RESOURCE AND PATIENT MANAGEMENT SYSTEM

Electronic Health Record

(EHR)

Addendum to User Manual

Version 1.1 Patch 28
July 2020

Office of Information Technology
Division of Information Technology

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Preface

In 2015, the Office of the National Coordinator (ONC) for Health Information Technologies published the 2015 Edition set of rules related to the adoption of standards, implementation, and certification criteria for Electronic Health Record (EHR) technology.

The Indian Health Service (IHS) must meet these ONC 2015 certification requirements, which include new regulations around electronic prescribing (eRx) functions. The enhancements are scheduled to be released over several patches. The EHR patch 28 along with the IHS Pharmacy Modifications (namespace APSP) patch 1025 will include changes related to dosing and quantities as well as improvements to the Clinical Information Reconciliation (CIR) Tool.

For more information about the ONC 2015 Edition certification requirements relating to electronic prescribing, see the Electronic Prescribing page at ONC's HealthIT website here: https://www.healthit.gov/test-method/electronic-prescribing.

For more information about the ONC 2015 Edition certification requirements relating to Clinical Information Reconciliation, see the Clinical Information Reconciliation page at ONC's HealthIT website here: https://www.healthit.gov/test-method/clinical-information-reconciliation-and-incorporation.

1.0 Introduction

The purpose of this document is to provide information on the changes to the EHR and medication ordering processes and to provide information on the CIR Tool.

Changes for medication ordering consist of standardization of decimal numbers with regard to leading and trailing zeros, and also to allowable dosing units for oral liquid medications. The changes will affect Outpatient, Inpatient, and Non-VA (also known as Outside) medication orders. For the purposes of this manual, it is assumed that all numbers used in the ordering process will be positive numbers.

The CIR Tool has been reworked to more closely align with the site workflows and needs for the Certified EHR rules and the various reporting requirements for quality payment programs.

This manual is intended for providers, pharmacists, and clinical informaticists or clinical application coordinators. As such, not all sections will be applicable to all audiences.

This patch is EHR*1.1*28 and has APSP*7.0*1023 as a prerequisite as described in the release notes and install guide.

2.0 Leading and Trailing Zeros

For many years, users have been encouraged to format decimal numbers to include a leading zero for numbers less than 1 (e.g., "0.5" not ".5") and avoid trailing zeros (e.g., "3" not "3.0") when these numbers are used for dosing or quantity. Even with the use of electronic mediums, it can be difficult to see the decimal point without this standardization, which can lead to errors.

These standards are now required in the ONC 2015 Edition certification requirements, and by Surescripts for prescriptions transmitted over their network. The IHS Resource and Patient Management System (RPMS) EHR will now enforce this standard in medication orders for outpatient, inpatient, and non-VA (outside) order dialogs. The following sections discuss each ordering method and fields affected by this change.

2.1 Outpatient Medications

Outpatient medication ordering can be done as normal; however, the **Dosage** and quantity (**Qty**) fields will not allow numbers less than 1 without a leading zero, nor allow trailing zeros after a decimal. In the case of doses, the order will not be able to be saved, and an error message will display. For quantities, the system will automatically correct the format.

2.1.1 Dosage

The **Dosage** field will accept a value chosen from a list and will also accept text typed in by the provider or proxy entering the order. In either case, the user must include a leading zero for numbers less than 1 and no trailing zeros.

If there are doses that do not comply when the user clicks **Accept Order**, an error message similar to the ones shown in Figure 2-1 and Figure 2-2 will display. The behavior is the same for doses on the **Complex** tab.

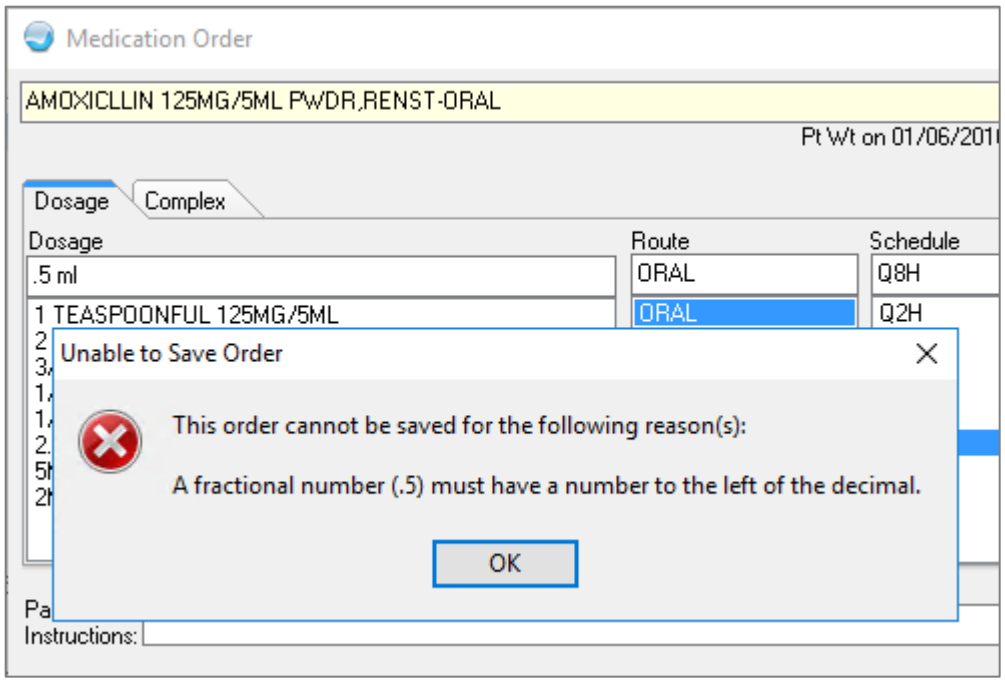

Figure 2-1: Unable to Save Order message for no leading zero in Dosage field for an outpatient medication

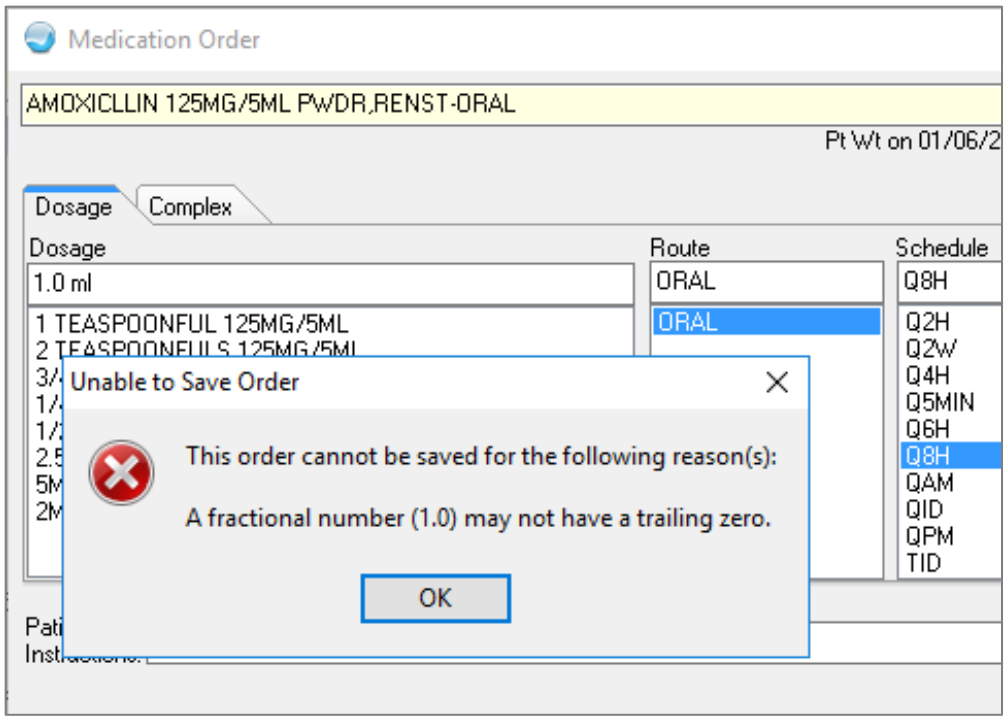

Figure 2-2: Unable to Save Order message for trailing zero in Dosage field for an outpatient medication

2.1.2 Quantity

Like the **Dosage** field, the quantity (**Qty**) field must not contain a trailing zero or be missing a leading zero for numbers less than 1. If the quantity entered does not meet these requirements, the numbers will be updated to meet the guidelines when the user moves to another field. This is not possible for the **Dosage** field, since that field may contain text as well as numbers.

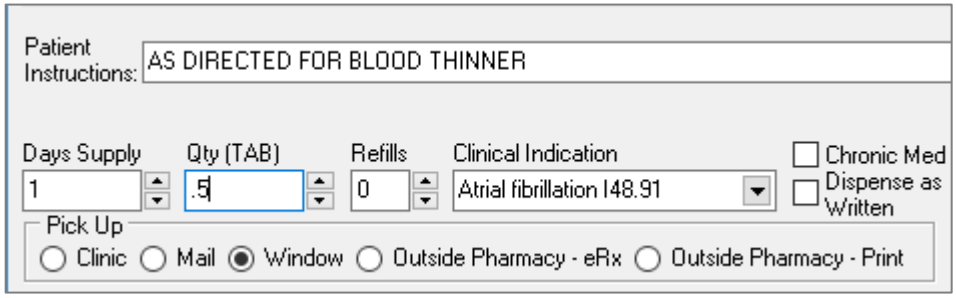

Figure 2-3: Medication Order dialog with typed-in Qty number with no leading zero

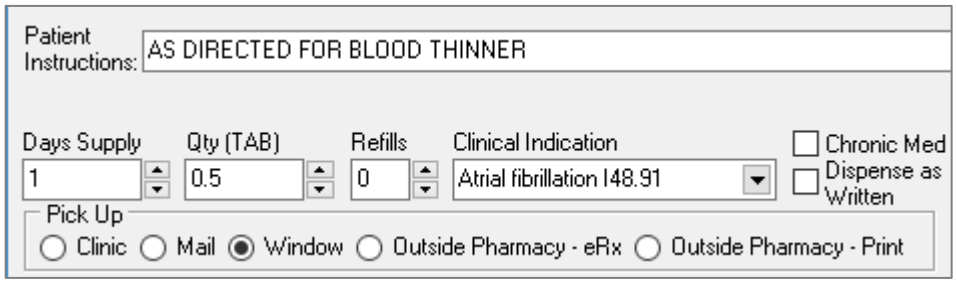

Figure 2-4: Medication Order dialog with corrected Qty value

2.2 Unit Dose Medications

Unit dose medications, whether ordered for patients who are admitted to an inpatient unit or for clinic administration for an outpatient, will only have a **Dosage** field that will be validated for leading and trailing zeros.

2.2.1 Dosage

The **Dosage** field will accept a value chosen from a list and will also accept text typed in by the provider or proxy entering the order. In either case, the user must include a leading zero for numbers less than 1, and no trailing zeros. If there are doses that do not comply when the user clicks **Accept Order**, an error message similar to the ones shown in Figure 2-5 and Figure 2-6 will display.

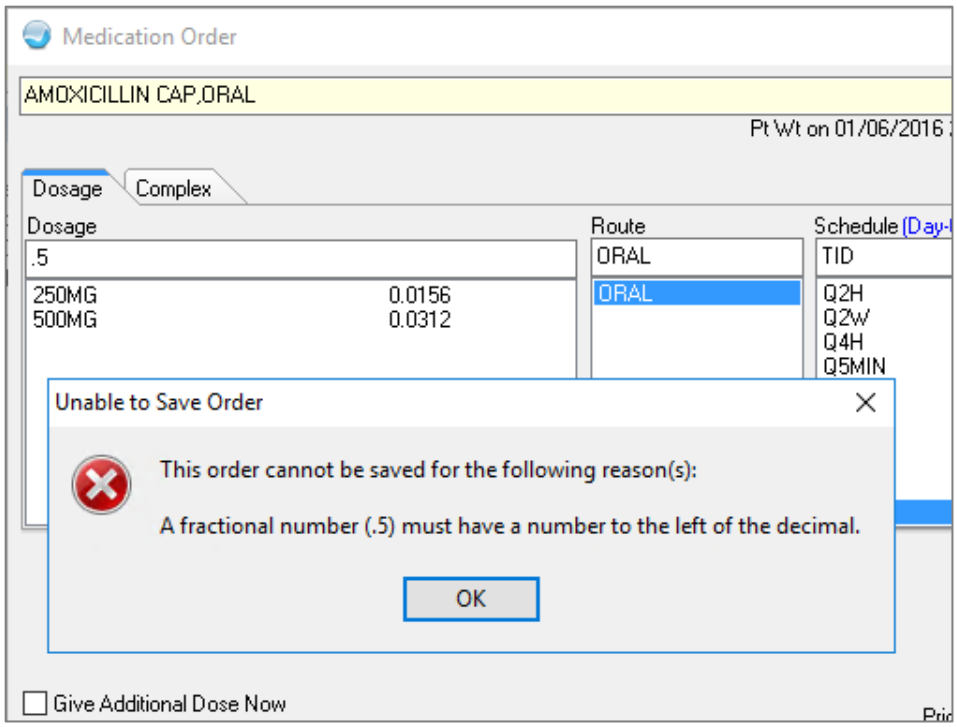

Figure 2-5: Unable to Save Order message for no leading zero in Dosage field for a unit dose medication

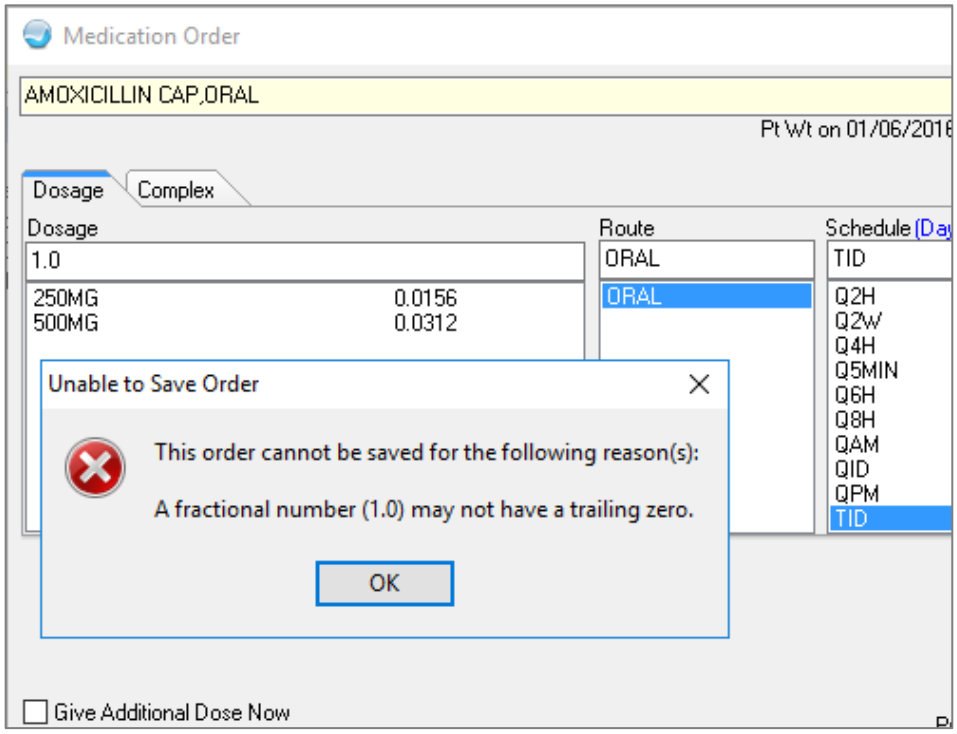

Figure 2-6: Unable to Save Order message for trailing zero in Dosage field for a unit dose medication

2.3 Intravenous Medications

Intravenous (**IV**) medication orders may be either continuous or intermittent, and may consist of a solution only, or a solution with one or more additives. There are several fields that undergo validation in these orders, with some validation being existing functionality and not new to this patch.

One numerical field that is ***not*** validated in the EHR at this time is the volume of the solution, because these are set in the drug file and are not editable inside the EHR **Order** dialog.

2.3.1 Volume/Strength

The **Volume/Strength** field is validated for additives only. Numbers that do not conform to the leading and trailing zeros standards will not save. If such numbers are in the **Volume/Strength** field of the additive or additives when the user clicks **Accept Order**, the user will see error messages similar to the ones shown in Figure 2-7 and Figure 2-8.

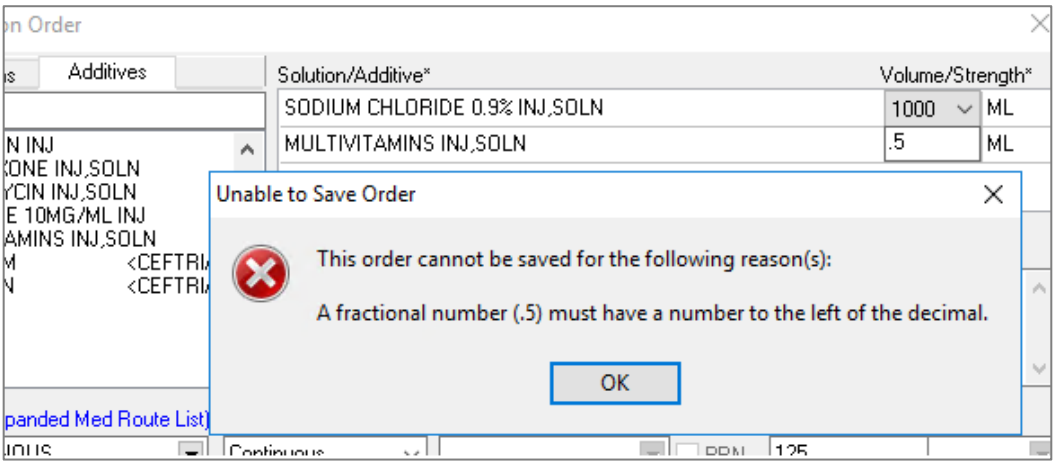

Figure 2-7: Unable to Save Order message for no leading zero in Volume/Strength field for an IV medication

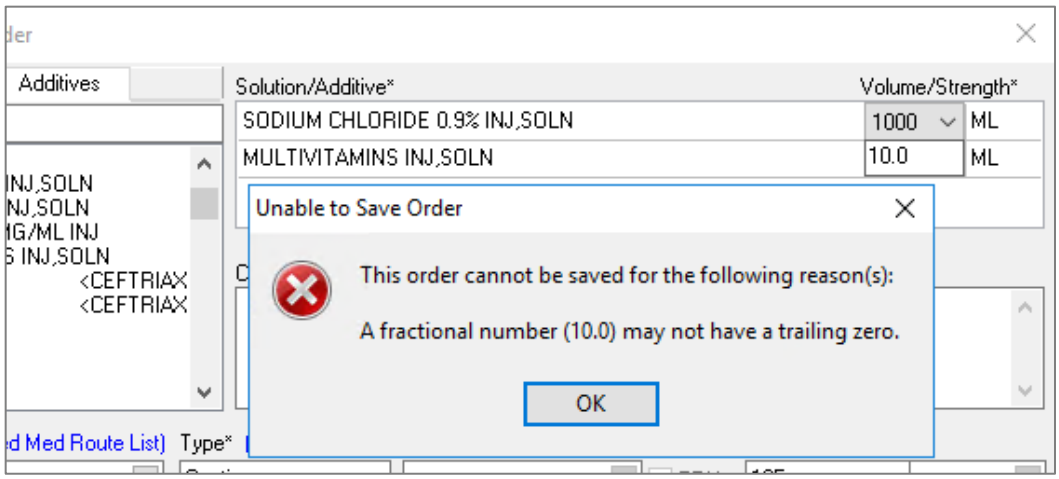

Figure 2-8: Unable to Save Order message for trailing zero in Volume/Strength field for an IV medication

2.3.2 Infusion Rate

The **Infusion Rate** field for applies to continuous type IV medications only. Numbers that do not conform to the standards for leading and trailing zeros will not be able to be saved. If such numbers exist in this field when the user clicks **Accept Order**, the user will see error messages similar to the ones in Figure 2-9 and Figure 2-10.

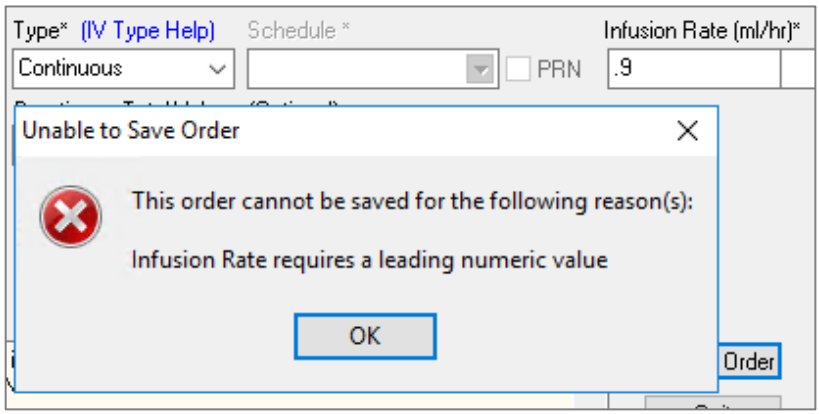

Figure 2-9: Unable to Save Order message for leading zero in Infusion Rate field for an IV medication

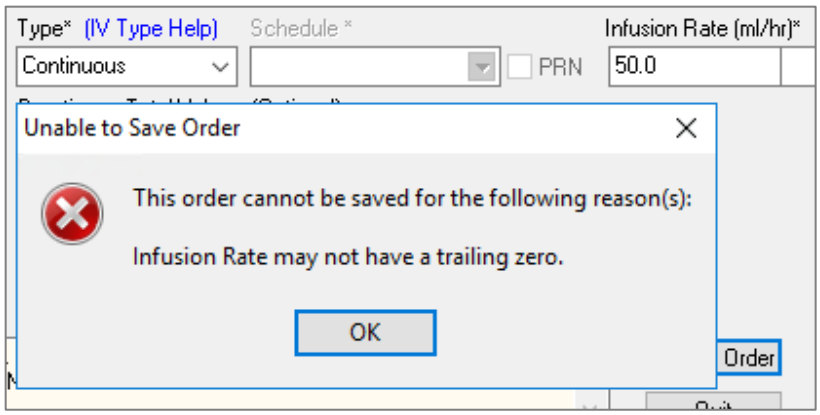

Figure 2-10: Unable to Save Order message for trailing zero in Infusion Rate field for an IV medication

2.3.3 Infuse Over Time

The **Infuse Over Time** field for applies to intermittent type IV medications only. This field must be a whole number so is not validated for leading and trailing zeros. If decimal numbers are in this field when the user clicks **Accept Order**, the user will see an error message similar to the one shown in Figure 2-11.

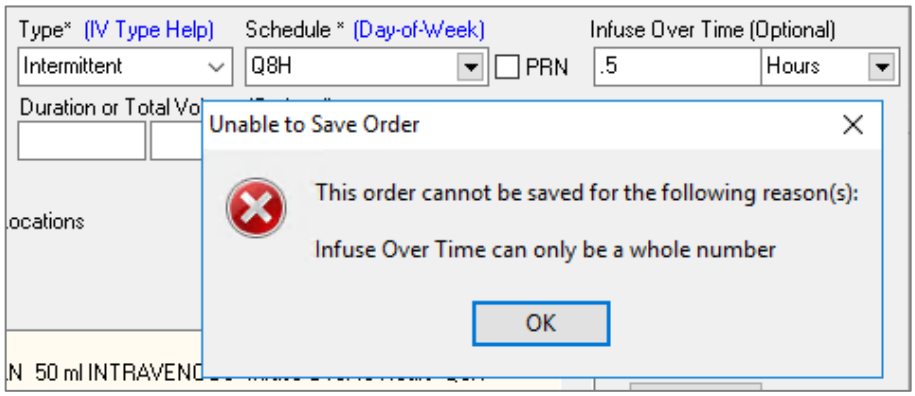

Figure 2-11:Unable to Save Order message for leading zero in Infuse Over Time field for an IV medication

2.3.4 Duration or Total Volume

The **Duration or Total Volume** field must be a whole number, so it is not validated for leading and trailing zeros. If a fractional number is in this field when the user clicks **Accept Order**, the user will see an error message similar to the one in Figure 2-12. This is existing functionality but included here for completeness.

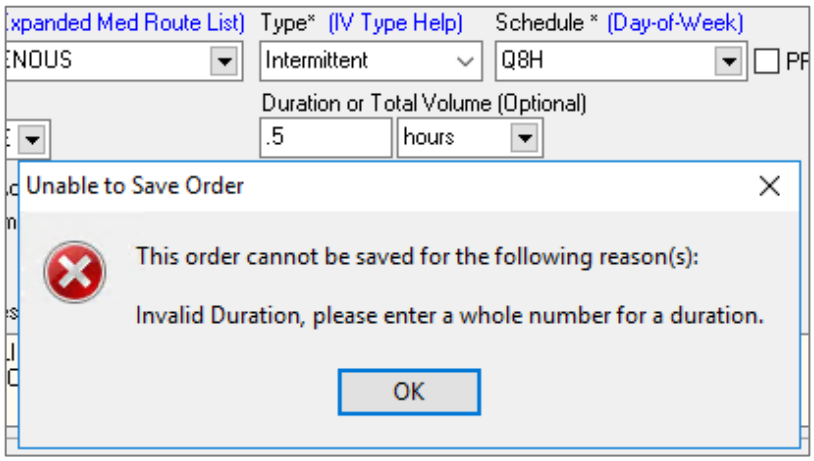

Figure 2-12: Unable to Save Order message for whole number for Duration or Total Volume field for an IV medication

2.4 Non-VA (Outside) Medications

Non-VA medications, also known as outside medications, are technically not ordered but rather documented. However, the **Dosage** field will still have validation for the leading and trailing zero standards.

2.4.1 Dosage

The **Dosage** field will accept a value chosen from a list and will also accept text typed in by the provider or proxy entering the order. In either case, the user must include a leading zero for numbers less than 1, and no trailing zeros. If there are doses that do not comply when the user clicks **Accept Order**, an error message similar to the ones shown in Figure 2-13 and Figure 2-14 will display.

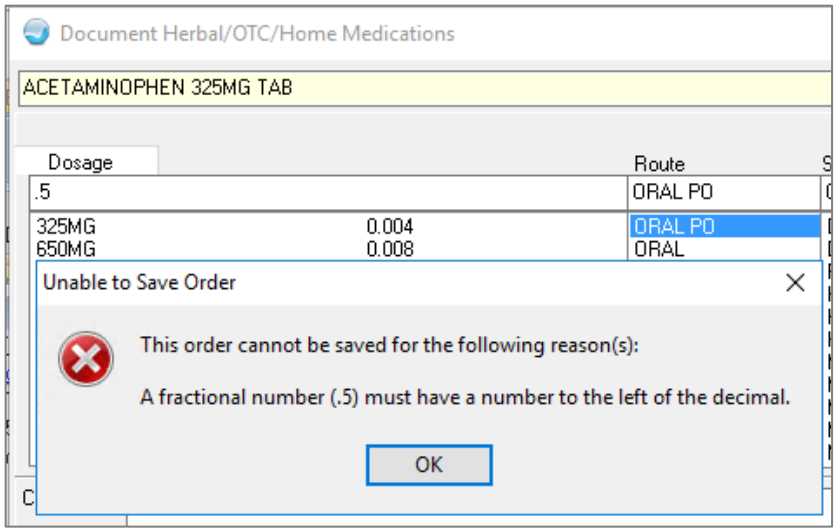

Figure 2-13: Unable to Save Order message for no leading zero for Dosage field for a non-VA medication

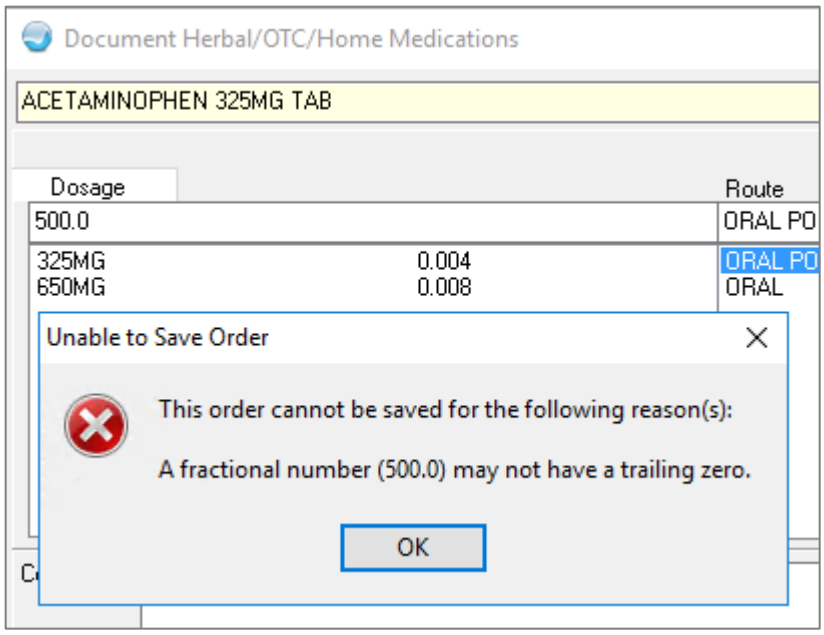

Figure 2-14: Unable to Save Order message for trailing zero for Dosage field for a non-VA medication

3.0 Oral Liquid Dosage Units

A new regulation based in part on the Institute for Safe Medication Practices (ISMP) guidelines applies only to oral liquid medications for outpatient medication orders.

These medications must be dosed in milliliters (mL) and milliliters only. The use of terms such as teaspoons, tablespoons, cubic centimeters, etc. are no longer allowed, even when used along with mL. This means that a dose of "5 mL" is acceptable, but a dose of "1 teaspoonful (5 mL)" is not.

3.1 Identifying Oral Liquids

The software will identify oral liquids based on the dosage form associated with the drug in the drug file. Specific dosage forms are marked as being an oral liquid and will trigger the validation. Because of limitations in the **Dosage Form** file, there may be a few items that are not validated by the software; however, these should be rarely used items in most cases.

