

# Dynamic Documentation





# End User Terminology

# Dynamic Documentation

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**Admission H & P**
[List](#)

Tahoma
 
 Size

**Chief Complaint**  
 Shortness of breath

**History of Present Illness**

**Review of Systems**  
 Constitutional: [No fevers, chills, sweats]  
 Eye: [No recent visual problems]  
 ENMT: [No ear pain, nasal congestion, sore throat]  
 Respiratory: [No shortness of breath, cough]  
 Cardiovascular: [No Chest pain, palpitations, syncope]  
 Gastrointestinal: [No nausea, vomiting, diarrhea]  
 Genitourinary: [No hematuria]  
 Hema/Lymph: [Negative for bruising tendency, swollen lymph glands]  
 Endocrine: [Negative for excessive thirst, excessive hunger]  
 Musculoskeletal: [No back pain, neck pain, joint pain, muscle pain, decreased range of motion]  
 Integumentary: [No rash, pruritus, abrasions]

**Problem List/Past Medical History**  
 Chronic  
 Asthma  
 Pneumonia  
 Historical  
 No historical problems

**Procedure/Surgical History**  
 Tonsillectomy (06/01/1973).

**Medications**  
 Inpatient  
 No active inpatient medications  
 Home  
 Pepcid 20 mg oral tablet, 20.0 mg, 1.0 tabs, Oral, BID

**Allergies**  
 amoxicillin (Hives)




**Social History**  
 Alcohol


Note Details: Akers, Roberta, 12/5/2013 12:36 PM CST, Admission H...

Sign/Submit Save Save & Close Cancel

# Section

- Designated area of a note. The reference template is comprised of one or more sections.

Problem List/Past Medical History   

Chronic  
Asthma   
Pneumonia

Historical  
No historical problems

# Subsection

- **Section nested within another section.**
  - A section can contain 0 to many subsections
  - A subsection cannot contain sections or subsections

Vitals & Measurements  
is a subsection in the  
Objective section



Objective [refresh] [back] [close]

Vitals & Measurements  
T: 36.5 °C (Oral) RR: 16 BP: 120/80

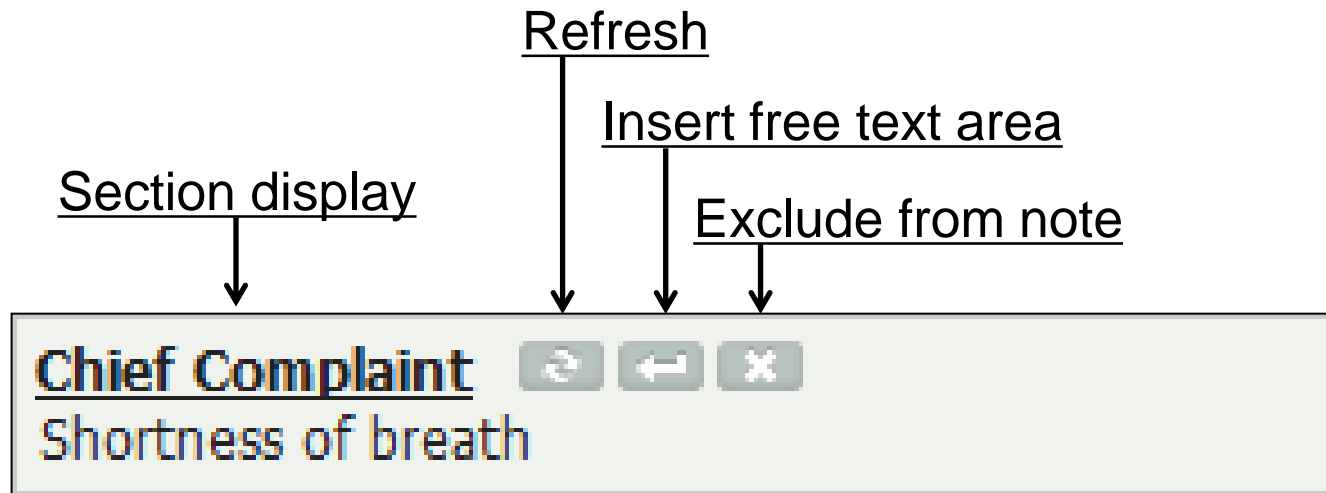
Lab Results

Diagnostic Results

# Section Display

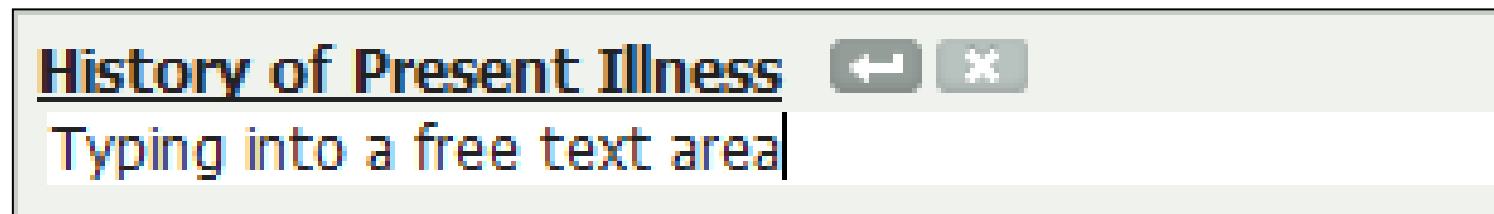
## ■ Title of a section.

- Serves as a target for section or subsection level floating buttons



# Free Text Area

- **Area within the note a user can input text.**
  - Can reside anywhere within a section or subsection



The screenshot shows a user interface for a medical note. At the top, the text "History of Present Illness" is displayed in a bold, blue font and is underlined. To the right of this text are two small, grey buttons: one with a left-pointing arrow and another with an 'X' icon. Below the header, there is a white text input area with a light grey border. Inside this area, the text "Typing into a free text area" is visible in a blue font, followed by a vertical cursor line indicating the current position for typing.

# EMR Content Placeholder

- **Area within the note where chart data is automatically displayed.**
  - Can reside anywhere within a section or subsection

EMR Content  
retrieved using a  
filter and format



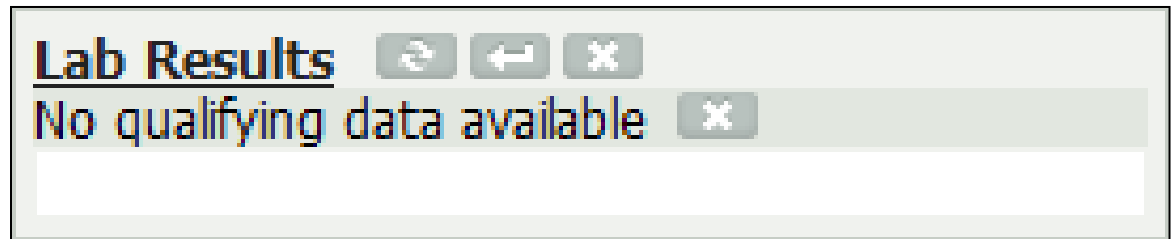
The screenshot shows a window titled "Problem List/Past Medical History" with standard window controls (refresh, back, close). The content is organized into two sections: "Chronic" and "Historical". Under "Chronic", there is a list item "Asthma" with a close button (X) next to it, and "Pneumonia" listed below it. Under "Historical", the text "No historical problems" is displayed.



