Requestor User Support Manual
Delaware Prescription Monitoring Program

December 2019
Version 2.1

Table of Contents

1 Document Overview

The PMP AWARxE *Requestor User Support Manual* provides step-by-step instructions for healthcare professionals requesting data from the Delaware Monitoring Program (PMP) database. It includes such topics as:

- Registering for an account
- Creating patient requests
- Viewing request status
- Viewing patient reports
- Appointing a delegate to request and receive information on behalf of a prescriber or dispenser
- Managing your account

1.1 What is a Requestor?

A requestor is a PMP AWARxE account type typically used to review patients' prescription history. A requestor's primary task within the application is to determine if a patient should be given or dispensed a prescription based on their prescription history. Requestors are the strongest line of defense in preventing prescription drug abuse. Physicians and pharmacists are the most common type of requestor; however, there are a myriad of roles that can be classified as a requestor. A complete list of available roles that fall into the requestor category is provided below:

Healthcare Professionals

- Dentist
- Medical Intern
- Medical Resident
- Midwife with Prescriptive Authority
- Military Prescriber
- Nurse Practitioner / Clinical Nurse Specialist
- Optometrist

- Out of State Pharmacist
- Out of State Prescriber
- Pharmacist
  Pharmacist's Delegate - Licensed
- Pharmacist's Delegate - Unlicensed
- Pharmacy Technician
- Physician (MD, DO)

- Physician Assistant
- Podiatrist (DPM)
- Prescriber Delegate - Licensed
- Prescriber Delegate - Unlicensed
- Prescriber without DEA
- VA Dispenser
- VA Prescriber

Other

- Licensing Addiction Counselor
- Licensing Board Investigator
- Medical Examiner/Coroner

2   Registration

This chapter provides an overview of the PMP AWARxE registration process as well as detailed instructions for registering for an account and registering for a delegate account.

2.1   Registration Overview

PMP AWARxE requires that every individual register as a separate user, using their email address as their username within the system. A user can register as a delegate, a role that is designed to allow the user to generate reports on the behalf of another, current user; for example, a nurse at a small doctor's office could be assigned to act as a delegate to the physician to create Narx Reports for the patients whom the physician would be seeing that day. All queries run by the delegate are attributed to the prescriber for whom they run the report.

Please note that if you had an account with the previous system, you may already have an account in PMP AWARxE. Please attempt to access your account by following the Reset Password instructions located in this guide before attempting to create a new account. Please utilize the email address associated with your previous account. If your account was transferred but the account is missing information, the user demographics page is displayed. You must complete any missing information before you are able to gain full access to the account.

The registration process is comprised of four sections: Register for an Account, User Role Selection, User Demographics, and Review Profile Details. All sections must be completed before your registration is successfully submitted for processing.

Some requestor roles may also require you to upload of a copy of a current government-issued photo ID, such as a driver's license or a passport, or notarized validation documents. If required, you must submit this documentation before your account can be approved. Digital copies of these documents can be submitted through PMP AWARxE after you have completed the registration process.

2.2   Registering for an Account

To request a new account in PMP AWARxE:

1. Navigate to https://delaware.pmpaware.net/login.

    The Log In page is displayed as shown on the following page.
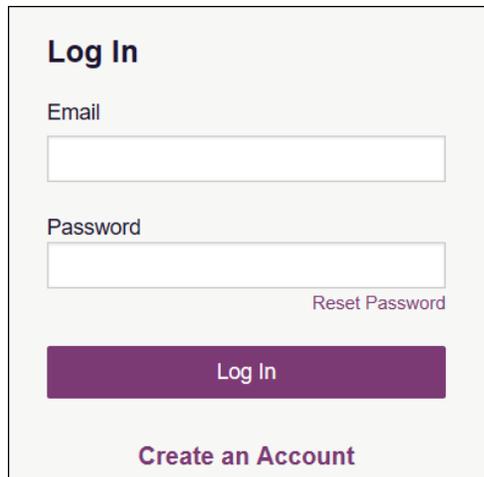
2. Click **Create an Account**.

   The Register for an Account page is displayed.

*Note: A tutorial describing the complete registration process is available by clicking the **Registration Process Tutorial** link located in the top right corner of the page.*

3. Enter your current, valid email address in the **Email** field, then re-enter it in the **Confirm Email** field. The email address you provide will be your username for logging in to the system.

   Note: If the email addresses you entered do not match, an error message is displayed.

4.   Enter a password in the **Password** field, using the password requirements provided below, then re-enter it in the **Password Confirmation** field.

Passwords must contain:

- *At least eight (8) characters*
- *One (1) uppercase letter*
- *One (1) lowercase letter*
- *One (1) special character such as !, @, #, $, etc.*
- *No more than 72 characters*

Note that a checkmark appears next to each requirement as it is met.
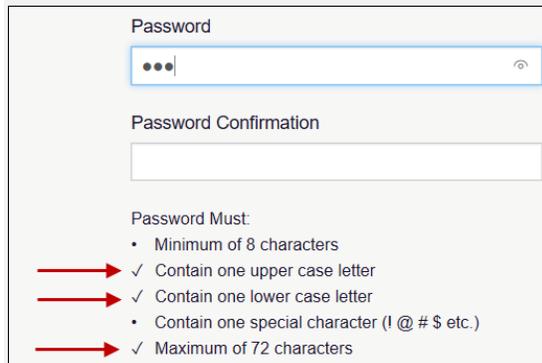
Password

Password Confirmation

Password Must:
- Minimum of 8 characters
- ✓ Contain one upper case letter
- ✓ Contain one lower case letter
- Contain one special character (! @ # $ etc.)
- ✓ Maximum of 72 characters

If the passwords you entered do not match, an error message is displayed.
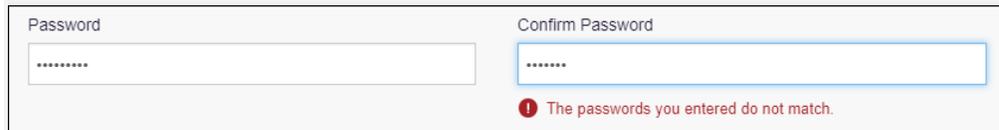
Password

Confirm Password

⚠ The passwords you entered do not match.

5.   Click **Continue**.

The Account Registration: User Role Selection page is displayed.
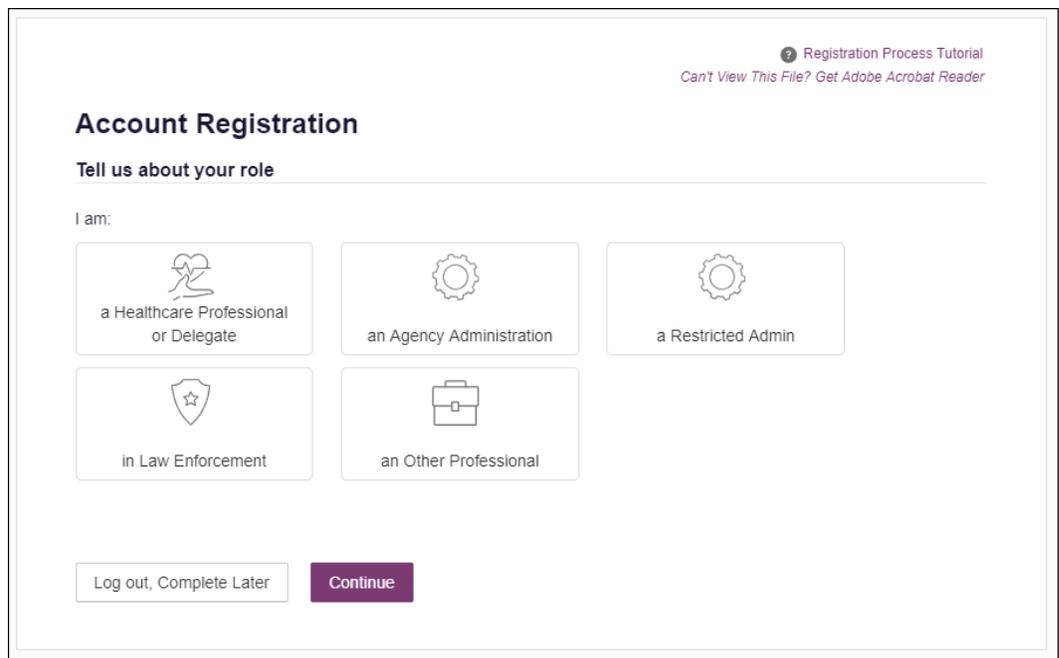
Registration Process Tutorial
Can't View This File? Get Adobe Acrobat Reader

Account Registration

Tell us about your role

I am:

a Healthcare Professional or Delegate

an Agency Administration

a Restricted Admin

in Law Enforcement

an Other Professional

Log out, Complete Later   Continue

> ***Note:*** *At this point in the registration process, you may click **Log Out, Complete Later** to save your login credentials and complete your registration at a later time. When you are ready to complete your registration, navigate to https://delaware.pmpaware.net, then enter the username and password you established in the previous steps.*

6. Click to select the user role category that best describes your user role type (e.g., Healthcare Professional or Delegate, Law Enforcement, etc.).

   The list of available user roles in that category is displayed.

> ***Notes:***
>
> - *The roles displayed on this page may vary depending on your state's configurations.*
> - *If you are registering as a delegate, please ensure that you select the appropriate delegate user role (e.g., Prescriber Delegate, Pharmacist Delegate, etc.).*
> - *If you do not see an applicable role for your profession, the State Administrator has not configured a role of that type and potentially may not allow users in that profession access to PMP AWARxE. Please contact your State Administrator for more information.*

7. Click to select your user role, then click **Continue**.

The Account Registration: User Demographics page is displayed.

Notes:

- *If you selected the wrong user role, you may click **Change**, located at the top of the page next to the user role you selected, at any time to return to the previous page and select the correct user role. Please be aware that changing your user role will cause you to lose any information you entered on the registration form.*

- *The information you are required to enter on this page may vary by state. Required fields for your state are marked with a red asterisk (*). You may use the information provided below as a guideline; however, the same fields will not be displayed or required for every user role.*

a. The Professional Details section of this page allows you to enter such information as your DEA number, NPI number, professional license number, license type, and healthcare specialty.

- To add your DEA number, enter it in the **DEA Number** field, and then click **Add**. You may add multiple DEA numbers, if permitted by your state, by repeating this process for each DEA number you wish to add. Once you click **Add**, the DEA number is displayed beneath the **DEA Number** field. If necessary, you may click **Remove** next to a DEA number to remove it.
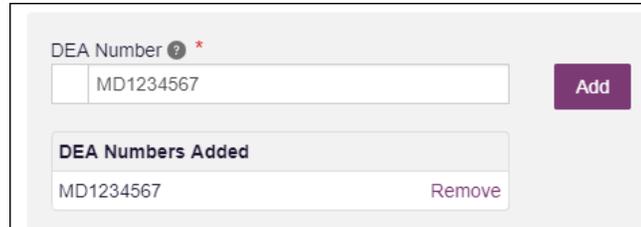
- If you have an NPI number, you can enter it in the **National Provider ID** field, then click **Autofill Form** to auto-populate the form with the demographic information associated with your NPI number.

- To search for your specialty, begin typing it in the **Add a Healthcare Specialty** field. A list of specialties matching your search criteria is displayed. Click to select your specialty from the list. You may repeat this process to select multiple specialties.
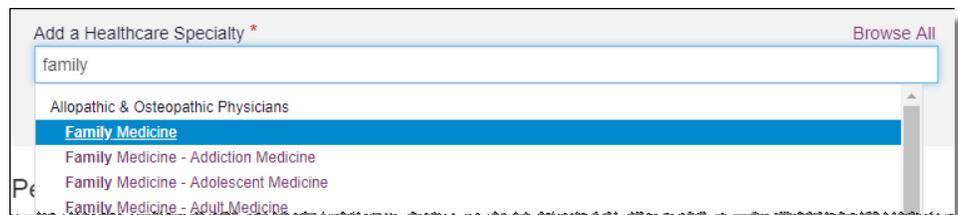
  Once you have selected your specialty from the list, it is displayed beneath the **Add a Healthcare Specialty** field. If necessary, you may click the "x" to remove it.

b. The Personal Information section of this page allows you to enter your personal contact information such as first and last name, date of birth, last four digits of your Social Security Number (SSN), primary contact phone number, and mobile phone number.

c. The Employer Information section of this page allows you to enter information about your employer such as DEA number, NPI number, name, address, phone number, and fax number.