In general, if a medication is to be used by the patient in an oral liquid form, even if it is dispensed in another form, then the validation will apply.

3.2 Outpatient Medications

Oral liquid medications will be ordered as normal. Doses may be selected from a list or entered as free text. While the associated APSP patch will prevent incorrect doses from being created, there may be existing doses in the system that are not compliant with the new rule, especially when the patch is first installed.

When a dose that does not meet the new rule is present when the user clicks **Accept Order**, an error message similar to the one in Figure 3-1 will display. This validation will occur whether the user is on the **Dosage** tab or the **Complex** tab in the **Order** dialog.

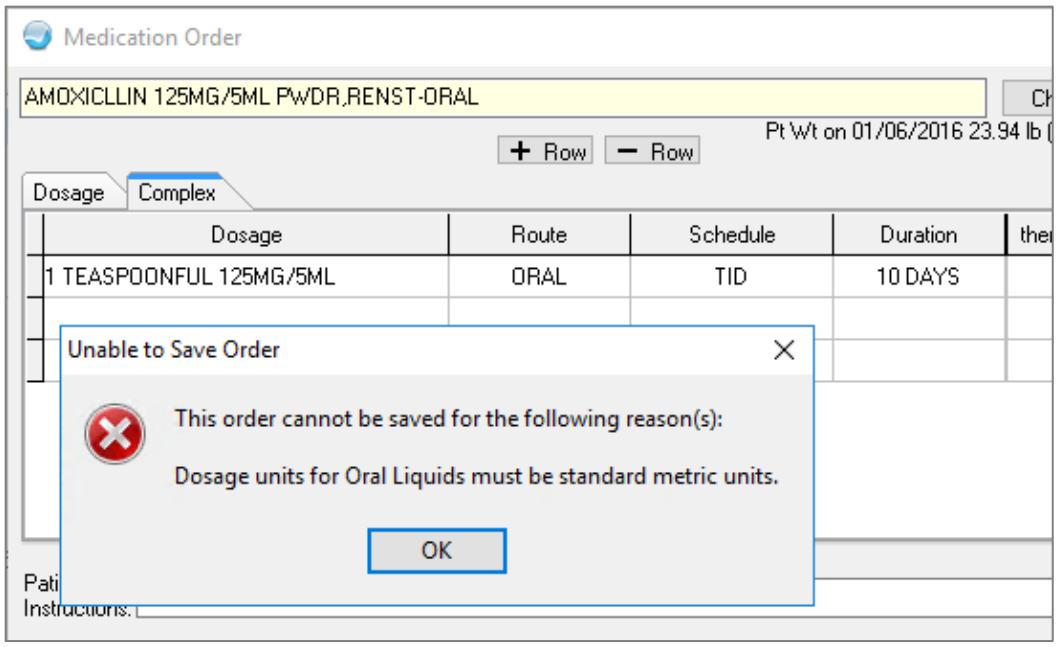

Figure 3-1: Unable to Save Order message for a non-metric dosage on an oral liquid outpatient medication

3.3 Unit Dose, IV, and Non-VA medications

The metric dose unit validation will not apply to these medications, and doses may be in units other than milliliters. However, users are strongly encouraged to avoid cubic centimeters or household measurement units such as teaspoonfuls. Doses that express both strength and volume are acceptable here (e.g., “250 mg (5 mL)”).

4.0 Quick Orders

Creation of quick orders (QO) will be subject to the same validation as ordering, including both the leading and trailing zeros validation for all medication order types and the milliliters in oral liquid dosing for outpatient medications. However, this will apply to new quick orders only, and existing quick orders will need to be edited manually. Currently, QO may be created either in RPMS (more common) or in the EHR Quick Order Wizard (less common).

4.1 RPMS

For most sites, QO are created and edited in RPMS. The validation that is found in the EHR for ordering will also occur when creating and editing QO in RPMS.

4.1.1 Outpatient Medications

Figure 4-1 shows only the relevant portions of the QO creation process. Error messages are in bold font in this output for visibility, but display in normal font within RPMS.

```
Select QUICK ORDER NAME:    PSOZ TEST QUICK ORDER
NAME: PSOZ TEST QUICK ORDER  Replace
DISPLAY TEXT: This is a test quick order please do not use
           Replace
VERIFY ORDER: YES//
DESCRIPTION:
  No existing text
  Edit? NO//
ENTRY ACTION:

Medication: AMOX,125 AMOXICLLIN 125MG/5ML PWDR,RENST-ORAL     AMOXICLLIN
125MG/5ML PWDR,RENST-ORAL   AMOXICLLIN 125MG/5ML PWDR,RENST-
ORAL
Complex dose? NO// YES
Choose from (or enter another):
     1   1 TEASPOONFUL 125MG/5ML
     2   2 TEASPOONFULS 125MG/5ML
Dose: 1   1 TEASPOONFUL 125MG/5ML
   ...OK? YES//
Dosage units for Oral Liquids must be standard metric units.
Dosage will not be saved/changed
Dose: .5 ML
Enter the amount of this drug that the patient is to receive as a dose,
NOT as the number of units per dose.
A fractional number .5 must have a number to the left of the decimal.
Dosage will not be saved/changed
Dose: 5.0 ML
A fractional number 5.0 may not have a trailing zero
Dosage will not be saved/changed
Dose: ^
```

Figure 4-1: Quick Order example and error messages (in bold font)

4.1.2 Unit Dose Medications

Figure 4-2 shows only the relevant portions of the QO creation process. Error messages are in bold font in this output for visibility, but display in normal font within RPMS.

```
Select QUICK ORDER NAME:    PSJZ TEST UD QO
NAME: PSJZ TEST UD QO//
DISPLAY TEXT: Test quick order please do not use  Replace
VERIFY ORDER: YES//
DESCRIPTION:
  No existing text
  Edit? NO//
ENTRY ACTION:

Medication: METRON
     1   METRONIDAZOLE GEL,TOP
     2   METRONIDAZOLE SUSP,ORAL
CHOOSE 1-2: 2
Complex dose? NO//
Choose from (or enter another):
     1   5ML METRONIDAZOLE 50MG/ML SUSPENSION
     2   55ML METRONIDAZOLE 50MG/ML SUSPENSION
     3   70ML METRONIDAZOLE 50MG/ML SUSPENSION
     4   35ml METRONIDAZOLE 50MG/ML SUSPENSION
     5   88ml METRONIDAZOLE 50MG/ML SUSPENSION
     6   95ml METRONIDAZOLE 50MG/ML SUSPENSION
Dose: .5
Enter the amount of this drug that the patient is to receive as a dose,
NOT as the number of units per dose.
A fractional number .5 must have a number to the left of the decimal.
Dosage will not be saved/changed
Dose: 5.0 ML
A fractional number 5.0 may not have a trailing zero
Dosage will not be saved/changed
Dose:
```

Figure 4-2: Unit Dose example with errors (in bold font)

4.1.3 IV Medications

The following shows only the relevant portions of the QO creation process. Error messages are in bold font in this output for visibility, but display in normal font within RPMS.

Figure 4-3 show an example of continuous infusion.

```
Select QUICK ORDER NAME: PSIVZ TEST IV QO
NAME: PSIVZ TEST IV QO//
DISPLAY TEXT: Test quick order please do not use  Replace
VERIFY ORDER: YES//
DESCRIPTION:
  No existing text
  Edit? NO//
ENTRY ACTION:
```

```
Type: Continuous//
Solution: SODIUM CHLORIDE 0.9% INJ,SOLN //
Volume (in ml): 1000// 10.0
Choose from:
    50
   100
  1000
Volume (in ml): 1000//
Additive:
Route: INTRAVENOUS//
Infusion Rate (ml/hr): 125 ml/hr// 10.0

Enter the infusion rate, as the number of ml/hr or Text@Number of Labels
per day. .

Infusion Rate (ml/hr): 125 ml/hr// .5
Infusion Rate required a leading numeric value.

Enter the infusion rate, as the number of ml/hr or Text@Number of Labels
per day. .

Infusion Rate (ml/hr): 125 ml/hr//
```

Figure 4-3: Continuous infusion and errors (in bold font) example

Figure 4-4 shows an example of intermittent infusion.

```
Select QUICK ORDER NAME: PSIVZ TEST IV QO
NAME: PSIVZ TEST IV QO//
DISPLAY TEXT: Test quick order please do not use  Replace
VERIFY ORDER: YES//
DESCRIPTION:
  No existing text
  Edit? NO//
ENTRY ACTION:

Type: Continuous// Intermittent
Solution: SODIUM CHLORIDE 0.9% INJ,SOLN //
Volume (in ml): 1000// 50
Additive: AMPICILLIN INJ
 (Units for this additive are GM)
Strength: .5
A fractional number .5 must have a number to the left of the decimal.
Enter the strength of this additive, as a number.

Strength: 1.0
A fractional number 1.0 may not have a trailing zero
Enter the strength of this additive, as a number.

Strength: 1
Another Additive:
Route: INTRAVENOUS//
Infuse over time (min): .5
Infuse Over Time must be a whole number.
Enter the number of minutes over which to infuse this medication.

Infuse over time (min): 10.0
Infuse Over Time must be a whole number.
```

```
Enter the number of minutes over which to infuse this medication.

Infuse over time (min):
```

Figure 4-4: Intermittent infusion and errors (in bold font) example

4.1.4 Outside Medications

Figure 4-5 shows only the relevant portions of the QO creation process. Error messages are in bold font in this output for visibility, but display in normal font within RPMS.

```
Select QUICK ORDER NAME: PSOXZ TEST QO OUTSIDE
NAME: PSOXZ TEST QO OUTSIDE  Replace
DISPLAY TEXT: This is a test QO please do not use
          Replace
VERIFY ORDER: YES//
DESCRIPTION:
  No existing text
  Edit? NO//
ENTRY ACTION:

Outside Medication:AMOX
     1   AMOXICILLIN 200MG/5ML PWDR,RENST-ORAL
     2   AMOXICILLIN 250MG/5ML PWDR,RENST-ORAL
     3   AMOXICILLIN CAP,ORAL
     4   AMOXICILLIN PWDR,RENST-ORAL
     5   AMOXICILLIN TAB
Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-5: 3    AMOXICILLIN CAP,ORAL
Complex dose? NO//
Choose from (or enter another):
     1   250MG     $0.0156
     2   500MG     $0.0128
     3   1000MG     $0.0256
     4   2000MG     $0.0512
Dose: .5
Enter the amount of this drug that the patient is to receive as a dose,
NOT as the number of units per dose.
A fractional number .5 must have a number to the left of the decimal.
Dosage will not be saved/changed
Dose: 5.0
Enter the amount of this drug that the patient is to receive as a dose,
NOT as the number of units per dose.
A fractional number 5.0 may not have a trailing zero
Dosage will not be saved/changed
Dose: 1   250MG     $0.0156
```

Figure 4-5: Outside Medications and errors (in bold) example

4.2 Quick Order Wizard

While this component may not be widely used, it is still available and currently functional. The same validation described for EHR ordering will occur for creating and editing QO when using the Quick Order Wizard. Note that Non-VA medication QO cannot be created or edited in the EHR.

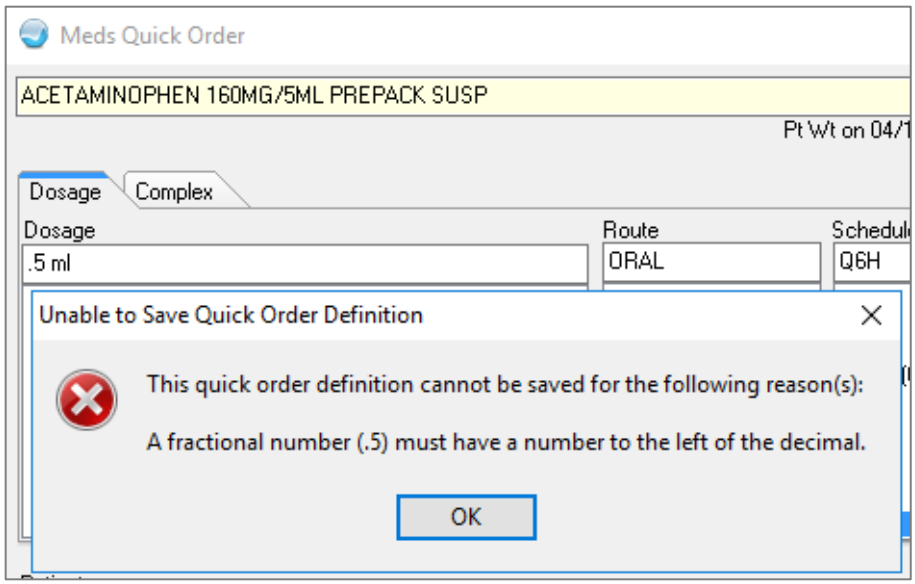

Figure 4-6: Unable to Save message for leading zero on Outpatient QO

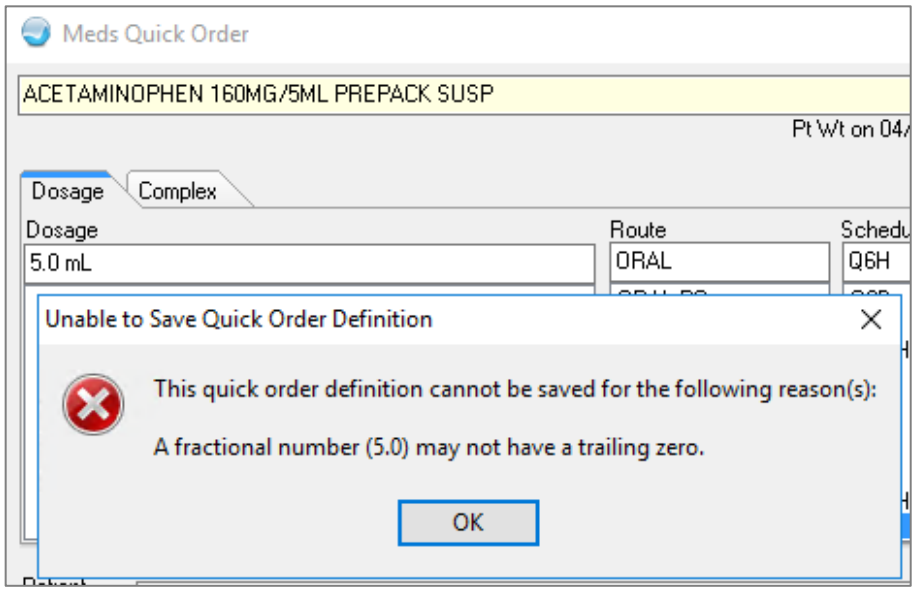

Figure 4-7: Unable to Save message for trailing zero on Outpatient QO

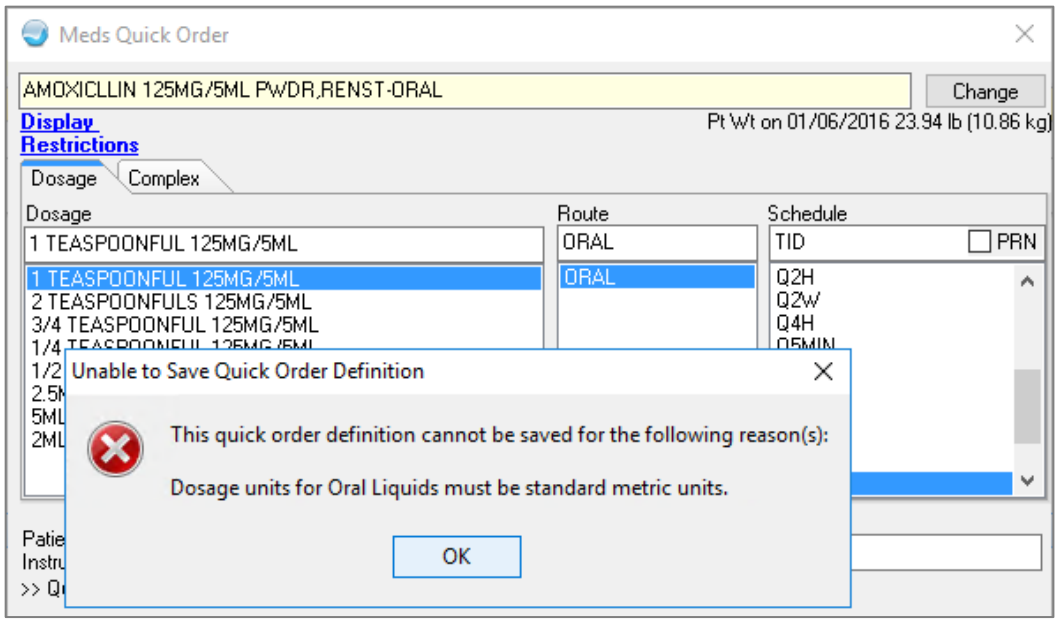

Figure 4-8: Unable to Save message for metric dose for Outpatient QO

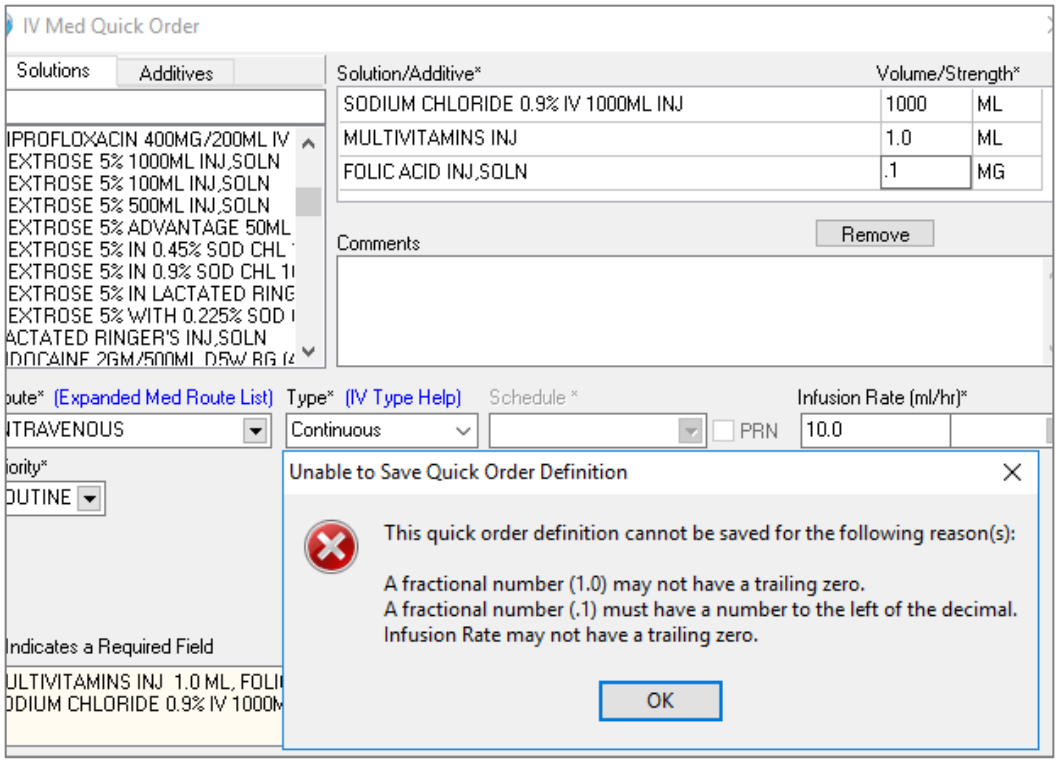

Figure 4-9: Unable to Save message for various leading and trailing zeros for Continuous Infusion QO

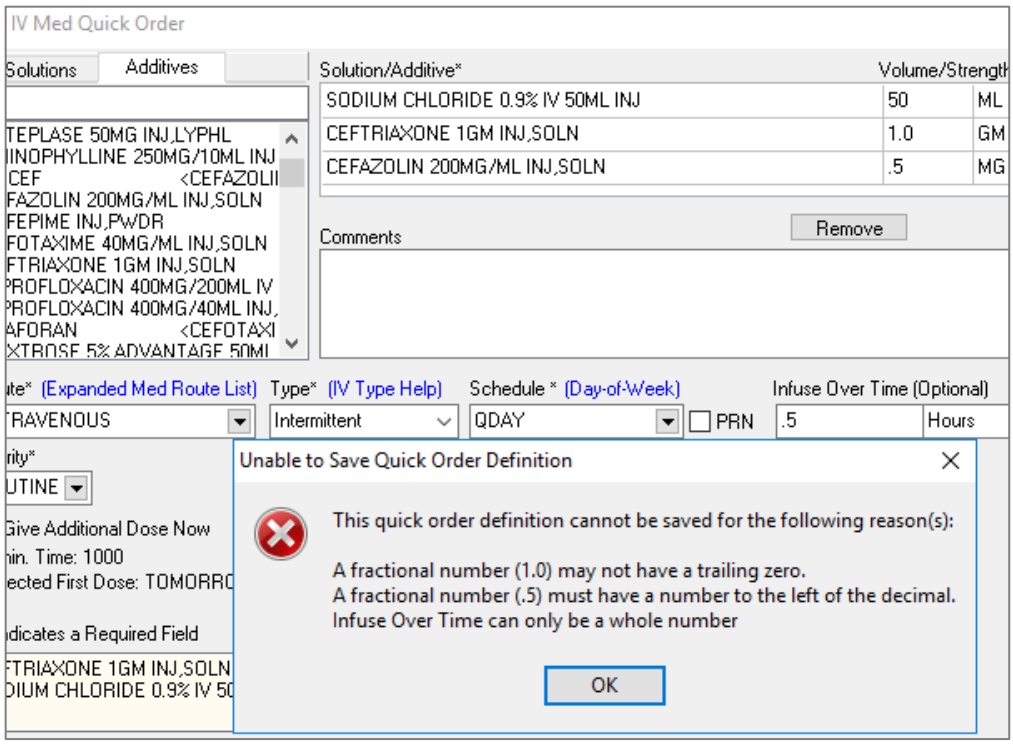

Figure 4-10: Unable to Save message for various leading and trailing zeros for Intermittent Infusion QO

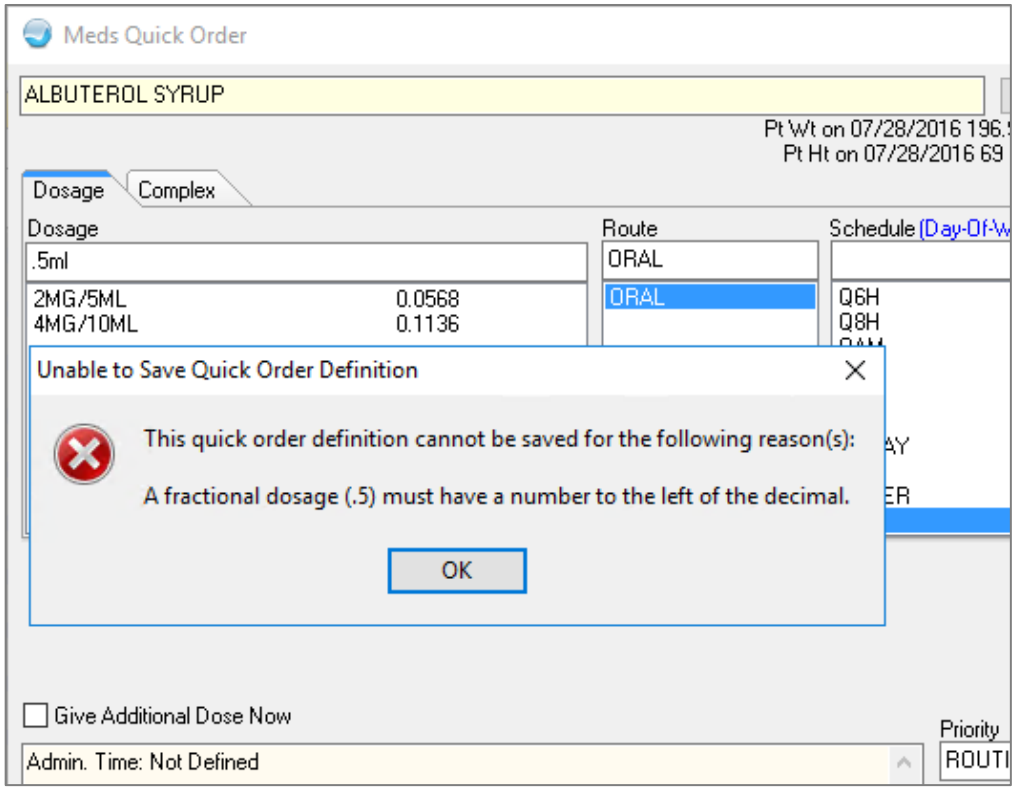

Figure 4-11: Unable to Save message for leading zero for Unit Dose QO

5.0 CIR Tool

The CIR Tool is intended to allow providers and other clinical staff to reconcile information from other facilities or from the patient or caregiver to ensure all relevant information is available for the care of the patient. Information may be obtained from sources such as documents sent to your facility in the Consolidated Clinical Document Architecture (CCDA) format, or from a patient or caregiver interview, a medication list the patient or caregiver has, actual medication bottles, or any other source that can provide information regarding problems, adverse reactions, or medications.

In most cases, CCDAs received from external partners should be imported into the patient's IHS medical record. Follow the processes, procedures, and policies for document import. This section assumes the site has set up and configured the Veterans Health Information System and Technology Architecture (VistA) Imaging Capture tool (known as VIC) and knows how to use the tool.

If the VIC setup and configuration is unknown, check with your site Information System Security Officer (ISSO), Health Information Management (HIM) personnel, Clinical Informaticist, or Clinical Application Coordinator (CAC) for more information. All images shown within this section are for illustration purposes and contain demo data only.

> **Note:** Before proceeding make sure you have completed all the required training and that you understand your site's processes, procedures, or policies. If you do not know your site's processes, procedures, or policies regarding clinical information reconciliation, check with your ISSO, HIM personnel, Clinical Informaticist, or CAC before continuing. For more detailed information about the CIR tool, see the EHR User Manual or work with your site HIM personnel, Clinical Informaticist, or CAC. Questions or issues with the CIR tool should be directed to the CIR team.

5.1 Launch the CIR Tool

The CIR Tool icon is a circle of four arrows with the text **CIR** or a number. When a patient has not been selected, the icon will be green with the letters CIR in the center; see Figure 5-1.

Figure 5-1: The CIR Tool icon with no patient selected

Once a patient has been selected, the icon will be green if the patient has no CCDA documents to reconcile. The number on the icon will represent the number of CCDA documents received, as shown in Figure 5-2.

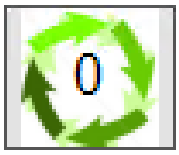

Figure 5-2: The CIR Tool icon for a patient with no CCDA documents to reconcile and no CCDA documents received

If the patient has CCDA documents that must be reconciled, the icon will be red and display the number of CCDA documents not reconciled. See Figure 5-3.

Figure 5-3: The CIR Tool icon appearance with 3 CCDA documents to reconcile.

Hover the mouse pointer over the CIR Tool icon to display the number of CCDA documents that have already been reconciled as well as the total number of documents. See Figure 5-4.

Figure 5-4: Hover text over the CIR Tool icon showing the number of reconciled and the total number of CCDA documents.

Launch the CIR Tool by clicking on the icon. The tool will launch in a pop-up window over the main EHR window.

The CIR Tool will show the **CCDA Source** at the top. Tabs for **Problems**, **Adverse Reactions**, and **Medications** display in the middle. **Reconciled** items (**Problems**, **Adverse Reactions**, or **Medications** depending on the tab selected) display at the bottom. Sources will be blank if the patient has no CCDA documents. The tabs default to **Problems**. **Reconciled Problems** will be collapsed by default.

The overall window and the various panes may be resized by dragging the edges or splitter bars to the desired size. Column widths may also be resized, and clicking on a column header will sort by that column. Clicking again will reverse the sort order.

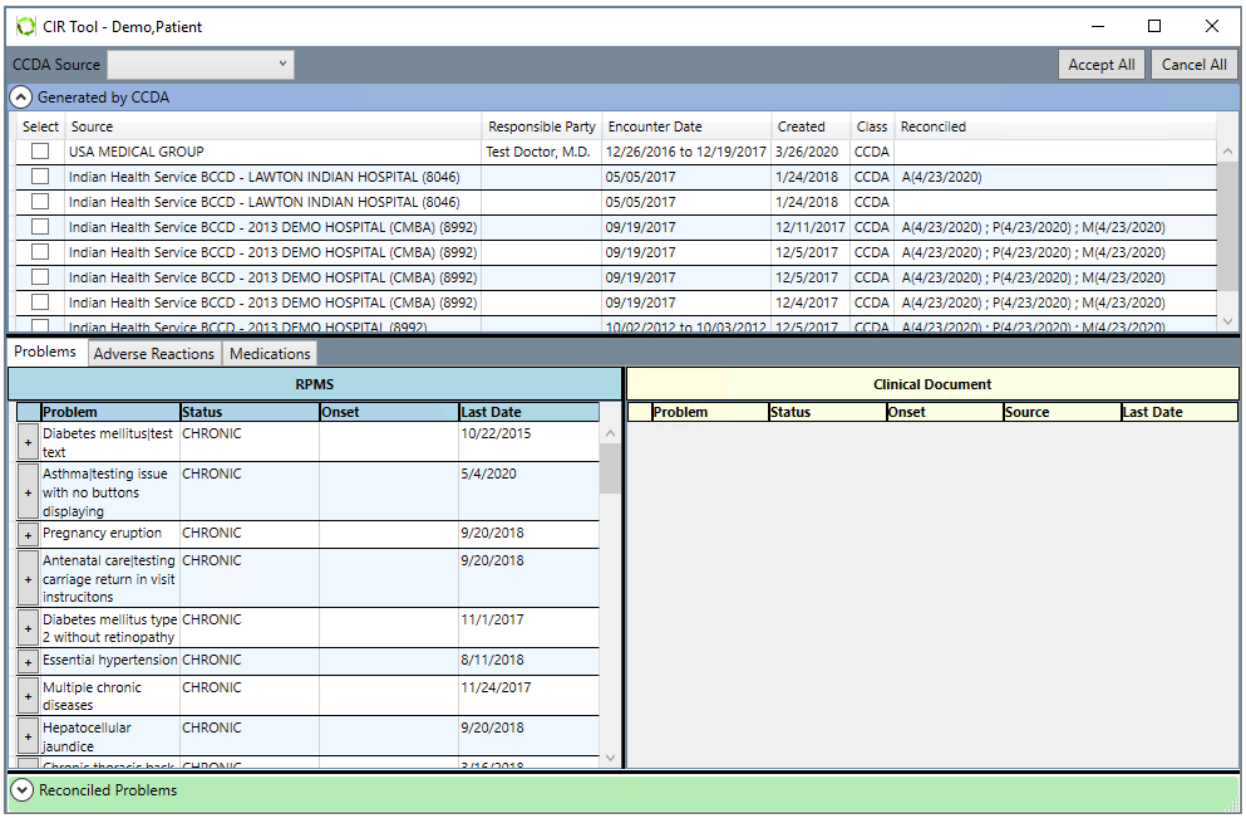

Figure 5-5: CIR Tool default view on launch for patient with CCDA documents

All CCDA documents will display for the patient, with the unreconciled items at the top of the list. Reconciled items will have data in the **Reconciled** column. The letters **A**, **P**, and **M** represent **Adverse Reactions**, **Problems**, and **Medications** respectively. The date in parentheses is the date that item was last reconciled.

