

## ChartMaker<sup>®</sup> Clinical

\*\*\*Please note that the ChartMaker Medical Suite can no longer be installed on computers using the Windows XP or Windows 2003 Server operating system. Since Microsoft has discontinued support for Windows XP in April 2014, and Windows 2003 Server in July 2015, we can no longer guarantee the stability of computers using this operating system, and recommend that you upgrade the operating system on any computers currently using Windows XP or Windows 2003 Server.\*\*\*

### Added Features

- **Clinical Login – Change Password** – The Change Password dialog has been updated so that when you are prompted to change your password, and enter an incorrect **Current Password**, the system will generate a warning message indicating that the current password is incorrect. See Figure 1. When exiting the warning message, you will return to the Change Password dialog to continue changing your password. In previous versions, the Change Password dialog would close, forcing you to reinitiate the process.



Figure 1 – Change Password

- **Direct Messaging** – The Direct Message dialog has been updated with a CC field allowing you to carbon copy recipients when sending and replying to direct messages. The CC field functions in the same manner as the To field.
- **Direct Messaging** – The Direct Message dialog has been updated with a Reply All button allowing you to reply to all recipients included in a multi-recipient direct message. When the Reply All button is used, all recipients in the message will appear in the To: field.
- **Direct Messaging** – The system has been updated so that when adding a patient to a direct message, the patient's first name, last name, date of birth, gender, and zip code will be required and sent with the direct message. If this information is missing from the patient's record, a warning message will be generated indicating that the patient cannot be attached to the direct message due to the missing information. See Figure 2.

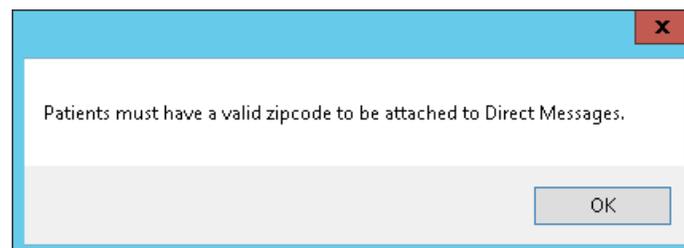


Figure 2– Direct Message Warning

## Added Features (continued)

- **The ID Tab – Patient** – The Additional Patient Information dialog (accessed via the **Additional Info** button) has been updated with a **First**, a **Middle**, and a **Last** name field where you can view or configure any previous name that the patient may have previously had. See Figure 3. Information added or modified in the previous First, Middle, and Last Name fields will be updated in the Audit Trail. Likewise, whenever a previous First and Last name is entered, the previous name information will be included in any Transition of Care (CCDA) documents exported from the system.
- **The ID Tab – Patient** – The **Sexual Orientation** and **Gender Identity** sections of the Additional Patient Information dialog (accessed via the **Additional Info** button) have been updated so that the various orientation and identity options match the SNOMED-CT code descriptions associated with those options. See Figure 3. Likewise, when you hover over these orientation and identity options with your mouse pointer, a tool tip pop-up will display the SNOMED code associated with that option.

**Additional Patient Information**

Previous Name

First: Jeffrey Middle: Scott Last: DeLynt

Sexual Orientation

Do you think of yourself as: (Check one.)

- Lesbian, gay or homosexual
- Straight or heterosexual
- Bisexual
- Something else, please describe
- Don't know
- Choose not to disclose

Gender Identity

What is your current gender identity? (Check all that apply.)

- Identifies as Male
- Identifies as Female
- Female-to-Male (FTM)/Transgender Male/Trans Man
- Male-to-Female (MTF)/Transgender Female/Trans Woman
- Genderqueer, neither exclusively male nor female
- Additional gender category or other, please specify
- Choose not to disclose

OK Cancel

Figure 3– Additional Patient Information

- **Meaningful Use Stage 2 2017 – Quality Measures** – The Clinical Quality Measures (CQM) value sets in the Meaningful Use Dashboard (Stage 2 2017) have been updated to the January 2017 version released by CMS.
- **Medication** – The system has been updated to remove the decimal point from ICD10 diagnostic codes included with the prescriptions when sending those prescriptions electronically (for a new prescription, a refill, a canceled prescription, etc.). This change only affects the transmission of diagnostic information within a prescription, the decimal point will be present throughout the Clinical system when displaying and selecting ICD10 diagnosis codes.

## Added Features (continued)

- **Medication – EPCS** – The system has been updated so that only one user can be linked to an IdenTrust token and corresponding certificate. Whenever a user tries to link to a token that is already linked to another user via the Provider Token Linkage dialog (accessed via **Edit > System Tables > Electronic Prescribing > EPCS Token Linkage**), a warning will be generated informing the user that the only one token certificate can be linked to a single provider at a time and list the provider already linked to the token. See Figure 4.

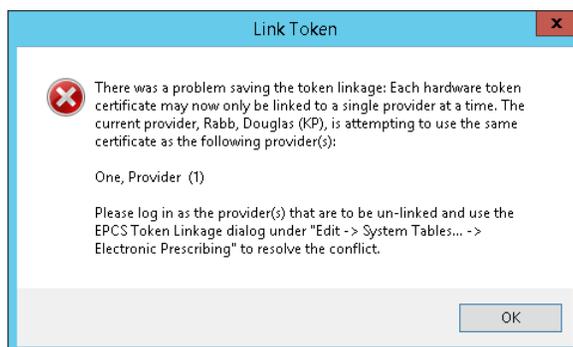


Figure 4 – Link Token Error Message

Also, whenever a provider tries to sign for a controlled substance using a token linked to multiple users via the Confirm Prescription, Send E-Prescriptions, Process a Refill Request, or Process a Change Request dialogs, a similar warning message will be generated. See Figure 5.

Likewise, an error message may be generated when a provider is linked to two token certificates when trying to sign for a controlled substance via the Confirm Prescription, Send E-Prescriptions, Process a Refill Request, or Process a Change Request dialogs. See Figure 6.

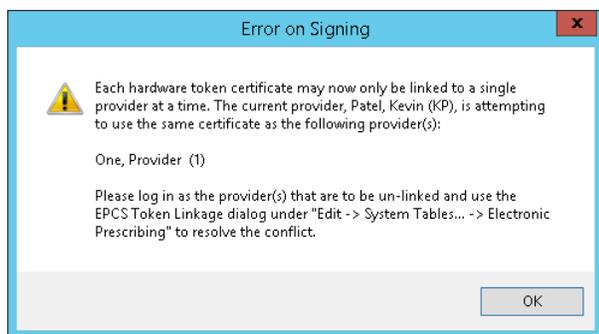


Figure 5 – Error on Signing

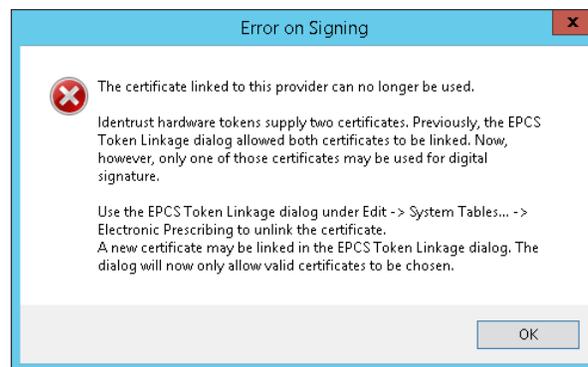


Figure 6 – Error on Signing

In each case where there are multiple users attached to a single token, or a user linked to multiple token certificates, they are directed to go to **Edit > System Tables > Electronic Prescribing > EPCS Token Linkage** to access the Provider Token Linkage dialog and unlink those users that should not be linked to the token or certificate, and then, when needed, relink users to the proper certificate. Once the conflicts have been rectified, the proper provider will be able to sign and send the prescription for the controlled substance.

