find" button or press Enter **on your keyboard.** The keyword search results window will appear, displaying information about NEMSIS elements matching your search criteria.



To perform another help search, click "Close" in the keyword search results window and repeat the search with another word or phrase.

Logging Off

POLARIS will automatically log you off after twenty (20) minutes of inactivity. However, for increased security, you should log yourself off of POLARIS when you are done using it. To log off, do the following:

Click "Log Off" on the POLARIS system menu. It is also recommended that you close your browser.

Changing E-mail Address, User ID, and/or Password

You can change your e-mail address, user ID, password, and other user account details at any time via the Utah-ID account maintenance page. For example, you may wish to change your user ID to match your Utah EMS ID, so that when you start new PCRs, you will be automatically listed as a crew member (if there is a matching personnel record for you in POLARIS). To change your e-mail address, user ID, password, or other user account details, do the following:

Log on to POLARIS (see Logging On, pg. 12).

In the "Common Tasks" pane of the POLARIS welcome page, click "Maintain your own user account..." The Utah-ID account maintenance page will appear.

To change your e-mail address, remove the e-mail address shown and enter your new e-mail address. If you change your e-mail address, you will need to validate your new e-mail address (see Obtaining a User Account, pg. 10).

To change your user ID, remove the user ID shown and enter your new user ID. If you change your user ID, please notify the Bureau of EMS so that your new user ID can be linked to PCRs you have previously created in POLARIS (see Support Contacts, pg. 6).

To change your password, click on "Edit Password". The password information page will appear. **Enter your current password in the first box. Then enter your new password in the second box and confirm it by entering it again in the third box.** Utah-ID requires your password to be at least eight (8) characters long. **Click "Change Password."** The following message will appear: "Password Changed."

To change your password recovery questions and answers, click on "Edit Password". The password information page will appear. **Change any of the questions and answers and click "Change Security Settings."**

To change other user account details, click "Edit" in the relevant section and enter the new information. Then click "Save."

To complete the changes, click "Save" at the bottom of the page. The following message will appear: "Account information has been saved."

Changing your user information, such as name, address, and phone number, does not affect any personnel record that may exist for you in POLARIS. Personnel records must be changed by your agency's data manager.

Patient Care Reports

A patient care report should be completed for each crew's care of each patient during an incident. There should always be one PCR per crew, per patient. The PCR serves as a legal record of care given to a patient by an EMS crew.

A PCR does not need to be completed all at once. The data you enter is saved as you move from page to page. At any time, you may click "Exit" or "Finish" and choose whether to mark the PCR complete or incomplete. Incomplete PCRs are not included in statewide statistics by the Bureau of EMS.

Creating a New PCR

A new PCR should be started as soon after the start of a call as possible. For current state requirements regarding the timeliness of patient care reporting, see the Dataset/Compliance page of the POLARIS section of the Bureau of EMS Web site at health.utah.gov/ems/data/polaris/. Even if you don't have time to completely finish a PCR right after a call, please attempt to at least complete the initial page of the PCR so that POLARIS can provide real-time epidemiological surveillance to the Bureau of EMS and the state epidemiologist.

To start a new PCR, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "New PCR" on the POLARIS system menu.

Click the "Begin PCR" button. The initial page of the PCR will appear.

Creating a New PCR in Disconnected Mode

If you expect to have poor or spotty Internet service while you are filling out a PCR, then you can use the disconnected mode feature. The disconnected mode feature pre-loads an entire new PCR into your browser so that you can fill out the PCR while disconnected from the Internet. Then, when you are connected to the Internet again, you can reconnect to POLARIS and submit the PCR.

Disconnected mode differs from online mode in the following ways:

- Online help is not available while filling out a PCR in disconnected mode.
- Tabs and elements that are automatically hidden based on your responses to other elements are not hidden in disconnected mode.
- The narrative is not a pop-up window in disconnected mode; instead, it is shown at the bottom of each page.
- Narrative descriptions on the NHTSA Injury Matrix page are not available in disconnected mode; they can be added by submitting the PCR and opening it back up in online mode.
- The “Exit” button is replaced by the “Reconnect” button; you must reconnect to POLARIS before the “Exit” button will appear.
- If a disconnected mode PCR is started by one user but reconnection is done by a second user, the second user will be recorded as having created the PCR.

To start a PCR in disconnected mode, do the same steps as above (see Creating a New PCR, pg. 17), except for the last step:

Click the “Begin PCR (Disconnected Mode)” button.

After a moment, the disconnected mode PCR will begin to load. The PCR will require about one minute to load, so please be patient.

After the PCR has finished loading, you can disconnect your computer from the Internet. You can also put the computer to sleep. If you expect not to use the computer for some time, then you can put the computer into hibernation, or suspend-to-disk mode (see your computer operating system documentation for instructions on hibernation or suspend-to-disk mode). Then, when you are ready to start filling out the PCR, you can wake your computer and the blank disconnected mode PCR will be waiting on your screen.

If you expect to need to fill out more than one PCR at a time, then you can open multiple windows or tabs in your browser and start a disconnected mode PCR in each one.

Filling Out a PCR

You can start a new PCR and fill it out, or you can return to a PCR that has already been started and continue filling it out. (To begin a new PCR, see Creating a New PCR, pg. 17. To work on an existing PCR, see Finding Incomplete PCRs, pg. 31, and Searching for PCRs, pg. 31.)

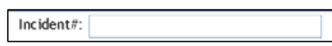
Once you are in a PCR, the POLARIS system menu is replaced by the PCR menu.

Typical PCR Elements

The PCR contains all national and Utah NEMSIS elements, as well as any optional NEMSIS elements that have been turned on by your agency's data manager. For a list of national, Utah, and local-option NEMSIS elements, and for the current NEMSIS data dictionary, see the Dataset/Compliance page of the POLARIS section of the Bureau of EMS Web site at health.utah.gov/ems/data/polaris/.

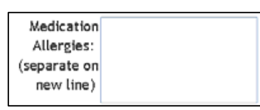
The PCR elements should look familiar to any EMS professional, but some of the options may be different than what you are used to. Many element options are defined by the NEMSIS standard and cannot be changed by the Bureau of EMS. This creates a consistent system for analyzing prehospital care across the country. Following are typical element types found in the NEMSIS standard.

Text



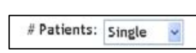
Some elements require you to enter text. They appear as plain text boxes. Many of those elements have constraints defined by NEMSIS. For example, a ZIP Code element has to be a valid five-digit or 5+4-digit ZIP code and cannot contain letters. If you enter text in a text element that is not valid, then when you try to move to the next page of the PCR, POLARIS will display a message explaining the problem. You will need to fix the problem before you can move to the next page.

Multiple Line Text



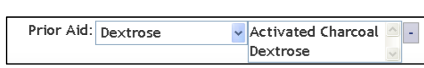
Some elements allow you to enter more than one text value. For example, a patient could be allergic to any number of medications. To enter responses in multiple line text boxes, enter each response, followed by pressing the Enter key.

Single Selection Lists



Some elements are answered by selecting one value from a list of possible values. For example, the NEMSIS standard defines a set list of values for # Patients. You must choose the one value that most closely matches your situation.

Multiple Selection Lists



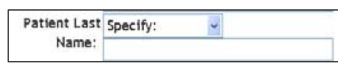
For some elements, the NEMSIS standard defines a set list of values, but you can choose more than one value from the list. For example, if prior aid was given, any number of medications and procedures could have been done. To answer multiple selection list elements, choose a value from the drop-down list and it will be added to the box that shows the values you have selected. To remove a value that you accidentally added, choose the value in the box that shows the values you have selected and then click the “-” button. The exception to this is that if you choose one of the common null values on the drop-down list, then that is the single value that will be saved, and any values previously added to the list will not be saved (see Common Null Values, pg. 20).

Dates and Times

Some elements ask for a date and time. Date/time elements are rendered as a series of boxes in which you must enter numbers that make sense as a date/time. The order of the boxes is *month, day, year, hour, minute*, and all times are in 24-hour format using Mountain Time Zone.