You may view the CCDA in full, or one of its sections, by right-clicking on the line item and selecting the appropriate option from the context menu that displays. The list of sections will vary based on the document selected.

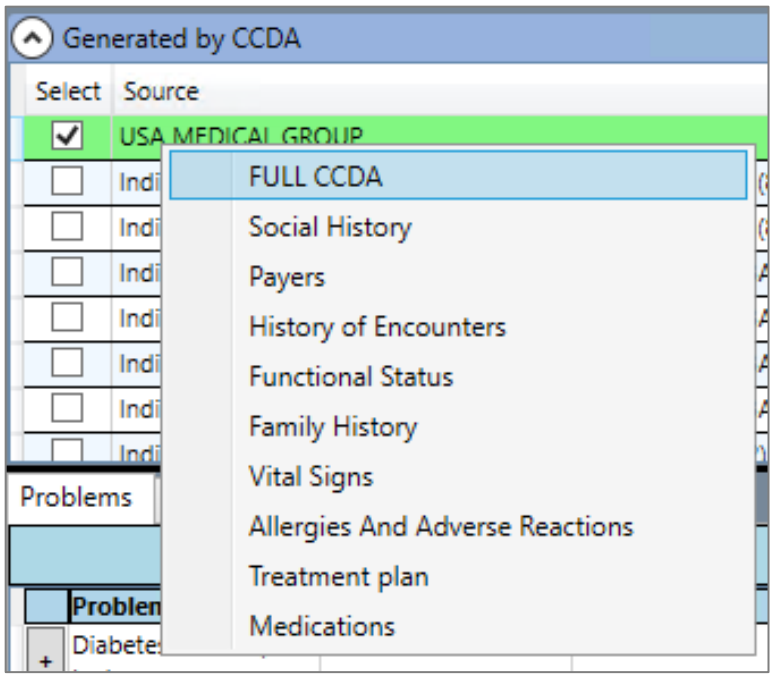

Figure 5-6: The context menu options for viewing a CCDA document

5.2 Select a Visit

The user must select a visit to reconcile a document or documents. If you have not already set a visit context in the EHR, the **Visit** button will be available in the CIR Tool. Click **Visit** to open the **Encounter Settings for Current Activities** window. Set the visit details as defined by your site.

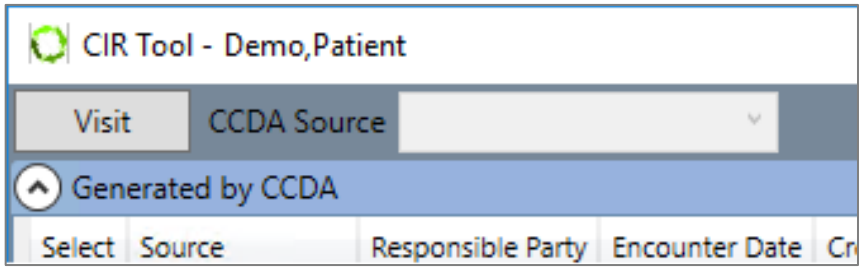

Figure 5-7: The Visit button in the CIR Tool

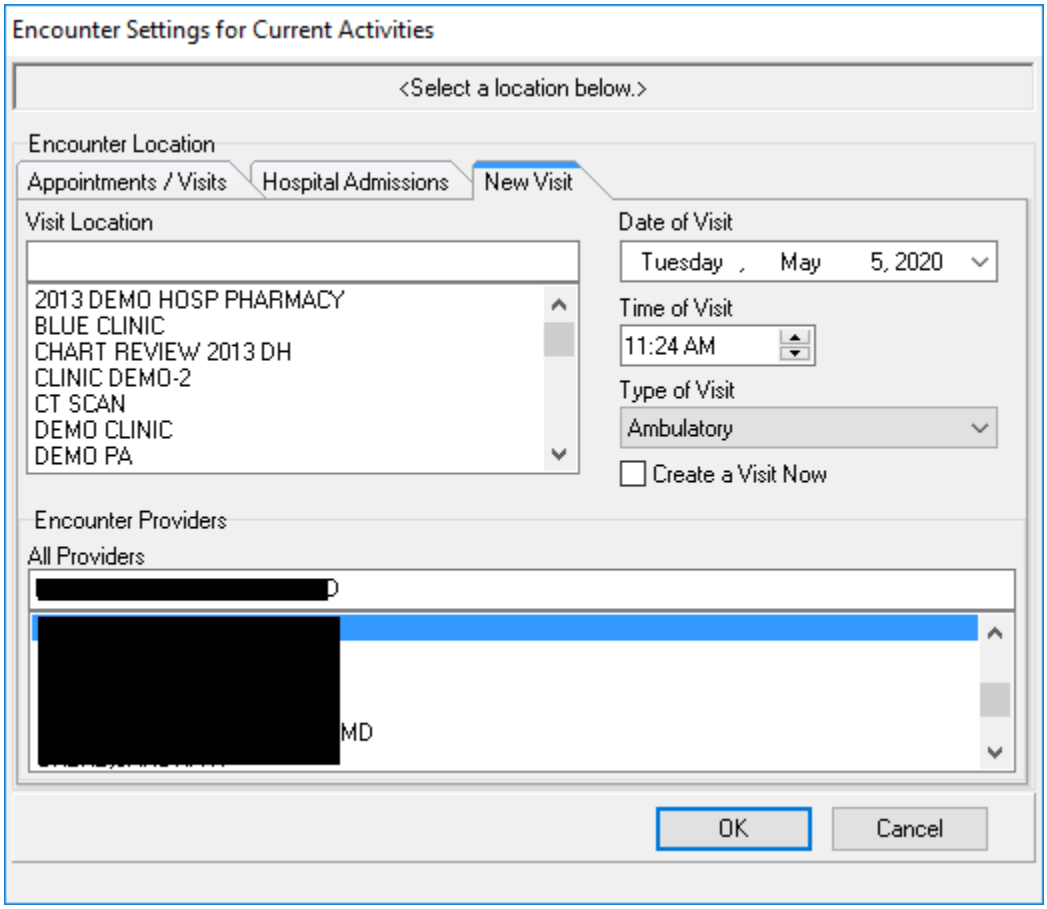

Figure 5-8: The Encounter Settings for Current Activities window

5.3 Select a Source

Select a source by either clicking on one or more CCDA documents, or by selecting one of the sources in the menu labeled **CCDA Source**. The items in this list are controlled by the parameter BEHOCIR SOURCES, but default to **Patient History**, **Caregiver**, and **Patient Medication List**. Other items may display if there are CCDA documents present.

After selecting a source, the user may begin to reconcile the problems, adverse reactions, and/or medications. If a CCDA document is selected, the problems, adverse reactions, and medications from that document populate the appropriate tab in the middle section. For the purposes of this manual, it will be assumed from here on that the user has selected a CCDA document.

The **Reconciled Problems** at the bottom will open and populate with the problems from the local RPMS database by default.

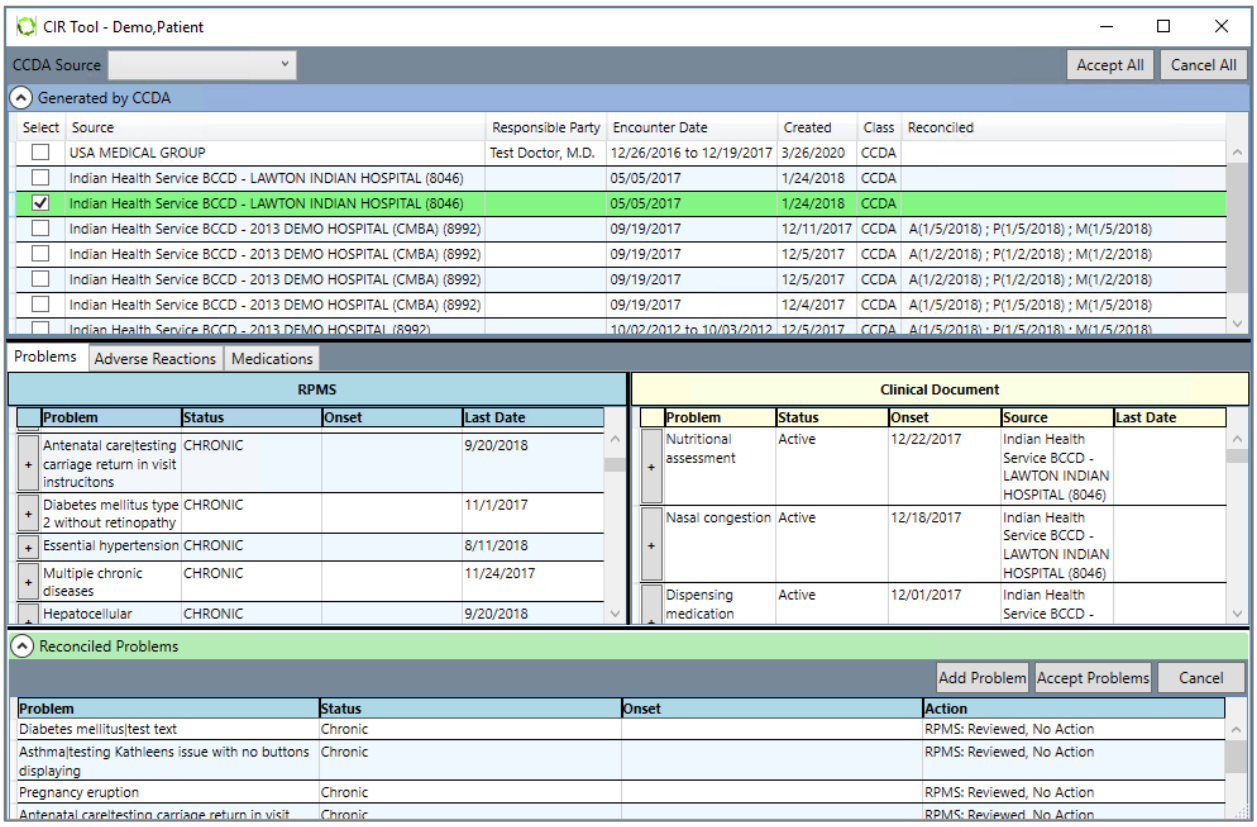

Figure 5-9: CIR Tool with CCDA document selected showing Problems reconciliation

5.4 Reconcile Problems

The middle section of the CIR Tool is where the information from the local RPMS database and the incoming information may be compared. In the left pane is the information from the local RPMS database. In the right pane is the information from the CCDA document.

Each pane may be sorted by any of the column headers. Click on the plus sign next to any given problem in either pane to see the details of the problem. Right-click a problem to see the context menu actions available. Context menu actions are described in the following sections.

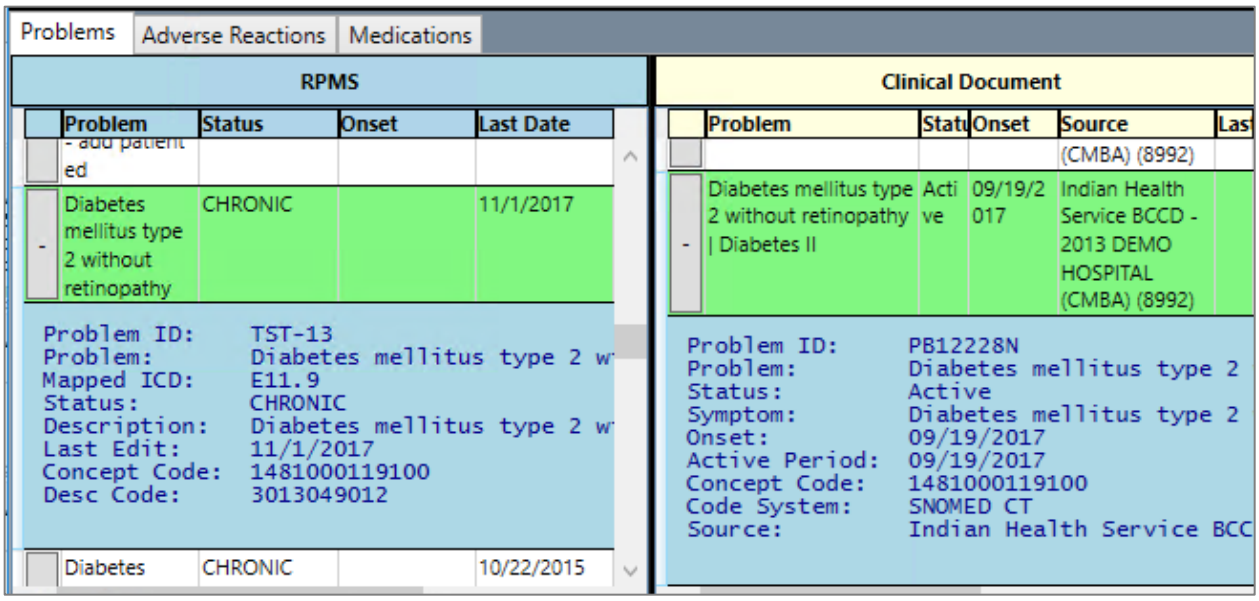

Figure 5-10: A portion of the CIR Tool with problem details

5.4.1 RPMS problems

For RPMS problems, context menu actions include **Change**; **Reviewed, No Action**; **View Details**; and **Entered In Error**.

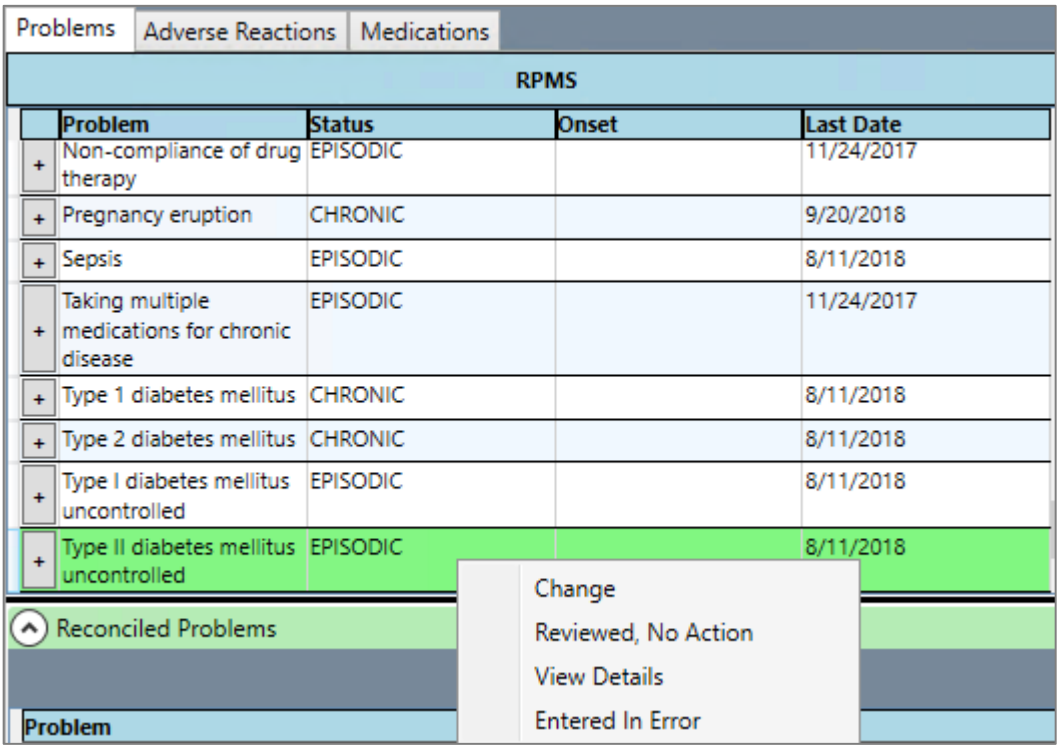

Figure 5-11: Context menu actions for RPMS problems

5.4.1.1 Change

Select **Change** to display the **Reconcile RPMS Problem** window (Figure 5-12). Here, users may edit the problem as needed.

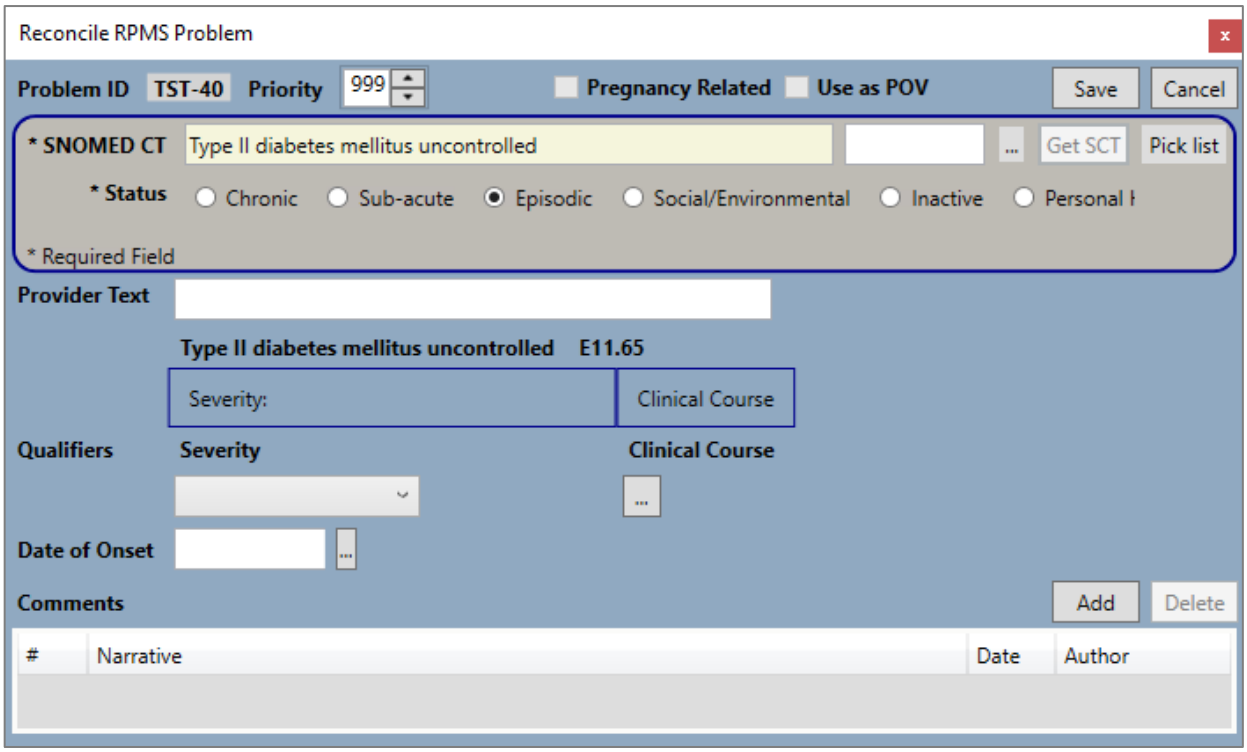

Figure 5-12: Reconcile RPMS Problems window

5.4.1.2 Reviewed, No Action

Select **Reviewed, No Action** to mark the item in the **Reconcile Problems** list. For ease of documentation, this action is the default for all RPMS problems. The user only needs to select this if some other action was selected first and the user wishes to go back to the **Reviewed, No Action** option.

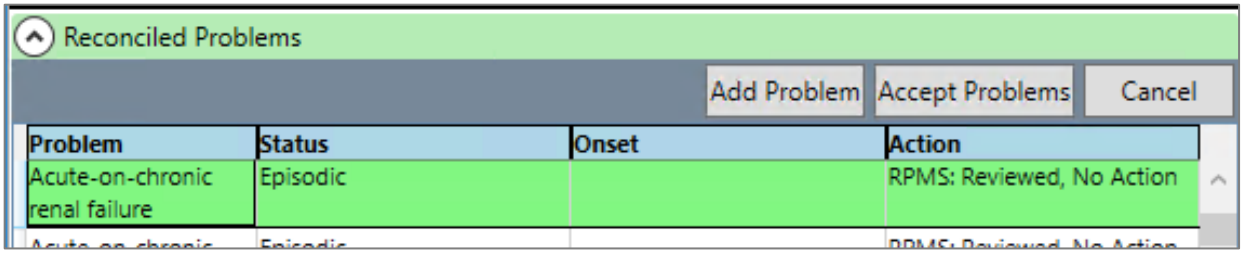

Figure 5-13: The Reconciled Problems section with action RPMS: Reviewed, No Action

5.4.1.3 View Details

Select **View Details** to display a new window where the problem details are listed. If there is a corresponding problem (matched by SNOMED CT Concept ID and/or by name) in the **Clinical Document** pane, the details for that problem will also display. The user may right-click on the problem to see all the same context menu actions as on the main window except **View Details**.

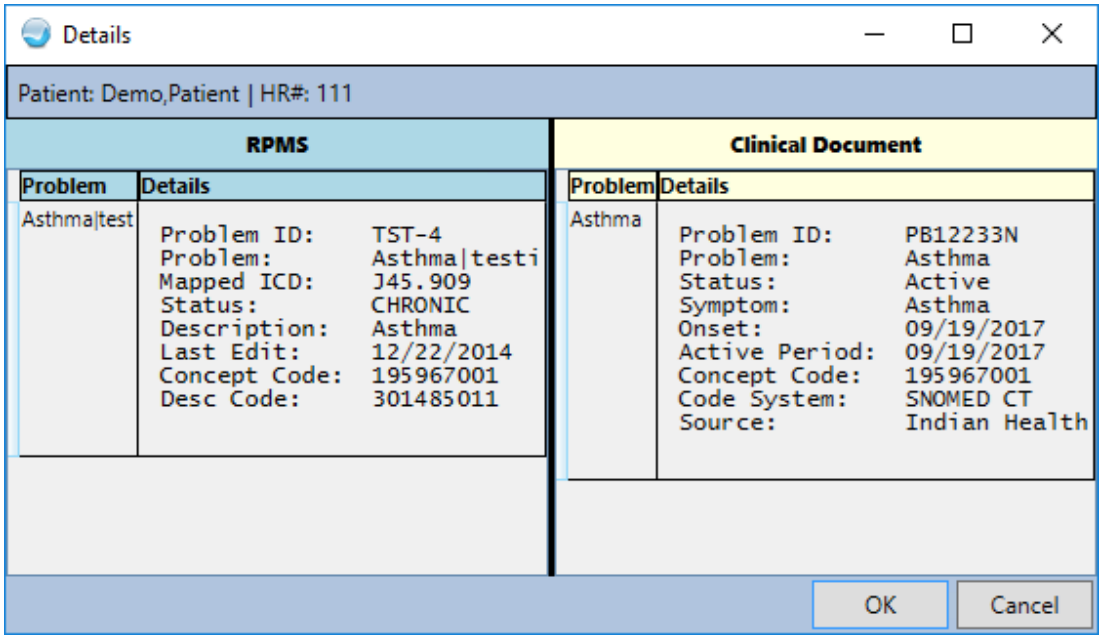

Figure 5-14: Details window with RPMS problem and corresponding Clinical Document problem

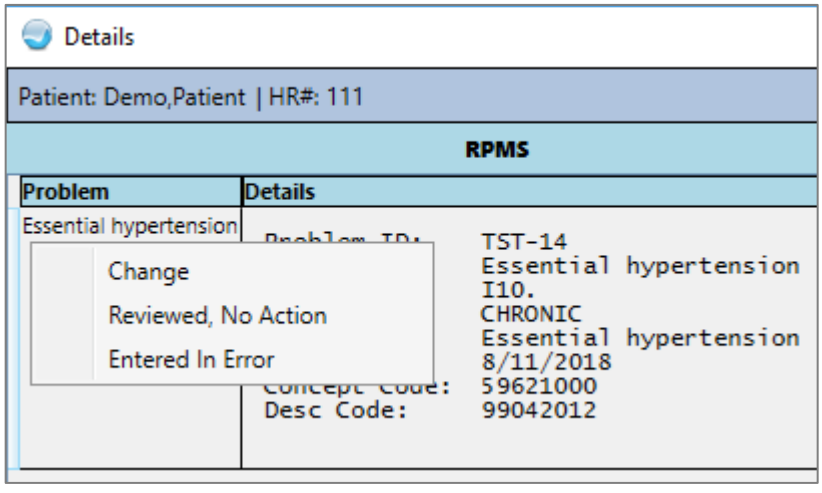

Figure 5-15: Context menu actions for RPMS problem details

5.4.1.4 Entered In Error

Select **Entered In Error** to open the **Delete RPMS Problem** window (Figure 5-16). The user may select the appropriate reason or type in another, then click **OK**. Note that problems may not be deleted if used for any visit as Purpose of Visit (POV), or they contain Visit Instructions, Care Planning, or goals.

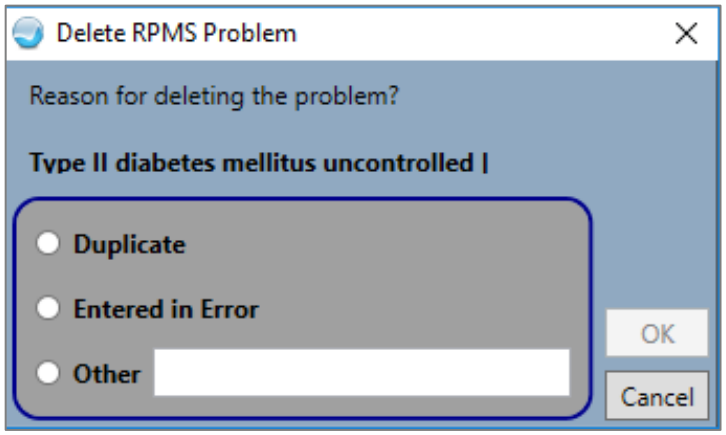

Figure 5-16: Delete RPMS Problem window

5.4.2 Clinical Document Problems

For Clinical Document problems, actions include **Add**; **Do Not Add, Redundant**; **Do Not Add, Not Clinically Significant**; and **View Details**.

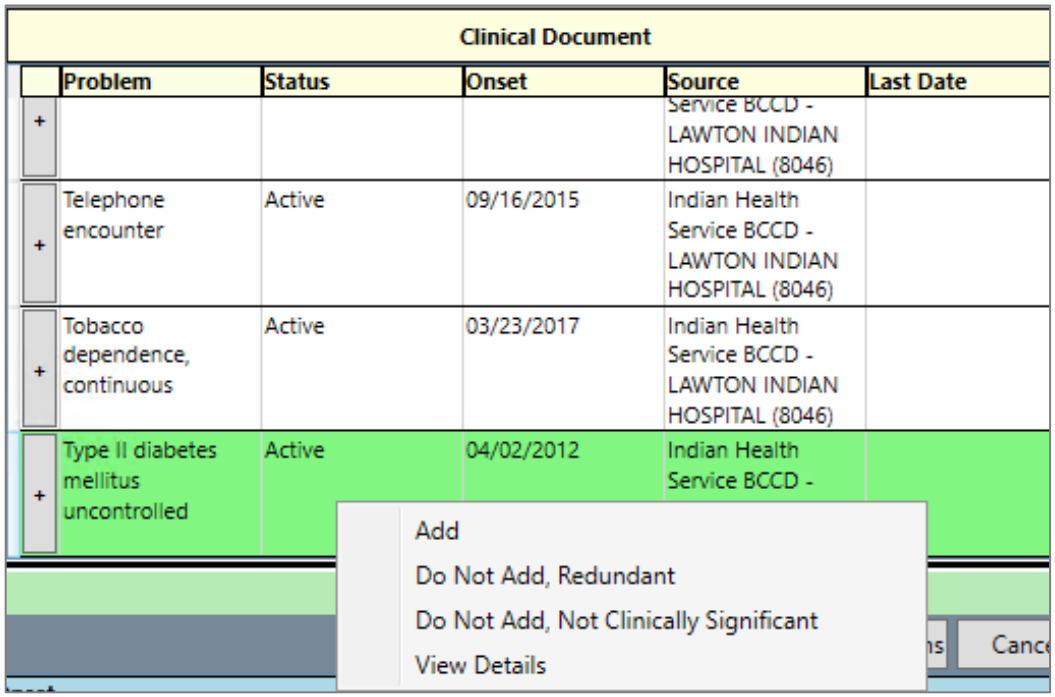

Figure 5-17: The CIR Tool with context menu actions for Clinical Document problems

5.4.2.1 Add

Select **Add** to open the **Add CCDA Problem** window (Figure 5-18). The user may fill in the appropriate fields and click **Add**.

