



# ChartMaker® Clinical Release Notes

ChartMaker® 2016 (fv6.2.4)

\*\*\*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

- **Audit Trail** – The Audit Trail has been updated to track when an order has been uploaded to the PatientPortal. When the **Send Print Procedures and Send to PatientPortal** or **Send to PatientPortal** option is selected from the facesheet context menu for Procedures, and audit event will be created. When such an event occurs the Event column will display **Export**; the Group column will display **Order**; the Audit Trail Description will display the list of **Orders** separated by a semicolon; and the patient's **Account #** will be listed in the Metadata column.
- **Audit Trail** – The Audit Trail has been updated to track when a new patient is added in ChartMaker® Mobile (requires ChartMaker® Mobile version 6.2.4 due to be released 09/15/2017). When a new patient audit event occurs, the Event column will display **Added**; the Group column will display **Person**; the Audit Trail Description will display **Status**; and the patient's **Account #, Practice, and Mobile Username** (in comments) will be listed in the Metadata column.
- **Export Patient Data** – The **Document Type** field, in the Export Patient Data dialog, has been updated with a **Referral Summary** option that becomes available whenever the **Date Range** option is selected above. See Figure 1. When the Referral Summary is selected as the Document Type, the system will generate a Referral Summary note for each of the patients selected that have an open referral for the date range specified.

Name	Date of Birth	Account #
Duck, Daffy	2/1/1963	10102

Name	Date of Birth	Account #
Duck, Daffy	2/1/1963	10102

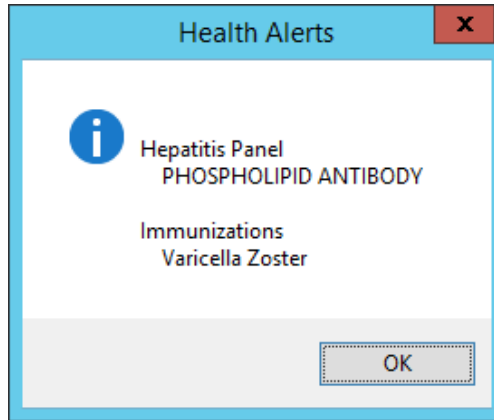
Figure 1 – Export Patient Data

**Added Features (continued)**

- The Facesheet – Health Alert** – The Health Alert button in the Facesheet has been updated so that whenever button becomes active (highlighted), indicating that a procedure is due per the Flow Sheets, you can now click the **Health Alert** button to access a Health Alerts dialog that will display the Flow Sheet name, and underneath any procedures that are due for that flowsheet. See Figures 2 and 3.



**Figure 3 – The Facesheet – Health Alert Button**



**Figure 3 – Health Alerts**

- History Tab** – The Global (**All**) and **Results** views of the History tab have been updated to display the LOINC codes in parentheses after the answers to screening questions in the Detail column, for the **Social, Psychological, and Behavioral, Quick Depression Assessment Panel (PHQ9)**, and **Generalized Anxiety Disorder (GAD7)** questionnaires. See Figure 4.

Date	Name	Detail	Action	Code	SNOMED Code	Signer	Type
2017-08-29 ...	Little interest or pleasure in doing thi...	Several days (LA6569-3)	Entered	44250-9			Value
2017-08-29 ...	Feeling down, depressed, or hopeless...	Several days (LA6569-3)	Entered	44255-8			Value
2017-08-29 ...	Patient Health Questionnaire 2 item (...)	2	Entered	55758-7			Value
2017-08-29 ...	What is the highest grade or level of ...	High school graduate (LA15564-0)	Entered	63504-5			Value
2017-08-29 ...	How many days of moderate to stren...	1	Entered	68515-6			Value
2017-08-29 ...	On those day that you engage in mo...	20	Entered	68516-4			Value
2017-08-29 ...	How often do you have a drink cont...	2-4 times a month (LA18927-6)	Entered	68518-0			Value
2017-08-29 ...	How many standard drinks containin...	1 or 2 (LA15694-5)	Entered	68519-8			Value
2017-08-29 ...	How often do you have 6 or more dri...	Less than monthly (LA18933-4)	Entered	68520-6			Value
2017-08-29 ...	Total score [AUDIT-C]	3	Entered	75626-2			Value
2017-08-29 ...	How hard is it for you to pay for the v...	Somewhat hard (LA22683-9)	Entered	76513-1			Value
2017-08-29 ...	Do you feel stress - tense, restless, n...	Only a little (LA22687-0)	Entered	76542-0			Value

**Figure 4 – History Tab**

## Added Features (continued)

- **History Tab** – The **Procedures** view of the History tab has been updated with a **SNOMED Code** column that will display any SNOMED Codes attached to the corresponding procedure. See Figure 5.

Date	Procedure	Comments	Action	CPT Code	SNOMED Code	Signer	Target Date
2017-05-22 ...	MMR VACCINE, SC		Added	90707	310374009		
2016-01-27 ...	URINALYSIS		Added	81005		D	2/1/2016
2014-07-14 ...	OFFICE/OUTPATIENT VISIT,...		Added	99211	30346009	D	
2014-01-14 ...	Surgery Procedure		Added	55899			
2014-01-14 ...	URINALYSIS		Added	81005			1/19/2014
2014-01-14 ...	Surgery Procedure		Added	55899			
2014-01-14 ...	Immunization Procedure		Added	90471	127785005, 171...		
2014-01-14 ...	Lab Procedure		Added	89240	410343006, 410...		1/19/2014
2014-01-13 ...	Lab Procedure		Added	89240			

Figure 5 – History Tab – Procedures View

- **Import Patient Data** – The Import Document dialog (accessed via **Chart > Import > Patient data**) has been updated with a **This patient has been transferred or referred to provider, or has not yet seen the provider** option that allows you to track whether the patient has been transferred, referred, or never seen the provider when importing a document for a patient. See Figure 6. Whenever this option is selected, it will be counted toward any applicable Meaningful Use and MIPS 2018 performance measures.

Figure 6 – Import Document

## Added Features (continued)

- Import from HIE** – The Import Document from HIE dialog (accessed via **Chart > Import > From HIE**) has been updated with a **This patient has been transferred or referred to provider, or has not yet seen the provider** option that allows you to track whether the patient has been transferred, referred, or never seen the provider when importing a document from an HIE for a patient. See Figure 7. Whenever this option is selected, it will be counted toward any applicable Meaningful Use and MIPS 2018 performance measures.

