



OIT Office Hours

EHRp19 ~ BJPNp7 ~ BSTSp7
TIUp1016 ~ BHSp13
DRAFT

May 2016



EHRp19

- Usability focused on decluttering problem display, ease management of problems, improve POV management
- Further extension of mapping to include prompting for laterality



Key Improvements

New tabular design

Landing tab “*Core Problems*”

- Approximates the previous “Chronic Problem List”
- Default to Chronic & Subacute, and includes any problems of any status used as POV for the current visit.
- Default sort to Priority, Chronic, Sub-acute and problems marked as POV (alphabetical in each).
- **User can configure** this landing tab with whatever statuses, include/exclude Personal History, POV, Inpatient, Remove/Add columns and set as their default (so user could choose to sort by priority).



Key Improvements (cont.)

Additional Tabs - The following are displayed on separate tabs:

- Chronic
- Subacute
- Personal History
- Episodic
- Social/Environmental
- Routine/Admin
- Inactive
- *Inpatient*
- *Eye related problems*

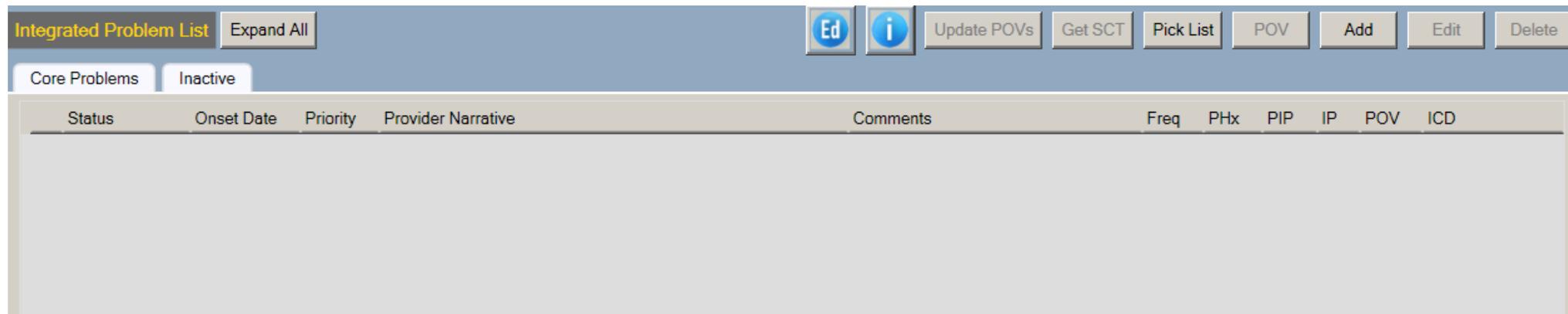


Display Improvements and Clutter Management

- Tabular display with ***user defined*** landing page
- Add Routine/Admin status
- New/edit problems do not move to top

New Patient with No Problems

- The IPL will consist of two tabs – “Core” and “Inactive” which will be blank until problems are added.

A screenshot of the Integrated Problem List (IPL) interface. The interface has a blue header bar with the text "Integrated Problem List" and an "Expand All" button. Below the header bar are two tabs: "Core Problems" (selected) and "Inactive". To the right of the tabs is a toolbar with several buttons: "Ed" (with a blue 'e' icon), "i" (with a blue 'i' icon), "Update POVs", "Get SCT", "Pick List", "POV", "Add", "Edit", and "Delete". Below the tabs and toolbar is a table with the following columns: "Status", "Onset Date", "Priority", "Provider Narrative", "Comments", "Freq", "PHx", "PIP", "IP", "POV", and "ICD". The table is currently empty, showing only the column headers.

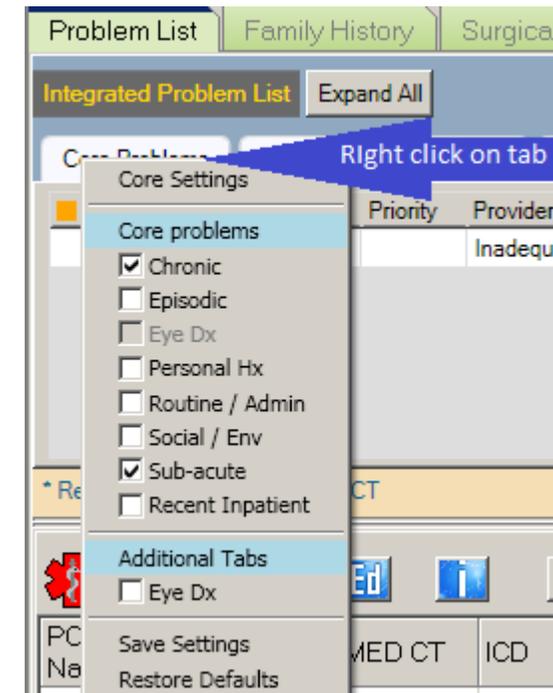
IPL Populated

- As problems are added and assigned statuses, tabs appear.