# Smart Template Placeholder

- **Area within the note where result of running a Smart Template is automatically displayed**
  - Can reside anywhere within a section or subsection

Text built by a  
smart template





# Preferences

# Pref Maint

**Preference Form** [Task Edit View]

Application:  Position:  User:  Search for Preferences:

Level:

- Chart
  - Discern Report
  - Discern Report
  - Result Review
  - Problems and Diagnoses
  - PowerOrders
  - Document Viewing**
  - Chart Summary
  - Allergies
  - Discern Report
  - Histories
  - Immunization Schedule
  - Documentation
  - MAR Summary
  - Medication List
  - Clinical Notes

Existing Preferences

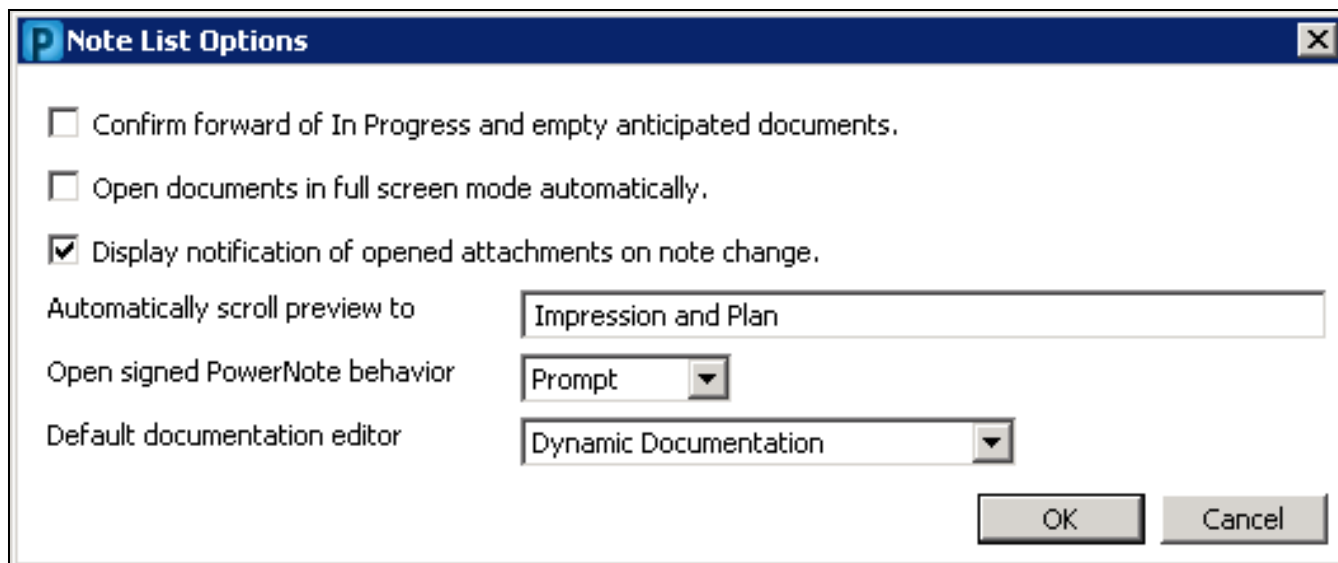
LEVEL	PREFERENCE NAME	VALUE
	ADDENDIUM_DISPLAY	0-Display at Bottom
	ADD_NEW_DYNDOC	1-Yes
	ADD_NEW_POWERNOTE	1-Yes
	ALTERED_AS_AUTH	0-OFF
	CLINICAL_ATTACHMENTS	1-On
	COMMENT_REQD	0-OFF
	CUSTOM_DICTIONARY	
	DEFAULT_ADD_BEHAVIOR	1-Create a new Dynamic Document
	DEFAULT_FONT_NAME	Arial
	DEFAULT_FONT_SIZE	10
	FORWARD_ONSIGN	1-Allow forward after signing
	LAUNCH_MESSAGE	1-Yes
	NO_ENCOUNTER_WARNING	0-OFF
	PRINtheadER	0-Do not print header
	PRINT_DOCUMENTS	1;5;1;4;0

Buttons: Add Tab, Add Component, Add Preference, Delete Preference, Delete Tab, Delete Component, OK, Close, Apply

Path: C:\Program Files\Cerner\prefs.mdb Date/Time: 5/16/2013 12:01 PM

# End User

## ■ List Tab>View>Customize



The screenshot shows a dialog box titled "Note List Options" with a standard Windows-style title bar (blue with a close button). The dialog contains three checkboxes, three text input fields, and two buttons at the bottom right.

- ☐ Confirm forward of In Progress and empty anticipated documents.
- ☐ Open documents in full screen mode automatically.
- ☒ Display notification of opened attachments on note change.

Below the checkboxes are three input fields:

- "Automatically scroll preview to" with a text box containing "Impression and Plan".
- "Open signed PowerNote behavior" with a dropdown menu showing "Prompt".
- "Default documentation editor" with a dropdown menu showing "Dynamic Documentation".

At the bottom right are two buttons: "OK" and "Cancel".