As you fill out dates and times, your cursor will auto-tab from one box to the next.

Common Null Values



Many information systems have some equivalent to “Unknown” or “N/A.” Many NEMSIS elements have a more detailed set of “null” values as options. The null values are as follows:

- Not Applicable: The information requested did not apply to the EMS or patient event. For example, if no prior aid was performed on a patient, then the “Prior Aid Outcome” element should be marked “Not Applicable.”
- Not Available: The information requested was not available to EMS personnel. The information did exist but EMS personnel were unsuccessful in their attempt to obtain it.
- Not Known: The information requested was not known to patient, family, and EMS personnel. There was an attempt to obtain information but it was unknown by all parties involved.
- Not Recorded: The information requested may have existed and been known by and available to EMS personnel, but EMS personnel did not document it.
- Not Reporting: This is used internally by some systems, but is not used in the POLARIS Web interface, since POLARIS supports the reporting of all elements in the NEMSIS dataset.

Many elements that have null values as options also have “Specify” as an option. When responding to the element, you can either pick one of the null values, or you can pick "Specify" and then enter the appropriate value in the accompanying text box.

Checkboxes

Checkboxes are used for epidemiological indicators and the Injury Matrix, and to implement certain logic throughout the PCR. If a particular element applies to the call, check the checkbox; otherwise, leave it unchecked. If you need to clear a previously checked checkbox, click on it again.

Reset Button

On all PCR pages (except the narrative window and while operating in disconnected mode), the "Reset" button is available at the top and bottom of the page. Click the "Reset" button if you want the elements on the current page to be returned to the values they held when you most recently arrived on the page. The "Reset" button only affects the current page. In the narrative, use the "Cancel" button and then re-open the narrative to get the same result.

Keyboard Shortcuts

You can take advantage of several keyboard shortcuts recognized by your Web browser when you use POLARIS. Using keyboard shortcuts enables you to spend less time going back and forth between your keyboard and mouse or other pointing device and helps you to complete your PCR more quickly. The most common and helpful shortcuts are described here.

Tab Key

If you use a keyboard to fill out a PCR, the Tab key is very useful. To move your cursor from one element to the next element, press the Tab key. To move backwards from one element to the previous element, hold down the Shift key and press the Tab key.

Enter Key

For some elements in POLARIS, the Enter key is used to provide multiple values in response to a single element. Except for those elements, the Enter key retains its usual browser function of submitting the current page. Within a PCR, you can press the Enter key to exit the PCR.

Keys and Selection Lists

When you are responding to a selection list element, you can use the keys on your keyboard to quickly find the response you're looking for. In Internet Explorer, you can type the letter that your response starts with, and the selection will jump to the first item on the list that starts with that letter. Press the letter again to move to the second item that starts with that letter. In Mozilla-based browsers such as Mozilla Firefox, you can begin typing the item that you are looking for and the selection list will jump to the first item that matches your typing. Then press the Tab key to move on to the next element.

Initial

The Initial page of the PCR is a collection of important elements. They are used for a number of purposes:

- Unit Notified Date/Time, County, and the Bioterrorism Indicators are used for conducting epidemiological surveillance.
- Incident Number, Unit Notified Date/Time, Incident City, and the patient's name and date of birth are used for PCR linkage (see PCR Linkage, pg. 28).
- Call Type is used to show or hide the trauma-related elements in the PCR.
- Cardiac Arrest is used to show or hide the cardiac arrest-related elements on the PCR.
- Patient Date of Birth and Patient Age are used to control elements that have different response sets for adult and pediatric patients, such as the Glasgow Coma Score components.

The following notes apply to the elements on the Initial page:

- Unit Notified Date/Time is required. You cannot move to another page until you have entered a valid date/time that is not in the future.
- Incident County should automatically show the county that you serve. If it does not, then contact your agency's data manager to change the Counties Served element in your agency demographics. If an incident happened outside of the county you typically serve, then you can select that county from the list.
- The Disposition element should be answered from the perspective of your unit. If the patient was delivered to a hospital after you transferred him/her to another agency, then your response should be "Treated, Transferred Care."
- POLARIS will calculate the Patient Age element based on your response to Unit Notified Date/Time and Patient Date of Birth. If you do not know the patient's exact birth date, then leave Patient Date of Birth blank and enter your best estimate for Patient Age.
- Check any bioterrorism indicators that were present on your call, even if you do not suspect that bioterrorism was involved. The Bureau of EMS monitors the base rate of occurrence of those

indicators and will alert the state epidemiologist if any of the indicators exceeds reasonable thresholds.

If you leave an element that says “Specify” blank, when you move to the next page its value will be set to the appropriate common null value (see Common Null Values, pg. 20).

For general information on how to fill out the elements on the Initial page, see Typical PCR Elements, pg. 19.

Unit/Times

The Unit/Times page collects information about the responding unit and how long the call took. The following notes apply to the elements on the Unit/Times page:

- If your user ID matches the EMS ID of a record in your agency’s personnel list, then you will automatically be listed on the crew (to change your user ID, see Changing E-mail Address, User ID, and/or Password, pg. 15). If you were not on the crew for a call, then highlight your name on the Crew Members on Call list and click the “Remove” button.
- POLARIS automatically calculates the date for all of your call times based on the Unit Notified Date/Time on the Initial page. In most cases, POLARIS will recognize if your call crossed midnight and will adjust the dates accordingly. If POLARIS calculates anything incorrectly, then you can override the dates. To override the dates, click the “Advanced Time Entry” button in the Times section. To return to simple time entry, click the button again.
- POLARIS expects call times to be in a valid order. For example, the Arrived at Patient time cannot happen before the Arrived at Scene time. If any times are entered in an invalid order, then POLARIS will not allow you to move to another page until you have corrected the problem.
- Back in Service is required. You cannot move to another page until you have entered a valid date/time. If you are trying to fill out a PCR while the call is ongoing, then you can enter your expected Back in Service time (up to four hours in the future) and then go back and revise it at the end of the call.
- The Delays section only needs to be filled out if you experienced delays during the call.

For general information on how to fill out the elements on the Unit/Times page, see Typical PCR Elements, pg. 19.

Situation

The Situation page collects information about the scene and the condition of the patient upon your arrival. The following notes apply to the Situation page:

- If the incident occurred at the patient’s home, then fill out the Scene elements and check the checkbox labeled “Check if patient address same as incident address.” The patient’s address on the Transport/Patient page of the PCR will be automatically set to the responses you entered for the scene address.
- NEMSIS contains an element called “Medical/Surgical History,” but it is not a national or Utah element. If you are looking for a place to enter the patient’s medical history, ask your agency’s data manager to enable the Medical/Surgical History element for your agency.

For general information on how to fill out the elements on the Situation page, see Typical PCR Elements, pg. 19.

Trauma/CPR

The Trauma/CPR page collects information about traumatic injuries and cardiac arrest. The page is only available if your response to the Call Type element on the Initial page included trauma or if your response to the Cardiac Arrest element on the Initial page indicated cardiac arrest. The following notes apply to the Trauma/CPR page:

- According the NEMSIS standard, Fall Height cannot be zero (0). Until the standard is revised, leave the Fall Height element blank to indicate a ground-level fall.
- For Seat Row, a value of “50” can be entered to indicate the cargo area of a vehicle, such as the bed of a pickup truck.

For general information on how to fill out the elements on the Trauma/CPR page, see Typical PCR Elements, pg. 19.

Injury Matrix

The Injury Matrix page collects information about injuries sustained on trauma calls. The following notes apply to the Injury Matrix page:

- The Injury Matrix page is not available if you did not indicate a response that includes trauma for the Call Type element on the Initial page.
- Some of the Injury Matrix combinations do not make sense (for example, amputation of the spine), but they are included because according to the NEMSIS standard each element in the Injury Matrix shares the same set of possible responses.

- You can click areas of the image of the body to enter narrative-style information about injuries. (This feature is not available in disconnected mode; see Creating a New PCR in Disconnected Mode, pg. 17.)

For general information on how to fill out the elements on the Injury Matrix page, see Typical PCR Elements, pg. 19.