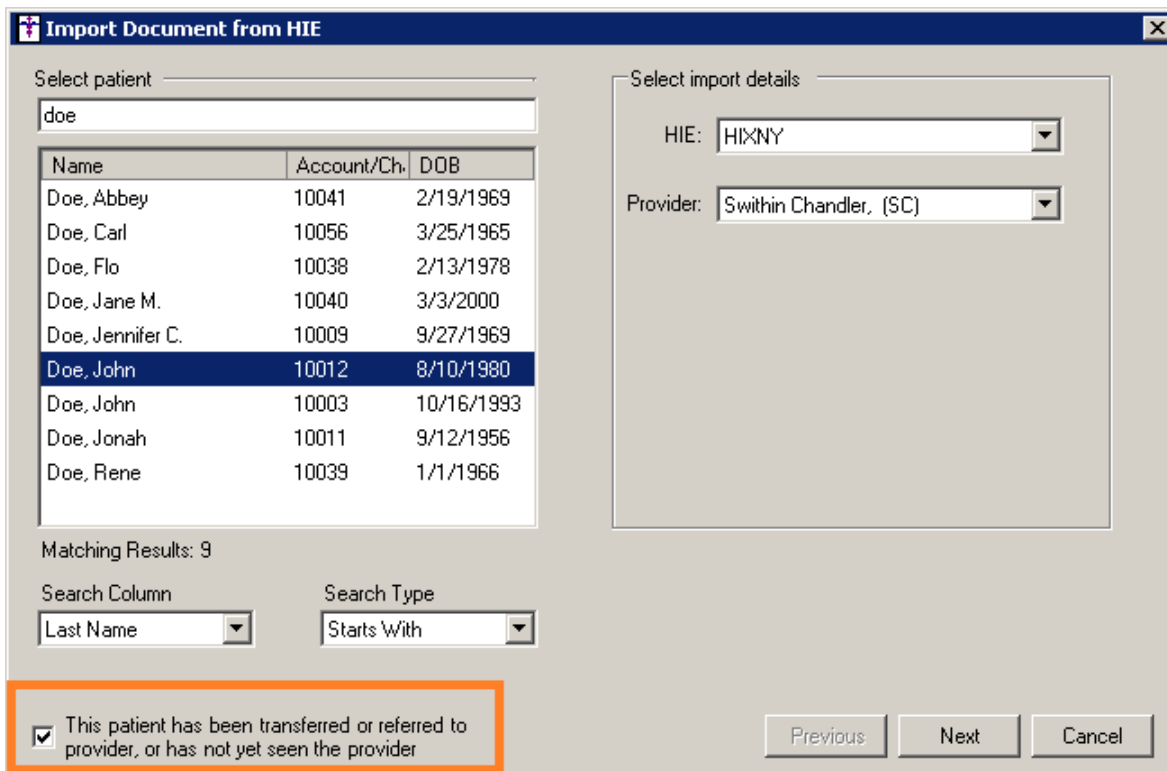


Figure 7 – Import Document from HIE

- Infobutton** – A new Infobutton dialog has been created that allows you to research and retrieve diagnostic and therapeutic information concerning a patient via MedlinePlus. The Infobutton dialog is accessed through the Chart menu when in a patient’s chart (**Chart > Infobutton**), or via the **i** button located at the bottom-left of the decision support Alert Manager dialog. See Figure 8.

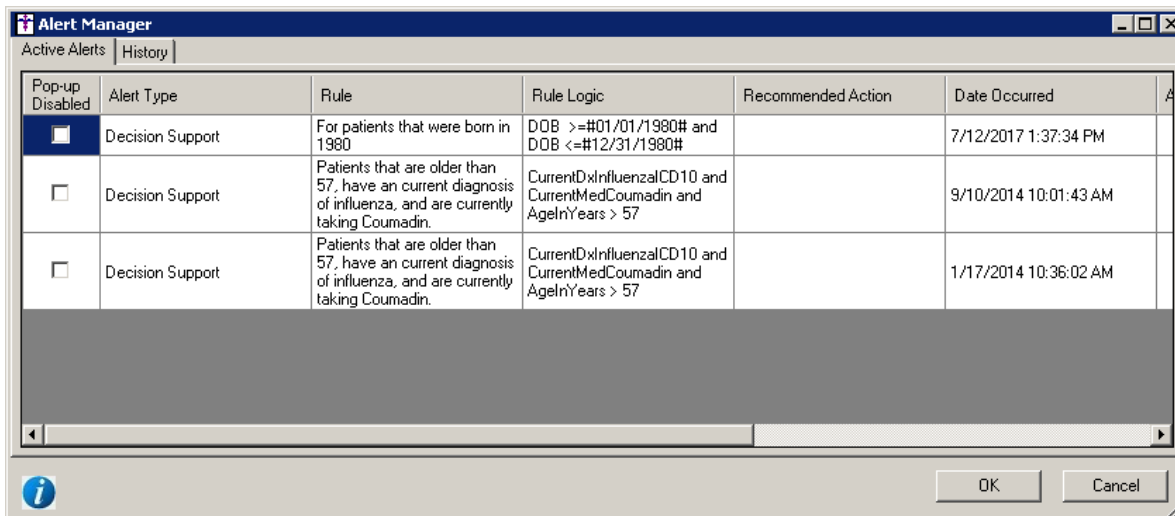


Figure 8 – Alert Manager

## Added Features (continued)

### Infobutton (continued)

After the Infobutton dialog has been accessed, you can then configure the various parameters to search, locate, save, and print applicable diagnostic and therapeutic information as needed. See Figure 9. In the Patient Search Criteria section of the Infobutton dialog, you can refine your search by the patient's **Age, Birth Date, Birth Sex, Race, Ethnicity, Sexual Orientation, Gender Identity**, as well as **Diagnoses, Medications, Procedures, and Lab Results**. When selecting diagnoses, medications, procedure, and lab results the corresponding drop-down lists will populate with information from the patient's chart.

After the search criteria has been selected, you can click the **Search** button, and the system will retrieve any applicable information from MedlinePlus. You can then scroll through the information in the various tabs below, click the various links in the pages as needed, and then once the desired information has been located, you can save or print that information using the corresponding buttons. Any information saved will appear as a hyperlink in the **Saved Information** section. You can then access that information as needed by double-clicking the link, and the information will open in a tab below. When that information is no longer needed, you can delete it by highlighting the item in the Saved Information section, and then clicking the **Delete** button.