- **Medication – Prescribe Medication**– The Dose and Dispense fields in the Prescribe Medication dialog have been updated so that leading zeros will be automatically inserted before the decimal point for amounts less than one and any trailing zeros after a decimal point will be removed. For example, if you enter .5000 into the Dose field, it automatically will become 0.5 once you tab out of that field or click into another field.
- **Medication – Confirm Prescription / Send Prescription** – The system has been updated to include the pharmacy's NPI, if available, when sending electronic prescription messages. If the pharmacy's NPI is not available in the system, it will not be included in the prescription message.

## Added Features (continued)

- **The Note Tab – Allergies** – The Active Allergies dialog (in previous versions Active Allergy dialog) has been redesigned to provide increased speed and performance, ease of use, as well as enhance the overall user experience. The updated Active Allergies dialog contains buttons for adding (**Add**), removing (**Remove**), reviewing and individual allergy (**Review**), and reviewing all allergies (**Review All**). See Figure 7. The column headings have also been updated to better identify the information being displayed and new columns have been added for **Reaction SNOMED** and **Severity**, which allow you to configure applicable SNOMED codes for the reaction, as well as the severity of the allergic reaction (**Fatal**, **Life threatening severity**, **Mild**, **Mild to moderate**, **Moderate**, **Moderate to severe**, and **Severe**) respectively.

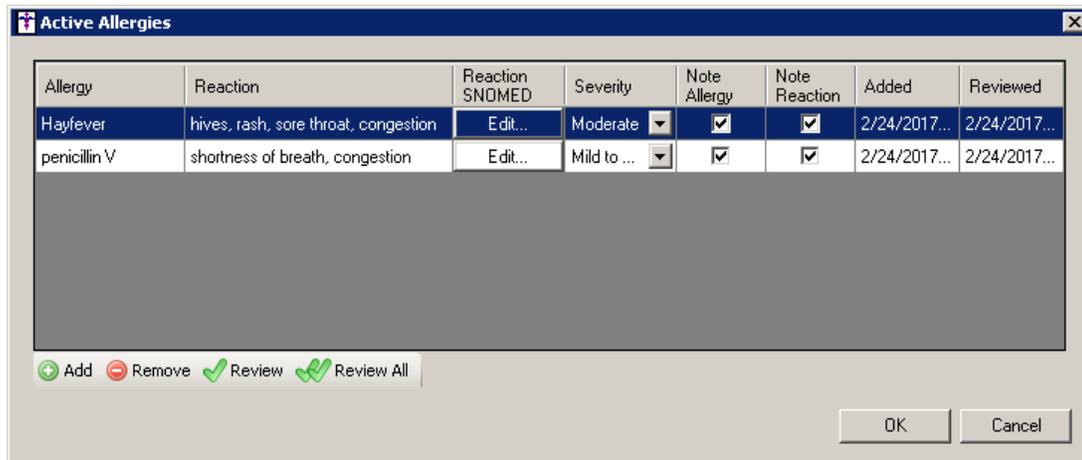


Figure 7 – Active Allergies

You can add SNOMED codes for the reaction by clicking the **Add** or **Edit** button in the Reaction SNOMED column. This will open the Selected SNOMEDs dialog where you can select among the **Reactions** listed with their accompanying SNOMED codes, or you can click the **Search** button and search for specific SNOMED codes as needed. See Figure 8.

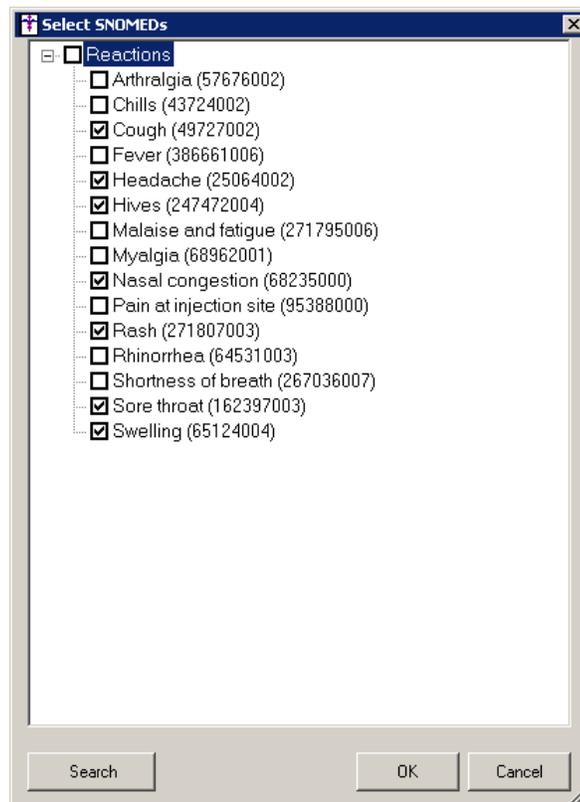


Figure 8 – Selected SNOMEDs

## Added Features (continued)

### The Note Tab – Allergies (continued)

The Select Allergy dialog, accessed when clicking the **Add** button to add a new allergy, has also been updated. See Figure 9. A new Allergy Type field allows you to select **Drug**, **Group**, or **Ingredient** when searching for allergies. Likewise, you have the ability to select a **Search Type** (**Contains**, **Equals**, or **Starts With**) for your search. The Search Type field defaults to the Starts With option. Once the applicable allergy is located you can select that allergy by either double-clicking that allergy, or highlighting it and then clicking the **Select** button.

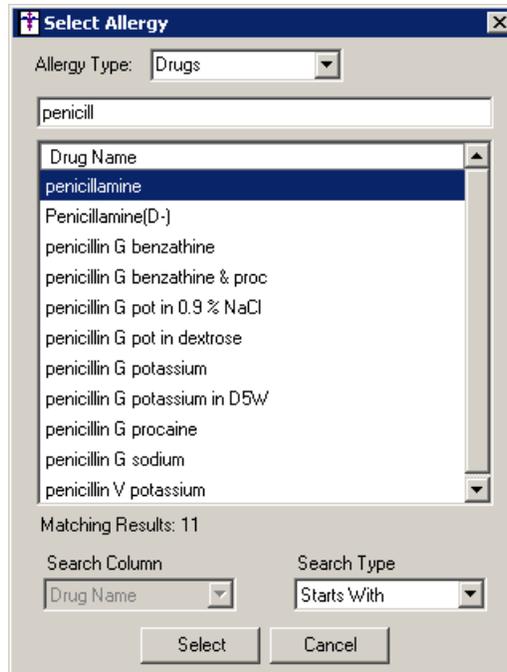


Figure 9 – Select Allergy

When removing allergies for a patient, by highlighting the applicable allergies and clicking the **Remove** button, a new Remove Reason dialog will appear that allows you to configure a reason you are removing the allergy. See Figure 10. If multiple allergies were selected, the reason entered will be used for all of those selected allergies.