Assessments

The Assessments page collects information about vital signs collected, exams performed, and (optionally) medical device data collected by your crew. You can also record vital signs that were collected prior to your unit's arrival at the patient. The following notes apply to the Assessments page:

- Click "Add Set of Vital Signs" to add a set of vital signs or "Add Exam" to add an exam. You can add an unlimited number of sets of vital signs and exams. Click "Remove This Set of Vital Signs" to remove a particular set of vital signs or "Remove This Exam" to remove a particular exam.
- If you need to record a set of vital signs or an exam that is very similar to a set of vital signs or exam that you have already recorded, click "Copy This Set of Vital Signs" or "Copy This Exam" within the section you wish to make a copy of. Then, after POLARIS creates the copy, you can modify the responses that were different in the copy.
- If a particular vital sign was not collected in a set of vital signs, then leave that element blank for that set of vital signs.
- The Glasgow Coma Score components will show different response options depending on whether the patient is an adult or pediatric patient and whether or not the call involved trauma, based on your responses to the elements on the Initial page of the PCR.
- If you click the "Mark All as Normal" button at the top of an exam, then POLARIS will set the responses for the elements in that exam to "Normal." Then, just change the responses for the body areas that were not normal.
- If a particular body area was not examined during an exam, then choose "Not Done" for that area.

For general information on how to fill out the elements on the Assessments page, see Typical PCR Elements, pg. 19.

Treatments

The Treatments page collects information about the procedures, medications, and other interventions that your crew administered to the patient. You can also collect information about medications that were administered prior to your unit's care of the patient. The following notes apply to the Interventions page:

- Click "Add Procedure" to add a procedure or "Add Medication" to add a medication. You can add an unlimited number of procedures and medications. Click "Remove This Procedure" to remove a particular procedure or "Remove This Medication" to remove a particular medication.
- If you need to record a procedure or a medication that is very similar to a procedure or medication that you have already recorded, click "Copy This Procedure" or "Copy This Medication" within the section you wish to make a copy of. Then, after POLARIS creates the copy, you can modify the responses that were different in the copy.
- The list of medications for the Medication Given element is created by your agency. If the list does not contain a particular medication that you use, then contact your agency's data manager and ask him/her to add that medication to the list. To report a medication that you do not typically use (such as a medication already started by hospital personnel for an interfacility transport), you may select "Specify" from the medication list and then enter the name of the medication in the accompanying text box.

For general information on how to fill out the elements on the Treatments page, see Typical PCR Elements, pg. 19.

Transport/Patient

The Transport/Patient page collects information about who you transferred the patient to, whether it be a hospital, another EMS agency, or some other destination. The following notes apply to the Transport/Patient page:

- The list of responses for Destination/Transfer is created by your agency. It contains the hospitals and other destinations that your agency serves. If you commonly deliver to a destination that is not on the list, ask your agency's data manager to add it. If you commonly transfer patients to another EMS agency, ask your agency's data manager to add that agency to the list.
- If you transfer a patient to another unit, select that unit's agency from the response list for Destination/Transfer, or select "Specify" and enter the name of the agency if it is not on the list. Do not select the

hospital that the patient was transported to; the transporting unit will provide that information in its report.

- If you checked “Check if patient address same as incident address” on the Situation page, then the elements for the patient’s address will already be filled in.
- The Race and Ethnicity elements are mandatory. However, you can select one of the common null values. Providing your best guess of the patient’s race and ethnicity is valuable to researchers discovering ways of improving prehospital care by identifying specific health vulnerabilities and reactions to treatments shown by different genetic groups.

For general information on how to fill out the elements on the Transport/Patient page, see Typical PCR Elements, pg. 19.

Billing

The Billing page collects information necessary for conducting billing for an incident. The following notes apply to the Billing page:

- Only a few billing elements are identified as national or Utah elements. The rest are local-option elements. If your agency needs to collect more billing information through POLARIS, then ask your agency’s data manager to enable the additional necessary elements.
- Users with the Third Party Biller role can view all of an agency’s PCRs, but the Billing page is the only page of a PCR that they can edit. If your agency works with a biller, your agency may ask you to skip the Billing page and have the biller fill it out.

For general information on how to fill out the elements on the Billing page, see Typical PCR Elements, pg. 19.

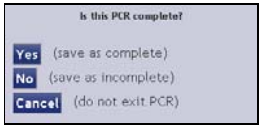
Narrative

The PCR narrative is available from every page of the PCR. To edit the narrative, click the “Narrative” button. The Narrative window will appear. You may leave the Narrative window open as you move from page to page of the PCR, and you can switch back and forth between the narrative and the PCR pages. However, the narrative is not updated until you click “Save” in the Narrative window. If a PCR contains a narrative, then the Narrative button will become yellow.

Use the narrative for important information that was not able to be reported elsewhere in the PCR. Do not use the narrative to repeat information that is already collected through the other areas of the PCR. For example, you do not need to state the time at which you arrived at the patient in the narrative, because the PCR already contains the Arrived at Patient Date/Time element.

Marking a PCR Complete

A PCR is considered incomplete until it is marked complete. Every time you exit an incomplete PCR, you will be asked whether to mark the PCR complete.



This gives you the ability to work on a PCR without finishing it all at once. For example, if you are filling out a PCR and another call comes, then you can exit the PCR as an incomplete PCR, log off, go on your call, and then return later to POLARIS to look up your incomplete PCR and continue filling it out.

To mark a PCR complete, you must first be editing an incomplete PCR. Then, do the following:

Click the "Exit" button. The PCR completion window will appear.

Click "Yes" to save the PCR as complete. The PCR completion window will disappear, the PCR will be exited, and the POLARIS welcome page will appear.

To leave a PCR marked as incomplete, click the "No" button when the PCR Completion window appears.

If you do not want to exit the PCR, click "Cancel" in the PCR Completion window to make it disappear. Then you can continue working on the PCR.

After a PCR has been marked complete, it cannot be changed back to incomplete. However, it can still be edited for up to 60 days after it was created. Incomplete PCRs more than 60 days old are flagged "expired" and should be deleted by your agency's data manager. Complete PCRs more than 60 days old are flagged "archived."

Amending a PCR

A PCR can still be edited after it has been marked complete, for up to 60 days after it was created. Any changes made to a PCR after it is marked complete will cause the PCR to be flagged as "amended." POLARIS maintains a log of all changes made to a PCR after it is marked complete.

To amend a PCR, search for the PCR (see Searching for PCRs, pg. 31), select the PCR you want to edit, and click "Edit." After you edit the PCR, it will become flagged as amended.

PCR Linkage

Much of Utah's EMS system operates on a tiered-response model: a quick response/rescue unit arrives on scene first and then transfers care to a transporting unit, which delivers the patient to a hospital. According to the NEMSIS standard, each responding unit should report the care that it provided to the patient. The first response/rescue unit should create a PCR to record the care that it gave, and to report that the patient was transferred to another EMS responder. The transporting unit should create a PCR to record the care that it gave and to report the destination to which it transported the patient. There are also situations where EMS treats multiple patients at a single incident, and situations where EMS responds to the same patient repeatedly.

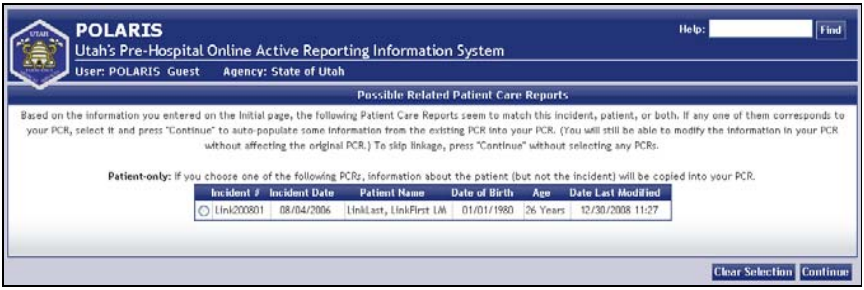
In a tiered-response, multiple patient, or repeat patient scenario, there is some information that is common between the PCRs, such as information about the scene or the patient. There is also information that is specific to each PCR, such as information about care given by the unit. PCR linkage addresses the information that is common between the PCRs.