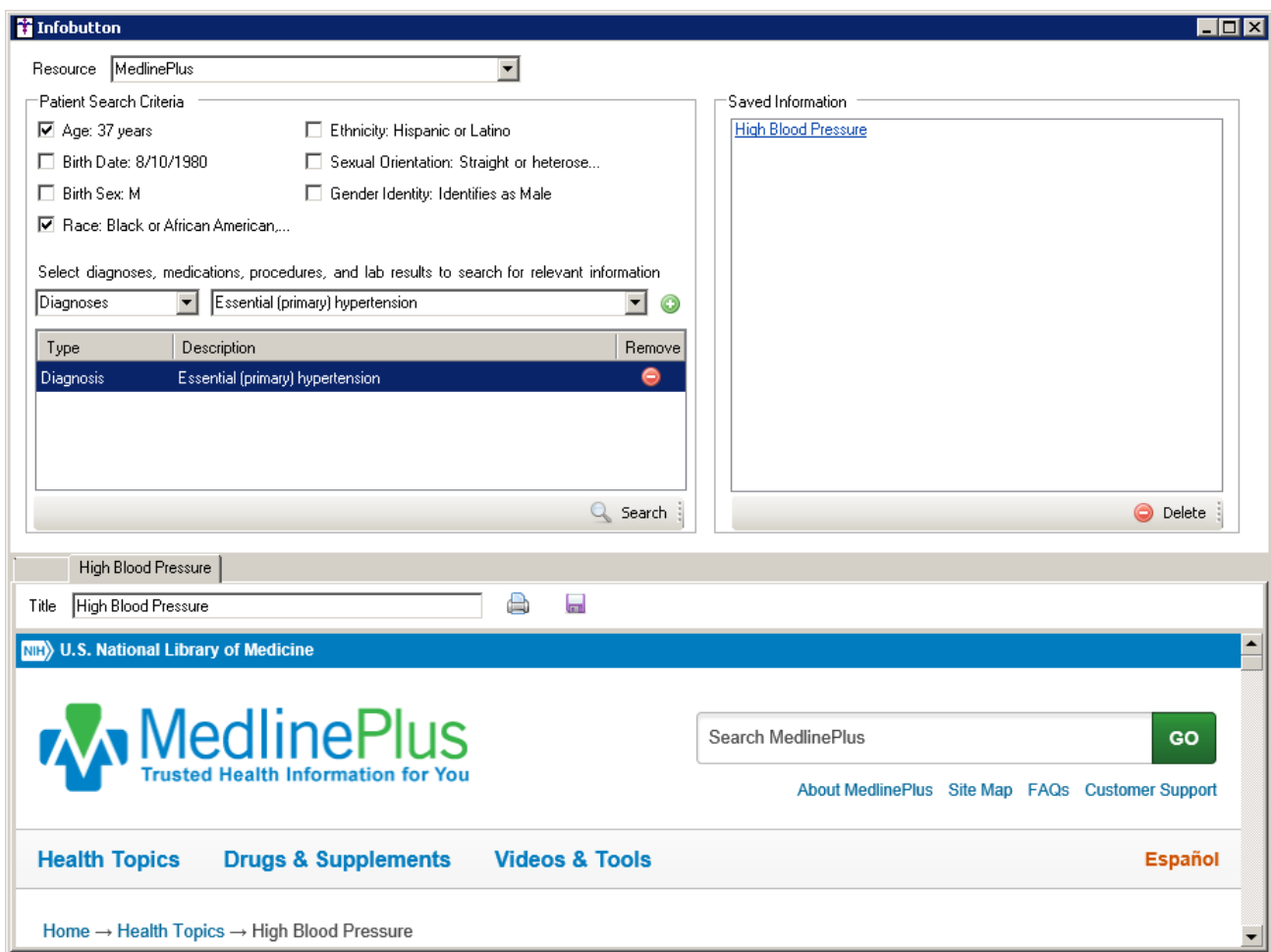


Figure 9 – Infobutton

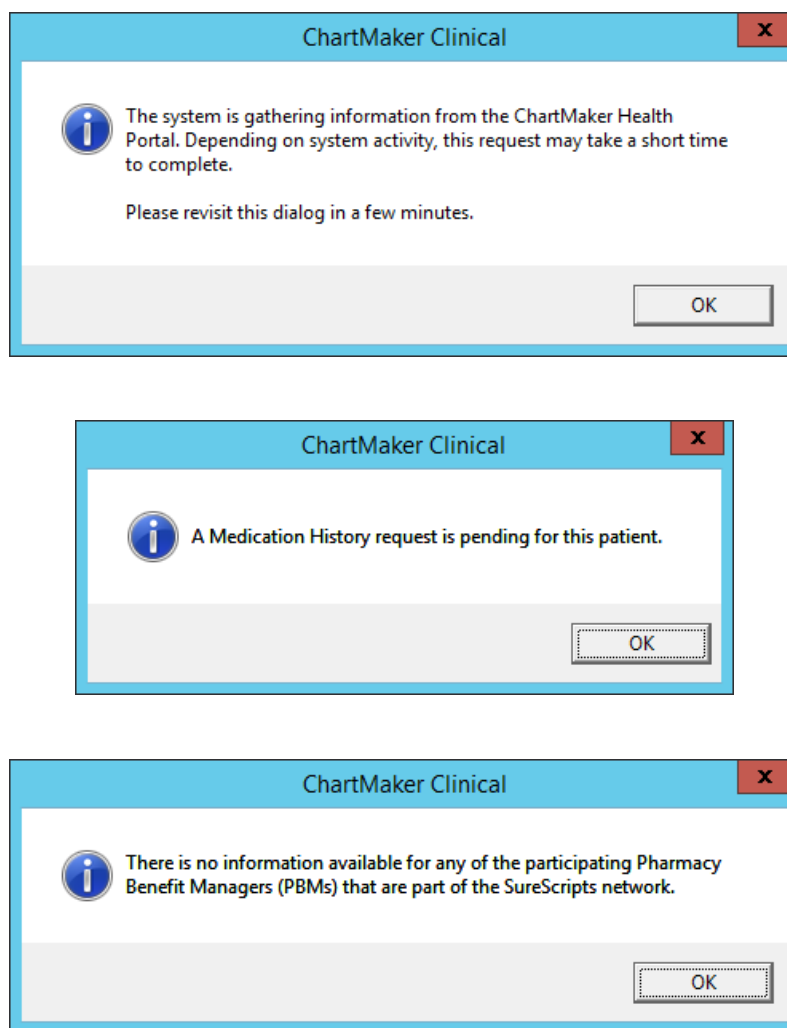
- **Medications – Process Change Request** – The system has been updated to allow you to create and maintain user-defined Comments when processing change request denials as well as unmatched change request denials.
- **Medications – Process Refill Request** – The system has been updated to allow you to create and maintain user-defined Comments when processing refill request denials as well as unmatched refill request denials.