# Reference Template Terminology

# Content

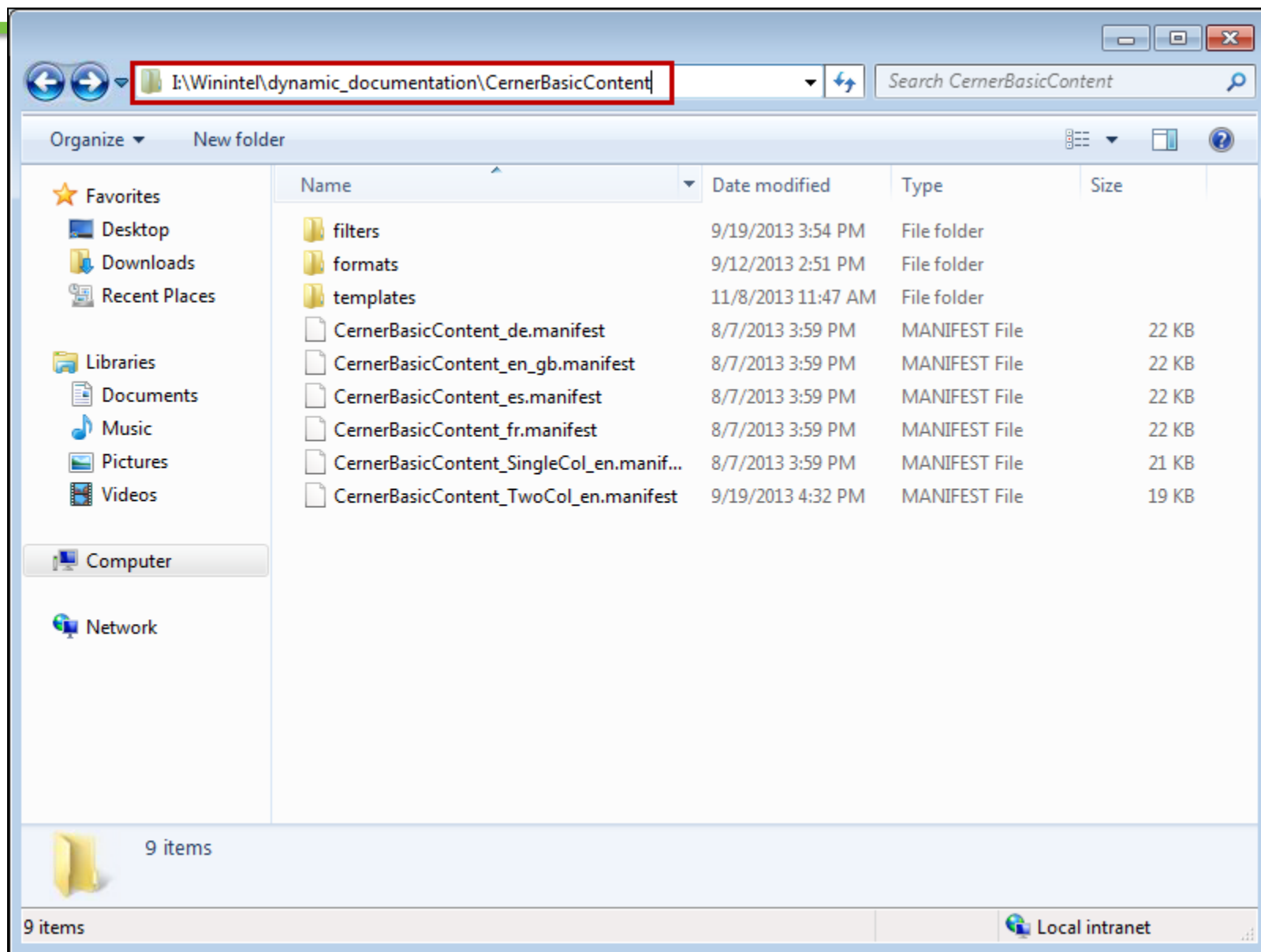
---

## ■ Reference data to serve these purposes:

- Basis for creating a new note
- Filters data pulled in from the chart
- Formats data pulled in from the chart


## ■ Content is made up of filters, formats, reference templates, and manifests

# Content



# Manifest





- **An xml file that identifies which filters, formats, EMR Content associations, and reference templates shall be imported.**

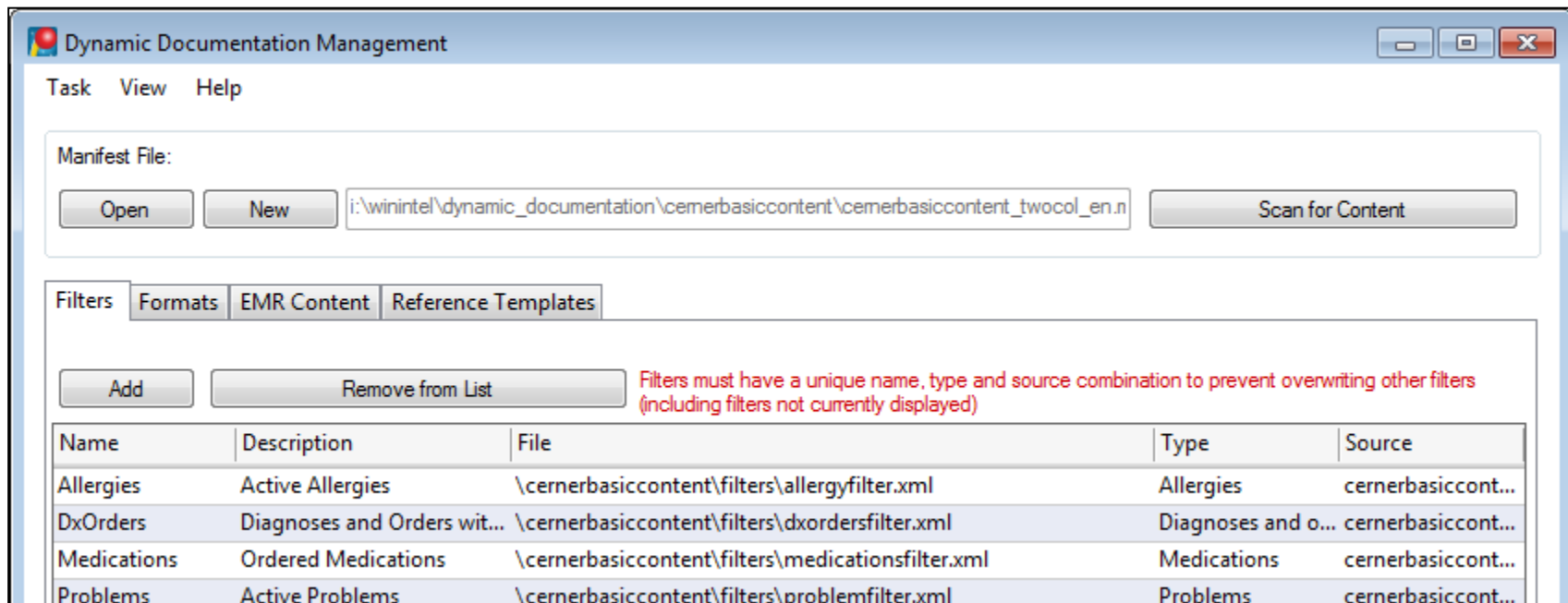
 CernerBasicContent_de.manifest	8/7/2013 3:59 PM	MANIFEST File
 CernerBasicContent_en_gb.manifest	8/7/2013 3:59 PM	MANIFEST File
 CernerBasicContent_es.manifest	8/7/2013 3:59 PM	MANIFEST File
 CernerBasicContent_fr.manifest	8/7/2013 3:59 PM	MANIFEST File
 CernerBasicContent_SingleCol_en.manifest	8/7/2013 3:59 PM	MANIFEST File
 CernerBasicContent_TwoCol_en.manifest	9/19/2013 4:32 PM	MANIFEST File



# Filter

- An XML file that limits the amount of data pulled into the note.

	AllergyFilter	7/25/2013 9:43 AM	XML Document
	chiefcomplaintfilter	9/19/2013 3:54 PM	XML Document
	DxOrdersFilter	7/25/2013 9:43 AM	XML Document
	FamilyHistory	7/25/2013 9:43 AM	XML Document



Dynamic Documentation Management

Task View Help

Manifest File:

Open New  Scan for Content

Filters Formats EMR Content Reference Templates

Add Remove from List

Filters must have a unique name, type and source combination to prevent overwriting other filters (including filters not currently displayed)

Name	Description	File	Type	Source
Allergies	Active Allergies	\cernerbasiccontent\filters\allergyfilter.xml	Allergies	cernerbasiccont...
DxOrders	Diagnoses and Orders wit...	\cernerbasiccontent\filters\dxordersfilter.xml	Diagnoses and o...	cernerbasiccont...
Medications	Ordered Medications	\cernerbasiccontent\filters\medicationsfilter.xml	Medications	cernerbasiccont...
Problems	Active Problems	\cernerbasiccontent\filters\problemfilter.xml	Problems	cernerbasiccont...

# Format

- An XSLT file that converts XML into XHTML displayed in the note.

Allergy_en.xslt	7/25/2013 9:43 AM	XSLT File
ChiefComplaint_en.xslt	7/25/2013 9:43 AM	XSLT File
DxCodes_en.xslt	8/2/2013 3:57 PM	XSLT File
DxOrder_en.xslt	7/25/2013 9:43 AM	XSLT File
FamilyHistory_en.xslt	7/25/2013 9:43 AM	XSLT File

The screenshot shows the 'Dynamic Documentation Management' application window. It has a menu bar with 'Task', 'View', and 'Help'. Below the menu is a 'Manifest File' section with 'Open', 'New', and 'Scan for Content' buttons. The 'Manifest File' text field contains the path 'i:\winintel\dynamic\_documentation\cernerbasiccontent\cernerbasiccontent\_twocol\_en.n'. Below this is a tabbed interface with 'Filters', 'Formats', 'EMR Content', and 'Reference Templates' tabs. The 'Formats' tab is active, showing a table of formats. Above the table are 'Add' and 'Remove from List' buttons. A red warning message states: 'Formats must have a unique name, type and source combination to prevent overwriting other formats (including formats not currently displayed)'. The table has four columns: 'Description', 'File', 'Type', and 'Source'. It lists several formats including 'Vital Signs and Measurements ED (Logic)', 'History of Present Illness', 'Physical Exam', 'Review of Systems', 'Assessment and Plan', 'Allergies', and 'Chief Complaint'.