Status	Onset Date	Priority	Provider Narrative	Comments	Freq	PHx	PIP	IP	POV	ICD
Chronic			Diabetes mellitus type 2		0					E11.9
Chronic			Essential hypertension		0					I10.
Personal Hx			History of chickenpox		0	✓				Z86.19

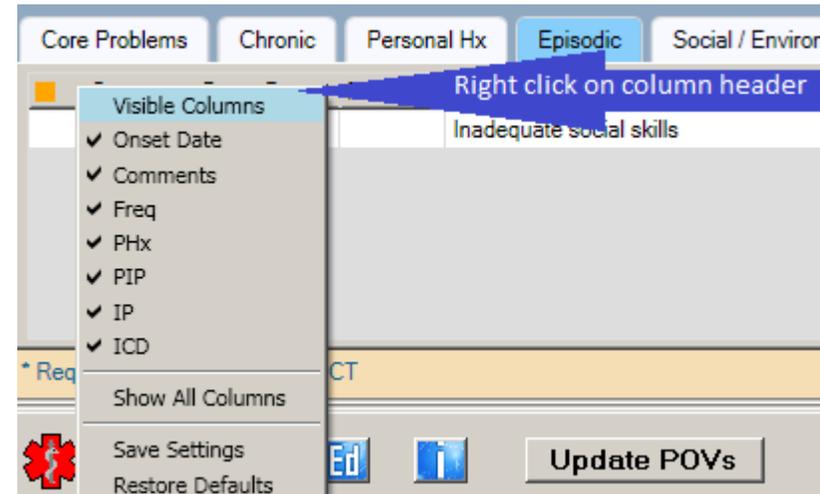
User Defined IPL Core Tab

- Right click on the Core Problem top tab.
- The user may change which groups of problems appear on their “Core” IPL list then “save settings”.
- This allows each clinician to have a default display that meets their needs.



User Defined IPL Columns

- Right click on the header row.
- The user may want to expose or hide rows then click “save settings”.

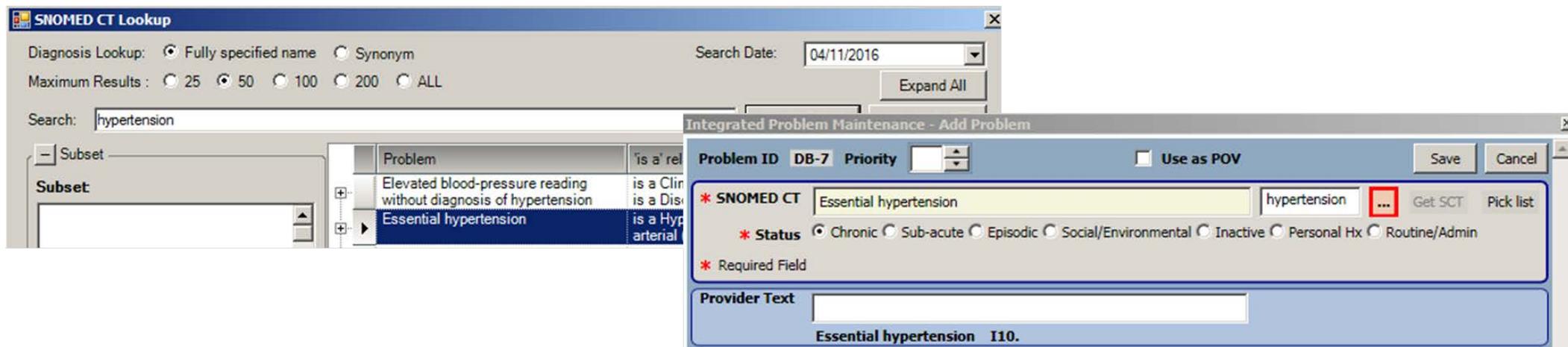


Display Improvements and Clutter Management (cont.)

Default status inherited from DTS (SNOMED search database) when defined.