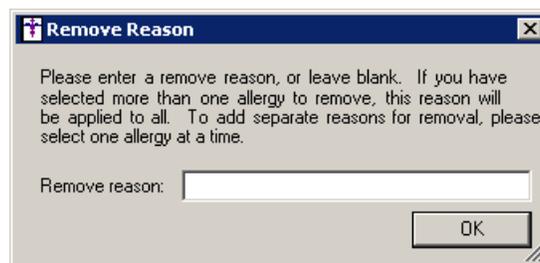


Figure 10 – Remove Reason

When you have finished configuring allergy information in the Active Allergies dialog, you must press the **OK** button to activate these changes. If you click the **Cancel** button or close out of the dialog, your additions and modifications will not be saved. Once the OK button has been clicked, the updated allergy information, along with any configured SNOMED codes, will appear in the patient's History tab. Likewise, the Audit Trail will be updated with applicable allergy events.

## Added Features (continued)

- **The Note Tab – Immunizations** – The program has been updated so that the latest immunization codes from the CDC are being used when configuring immunization information.
- **The Note Tab – Screening** – The Screening dialog has been updated so that multiple screening questionnaires will be displayed along the top of the dialog in the form of individual buttons. See Figure 11. To access the screening questionnaire simply click the applicable button.
- **The Note Tab – Screening – Quick Depression Assessment Panel (PHQ9)** – The Screening dialog has been updated with a **Quick Depression Assessment Panel (PHQ9)** questionnaire that is accessed by clicking the corresponding button at the top of the dialog. See Figure 11. After the questionnaire is accessed, you can configure the answers for the various questions (**Not at all**, **Several days**, **More than half the days**, **Nearly every day**, and **Declined to specify**).

The first nine questions have a measured **Total Score** based on the answered questions above that allows you to quickly determine the severity of the screening and thereby offer further testing or treatment as needed. If you click the **Total Score** link, additional information is provided that displays how the scoring is conducted and providing further information.

In addition, you also have the ability to determine how this information is outputted to the note. You can choose only to output only the **Title**, to output the configured information in **List** format, or to output the configured information in **Paragraph** format. When information is configured in the Screening dialog, the applicable LOINC codes will be attached to the options selected and the information will also appear in the History tab for the patient.

The screenshot shows a software window titled "Screening" with three tabs: "Social, Psychological and Behavioral", "Quick Depression Assessment Panel (PHQ9)", and "Generalized Anxiety Disorder (GAD7)". The "Quick Depression Assessment Panel (PHQ9)" tab is active. The questionnaire consists of ten questions, each with a dropdown menu for the answer. The questions and their selected answers are:

Question	Selected Answer
Little interest or pleasure in doing things?	Several days
Feeling down, depressed, or hopeless?	Several days
Trouble falling or staying asleep, or sleeping too much?	More than half the days
Feeling tired or having little energy?	Nearly every day
Poor appetite or overeating?	Nearly every day
Feeling bad about yourself-or that you are a failure or have let yourself or your family down?	Several days
Trouble concentrating on things, such as reading the newspaper or watching television?	More than half the days
Moving or speaking so slowly that other people could have noticed. Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual?	Several days
Thoughts that you would be better off dead, or of hurting yourself in some way?	Not at all
How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	(Empty dropdown)

Below the questions, there is a "Total Score" of 14, which is a clickable link. At the bottom of the dialog, there is a "Note Output" section with three radio buttons: "Title only", "List" (which is selected), and "Paragraph". At the very bottom are "OK" and "Cancel" buttons.

Figure 11 – Screening – Quick Depression Assessment Panel (PHQ9)

## Added Features (continued)

- **The Note Tab – Screening – Generalized Anxiety Disorder (GAD7)** – The Screening dialog has been updated with a **Generalized Anxiety Disorder (GAD7)** questionnaire that is accessed by clicking the corresponding button at the top of the dialog. See Figure 12. After the questionnaire is accessed, you can configure the answers for the various questions (**Not at all**, **Several days**, **More than half the days**, **Nearly every day**, and **Declined to specify**).

The seven questions have a measured **Total Score** based on the answered questions above that allows you to quickly determine the severity of the screening and thereby offer further testing or treatment as needed.

In addition, you also have the ability to determine how this information is outputted to the note. You can choose only to output only the **Title**, to output the configured information in **List** format, or to output the configured information in **Paragraph** format. When information is configured in the Screening dialog, the applicable LOINC codes will be attached to the options selected and the information will also appear in the History tab for the patient.

The screenshot shows a software window titled "Screening" with a tab for "Generalized Anxiety Disorder (GAD7)". The window contains the following content:

Question	Selected Answer
Feeling nervous, anxious or on edge?	Several days
Over the past 2 weeks have you not been able to stop or control worrying?	More days than not
Worrying too much about different things?	Nearly every day
Trouble relaxing?	More than half the days
Being so restless that it is hard to sit still?	Several days
Becoming easily annoyed or irritable?	Nearly every day
Feeling afraid as if something awful might happen?	Not at all

Total Score: 12

Note Output:  
 Title only  List  Paragraph

Buttons: OK, Cancel

Figure 12 – Screening – Generalized Anxiety Disorder (GAD7)

## Added Features (continued)

- **The Note Tab – Screening – Social, Psychological, and Behavioral** – The Social, Psychological, and Behavioral screening (accessed via the **Screening** button in the chart note), has been updated so that **Declined to answer** option available for each category (Financial Resource Strain, Education, Stress, Depression, Physical Activity, Alcohol Use, and Violence) has been replaced with a **Declined to specify** option for each individual question within each category, unless the answer drop-down list already contains a **Refused** option. See Figure 13. Any answer that is tagged as Declined to specify will output to the note and will also appear in the History tab.

The screenshot shows a software window titled "Screening" with a subtitle "Social, Psychological and Behavioral". Below the subtitle, it lists "Quick Depression Assessment Panel (PHQ9)" and "Generalized Anxiety Disorder (GAD7)". The main content area is divided into several sections, each with a question and a corresponding input field:

- Financial Resource Strain:** Question: "How hard is it for you to pay for the very basics like food, housing, medical care, and heating?" Input: A dropdown menu with "Not very hard" selected.
- Education:** Question: "What is the highest grade or level of school you have completed or the highest degree you have received?" Input: A dropdown menu with "Declined to specify" selected. The menu also shows "Very hard", "Hard", and "Somewhat hard".
- Stress:** Question: "Stress means a situation in which a person feels tense, restless, nervous, or anxious, or is unable to sleep at night because his/her mind is troubled all the time. Do you feel this kind of stress these days?" Input: An empty dropdown menu.
- Depression:** Two questions: "Little interest or pleasure in doing things?" and "Feeling down, depressed, or hopeless?". Both have empty dropdown menus.
- Physical Activity:** Two questions: "How many days of moderate to strenuous exercise, like a brisk walk, did you do in the last 7 days?" and "On those days that you engage in moderate to strenuous exercise, how many minutes, on average, do you exercise?". Each has a text input field, a unit label ("days/7 days" and "min/d" respectively), and a "Declined" checkbox.
- Alcohol Use:** Three questions: "How often do you have a drink containing alcohol?", "How many standard drinks containing alcohol do you have on a typical day?", and "How often do you have 6 or more drinks on 1 occasion?". Each has a dropdown menu.