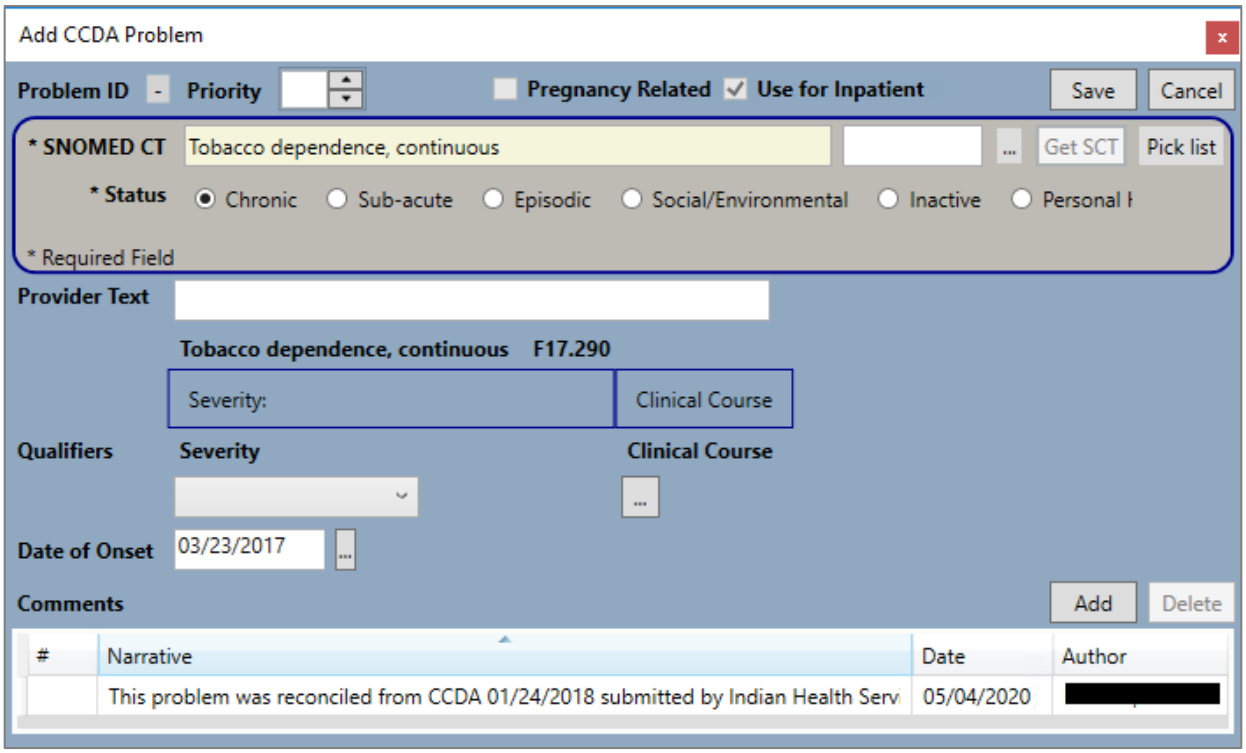

Figure 5-18: Add CCDA Problem window

If a problem with the same SNOMED CT concept ID is already present in RPMS, the error message shown in Figure 5-19 displays.

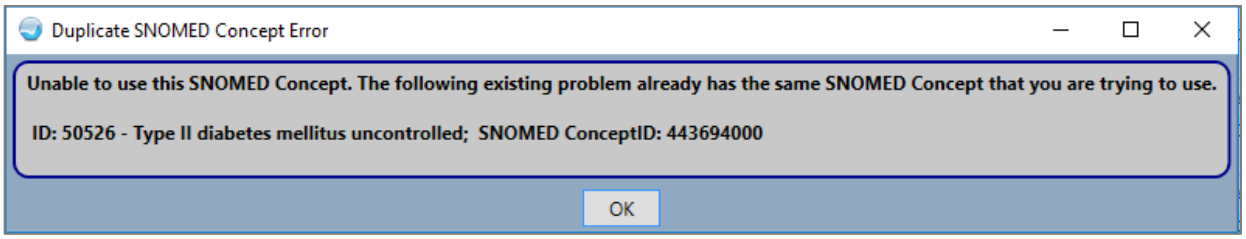

Figure 5-19: Duplicate SNOMED Concept Error window

5.4.2.2 Do Not Add, Redundant

Selecting the **Do Not Add, Redundant** option marks the problem in the Reconciled Problems at the bottom. Because "redundant" implies there is an existing RPMS entry, the item will most often have an RPMS action and a clinical document (CCDA) action listed.

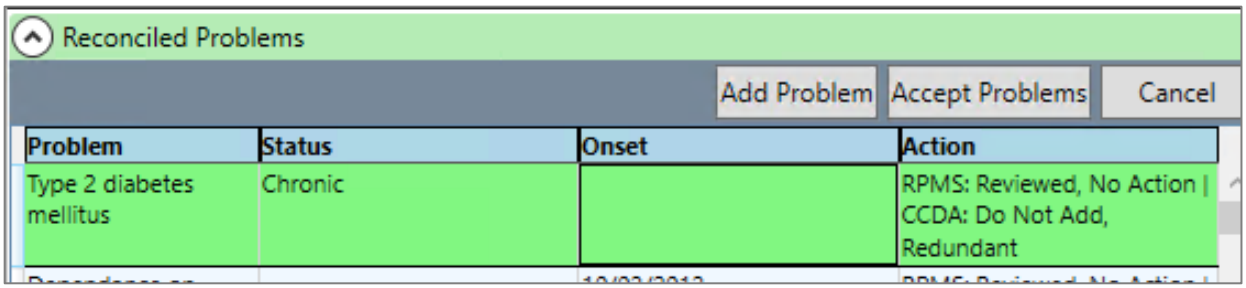

Figure 5-20: Reconciled Problems section with problem with CCDA action Do Not Add, Redundant

5.4.2.3 Do Not Add, Not Clinically Significant

Selecting the **Do Not Add, Not Clinically Significant** option marks the problem in the **Reconciled Problems** section at the bottom.

Figure 5-21: Reconciled Problems section with problem and the CCDA action Do not add, not clinically significant

5.4.2.4 View Details

Selecting the **View Details** option opens a new window where the problem details are listed (Figure 5-22). If there is a corresponding problem (matched by SNOMED CT Concept ID and/or by name) in the RPMS pane, the details for that problem will also display. The user may right-click on the problem to see all the same actions as on the main window except **View Details**.

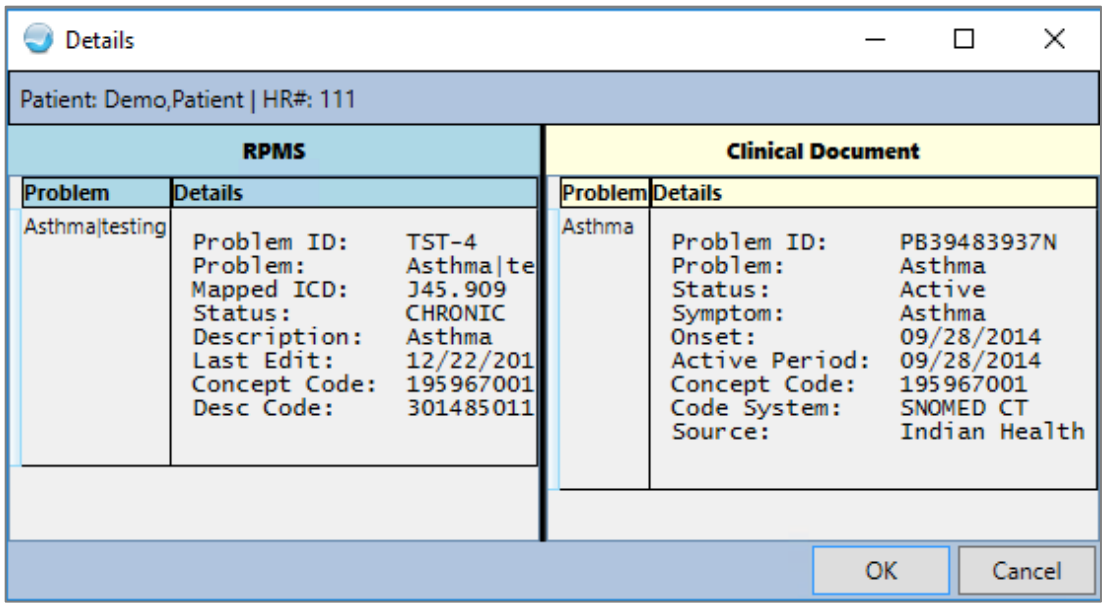

Figure 5-22: Details window for Clinical Document and corresponding RPMS problems

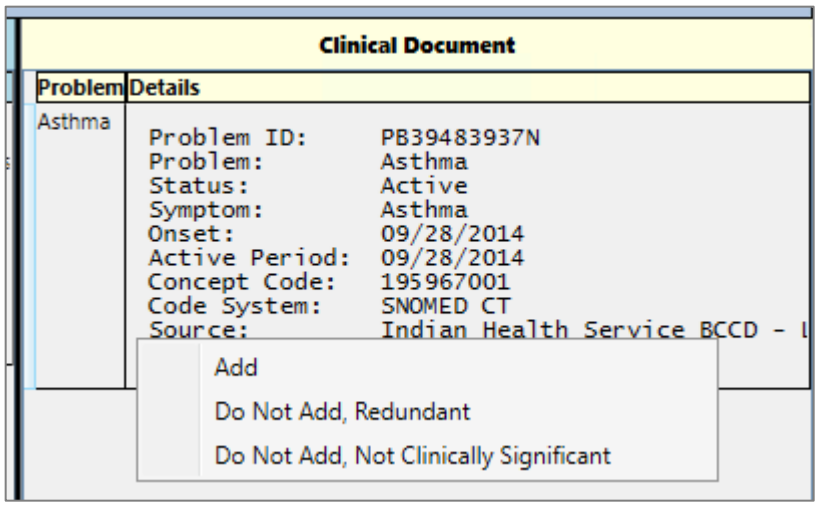

Figure 5-23: Context menu options for Clinical Document problem

5.4.3 Review the Reconciled Items

Once all the problems have been reconciled, you may review the items and the actions taken in the **Reconciled Problems** section at the bottom of the main **CIR Tool** window. Each item from RPMS and each item from the clinical document that had an action taken on it will be listed, along with the status and onset date.

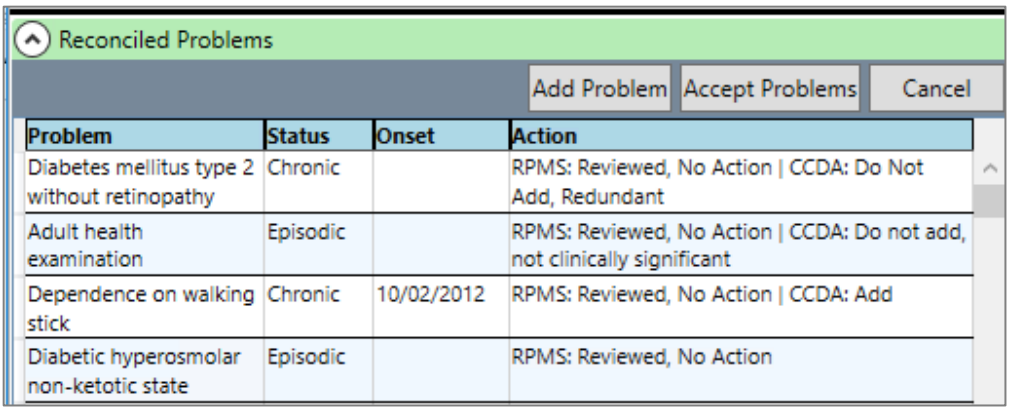

Figure 5-24: The Reconciled Problems section with actions taken on each item

5.4.3.1 Add Problem

If needed, you may add a completely new problem from this section by clicking the **Add Problem** button to open the **Add Problem** window (Figure 5-25). You may search for a SNOMED CT code and complete the remaining information as usual.

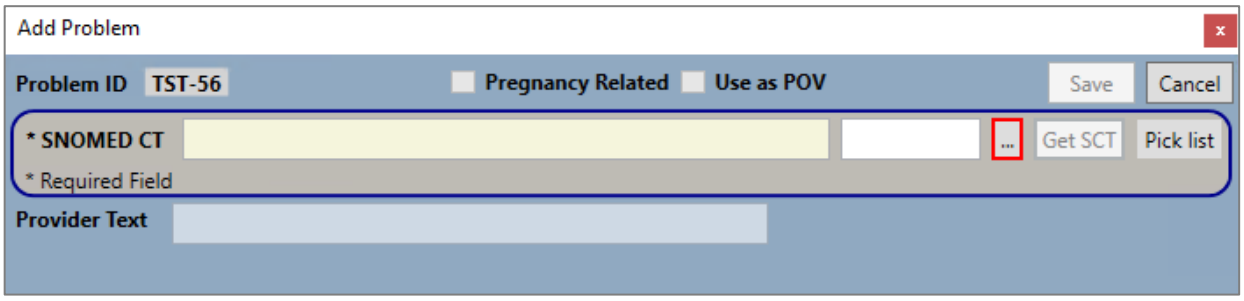

Figure 5-25: The CIR Tool Add Problem window

5.4.3.2 Accept Problems

Until the reconciled items are accepted, no changes are made to the record. To accept all the reconciled problem information and not the adverse reaction and medication information, click **Accept Problems**. This is generally only used if you are only reconciling problems.

If you reconciled other items, click the **Accept All** button (see Section 5.7). After selecting the Accept Problem button, the Review/Sign Changes window displays (Figure 5-26). The reconciled items will display along with any other items needing signature.

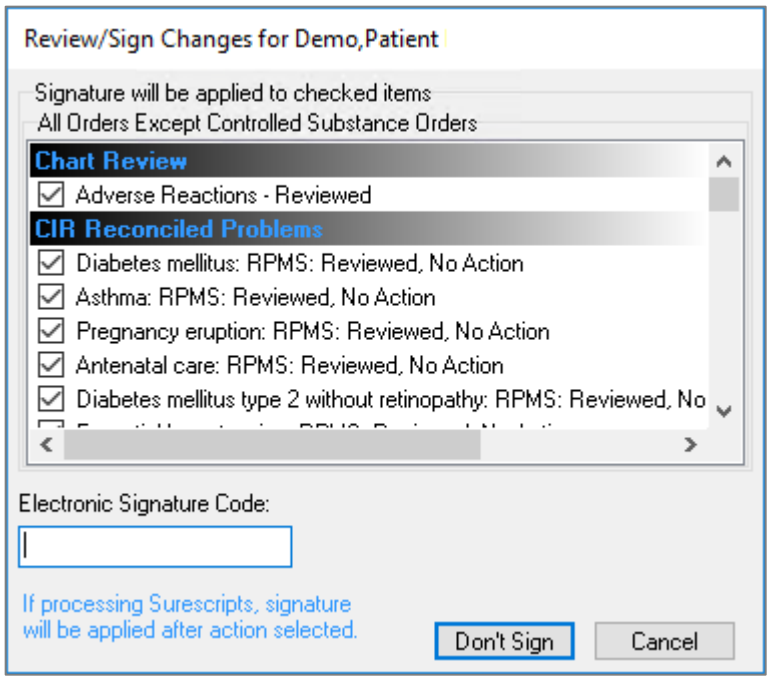

Figure 5-26: Review/Sign Changes for Reconciled Problems

The CIR Tool information for Problems will reset, and the CCDA document will reflect the reconciliation type and date.

5.4.3.3 Cancel

If you do not wish to complete the reconciliation, of if you wish to undo your changes, click the **Cancel** button. This will remove all of the previously selected actions for the Adverse Reactions.

5.5 Reconcile Adverse Reactions

Click on the **Adverse Reactions** tab to view the adverse reactions recorded in the RPMS Adverse Reactions package (and not reactions documented in the problem list) in the left pane, and any adverse reactions documented in the selected clinical document or documents in the right pane.

Each pane may be sorted by any of the column headers. Click on the plus sign next to any given reaction in either pane to view the details of the reaction. Right-click a reaction to see the context menu actions available. Context menu actions are described in the following sections.

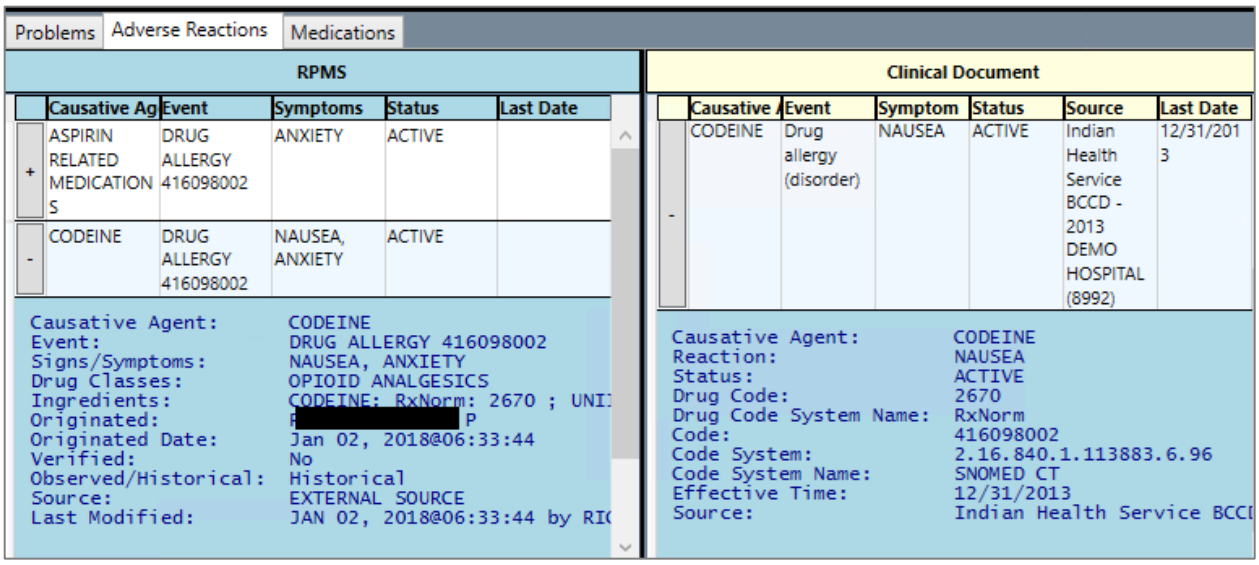

Figure 5-27: A portion of the CIR Tool is shown with adverse reaction details showing

5.5.1 RPMS Adverse Reactions

For RPMS Adverse Reactions, right-click actions include **Change**; **RPMS: Reviewed, No Action**; **Entered in Error**; **Inactivate**; and **View Details**.

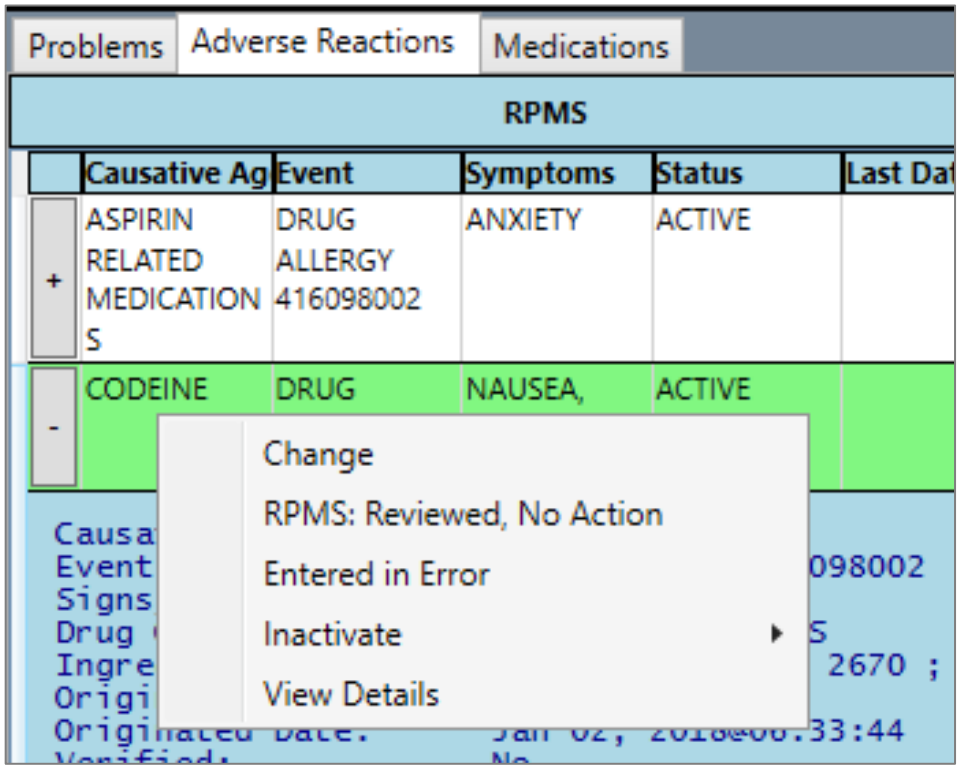

Figure 5-28: A portion of the CIR Tool with right click actions for RPMS adverse reactions

5.5.1.1 Change

Selecting the **Change** option opens the **Edit Adverse Reaction** window (Figure 5-29). In this window, you may change the event code, source of information, add signs/symptoms, add a source of a sign/symptom, and add comments. You may not change the causative agent, remove the originally documented signs/symptoms, or adjust the date/time of the original signs/symptoms.

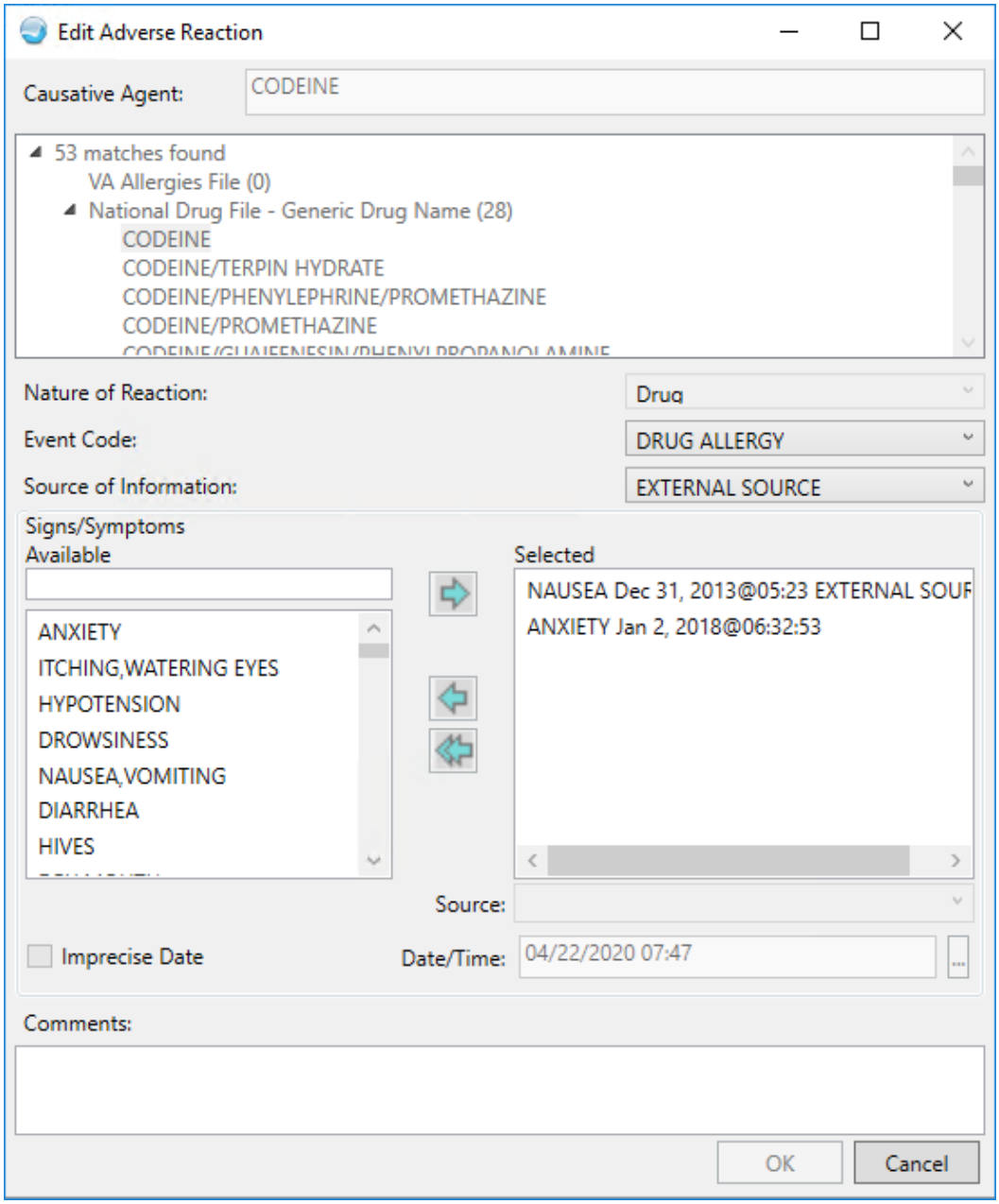

Figure 5-29: The Edit Adverse Reaction window of the CIR Tool

5.5.1.2 RPMS: Reviewed, No Action

Selecting the **RPMS: Reviewed, No Action** option marks the item in the **Reconciled Adverse Reactions** section at the bottom (Figure 5-30). For ease of documentation, this action is the default for all RPMS reactions, so the user only needs to select this if some other action was selected first and the user wishes to go back to the **RPMS: Reviewed, No Action** option.

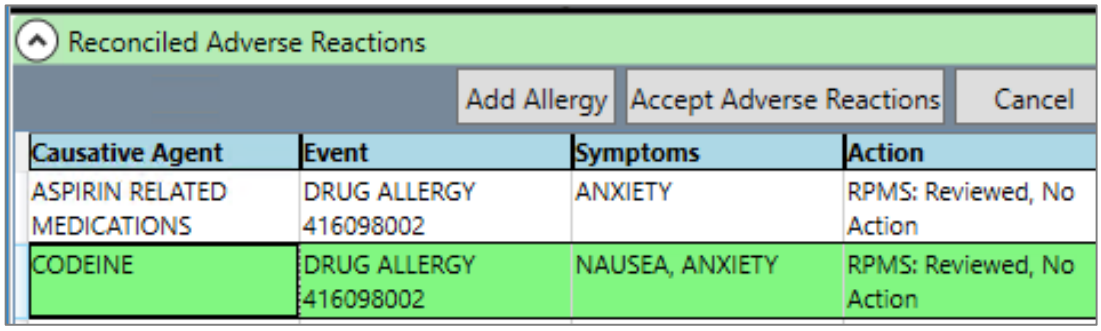

Figure 5-30: Reconciled Adverse Reactions in the CIR Tool with Codeine marked RPMS: Reviewed, No Action

5.5.1.3 Entered in Error

Selecting the **Entered in Error** option displays the **Entered in Error** window (Figure 5-31), which will logically delete the entry. The entry will still exist in the system but will be marked as entered in error, will not display in the patient chart, and will not be used in order checks.

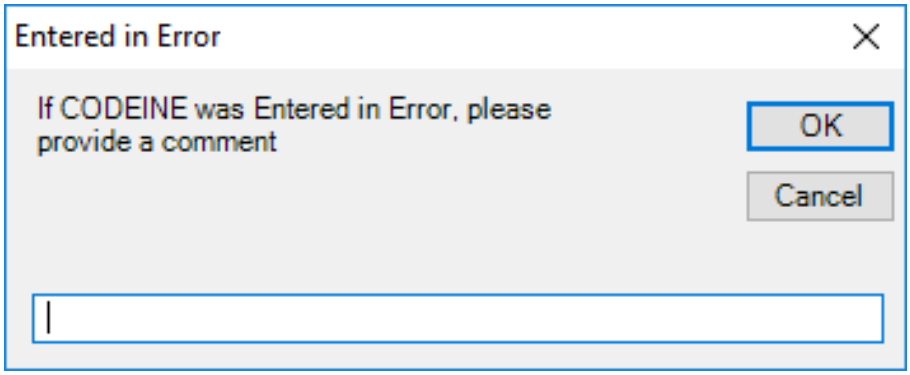

Figure 5-31: The Entered in Error window for the CIR Tool Adverse Reaction review

5.5.1.4 Inactivate

Selecting the Inactivate option opens the following secondary options: **No Longer Allergic** and **Reaction is Tolerable**. Selecting one of these options will mark the reaction as inactive with the selected reason. These reactions will be available to view in the record but will not be used in order checks.

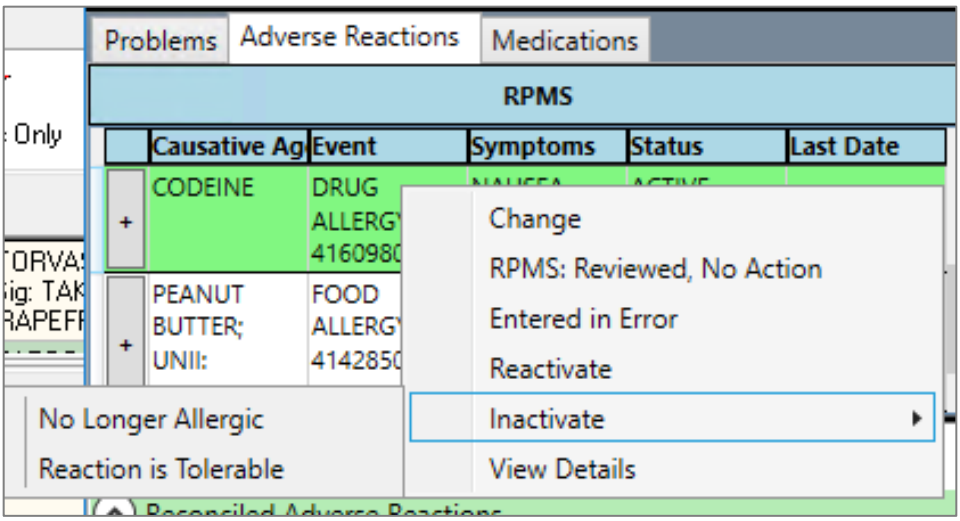

Figure 5-32: A portion of the CIR Tool window with the context menu for adverse reactions showing Inactivate option and secondary menu

5.5.1.5 View Details

Selecting the **View Details** option will display the same details as when using the plus sign, but in a new window. Additionally, if there is a matching reaction in the clinical document section, that reaction will also display with its details.