Description	File	Type	Source
Vital Signs and Measurements ED (Logic)	\cernerbasiccontent\formats\vitalsmeasuremented.xslt	Patient Care M...	cernerbasiccont...
History of Present Illness	\cernerbasiccontent\formats\hpi.xslt	Document Co...	cernerbasiccont...
Physical Exam	\cernerbasiccontent\formats\pe.xslt	Document Co...	cernerbasiccont...
Review of Systems	\cernerbasiccontent\formats\ros.xslt	Document Co...	cernerbasiccont...
Assessment and Plan	\cernerbasiccontent\formats\ip.xslt	Document Co...	cernerbasiccont...
Allergies	\cernerbasiccontent\formats\en\allergy_en.xslt	Allergies	cernerbasiccont...
Chief Complaint	\cernerbasiccontent\formats\en\chiefcomplaint_en.xslt	Patient Care M...	cernerbasiccont...

# EMR Content

- An association between a filter, a format, and a globally unique id.

Filter

Format

Globally Unique ID

Dynamic Documentation Management

Task View Help

Manifest File:

Open New  Scan for Content

Filters Formats **EMR Content** Reference Templates

Add Remove from List

Each EMR Content is given a unique non-editable Reference UUID when created and cannot be overwritten

Name	Description	Type	Source	Filter	Format	Reference UUID
Allergies	Active Allergies	Allergies	cernerbasico...	Allergies\cernerbasicon...	\cernerbasiccontent\for...	1446A201-FD91-4A82-B645-306...
DxOrders	Active Diagnosis with Orders	Diagnoses and...	cernerbasico...	DxOrders\cernerbasico...	\cernerbasiccontent\for...	28ADF401-6012-454F-B8DF-CD...
Medications	Ordered Medications	Medications	cernerbasico...	Medications\cernerbasic...	\cernerbasiccontent\for...	381B1344-329A-4C22-8E0A-40F...
Medications ...	Ordered Medications with Cate...	Medications	cernerbasico...	Medications\cernerbasic...	\cernerbasiccontent\for...	38AAD525-7E2C-40B1-8699-896...
Problems	Active Problems	Problems	cernerbasico...	Problems\cernerbasico...	\cernerbasiccontent\for...	40FD47F5-E31A-4099-BA81-F56...
Review of Syst...	Review of Systems	Document Co...	cernerbasico...	Review of Systems\cerne...	\cernerbasiccontent\for...	41CF6777-D723-4474-83D5-3D...
History of Pre...	History of Present Illness	Document Co...	cernerbasico...	History of Present Illness...	\cernerbasiccontent\for...	50300668-B513-41B3-828B-0F6E...
Vital Signs an...	Vital Signs and Measurements ...	Patient Care ...	cernerbasico...	Vital Signs and Measure...	\cernerbasiccontent\for...	807F87CA-7318-455B-BC24-F1...
Vital Signs an...	Latest Vital Signs and Measure...	Patient Care ...	cernerbasico...	Vital Signs and Measure...	\cernerbasiccontent\for...	9444551A-7801-4D57-A271-FD6...

# Reference Template

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## ■ An XHTML file used to start a new note.

- Lays out sections
- Defines section displays
- Hover behavior
  - *Able to insert free text*
  - *Able to remove element*
  - *Location of buttons on hover*
- Face-up free text areas
- EMR content placeholders
- Standard/smart template placeholders

# Reference Template

The screenshot shows the 'Dynamic Documentation Management' application window. The 'Reference Templates' tab is selected. The interface includes a 'Manifest File' section with an 'Open' button, a 'New' button, a text field containing the path 'i:\winintel\dynamic\_documentation\cernerbasiccontent\cernerbasiccontent\_twocol\_en.manifest', and a 'Scan for Content' button. Below this, there are tabs for 'Filters', 'Formats', 'EMR Content', and 'Reference Templates'. Under the 'Reference Templates' tab, there are 'Add' and 'Remove from List' buttons. A red warning message states: 'Reference Templates must have a unique name and source combination to prevent overwriting other reference templates (including reference templates not currently displayed)'. A table lists the following reference templates:

Name	Description	File	Source
Admission H & P	Admission History & Physical Note Template	\cernerbasiccontent\templates\en\admissionhp_en.html	cernerbasiccontent
ED Note	Emergency Department Note Template	\cernerbasiccontent\templates\en\ednote_en.html	cernerbasiccontent
Free Text Note	Free Text Note Template	\cernerbasiccontent\templates\en\freetextnote_en.html	cernerbasiccontent
Letter	Letter Template	\cernerbasiccontent\templates\en\letter_en.html	cernerbasiccontent
Office Visit Note	Outpatient Office Visit Note Template	\cernerbasiccontent\templates\en\officevisitnote_en.html	cernerbasiccontent
Procedure Note	Procedure Note Template	\cernerbasiccontent\templates\en\procedurenote_en.html	cernerbasiccontent
Progress/SOAP Note	Daily Progress/SOAP Note Template	\cernerbasiccontent\templates\en\progress-soapnote_en.html	cernerbasiccontent
Consult Note	Consultation Note Template	\cernerbasiccontent\templates\en\consultnote_en.html	cernerbasiccontent
Discharge Note	Discharge Note Template	\cernerbasiccontent\templates\en\dischargenote_en.html	cernerbasiccontent
Op Note	Operative Note Template	\cernerbasiccontent\templates\en\opnote_en.html	cernerbasiccontent
ICU Progress Note	Critical Care Note Template	\cernerbasiccontent\templates\en\icu progress note_en.html	cernerbasiccontent

# Reference Template

E:\Winintel\dynamic\_do...

[Chief Complaint](#)  
[History of Present Illness](#)  
[Review of Systems](#)  
[Physical Exam](#)  
     [Vitals & Measurements](#)  
[Assessment/Plan](#)

[Problem List/Past Medical History](#)  
[Procedure/Surgical History](#)  
[Medications](#)  
[Allergies](#)  
[Social History](#)  
[Family History](#)  
[Immunizations](#)  
[Lab Results](#)

Admission H & P   X   List

Tahoma   Size

[Chief Complaint](#)  
 Shortness of breath

[History of Present Illness](#)  
 Typing into a free text area

[Review of Systems](#)   ✕
   
 Constitutional: [No fevers, chills, sweats]  
 Eye: [No recent visual problems]  
 ENMT: [No ear pain, nasal congestion, sore throat]  
 Respiratory: [No shortness of breath, cough]  
 Cardiovascular: [No Chest pain, palpitations, syncope]  
 Gastrointestinal: [No nausea, vomiting, diarrhea]  
 Genitourinary: [No hematuria]  
 Hema/Lymph: [Negative for bruising tendency, swollen lymph glands]

[Problem List/Past Medical History](#)  
 Chronic  
     Asthma  
     Pneumonia  
 Historical  
     No historical problems

[Procedure/Surgical History](#)  
 Tonsillectomy (06/01/1973).