At the bottom right of the dialog, there is a "Total Score: 0" label and "OK" and "Cancel" buttons.

Figure 13 – Screening – Social, Psychological, & Behavioral

- **The Note Tab – Vital Signs** – The system has been updated to save the new updated LOINC codes whenever a value for Weight (29463-7) and Oxygen Saturation (59408-5) is entered in the Vitals dialog. The applicable LOINC codes will appear in the patient's History tab and well as in any Transition of Care documents generated for the patient.

## Added Features (continued)

- **ChartMaker® PatientPortal** — The system has been updated so that whenever a patient is registered and activated for the ChartMaker® PatientPortal, any applicable patient saving (ScriptGuide and eCopay) materials, generated when prescribing or renewing a medication, will be automatically uploaded to the patient's PatientPortal account and the patient will receive an email notification once they arrive.

In the PatientPortal site, the home screen will show the number of unread prescription savings. Likewise, the Message tab has been updated to have an **Inbox** and **Prescription Savings** options.

When the Prescription Savings option is accessed, the patient saving (ScriptGuide and eCopay) materials will be listed in date order of when they were received. The right side will show an image of all pages for the savings material. The patient has the option to print and to delete these as desired. The PatientPortal will also run a nightly process to purge any savings material that is older than 30 days from the date it was received.

- **Preferences – Prescription** — The **Printing** section of the **Prescription** tab in the Preferences dialog has been updated with a **Do not print savings when patient is registered for the patient portal** option that allows you to choose not to print applicable patient saving (ScriptGuide and eCopay) materials when prescribing and renewing medications if a patient is registered and activated for the ChartMaker® PatientPortal. See Figure 14. Applicable patient saving (ScriptGuide and eCopay) materials are automatically uploaded to the patient's PatientPortal account regardless of how this preference is configured.

When the **Do not print savings when patient is registered for the patient portal** option is checked, and a patient is registered and activated for the ChartMaker® PatientPortal, the **Print patient prescription savings materials** option in the Prescribe Medication dialog will default as checked when prescribing and renewing medications. When this option is unchecked, the **Print patient prescription savings materials** option will default unchecked when prescribing and renewing medications. You have the ability to override this option on an individual basis in the Prescribe Medication dialog.

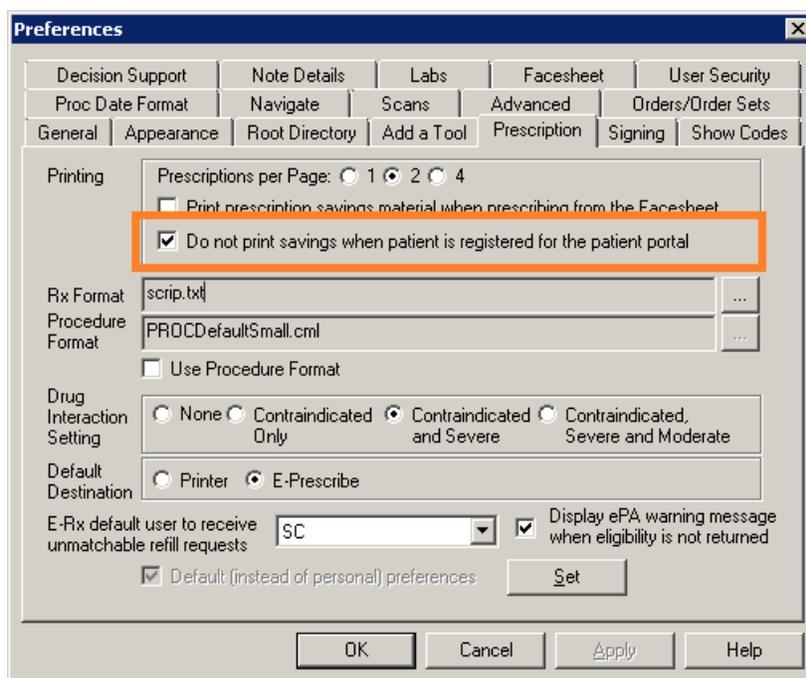


Figure 14 – Preferences – Prescription

- **System Change – SNOMED Codes** — The system has been updated to use the latest (September 2016) version of the SNOMED-CT Codes and have been mapped to the applicable SNOMED categories used throughout the system.

## Added Features (continued)

- **System Tables – DSS Rule Builder** — The **Data Points** tab of the Rule Builder dialog has been updated so that all data points that appear in **red** do not have a code mapped to them, so a code will need to be configured for these data points prior to being used. See Figure 15.