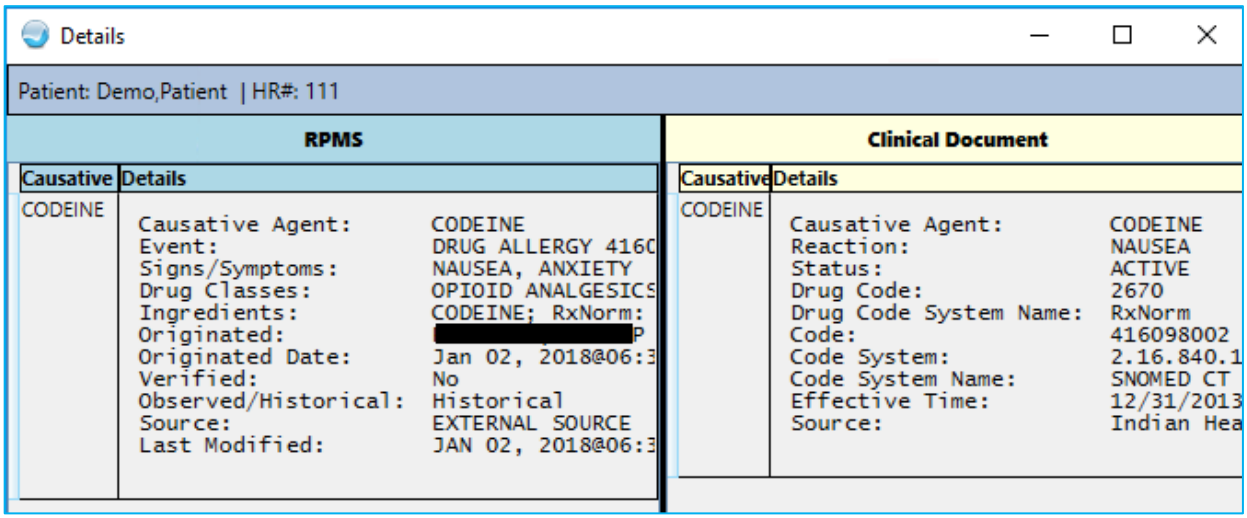

Figure 5-33: A portion of the Details window for Adverse Reactions in CIR Tool

Right-clicking on the reaction from the details window will give the same actions as are available on the main window, except for **View Details**.

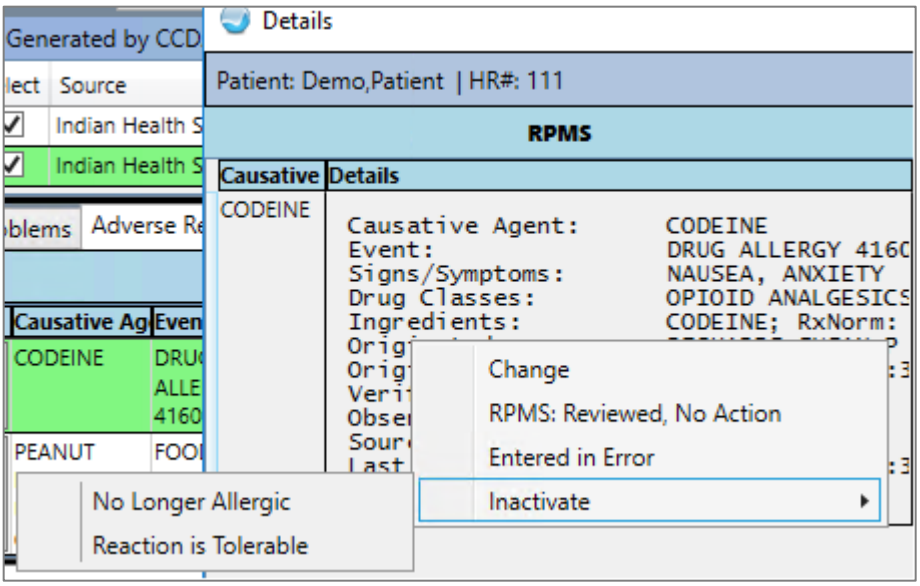

Figure 5-34: Context menu actions on adverse reaction Details window in CIR Tool

5.5.2 Clinical Document Adverse Reactions

For Clinical Document adverse reactions, context menu options include **Add**; **CCDA: Do not add, redundant**; **CCDA: Do not add, not clinically significant**; and **View Details**. See Figure 5-35.

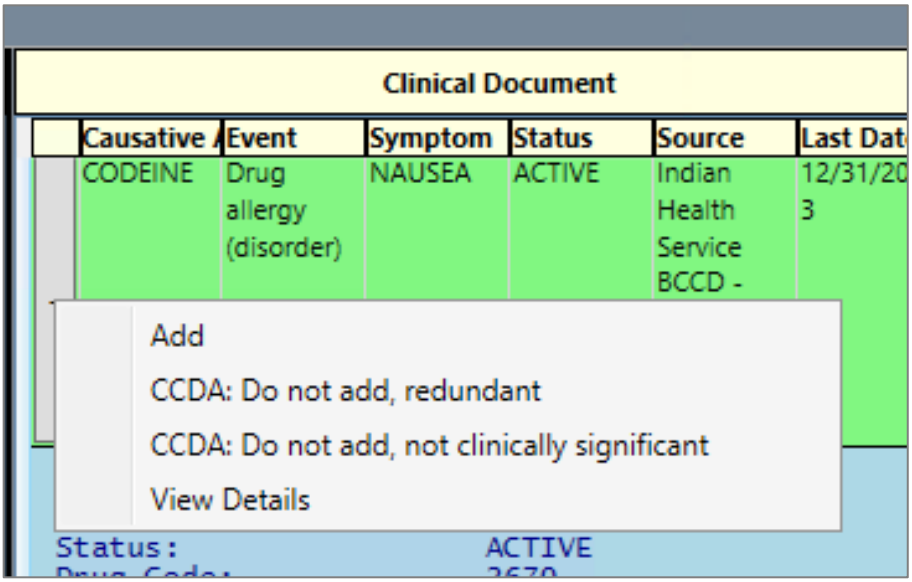

Figure 5-35: Context menu actions on adverse reaction Details window in CIR Tool

5.5.2.1 Add

Selecting **Add** displays the **Add Adverse Reaction** window (Figure 5-36). The information available from the clinical document will be prepopulated in the appropriate fields, with the source being documented as "external source." You may adjust the causative agent, and add or edit the **Event Code**, **Source of Information**, **Signs/Symptoms**, **Source**, and **Date/Time** fields. Comments may be added if needed.

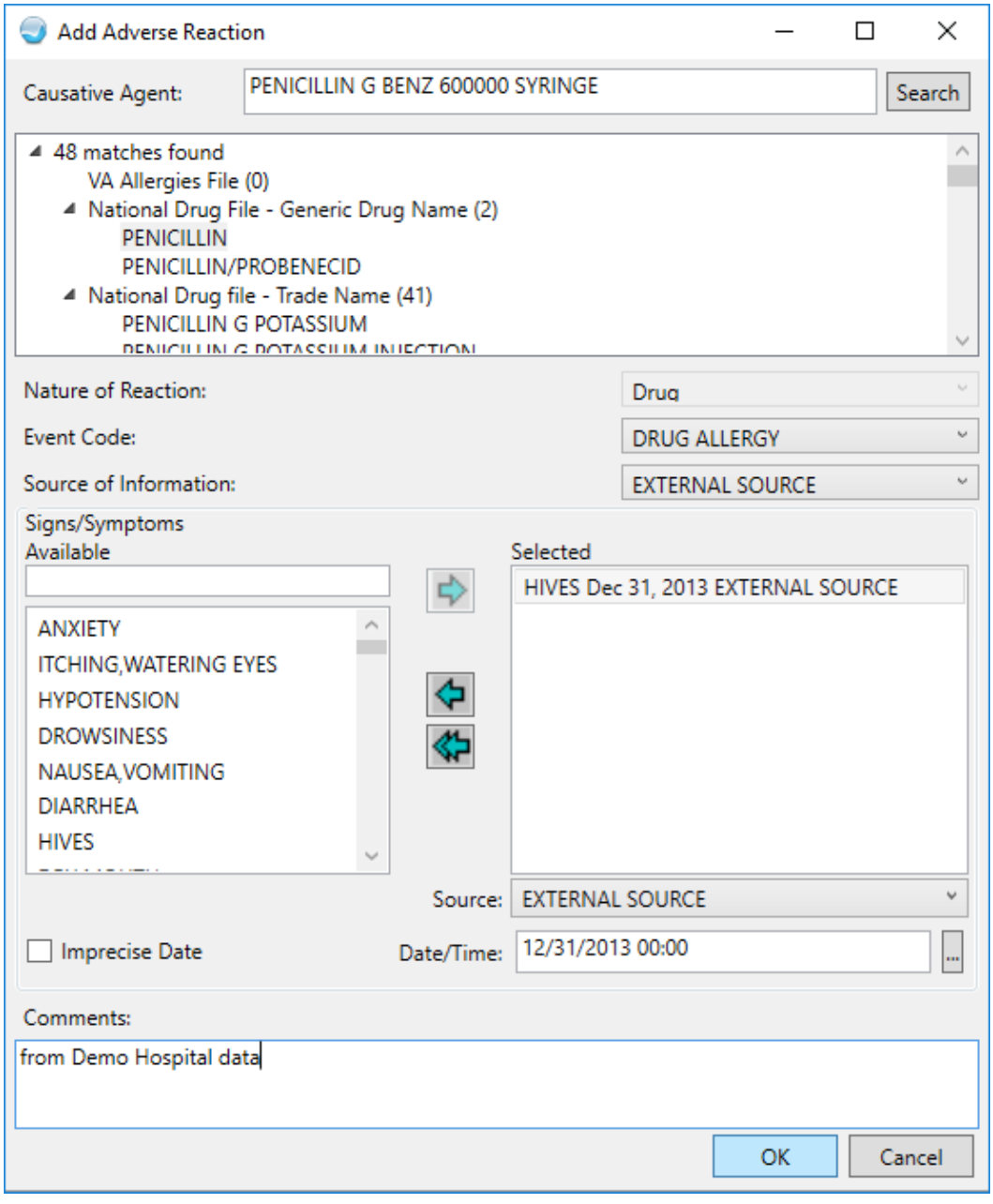

Figure 5-36: The Add Adverse Reaction window of the CIR Tool

5.5.2.2 CCDA: Do Not Add, Redundant

Selecting the **Do not add, redundant** option marks the reaction in the **Reconciled Adverse Reactions** at the bottom (Figure 5-37). Because "redundant" implies there is an existing RPMS entry, the item will most often have an RPMS action and a clinical document action listed.

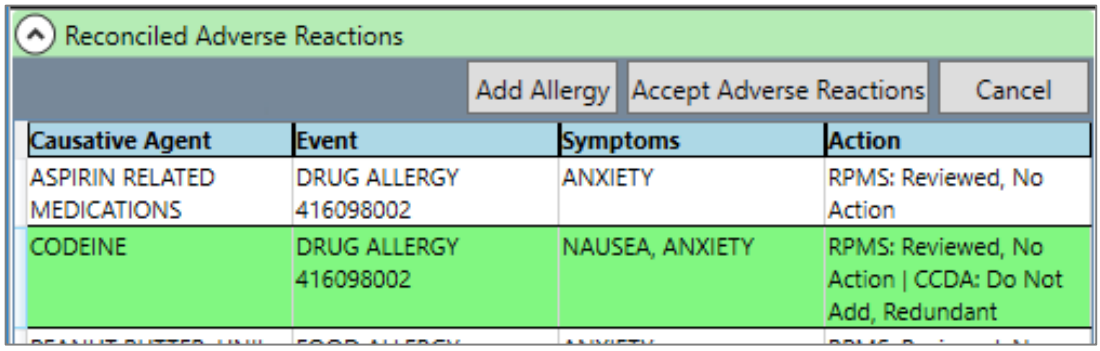

Figure 5-37: Reconciled Adverse Reactions section showing adverse reaction with action CCDA: Do not add, redundant

5.5.2.3 CCDA: Do Not Add, Not Clinically Significant

Selecting the **Do not add, not clinically significant** option marks the reaction in the Reconciled Adverse Reactions at the bottom. See Figure 5-38.

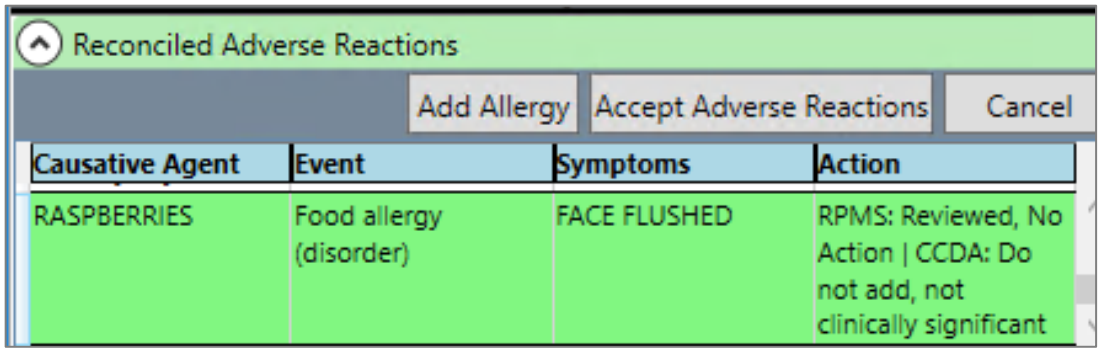

Figure 5-38: Reconciled Adverse Reactions section showing reaction with CCDA: Do not add, not clinically significant

5.5.2.4 View Details

Selecting the View Details option will display the same details as when using the plus sign, but in a new window (Figure 5-39). Additionally, if there is a matching reaction in the RPMS section, that reaction will also display with its details.

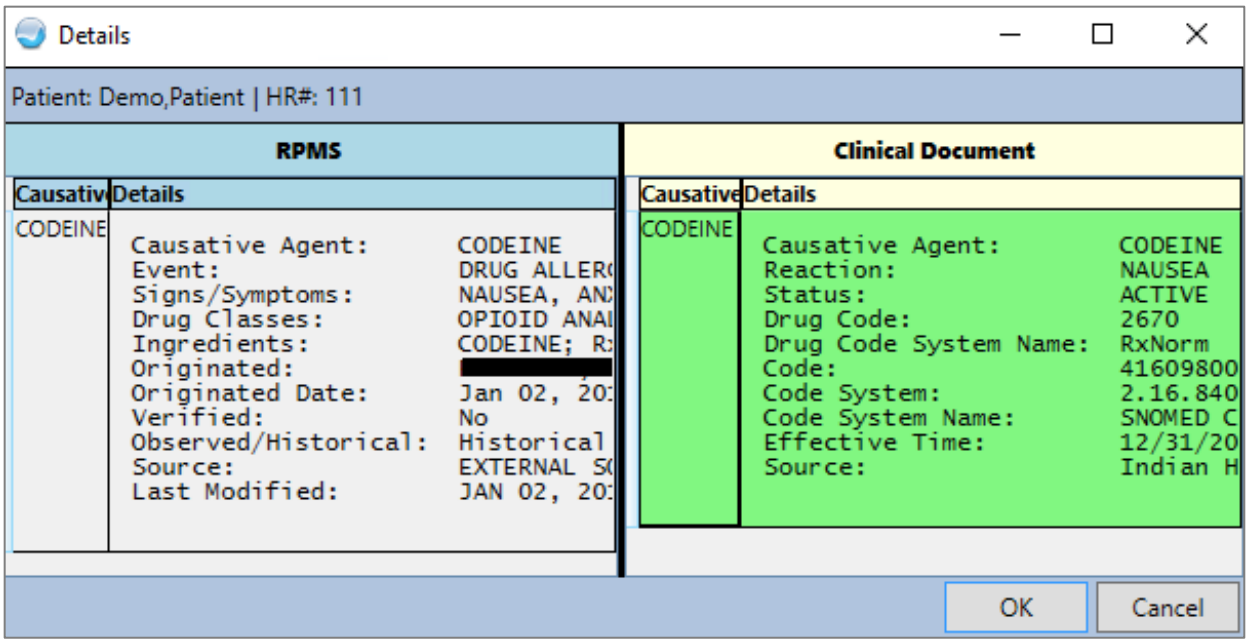

Figure 5-39: Details window for the CIR Tool Clinical Document adverse reaction and corresponding RPMS adverse reaction

Right-clicking on the reaction from the details window will give the same actions as are available on the main window, except for **View Details**.

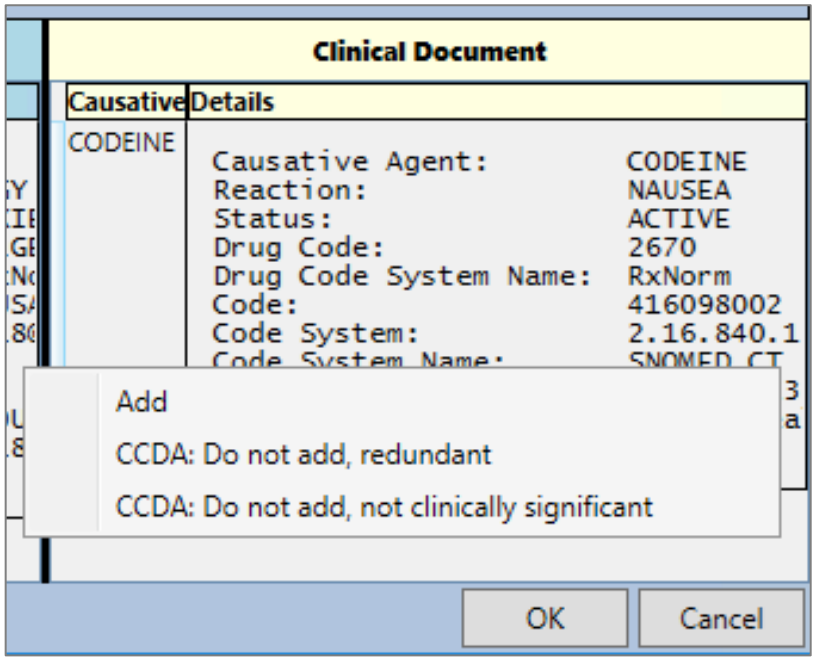

Figure 5-40: The context menu actions for the Clinical Document adverse reaction detail window

5.5.3 Review the Reconciled Items

Once all the adverse reactions are reconciled, you may review the items and the actions taken in the **Reconciled Adverse Reactions** section at the bottom of the main **CIR Tool** window. Each item from RPMS and each item from the clinical document that had an action taken on it will be listed, along with the Event type and Symptoms.

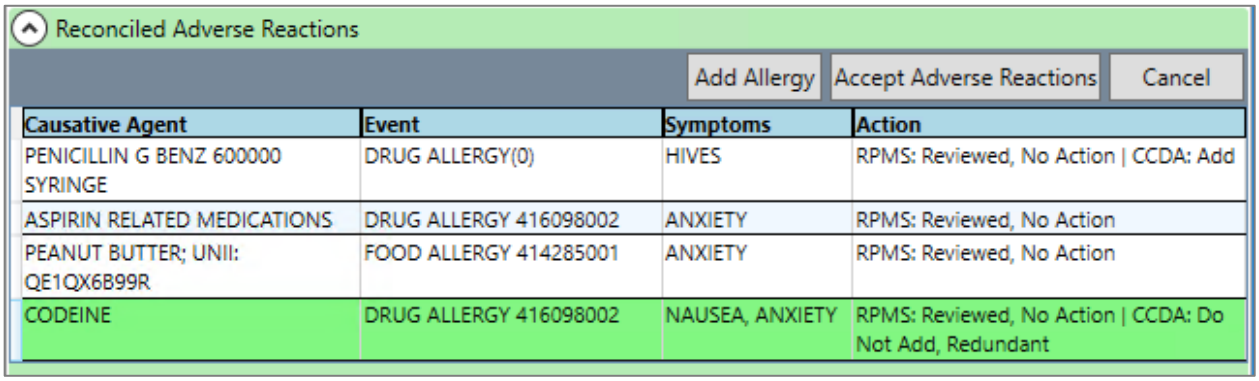

Figure 5-41: The Reconciled Adverse Reactions section of the CIR Tool with various actions

5.5.3.1 Add Allergy

If needed, you may add a completely new allergy from this section by clicking the **Add Allergy** button. Clicking this button opens the **Add Adverse Reaction** window (Figure 5-42). You may search for a Causative Agent and complete the remaining information as usual.

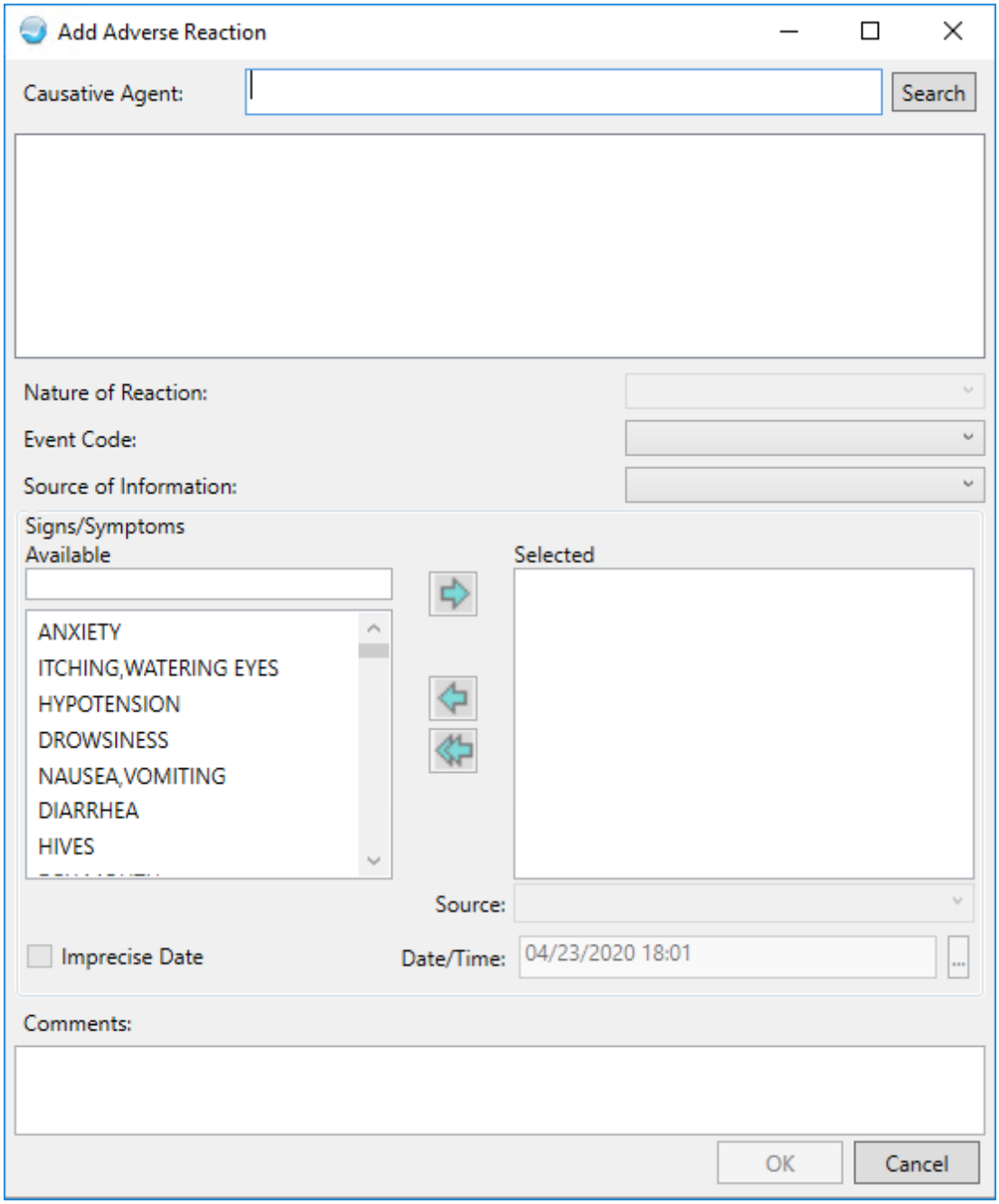

Figure 5-42: The CIR Tool Add Adverse Reaction window

5.5.3.2 Accept Adverse Reactions

Until the reconciled items are accepted, no changes are made to the record. To accept all the reconciled adverse reaction information and not the problem and medication information, click **Accept Adverse Reactions**. This is generally only used if you are only reconciling adverse reactions.

If you reconciled other items, click the **Accept All** button (see Section 5.7). After clicking the **Accept** button, the order check system will be invoked and will check the current medication list. See Figure 5-43.

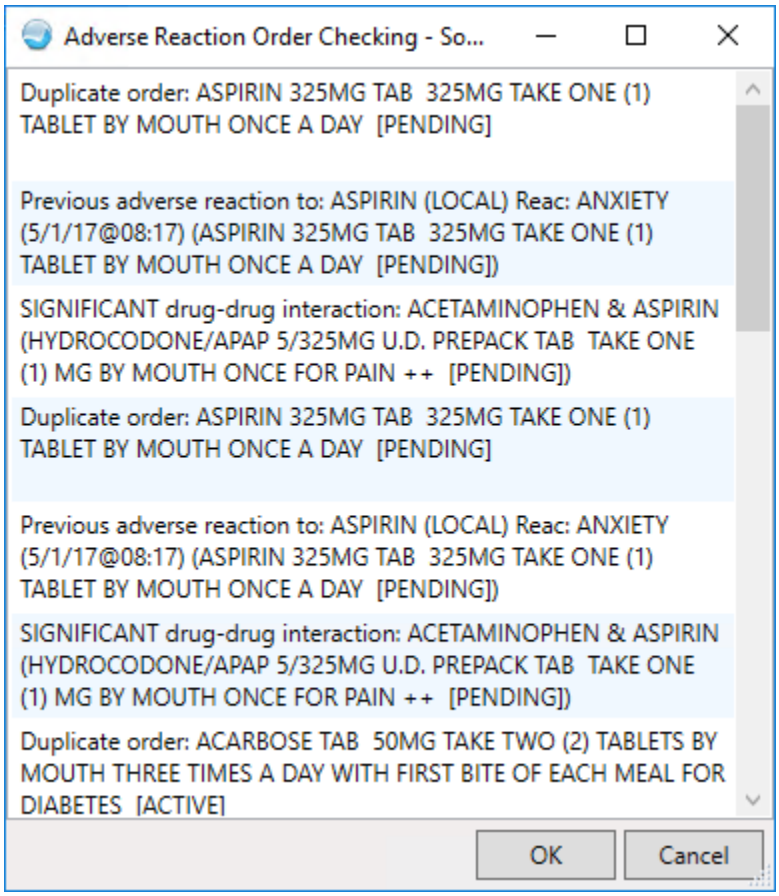

Figure 5-43: The Adverse Reaction Order Checking window

Click **OK**. The **Review/Sign Changes** window displays (Figure 5-44). The reconciled items will display along with any other items needing signature.

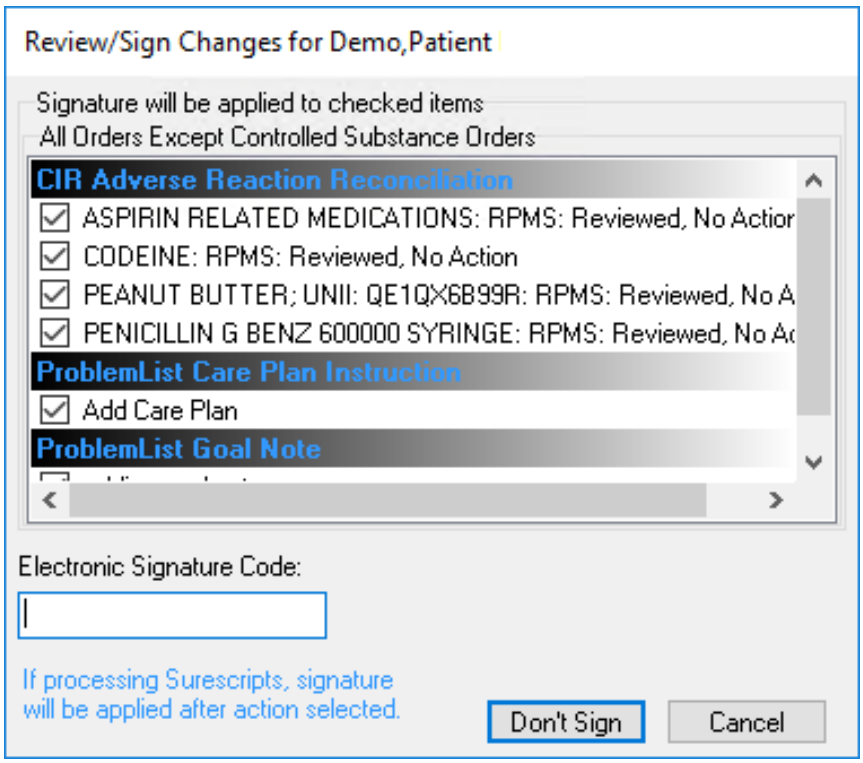

Figure 5-44: The Review/Sign Changes window with the CIR Adverse Reaction Reconciliation items

The CIR Tool information for Adverse Reactions will reset and the CCDA document will reflect the reconciliation type and date.

5.5.3.3 Cancel

If you do not wish to complete the reconciliation, of if you wish to undo your changes, click the **Cancel** button. This will remove all of the previously selected actions for the Adverse Reactions.

5.6 Reconcile Medications

Clicking the **Medications** tab will display the medications recorded in the RPMS Pharmacy package in the left pane, and any medications present in the selected clinical document or documents in the right pane.

Users can sort each pane by any of the column headers. Click the plus sign next to any given medication in either pane to view the medication details. Right-click a medication to see the context menu actions available. The context menu options are described in the following sections.