When you begin a PCR, POLARIS attempts to find any existing PCRs for the same incident or patient. If it finds any, it will propose linkage and ask the user whether he/she wants POLARIS to auto-populate common elements from the existing PCR into his/her PCR. POLARIS will propose up to three types of linkage:

- Incident-only Linkage: POLARIS has found an existing PCR for the same incident and will auto-populate information about the incident (but not the patient) in the linked PCR.
- Patient-only Linkage: POLARIS has found an existing PCR for the same patient and will auto-populate information about the patient (but not the incident) in the linked PCR.
- PCR Linkage: POLARIS has found an existing PCR for the same patient at the same incident and will auto-populate information about both the incident and the patient in the linked PCR.

POLARIS will propose PCR linkage based on the following criteria, using elements on the Initial page:

- Incident-only Linkage: POLARIS will attempt to find PCRs that have the same unit notified date/time and incident city.
- Patient-only Linkage: POLARIS will attempt to find PCRs that have the same patient name and date of birth.
- PCR Linkage: POLARIS will attempt to find PCRs that meet both the incident-only and patient-only linkage criteria.



Up to three lists will be shown, for incident-only, patient-only, or PCR linkage. You can review the lists of proposed links to verify if they are appropriate. To accept a proposed link, select the radio button for the correct PCR and click “Continue.” If none of the proposed PCRs are a correct match, then click “Continue” without selecting any PCRs; linkage will not be used. If you selected a match by accident and need to clear your selection before you continue, then click “Clear Selection.”

PCR linkage will auto-populate the following NEMSIS elements in your PCR if they were reported in the linked PCR, depending on the type of linkage you choose:

- Incident-only Linkage: E02_02 Incident Number (if it was not provided in your PCR); E03 Unit/Call Information (all elements); E05_01 Incident Onset Date/Time; E08_04 Date/Time Initial Responder Arrived on Scene, E08_05 Number of Patients at Scene, E08_06 Mass Casualty Incident, E08_07 Incident Location Type, E08_08 Incident Facility Code, E08_10 Scene GPS Location, E08_11 Incident Address, E08_15 Incident Zip Code; E23_04 Suspected Intentional or Unintentional Disaster; Bioterrorism Indicators.
- Patient-only Linkage: E06 Patient (all elements except E06_14 Age and E06_15 Age Units; E06_03 Middle Initial/Name is populated if it was not provided in your PCR); and E07 Billing (all elements except E07_33 Response Urgency, E07_34 CMS Service Level, E07_35 Condition Code Number, E07_36 ICD-9 Code for the Condition Code Number, and E07_37 Condition Code Modifier); E12 Medical History (all elements except E12_01 Barriers to Patient Care, E12_02 Sending Facility Medical Record Number, E12_03 Destination Medical Record Number, E12_19 Alcohol/Drug Use Indicators, and E12_20 Pregnancy); and E16_01 Estimated Body Weight.
- PCR Linkage: E02_02 Incident Number (if it was not provided in your PCR); E03 Unit/Call Information (all elements); E05_01 Incident Onset Date/Time; E06 Patient (all elements except E06_14 Age and E06_15 Age Units; E06_03 Middle Initial/Name is populated if it was not provided in your PCR); E07 Billing (all elements); E08_04 Date/Time Initial Responder Arrived on Scene, E08_05 Number of

Patients at Scene, E08_06 Mass Casualty Incident, E08_07 Incident Location Type, E08_08 Incident Facility Code, E08_10 Scene GPS Location, E08_11 Incident Address, E08_15 Incident Zip Code; E09 Situation (all elements except E09_01 Prior Aid, E09_02 Prior Aid Performed By, E09_03 Outcome of Prior Aid, and E09_04 Possible Injury); E10 Situation/Trauma (all elements); E12 Medical History (all elements except E12_01 Barriers to Patient Care); E16_01 Estimated Body Weight; E16_02 Broselow/Luten Color; E22 Outcome and Linkage (all elements); E23_02 Potential Registry Candidate, E23_04 Suspected Intentional or Unintentional Disaster, 23_08 Required Reportable Conditions; and Bioterrorism Indicators.

After you have linked to another PCR, you can change the responses for the elements that were auto-populated into your PCR. The changes you make in your PCR will not affect the PCR to which you linked.

Finding Incomplete PCRs

POLARIS keeps track of incomplete PCRs so you can find them quickly and complete them. The Incomplete PCRs page shows a different list of PCRs based on your user role:

- Users see their own incomplete PCRs.
- PCR Reviewers, Billers, and Data Managers see all incomplete PCRs in their agency.

To find incomplete PCRs, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click on "Incomplete PCRs" on the POLARIS system menu. A list of incomplete PCRs will appear.

To sort the list of incomplete PCRs, click on a heading in the list (e.g., "Patient Name"). Click the same heading again to reverse the sort order.

To resume an incomplete PCR, click on the radio button on the left side of the PCR you wish to resume, and then click the "Resume" button at the top or bottom of the page.

POLARIS allows up to 60 days for a PCR to be completed once it has been started. Incomplete PCRs created more than 60 days in the past are marked "expired" and are not shown on the Incomplete PCRs list. They can no longer be edited by users. Your agency's data manager can search for expired PCRs and delete them (see Searching for PCRs, pg. 31, and Deleting PCRs, pg. 36).

Searching for PCRs

POLARIS users can search for PCRs and edit or view them. The Search PCRs page finds all PCRs that match a user's search criteria, including incomplete, complete, amended, archived, and expired PCRs. There is no limit to the date ranges that can be searched.

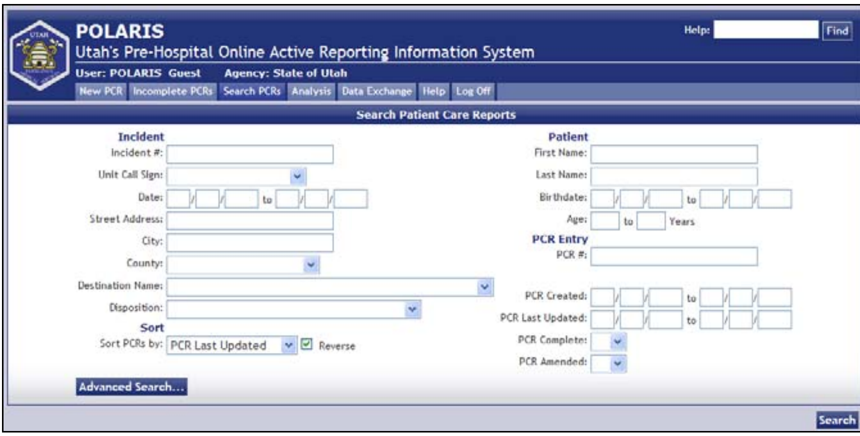
Search PCRs shows a different list of PCRs based on your user role:

- Users see their own PCRs.
- PCR Reviewers, Billers, and Data Managers see all PCRs in their agency.
- Hospital Users see all PCRs for patients delivered to their hospital.

To search for PCRs, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click on "Search PCRs" on the POLARIS system menu. A search form will appear.



Enter the criteria by which you wish to search. The more criteria you enter, the more restrictive your search will be. Warning: it you enter no search criteria, all PCRs to which you have access will be shown; the list could be very long.

Click the "Search" button. A list of matching PCRs will appear.

To sort the list of PCRs, click on a heading in the list (e.g., "Patient Name"). Click the same heading again to reverse the sort order.

To select a PCR, click on the radio button on the left side of the PCR you wish to select.

To view the selected PCR, click the "View" button at the top or bottom of the page.

To edit the selected PCR, click the "Edit" button at the top or bottom of the page. Only the roles of User and Data Manager can edit a PCR. PCRs can be edited for up to 60 days after being created. After that time they are marked "archived" but they are still available for viewing.