Example: Essential Hypertension would default to status of “chronic”

*** This will be an ongoing project. We will welcome field input on curating these definitions over time.***



The screenshot displays two overlapping software windows. The background window is titled "SNOMED CT Lookup" and shows a search for "hypertension" with results including "Essential hypertension". The foreground window is titled "Integrated Problem Maintenance - Add Problem" and shows the configuration for a new problem. The "SNOMED CT" field is populated with "Essential hypertension" and "hypertension". The "Status" field is set to "Chronic". The "Provider Text" field contains "Essential hypertension I10.".

SNOMED CT Lookup

Diagnosis Lookup: Fully specified name Synonym

Search Date: 04/11/2016

Maximum Results: 25 50 100 200 ALL

Search: hypertension

Expand All

Subset

Problem

Elevated blood-pressure reading without diagnosis of hypertension

Essential hypertension

Integrated Problem Maintenance - Add Problem

Problem ID DB-7 Priority

Use as POV

Save Cancel

* SNOMED CT Essential hypertension hypertension ... Get SCT Pick list

* Status Chronic Sub-acute Episodic Social/Environmental Inactive Personal Hx Routine/Admin

* Required Field

Provider Text

Essential hypertension I10.



Utilities to Assist CAC with IPL Reorganization



Reorganization of IPL Content

Clean up options:

Step 1: PLST Update Problem Status Based on SNOMED Default

- Reassigns statuses based on default in DTS
- Site determines if runs
- Recommend Chronic, Routine/Admin – Social/Environmental optional

Step 2: APCD EPISODI CLEANUP (do not recommend unless step 1 is done)

- Inactivates problems as “Episodic” if the problem has not been used as POV in site defined timeframe
- Site set parameter for look back timeframe
- Site schedules recurring task



PLST Update Problem Status

- Prerequisites: BSTSp7; BSTS CODESET 36 version ____)

In PCC Data Entry SUPERVISOR Options and Utilities

PLST Update Problem Status based on SNOMED Default

Update all Chronic	<ul style="list-style-type: none">• This will loop through the problems on the IPL and for any problem whose Concept ID is defaulted to Chronic in DTS, change to Chronic on IPL.• Problems on the IPL with a status of inactive will be skipped and the status will not be changed.
Update all Social/Environmental	<ul style="list-style-type: none">• This will loop through the problems on the IPL and for any problem whose Concept ID is defaulted to Chronic in DTS, change to Chronic on IPL.• Problems on the IPL with a status of inactive will be skipped and the status will not be changed.
Update all Routine/Admin	<ul style="list-style-type: none">• Twill loop through the problems on the IPL and for any problem whose Concept ID is defaulted to Routine/Admin in DTS, change to Routine/Admin on IPL.• Problems on the IPL with a status of Inactive will be skipped and the status will not be changed.



APCD EPISODIC CLEANUP

This should only be set up AFTER problem lists have been updated either manually or via the PLST Update Problem Status utilities.

1. Set parameter BGO IPL INACTIVATE TIMEFRAME

Select PARAMETER DEFINITION NAME: BGO IPL INACTIVATE **TIMEFRAME** Lookback for
APCD EPISODIC CLEANUP task

- Setting BGO IPL INACTIVATE TIMEFRAME for System: 2011 DEMO-HO.ABQ.IHS.GOV -
Value: ??

Enter number of days to look back for episodic problems used as POV. This look back is used to determine how long before episodic problems that have not been used as a POV will be changed over to inactive status.

Example: an entry of 90 indicates that any problems with episodic status that have not been used as POV in past 90 days will change to inactive status.



APCD EPISODIC CLEANUP (cont.)

2. Schedule the ACPD EPISODIC CLEAN UP

Select Taskman Management <TEST ACCOUNT> Option: schedule/Unschedule Options

Select OPTION to schedule or reschedule: **APCD EPISODIC CLEANUP** Inactivate episodic Problems not used as POV