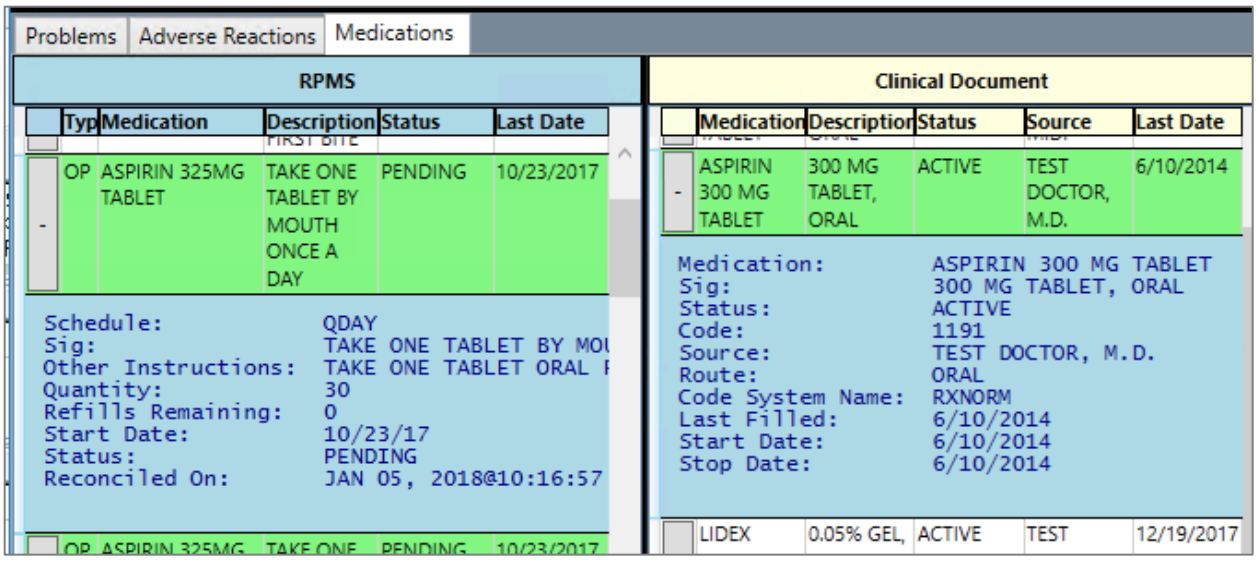

Figure 5-45: A portion of the CIR Tool is shown with medication details showing

5.6.1 RPMS Medications

For RPMS medications, context menu actions include **Change**; **Discontinue**; **Reviewed, No Action**; **Renew**; and **View Details**.

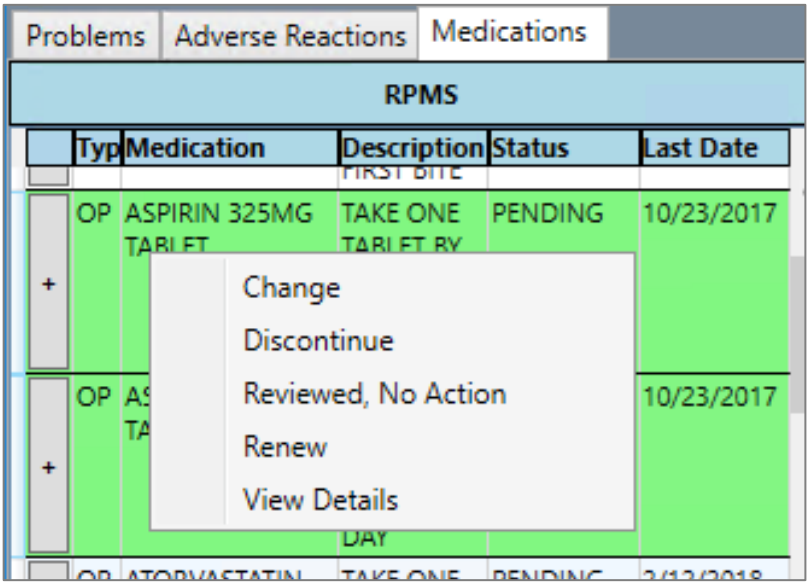

Figure 5-46: A portion of the CIR Tool with context menu actions for RPMS medications

5.6.1.1 Change

Selecting the **Change** option displays the **Edit Medication** window (Figure 5-47). In this window, you may change all fields except the medication.

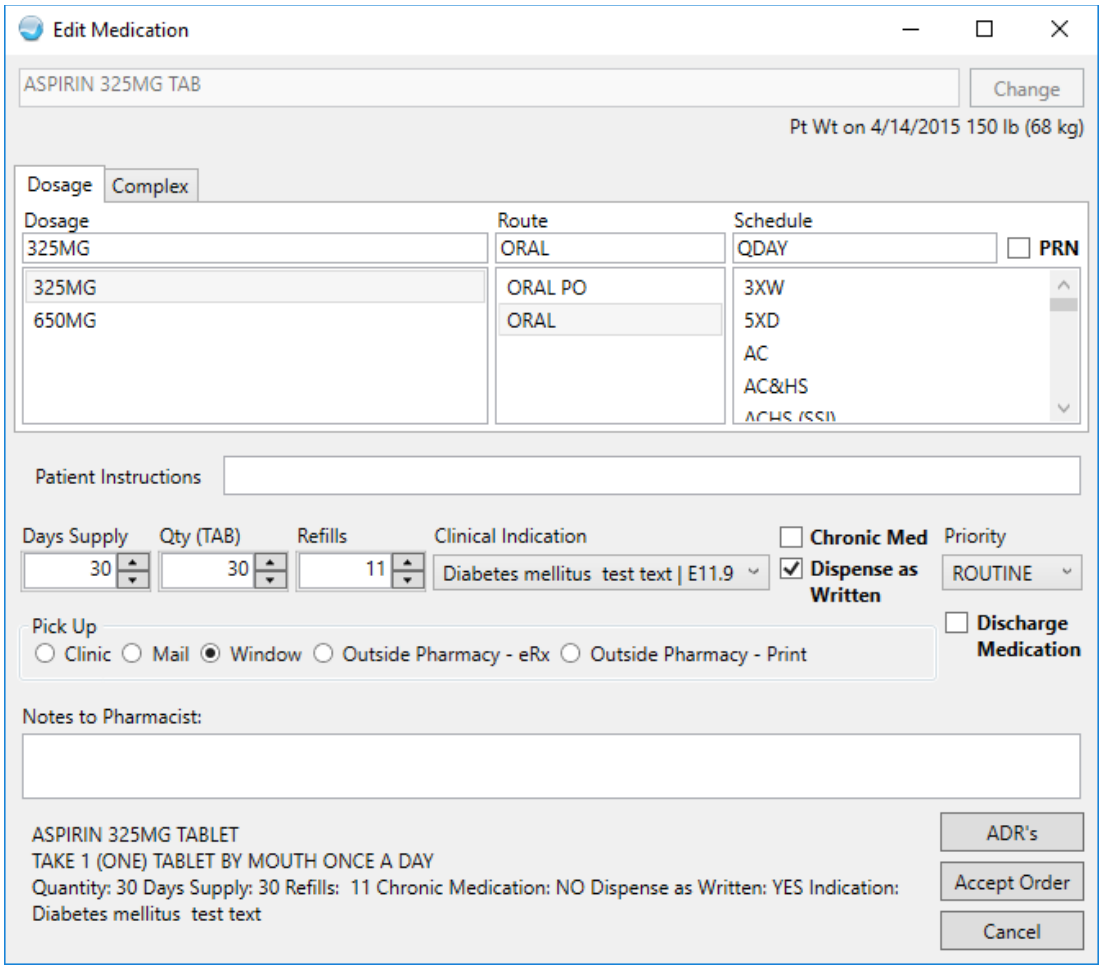

Figure 5-47: The CIR Tool Edit Medication window example with prepopulated information

5.6.1.2 Discontinue

Selecting **Discontinue** opens the **Discontinue / Cancel Orders** window. This window displays the selected order information at the top and potential reasons at the bottom. You may select an appropriate reason and the click **OK** to discontinue the order.

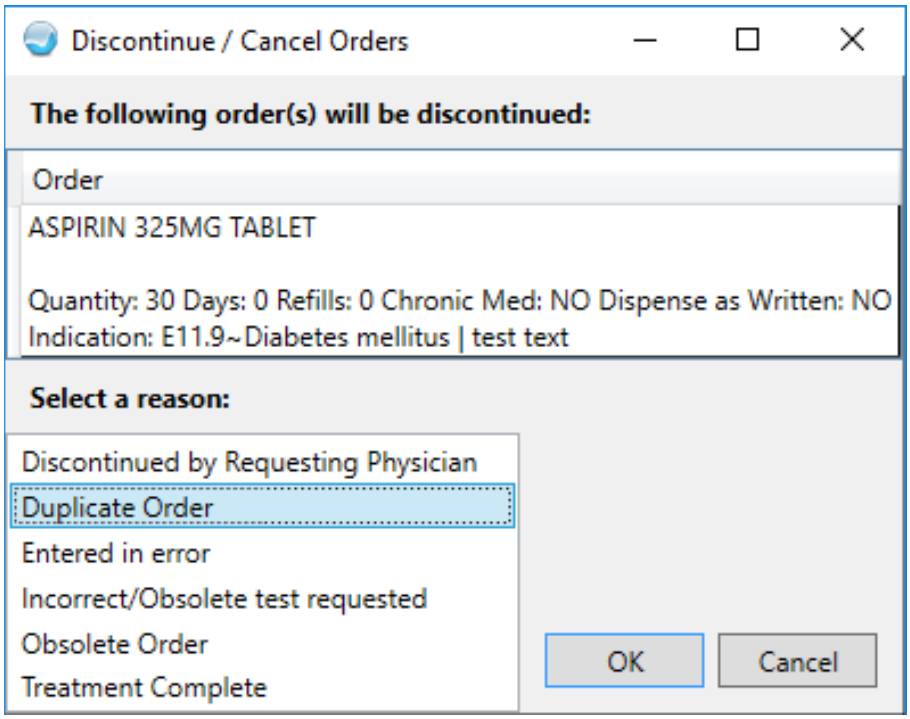

Figure 5-48: The CIR Tool Discontinue/Cancel Orders window with order details and reason

5.6.1.3 Reviewed, No Action

Selecting the **Reviewed, No Action** option marks the item in the **Reconciled** section at the bottom. For ease of documentation, this action is the default for all RPMS medications, so the user only needs to select this if some other action was selected first and the user wishes to go back to the **Reviewed, No Action** option.

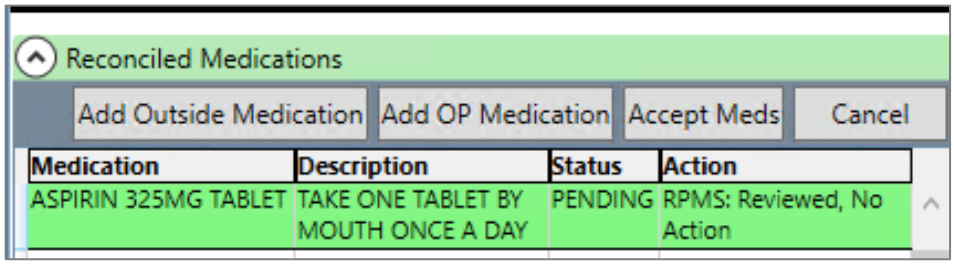

Figure 5-49: Reconciled Medications in the CIR Tool with Aspirin marked RPMS: Reviewed, No Action

5.6.1.4 Renew

> **Note:** The **Renew** function within the CIR Tool is currently experiencing a problem with accepting the order. This will be fixed in the next patch. For now, users should renew medication orders outside of the CIR Tool. The instructions below are presented for future reference.

Selecting the **Renew** option opens the **Order Details** window where the user can review the order and select a value for the **Clinical Indication** field.

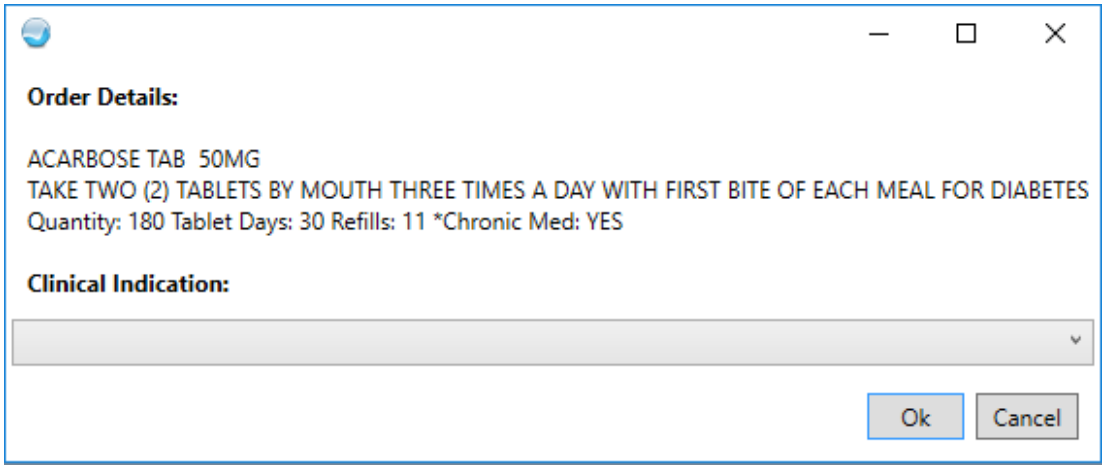

Figure 5-50: The Order Details with the Clinical Indication menu

Once the user selects a value for the **Clinical Indication** field, the **Renew Order** window displays. You may adjust the number of refills and pick up location within limits but may not edit any other field using the renew function.

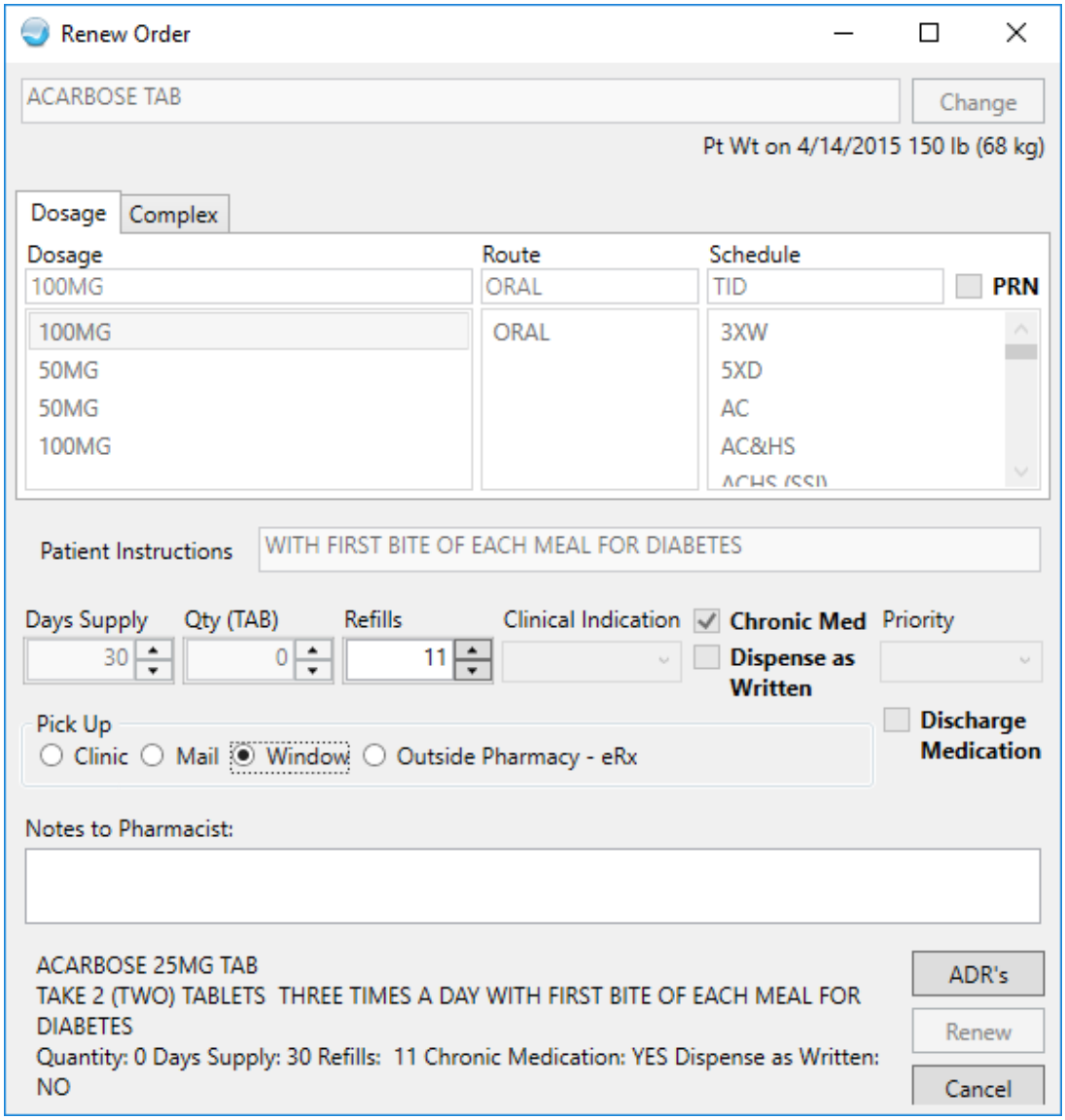

Figure 5-51: The CIR Tool Renew Order window with the Refills and Pick Up active

5.6.1.5 View Details

Selecting **View Details** will display the same details as when using the plus sign, but in a new window. Additionally, if there is a matching medication in the clinical document section, that medication will also display with its details.

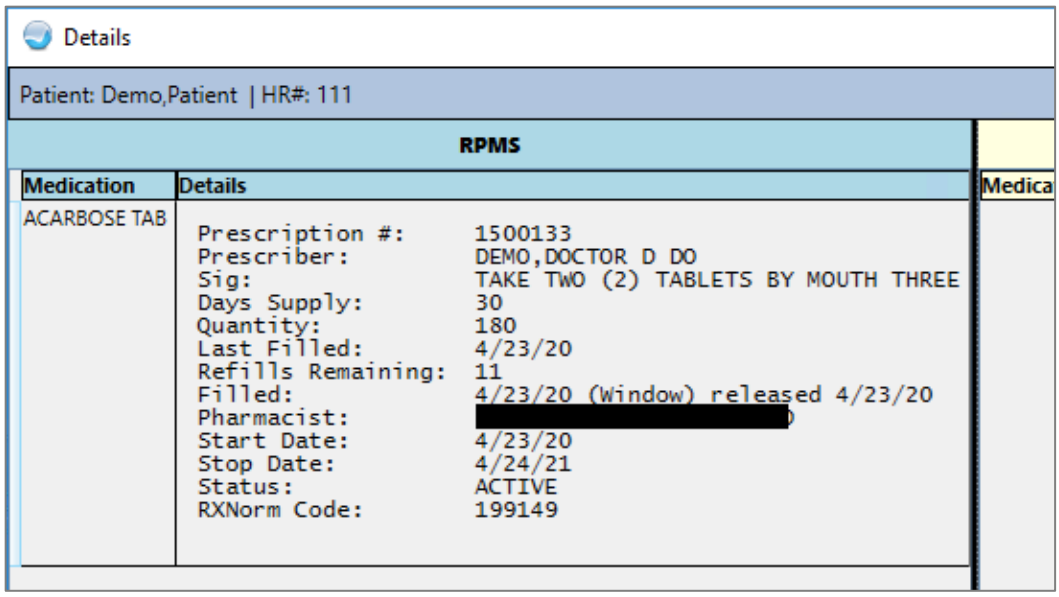

Figure 5-52: A portion of the Details window for medications in CIR Tool

Right-clicking on the medication from the details window will give the same actions as are available on the main window, except for **View Details**.

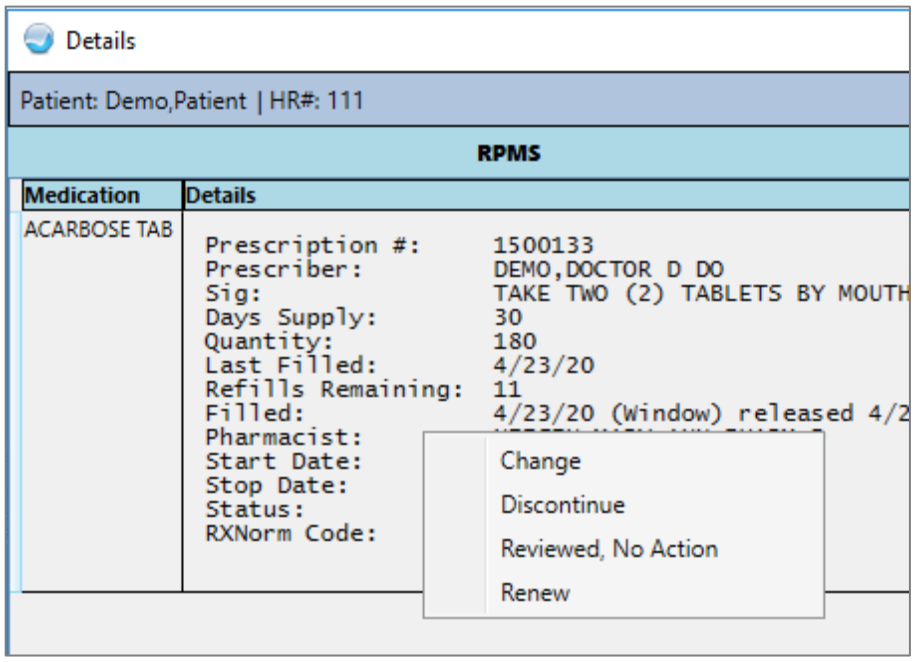

Figure 5-53: Context menu actions on medication Details window in CIR Tool

5.6.2 Clinical Document Medications

For Clinical Document medications, context menu actions include **Add Outside**; **Add OP**; **Do Not Add, Discontinued**; **Do Not Add, Redundant**; and **View Details**.

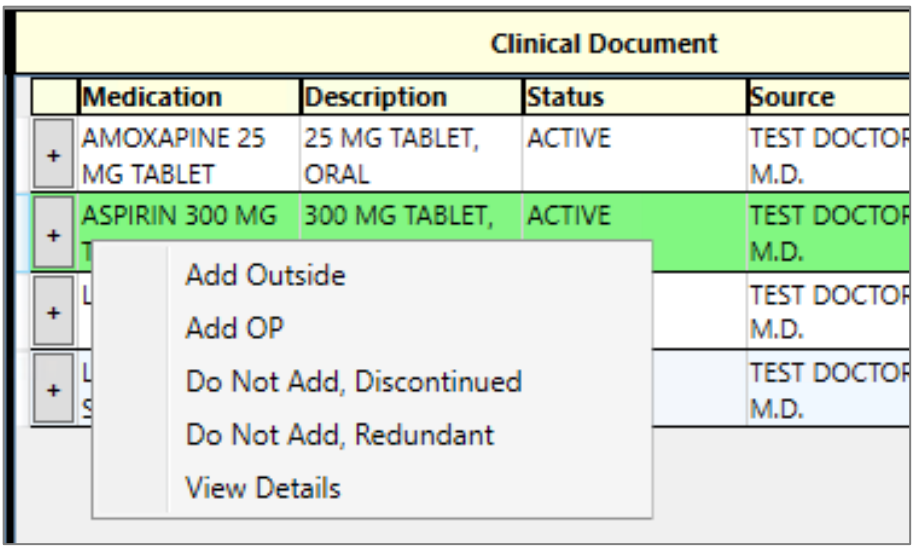

Figure 5-54: Context menu actions for Clinical Document medications

5.6.2.1 Add Outside

Selecting **Add Outside** opens the **Add Non-VA Medication** window. This will document the medication in the medication management component of the EHR but will not create an order to be filled by a pharmacy. Only the medication is required here, but you should add as much detail as is available.

If the **Accept Order** button is not active, you may need to change the medication. The initial search will use the exact term used in the clinical document, but this is often too precise for the RPMS look-up function. Searching for a more general term is usually more successful. For example, if the clinical document lists a medication as Aspirin 300 mg tablet, and only the 325 mg tablet is available in the local system, you may need to just search for "Aspirin" to find the correct item.

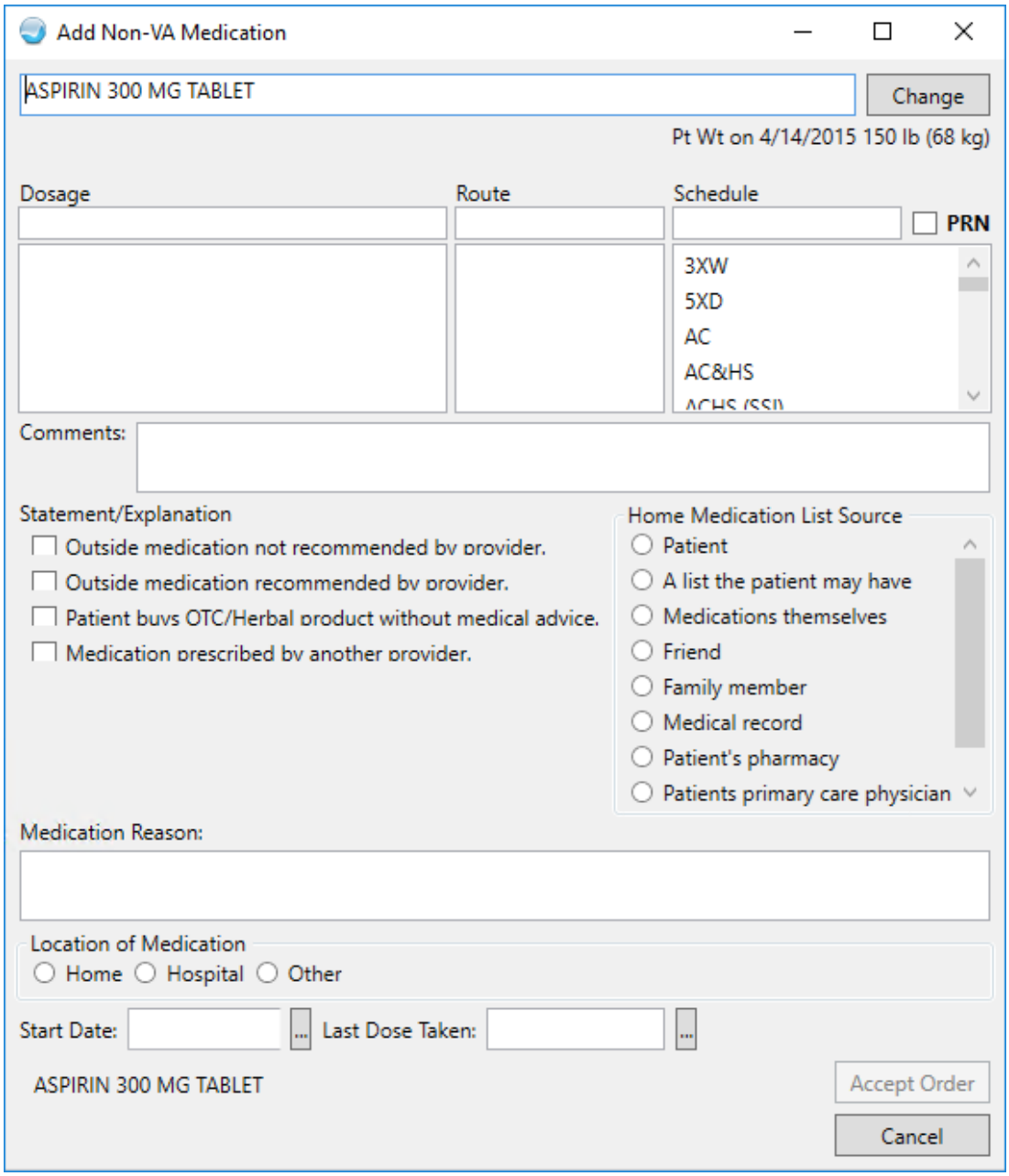

Figure 5-55: The CIR Tool Add Non-VA Medication window

5.6.2.2 Add OP

Selecting **Add OP** opens the **Add Outpatient Medication** window. The order must be completed in the same way an order would be completed outside the CIR Tool.