## Added Features (continued)

- **Medication History** – The system has been updated with a Medication History dialog that allows you to import Medication History for a patient from the SureScripts Network into the patient's chart, and then reconcile that information with any medications currently in the patient's chart. The Medication History dialog is accessed through the Chart menu when in a patient's chart (**Chart > Medication History**). The medication history information is also available through the Medication History button in the Prescribe Medication dialog, however, you are not able to import and reconcile medications when accessing via the Prescribe Medication dialog, it is view only from this area.

Do note, to access Medication History for a patient, the patient must have given medication history consent and it must be configured in the Consent dialog for that patient (i.e., in **ID Tab > Consent** or **Medication History Consent** button in Prescribe Medication dialog).

When accessing the Medication History dialog, you may first receive a series of dialogs indicating that the system is gathering the information, or that the Medication History is pending for the patient. Likewise, you may also receive dialogs that indicate that there is no history information available for the patient, or that history information could not be retrieved. See Figure 10 for examples of these types of messages.



**Figure 10 – ChartMaker Clinical – Medication History Messages**

## Added Features (continued)

### Medication History (continued)

In the Medication History dialog, the patient basic demographic information will be listed, along with medication history for that patient. See Figure 11. Beside the Medication History title, at the top of the dialog, the number of medication occurrences will appear in parentheses.

At the bottom of the dialog there is a **Filter By** section that allows you filter the medication history by **Medication**, **Prescriber**, and **Last Fill Date**. After the filter items are configured as desired, simply click the **Filter** button. You can then view the medication by scrolling through the Medication section, **Reconcile** the medications, or **Print** the medication history. When reconciling and printing, only those medications that are included in the filter criteria will be included.

Medication History (54)

Consent: Ben Davidson  
Date Received: 8/31/2017 11:50:14 AM

**Patient -**

Name:	SELENA KYLE
Gender:	F
Date of Birth:	10 / 11 / 1966
Address:	23230 PORT
City:	AKRON
State:	OH
Zip Code:	44306

**Medication -**

Drug Description:	LIFESCAN UNISTIK 2 LANCETS
-------------------	----------------------------

Disclaimer: Some information may not be available or accurate in this list, including items that the patient asked not be disclosed due to patient privacy concerns, over-the-counter medications, low cost prescriptions, prescriptions paid for by the patient, non-participating sources, or errors in insurance claims information. The provider should independently verify medication history with the patient.

Filter By...

Medication:  Prescriber:

Last Fill Date: 7/ 1/2015 to 8/31/2017

Figure 11 – Medication History

## Added Features (continued)

### Medication History (continued)

After the Reconcile button has been clicked, a Clinical Information Reconciliation (CIR) dialog will appear that allows you to view and reconcile the various medications, broken into the patient's Current Chart Medications, Available Medications from Surescripts Medication History, and a Final Merged List. Each list will show the available medication (name, start and last modified dates, last fill date, and sig information) detail. See Figure 12.

Medications in the Available Medications from Surescripts Medication History list are color-coded to denote the level of medication information available and the ability of importation. You can click the **Legend** option for a complete listing. Medications can be moved individually by clicking the **Add** button, or in bulk using the **Add All** button. Each medication also includes a **Skip** checkbox that can be manually selected, but will be turned on if the medication already exists, has an end date that has passed, or if there isn't enough information to import the medication. Medications that have been added will show in the Final Merged List and labels will be updated to show their status as added.

New medications added to the Final Merged List can be edited by using the **Change** button (except for controlled substances which cannot be changed during the import process). This will open the Prescribe Medication dialog with as much of the available information found in the Surescripts Medication History pre-filled. The Prescribe Medication dialog will also show the original name, dates, and text from the import at the bottom of the dialog for reference.

An added medication can be removed from the list and existing medications can be discontinued on either the final or current list. If a medication is discontinued, the End Medication dialog will appear and then the medication will be marked as ended.

After all the applicable medications have been reconciled, you can **Confirm** the import. The system will then import the medications in the Final Merged List, and after confirmation messages have been satisfied, you will return to the Clinical Information Reconciliation (CIR) dialog with the medication information updated. An Auto-generated drug log will be created listing the drug details for each medication imported. Likewise, the patient's facesheet will be updated with the medications imported, and the medications will appear in the patient's History tab.