- To add your employer's DEA or NPI number, enter it in the appropriate field, and then click **Add**. You may add multiple DEA and/or NPI numbers, if permitted by your state, by repeating this process for each DEA/NPI number you wish to add. Once you click **Add**, the DEA/NPI number is displayed beneath the appropriate field. If necessary, you may click **Remove** next to a DEA/NPI number to remove it.

d. If you selected a delegate user role (e.g., Prescriber Delegate, Pharmacist Delegate, etc.), you must add your supervisor(s) in the Delegate section of this page. *Note that this section is only displayed if you selected a delegate user role.*
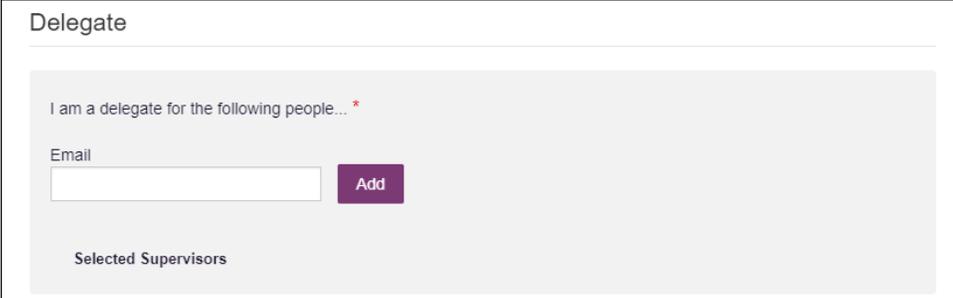
- To add a supervisor, enter their current, valid email address in the **Email** field, and then click **Add**. You may add multiple supervisors by repeating this process. Once you click **Add**, the supervisor's email address is displayed beneath the **Email** field. If necessary, you may click the "x" to remove it.
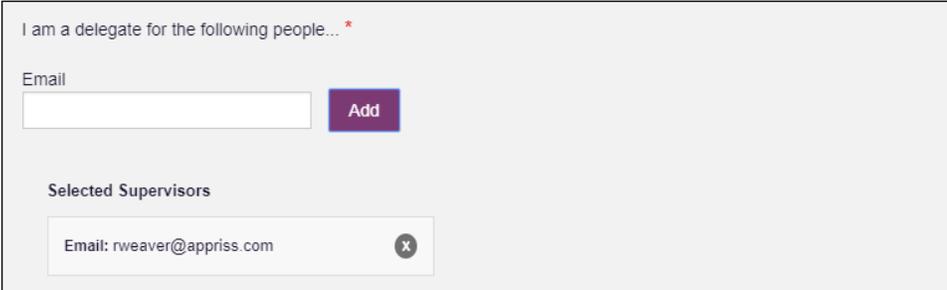
Notes:

- *The supervisor must already have a registered account with your state's PMP.*
- *Ensure that you enter the supervisor's email address correctly and that it is a valid email address.*
- *You will not be able to perform Patient Requests on behalf of a supervisor until that supervisor has approved you as a delegate.*

8. Once you have entered all required information, click **Continue**.

*Note: At this point in the registration process, you may click **Log Out, Complete Later** to save your login credentials and complete your registration at a later time. When you are ready to complete your registration, navigate to https://delaware.pmpaware.net, then enter the username and password you established in the previous steps.*

The Account Registration: Review Profile Details page is displayed.

9. Review your information to ensure it is correct before submitting your registration.

    a. If you need to change your user role, click **Change**, located at the top of the page next to the role you selected. *Note that changing your user role will cause you to lose any information you entered on the registration form.*

    b. If you need to edit your personal information, click **Edit** next to the **Personal Information** section header.

10. If all information is correct, click **Submit & Continue**.

    Once you have submitted your registration, you will be notified of your account status (Access Granted, Pending Approval, or Not Complete – Additional Documents Needed) and instructed to verify your email address.

    Note: If you are a delegate, you must also be approved by any supervisors you have selected before you can perform a Patient Request.

    a. **Access Granted:** Certain user roles will be immediately granted access to the application provided their personal DEA numbers and professional license numbers as entered are valid and found within the registry. After accepting, you will be routed to your dashboard and can begin using the application.

        Notes:

        - *If you are a delegate, you must be approved by any supervisors you have selected before you can perform a Patient Request.*

- • *If configured by your state, upon logging in, you may be presented with the End User License Agreement that you must review and accept prior to using the application.*

b. **Pending Approval:** If your account requires manual approval to complete your registration, your registration status will be "Pending Approval." You may click the plus sign (+) next to **Registration Details** to view the information you submitted. *Note that your information may not be edited at this time.* Refer to Account Approval for more information.

c. **Not Complete – Additional Documents Required:** If your user role requires that you upload validation documents to complete your registration, your registration status will be "Not Complete – Additional Documents Required," and the Account Registration page displays the list of required documents.

- Click **Choose File** to upload the required document(s) to your account, then click **Submit Documents**;

  Or

- Click **Log Out, Complete Later** to return at a later time and upload the required document(s). When you are ready to complete your registration, navigate to https://delaware.pmpaware.net, then enter the username and password you established in the previous steps.

Once you have submitted your documents, you will be notified that your account is pending approval and instructed to verify your email address. You may click the plus sign (+) next to **Verification Documents** and **Registration Details** to view the information you submitted. *Note that your information may not be edited at this time.* Refer to Account Approval for more information.

2.3 Verifying Your Email Address

Once you have submitted your registration, PMP AWARxE sends an email to the supplied email address for verification of an active email address.

*Note: If you did not receive the email containing the verification link, you may click **Resend Email** from the Account Registration page.*

When you receive the email, it will contain a link to verify your email address. Click the **verify your email** link.
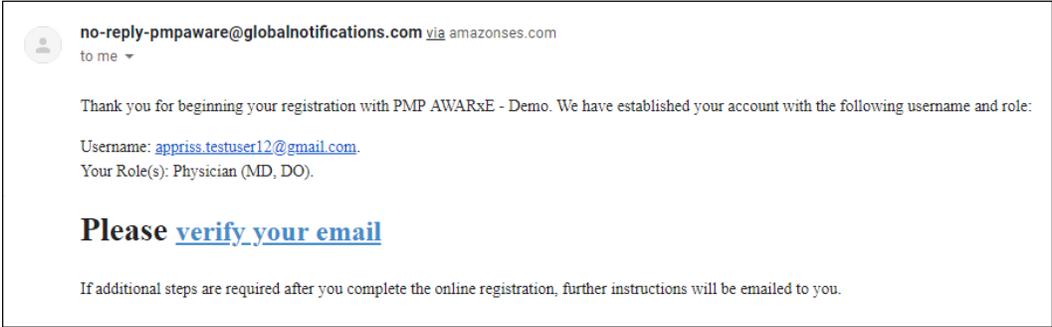
Notes:

- *The link contained within the email is only valid for 20 minutes. In the event that time has expired, clicking the link will result in a new email verification notification being sent to you. Click the link in the new email to verify your email address.*

- *If you are not able to receive HTML-formatted emails or emails with hyperlinks, please contact the help desk.*

Once you click the link, you are directed to PMP AWARxE, and a message is displayed indicating that your email address has been validated.

Note: If your account requires approval, you will not have full access to PMP AWARxE functionality, including performing patient requests, until your account is approved. Please refer to Account Approval for more information.

2.4 Account Approval

Once the State Administrator has determined that all you have met all account requirements and has approved your account, you will receive an email stating that your account has been approved and is now active.
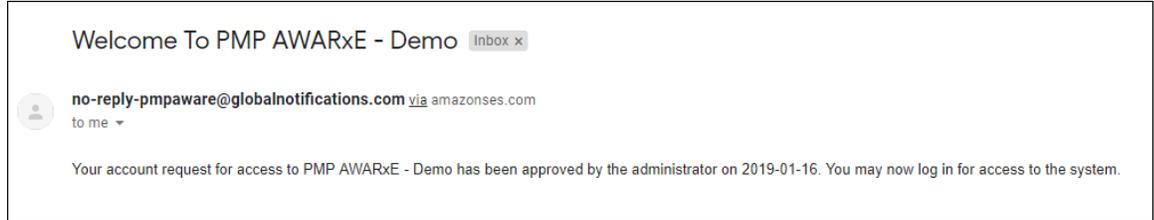
Once you receive the account approval email, you can log in to PMP AWARxE using the email address and password you created when you registered.

Notes:

- *If you no longer have the password, you can reset it by following the instructions in the Reset Password section of this document.*

- *If you are a delegate, you must be approved by any supervisors you have selected before you can perform a Patient Request.*

- *If configured by your state, upon logging in, you may be presented with the End User License Agreement that you must review and accept prior to using the application.*
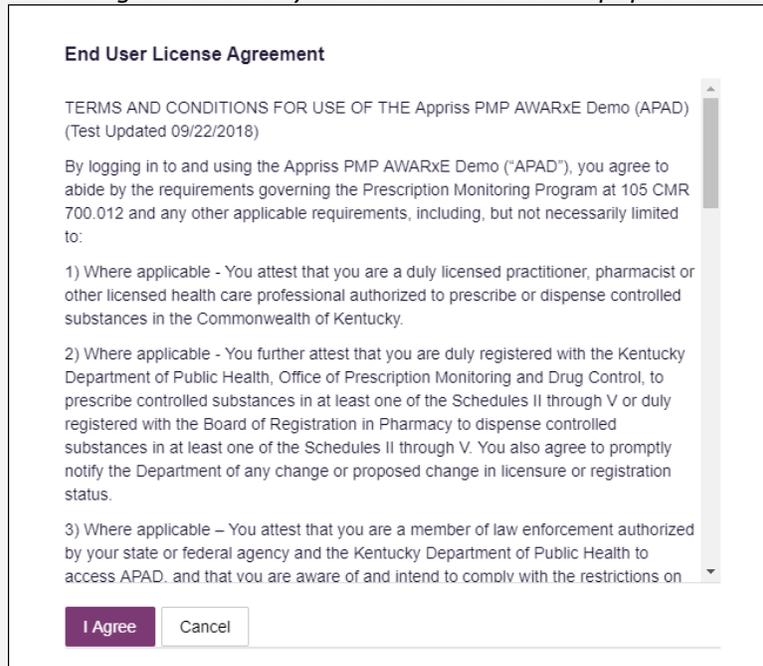
2.5 Approving and Rejecting Delegates

If a user registers as a delegate and selects you as their supervisor, you will receive email notification that a delegate account is pending your approval.

Note: If the request is not acted upon, the system will send weekly follow-up emails advising you that action is still required.

Once you have received the email notification:

1. Log in to PMP AWARxE.

2. From the Delegates section of your dashboard, click the delegate's name;

   Or

3. Click **Menu** > **Delegate Management**.

   The Delegate Management page is displayed.

   Note: New delegates are identified with a status of "Pending."

4. Click the delegate's name to display their information in the detail card at the bottom of the page.

5. Click **Approve** to approve the delegate;

   Or

6. Click **Reject** to reject the delegate. If rejected, the delegate will be removed.

3   Basic System Functions

This chapter describes how to log in to PMP AWARxE, the Requestor Dashboard that is displayed upon logging in, and how to log out.

3.1   Log In to PMP AWARxE

1. Navigate to https://delaware.pmpaware.net.

   The Log In page is displayed.

   Log In

   Email

   [   ]

   Password

   [   ]

   Reset Password

   Log In

   Create an Account
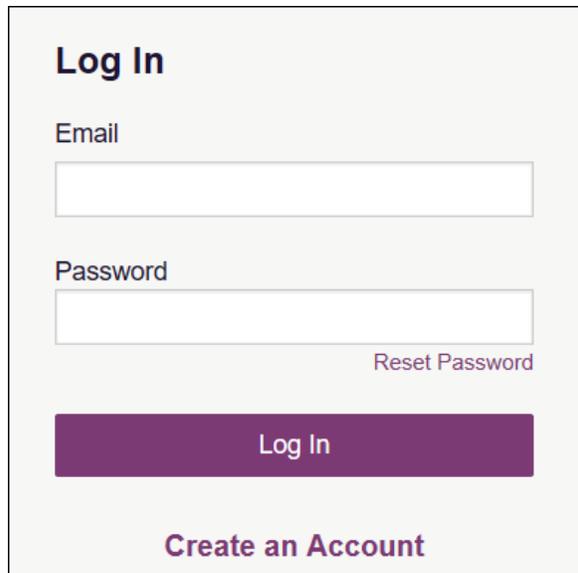
2. Enter the email address you provided when you registered in the **Email** field.