[Medications](#)  
 Inpatient  
     No active inpatient medications  
 Home  
     Pepcid 20 mg oral tablet, 20.0 mg, 1.0 tabs, Oral, BID



# Import Process

# Import Process – Install Content Package

## ■ Code Warehouse/Winintel/dynamic\_documentation/Cerner BasicContent

### Manifests

Name
filters
formats
templates
CernerBasicContent_de.manifest
CernerBasicContent_en_gb.manifest
CernerBasicContent_es.manifest
CernerBasicContent_fr.manifest
CernerBasicContent_SingleCol_en.manifest
CernerBasicContent_TwoCol_en.manifest

### Formats

Name
Allergy_en.xslt
ChiefComplaint_en.xslt
DxCodes_en.xslt
DxOrder_en.xslt
FamilyHistory_en.xslt
Meds_en.xslt

### Reference Templates

Name
AdmissionHP_en
AdmissionHP_SingleCol_en
ConsultNote_en
ConsultNote_SingleCol_en
DischargeNote_en
DL12 AdmissionHP_en
EDNote_en
EDNote_SingleCol_en
FreeTextNote_en
ICU Progress Note_en

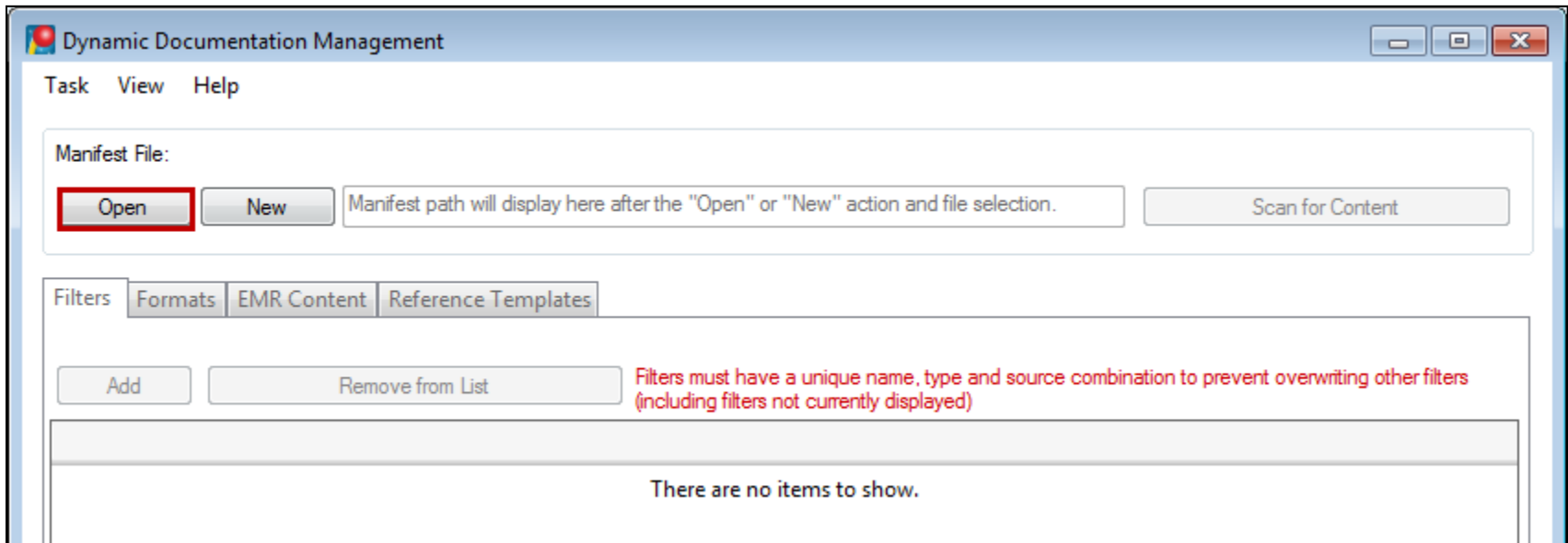
### Filters

Name
AllergyFilter
chiefcomplaintfilter
DxOrdersFilter
FamilyHistory
HPIFilter
IPFilter
MedicationsFilter
PEFilter
ProblemFilter
ProceduresFilter



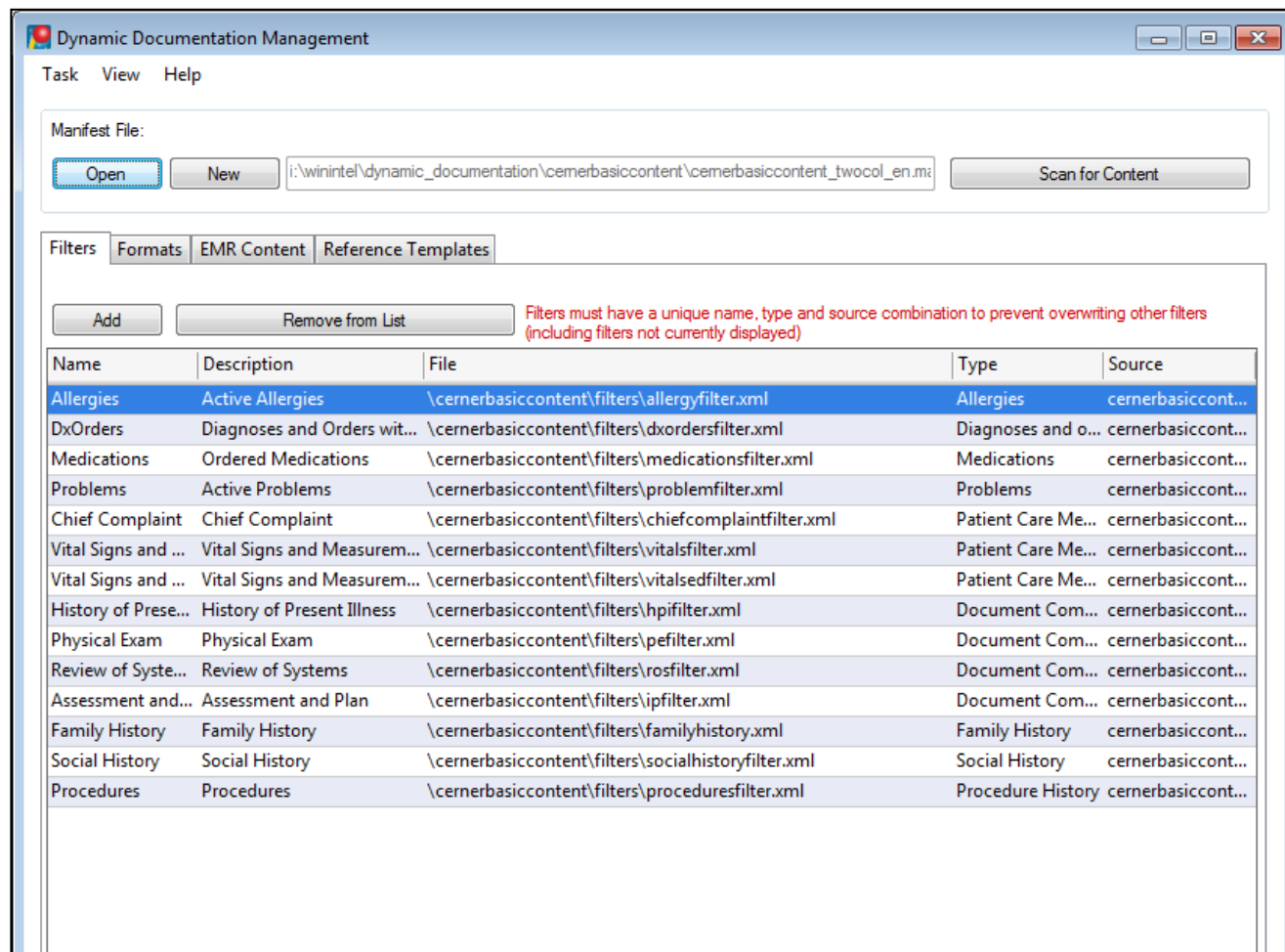
# Import Process

- **Open Dyn Doc Management**
- **Open Manifest**
- **Choose correct content**
  - Choose correct language (\_en for English)
  - Single column or two column