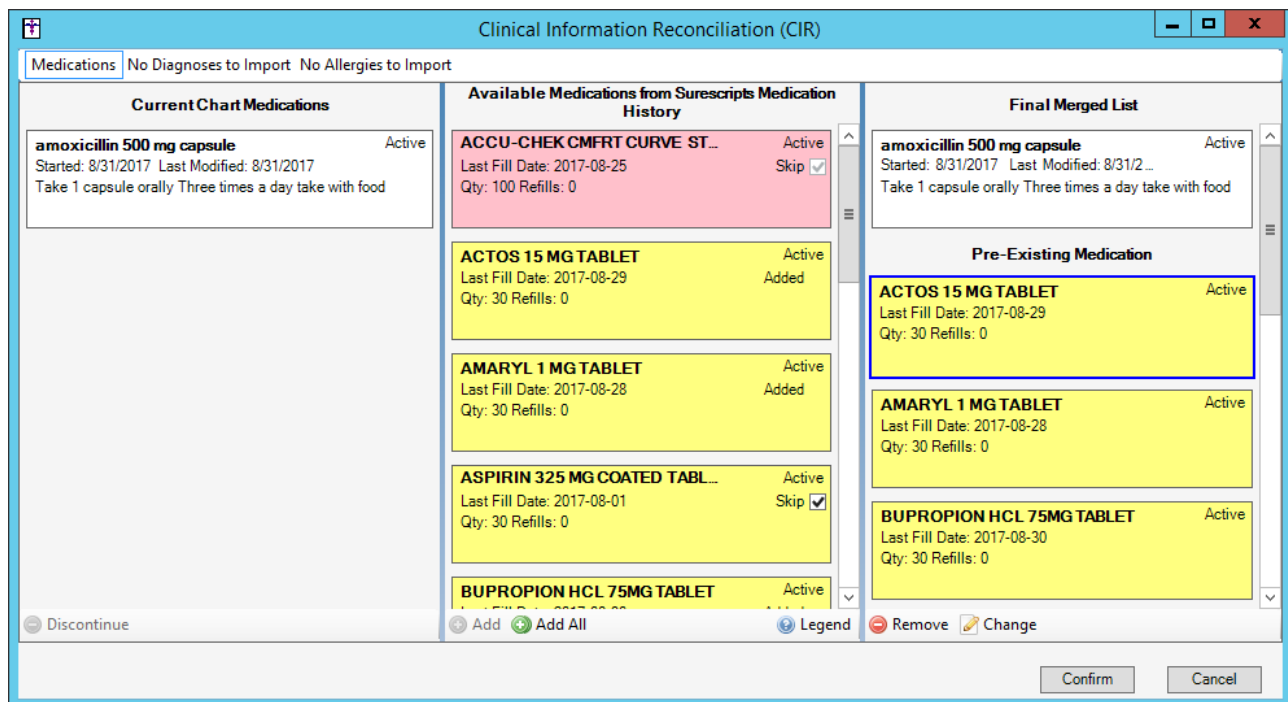


Figure 12 – Care Plan Button



## Added Features (continued)

- **The Note Tab – Care Plan** – A new **Care Plan** widget is available to add to chart note templates, via the Template Editor, that allows you to add Health Status, Impressions, Health Concerns, and Goals regarding a patient's health care. See Figure 13.



Figure 13 – Care Plan Button

When the Care Plan widget is accessed, a **Care Plan** dialog will appear allowing you to add, edit, and delete care plan information for the patient. See Figure 14.

The **Health Status** drop-down list will contain pre-configured status items along with the corresponding SNOMED codes. You can select an item or leave this field blank. When a health status is selected, it will appear in the History tab along with the SNOMED description and code.

The **Impressions** field allows you to enter any free-text impressions or assessments.

The **Health Concerns** section allows you to add chart diagnoses that are of concern via the **Add Diagnoses** button, or additional health concerns in free-text format via the **Add Additional Health Concerns** button. When adding diagnoses, an Add Diagnoses as Health Concerns dialog will appear listing any active, inactive, or pre-existing diagnoses that are in the patient's chart; you can simply check any diagnoses you want to include as health concerns. When adding additional health concerns, an Add Health Concern dialog will appear allowing you to add a free-text description of the concern. After diagnoses and additional health concerns have been added, you can edit and remove items by highlighting the applicable items, and using the **Edit** and **Remove** button.

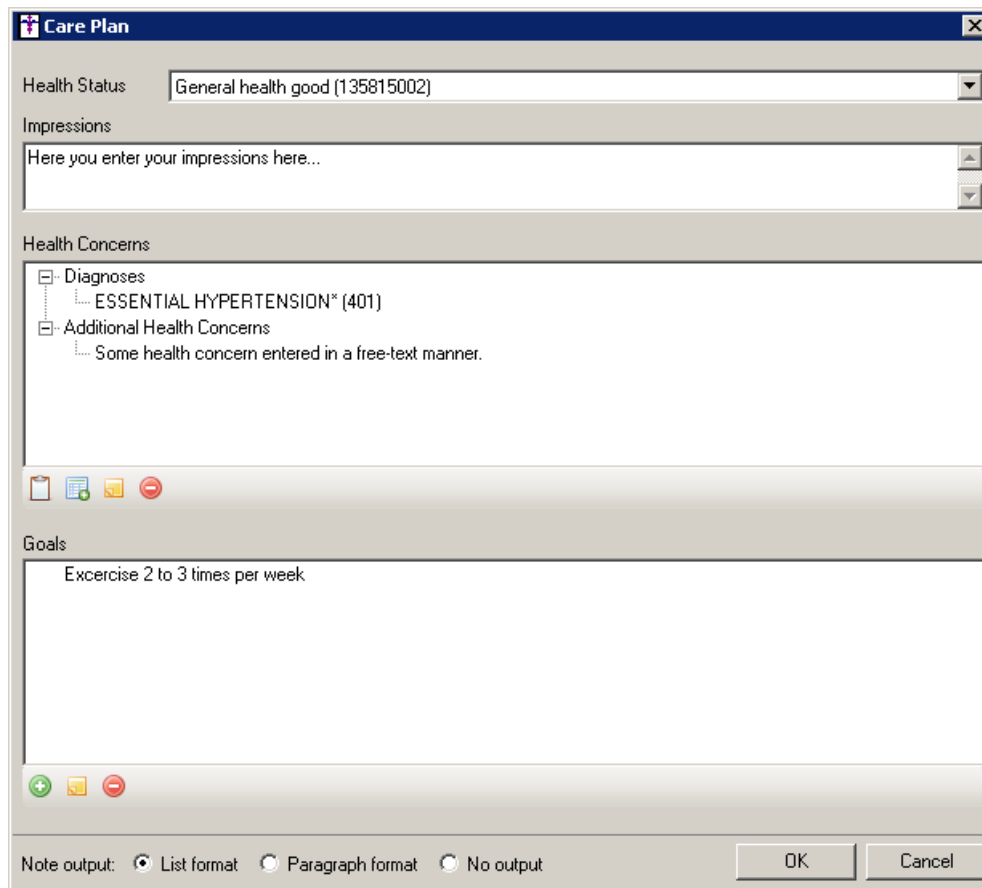


Figure 14 – Care Plan

## Added Features (continued)

### The Note Tab – Care Plan (continued)

The **Goals** section allows you to add, edit and remove health goals for the patient via the **Add Goal**, **Edit**, and **Remove** buttons. When adding and editing goals, the Add Goal dialog will appear allowing you to select from user-created list of common goals, or to enter or modify a free-text goal for the patient. See Figure 15. Likewise, the **Initiated By** field allows you to associate who initiated the goal: **Provider**, **Patient**, or **Both**. Common goals can be maintained via the Goal Maintenance dialog accessed by **Edit** button. Goals added in the Goals Maintenance dialog can be shared with other users in the system, as desired. When a new goal is added, it will appear in the patient's History tab with the text of the goal.