3. Enter your password in the **Password** field.

   *Note: If you have forgotten your password, click **Reset Password**. You will be prompted to enter the email address registered to your account. Once you have entered a valid, registered email address, you will receive an email with a link to reset your password.*

4. Click **Log In**.

   The My Dashboard page is displayed. Please refer to the My Dashboard section for a complete description of the dashboard.

3.2   My Dashboard

Upon logging in to PMP AWARxE with an approved account, the requestor dashboard (My Dashboard) is displayed. This dashboard provides a quick summary of pertinent items within PMP AWARxE, including State Administrator announcements, your recent patient searches, patient alerts, and, if applicable, your delegate's or supervisor's status. My Dashboard can be accessed at any time by clicking **Menu** > **Dashboard** (located under **Home**).

3.2.1   Patient Alerts

This section displays the most recent patient alerts.

Note: This section is user role dependent, meaning that certain roles will be unable to view this section.

- New alerts (i.e., those that have not been viewed) are displayed in **bold** with the word "NEW" next to them.
- You can download the letter associated with the alert by clicking **Download PDF**.
- You can view the Patient Request associated with a patient by clicking the patient's name.

- You can click **Patient Alerts**, located at the top of the section, to access a full listing of patient alerts. You can also access patient alerts at any time by clicking **Menu** > **Patient Alerts** (located under **Rx Search**).

3.2.2 Recent Requests

This section displays your most recent patient searches, including those performed by one of your delegates.

- You can view the Narx Report by clicking the patient's name.

- You can view a list of all past requests by clicking **View Requests History**. You can also access your request history at any time by clicking **Menu** > **Requests History** (located under **Rx Search**).

Note: The report that is displayed when you click the patient's name is a historical report, meaning that it contains the data that was viewed when the report was initially run. For instructions on performing new patient Rx history searches, please refer to the Creating a Patient Request *section.*

3.2.3 Delegates/Supervisors

This section displays your delegates or supervisors, depending on your user role.

- If you are a supervisor, you can quickly change a delegate's status from the dashboard by clicking the delegate's name. Once you click the delegate's name, the Delegate Management page is displayed, and you can approve, reject, or remove a delegate from your profile.

- You can click **Delegates**, located at the top of the section, to access the Delegate Management page. The Delegate Management page can also be accessed at any time by clicking **Menu** > **Delegate Management** (located under **My Profile**). For additional information regarding delegate management, please refer to the Delegate Management section.

3.2.4 Announcements and Quick Links

This section displays announcements from your State Administrator as well as links to webpages outside of AWARxE that may be of use to you.

- The quick view only displays the first few lines of text; however, you can click **PMP Announcements**, located at the top of the section, to display the full announcement text. You can access the Announcements page at any time by clicking **Menu** > **Announcements** (located under **Home**).

- The announcements displayed in this section are configured by your State Administrator. Announcements can be configured as role-specific, meaning that a user whose role is "physician" may see an announcement, whereas a user whose role is "delegate" may not.

- Quick links are also configured by your State Administrator. Any links configured will be visible toward the bottom right of the dashboard in the Quick Links section.

3.3   Log Out of PMP AWARxE

To log out of the system, click the arrow next to your username (located in the top right corner of the page), and then click **Log Out**.
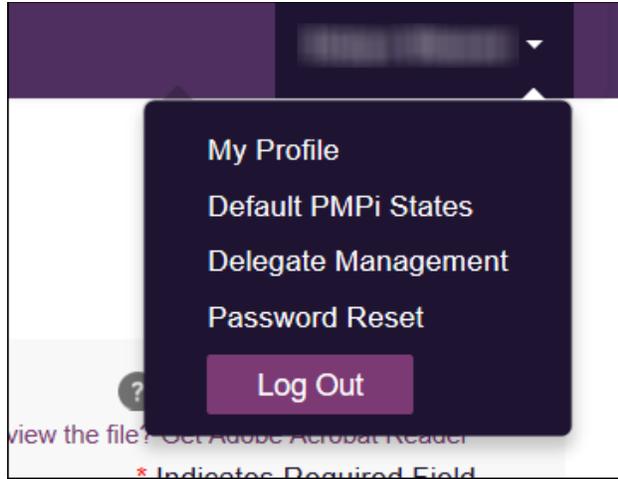
4   RxSearch

The RxSearch section of the PMP AWARxE menu contains the query functions available to you. These functions may include:

- Creating a patient request
- Viewing patient reports
- Performing a bulk patient search
- Viewing historical requests
- Viewing a report of prescriptions attributed to you

Note: You may not have access to all of the reports listed above. The functions available under RxSearch may vary depending on your user role and the settings enabled by your State Administrator. If you do not have access to a report and you think you should, please contact your State Administrator.
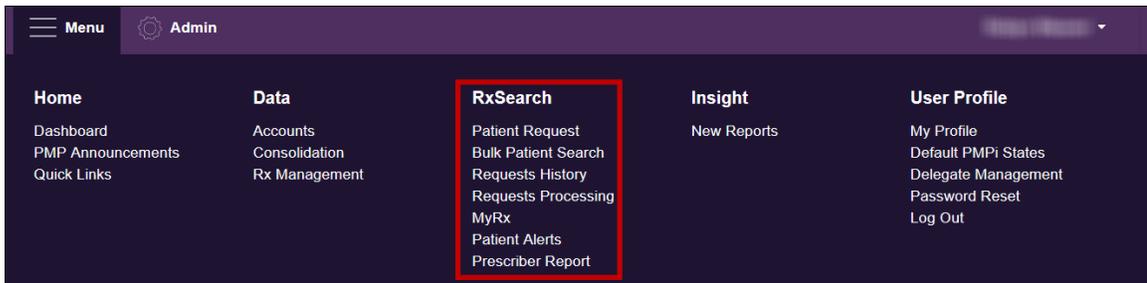
4.1   Creating a Patient Request

The Patient Request allows you to create a report that displays the prescription drug activity for a specific patient for the specified timeline.

1. Log in to PMP AWARxE.
2. Click **Menu** > **Patient Request**.

   The Patient Request page is displayed.

> ***Note:*** *A tutorial describing the complete patient request creation process is available by clicking the **Patient Rx Request Tutorial** link located in the top right corner of the page.*

3. Enter the required information, noting that required fields are marked with a red asterisk (*). At a minimum, you must complete the following fields:

Field Name	Notes
Patient Info	
First Name	Enter the patient's complete first and last name;
Last Name	Or Click the **Partial Spelling** checkbox to search by a partial first and/or last name. This option can be helpful when searching hyphenated names or names that are often abbreviated, such as "Will" vs. "William."
	Note: *The Partial Spelling function requires at least three letters. If the patient's name contains only one or two letters, please do not attempt a partial search.*
Date of Birth	Use the *MM/DD/YYYY* format, or select a date from the calendar that is displayed when you click in this field.
Prescription Fill Dates	
From	Use the *MM/DD/YYYY* format, or select a date from the
To	calendar that is displayed when you click in these fields.

Note: *If you are a delegate, you must select a supervisor from the **Supervisor** field, located above the Patient Info section of the page.*
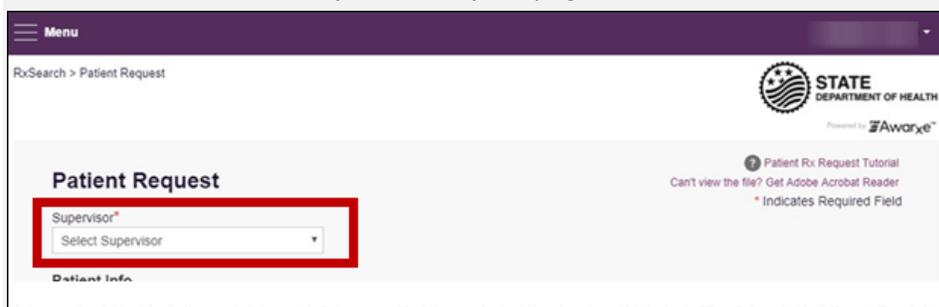
If no supervisors are available, please contact your supervisor(s) to approve your account or add the supervisor under My Profile. Current supervisors and their statuses are displayed on your dashboard. Refer to the Delegates/Supervisors *section of My Dashboard or the* My Profile *section for further instructions.*

4. If desired, you may enter additional patient information in the Patient Location section of the page, including the patient's state and ZIP code; however, it is recommended that you *do not* use the ZIP code to search.

5. If you require information from other states, click the checkbox next to the desired state(s) in the PMP InterConnect Search section of the page.

PMP Interconnect Search
To search in other states as well as your home state for patient information, select the states you wish to include in your search

A	☐Arizona		
C	☐Colorado	☐Connecticut	
I	☐Idaho		
K	☐Kansas		
M	☐Massachusetts	☐Michigan	☐Minnesota
N	☐New York		
O	☐Ohio PMP		
R	☐Rhode Island		
T	☐Tennessee CSMD		
V	☐Vermont		

Notes:

- *Partial search is not available when searching other states. If you have selected partial search, the PMP InterConnect Search section will be removed from the bottom of the page.*

- *If a state is not included on the list, data sharing with that state is not currently in place, or your user role does not allow for data sharing. Please contact your State Administrator for more information.*

6. Once you have entered all the required search criteria, click **Search**.

    d. If your search results return a single patient, the Narx Report is displayed. Refer to the Viewing a Narx Report section for more details regarding the Narx Report.

*Note: If you need a PDF or CSV version of the report, you can click **Download PDF** or **Download CSV**, located in the top right corner of the report.*

    e. If the search could not determine a single patient match, a message is displayed indicating that multiple patients were found.

        - If you searched for an exact patient name and multiple patients were found, refer to the Multiple Patients Identified section.

- If you searched for a partial patient name and multiple patients were found, refer to the Partial Search Results section.

f. If your search does not return any results, a message is displayed indicating that either no patient matching your search criteria could be identified or the patient was identified but no prescriptions were found. Refer to the No Results Found section for more information.

g. If you are a delegate, your request will be forwarded to your supervisor for review. Your request must be approved by your supervisor before you can view the results.
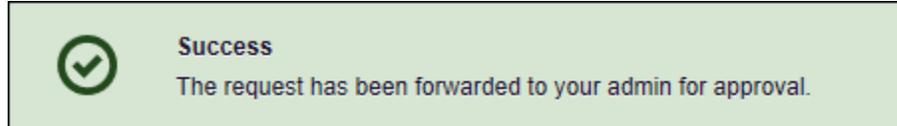
4.1.1 Multiple Patients Identified

1. If you searched for an exact patient name and multiple patients were found, a message is displayed indicating that multiple patients matching your search criteria have been identified.

2. From this window, you can:

   a. Click **Refine Search Criteria** to return to the Patient Request page, refine your search criteria, and re-run the report;

      Or

b. Select one or more of the patient groups displayed, and then click **Run Report**.

The Narx Report for the patient group(s) you selected is displayed.

4.1.2 Partial Search Results

1. If you searched for a partial patient name and multiple patients were found, a message is displayed indicating that multiple patients match your search criteria.

2. From this window, you can:

   a. Click **Refine Search** to return to the Patient Request page, refine your search criteria, and re-run the report;

      Or

   b. Select one or more of the patients displayed, and then click **Run Report**.

The Narx Report for the patient(s) you selected is displayed.

4.1.3 No Results Found

1. If your search criteria could not be matched to any patient records, a message is displayed indicating that no matching patient could be identified.

Or

2. If your search criteria matches a patient record but the patient has no prescriptions within the specified timeframe, a message is displayed indicating that the patient was found but no prescriptions were found.

3. Click **Change Date Range** to return to the Patient Request page, enter a different date range, and re-run the report.

   Notes:

   - *Be sure to verify that all information entered on the request was entered correctly (e.g., verify that the first and last names were entered in the correct fields, verify the patient's birthdate, etc.).*

   - *If **Partial Search** was not originally selected, you can click the **Partial Search** checkbox to expand your search results. You can also enter additional demographic information, such as a ZIP code, to perform a fuzzy search, which may help to obtain groups of patient records that match closely but are not exact.*

4.2   Viewing a Narx Report

If your search results return a single patient, or if your search returned multiple patients and you have selected the patient(s) for whom you wish to run the report, the Narx Report is automatically displayed. For complete information on the Narx Reports, and for more information on the NarxCare system, please refer to Appendix A: NarxCare.

You may also access your previously requested Narx Reports at any time by clicking **Menu** > **Requests History**. Refer to the Requests History section for more information.

4.3   Bulk Patient Search

The Bulk Patient Search functionality is similar to the Patient Request functionality; however, it allows you to enter multiple patients at once rather than one at a time. You can enter patient names manually or via CSV file upload.