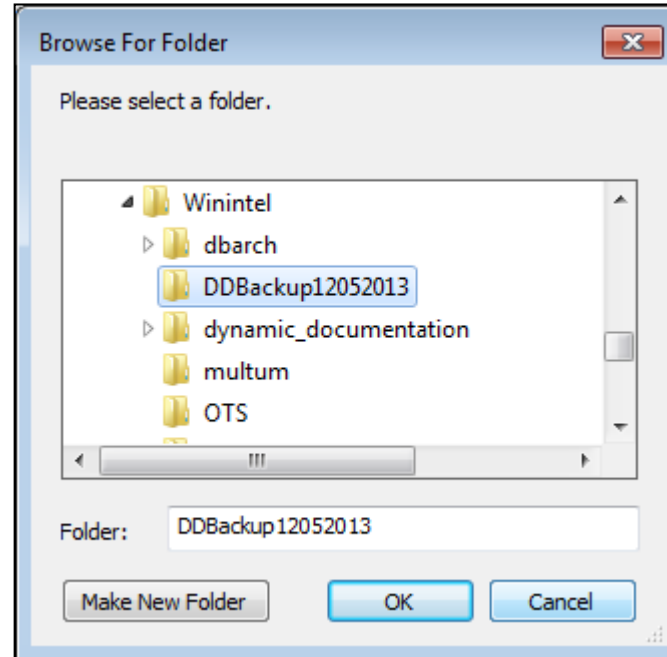
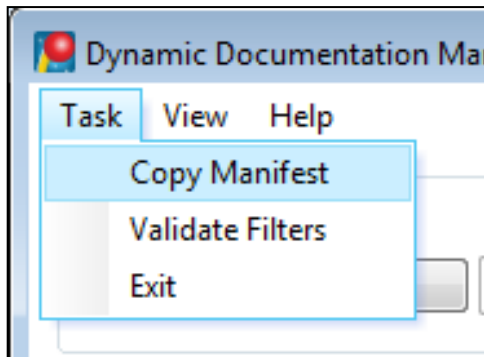
# Import Process

- Opening the Manifest populates the Filters, Formats, EMR Content and Reference Templates tabs



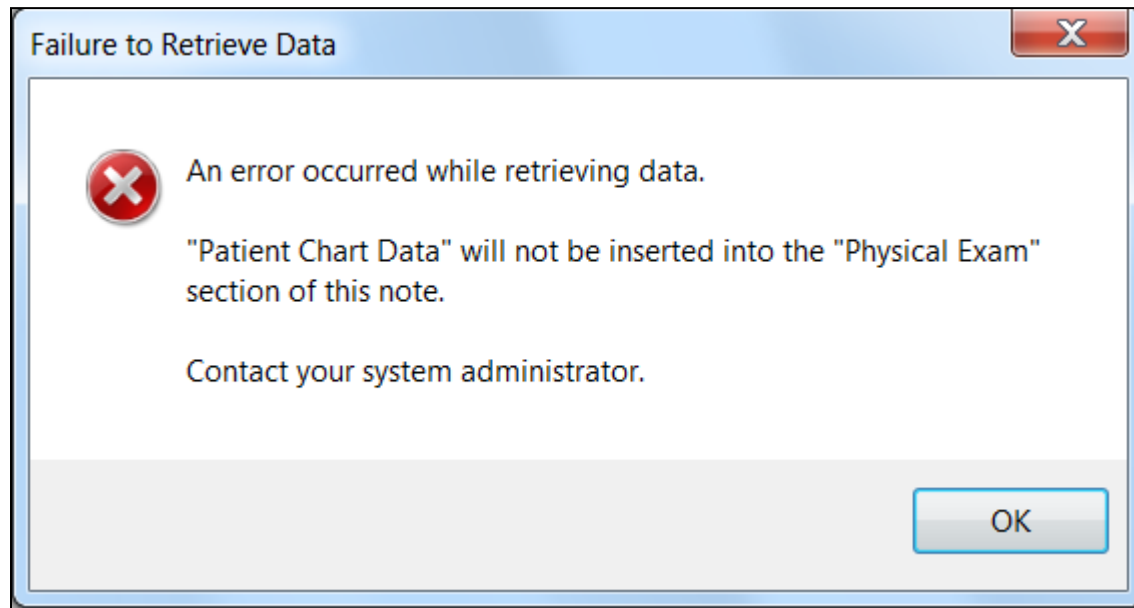
# Import Process – Copy Manifest

- If making Customizations, recommended to Copy Manifest to avoid content being deleted by future content installs
- Dyndocmgmt.exe>Task>Copy Manifest
- Choose a different location
- Need at least 2012.01.14 code level



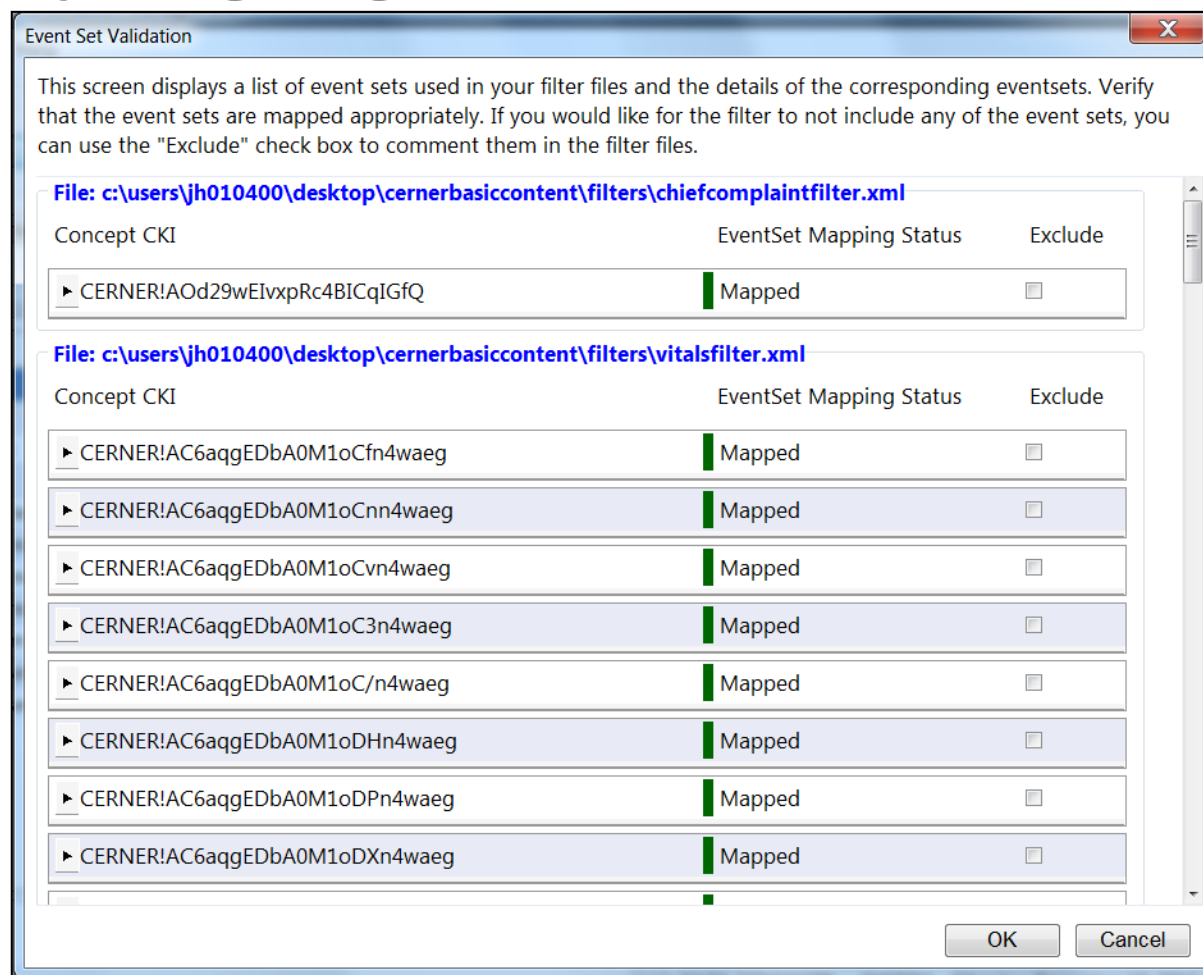
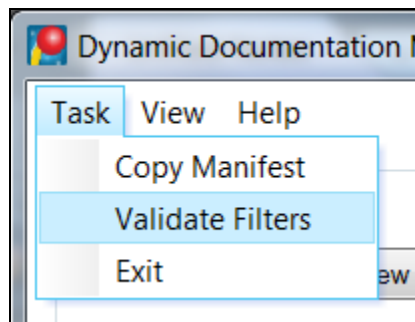
# Import Process – Validate Filters