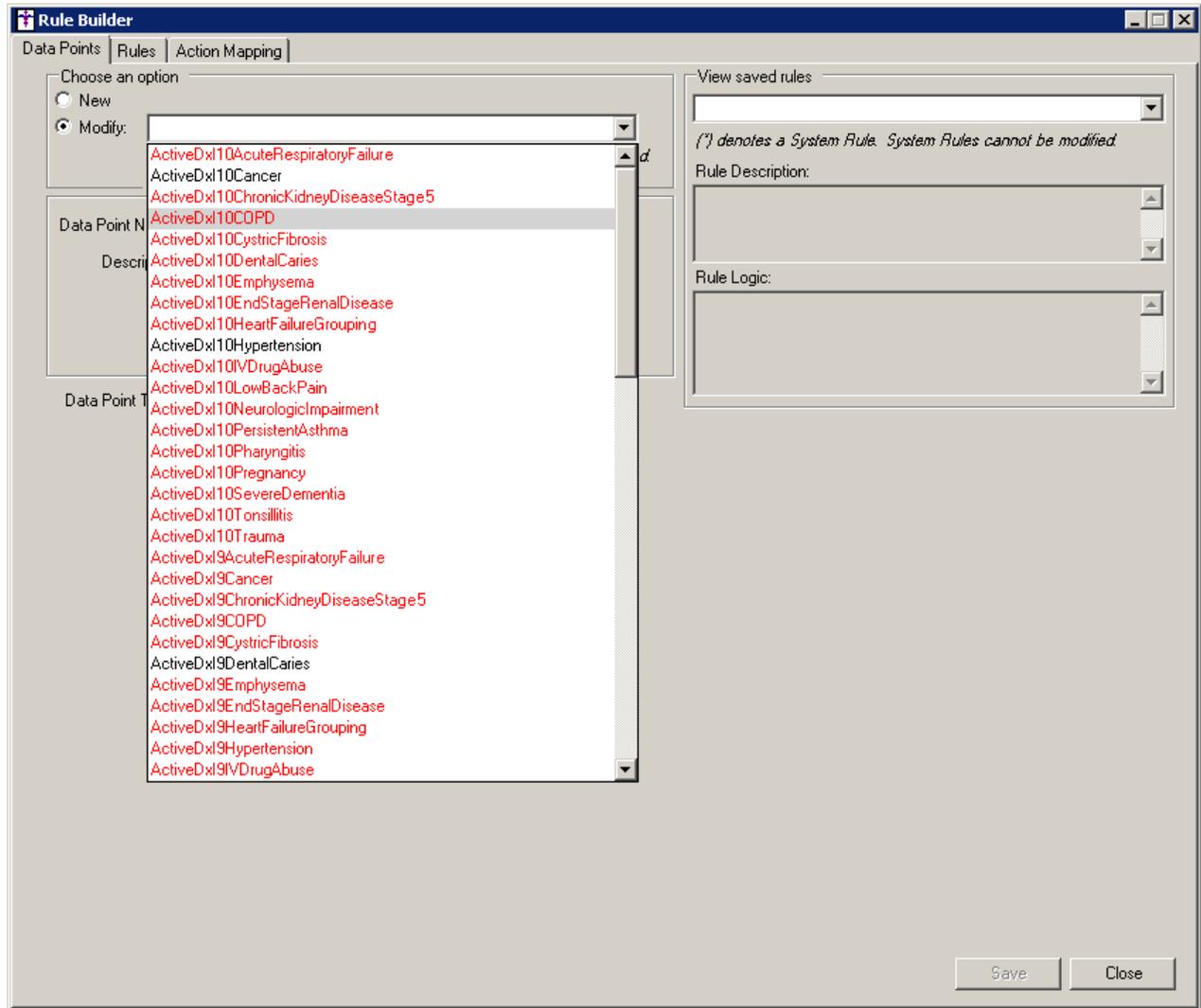


Figure 15 – Rule Builder – Data Points

## Added Features (continued)

- **System Tables – DSS Rule Builder** — The **Rules** tab of the Rule Builder dialog has been updated so that when the Rules and Data Points, Rules, or Data Points radio button is activated, the highlighting of the current item selected will appear in light gray in the corresponding drop-down list to allow you to better see the selected item due to the color coding of **Rules (Green)** and **Data Points (Blue)**. See Figure 16.

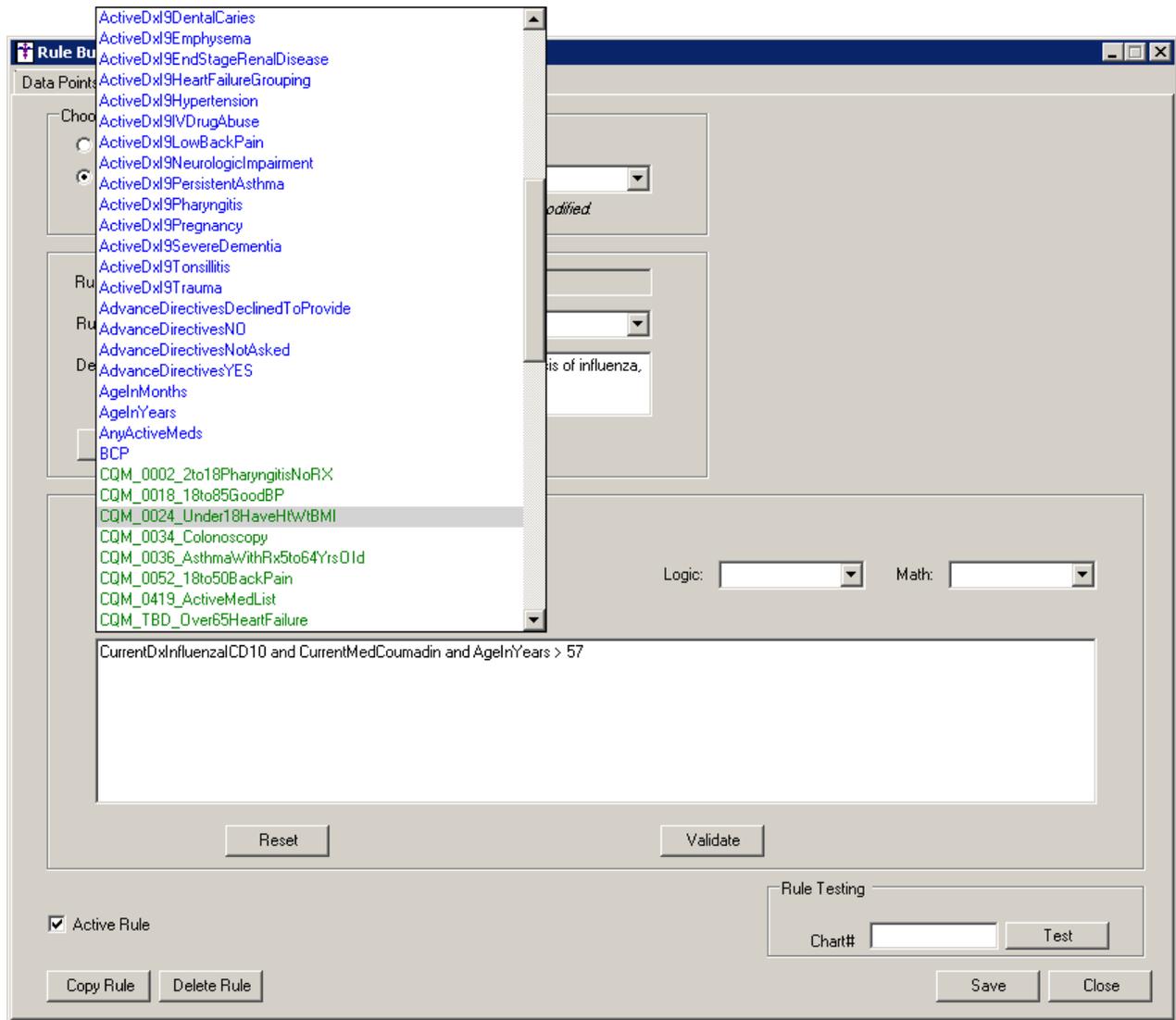


Figure 16 – Rule Builder — Rules

## Added Features (continued)

- **Template Editing – Screening** – The Screening Selection dialog (accessed via the Screening button), has been with two new screenings: a **PHQ-9 Quick Depression Assessment Panel**, and a **GAD-7 Generalized Anxiety Disorder** screening. See Figure 17. You have the ability to view each screening questionnaire, by highlighting the applicable screening, and clicking the **Preview** button.

Likewise, the Screening Selection dialog has been updated with a **Move Up**, **Move Down**, and **Remove** button. The **Move Up** and **Move Down** buttons allows you to modify the order in which the screening will appear when accessing the Screening dialog in the chart note (each screening appears a button at the top of the Screening dialog). When removing a screening from appearing in the chart note (by highlighting a screening in the **Screening available in a note** section, and then clicking the **Remove** button), that screening will moved to the **Unused Screening** section of the Screening Selection dialog, and can be reactivated in the chart note, by highlighting the screening, in that section, and then clicking the **Use** button.