To perform a Bulk Patient Search:

1.   Click **Menu** > **Bulk Patient Search**.

     The Bulk Patient Search page is displayed.

     a.   If you wish to enter patients manually, continue to step 2;

          Or

     b.   If you wish to enter patients via CSV file upload, continue to step 6.

2.   Ensure that **Manual Entry** is selected in the **How do you want to enter patients?** field at the top of the page.

The Manual Entry search is displayed.

Manual Entry

First Name*	Last Name*	Date of Birth*	Zip Code	
		MM/DD/YYYY		Add +

Name Grouping
Enter a name for this search session. This will make it easy to distinguish between searches in the history
Group Name*

Prescription Fill Dates
No earlier than 2 years and 6 months from today
From*   To*
05/29/2017   05/29/2018

3. Complete the following required fields:

   - **First Name** – enter the patient's complete first name

   - **Last Name** – enter the patient's complete last name

   - **DOB** – enter the patient's date of birth using the *MM/DD/YYYY* format, or select a date from the calendar that is displayed when you click in this field

   Note: You may also enter the patient's ZIP code; however, it is not recommended.

4. Once you have entered the patient's information, click **Add** to add an additional patient.

5. Repeat steps 2–3 until all patients have been entered.

   Note: Once you have finished entering patients, continue to step 14.

6. To enter patients via CSV file upload, click the **File Upload** radio button in the **How do you want to enter patients?** field at the top of the page.

Bulk Patient Search

How do you want to enter patients?
○ Manual Entry
◉ File Upload

The File Upload search is displayed.

File Upload
Upload a CSV file that includes patients by first name, last name and date of birth. View Sample file

Choose a file	Choose File	Clear

Validate Format

7. Click **View Sample File** to download the sample CSV file.

8. Open the sample CSV file and complete the required fields.
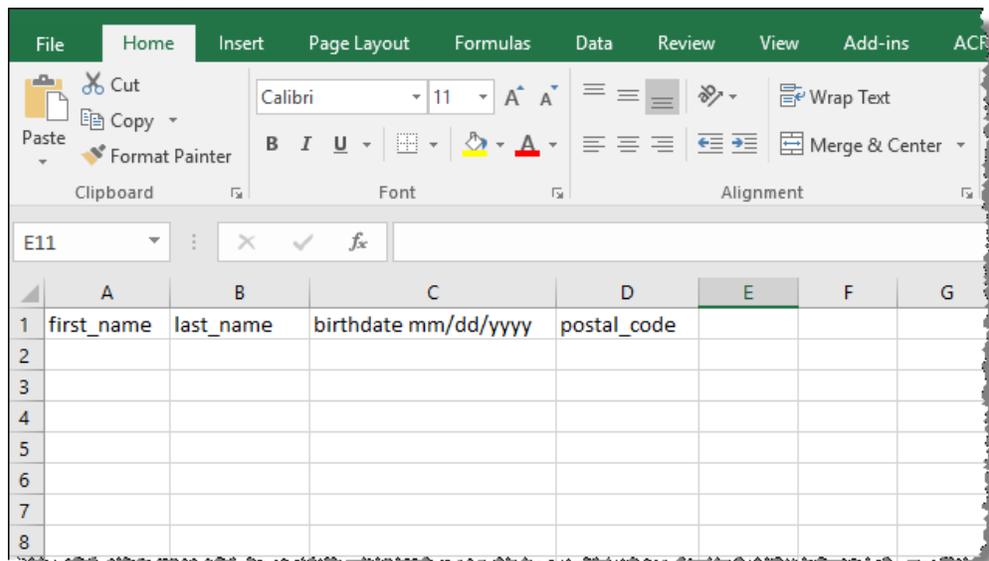
Notes:

- *The patient's complete first name, last name, and date of birth (using the MM/DD/YYYY format) are required.*

- *You may enter the patient's ZIP code; however, it is not recommended.*

9. Once you have entered all patient information, save the file to your computer.

Note: When naming your file, do not include spaces.

10. Click **Choose File**, then select the file you created in step 9.

11. Click **Validate Format** to download a validation report and ensure all records were entered correctly.

12. Once you open the validation report, any errors in your data will be listed in the **Errors** column. Please correct the errors and resubmit the corrected file. Note that if the **Errors** column is blank, the data is acceptable.

Examples:

- *File with errors:*

- *File with no errors:*

first_name	last_name	birthdate	postal_code	errors
john	smith	1/1/1950		
first_name	last_name	birthdate	postal_code	errors
adam	smith	1/1/1960		
first_name	last_name	birthdate	postal_code	errors
sally	smith	1/1/1970		

13. Repeat steps 10–12 until all errors have been corrected. Once all errors have been corrected and your file is validated, or if your file has no errors, continue to step 14.

14. Enter a name for your search session in the **Group Name** field.

    Note: Providing a group name will help you more easily distinguish between searches in the Bulk Patient History tab.

15. Enter the timeframe for which you wish to search in the **From** and **To** fields using the **MM/DD/YYYY** format.

16. If you wish to include other states in your search, click the checkbox next to the desired state(s) in the PMP Interconnect Search section of the page.

17. Click **Search**.

    A message is displayed indicating that your search is being processed.

    > ✓ **Success**
    > Your Bulk Request validated successfully and is now being processed. Results can be found in Bulk Patient History tab.   **DISMISS**

4.3.1 Viewing Bulk Patient Search Results

1. To obtain the results of a Bulk Patient Search, or to view previous searches, click the **Bulk Search History** tab (**Menu** > **Bulk Patient Search** > **Bulk Patient History**).

    Bulk Patient Search | **Bulk Patient History**

    Bulk Patient Search

    How do you want to enter patients?
    ◉ Manual Entry
    ○ File Upload

    The Bulk Search History page is displayed.

    Bulk Patient Search | **Bulk Patient History**

    Bulk Search History
    Select a group name to view reports run in that session.

Bulk Search Name	Number of Patients	Date Requested	Processing	Incomplete	Ready
Test Group 2 052918	2	05-29-2018	2	0	0
Test Group 52918	2	05-29-2018	0	0	0

29

Notes:

- The **Number of Patients** column provides the total number of patients included in your search.

- The **Processing** column provides the total number of searches remaining to be processed. If the number is "0," your search is complete.

- The **Incomplete** column provides the number of patient records that could not be found.

- The **Ready** column provides the number of patient search results available.

2. Click the **Bulk Search Name** to view the results of that search.

   The Bulk Patient Summary is displayed.

3. From this page, you can:

- Click **Download PDF** to export the Bulk Patient Summary. *Note that only the Bulk Patient Summary can be downloaded from this page. Individual Narx Reports must be exported from the Narx Report page.*

- If the **Status** column for an individual patient indicates **Ready**, click that patient's name to display the search details.

   The search details are displayed below the table.

When viewing the search details, you can:

−   Click **View** to display the Narx Report.

    Note: For more information on viewing report results, please refer to [*Viewing a Narx Report*](#)*.*

−   Click **Refresh** if you are reviewing a previous report and wish to run a current report.

4.3.2 Incomplete Bulk Patient Search Results

The **Status** column for an individual patient may indicate **Incomplete** for two reasons: **No Matching Patient Identified** or **Multiple Patient**. Upon clicking the patient's name, the reason is listed in the **Reason** field of the search details.

1. **No Matching Patient Identified.** The system was not able to locate a patient matching your search criteria. Click **Try Again** to open the Patient Request page where you can perform a partial search or modify your search criteria.

2. **Multiple Patient.** The system identified multiple patients matching your search criteria. Click **Try Again** to open the Patient Request page, then click **Search** at the bottom of the page. The Multiple Patients Found window will display prompting you to select the patients for whom you wish to run a report. The Multiple Patients Found window is shown on the following page.

Select the correct patient(s), and then click **Run Report** to view the Narx Report. For more information on viewing report results, please refer to [Viewing a Narx Report](#).

4.3.3 No Prescriptions Found in Bulk Patient Search

If the **Status** column indicates **No RXs Found** for a patient, the patient exists in the database, but no prescriptions were reported for the patient in your report timeframe. Upon clicking the patient's name, **No Prescriptions Found in Date Range** will be indicated in the **Reason** field.

You may click **View** if you need to export the blank report, or you may click **Refresh** to display the Patient Request page where you can change the date range and run a new report.

4.4 Requests History

1. To view a previously created Narx Report, click **Menu** > **Requests History**.

   The Requests History page is displayed.

Notes:

- *You can only view Narx Reports you or your delegate(s) have created.*

- *Reports are available in your Requests History for 30 days. After 30 days, reports are automatically removed from your history.*

2. From this page, you can:

   a. Click **Advanced Options** to filter the list of requests.

   b. Click **Download PDF** or **Download CSV** to export your search history, if configured by your State Administrator.

   c. Click a patient name to view the details of that request in a detail card at the bottom of the page.

   - Click **View** to display the results of the previously submitted request. Refer to Viewing a Narx Report for details regarding Narx Reports.

> *Note: The results of previous requests are not updated with new information. The results displayed are the results at the time the original search was performed.*

- Click **Refresh** to generate a new Narx Report for the selected patient. The Patient Request page will be displayed with the patient's information automatically populated. Refer to Creating a Patient Request for complete instructions on generating new requests.

4.5 My Rx

If you have a DEA number associated with your AWARxE account, My Rx allows you to run a report that displays the filled prescriptions for which you were listed as the prescriber.

Note: This functionality is only available if you have a DEA number associated with your user profile.

To run the My Rx report:

1. Click **Menu** > **My Rx**.

   The My Rx search page is displayed.

2. Enter the date range for your search in the **From** and **To** fields using the *MM/DD/YYYY* format.

3. Click the checkbox next to the DEA number(s) for which you wish to run a report.

4. If you wish to search for a specific drug, enter the generic drug name in the **Drug Name** field.

5. Click **Search**.

Your report results are displayed. If configured by your PMP Administrator, you may click **Download PDF** or **Download CSV** to export your report results.

4.6 Patient Alerts

This function displays your available patient alerts.

Note: This section is user role dependent, meaning that certain roles will be unable to view this section.

To access these alerts, click **Menu** > **Patient Alerts**.

The Patient Alerts page is displayed.

- New alerts (i.e., those that have not been viewed) are displayed in **bold** with the word "NEW" next to them.
- You can download the letter associated with the alert by clicking **Download PDF**.

- You can view the Patient Request associated with a patient by clicking the patient's name.

5   User Profile

The User Profile section of the PMP AWARxE menu allows you to manage your AWARxE user profile, including:

- [Viewing and updating your profile information](#)
- [Managing your delegate account(s)](#)
- [Updating or resetting your password](#)

5.1   My Profile

My Profile allows you to view your account demographics, including user role, license numbers, employer details, etc. as well as update your address, email address, healthcare specialty, time zone, mobile phone number, and supervisor(s) (if you are a delegate).

Note: If you need to update your personal or employer identifiers (including DEA/NPI/NCPDP/license numbers), please contact your State Administrator. Do not create a new account.

To update your account:

1.   Click **Menu** > **My Profile**.

The My Profile page is displayed.

2. Update your information as necessary. The following notes may be helpful in updating your information:

    - **Healthcare Specialty:** You can add or update your healthcare specialty in the Specialty section of the page. Search for your specialty by typing a few characters into the **Healthcare Specialty** field, or click **Browse All** to view all available specialties and select yours from the list. If you have multiple specialties, you can designate your primary specialty by clicking the star icon to the left of the specialty. To remove a specialty, click the "x" button to the right of the specialty.

    - **Updating Time Zone:** To update your time zone, select the correct time zone from the **Time Zone** drop-down.

    - **Adding Supervisors:** If you are a delegate, you may add supervisors to or remove supervisors from your account in the Supervisors section of the page. To add a supervisor, enter the supervisor's email address, and then click **Add**. To remove a supervisor, click the "x" button next to the supervisor.
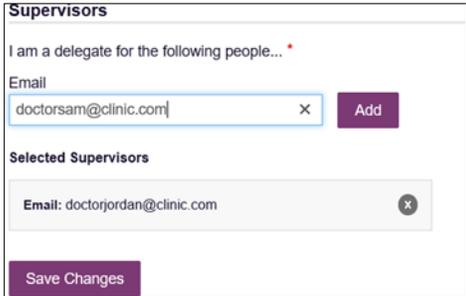
    - **Contact Information:** You may update the email address and mobile phone number associated with your account in the Contact Information section of the page.