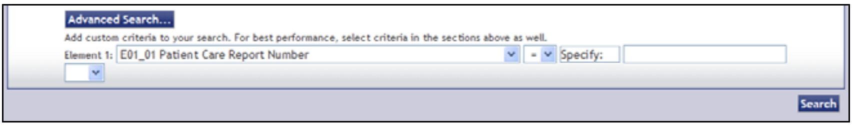
To export the selected PCR in NEMSIS XML format, click the "Export" button at the top or bottom of the page.

Advanced Search

The “Advanced Search” button allows POLARIS users to add more criteria to further restrict a search. To use the advanced search, do the following on the search form:

In the main search form, enter criteria by which you wish to search (optional). Searching based on criteria in the main search form is optimized for speed, but searching based on criteria in advanced search section takes longer. Your search will be performed more quickly if you initially limit it using criteria in the main search form before adding your additional criteria in the advanced search section.

Click the “Advanced Search” button. The advanced search section will appear.



In the first drop-down list, choose an element by which you want to limit your search. All NEMSIS elements that could be reported on a PCR are available.

Choose a search operator (=, ≠, <, ≤, >, or ≥).

Choose one or more values from the multi-line value list, or type a value into the textbox. If you chose an element that has a set list of values in the NEMSIS standard, then the value list will be filled for you, and you should pick one or more values from that list. If you chose an element that does not have a set list of values in the NEMSIS standard, then the value list will not be filled for you, and you should type a value into the text box.

To add further criteria to the search, click the drop-down list at the bottom of the advanced search section and choose either “AND” or “OR.” To get search results that match both criteria at the same time, choose “AND.” To get search results that match either of the criteria, choose “OR.” A new line will be added to the advanced search section. Repeat the steps above to define your second advanced search criterion. You may define up to five criteria in the advanced search section.

Viewing/Printing PCRs

PCRs can be viewed in a printable form using Portable Document Format (PDF). Your computer must have a PDF reader, such as the free Adobe Reader, to view printable PCRs. Printable PCRs can be viewed on a computer, saved to disk, or printed on paper.

To get a printable version of a PCR, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Using the Incomplete PCRs page or the Search PCRs page, select the PCR you wish to view (see Finding Incomplete PCRs, pg. 31, and Searching for PCRs, pg. 31).

Click the “View” button at the top or bottom of the page. Your browser may ask you whether you want to open or save the file. If you choose to save the file, you will need to find the saved file on your computer and open it if you want to view it. If you choose to open the file, your PDF reader will start and the PCR will be displayed on your computer.

To print the PCR, click on the "File" menu and choose "Print". Then, follow the instructions that appear in your PDF reader.

If you are already editing a PCR, you may click the "Preview" button at the top or bottom of the page. POLARIS will save the work you have done on the current page and then produce the printable version of the PCR.

Importing/Exporting Data in NEMSIS XML Format

PCRs can be created in POLARIS and then transferred to other software. Or, they can be created in other NEMSIS-compliant software and then transferred to POLARIS. Agency demographic data can also be exported from or imported into POLARIS. These tasks can be completed using POLARIS's Data Exchange page. Your user role determines what you can do:

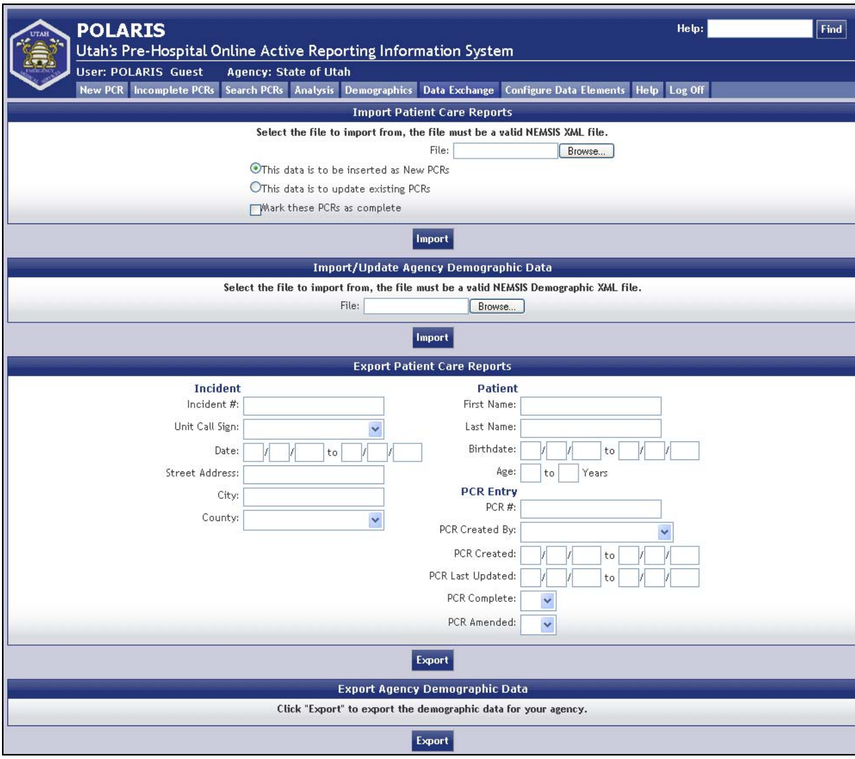
- Users and Data Managers can import and export PCRs.
- PCR Reviewers, Billers, and Hospital Users can export PCRs.
- Data Managers can import and export agency demographics.

To transfer PCRs in the NEMSIS XML format into POLARIS (import), do the following:

Using the NEMSIS-compliant software with which the PCR was created, follow the instructions for creating a NEMSIS XML export.

Log on to POLARIS (see Logging On, pg. 12).

Click "Data Exchange" on the POLARIS system menu. The Import and Export forms will appear.



In the Import Patient Care Reports section, click the "Browse" button, locate the NEMSIS XML file on your computer, and click "Open" or "OK."

Click "Import." The PCR(s) will be imported into POLARIS.

According to the NEMSIS standard, PCRs that you import contain a header with information describing your agency. When you import a PCR into POLARIS, the header information is overwritten by the information recorded in your agency's demographics in POLARIS.

To transfer PCRs from POLARIS to another system (export), do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "Data Exchange" on the POLARIS system menu. The Import and Export forms will appear.

In the Export Patient Care Reports section, enter criteria for the PCRs you want to export. If you enter no criteria, all PCRs to which you have access will be exported; the export could be very large.

Click the "Export" button. After some time (depending on how many PCRs are being exported), your browser may ask you whether you want to open or save the file. Choose "Save to disk" and click "OK." Then, select the location where you want to save the file.

Follow the instructions in your destination software to load the PCRs into it.

You may also export individual PCRs one at a time from the search results page in Search PCRs (see Searching for PCRs, pg. 31).

To transfer agency demographic data in the NEMSIS XML format into POLARIS (import), do the following:

Using the NEMSIS-compliant software with which the data was created, follow the instructions for creating a NEMSIS XML demographics export.

Log on to POLARIS (see Logging On, pg. 12).

Click "Data Exchange" on the POLARIS system menu. The Import and Export forms will appear.

In the Import/Update Agency Demographic Data section, click the "Browse" button, locate the NEMSIS XML file on your computer, and click "Open" or "OK."

Click "Import." The agency demographic data will be imported and replace any existing demographic data in POLARIS.

To transfer agency demographic data from POLARIS into another system (export), do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "Data Exchange" on the POLARIS system menu. The Import and Export forms will appear.

In the Export Agency Demographic Data section, click the "Export" button. Your browser may ask you whether you want to open or save the file. Choose "Save to disk" and click "OK." Then, select the location where you want to save the file.

Data can also be exchanged with POLARIS using a standard web services interface rather than a Web browser. The web services interface enables software developers to create automated tools that interact with POLARIS (see Automating Data Imports/Exports, pg. 52).

Deleting PCRs

In certain circumstances, PCRs may be deleted. The ability to delete PCRs is provided so that you can remove PCRs that were created accidentally. Only users with the role of Data Manager can delete PCRs. PCRs cannot be deleted once they have been marked "complete".