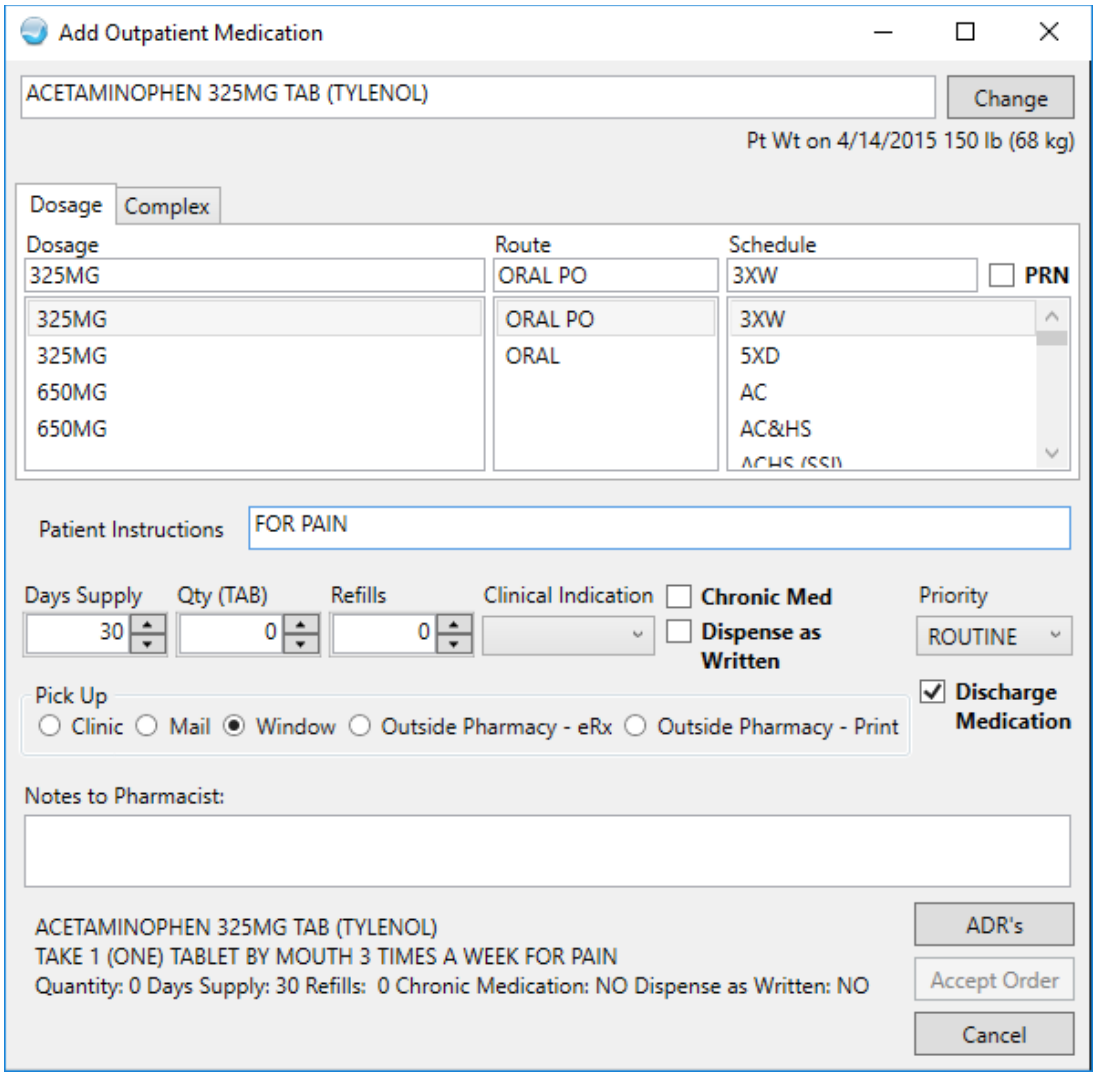

Figure 5-56: The CIR Tool Add Outpatient Medication window

If the medication cannot be appropriately matched to an existing entry in the local system, the **Select Medication** warning will display, followed by the **Search Medications** window.

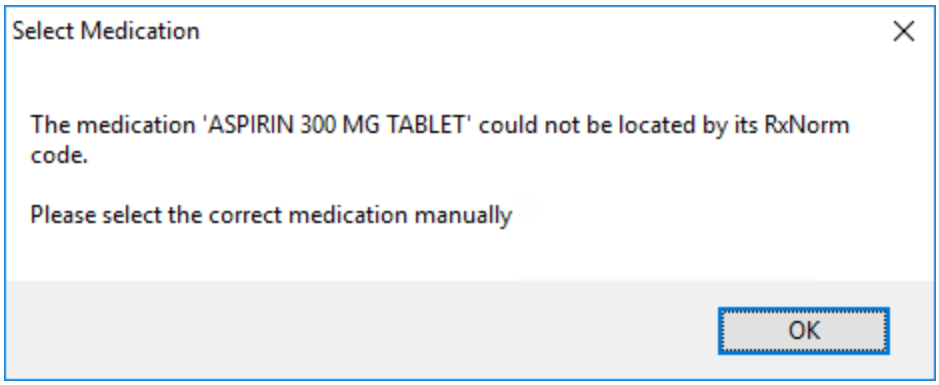

Figure 5-57: The CIR Tool Select Medication window

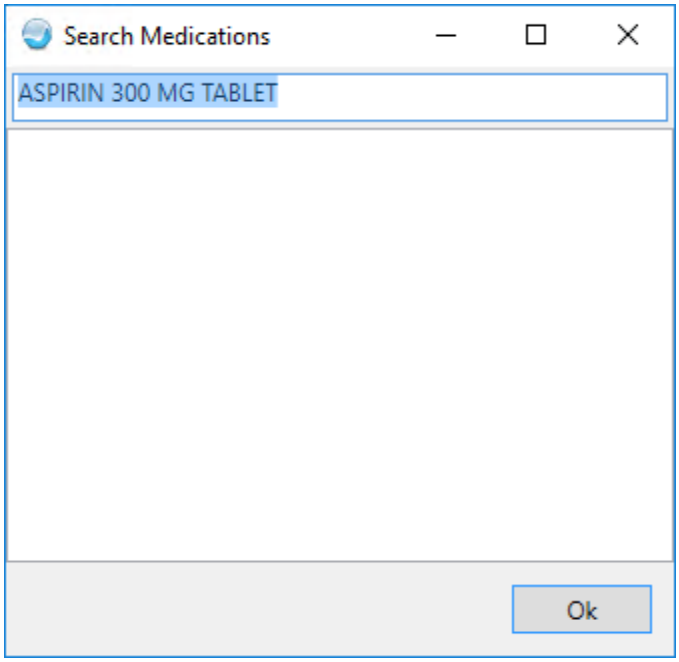

Figure 5-58: The CIR Tool Search Medications window

5.6.2.3 Do Not Add, Discontinued

Selecting the **Do Not Add, Discontinued** option marks the medication in the **Reconciled Medications** section at the bottom.

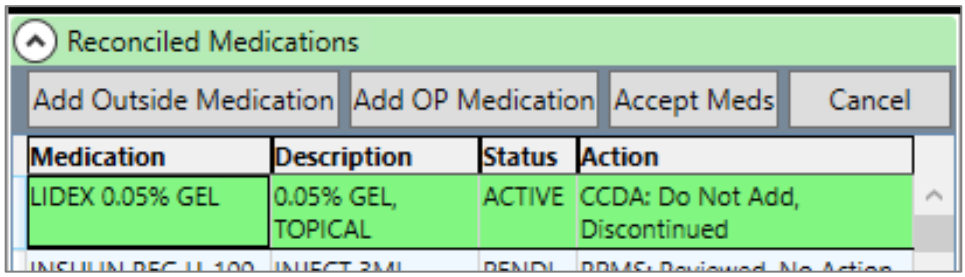

Figure 5-59: Reconciled Medications section with CCDA: Do Not Add, Discontinued

5.6.2.4 Do Not Add, Redundant

Selecting the **Do Not Add, Redundant** option marks the medication in the **Reconciled Medications** section at the bottom.

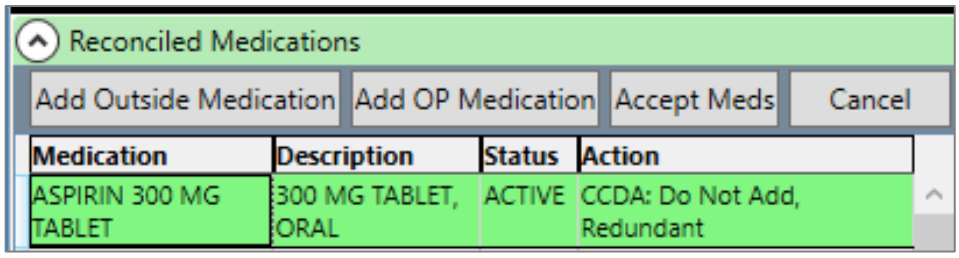

Figure 5-60: Reconciled Medications section showing action CCDA: Do Not Add, Redundant

5.6.2.5 View Details

Selecting the **View Details** option will display the same details as when using the plus sign, but in a new window. Additionally, if there is a matching medication in the RPMS section, that medication will also display with its details.

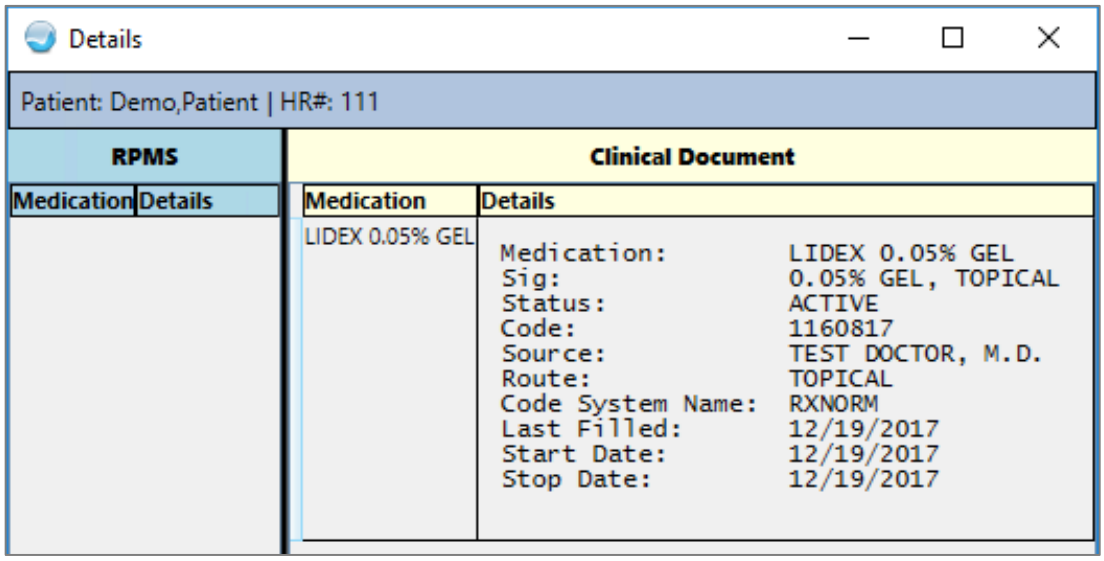

Figure 5-61: A portion of the Details window for medications in CIR Tool

Right-clicking on the medication from the details window will give the same actions as are available on the main window, except for **View Details**.

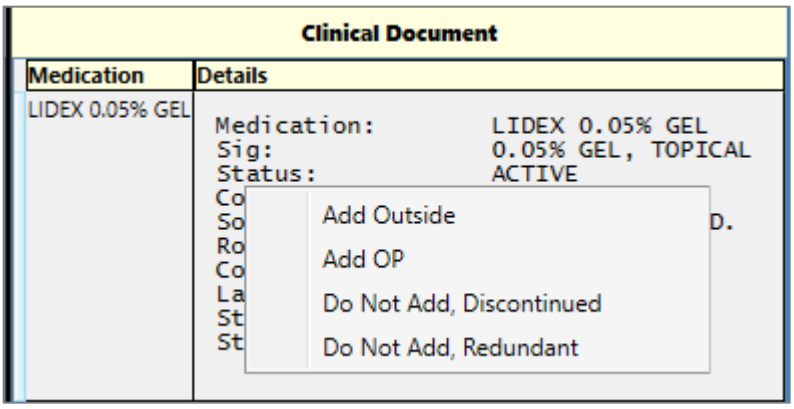

Figure 5-62: Context menu options on Medication Details window in CIR Tool

5.6.3 CIR Tool Dose Validation

The CIR Tool medication ordering functions will have the same validation as occurs in the normal ordering process. This validation will apply to the same type of medication ordering, including outpatient, unit dose, intravenous, and non-VA medications.

The CIR Tool ordering may be done as normal. The CIR Tool allows a user to add a medication to the Outpatient (OP) medications or the non-VA (Outside) medications only. These order dialogs will have the same validation in the same fields as described above for normal ordering.

5.6.3.1 Add Outside

The **Add Outside** option will have validation on the dosage field for leading and trailing zeros. There is no validation for metric dosing units for oral liquid medications.

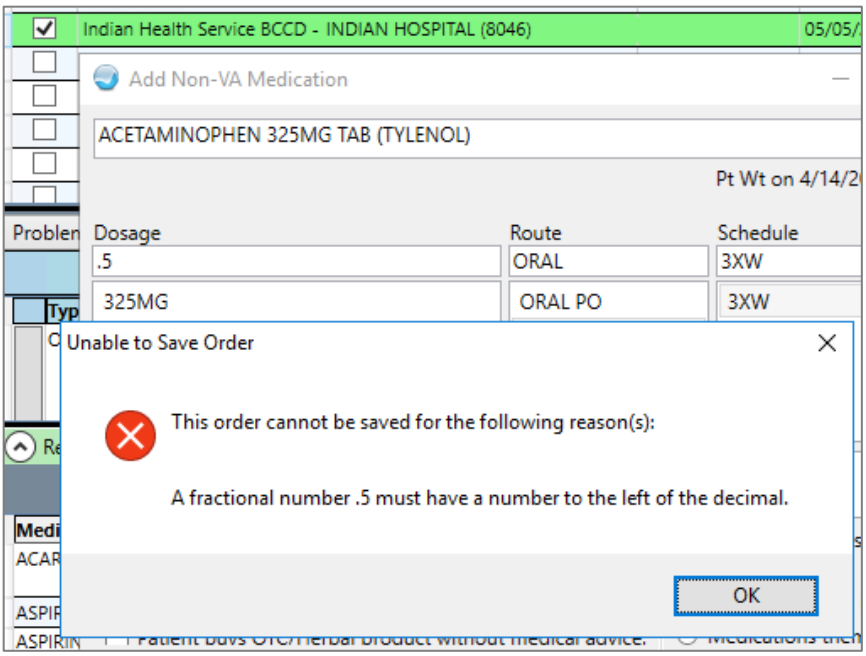

Figure 5-63: Unable to Save Order message for leading zero in Dosage field for CIR Add Outside option

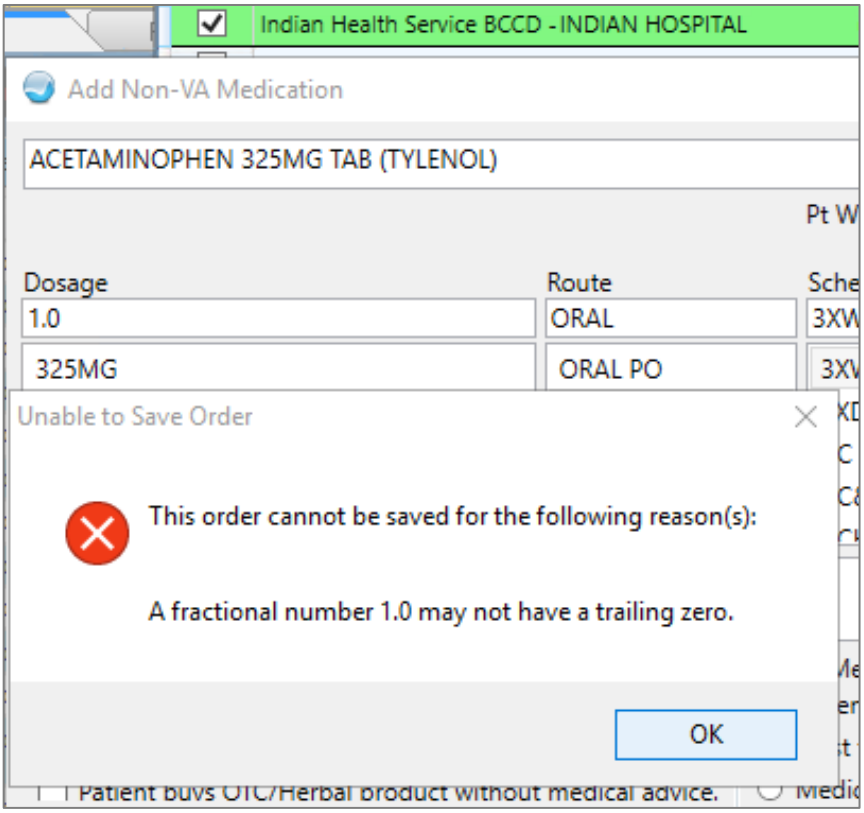

Figure 5-64: Unable to Save Order message for trailing zero in Dosage field for CIR Add Outside option

5.6.3.2 Add OP

The **Add OP** option will have validation on the **Dosage** field and the quantity (**Qty**) field for leading and trailing zeros. In addition, when the medication is an oral liquid, there will be validation on the **Dosage** field for metric units.

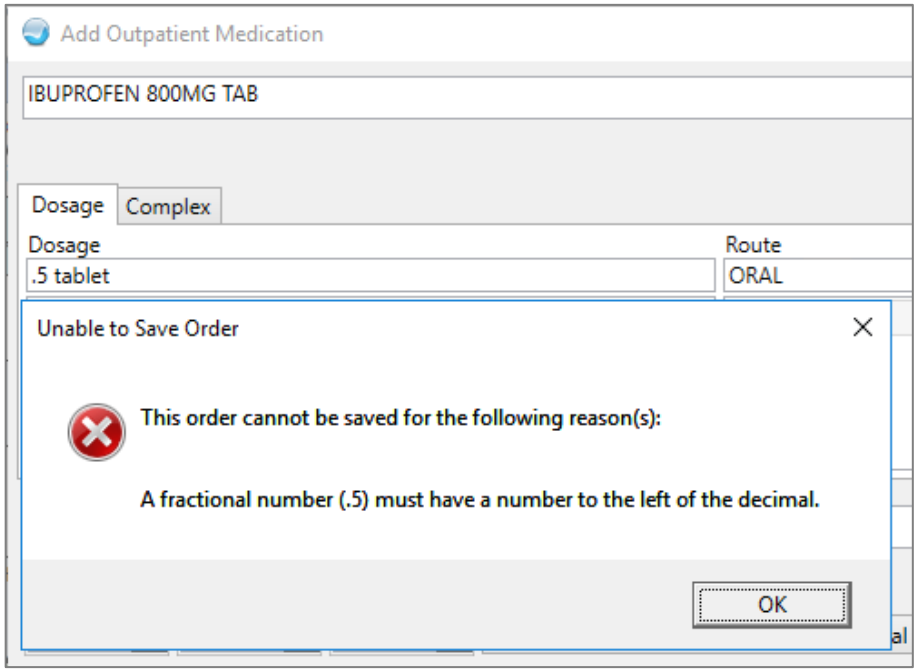

Figure 5-65: Unable to Save Order message for leading zero in Dosage field for CIR Add OP option

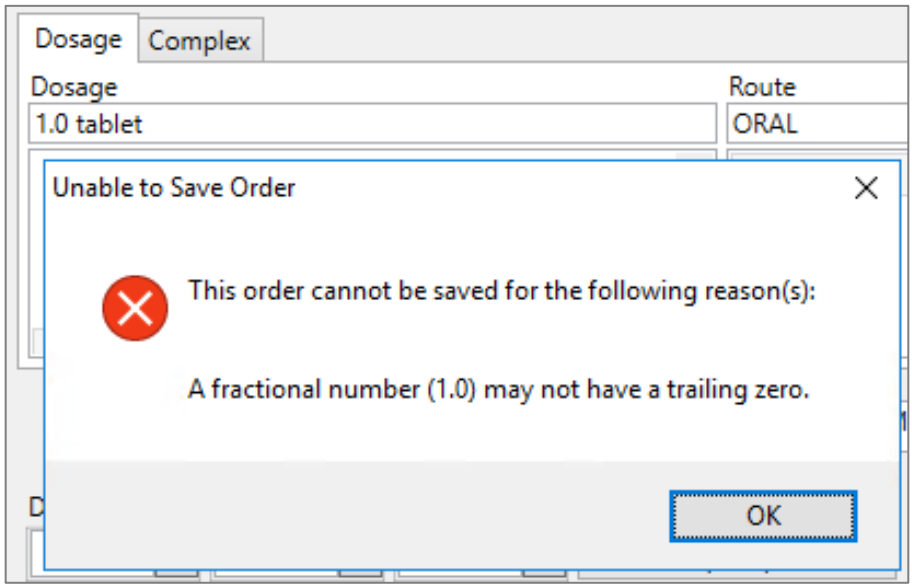

Figure 5-66: Unable to Save Order message for trailing zero in Dosage field for CIR Add OP option

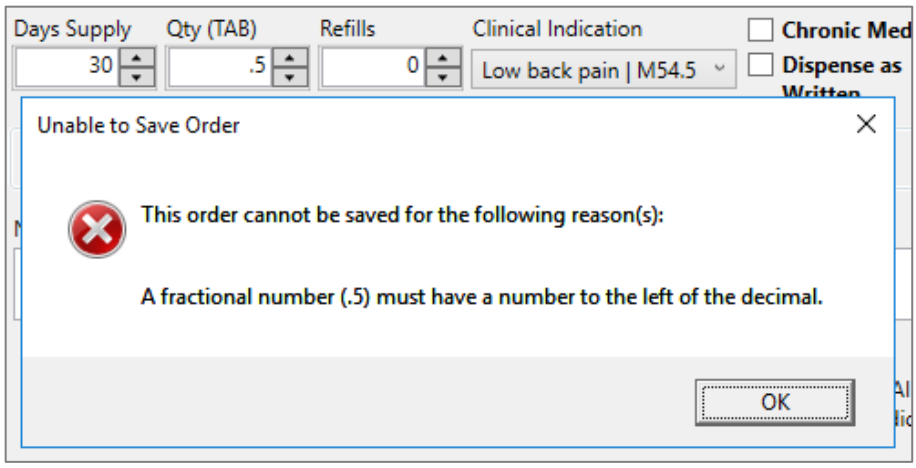

Figure 5-67: Unable to Save Order message for leading zero in Qty field for CIR Add OP option

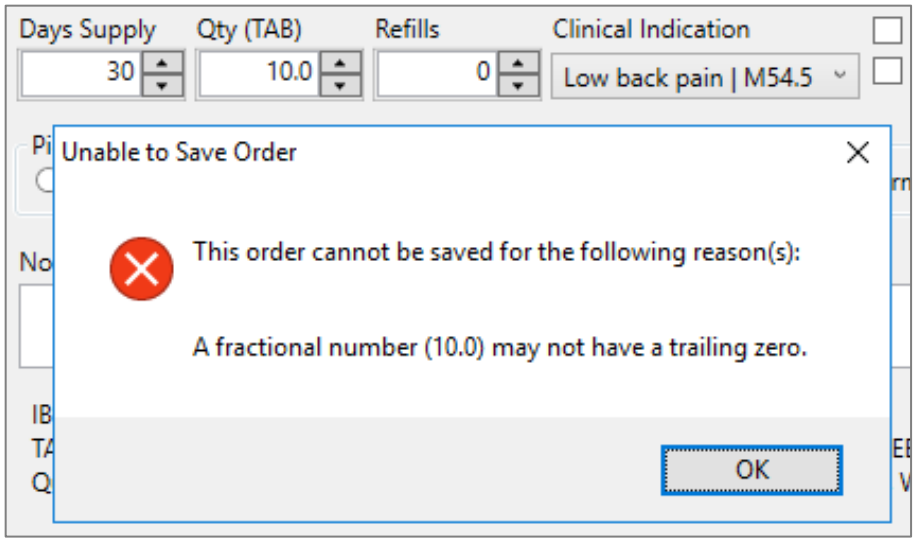

Figure 5-68: Unable to Save Order message for trailing zero in Qty field for CIR Add OP option

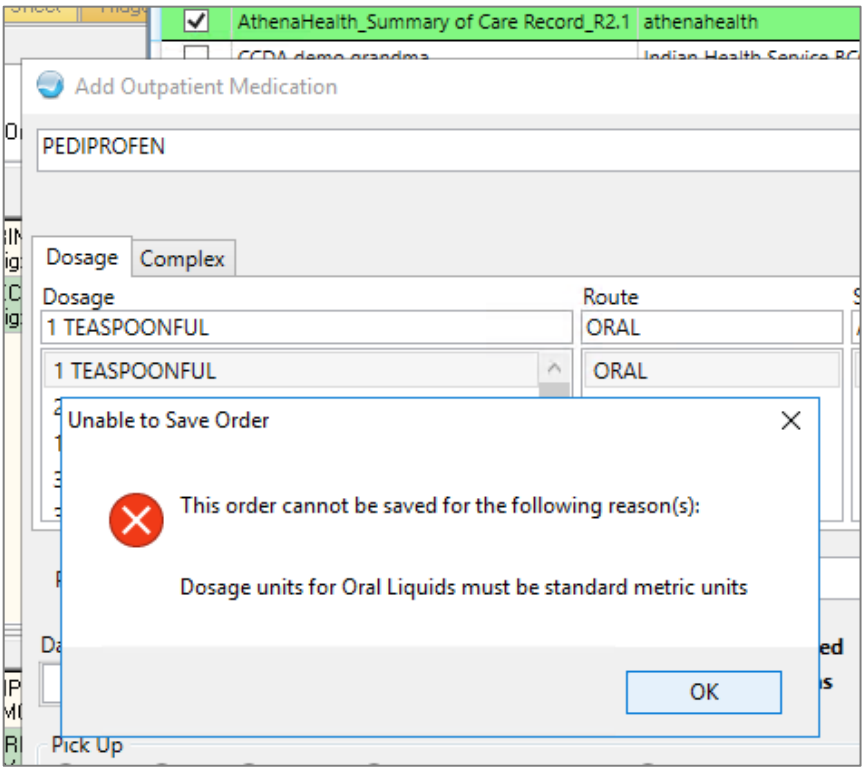

Figure 5-69: Unable to Save Order warning for oral liquid metric dose for CIR Add OP option

5.6.4 Review the Reconciled Items

Once all the medications are reconciled, you may review the items and actions taken in the **Reconciled Medications** section at the bottom of the main **CIR Tool** window. Each item from RPMS and each item from the clinical document that had an action taken on it will be listed, along with the **Description** and **Status**. See Figure 5-70.

Reconciled Medications

Add Outside Medication | Add OP Medication | Accept Meds | Cancel

Medication	Description	Status	Action
INSULIN GLARGINE SOLOSTAR PEN INJ	INJECT 40 UNITS UNDER THE SKIN DAILY FOR DIABETES	PENDING	CCDA: Add OP
INSULIN ASPART INJ	INJECT UNDER THE SKIN 3 TIMES A WEEK	PENDING	CCDA: Add Outside
ASPIRIN 81 MG ENTERIC COATED TABLET	TAKE ONE (1) TABLET BY MOUTH ONCE A DAY	ACTIVE	CCDA: Do Not Add, Discontinued
ATORVASTATIN 40 MG ORAL TABLET	TAKE ONE (1) TABLET BY MOUTH ONCE A DAY FOR HIGH CHOLESTEROL -AVOID GRAPEFRUIT/ GRAPEFRUIT JUICE-	ACTIVE	CCDA: Do Not Add, Redundant
INSULIN REG U-100 INJ PREPACK	INJECT 5ML UNDER THE SKIN TWO TIMES PER DAY 30 MINUTES	PENDING	RPMS: Reviewed, No Action

Figure 5-70: The Reconciled Medications section of the CIR Tool with various actions listed

5.6.4.1 Add Outside Medication

If needed, you may add a completely new outside medication from this section by clicking the **Add Outside Medication** button to open the **Add Non-VA Medication** window. You may search for a medication and complete the remaining information as usual.

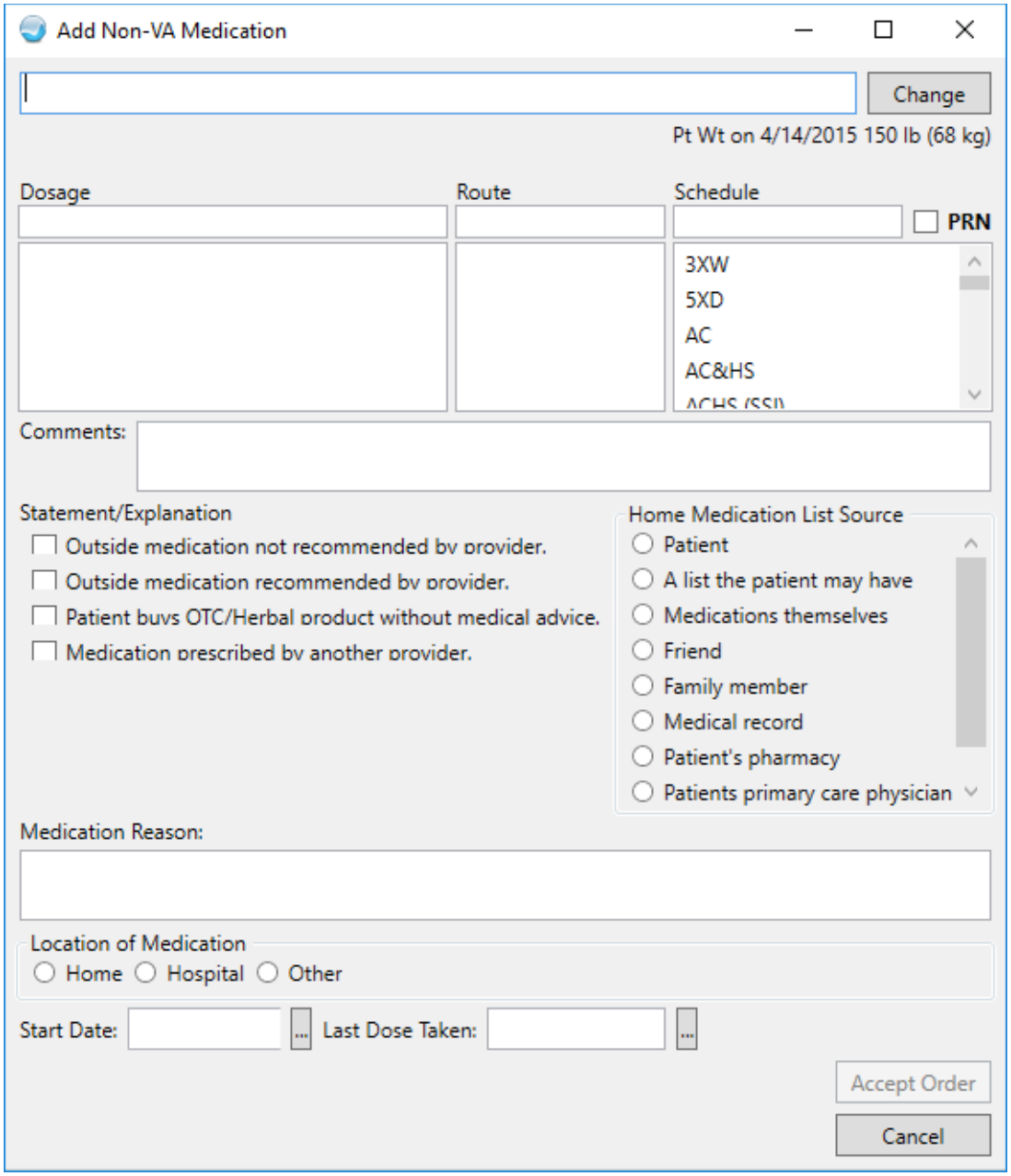

Figure 5-71: The CIR Tool Add Non-VA Medication window

5.6.4.2 Add OP Medication

If needed, you may add a completely new outpatient medication from this section by clicking on the **Add OP Medication** button. Clicking this button opens the **Add Outpatient Medication** window. You may search for a medication and complete the remaining information as usual.