      To update the email address associated with your account, enter the new email address in the **New Email Address** field, then re-enter it in the **Re-enter Email Address** field. Once your changes have been saved, you will receive an email asking you to verify the new email address. Please ensure that you click the link in the verification email to verify your new email address. *Note that the verification link is only valid for 20 minutes. If you click the verification link after it has expired, you will be sent a new link.*

To update the mobile phone number associated with your account, enter the new phone number in the **New Mobile Phone Number** field, then re-enter it in the **Re-enter New Mobile Phone Number** field.

5.2 Setting Default PMP InterConnect States

PMP AWARxE is configured to integrate with PMP InterConnect to expand your search capabilities when researching a patient's prescription history. This feature allows you to configure states to be selected by default when performing a Patient Request. To set your default PMP InterConnect states:

1. Click **Menu** > **Default PMPi States**.

    The Default InterConnect PMPs page is displayed.

2. Click the checkbox next to the state(s) you would like to be selected by default when performing a Patient Request.

3. Click **Update Defaults**.

    Your selections are saved and will be selected by default when you create a Patient Request.

    Note: You can de-select default states as necessary—selecting default states does not require you to search for those states every time.

5.3   Delegate Management

If you are a supervisor, the Delegate Management function allows you to approve or reject new delegates, or remove existing delegates from your account.

5.3.1   Approving and Rejecting Delegates

If a user registers as a delegate and selects you as their supervisor, you will receive email notification that a delegate account is pending your approval.

Note: If the request is not acted upon, the system will send weekly follow-up emails advising you that action is still required.

Once you have received the email notification:

1. Log in to PMP AWARxE.
2. Click **Menu** > **Delegate Management**.

   The Delegate Management page is displayed.

Note: New delegates are identified with a status of "Pending."

3. Click the delegate's name to display their information in the detail card at the bottom of the page.

4. Click **Approve** to approve the delegate;

   Or

5. Click **Reject** to reject the delegate. If rejected, the delegate will be removed.

5.3.2   Removing/Deactivating Delegates

If you need to deactivate a delegate from your account:

1. Click **Menu** > **Delegate Management**.

The Delegate Management page is displayed.

Delegate Management
Select a delegate to review details.

First	Last	Role	Delegate Status	Date Requested	Date Verified
Jordan	Delegate	Prescriber Delegate - Unlicensed	Pending	04/06/2018	
Adam	Delegate	Prescriber Delegate - Unlicensed	Approved	04/06/2018	04/11/2018

2. Click the delegate's name to display their information in the detail card at the bottom of the page.

3. Click **Remove**.

Upon removal, the delegate's status will be returned to "Pending." The delegate is not removed from your delegate list.

Notes:

- *If you need to add the user again at a later date, select the former delegate, then click **Approve** to add them to your account.*

- *If you need to completely remove a delegate from your account, select the former delegate, then click **Reject**. Rejecting a delegate will remove them from your account.*

- *It is your responsibility to regularly maintain your delegate list and remove access if it is no longer necessary.*

5.4 Password Management

Your AWARxE password expires every 90 days. Prior to the expiration date, you will receive email notifications reminding you that your password will soon expire. There are two ways you can manage your password:

1. You can proactively change your password within the application before it expires by updating your current password.

2. If your password has already expired, or if you have forgotten your password, you can reset your password. Note that you can reset your password via email or mobile phone.

5.4.1 Updating a Current Password

If your password has not expired, but you would like to proactively reset it, you can do so within the AWARxE application.

Note: This functionality requires that you know your current password and are logged into PMP AWARxE.

To update your password:

1. Click **Menu** > **Password Reset**.

The Change Password page is displayed.

2. Enter your current password in the **Current Password** field.

3. Enter a new password in the **New Password** field, then re-enter it in the **New Password Confirmation** field. The password guidelines are provided below.

    Passwords must contain:

    - *At least eight (8) characters*
    - *One (1) uppercase letter*
    - *One (1) lowercase letter*
    - *One (1) special character such as !, @, #, $, etc.*

    Note that a checkmark appears next to each requirement as it is met.

4. Click **Change**.

    Your password is updated, and you will use the new password the next time you log in to the system.

5.4.2 Resetting a Forgotten Password

1. If you have forgotten your password or your password has expired, navigate to https://delaware.pmpaware.net/.

The Log In page is displayed.

2. Click **Reset Password**.

The Reset Password page is displayed.

3. Enter the email address associated with your account, then click **Continue**.

You will be prompted to select how you want to reset your password.

4. Select whether you would like to reset your password via a code texted to your mobile phone or via an email containing a link to reset the password.

   Note: Resetting your password via mobile phone requires that you have a mobile phone number stored in the system. Please refer to My Profile for information on adding your mobile phone number to your account. If you do not have a mobile phone number stored in the system, and you cannot remember your password or it has expired, please select the email option.

5. Click **Continue**.

   a. If you selected the mobile phone option, a verification code is sent to your mobile phone, and you are prompted to enter that code.

   Once you have received the verification code, enter it, then click **Continue**.

   OR

b. If you selected the email option and the email address you provided is valid and registered, you will receive an email containing a link to reset your password. Once you have received the email, click the link.

Once you have entered the verification code or clicked the link in the email, the Change Password page is displayed.

6. Enter a new password in the **New Password** field, then re-enter it in the **New Password Confirmation** field. The password guidelines are provided below.

Passwords must contain:

- *At least eight (8) characters*
- *One (1) uppercase letter*
- *One (1) lowercase letter*
- *One (1) special character such as !, @, #, $, etc.*

Note that a checkmark appears next to each requirement as it is met.

7. Click **Change**.

Your password is updated, and you will use the new password the next time you log in to the system.

Notes:

- *The password reset link is only active for 20 minutes. After the time has expired, you will need to repeat steps 1–5 to generate a new password reset email.*

- *If you use the mobile reset option, the validation code is only active for 20 minutes. In addition, only the most recent code is valid (e.g., if you requested a validation code twice, only the second code would be valid).*

- *Per our security protocol, PMP AWARxE will not confirm the existence of an account. If you do not receive an email at the email address provided, follow the steps below:*
  1. Ensure you entered a valid email address.
  2. Check your Junk, Spam, or other filtered folders for the email.
  3. If the email address is correct but you have not received the email, contact your PMP Administrator to request a new password or determine what email address is associated with your account.

4. Add the following email addresses and domains to your contacts list, or contact your organization's IT support to have them added as safe senders:
   (a) no-reply-pmpaware@globalnotifications.com
   (b) globalnotifications.com
   (c) amazonses.com

6   Assistance and Support

6.1 Technical Assistance

If you need additional help with any of the procedures outlined in this guide, you can:

- Contact Appriss Health at 1-855-263-6401;
  OR

- Create a support request at the following URL:
  https://apprisspmp.zendesk.com/hc/en-us/requests/new.

6.2 Administrative Assistance

If you have non-technical questions regarding the DE PMP, please contact:

Jason Slavoski, Pharm.D.
Prescription Monitoring Program Administrator
Delaware Board of Pharmacy
Office of Controlled Substances

Telephone: 302-744-4518
E-mail: delawarepmp@state.de.us

7   Document Information

7.1 Disclaimer

Appriss has made every effort to ensure the accuracy of the information in this document at the time of printing; however, information is subject to change.

7.2 Change Log

Version	Date	Chapter/Section	Change Made
1.0		N/A	N/A; initial publication
2.0	12/04/2018	Global	Updated to current document template
		5.1/My Profile	Added instructions for adding a mobile phone number to account profile
		5.4/Resetting a Forgotten Password	Added instructions for resetting a password via mobile phone
2.1	12/26/2019	2/Registration	Replaced registration instructions with updated registration process

Appendix A: NarxCare

Introduction to NarxCare

NarxCare is a robust analytics tool and care management platform that helps prescribers and dispensers analyze real-time controlled substance data from prescription drug monitoring programs (PDMPs), which are the system's primary data source.

NarxCare automatically accesses the PDMP data, analyzes it, scores it, and generates an interactive, patient-centered report with visual enhancements that enable providers to quickly comprehend the patient's controlled substance use history.

The NarxCare platform is designed to accommodate additional, non-PDMP data sources such as claims data, registry data, continuity of care documentation, etc. As these data become available, they will be visually incorporated as additional risk indicators and eventually be included in existing and new algorithms.

Every Narx Report includes type-specific use scores for narcotics, sedatives, and stimulants. These scores are based on a complex algorithm with up to 20 time-weighted measurement points. The scores range from 000 to 999, with higher scores equating to higher numbers of prescribers, MME, pharmacies, and overlapping prescriptions.

An Overdose Risk Score, developed using advanced data science, is also included. This risk score ranges from 000–999 with higher scores equating to increased risk of unintentional overdose. Currently based on PDMP data, the score will become more holistic in nature as additional data sources are added to the algorithm.

Data visualization is enhanced with an interactive, color-coded graphical display of prescription data that allows for increased detail when desired.

A Resources section provides tools that enable providers to link patients with treatment and easily obtain information documents that may be helpful as reference material or patient handouts.

Application Interface Overview

The NarxCare report interface is a modular design with several collapsible segments.

Header	
Scores and Indicators	
Graphs	
Full Prescription Detail	

Narx Report Details

Report Header

The Narx Report page heading contains several report- and account-level controls:

- **Drop-down menu bar:** Clicking **Menu** allows you to navigate to all functional areas of AWARxE. For NarxCare users, the menu contains additional training links as well as a link to the NarxCare user guide. You can click your username for quick access to account management options such as **My Profile**, **Delegate Management**, and **Password Reset**.

- **Patient identifying information:** The patient's name, age in years, and gender are displayed above the navigation tabs. Additional patient information, such as date of birth and address, can be found in the first segment of the Narx Report.
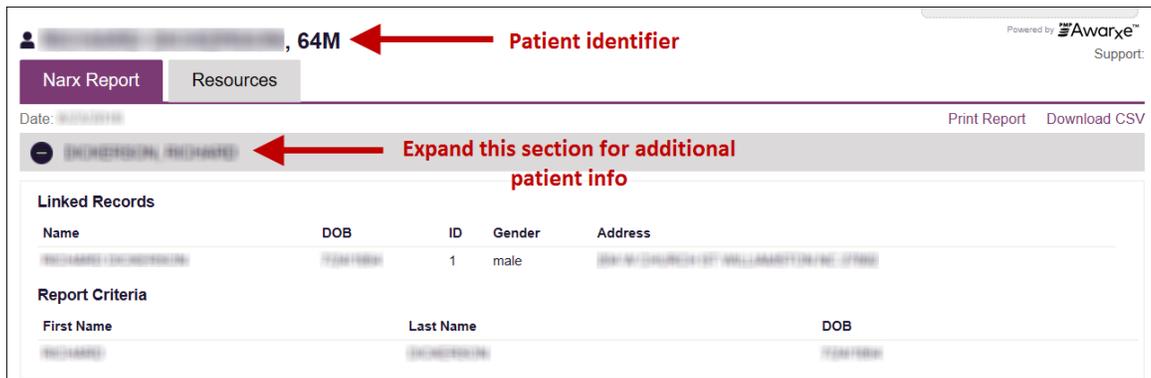
- **Navigation tabs:** There are two tabs beneath the patient's name labeled **Narx Report** and **Resources**. The **Narx Report** tab is displayed by default. You can click on the **Resources** tab to display several treatment locators and document resources that may be useful in managing patient referrals or reviewing CDC guidelines.
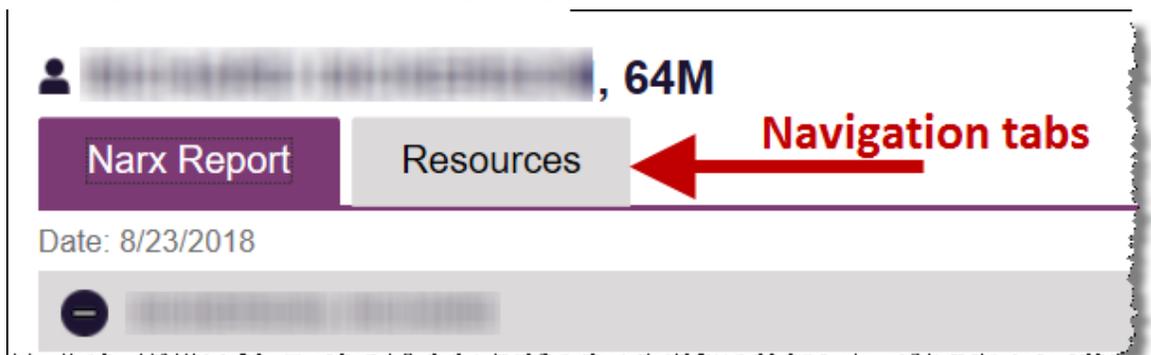
- **Report download links:** If you need to download a PDF or CSV version of the report, click the **Download PDF** or **Download CSV** links located on the right side of the page below the state logo.