To delete a PCR, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Using the Incomplete PCRs page or the Search PCRs page, select the PCR you wish to delete (see Finding Incomplete PCRs, pg. 31, and Searching for PCRs, pg. 31).

Click the "Delete" button at the top or bottom of the page. POLARIS will ask you if you are sure you want to delete the PCR. **If you are sure, click "Yes"; otherwise, click "No" to cancel your request.**

If you click “Yes” to delete the PCR, the PCR will be deleted and the PCR list will be reloaded.

Editing Billing Information in a PCR

Some agencies use partner organizations to help with their billing activities. Faster billing increases an agency’s chances of collecting payment for services. Using POLARIS, agencies can grant their billers real-time electronic access to their PCRs. Billers can view or export PCRs, and they can add billing information to the PCRs.

For information on granting the Biller role to a user, see User Administration, pg. 38.

A user with the Biller role can do the following:

- Find PCRs using the Incomplete PCRs page or the Search PCRs page (see Finding Incomplete PCRs, pg. 31, and Searching for PCRs, pg. 31).
- View a PCR in printable format (see Viewing/Printing PCRs, pg. 33).
- Export PCRs and transfer them into billing software that recognizes the NEMSIS standard (see Importing/Exporting Data in NEMSIS XML Format, pg. 34).
- Edit the billing information in a PCR.

To edit the billing information in a PCR, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Using the Incomplete PCRs page or the Search PCRs page, select the PCR you wish to edit (see Finding Incomplete PCRs, pg. 31, and Searching for PCRs, pg. 31).

Click “Edit Billing” at the top or bottom of the page. The billing page of the PCR will appear.

For general information about filling out PCRs, see Filling Out a PCR, pg. 18.

User Administration

Web-based access to POLARIS is controlled by Utah-ID. Utah-ID is a single sign-on user authentication service used by many state applications in Utah. All POLARIS users must have Utah-ID accounts before they can be granted access to POLARIS. User administration can be performed by users who have the User Administrator or Hospital User Administrator roles.

Creating User Accounts

Each POLARIS user must create their own user account before they can be granted access to POLARIS. To create a user account, see Obtaining a User Account, pg. 10. Administrators should not create user accounts on behalf of users, because they contain private information, such as passwords.

Finding a User

After a person has created a user account, he/she can be found in POLARIS and access can be granted. To find a user, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "User Administration" on the POLARIS system menu. The user search form will appear. A list of users who already have access to your agency will also appear.

Enter your search criteria for the user's first name, last name, or user ID exactly as the user entered them when creating his/her account. The more criteria you enter, the more restrictive your search will be.

Click "Search." If only one user matches your search criteria, then the user's profile will appear. Otherwise, a list of users matching your criteria will appear.

If a list of users appears, click on the user whose roles you wish to administer. The user's profile will appear.

Granting Roles to a User

A user may have any combination of roles within an agency or hospital. The roles are additive, meaning that the user can perform all activities allowed by the various roles he/she has been granted. The same user can have different roles in different agencies or hospitals.

To grant roles to a user, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Find the user whose roles you wish to administer (see Finding a User, pg. 38).

In the user's profile, check the checkboxes next to the roles you wish to grant to the user.

Click "Save." The user's profile will disappear and the user search form will appear.

Changing a User's Roles

A user's roles can be changed at any time by a User Administrator or Hospital User Administrator. The change will take effect the next time the user logs on. To change a user's roles, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Find the user whose roles you wish to administer (see Finding a User, pg. 38).

In the user's profile, check or clear the checkboxes next to the roles you wish to grant to or revoke from the user.

Click "Save." The user's profile will disappear and the user search form will appear.

If a user belongs to multiple agencies or hospitals, role changes done by one agency or hospital do not have any effect on the user's roles in other agencies or hospitals.

Removing a User

User administrators and hospital user administrators should keep track of all users currently granted access to their agency or hospital. If a person leaves the organization, they should be removed as a user of POLARIS. To remove a user, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Find the user you wish to remove (see Finding a User, pg. 38).

Click "Remove User" at the bottom of the user profile. The user will be removed from your agency or hospital, the user's profile will disappear, and the user search form will appear.

If a user belongs to multiple agencies or hospitals, removing the user from one agency or hospital has no effect on the user's access to other agencies or hospitals. PCRs completed by a user who has been removed are still available within POLARIS.

Roles

The following roles are available to be granted to a user within an EMS agency:

- User: Can create PCRs and can view and edit one's own PCRs.
- Data Manager: Can view and edit (amend) all PCRs in the agency (except, archived PCRs cannot be edited); can manage Demographics (see Agency Demographics, pg. 41); and can configure data elements (see Data Element Configuration, pg. 46).
- PCR Reviewer: Can view but not edit all PCRs in the agency.
- User Administrator: Can manage users' roles within the agency (see User Administration, pg. 38).
- Biller: Can view all PCRs in the agency; and can edit the Billing page only in PCRs (see Billing, pg. 27).

The following roles are available to be granted to a user within a hospital:

- Hospital User: Can view PCRs for all patients delivered to the hospital.
- Hospital User Administrator: Can manage users' roles within the hospital (see User Administration, pg. 38).

Agency Demographics

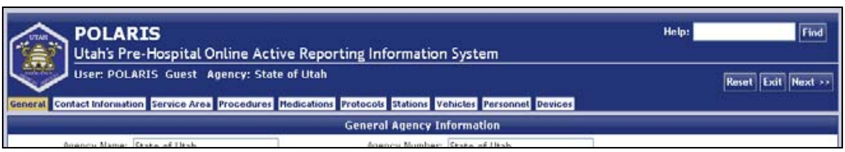
Agency demographics represent infrequently-changing information about EMS agencies and their resources. Agency demographics must be filled out properly before users attempt to create PCRs, because the PCR entry pages rely on information provided in agency demographics. Agency demographics can be filled out by users with the Data Manager role.

Agency Demographics should be filled out for the first time when an agency begins using POLARIS. They should then be updated any time the information in them changes. For example, when a new employee is hired, the employee should be added to the personnel list in Agency Demographics.

To manage agency demographics, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "Demographics" on the POLARIS system menu. The General page of demographics will appear.



Once you are in demographics, the POLARIS system menu is replaced by the Demographics menu. Information in demographics may be filled out in any order, except that certain NEMSIS elements are mandatory and must be responded to before you can move to another page. If you leave a mandatory element blank, POLARIS will display a message explaining the problem. You will need to fix the problem before you can move to another page.

An agency's demographics should not be worked on by more than one user at the same time. If two or more users work on the same agency's demographics at the same time, they will overwrite each other's responses as they move from page to page. If this happens, contact the Bureau of EMS for technical support.

To leave demographics and return to the POLARIS system menu, click the "Exit" button.

General

The General page collects general information and yearly statistics about your agency. The following notes apply to the General page:

- Your agency number should only be changed if the Bureau of EMS changes it in the agency licensing process.

- You may record multiple sets of yearly statistics. To record additional years, click the “More Yearly Statistics…” button at the bottom of the page. After clicking the button, a new row will be added to the table. To remove a row that you added, click the “Remove” button at the left of the row. Yearly statistics should be added for each year starting with the year you began using the NEMSIS data standard. Previous years’ statistics should not be removed.

For general information on how to fill out the elements on the General page, see Typical PCR Elements, pg. 19.

Contact Information

The Contact Information page collects information about your agency contact person and medical director. The following notes apply to the Contact Information page:

- Agency Contact Zip Code is required. You cannot move to another page until you have entered a valid ZIP code for your agency contact.

For general information on how to fill out the elements on the Contact Information page, see Typical PCR Elements, pg. 19.

Service Area

The Service Area page collects information about the area served by your agency. The following notes apply to the Service Area page:

- Counties Served is required. You cannot move to another page until you have selected at least one county.
- When a user fills out a new PCR, he/she must select the county in which the incident occurred. The entire list of Utah counties is shown, but the counties you have selected for Counties Served are displayed at the top of the list for the user, with the first county on your list pre-selected. Thus, you should first select the county you serve most often, and then select other counties that you may serve.
- When a user fills out a PCR, several elements collect information about the name, address, etc., of the destination. The hospitals that you select for Hospitals Served are provided to the user in a list. When the user selects one of the hospitals, all of the destination-related elements are filled out for the user.
- The destinations that you add to Other Destinations are also listed for users along with hospitals.