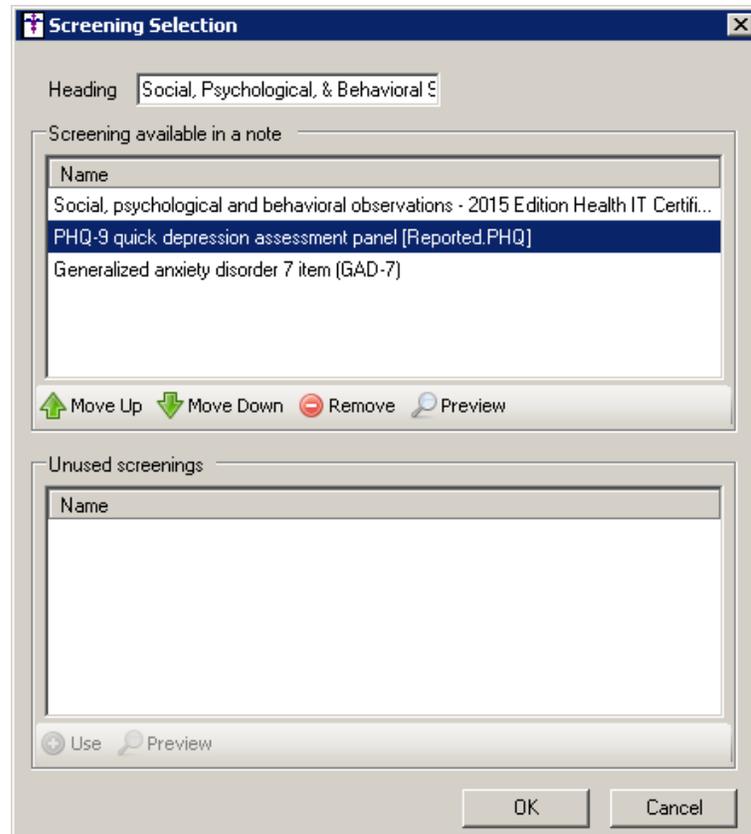


Figure 17 – Screening Selection

## Addendum

### SureScripts® E-Prescribing Best Practice Guidelines

Below are best practices that have been developed to assist in the construction of complete, non-contradictory, and clear patient directions:

#### Ensure that Directions are complete and accurate

- All information in the Sig must be accurate, complete, and include all the required components written in the following order: action, dose, dose units, route, frequency, and finally auxiliary information.
  - The exception to this syntax is Sigs which simply state "Take/Use as Directed/Instructed as per manufacturer labeling."
- Information within the Sig must not conflict with itself

Example: Use **"Take 1 tablet by mouth daily"** instead of just **"Daily."**

#### Always qualify "...as Directed" with a source

- Statements such as "Take as directed" and "Use as instructed" should only be used when followed by a source that clearly dictates to the patient where or from whom they can obtain the specific directions.
- If a Sig builder tool is used, ensure that prescribers enter the specific source of the instruction after selecting the "Take/Use as directed/instructed" option before they can proceed with finalizing the e-prescription.

Example: Use **"Use as instructed per instructions on package"** instead of **"Use as instructed."**

#### Always qualify "PRN (as needed)" with an indication

- The use of "PRN" (i.e. "as needed") should only be used in conjunction with an indication.
- For all other non-PRN directions, inclusion of an indication is also recommended; alternatively, there is also a designated structured field for Diagnosis, in which ICD-10 codes may be used to communicate the appropriate diagnosis or indication relevant for the prescribed product
- If a Sig builder tool is used, ensure that the Sig builder tool requires prescribers to enter the specific indication or conditions for PRN use if the prescriber selects a "PRN" frequency

Example: Use **"Take 1 tablet by mouth every 4 hours as needed for mild to moderate pain"** instead of **"Take 1 tablet by mouth every 4 hours as needed."**

#### Always specify the Duration of Therapy for Acute Treatments

- Duration of therapy should **only** be specified for medications for acute treatments with a defined length of therapy, e.g., antibiotics.

#### Avoid Abbreviations, Acronyms or Symbols

- ISMP (Institute for Safe Medication Practices) provides the complete list of *Error-Prone Abbreviations, Symbols, and Dose Designations* that should never be used in a prescription
- If the use of Latin abbreviations is desired, the system should include the ability to expand Latin abbreviations into plain English text via keystroke accelerators. The expanded text form of the Sig should be displayed to the prescriber to ensure correct transition from abbreviations to full text

Example: Use **"Instill 1 drop into both eyes once daily"** instead of **"1 gtt ou qd."**

#### Never Truncate or Split Directions between multiple fields

- If the patient directions are being transmitted exceeds the 140-character limit, it should be communicated by other means, e.g. as a fax or printed handout
- Sig information should **not** be written into the Notes field if it exceeds the 140-character limit.

#### Send only Patient Directions (Sig) within the Directions field

- The Sig should not contain information for which another designated field exists in the SCRIPT standard (e.g. the Sig should never include the quantity, drug name, NDC or RxCUI values, or Notes to pharmacists, etc.)

Example: Use **"Take 1 tablet by mouth once daily"** instead of **"Take 1 tablet by mouth once daily. Dispense #30, 3 Refills, Thank you."**

#### Do not include Clinical or Prescription Information in the Notes field.

- The Notes field be used to contain information related to, but not part of the prescription. While clinical and prescription information should appear in the designated fields for these data elements, not in the Notes field.