RxSearch > Patient Request   Your Logo Here

█████████ ██████████, 64M   Powered by ☰Awarxe™
                                                                                      Support:

| Narx Report | Resources |

Date: 8/23/2018   **Download the report here** ➡   Print Report   Download CSV

Report Body

The body of the Narx Report contains several functional areas aimed at rapidly raising awareness of risk and prescription use patterns, and when required, individual prescription detail.

- **Scores and additional risk indicators:** The Narx Report includes a series of type-specific use scores, Narx Scores, Overdose Risk Score, and Additional Risk Indicators, which are located in the Risk Indicators section of the report. These scores and other elements are often automatically returned to the requesting system as discrete data. Requesting systems receiving such data can choose to display the scores within the native electronic health record or pharmacy management system, and many systems choose to display these data in the patient header, face sheet, or alongside patient vital signs.

  Note: Please refer to the Narx Scores, Overdose Risk Score, and Additional Risk Indicators sections of this document for more information on those scores and indicators.

⊖ Risk Indicators

NARX SCORES

Narcotic	Sedative	Stimulant
380	440	000

Explanation and Guidance

OVERDOSE RISK SCORE

530
(Range 000-999)

Explanation and Guidance

ADDITIONAL RISK INDICATORS (2)

❗ >= 5 opioid or sedative providers in any year in the last 2 years
❗ > 100 MME total and 40 MME/day average

Explanation and Guidance

This NarxCare report is based on search criteria supplied and the data entered by the dispensing pharmacy. For more information about any prescription, please contact the dispensing pharmacy or the prescriber. NarxCare scores and reports are intended to aid, not replace, medical decision making. None of the information presented should be used as sole justification for providing or refusing to provide medications. The information on this report is not warranted as accurate or complete.

- **Rx Graph:** The Rx Graph, located in the Graphs section of the report, allows you to rapidly see important patterns and levels of use.
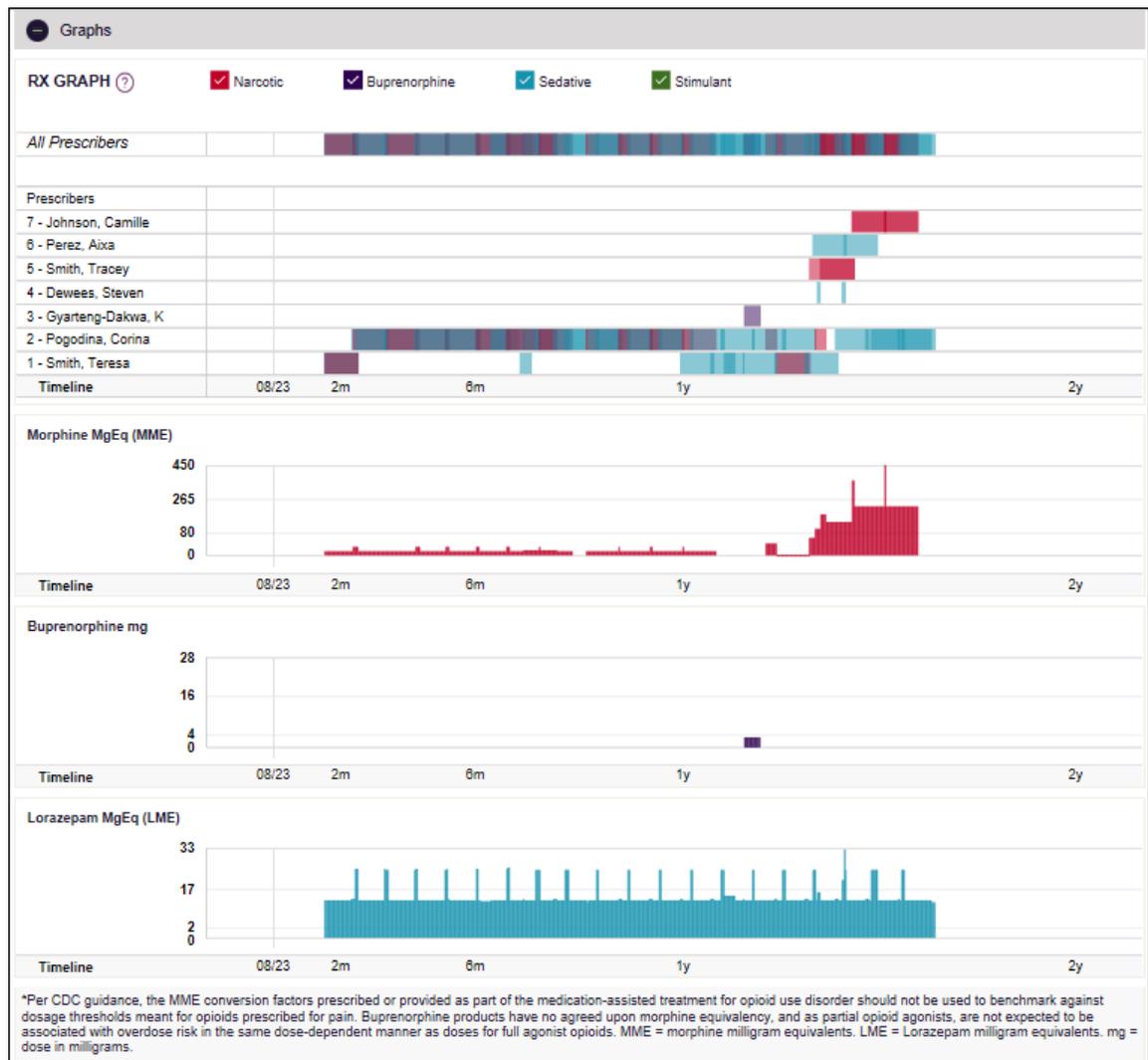
- Prescriptions are color coded and can be selected or deselected at the top of the graph.
    1. Narcotics (opioids) = **red**
    2. Buprenorphines = **purple**
    3. Sedatives (benzodiazepines, sleep aids, etc.) = **blue**
    4. Stimulants = **green**
    5. Other = **grey**
- The Rx Graph is reverse time ordered, meaning that the most recent prescriptions are displayed on the left side of the graph and the oldest are displayed on the right.

- Each pixel in the graph represents one day; therefore, a 30-day prescription is represented by a rectangle about 1 cm wide and a 1–3-day prescription appears as a narrow vertical bar.
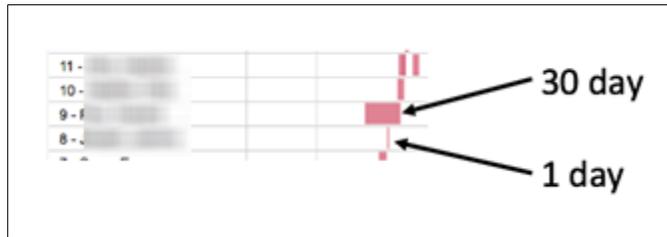
- The Rx Graph is interactive. You can click on a prescription to view information for that prescription, or you can click and drag over multiple prescriptions to view information for the selected prescriptions.
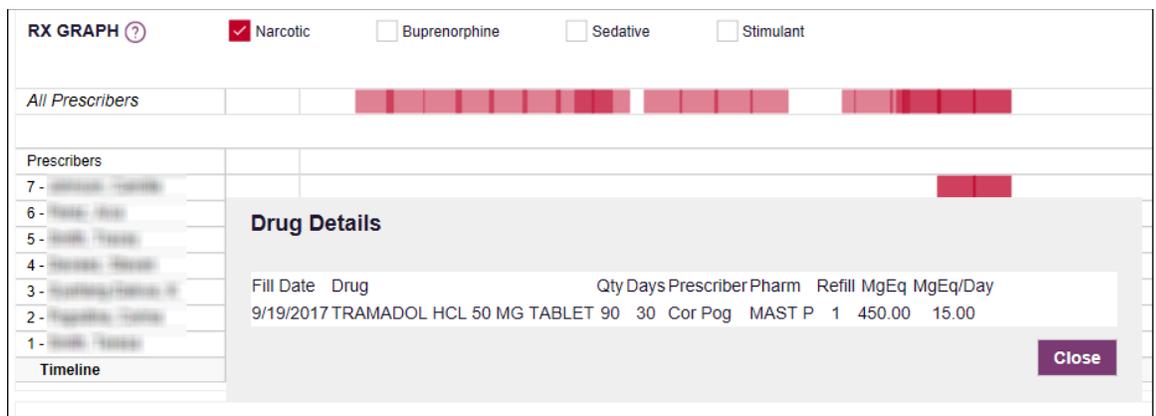
- Daily morphine milligram equivalency (MME), buprenorphine milligrams, and lorazepam milligram equivalency (LME) graphs are also provided for a quick longitudinal view of daily MME, buprenorphine, and LME. Abrupt changes in these factors are often due to overlapping prescriptions.

*Per CDC guidance, the MME conversion factors prescribed or provided as part of the medication-assisted treatment for opioid use disorder should not be used to benchmark against dosage thresholds meant for opioids prescribed for pain. Buprenorphine products have no agreed upon morphine equivalency, and as partial opioid agonists, are not expected to be associated with overdose risk in the same dose-dependent manner as doses for full agonist opioids. MME = morphine milligram equivalents. LME = Lorazepam milligram equivalents. mg = dose in milligrams.

Prescription Detail

Each prescription dispensed to the patient is presented in the Prescriptions table, which is located in the Rx Data section of the report. If desired, you can use the arrows next to each column header (⬍) to sort the table by that column. You can also hover your cursor over a prescriber or pharmacy to view additional information such as prescriber or pharmacy full name, address, and DEA number.

Provider and Pharmacy Detail

Provider and pharmacy information, including full name, address, and DEA number, is presented in the Providers and Pharmacies tables, located in the Rx Data section of the report.

Resources Tab

The **Resources** tab provides easy access to treatment locators and CDC documents.

- **MAT locator:** The MAT locator, located in the Access to Treatment section of the **Resources** tab, quickly creates a list of the 30 closest providers who are listed in the Substance Abuse and Mental Health Administration (SAMHSA) buprenorphine treatment locator database.

  ⊖ Access to Treatment

  Mat Providers
  Find the 30 closest MAT providers for this patient. The patient's zip code is prep-populated if available. View more information about the treatment locator.

  Search for providers near:

  Zip Code

  | 27892 |
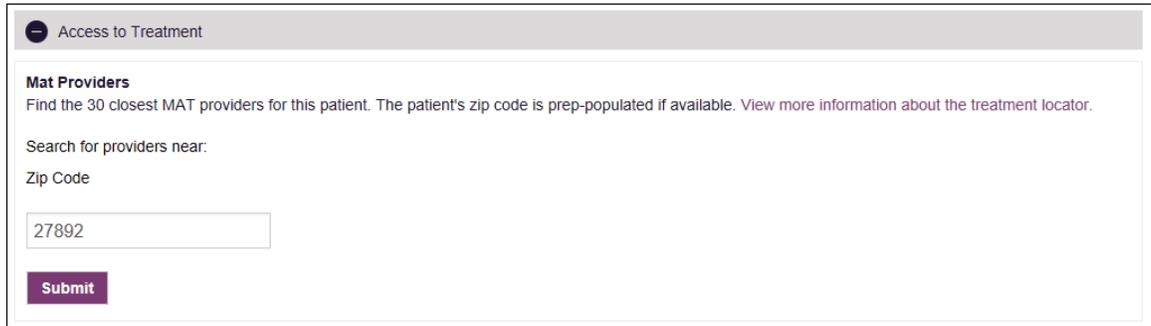
  Submit

  The patient's zip code is pre-populated but can be edited. Click **Submit** to generate a PDF that can be viewed and printed.

- **CDC documents:** The Information Documents section of the **Resources** tab provides a series of CDC documents pertaining to both providers and patients that can be referenced quickly and printed, if desired.

  ⊖ Educational Resources

  INFORMATIONAL DOCUMENTS
  Click the associated link and print. View more information about resources.