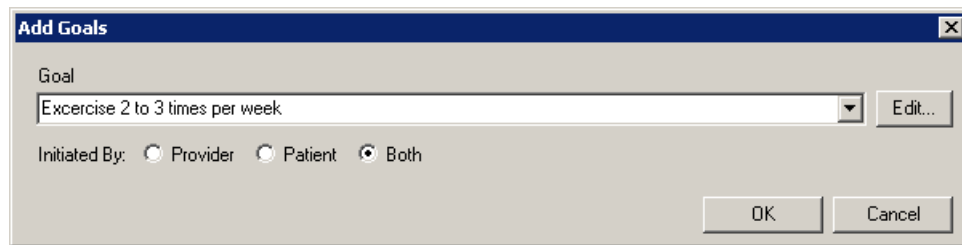


Figure 15 – Add Goals

In addition, in the **Note output** field you can determine how this information is outputted to the note. You can choose to output the configured information in **List format**, **Paragraph format**, or **No Output**.

When creating a note with a Care Plan button, if the patient already has a Care Plan from a previous note, all the previously entered information will automatically be pulled into the new note. When opening the Care Plan dialog, you can view, edit, and remove items done previously. A patient will only have one active care plan at any time, and this information will be included when generating Transition of Care documents for the patient.

- **The Note Tab – Diagnosis** – The **ICD10 Code Set** field, in the ICD10 Search and Crosswalk areas of the Diagnosis Search dialog, has been updated with an **October 1, 2017 – Sept 30, 2018** code set when searching for diagnosis codes or using the crosswalk functionality. You can toggle between the Oct 1, 2014 – Sept 30 2016 code set, the Oct 1, 2016 – Sept 30 2017 code set, and All ICD10 Codes, in addition to this new code set. This allows you to easily search for the applicable ICD10 codes that are active, as outlined by the CDC, for the applicable date ranges. When accessing the Diagnosis Search dialog when adding or editing a diagnosis in the chart note, the system will default to the code set based on the **Note Date** to ensure that the proper ICD codes for that date are selected.
- **The Note Tab – Educational Materials** – The system has been updated so that whenever you have saved education materials from MedlinePlus for a patient, and that patient is registered with the PatientPortal, the links to those web documents will be included in the Educational Materials section of the Clinical Summary that is sent to portal when the applicable note is signed, or if that note is manually sent to the portal by right-clicking the note and selecting **Send to PatientPortal**. When the links are clicked when viewing the Clinical Summary in PatientPortal, the exact documents that the provider selected will open.

## Added Features (continued)

- **The Note Tab – Implantable Device** – The FDA Device Name field in the Implantable Devices dialog has been renamed to **Device Name**. Also, the District Identification Code field has been renamed to **HCT/P Distinct ID Code**. See Figure 16.

The screenshot shows the 'Implantable Devices' dialog box with the following details:

- Device List:** A list of devices with 'Cadaveric-donor/synthetic mineral bone graft' selected.
- Device Information:** Metadata including 'Device Record Status: Published', 'Record Publish Date: 01/28/2016', 'Commercial Distribution Status: In Commercial Distribution', and various identifiers like 'Device ID: W4146EB0010T0475'.
- Device Details:** A form with fields for:
  - Device Name:** Cadaveric-donor/synthetic mineral bone graft (highlighted with an orange box).
  - Device Identifier:** W4146EB0010T0475
  - Serial #:** 000025
  - Batch/Lot #:** 000000000000XYZ123
  - Manufacture Date:** 2/1/2013
  - Expiration Date:** 2/1/2014
  - HCT/P Distinct ID Code:** A999713123456 (highlighted with an orange box).
  - Device Status:** Active
  - Device Removed:** No
- User-defined Device Name:** New Implanted Device
- Device UDI:** =/W4146EB0010T0475=,000025=A99971312345600=>014032=)013032&,100000000000XYZ123
- Implanted Date:** Month, Day, Year dropdowns.

Figure 16 – Implantable Devices

- **The Note Tab – Order Procedure – Immunizations** – The program has been updated to ensure that the latest CVX codes and CVX mappings, per the latest CDC guidelines, are used for immunization procedures.

## Added Features (continued)

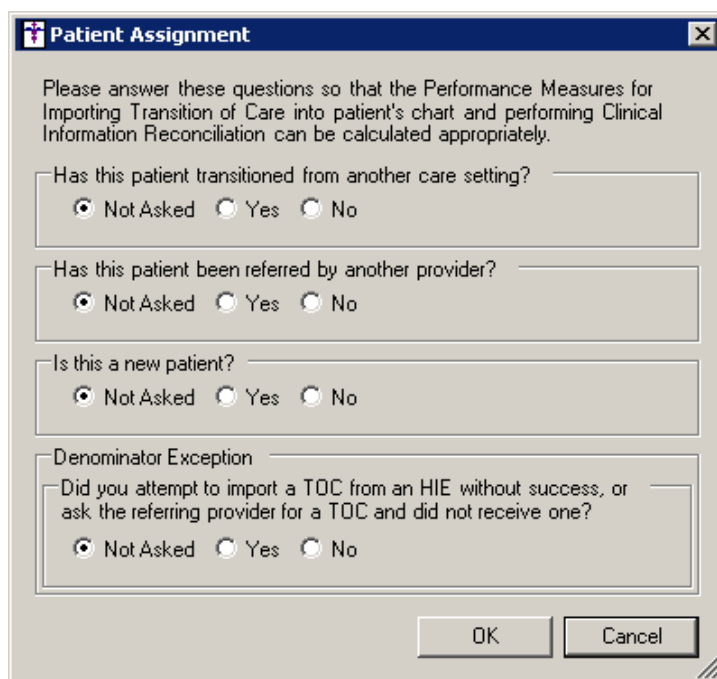
- **The Note Tab – Patient Assignment** – The program has been updated with the ability to enter and capture patient assignment information for incoming transition of care patients to ensure that the **Importing Transition of Care into Patient’s Chart** and **Clinical Information Reconciliation** performance measures are calculated correctly for Meaningful Use Stage 3 and MIPS 2018 via the Patient Assignment button. See Figure 17.

Patient Assignment: 

Figure 17 – Patient Assignment Button

Once the Patient Assignment button has been clicked the Patient Assignment dialog will appear allowing you to answer four questions regarding the patient’s transition of care and whether a Denominator Exception has been performed. See Figure 18. To edit patient assignment information, you must access the chart in which the original note was entered.