## SureScripts® E-Prescribing Best Practice Guidelines (continued)

### Category II—Prescription Data Elements Requiring Extra Care and Attention When Input.

- (1) Guidelines that apply to name, strength, dosage form, and quantity of drug prescribed as well as the directions for use (the “Sig”)
- Drug names should be spelled out in full, avoiding the use of abbreviations.
    - While it might be possible to make the case that abbreviations save time in the world of paper prescriptions, no such time savings accrue in the electronic world in which the prescriber simply picks a medication from a drug database.
    - Abbreviations can lead to a misinterpretation of the prescriber’s intent, which can result in medication errors.
    - Examples:
      - Use “Hydrochlorothiazide 50 mg” instead of “HCTZ 50 mg.”
      - Use “Zidovudine 300 mg” instead of “AZT 300 mg.”
  - Drug descriptions should include complete name, strength, strength units and dosage form information (if applicable) in the same exact order, and all should appear in one drug description field.
    - Not doing so causes problems in pharmacies due to missing data components.
    - It is preferred that either the generic or the brand name be used in the drug description, but not both. Using both unnecessarily complicates the information in the drug description field.
    - Examples:
      - Use “Doxycycline Monohydrate 50 mg oral capsule” instead of “Doxycycline caps.”
      - Use “Ciprofloxacin 500 mg tablet” instead of “Ciprofloxacin tablet 500 mg.”
      - Use “Atorvastatin calcium 20 mg tablet” or “Lipitor 20 mg tablet” instead of “Lipitor (Atorvastatin calcium) 20 mg tablet.”
      - Drug descriptions for generic products should use the naming conventions found in the Food and Drug Administration’s “Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations.”
    - This helps pharmacists to accurately choose the product to be dispensed when brand names are not used.
    - Examples:
      - Use “Glipizide 10mg tablets, extended release” instead of “Glipizide TAB OSM 24 10mg.”
      - Drug strength information should be consistent across all fields in which it appears.
    - The strength in the drug description should match that in the drug strength field.
    - Drug strength units in the drug description should match those in the drug strength units field. Drug strength units should not be sent in the drug strength field.
    - Example of improper use: The drug description is “Amoxicillin 500 mg oral capsule” and the drug strength field contains the value of “250.”
  - Dosage form codes should match the forms sent in drug description fields.
    - Example of improper use: The drug description is Amoxicillin 500 mg capsule and the dosage form code field contains “10,” which is the NCPDP code that stands for tablet.
  - All orders should be written using metric measurements of weight (e.g., mg, gm and kg) and volume (e.g., ml).
    - The apothecary and avoirdupois systems of weights and volumes are no longer considered appropriate in the world of pharmaceuticals.
    - Example: Use “Aspirin 81 mg” instead of “Aspirin 1 ¼ grains.”
  - A zero should be used before a decimal (use 0.X mg instead of .X mg), but not after (use X mg instead of X.0 mg).
    - Trailing zeros are particularly dangerous in that they can lead to ten-fold overdoses. Thus, trailing zeros should never be used.
    - Examples:
      - Use “Digoxin 0.25 mg” instead of “Digoxin .25 mg.”
      - Use “Haloperidol 5 mg” instead of “Haloperidol 5.0 mg.”
  - Arabic (decimal) numerals are preferable to Roman numerals, and in some instances it is preferable for numbers to be spelled out.
    - Example: Use “Aspirin 325 mg” instead of “Aspirin V grains.”
  - Other specific abbreviation issues:
    - The term “microgram” can be abbreviated as “mcg,” but it should not be abbreviated as “ug,” which can easily be mistaken for the abbreviation for “mg,” standing for “milligram.”
    - The word “unit” should be spelled out and never abbreviated as “U” or “u.”
    - “M” should not be used as an abbreviation for thousands (e.g., 5 M units), as it has been mistaken as meaning one million.
    - Do not use commas when expressing thousands as they might be misinterpreted as periods.

## SureScripts® E-Prescribing Best Practice Guidelines (continued)

### Category II—Prescription Data Elements Requiring Extra Care and Attention When Input. (Continued)

(2) Issues related specifically to the Sig field or directions for use.

- The directions for use should not be split between the Sig and Notes fields.
  - Depending upon the design of the pharmacy system and/or the effectiveness of the training of pharmacy personnel, splitting directions between the Sig and Notes fields can result in part of the directions being missed, thereby preventing complete directions from being conveyed to patients. Patients may experience significant negative therapeutic outcomes when this occurs.
  - Examples of improper use:
    - Sig field—"Take one tablet daily," Notes field—"Take only on Monday, Wednesday and Friday." NOTE: This is an actual example from a warfarin e-prescription, which if not taken according to the complete directions, could possibly result in serious patient harm.
    - Sig field—"Dissolve one tablet under the tongue every 10 minutes for chest pain," Notes field—"Call physician immediately if relief is not obtained after three doses."
    - Sig field—"Apply and rub well into affected area twice a day," Notes field—"Discontinue use and call physician if rash worsens."
    - Sig field—"One drop to eye having surgery three times daily," Notes field—"Start two days prior to surgery."
- Information in the Sig field should not conflict with information in the Notes field.
  - Conflicting information in these fields usually requires pharmacists to contact prescribers to ascertain their actual intent with respect to the directions, which compromises the efficiencies related to e-prescribing.
  - Inconsistent information in the Sig versus the Notes fields can result in incorrect directions being conveyed to patients.
  - Example of improper use: Sig field—"1 cap orally 3 times a day", Notes field—"One capsule by mouth daily."
- Care must be taken so that Sigs are not truncated because important information can be lost.
  - Example of improper use: "Take 1 tablet once a month in the am 1 hr before eating or drinking, with 1 C water. Remain upright x 1 hour and nothing by mouth, then resu"
- Sig information should be clinically correct.
  - Example: Use "Amoxicillin 500 mg Oral Capsules"—Sig "One capsule three times a day" instead of "500 caps 3 times a day."
- Directions for use should be spelled out clearly in proper English.
  - Since the pharmacist must interpret—and nearly always writes—the label in English, the use of abbreviations (particularly Latin) or symbols is unnecessary and discouraged because it can lead to medication errors.
  - Example: Use "Take 1 tablet by mouth twice a day" instead of "1 T PO BID."
- Information in the Sig field should be limited to the Sig.
  - Quantity to be dispensed should not be placed in the Sig field.
    - Example: Use "One capsule by mouth three times daily" instead of "One capsule by mouth three times daily – Disp # 30."
  - Duration of therapy should not be placed in the Sig field.
    - Example: Use "One capsule by mouth four times daily" instead of "One four times daily – Disp 10 day supply."
  - Drug description should not be placed in Sig field.
    - Example: Use "One capsule by mouth at bedtime" instead of "One by mouth at bedtime– Paxil CR 20 mg."
  - Example of improper use:
    - "One drop to eye having surgery three times daily. Start two days prior to surgery. May substitute Acular LS, Xibrom, or Voltaren if less expensive." (i.e., the indication of alternative approved drugs "May substitute Acular LS, Xibrom, or Voltaren if less expensive" should be placed in the Notes field.)
- Sigs should be complete, properly formatted, and not repeated.
  - Sig should be complete.
    - □ Example: Use "Apply topically to forearm three times a day" instead of "Topical each day."
  - Sig should be properly formatted.
    - □ Example: Use "Take one capsule three times a day" instead of "1 3 times a day."
  - Sig should not be repeated.
    - □ Example: Use "Take one capsule daily" instead of "1 PO QD – Take one tablet every day."
- The inclusion of the intended use or the indication for the medication in the directions for use is helpful to patients, pharmacists and other prescribers, and is strongly encouraged.
  - Intended use can help patients to organize and better understand their medications and why they are taking them.
  - Including the indication in the Sig field can help prevent dispensing errors, and it provides pharmacists with a foundation for patient counseling and medication therapy management.
  - Other prescribers may find the indication helpful when a patient brings their medication bottles with them to office visits.
  - Example: "Take according to instructions in dosepak for poison ivy rash."