What You Need to Know	Opioids and Chronic Pain	Pregnancy and Opioids
Prescription Opioids: What You Need to Know (PDF)	Promoting Safer and More Effective Pain Management (PDF)	Pregnancy and Opioids Pain Management (PDF)
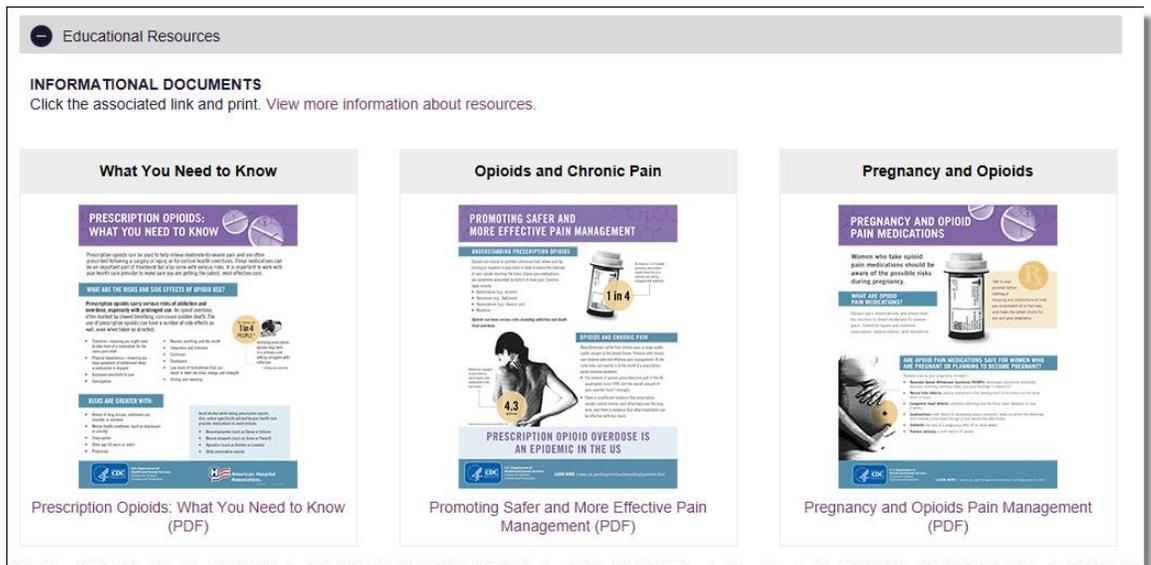
Narx Scores

The NarxCare application delivers several elements of discrete data and a visually enhanced, interactive PDMP report. Contained on the report, and delivered as discrete data, are three type-specific *use* scores called Narx Scores. These Narx Scores numerically represent the PDMP data for a patient.

Narx Scores are calculated for narcotics (opioids), sedatives, and stimulants and have the following characteristics:

1. Each score consists of three digits ranging from 000–999.
2. The <u>last digit</u> of each score represents the number of active prescriptions of that type. For example, a Narx Score of 50<u>4</u> indicates the patient should have four active narcotic prescriptions according to dispensation information in the PDMP.
3. The scores correspond to the number of literature-based risk factors that exist within the PDMP data. These risk factors include:
    a. The number of prescribers
    b. The number of pharmacies
    c. The amount of medication dispensed (often measured in milligram equivalencies)
    d. The number of times prescriptions of a similar type overlap from different prescribers
4. The time elapsed for any risk factor serves to decrease its contribution to the score. For example, 1000 MME dispensed within the last month will elevate the score *more than* 1000 MME dispensed one year ago.
5. The distribution of Narx Scores for patients found in a PDMP is approximated as follows:
    a. 75% score less than 200
    b. 5% score more than 500
    c. 1% score more than 650

The Narx Scores were designed such that:

1. Patients who use small amounts of medication with limited provider and pharmacy usage will have **low scores**.
2. Patients who use large amounts of medications in accordance with recommended guidelines (single provider, single pharmacy, etc.) will have **mid-range scores**.
3. Patients who use large amounts of medications while using many providers and pharmacies, and with frequently overlapping prescriptions, will have **high scores**.

Narx Score Algorithm

Relative Scoring

Narx Scores represent a *relative scoring* system wherein the risk factors representing use within a PDMP report are counted and then converted to a reference value that ranges from 0–99. These reference values correlate with a percentile measurement of that use within the PDMP population.

A single point measurement of total MME in the last 60 days can be used to illustrate this concept further using the following three patients:

- Patient A: 160 MME
- Patient B: 4800 MME
- Patient C: 1050 MME

If we were to place these three patients on a line of relative risk, we could intuit a linear relationship based on MME, which could be depicted as follows:

This depiction has no boundaries to the left or right so these patients could just as easily be drawn as follows:

The NarxCare algorithm uses a unique strategy to establish boundaries of use by converting all measured variables, such as 60-day MME, to a scaled value between 0 and 99. This was done by evaluating a large PDMP population and measuring the 60-day MME value for every patient. This set of data was then used to create a reference table roughly equating to a percentile in the population. If we add the scaled value to each example patient's 60-day MME we get:

- Patient A: 160 MME | 20
- Patient B: 4800 MME | 90
- Patient C: 1050 MME | 65

If we apply these new scaled values to our risk diagram and create a left and right boundary of 0 and 99, we get:
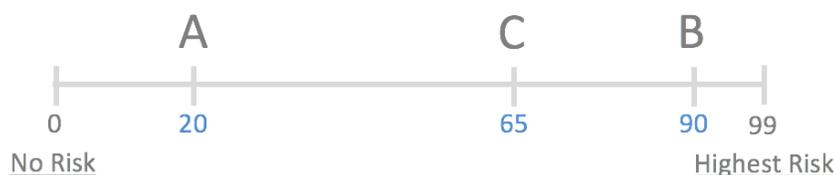
Interestingly, the population-based scaled values indicate that Patient B and C are closer to each other than might otherwise be suspected. In this case, we can also say that Patient B has used more MME in the last 60 days than 90% of the rest of the PDMP population.

Time Periods

The NarxCare algorithm evaluates a PDMP record using four different, overlapping time periods. In each time period, the risk factor being evaluated is tabulated and then converted to a scaled value. An example provider reference table is provided below.

Prescribers	2mo Scaled	6mo Scaled	1yr Scaled	2yr Scaled
0	0	0	0	0
1	19	12	8	6
2	36	22	16	11
3	51	32	23	16
4	64	41	30	21
5	75	49	37	26
6	85	57	43	30
And so on …				

These reference tables exist for all the risk factors being evaluated and cover all four time periods. In general, as the raw value count (i.e., number of prescribers) increases, so does the reference value (up to 99 maximum). As the time period increases, the scaled value decreases. Some examples are provided below.

Prescriber Count	2mo Scaled	6mo Scaled	1 yr Scaled	2yr Scaled
0	0	0	0	0
1	19	12	8	6
2	36	22	16	11
3	51	32	23	16
4	64	41	30	21
5	75	49	37	26
6	85	57	43	30
And so on …				

Pharmacy Count	2mo Scaled	6mo Scaled	1 yr Scaled	2yr Scaled
0	0	0	0	0
1	25	16	13	10
2	45	31	25	19
3	63	44	35	27
4	78	56	45	35
5	90	67	54	42
6	99	76	62	49
And so on …				

Pharmacy Count	2mo Scaled	6mo Scaled	1 yr Scaled	2yr Scaled
0	0	0	0	0
1	25	16	13	10
2	45	31	25	19
3	63	44	35	27
4	78	56	45	35
5	90	67	54	42
6	99	76	62	49
And so on …				

Sedative LME	2mo Scaled	6mo Scaled	1 yr Scaled	2yr Scaled
0	0	0	0	0
1-4	4	6	8	10
5 - 9	8	10	13	16
10 - 14	10	12	16	19
15 - 19	20	20	23	26
20 - 24	23	23	26	29
25 - 29	24	23	26	30
And so on …				

Overlap Days	2mo Scaled	6mo Scaled	1 yr Scaled	2yr Scaled
0	0	0	0	0
1	3	2	1	1
2	6	4	3	2
3	9	5	4	3
4	11	7	6	4
5	14	9	7	5
6	16	10	8	6
And so on …				

Weighting

A Narx Score is calculated as a weighted average of the scaled values. A 50% weighting is applied to the milligram equivalencies with the remaining risk factors making up the other 50%.
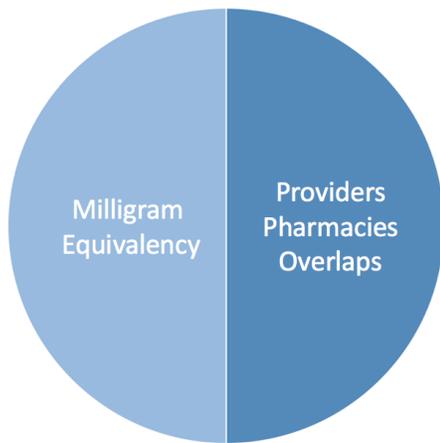
This type of weighting results in several reliable relationships. If we think of milligram equivalency as *consumption* and the combination of providers, pharmacies, and overlaps collectively as *behaviors*, we can intuit the following score categories.

	Consumption	Behaviors	Narx Score
Patient A	Low	Low	Low
Patient B	Low	High	Mid
Patient C	High	Low	Mid
Patient D	High	High	High

It is important to understand that there are several different patterns of use that can result in the same score. It is <u>always</u> necessary to look at the actual PDMP data to determine what use patterns exist that have resulted in the Narx Score presented.

Algorithm and Score Computation

The following steps are involved with calculating a Narx Score:

1. Determine the raw values for all time periods for all variables.
2. Convert all raw values to scaled values.
3. Average the scaled values for each risk factor for all time periods.
4. Determine the weighted average.
5. Add (concatenate) the number of active prescriptions.

Using a sample patient as an example to illustrate the calculation of a Narcotic Score:

1. Determine the raw values for all time periods for all variables.

	60 days	6 mos	1 year	2 years
Prescribers	6	9	15	15
Pharmacies	4	4	6	6
MME	1640	5408	7358	7364
LME	0	0	0	0
Overlaps	17	55	65	65

2. Convert all raw values to scaled values.

	60 days	6 mos	1 year	2 years
Prescribers	85	76	84	64
Pharmacies	78	56	62	49
Morphine milligram eq	74	87	88	87
Lorazepam milligram eq	0	0	0	0
Overlaps	41	70	64	52

3. Average the scaled value for each risk factor for all time periods.

	60 days	6 mos	1 year	2 years	Avg
Prescribers	85	76	84	64	**77**
Pharmacies	78	56	62	49	**61**
MME	74	87	88	87	**84**
LME	0	0	0	0	**0**
Overlaps	41	70	64	52	**57**

4. Calculate the weighted average.

	60 days	6 mos	1 year	2 years	Avg	Wt	
Prescribers	85	76	84	64	77	1	**77**
Pharmacies	78	56	62	49	61	1	**61**
MME	74	87	88	87	84	3	**252**
LME	0	0	0	0	0	1	**0**
Overlaps	41	70	64	52	56	2	**114**
Weighted Average (sum/8)							**63**

5. Add (concatenate) the number of active prescriptions

	60 days	6 mos	1 year	2 years	Avg	Wt	
Prescribers	85	76	84	64	77	1	77
Pharmacies	78	56	62	49	61	1	61
MME	74	87	88	87	84	3	252
LME	0	0	0	0	0	1	0
Overlaps	41	70	64	52	56	2	114
Weighted Average (sum/8)							63
Number of Active Narcotic Prescriptions							<u>2</u>
Narcotic Score							**63<u>2</u>**

Clinical Application

In-Workflow Use

Narx Scores are intended to be automatically delivered into the clinical workflow as discrete data and be easily viewable within a patient's record. Many systems choose to place the scores in the patient header or alongside the patient's vital signs.

Narx Scores are best viewed at the beginning of a patient encounter, and as such, they should be obtained at or near the time a patient is registered.

General Considerations

- The primary purpose of providing Narx Scores is to raise provider awareness of the associated PDMP data available for review.

- Concerning Narx Scores are intended to trigger a *discussion,* **not a decision**. If a Narx Score raises concern, the recommended course of action is to evaluate the PDMP data, review any additional pertinent data, and discuss any concerns with the patient.

- Just as there is no single blood pressure that can be considered *normal* for all people, there is no Narx Score that is *normal*. A Narx Score must be applied to the clinical scenario before evaluating appropriateness. For example, a blood pressure of 120/80 can simultaneously be:
  - Inappropriate for a 2-month-old infant
  - Appropriate for a 20-year-old woman
  - Inappropriate for an elderly patient with an average daily blood pressure of 200/100

- Narx Scores are distributed within the PDMP population as follows:
  - 75% of patients score below 200
  - 5% of patients score above 500
  - 1% of patients score above 650

Example Use Cases

Narx Scores can be used to great effect in certain clinical scenarios. Again, the recommended course of action is to seek additional information and discuss concerns with the patient.