- **Concept CKIs are used by the system to query for EMR content. These must be mapped in the event set hierarchy, if a concept CKI used in a filter is not mapped, the system will detect it and display a failure to retrieve content error.**



# Import Process – Validate Filters

- DynDocMgmt.exe can be used to identify unmapped concept CKIs by navigating to Task > Validate Filters.



# Import Process – Validate Filters

- If an unmapped concept CKI is identified there are two options:
  - Check the exclude checkbox and click OK, the system will no longer query for that concept CKI.
  - Map the concept

Event Set Name	Description	CKI	Id	Status
		CERNER!0BF8678F-E5DD-4342-BED7-BAC7F7C7ECA0		Unmapped <input type="checkbox"/>
	Temperature Temporal Artery	CERNER!0BF8678F-E5DD-4342-BED7-BAC7F7C7ECA0		
▶ CERNER!AC6aqqEDbA0M1oDfn4waeg				Mapped <input type="checkbox"/>
▶ CERNER!AC6aqqEDbA0M1oB3n4waeg				Mapped <input type="checkbox"/>
▶ CERNER!2999B67B-A644-4BF5-A01A-DB973CC97AF4				Unmapped <input type="checkbox"/>
▶ CERNER!AC6aqqEDbA0M1oB/n4waeg				Mapped <input type="checkbox"/>
▶ CERNER!76B85B38-85AF-415E-AA04-730D11F13A90				Unmapped <input type="checkbox"/>

OK Cancel

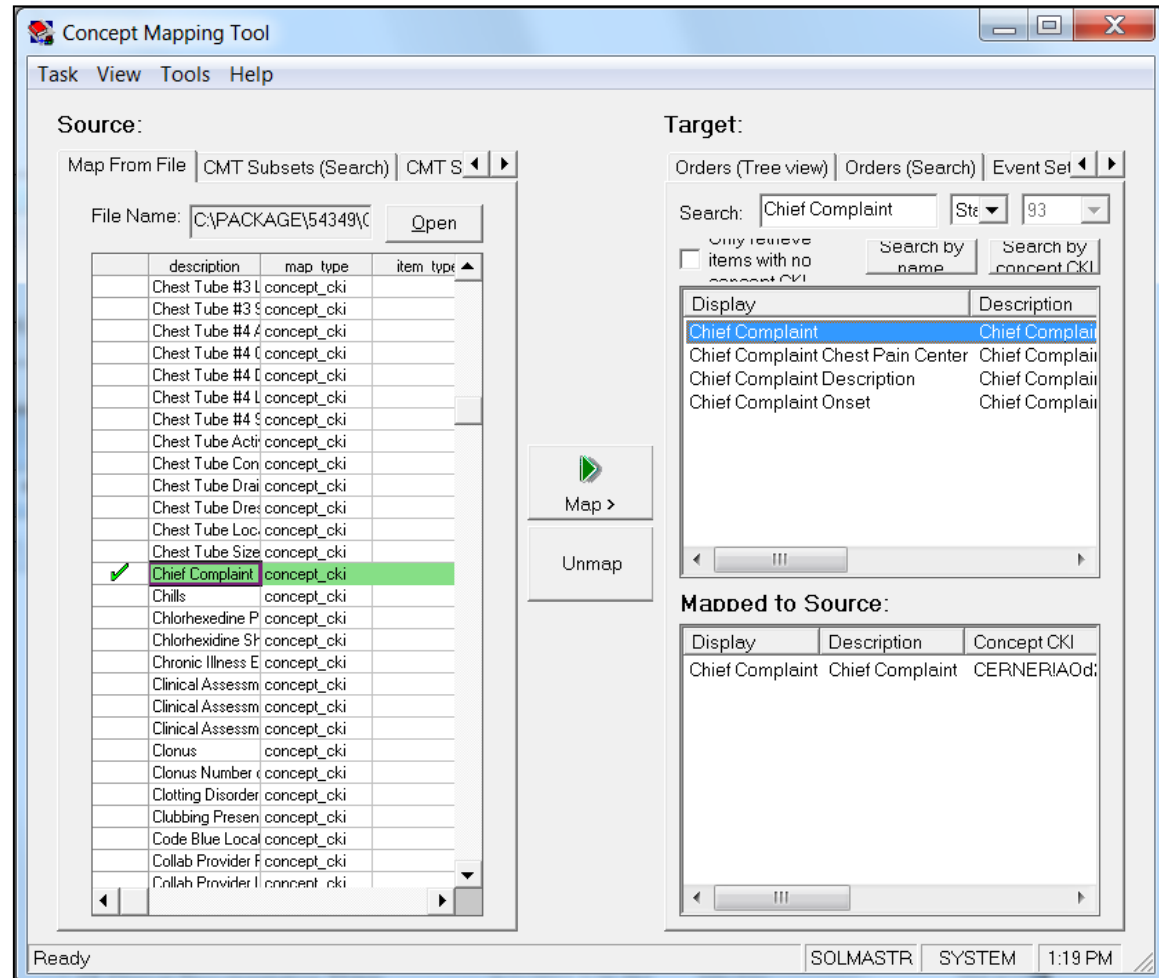
# Import Process – Mapping Concepts

## ■ ConceptMap.exe

- Open the bin file
- Find the concept cki to map on the left
- Pick a primitive event set on the right
- Click Map

## ■ Cycle servers 200 and 389

- **Close and reopen Validate Filters Dialog**



# Import Process

## ■ Click Import



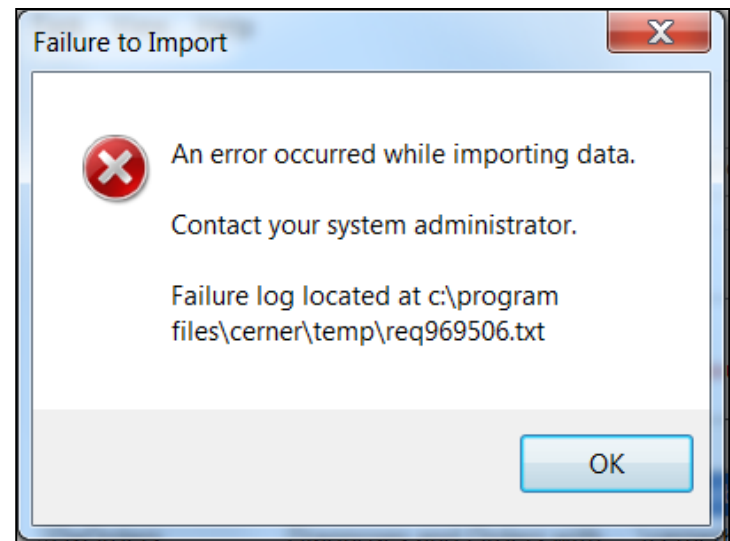
- If no errors, content immediately available in PowerChart
- If content was previously imported, these items will be overwritten:
  - Reference templates with the same name and source
  - EMR Content with the same reference UUID.
  - Formats with the same filename and source.
  - Filters with the same type, title, and source.