When Patient Assignment information is entered, it will be counted toward any applicable Meaningful Use Stage 3 and MIPS 2018 performance measures.



The image shows a dialog box titled "Patient Assignment". The text inside reads: "Please answer these questions so that the Performance Measures for Importing Transition of Care into patient's chart and performing Clinical Information Reconciliation can be calculated appropriately." There are four sections, each with a question and three radio button options: "Not Asked", "Yes", and "No".

- Has this patient transitioned from another care setting?  
 Not Asked  Yes  No
- Has this patient been referred by another provider?  
 Not Asked  Yes  No
- Is this a new patient?  
 Not Asked  Yes  No
- Denominator Exception  
Did you attempt to import a TOC from an HIE without success, or ask the referring provider for a TOC and did not receive one?  
 Not Asked  Yes  No

At the bottom right of the dialog box are "OK" and "Cancel" buttons.

Figure 18 – Medication Reconciliations

- **The Note Tab – Screening – Social, Psychological, and Behavioral** – The question under the **Education** category (What is the highest grade or level of school you have completed or the highest degree you have received?), and the first question under the Social Connection and Isolation category (Are you now married, widowed, divorced, separated, never married or living with a partner?), have been updated with a **Declined to specify** option. Any answer that is tagged as **Declined to specify** will output to the note and will also appear in the History tab.
- **The Note Tab – Signature Widget** – The system has been updated to allow those users accessing the ChartMaker Medical Suite applications in a Cloud environment to capture signatures using a Topaz Signature Device. Be aware that an Advanced Preference needs to be configured prior to use, and other setups may be required to enable this functionality.

## Added Features (continued)

- **Patient-Generated Health Data** – The Patient-Generated Health Data dialog has been updated with a Date Added column so you can easily see when data was entered for the patient. See Figure 19. Likewise, using the **Add** button, the title of the dialog accessed has been changed from Add Health Data to **Add Health Data Website**; and the URL field, in legacy versions of this dialog, has been renamed **Website**.

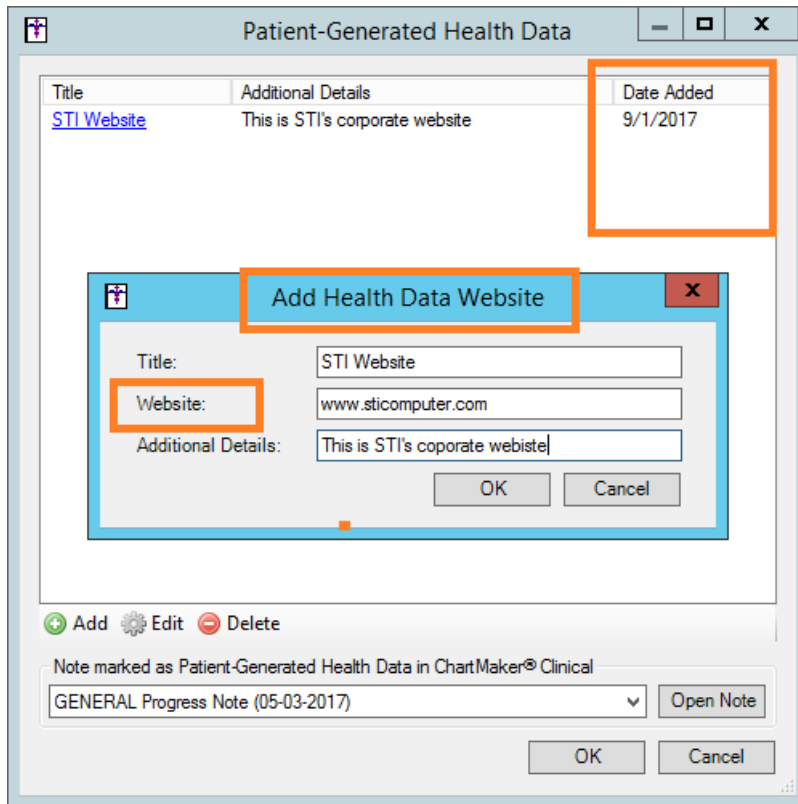


Figure 19 – Patient-Generated Health Data

- **System Tables – Diagnosis Search** – The **ICD10 Code Set** field, in the ICD10 Search and Crosswalk areas of the Diagnosis Search dialog, has been updated with an **October 1, 2017 – Sept 30, 2018** code set when searching for diagnosis codes or using the crosswalk functionality. You can toggle between the Oct 1, 2014 – Sept 30 2016 code set, the Oct 1, 2016 – Sept 30 2017 code set, and All ICD10 Codes, in addition to this new code set. This allows you to easily search for the applicable ICD10 codes that are active, as outlined by the CDC, for the applicable date ranges. When accessing the Diagnosis Search dialog via the **Edit > System Tables** menu, the system will default to the code set based on the current day's date.

## Added Features (continued)

- System Tables – Mobile – Mobile Administration** — The **Audit** tab, in the Mobile Administration dialog, has been updated to track to when a new patient is created in ChartMaker® Mobile (requires ChartMaker® Mobile version 6.2.4 due to be released 09/15/2017). See Figure 20. When a new patient audit event occurs, the Activity Type column will display **New Patient**, and the Additional Info column will display the patient's **Date of Birth** and the **Practice** to which the patient was added.