- **Case A** – A 17-year-old male basketball player with other significant history presents with a severe ankle sprain. His Narx Scores are:

Narcotic	Sedative	Stimulant
000	000	000

  Important consideration: If considered for an opioid due to the severity of injury, this may be the patient's first exposure to the effects of an opioid. Recommend thorough review of the risks and benefits with the patient and consideration of an informed consent process.

- **Case B** – an 81-year-old female presents with decreased level of consciousness following a fall where she suffered a closed head injury. Her Narx Scores are:

Narcotic	Sedative	Stimulant
341	501	000

  Important Consideration: Many elderly patients are on chronic opioids and benzodiazepines. The use of opioids and benzodiazepines for this patient may have contributed to her fall. The patient may be taking enough medication to develop anxiety seizures due to benzodiazepine withdrawal, complicating the medical picture.

- **Case C** – A 36-year-old male patient with mild chronic back pain frequently treated with opioids presents for a medication refill. On review of the PDMP record, the patient has been to 17 different prescribers in the last year. His Narx Scores are:

Narcotic	Sedative	Stimulant
671	240	000

  Important Consideration: Many patients obtain medications through multiple different providers. This can be due to the patient being seen in a clinic that is staffed by different providers, or it can be due to *access to care* issues requiring visits to urgent care centers or emergency departments.

Score-Based Guidance

Score/Range	Notes	Recommendations*
000	This may be the first prescription of this type for the patient.	Discuss risks/benefits of using a controlled substance. Consider informed consent.
010–200	Approximately 75% of scores fall in this range. Occasionally, patients in this score range have a remote history of high usage (> 1 year ago).	Review use patterns for unsafe conditions. Discuss any concerns with patient. See guidance below. If previously high usage exists with recent abstinence, consider risk/benefits of new prescriptions.

Score/Range	Notes	Recommendations*
201–650	Approximately 24% of scores fall in this range.	Review use patterns for unsafe conditions. Discuss any concerns with patient. See guidance below.
> 650	Approximately 1% of scores fall in this range. Some patient records may have a score in this range and *still be within prescriber expectations.* Many patient records include some level of multiple provider episodes, overlapping prescriptions, or elevated milligram equivalency.	Review use patterns for unsafe conditions. If multiple providers involved in unsafe prescribing, discuss concern with patient and consider contacting other providers directly. If multiple pharmacies involved in unsafe prescribing, discuss concern with patient and consider pharmacy lock-in program. If overlapping medications of same or different type, discuss concern with patient and consider taper to lower dose and/or discontinuation of potentiating medications. If patient has evidence of a substance use disorder, consider inpatient admit or referral for outpatient evaluation and treatment.

Overdose Risk Score

The NarxCare application delivers several elements of discrete data and a visually enhanced, interactive PDMP report. Contained on the report, and delivered as discrete data, is an Overdose Risk Score (ORS). This score numerically represents the risk of unintentional overdose death.

The ORS has the following characteristics:

1. The score is three digits and ranges from 000–999.
2. Risk approximately doubles for every 100-point increase in the score.
3. Using patients who score 0–199 as a reference group, the odds ratio associated with successive 100-point bins is as follows:

ORS	Odds Ratio of Unintentional Overdose Death
000–199	1
200–299	10

ORS	Odds Ratio of Unintentional Overdose Death
300–399	12
400–499	25
500–599	44
600–699	85
700–799	141
800–899	194
900–999	329

ORS Algorithm

The ORS algorithm was derived using machine learning and other predictive techniques applied to a large case series of over 5,000 unintentional overdose deaths. For the first version of the score, more than 70 PDMP variables were evaluated with 12 chosen for the final model. Subsequent revisions of the model have included evaluation of thousands of variables, and efforts to include non-PDMP data such as criminal justice information, claims data, overdose registry data, etc., are ongoing. A specific characterization of the current variables and coefficients is beyond the scope of this document. In general, the variables that have shown to be predictive of unintentional overdose death include:

- The number of pharmacies visited per unit time
- Maximum morphine milligram equivalency (MME) in the last year
- The number of prescribers in the last two years
- Various slopes of opioid and sedative use
- Various slopes of prescriber usage

This section will be updated when new types of variables are incorporated and/or new sets of data are included.

Clinical Application

The ORS is intended to eventually provide a holistic estimate of overdose risk. At the current time, the risk assessment does not incorporate any data other than PDMP usage. This aligns the clinical application of the score with other sources of overdose risk assessment based on PDMP data such as number of pharmacies visited in the last 90 days or daily morphine equivalent dose (MED). The ORS performs much better than estimates using only one variable. For example, when comparing the utility of average MED in the last 60 days to the ORS, one can easily see that while MED does have a dose response curve, the ORS has markedly higher performance.

Comparison of 60 day MED vs population matched ORS (Odds Ratios)
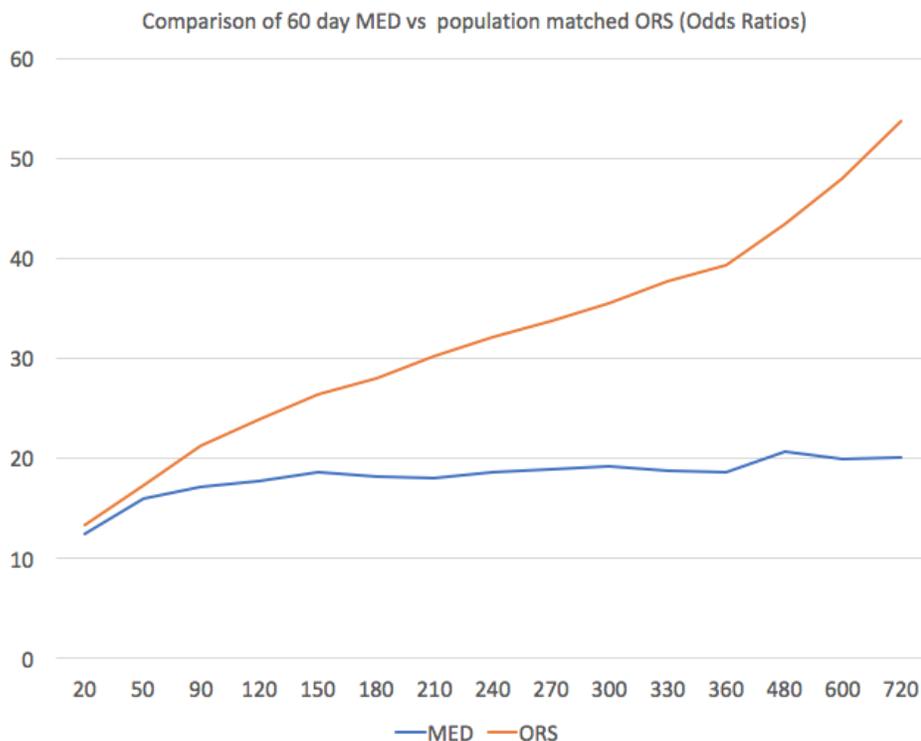
The absolute risk of death from unintentional overdose is very low in the population of patients found in a PDMP. Even though the annual unintentional overdose death rate is unacceptably high, measured in the thousands for many states, the number of people using controlled substances in those same states are in the multiple millions. Patients on elevated doses of medication are also prevalent and have a low overall incidence of unintentional overdose death. For example, in evaluating average daily MED over a period of 60 days in one state, the following death rates were found:

60-day MED avg	Decedents	Living	Death Rate
90 MED	1,008	162,231	0.6%
150 MED	722	94,681	0.8%
480 MED	144	13,693	1.0%

The results of this analysis equate the CDC-recommended maximum 90 MED for chronic opioid use to an expected death rate of just 0.6%. It isn't until you get to an average MED of 480 that the death rate reaches 1%, and at that level, there are over 13,000 patients in the PDMP database.

One method of incorporating the ORS into clinical practice is to use a value of 650 as a threshold approximately equivalent to the CDC's recommended maximum of 90 MED. Just as patients who are above 90 MED are often evaluated for dose reduction, patients above a score of 650 may similarly be considered for:

1. Substance Use Disorder evaluation and treatment (if appropriate)
2. Discontinuation of potentiating drugs (if present)
3. Dose reduction

4. Provider lock-in

5. Pharmacy lock-in

6. Consideration of non-opioid therapy

Score-Based Guidance

The ORS can be applied to clinical practice in a manner analogous to daily MED. The CDC opioid prescribing guidelines recommend naloxone be considered at 50 MED and that most patients should be treated at a dose of 90 MED or less. Using an equivalent population methodology, the following ORS ranges can be associated with CDC MED-based guidance.

Score	Approximate CDC MED Equivalent	Guidance*
< 010–440	< 50 MED	Consider other sources of risk beyond PDMP data. See below
450–650	50 MED (or more)	Consider naloxone prescription. See below.
> 650	90 MED (or more)	Consider naloxone prescription. Review use patterns for unsafe conditions. If multiple providers involved in unsafe prescribing, discuss concern with patient and consider contacting other providers directly. If multiple pharmacies involved in unsafe prescribing, discuss concern with patient and consider pharmacy lock-in program. If overlapping medications of same or different type, discuss concern with patient and consider taper to lower dose and/or discontinuation of potentiating medications. If patient has evidence of a substance use disorder, consider inpatient admit or referral for outpatient evaluation and treatment.

Additional Risk Indicators

The NarxCare application delivers several elements of discrete data and a visually enhanced, interactive PDMP report. Contained on the report, and delivered as discrete data, are a set of Additional Risk Indicators. These indicators may be determined by the state PDMP and are felt to have stand-alone value.

This section is intended to aggregate important information from multiple sources of data. These data sources may include PDMP data, claims data, overdose registry data, continuity of care documents, and criminal justice.

There are currently three PDMP based indicators:

- More than 5 providers in any 365-day period
- More than 4 pharmacies in any 90-day period
- More than 40 MED average and more than 100 MME total at any time in the previous 2 years

These indicators are based on the following literature:

- **Provider red flag:** Hall AJ, Logan JE, Toblin RL, et al. Patterns of Abuse Among Unintentional Pharmaceutical Overdose Fatalities. *JAMA.*2008;300(22):2613–2620. doi:10.1001/jama.2008.802.
- **Pharmacy red flag:** Zhou Yang, Barth Wilsey, Michele Bohm, et al. Defining Risk of Prescription Opioid Overdose: Pharmacy Shopping and Overlapping Prescriptions Among Long-Term Opioid Users in Medicaid. The Journal of Pain , Volume 16 , Issue 5 , 445 – 453.
- **40 MED red flag:** Leonard Paulozzi, Edwin Kilbourne, Nina Shah, et. al. A History of Being Prescribed Controlled Substances and Risk of Drug Overdose Death. Pain Medicine Jan 2012, 13 (1) 87–95; DOI: 10.1111/j.1526-4637.2011.01260.x.

Clinical Application

PDMP-based indicators typically corroborate any concerns raised by the Narx Scores and ORS.

When available, additional risk indictors sourced from non-PDMP data sources may represent other dimensions of risk such as past heroin use, substance use disorder, previous overdose, etc.

When non-PDMP indicators become routinely available, they will be modeled into the ORS, and it may then be the case that a patient may have low Narx Scores (due to low use of prescribed controlled substances) BUT have an elevated ORS (due to high risk associated with non-PDMP data.

In all cases, if a provider determines that inappropriate risk exists for a patient, they should seek additional information, discuss the risk concern with the patient, and choose appropriate medical care options that are in the best interest of the patient.

Indicator-Based Guidance

Indicator	Guidance*
More than 5 providers in any year (365 days)	Review use patterns for unsafe conditions. If multiple providers involved in unsafe prescribing, discuss concern with patient and consider contacting other providers directly.
More than 4 pharmacies in any 90-day period	Review use patterns for unsafe conditions. If multiple pharmacies involved in unsafe prescribing, discuss concern with patient and consider pharmacy lock-in program.
More than 40 MED per day average and more than 100 MME total	Review use patterns for unsafe conditions. Consider taper to lower dose and/or discontinuation of potentiating medications.
If all 3 indicators present	Review use patterns for unsafe conditions. If multiple providers involved in unsafe prescribing, discuss concern with patient and consider contacting other providers directly. If multiple pharmacies involved in unsafe prescribing, discuss concern with patient and consider pharmacy lock-in program. If overlapping medications of same or different type, discuss concern with patient and consider taper to lower dose and/or discontinuation of potentiating medications. If patient has evidence of a substance use disorder, consider inpatient admit or referral for outpatient evaluation and treatment.