## SureScripts® E-Prescribing Best Practice Guidelines (continued)

### Category II—Prescription Data Elements Requiring Extra Care and Attention When Input. (Continued)

- The instruction “take as directed” is rarely appropriate and should be avoided by prescribers.
    - Such an instruction assumes an understanding on the part of the patient that may not exist, and even if it does, will very likely be short lived.
    - Using the term “take as directed” provides little information upon which the pharmacist can base their counseling of the patient.
- (3) Proper use of the Notes field (referred to as “free text” in the NCPDP SCRIPT Standard).
- Prescription information that has a designated, standardized data field should not be placed in the Notes field.
    - For example, neither the drug name, strength nor quantity should be placed in the Notes field because there are specific fields in the NCPDP SCRIPT Standard for these data elements. This is important because if this information isn’t placed in the fields in which pharmacy personnel are trained to look for it, it might be missed.
  - Clinical information that has a designated, standardized data field should not be placed in the Notes field.
    - As with prescription information, the clinical information should appear in the designated fields for these data elements. This is important because if this information isn’t placed in the fields in which pharmacy personnel are trained to look for it, it might be missed.
  - Reserve use of the Notes field for information related to, but not part of, the prescription.
    - For example, a comment such as: “Please have the patient call the office when they have finished taking this prescription” would be an appropriate use of the Notes field.
  - To reiterate, as mentioned above, the directions for use should not be split between the Sig and Notes fields nor should the information in the Sig field conflict with information in the Notes Field.
    - The former can lead to critical information being missed by pharmacy personnel and possibly not being transmitted to the patient, and the latter normally requires pharmacists to contact the prescriber to clarify their intent, thereby compromising the potential efficiencies of e-prescribing.
- (4) Refills authorized, if any
- Although allowed both by convention and NCPDP SCRIPT, the indication of “PRN” (refill as needed) is not considered to be good practice and should be discouraged.
    - Example: Use “Refill 11 times” instead of “Refill PRN.”
- (5) Other items unique to electronic prescribing.
- Representative NDC number requirements.
    - Representative NDC numbers, which contain 11 digits, must be correct, as incorrect representative NDC numbers may cause drug identification problems in the receiving pharmacies.
    - Representative NDC numbers must be current and included in e-prescription messages unless the items do not have assigned NDCs.
  - Quantity Qualifiers must be correctly associated with drug descriptions.
    - Correct mapping procedures are available in the Units of Measure table, which can be found in the NCPDP External Code List and the Surescripts Implementation Guides.
    - Where possible, quantities should reflect the actual metric quantity to be dispensed.
      - Example: Use “Amoxicillin 250mg/5ml, 150 ml” instead of “Amoxicillin 250mg/5ml, 1 bottle.”
    - The use of “ZZ”, “EA” and “00” should be limited to instances in which none of the available qualifiers in the Units of Measure table can be applied.
      - □ Examples of improper use: Drug description—Amoxicillin 500 mg Oral Capsule, Quantity 30 and Quantity Qualifier sent “ZZ”—mutually defined, “EA”—each or “00”—unspecified instead of “AV”—capsules.

### Category III—Prescription Common Mistakes

Even though providers using the ChartMaker Medical Suite strive to be accurate in entering information for E-prescription, there are common mistakes made that can easily be corrected. Please read through the examples below in order to understand E-prescription best practices.

#### (1) Incorrect or incorrectly formatted SIG

This occurs when the appropriate dose is entered incorrectly. The following examples demonstrate typical errors:

## SureScripts® E-Prescribing Best Practice Guidelines (continued)

### Category III—Prescription Common Mistakes (continued)

Drug Description	SIG	Notes	Nomenclature Description	Comment
Combivent Respimat 20 mcg-100 mcg/actuation Aerosol Inhaler	Spray <b>1 aerosol</b> with adapter (gram) puff(s) 4 times a day		Incorrect or incorrectly formatted SIG	"1 aerosol" is not an appropriate dose for Combivent
Advair HFA 115 mcg-21 mcg/actuation Aerosol Inhaler	Take <b>2 aerosol</b> with adapter (gram) puff(s) twice a day		Incorrect or incorrectly formatted SIG	"2 aerosol" is not an appropriate dose for Advair HFA
ProAir HFA 90 mcg/actuation Aerosol Inhaler	Take <b>2 puffs puff(s)</b> q 4-6 hrs prn cough or wheeze or before exercise		Incorrect or incorrectly formatted SIG	Part of the patient instructions are duplicated
Proctosol HC 2.5 % Rectal Cream	Apply <b>1 cream</b> (gram) rectally 4 times a day		Incorrect or incorrectly formatted SIG	"1 cream" is not an appropriate dose for Proctosol
dicyclomine 10 mg capsule	Take 1 capsule ( <b>hard, soft, etc.</b> ) orally Three times a day	<b>prn as directed</b>	Incorrect or incorrectly formatted SIG	SIG should be free of all extraneous characters  All patient instructions should be sent in their designated SIG field; No parts of the SIG should be in the Notes
Lotrel 5 mg-10 mg capsule	Take 1 capsule ( <b>hard, soft, etc.</b> ) orally Daily	<b>Name Brand Medically Nec.</b>	Incorrect or incorrectly formatted SIG; Conflicting or Supplementary Drug Substitution information in the Notes	SIG should be free of all extraneous characters  All Drug Substitution information should be sent in its designated field; No parts of the Drug Substitution information should be in the Notes
Suprax 400 mg <b>capsule</b>	Take 1 capsule ( <b>hard, soft, etc.</b> ) orally qd		Incorrect or incorrectly formatted SIG; Incorrect, Missing or Incomplete Dosage Form sent in Drug Description	SIG should be free of all extraneous characters - Suprax 400mg is not available in capsule form; Appropriate dosage form: <b>Oral Tablet</b>

## SureScripts® E-Prescribing Best Practice Guidelines (continued)

### Category III—Prescription Common Mistakes (continued)

(2) Incomplete SIG

The following examples indicate incomplete SIG:

Drug Description	SIG	Comment
Suprep 17.5 gram-3.13 gram-1.6 gram Oral Solution	Take 1 solution, reconstituted, oral orally As Needed	SIG should include the <b>dose, route and frequency</b> of the prescribed medication
Coumadin 4 mg tablet	Take 2 tablet orally as directed	SIG should include the <b>dose, route and frequency</b> of the prescribed medication
Zithromax Z-Pak 250 mg tablet	Take 1 tablet orally As Directed	SIG should include the <b>dose, route and frequency</b> of the prescribed medication

## SureScripts® E-Prescribing Best Practice Guidelines (continued)

### Category III—Prescription Common Mistakes (continued)

(3) Conflicting or Supplementary SIG information included in the Notes

Drug Description	SIG	Notes	Comment
nystatin 100,000 unit/gram Topical Ointment	Apply 1 ointment (gram) topically Twice a day	FOR CORNER OF LIP	All patient instructions should be sent in their designated SIG field; No parts of the SIG should be in the Notes
metformin 500 mg tablet	Take 1 TABLET orally bid	*take 1 tablet daily for 1 month, then increase to 1 tablet twice a day	All patient instructions should be sent in their designated SIG field; No parts of the SIG should be in the Notes
Augmentin 875 mg-125 mg tablet	Take 1 tablet orally Every 12 hours	x 5 days	All patient instructions should be sent in their designated SIG field; No parts of the SIG should be in the Notes
Mobic 7.5 mg tablet	Take 1 tablet orally twice a day	as needed	All patient instructions should be sent in their designated SIG field; No parts of the SIG should be in the Notes

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