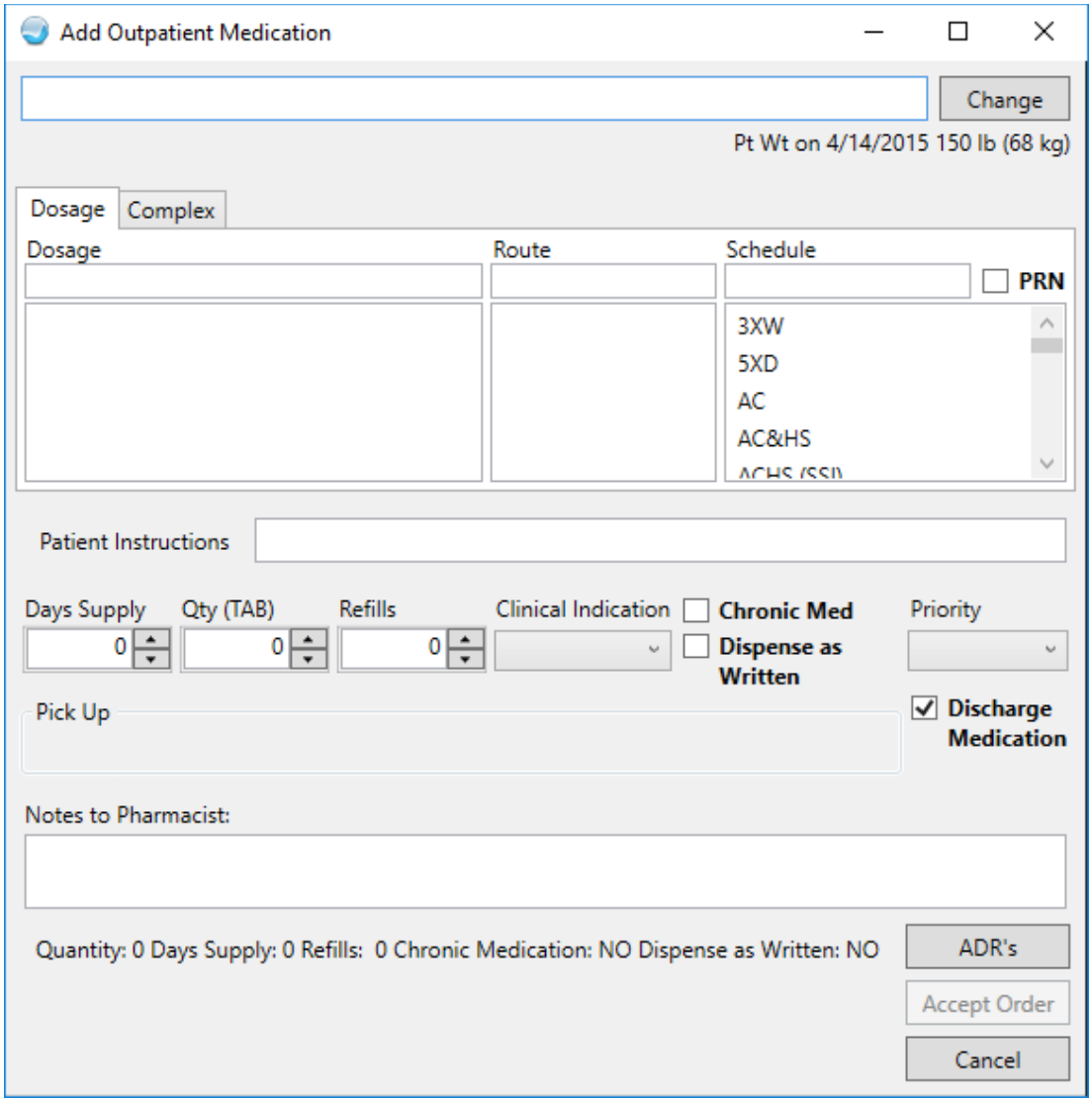

Figure 5-72: The CIR Tool Add Outpatient Medication window

5.6.4.3 Accept Meds

Until the reconciled items are accepted, no changes are made to the record. To accept all the reconciled medication information and not the problem and adverse reaction information, click the **Accept Meds** button. This is generally only used if you are only reconciling medications. If you reconciled other items, use the **Accept All** button (see Section 5.7). When the user clicks the **Accept** button, the **Review/Sign Changes** window displays. The reconciled items display along with any other items needing signature.

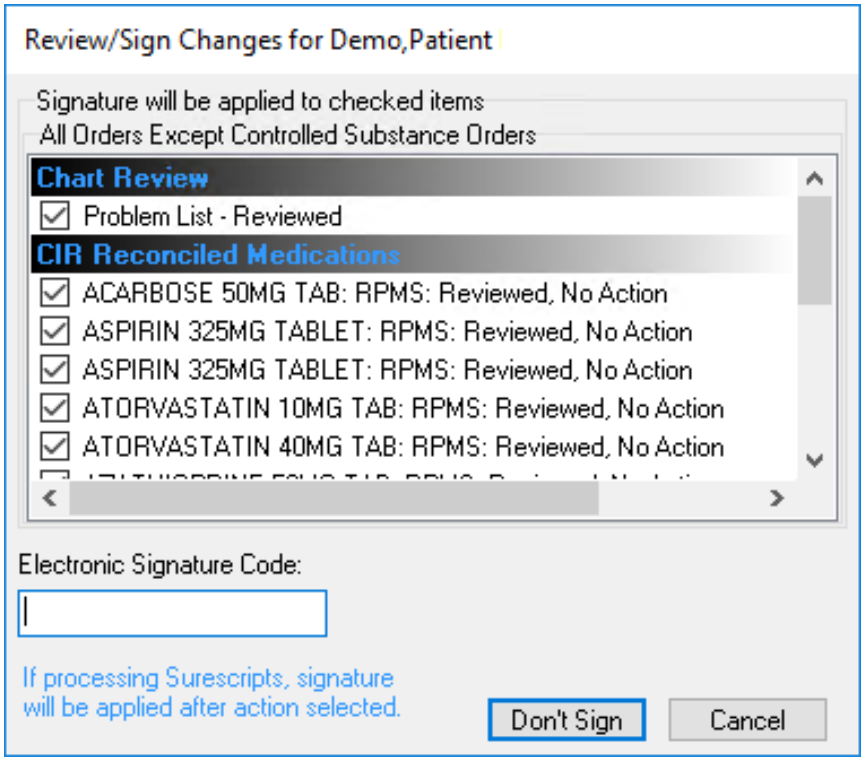

Figure 5-73: The Review/Sign Changes window with the CIR Medication Reconciliation items

The CIR Tool information for medications will reset and the CCDA document will reflect the reconciliation type and date.

5.6.4.4 Cancel

If you do not wish to complete the reconciliation, of if you wish to undo your changes, click the **Cancel** button. This will remove all of the previously selected actions for the Medications.

5.7 Accept All

If you reconciled items in more than one category, click the **Accept All** button when you are finished. Clicking this will invoke the **Order Check** functions.

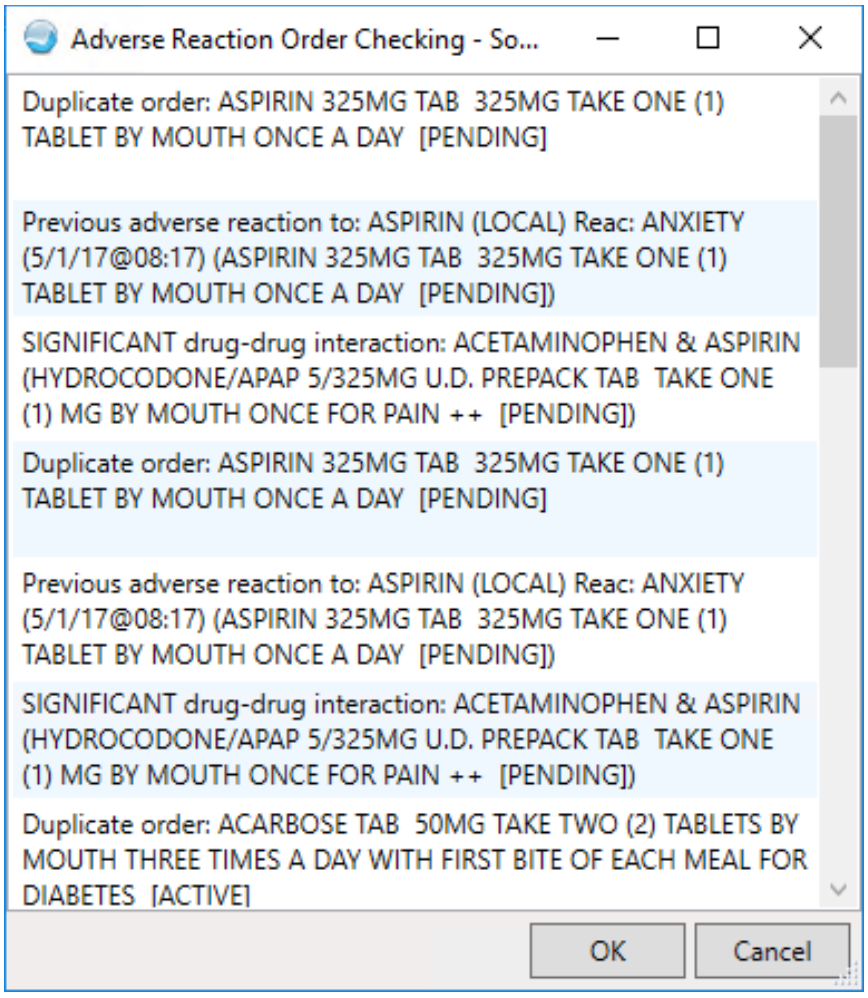

Figure 5-74: The Adverse Reaction Order Checking window

Click **OK**. The **Review/Sign Changes** window displays. The reconciled items will display along with any other items needing signature.

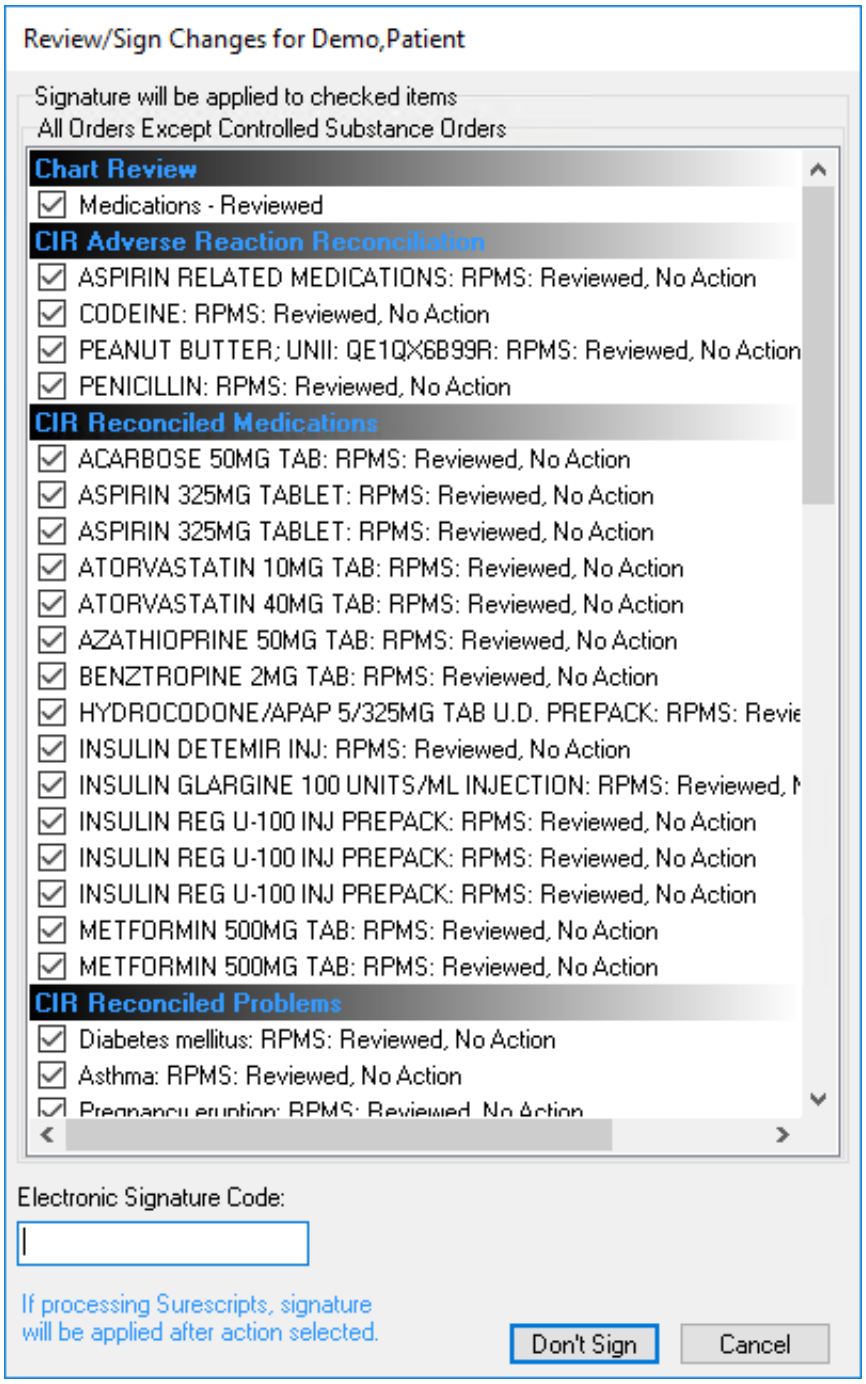

Figure 5-75: The Review/Sign Changes window with the reconciled items and their actions

The CIR Tool information will reset and each reconciled CCDA document will reflect the reconciliation type and date.

5.8 Cancel All

If you do not wish to complete the reconciliation, or if you wish to undo your changes, click the **Cancel All** button. The **Remove All Reconciliation Changes** warning will display (Figure 5-76).

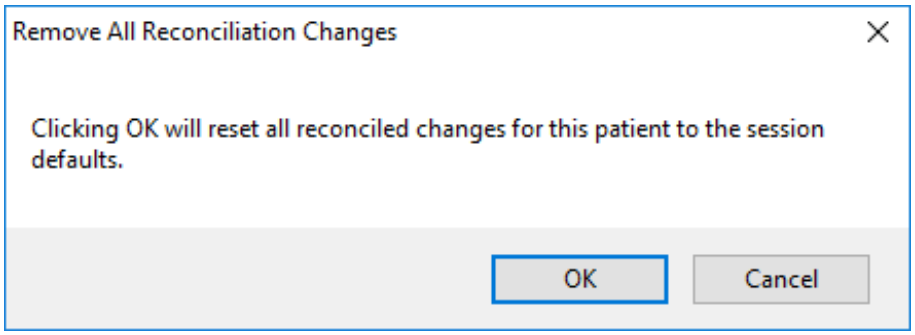

Figure 5-76: The Remove All Reconciliation Changes warning

Clicking **Cancel** on the warning will return you to the CIR Tool with the existing changes intact. Clicking **OK** will remove all of the previously selected actions for **Problems**, **Adverse Reactions**, and **Medications**.

Appendix A: Rules of Behavior

The Resource and Patient Management (RPMS) system is a United States Department of Health and Human Services (HHS), Indian Health Service (IHS) information system that is ***FOR OFFICIAL USE ONLY***. The RPMS system is subject to monitoring; therefore, no expectation of privacy shall be assumed. Individuals found performing unauthorized activities are subject to disciplinary action including criminal prosecution.

All users (Contractors and IHS Employees) of RPMS will be provided a copy of the Rules of Behavior (ROB) and must acknowledge that they have received and read them prior to being granted access to a RPMS system, in accordance IHS policy.

- For a listing of general ROB for all users, see the most recent edition of *IHS General User Security Handbook* (SOP 06-11a).
- For a listing of system administrators/managers rules, see the most recent edition of the *IHS Technical and Managerial Handbook* (SOP 06-11b).

Both documents are available at this IHS Web site: https://home.ihs.gov/security/index.cfm.

> **Note**: Users must be logged on to the IHS D1 Intranet to access these documents.

The ROB listed in the following sections are specific to RPMS.

A.1 All RPMS Users

In addition to these rules, each application may include additional ROB that may be defined within the documentation of that application (e.g., Dental, Pharmacy).

A.1.1 Access

RPMS users shall

- Only use data for which you have been granted authorization.
- Only give information to personnel who have access authority and have a need to know.
- Always verify a caller's identification and job purpose with your supervisor or the entity provided as employer before providing any type of information system access, sensitive information, or nonpublic agency information.

- Be aware that personal use of information resources is authorized on a limited basis within the provisions *Indian Health Manual* Part 8, "Information Resources Management," Chapter 6, "Limited Personal Use of Information Technology Resources."

RPMS users shall not

- Retrieve information for someone who does not have authority to access the information.
- Access, research, or change any user account, file, directory, table, or record not required to perform their *official* duties.
- Store sensitive files on a PC hard drive, or portable devices or media, if access to the PC or files cannot be physically or technically limited.
- Exceed their authorized access limits in RPMS by changing information or searching databases beyond the responsibilities of their jobs or by divulging information to anyone not authorized to know that information.

A.1.2 Information Accessibility

RPMS shall restrict access to information based on the type and identity of the user. However, regardless of the type of user, access shall be restricted to the minimum level necessary to perform the job.

RPMS users shall

- Access only those documents they created and those other documents to which they have a valid need-to-know and to which they have specifically granted access through an RPMS application based on their menus (job roles), keys, and FileMan access codes. Some users may be afforded additional privileges based on the functions they perform, such as system administrator or application administrator.
- Acquire a written preauthorization in accordance with IHS polices and procedures prior to interconnection to or transferring data from RPMS.

A.1.3 Accountability

RPMS users shall

- Behave in an ethical, technically proficient, informed, and trustworthy manner.
- Log out of the system whenever they leave the vicinity of their personal computers (PCs).
- Be alert to threats and vulnerabilities in the security of the system.
- Report all security incidents to their local Information System Security Officer (ISSO)

- Differentiate tasks and functions to ensure that no one person has sole access to or control over important resources.
- Protect all sensitive data entrusted to them as part of their government employment.
- Abide by all Department and Agency policies and procedures and guidelines related to ethics, conduct, behavior, and information technology (IT) information processes.

A.1.4 Confidentiality

RPMS users shall

- Be aware of the sensitivity of electronic and hard copy information, and protect it accordingly.
- Store hard copy reports/storage media containing confidential information in a locked room or cabinet.
- Erase sensitive data on storage media prior to reusing or disposing of the media.
- Protect all RPMS terminals from public viewing at all times.
- Abide by all Health Insurance Portability and Accountability Act (HIPAA) regulations to ensure patient confidentiality.

RPMS users shall not

- Allow confidential information to remain on the PC screen when someone who is not authorized to that data is in the vicinity.
- Store sensitive files on a portable device or media without encrypting.

A.1.5 Integrity

RPMS users shall

- Protect their systems against viruses and similar malicious programs.
- Observe all software license agreements.
- Follow industry standard procedures for maintaining and managing RPMS hardware, operating system software, application software, and/or database software and database tables.
- Comply with all copyright regulations and license agreements associated with RPMS software.

RPMS users shall not

- Violate federal copyright laws.
- Install or use unauthorized software within the system libraries or folders.

- Use freeware, shareware, or public domain software on/with the system without their manager's written permission and without scanning it for viruses first.

A.1.6 System Logon

RPMS users shall

- Have a unique User Identification/Account name and password.
- Be granted access based on authenticating the account name and password entered.
- Be locked out of an account after five successive failed login attempts within a specified time period (e.g., one hour).

A.1.7 Passwords

RPMS users shall

- Change passwords a minimum of every 90 days.
- Create passwords with a minimum of eight characters.
- If the system allows, use a combination of alpha-numeric characters for passwords, with at least one uppercase letter, one lower case letter, and one number. It is recommended, if possible, that a special character also be used in the password.
- Change vendor-supplied passwords immediately.
- Protect passwords by committing them to memory or store them in a safe place (do not store passwords in login scripts or batch files).
- Change passwords immediately if password has been seen, guessed, or otherwise compromised, and report the compromise or suspected compromise to their ISSO.
- Keep user identifications (IDs) and passwords confidential.

RPMS users shall not

- Use common words found in any dictionary as a password.
- Use obvious readable passwords or passwords that incorporate personal data elements (e.g., user's name, date of birth, address, telephone number, or social security number; names of children or spouses; favorite band, sports team, or automobile; or other personal attributes).
- Share passwords/IDs with anyone or accept the use of another's password/ID, even if offered.
- Reuse passwords. A new password must contain no more than five characters per eight characters from the previous password.
- Post passwords.

- Keep a password list in an obvious place, such as under keyboards, in desk drawers, or in any other location where it might be disclosed.
- Give a password out over the phone.

A.1.8 Backups

RPMS users shall

- Plan for contingencies such as physical disasters, loss of processing, and disclosure of information by preparing alternate work strategies and system recovery mechanisms.
- Make backups of systems and files on a regular, defined basis.
- If possible, store backups away from the system in a secure environment.

A.1.9 Reporting

RPMS users shall

- Contact and inform their ISSO that they have identified an IT security incident and begin the reporting process by providing an IT Incident Reporting Form regarding this incident.
- Report security incidents as detailed in the *IHS Incident Handling Guide* (SOP 05-03).

RPMS users shall not

- Assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once.

A.1.10 Session Timeouts

RPMS system implements system-based timeouts that back users out of a prompt after no more than 5 minutes of inactivity.

RPMS users shall

- Utilize a screen saver with password protection set to suspend operations at no greater than 10 minutes of inactivity. This will prevent inappropriate access and viewing of any material displayed on the screen after some period of inactivity.

A.1.11 Hardware

RPMS users shall

- Avoid placing system equipment near obvious environmental hazards (e.g., water pipes).

- Keep an inventory of all system equipment.
- Keep records of maintenance/repairs performed on system equipment.

RPMS users shall not

- Eat or drink near system equipment.

A.1.12 Awareness

RPMS users shall

- Participate in organization-wide security training as required.
- Read and adhere to security information pertaining to system hardware and software.
- Take the annual information security awareness.
- Read all applicable RPMS manuals for the applications used in their jobs.

A.1.13 Remote Access

Each subscriber organization establishes its own policies for determining which employees may work at home or in other remote workplace locations. Any remote work arrangement should include policies that

- Are in writing.
- Provide authentication of the remote user through the use of ID and password or other acceptable technical means.
- Outline the work requirements and the security safeguards and procedures the employee is expected to follow.
- Ensure adequate storage of files, removal, and nonrecovery of temporary files created in processing sensitive data, virus protection, and intrusion detection, and provide physical security for government equipment and sensitive data.
- Establish mechanisms to back up data created and/or stored at alternate work locations.

Remote RPMS users shall

- Remotely access RPMS through a virtual private network (VPN) whenever possible. Use of direct dial in access must be justified and approved in writing and its use secured in accordance with industry best practices or government procedures.

Remote RPMS users shall not

- Disable any encryption established for network, internet, and Web browser communications.

A.2 RPMS Developers

RPMS developers shall

- Always be mindful of protecting the confidentiality, availability, and integrity of RPMS when writing or revising code.
- Always follow the IHS RPMS Programming Standards and Conventions (SAC) when developing for RPMS.
- Only access information or code within the namespaces for which they have been assigned as part of their duties.
- Remember that all RPMS code is the property of the U.S. Government, not the developer.
- Not access live production systems without obtaining appropriate written access, and shall only retain that access for the shortest period possible to accomplish the task that requires the access.
- Observe separation of duties policies and procedures to the fullest extent possible.
- Document or comment all changes to any RPMS software at the time the change or update is made. Documentation shall include the programmer's initials, date of change, and reason for the change.
- Use checksums or other integrity mechanism when releasing their certified applications to assure the integrity of the routines within their RPMS applications.
- Follow industry best standards for systems they are assigned to develop or maintain, and abide by all Department and Agency policies and procedures.
- Document and implement security processes whenever available.

RPMS developers shall not

- Write any code that adversely impacts RPMS, such as backdoor access, "Easter eggs," time bombs, or any other malicious code or make inappropriate comments within the code, manuals, or help frames.
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Release any sensitive agency or patient information.

A.3 Privileged Users

Personnel who have significant access to processes and data in RPMS, such as, system security administrators, systems administrators, and database administrators, have added responsibilities to ensure the secure operation of RPMS.

Privileged RPMS users shall

- Verify that any user requesting access to any RPMS system has completed the appropriate access request forms.
- Ensure that government personnel and contractor personnel understand and comply with license requirements. End users, supervisors, and functional managers are ultimately responsible for this compliance.
- Advise the system owner on matters concerning information technology security.
- Assist the system owner in developing security plans, risk assessments, and supporting documentation for the certification and accreditation process.
- Ensure that any changes to RPMS that affect contingency and disaster recovery plans are conveyed to the person responsible for maintaining continuity of operations plans.
- Ensure that adequate physical and administrative safeguards are operational within their areas of responsibility and that access to information and data is restricted to authorized personnel on a need-to-know basis.
- Verify that users have received appropriate security training before allowing access to RPMS.
- Implement applicable security access procedures and mechanisms, incorporate appropriate levels of system auditing, and review audit logs.
- Document and investigate known or suspected security incidents or violations and report them to the ISSO, Chief Information Security Officer (CISO), and systems owner.
- Protect the supervisor, superuser, or system administrator passwords.
- Avoid instances where the same individual has responsibility for several functions (i.e., transaction entry and transaction approval).
- Watch for unscheduled, unusual, and unauthorized programs.
- Help train system users on the appropriate use and security of the system.
- Establish protective controls to ensure the accountability, integrity, confidentiality, and availability of the system.
- Replace passwords when a compromise is suspected. Delete user accounts as quickly as possible from the time that the user is no longer authorized system. Passwords forgotten by their owner should be replaced, not reissued.
- Terminate user accounts when a user transfers or has been terminated. If the user has authority to grant authorizations to others, review these other authorizations. Retrieve any devices used to gain access to the system or equipment. Cancel logon IDs and passwords, and delete or reassign related active and backup files.

- Use a suspend program to prevent an unauthorized user from logging on with the current user's ID if the system is left on and unattended.
- Verify the identity of the user when resetting passwords. This can be done either in person or having the user answer a question that can be compared to one in the administrator's database.
- Shall follow industry best standards for systems they are assigned to, and abide by all Department and Agency policies and procedures.

Privileged RPMS users shall not

- Access any files, records, systems, etc., that are not explicitly needed to perform their duties
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Release any sensitive agency or patient information.

Glossary

APSP

The namespace of the IHS modifications to the Outpatient Pharmacy Suite.

CIR Tool

The EHR component used to reconcile a patient's problems, adverse reactions, and medications from outside sources.

Clinical Informaticist

A person who works in Clinical Informatics, a discipline of managing and utilizing patient health information to improve health care. Clinical Informaticist is a general term, and specific disciplines may use more specific terms such as Nurse Informaticist or Pharmacy Informaticist.

eRx

Electronic prescribing or an electronic prescription.

Intravenous Medications

Medications that are administered into a vein. For RPMS, the Pharmacy package that manages these types of medications for patients.

Leading Zeros

For the purposes of EHR and RPMS validation, one or more zeros to the left of a decimal point in a positive number that is less than 1. Example: 0.5.

Non-VA Medications

Also known as Outside Medications, this is the mechanism for a user to document a patient's herbal, over-the-counter, and home medications that are not prescribed or managed by the site's providers.

Oral Liquid Medications

A medication that is intended to be taken orally and intended to be in a liquid form at the time of administration. Oral liquids may be dispensed in a non-liquid form and converted to a liquid by the patient or person administering the medication.

Outpatient Medications

Medications primarily meant to be dispensed or administered to patients who are not admitted to a hospital unit or ward. For RPMS, the Pharmacy package that manages these types of medications for patients.

Outside Medications

See Non-VA Medications.

Quick Order

In EHR and RPMS, a medication order template with the majority of the information already filled in to help the provider order a medication quickly.

Trailing Zeros

For the purposes of this validation, one or more zeros in a decimal number after which no other numbers follow. Example: 5.0.

Unit Dose Medications

Medications that are specifically packaged in premeasured doses for single use. For RPMS, the Pharmacy package that manages non-IV versions of these types of medications for patients.

Acronym List

Acronym	Meaning
CAC	Clinical Application Coordinator
CCDA	Consolidated Clinical Document Architecture
CIR	Clinical Information Reconciliation
CISO	Chief Information Security Officer
EHR	Electronic Health Record
HHS	U.S. Department of Health and Human Services
HIM	Health Information Management
HIPAA	Health Information Portability and Accountability Act
ID	Identification
IHS	Indian Health Service
ISMP	Institute for Safe Medication Practices
ISSO	Information System Security Officer
IT	Information Technology
IV	Intravenous
mL	Milliliter
ONC	Office of the National Coordinator
OP	Outpatient
PC	Personal Computer
POV	Purpose of Visit
QO	Quick Order
ROB	Rules of Behavior
RPMS	Resource and Patient Management System
SAC	Standards and Conventions
SNOMED CT	Systematized Nomenclature of Medicine Clinical Terms
VA	Department of Veterans Affairs
VIC	VistA Imaging Capture
VistA	Veterans Health Information Systems and Technology Architecture
VPN	Virtual Private Network

Contact Information

If you have any questions or comments regarding this distribution, please contact the IHS IT Service Desk.

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