For general information on how to fill out the elements on the Service Area page, see Typical PCR Elements, pg. 19.

Procedures, Medications, and Protocols

The Procedures, Medications, and Protocols pages collect information about the procedures, medications, and protocols used by your agency. The following notes apply to the Procedures, Medications, and Protocols pages:

- It is important to check the checkbox next to the name of each procedure, medication, and protocol used by your agency. Optionally, you can also check the checkboxes next to the personnel certification levels to indicate which levels are permitted to use each procedure, medication, and protocol.
- The procedure and protocol lists are defined by the NEMSIS standard and cannot be changed by the Bureau of EMS.
- The medication list includes all required medications as mandated by Utah Administrative Rule R426-15-203, as well as all medications being used on variances granted to agencies throughout the state. A variance medication can only be used if your agency has a current variance from the Bureau of EMS.
- When users fill out PCRs, they can only report procedures (and protocols, if you choose to enable the Protocols Used element in PCRs) that you have selected in demographics. If you have not selected any procedures or protocols in demographics, users will be unable to record which procedures or protocols they used.

For general information on how to fill out the elements on the Procedures, Medications, and Protocols pages, see Typical PCR Elements, pg. 19.

Stations

The Stations page collects information about the stations from which your agency operates. The following notes apply to the Stations page:

- The Stations page provides a list of stations already entered in POLARIS. To edit the information for a station, click on that station's name. To remove a station, first click on its name; then, click "Delete Station". To add a station, click "Add Station."

For general information on how to fill out the elements on the Stations page, see Typical PCR Elements, pg. 19.

Vehicles

The Vehicles page collects information about the units and vehicles operated by your agency. It is important to note the distinction between units and vehicles. Unit call signs are logical designations given to your vehicles, but the same unit call sign may be applied to different physical vehicles over time. A vehicle identification number (VIN) is always unique to a single vehicle. For example, your agency might operate one of your vehicles as Ambulance #1. “Ambulance #1” is the unit number. Then, your agency decommissions the vehicle used as Ambulance #1 and replaces it with a new Ambulance #1. The old vehicle should be removed from the Vehicles page and the new vehicle added, but your unit call signs will not change.

The following notes apply to the Vehicles page:

- For the Unit Call Signs element, enter each of your unit numbers (or call signs), pressing the Enter key between each.
- The NEMSIS standard does not allow one-character unit call signs. If you use any one-character unit call signs, you will need to add a second character, such as a pound sign (#), to the unit call sign.
- The Vehicles section provides a list of vehicles already entered in POLARIS. To edit the information for a vehicle, click on that vehicle’s number. To remove a vehicle, first click on its number; then, click “Delete Vehicle”. To add a vehicle, click “Add Vehicle.”

For general information on how to fill out the elements on the Vehicles page, see Typical PCR Elements, pg. 19.

Personnel

The Personnel page collects information about your agency’s state-certified EMS personnel who provide patient care. You do not need to provide information about administrative or support personnel who do not provide patient care. The following notes apply to the Personnel page:

- Users and personnel are not the same. A person can have user access in POLARIS but not be listed in personnel, and a person can be listed in personnel but not have a POLARIS user account. Granting access to a user *does not* automatically create a personnel record for the person, and adding a personnel record *does not* automatically create a user account for the person.

To add a person to the personnel list, do the following:

Log on to POLARIS and enter Demographics (see Agency Demographics, pg. 41).

Click “Personnel” on the Demographics menu. The personnel list page will appear.

Click the “Add Person” button at the bottom of the personnel list page. The personnel details page will appear.

Fill out the information about the person.

To save the personnel record, click the “Save Person” button at the bottom of the page, or any item on the Demographics menu. The personnel list page will appear, with the new person shown on the list.

To cancel the new personnel record, click on the “Cancel” button at the bottom of the page. The personnel list page will appear and the person will not be added.

To edit the information for a person who already has a personnel record, do the following:

Log on to POLARIS and enter Demographics (see Agency Demographics, pg. 41).

Click “Personnel” on the Demographics menu. The personnel list page will appear.

Click the last name of the person whose information you wish to edit. The personnel details page will appear.

Fill out or change the information about the person.

To save the personnel record, click the “Save Person” button at the bottom of the page, or any item on the Demographics menu. The personnel list page will appear, with the person’s information updated on the list.

To cancel the changes to the personnel record, click the “Cancel” button at the bottom of the page. The personnel list page will appear and the person’s information will not be updated.

To remove a person from the personnel list, do the following:

Log on to POLARIS and enter Demographics (see Agency Demographics, pg. 41).

Click “Personnel” on the Demographics menu. The Personnel list page will appear.

Click the last name of the person whose record you wish to remove. The personnel details page will appear.

Click the “Delete Person” button at the bottom of the page. The personnel list page will appear, with the person removed from the list.

For general information on how to fill out the elements on the Personnel Details page, see Typical PCR Elements, pg. 19.

Devices

The Devices page collects information about medical devices operated by your agency. If your agency chooses to enable the collection of medical device data within PCRs, then the data provided by the devices will be linked with the device information reported on the Devices page of demographics. The following notes apply to the Devices page:

- You may record multiple devices. To add additional devices, click the “More Devices…” button at the bottom of the page. After clicking the button, a new row will be added to the table. To remove a row that you added, click the “Remove” button at the left of the row.

For general information on how to fill out the elements on the Devices page, see Typical PCR Elements, pg. 19.

Data Element Configuration

POLARIS users with the Data Manager role can manage which NEMSIS elements are collected in PCRs within their agencies. The NEMSIS standard contains 424 elements and the ability to collect additional "research elements," but the Bureau of EMS only requires a subset of the elements to be reported to the state and national data repositories. The elements that are not required for the state or national repositories are optional elements. Optional elements can be enabled or disabled at any time by a data manager.

Finding Information About NEMSIS Data Elements

When considering additional information to collect on PCRs in your agency, you need to figure out which NEMSIS elements best represent the information you are trying to collect. To do so, you need to understand the definitions of the NEMSIS elements. You can find information about NEMSIS data elements in two locations:

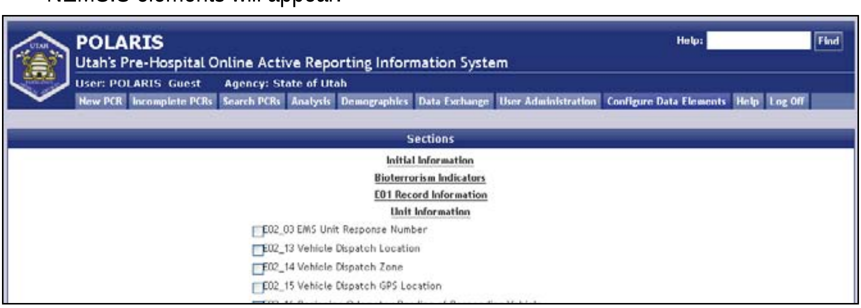
- POLARIS's online help tool, where you can search using keywords (see Online Help, pg. 14).
- The NEMSIS data dictionary on the NEMSIS Web site, www.nemsis.org.

Enabling Optional Data Elements

Optional data elements can be enabled by users with the Data Manager role. Once you have determined an optional element that needs to be collected within your agency, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "Configure Data Elements" on the POLARIS system menu. The list of optional NEMSIS elements will appear.



Check the checkbox next to the name of each data element you wish to collect.

Click the "Save" button at the bottom of the page. The list of elements will reappear with changes saved.

The elements that you enabled will now be shown within PCRs so that users can provide responses to them.

Disabling Optional Data Elements

Optional data elements that have been enabled can be disabled again at any time by a data manager (national and state elements can only be disabled by the Bureau of EMS). To disable optional elements that were previously enabled, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click “Configure Data Elements” on the POLARIS system menu. The list of optional NEMSIS elements will appear.