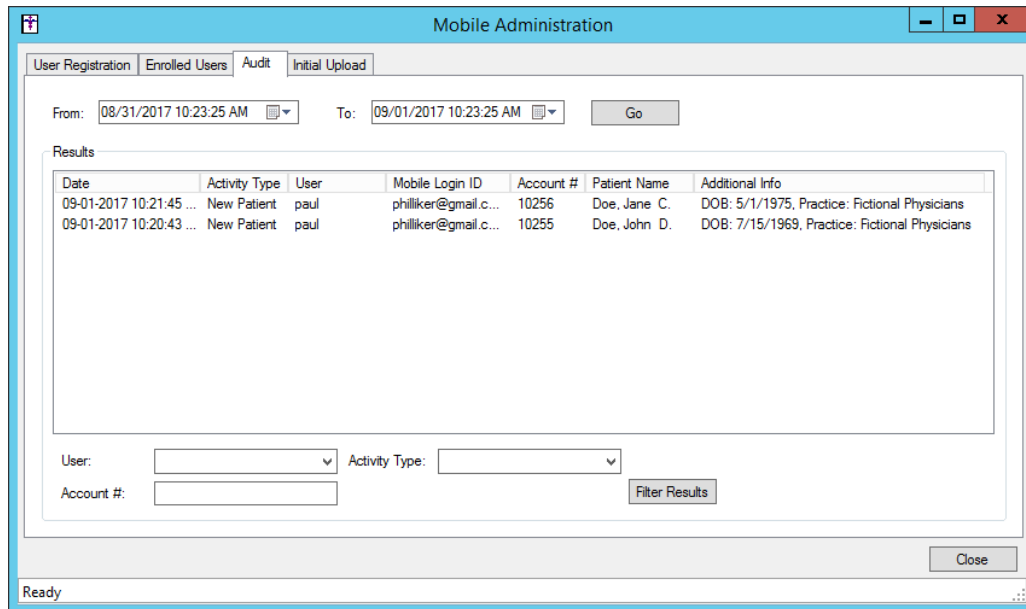


Figure 20 – Mobile Administration – Audit

- System Tables – Mobile – New Patients** — A **New Patients From ChartMaker® Mobile** dialog has been created to easily view all patients that were created in ChartMaker® Mobile (requires ChartMaker® Mobile version 6.2.4 due to be released 09/15/2017). See Figure 21. When new patients are added through the mobile app, they are given a status of NPI (New Patient Incomplete Information), and need to be activated in Practice Manager prior to processing any pending charges. Patients will remain listed in this dialog until their status has been updated in Practice Manager.

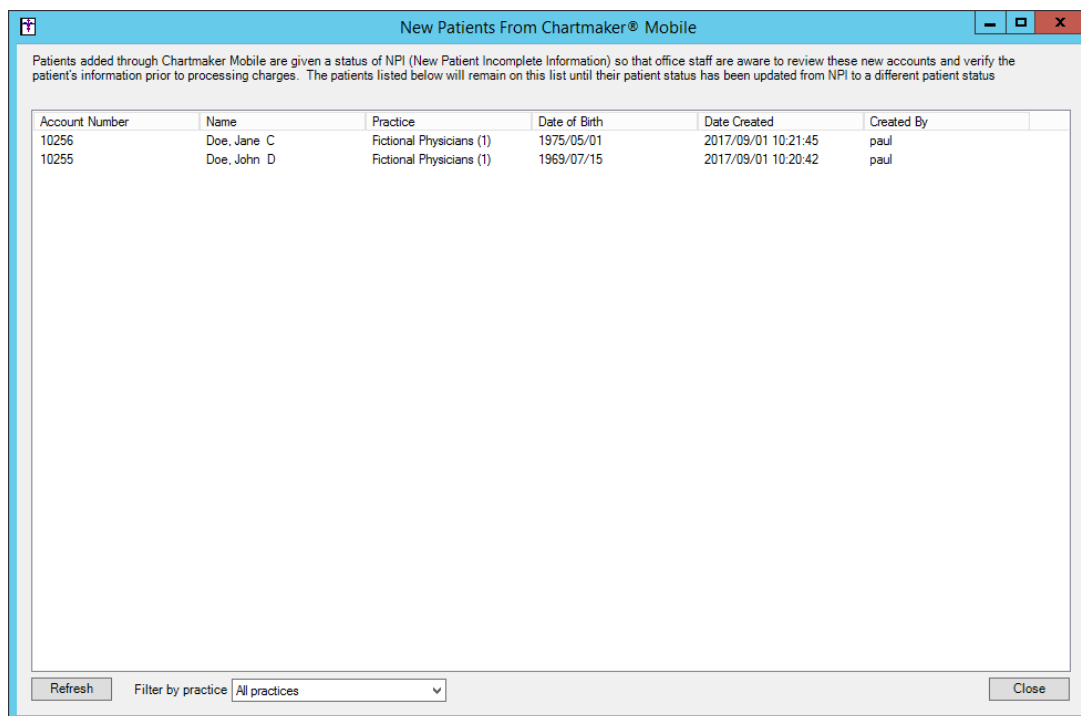


Figure 21 – Mobile Administration – Audit

## Added Features (continued)

- **Template Editing – Care Plan** – The Template Editor has been updated with the ability to add a **Care Plan** widget to a template that will allow you to add health related information such as health status, impressions and concerns, as well as goals for a patient. See Figure 22.



Figure 22 – Care Plan Button

- **Template Editing – Patient Assignment** – The Template Editor has been updated with the ability to add a Patient Assignment button to a template. The Patient Assignment button lets you to track patient assignment information for incoming transition of care patients to ensure that the **Importing Transition of Care into Patient's Chart** and **Clinical Information Reconciliation** performance measures are calculated correctly for Meaningful Use Stage 3 and MIPS 2018. See Figure 23.

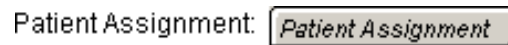


Figure 23 – Patient Assignment Button

When the Patient Assignment button is added to the template you can access the Patient Assignment dialog that allows you to add a **Heading** that will be displayed prior to the **Patient Assignment** button. See Figure 24.

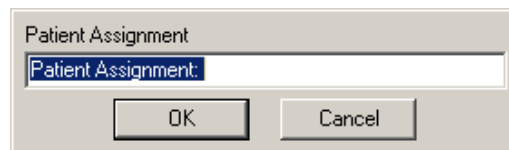


Figure 24 – Implantable Device

## 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 dosepack 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)**

<b>Drug Description</b>	<b>SIG</b>	<b>Notes</b>	<b>Nomenclature Description</b>	<b>Comment</b>
Combivent Respimat 20 mcg-100 mcg/actuation Aerosol Inhaler	Spray 1 aerosol 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 2 aerosol 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 2 puffs puff(s) 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 1 cream (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 (hard, soft, etc.) orally Three times a day	prn as directed	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 (hard, soft, etc.) orally Daily	Name Brand Medically Nec.	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 capsule	Take 1 capsule (hard, soft, etc.) 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 Ointment Topical	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

Some icons are from the Silk icon set by Mark James (<http://www.famfamfam.com/>). All rights reserved. Licensed under a Creative Commons Attribution 2.5 License (<http://creativecommons.org/licenses/by/2.5/>).

Some icons are from the Fugue icon set by Yusuke Kamiyamane (<http://p.yusukekamiyamane.com/>). All rights reserved. Licensed under a Creative Commons Attribution 3.0 License (<http://creativecommons.org/licenses/by/3.0/>).