# Import Process – Common Errors

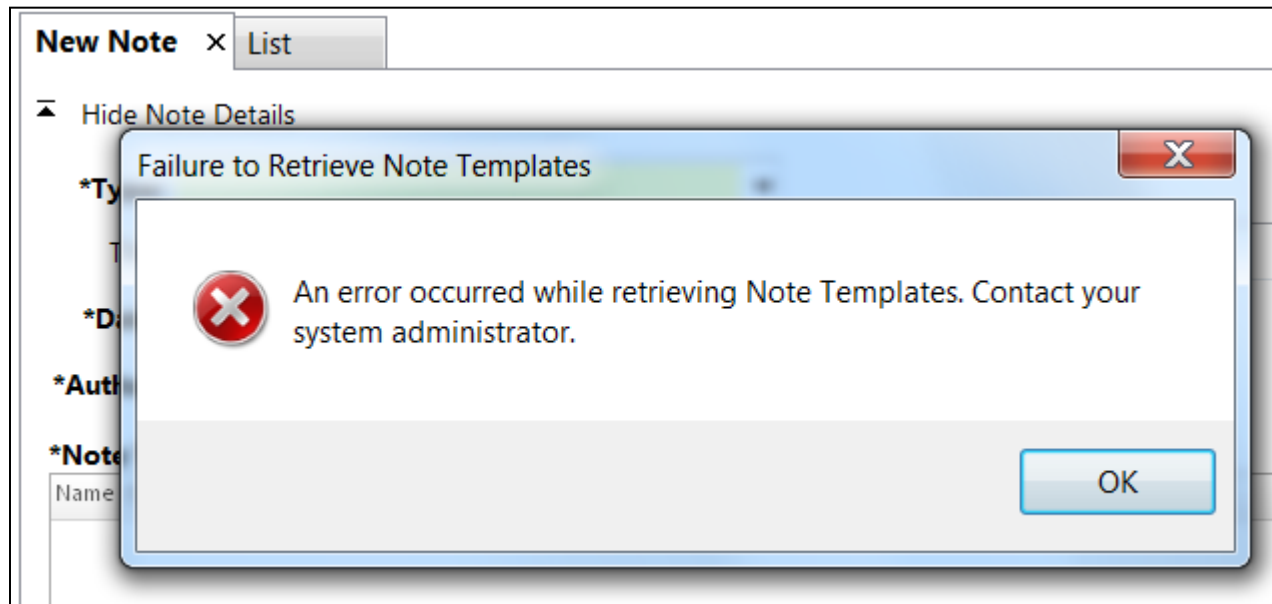
## ■ Common Import Errors

- The content refers to a smart template CKI that does not exist in codeset 16529
- An EMR content entry refers to a filter or format either not present in the manifest or not present in the system
- A reference template uses an EMR content placeholder either not present in the manifest or not present in the system
- Syntax error in a filter or format
- Server 389 is not running



# Import Process – Common Errors

- If no content is imported, users see error in Powerchart.
- Just installing content is not enough, need to import





# **Make up of a Reference Template**

# Make up of a Reference Template

## ■ Overview of the XHTML in a reference template

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xmlns:dd="DynamicDocumentation">
<head><title></title></head>
<body>
<div style="font-family:tahoma,arial; font-size:12px;">
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!19880257">&nbsp;</div>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

# Make up of a Reference Template

- **Encoding** – if not specified defaults to UTF-8, used by i18n clients

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xmlns:dd="DynamicDocumentation">
<head><title></title></head>
<body>
<div style="font-family:calibri,tahoma,arial; font-size:14px;">
```

# Makeup of a Reference Template

- DOCTYPE – must be some form of XHTML

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xmlns:dd="DynamicDocumentation">
<head><title></title></head>
<body>
<div style="font-family:calibri,tahoma,arial; font-size:14px;">
```

# Makeup of a Reference Template

- **HTML – must include “DynamicDocumentation” namespace**

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xmlns:dd="DynamicDocumentation">
<head><title></title></head>
<body>
<div style="font-family:calibri,tahoma,arial; font-size:14px;">
```

# Makeup of a Reference Template

- **HEAD, TITLE** – required to be valid XHTML, not displayed in Millennium.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html SYSTEM "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xmlns:dd="DynamicDocumentation">
<head><title></title></head>
<body>
<div style="font-family:calibri,tahoma,arial; font-size:14px;">
```





# Makeup of a Reference Template

- A section comprised of a section display and a face-up free text area.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddmrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!19880257">&nbsp;
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

# Makeup of a Reference Template

- A section comprised of a section display, smart template placeholder, and a face-up free text area.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!19880257">&nbsp;</div>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

# Makeup of a Reference Template

- Class attributes denote sections and hover behavior of the sections.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!19880257">
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

**Chief Complaint**



Shortness of breath

# Makeup of a Reference Template

- Style attributes are optional but make the note nicer to look at.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!198802">
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

# Makeup of a Reference Template

- The **ddsectiondisplay** class attribute identifies section displays. For best results the section display should be a span.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!198802">
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

# Makeup of a Reference Template

- The class attribute of `ddfreetext` identifies face-up free text areas.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext" ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!198802">
    <div class="ddfreetext" ddremovable" dd:btnfloatingstyle="top-right"></div>
  </div>
```



# Makeup of a Reference Template

- The `dd:btnfloatingstyle` attribute defines where the Remove button displays in the Dynamic Documentation editor.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!11369-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Immunizations</span></span>
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>

<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!198802">
    <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
  </div>
</div>
```





# Makeup of a Reference Template

- The class attribute of `ddemrcontent` identifies an `emr` content placeholder.
- The `dd:contenttype` attributes refers to a `cdf_meaning` in codeset 32000.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:section
<span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Fam
<div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B6
</div>
```

# Makeup of a Reference Template

- The `dd:referenceuuid` ties to a globally unique identifier associated with a filter and format. This identifier is created in `DynDocMgmt.exe`, then copy/pasted here.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!10157-6">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Family History</span></span>
  <div class="ddemrcontent" dd:contenttype="FAMILYHX" dd:referenceuuid="1F1618D1-D181-4E00-9B64-51F4895E7626"></div>
</div>
```

# Makeup of a Reference Template

- The class attribute of blocksmarttemplate identifies a smart template placeholder.

```
<div class="ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">
  <span class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>
  <div class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!1988025"
  <div class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
</div>
```

# Makeup of a Reference Template

- The `dd:template_cki` attribute identifies the CKI of the smart template defined in codeset 16529.

```
=>"ddsection ddrefreshable ddinsertfreetext ddremovable" style="padding:4px;" dd:sectioncode="LOINC!30954-2">  
class="ddsectiondisplay"><span style="font-weight:bold;text-decoration:underline;">Lab Results</span></span>  
class="blocksmarttemplate ddremovable" dd:btnfloatingstyle="float-right" dd:template_cki="CKI.CODEVALUE!19880257">&nbsp;<br>  
class="ddfreetext ddremovable" dd:btnfloatingstyle="top-right"></div>
```

# Document Control

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