Clear the checkbox next to the name of each data element you wish to stop collecting.

Click the “Save” button at the bottom of the page. The list of elements will reappear with changes saved.

The elements that you disabled will no longer be shown within PCRs, so users will no longer be able to provide responses to them. However, data collected while the elements were enabled will not be lost and can still be queried in the POLARIS analysis suite.

Requesting Additional Data Elements

If you need to collect an additional data element, and there is no NEMSIS element that fits your need appropriately, contact the Bureau of EMS to request that a new research element be created to meet your need. The Bureau of EMS will review your request and, if it is approved, create the additional data element. The element will become available as an optional element to all agencies in the state, including your own. Then, you can enable the data element within your agency.

Please do not repurpose the existing elements. In other words, do not turn on an unrelated element and then train your users to report the information you seek through that element. Instead, contact the Bureau of EMS so that an element can be created that directly addresses your need.

Analysis

The POLARIS analysis suite allows extensive research and analysis capabilities. It uses the Pentaho Business Intelligence Suite (see www.pentaho.org), so Pentaho documentation from other sources usually applies to the POLARIS analysis suite.

To enter the analysis suite, do the following:

Log on to POLARIS (see Logging On, pg. 12).

Click "Analysis" on the POLARIS system menu. The Analysis menu will appear. To return to the POLARIS system menu, click "Exit."

Basic Stats

The Basic Stats page is the page that is shown when first entering the analysis suite. The Basic Stats page displays current counts of the number of PCRs completed by you, within your agency (if you have an agency-wide role), and statewide.

Reports

The Reports page provides links to predefined reports that have been designed by the Bureau of EMS. When you click on a report to run it, you will be asked to provide one or more parameters to the report, such as a date range.

The Reports page also provides a link to the National EMS Database, maintained by the NEMSIS Technical Assistance Center. Utah is one of several states providing data to the National EMS Database. By accessing the National EMS Database, you can run predefined reports based on nationwide EMS data.

Contact the Bureau of EMS to recommend additional reports that should be designed and made available (see Support Contacts, pg. 6).

Multidimensional Analysis

Multidimensional Analysis provides access to many NEMSIS elements collected in POLARIS. More elements will be added until all elements are available.

Multidimensional Analysis uses the Pentaho Analysis software, also known as Mondrian, from the Pentaho Business Intelligence Suite. Pentaho Analysis implements a query language called Multidimensional Expressions (MDX), a standard developed by Microsoft. Most MDX documentation from other sources also applies to POLARIS Multidimensional Analysis.

Dimensions and Measures

Effective use of Multidimensional Analysis requires an understanding of dimensions and measures. In Multidimensional Analysis, you can choose measures that you want to measure, and dimensions by which you want to measure them.

Dimensions
Dimensions are descriptive attributes by which you measure. Examples include dispatch complaints, dates, locations, etc. Use dimensions to categorize or filter the data that you are measuring.

Measures
Measures are the actual data points you want to measure. They are usually numeric. Examples include record counts, times, fall height, patient weight, etc. Measures are either additive or semiadditive. Additive measures can be added, such as record counts. Semiadditive measures don't make sense when added but they can be aggregated in other ways such as averaging. For example, it would not make sense to add Glascow Coma Scores across records ("The total GCS of our calls last month was [some big number]"), but it does make sense to average them ("The average GCS of our calls last month was 12").

Multidimensional Analysis Usage

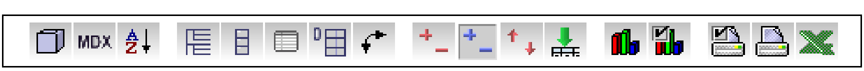
To use Multidimensional Analysis, do the following:

Enter the analysis suite (see Analysis, pg. 48).

Click "Multidimensional Analysis" on the Analysis menu. The Multidimensional Analysis contents page will appear, containing links that represent various starting points into Multidimensional Analysis.

Click on a starting link that is similar to the analysis question you are looking to answer. The Multidimensional Analysis browser will appear in a new window or tab in your Web browser. You will be able to further refine your analysis once you have opened the Multidimensional Analysis browser.

The Multidimensional Analysis browser displays a data table, with dimensions as row and column headings, and measures in the body of the table. It also provides a toolbar that enables navigation and manipulation of the data table.



Open OLAP Navigator
This is the main way of selecting what you want to include in your analysis. Click on one of the underlined links to select or filter items within that category. The navigator contains the following icons:

Move something to be a column header.

Move something to be a row header.

Move something to the filter area (also used to remove something from columns or rows).

Move something up or down in a hierarchy.

Show MDX Editor
Shows the MDX query that is used to retrieve your analysis results. To save a particular analysis view, copy the contents of the MDX editor; when you come back later, paste the contents into the MDX editor to retrieve that view. You can also hand-edit the MDX query by referring to the MDX language reference. You can share MDX queries with other users, and they will see your query applied to their data.

Configure Sorting Options
Displays sorting options, including options such as “top count” (for example, top ten).

Show Parent Members
Changes the layout of the analysis table by showing top-level labels of the dimensions you’ve chosen.

Show Spans
Changes the layout of the analysis table by showing an item repeatedly instead of showing a large span with the item only printed once.

Show Properties
Shows additional information on some items.

Suppress Empty Rows/Columns
Suppresses display of items that have no data. For example, a list of dispatch complaints with “Suppress Empty Rows/Columns” turned off will show all dispatch complaints, regardless of whether your organization has had any PCRs with each of those dispatch complaints. With “Suppress Empty Rows/Columns” turned on, only dispatch complaints that have actually happened in your organization will be shown.

Swap Axes
Moves dimensions that are on the rows to the columns, and vice-versa.

Drill Member
Puts a red plus or minus next to each dimension member that can be drilled down. When clicking on a red plus or minus, all members with the same position will be drilled into.

Drill Position
Puts a blue plus or minus next to each dimension member that can be drilled down. When clicking on a blue plus or minus, only the member clicked on will be drilled into.

Drill Replace
Puts a red arrow next to each dimension member that can be drilled down. When clicking on a red arrow, the member clicked on will be removed and its parent or children will be shown in its place.

Drill Through
Places a green arrow next to each measure. Clicking on the green arrow for a particular measure will show a table of the detailed data of the actual records that made the measure. The table can be configured to only show certain elements by clicking E.

Show Chart
Shows a chart of the data being analyzed.

Configure Chart
Shows chart configuration options for the chart. You can choose chart type, size, fonts, and more. You can also enable drill-through on a chart, so that when you click on a particular area of the chart, the underlying data for that area is displayed in a drill-through table.

Configure Print Settings
Shows the printing configuration settings.

Print as PDF
Downloads the analysis as a PDF.

Export to Excel
Downloads the analysis in Excel format for further manipulation.

Automating Data Imports/Exports

POLARIS provides an industry-standard web services interface for uploading and downloading NEMSIS data without using a Web browser. The interface uses the following technologies to transmit NEMSIS XML data:

- Simple Object Access Protocol (SOAP): A protocol for exchanging structured information in a distributed environment using standard Internet transport protocols, including HTTP/HTTPS.
- Web Services Description Language (WSDL): An XML-based language for describing the features of a web service and how to interact with it, readable by a computer.

The web services interface is the recommended method for facilitating data exchange between POLARIS and other software products, especially commercial NEMSIS-compliant data collection systems used by EMS agencies. The interface makes it possible to establish automated real-time data uploads to POLARIS.

The WSDL for POLARIS is available at health.utah.gov/ems/web_services/PolarisWS.wsdl. For development and testing purposes, a separate WSDL is available that provides access to the POLARIS development and testing server, at health.utah.gov/ems/web_services/PolarisWS.dev.wsdl.

To gain access to the web services interface, contact the Bureau of EMS (see Support Contacts, pg. 6). The Bureau of EMS will issue a client ID and password for you to use in your software. Web services client IDs and passwords are not managed by the Utah-ID system.

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Prehospital Online Active Reporting Information System

USER MANUAL

Bureau of Emergency Medical Services
Utah Department of Health
Rev. 1.5
April 14, 2009