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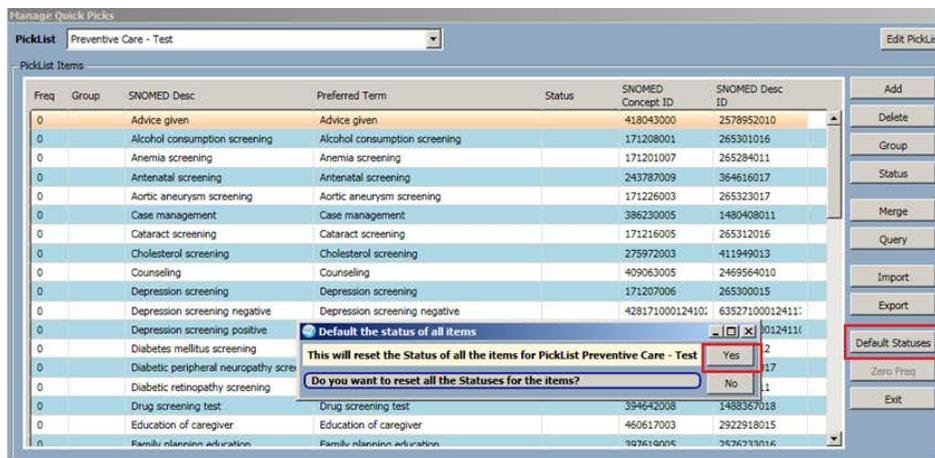
10.154.33.215
Edit option schedule
Option Name: APCD EPISODIC CLEANUP
Menu Text: Inactivate Episodic Problems not          TASK ID:
-----
QUEUED TO RUN AT WHAT TIME: APR 26,2016@23:59
DEVICE FOR QUEUED JOB OUTPUT:
QUEUED TO RUN ON VOLUME SET:
RESCHEDULING FREQUENCY: 30D
TASK PARAMETERS:
SPECIAL QUEUEING:
-----
Exit   Save   Next Page   Refresh
Enter a command or '^' followed by a caption to jump to a specific field.
COMMAND: ██████████          Press <PF1>H for help   Insert

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BGO IPL INACTIVATE TIMEFRAME	APCD EPISODIC CLEAN UP suggested schedule frequency
90D	14D-30D
180D	30D
270D	30D
365D	30D-90D

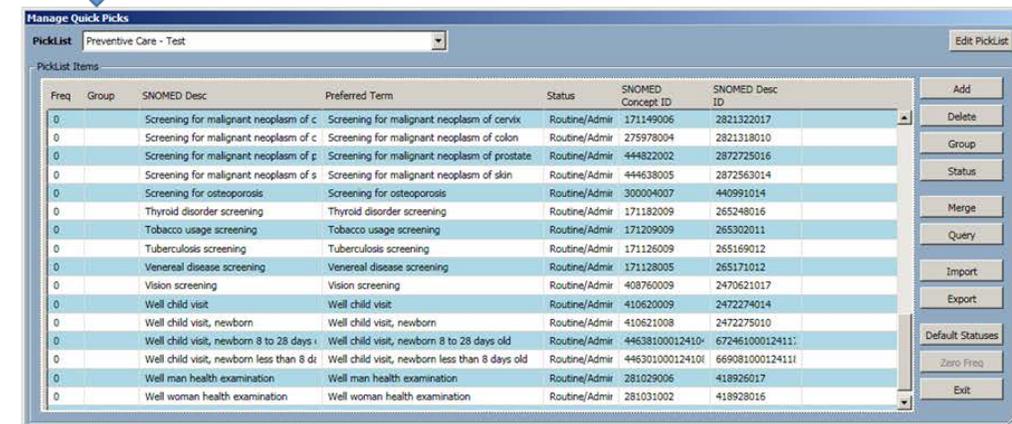
Picklist – Update with Default Statuses

- To update pick list with defaulted statuses (helpful for those with routine/admin/screening terms), click **default statuses** in **Manage Quick Picks** dialog.



The screenshot shows the 'Manage Quick Picks' dialog with the 'PickList' set to 'Preventive Care - Test'. A table of items is displayed with columns for Freq, Group, SNOMED Desc, Preferred Term, Status, SNOMED Concept ID, and SNOMED Desc ID. A 'Default Statuses' button is highlighted in red on the right-hand side of the dialog.

Freq	Group	SNOMED Desc	Preferred Term	Status	SNOMED Concept ID	SNOMED Desc ID
0		Advice given	Advice given		418043000	2578952010
0		Alcohol consumption screening	Alcohol consumption screening		171208001	265301016
0		Anemia screening	Anemia screening		171201007	265284011
0		Antenatal screening	Antenatal screening		243787009	364616017
0		Aortic aneurysm screening	Aortic aneurysm screening		171226003	265323017
0		Case management	Case management		386230005	1480408011
0		Cataract screening	Cataract screening		171216005	265312016
0		Cholesterol screening	Cholesterol screening		275972003	411949013
0		Counseling	Counseling		409063005	2469564010
0		Depression screening	Depression screening		171207006	265300015
0		Depression screening negative	Depression screening negative		42817100012410	63527100012411
0		Depression screening positive	Depression screening positive			012411
0		Diabetes mellitus screening	Diabetes mellitus screening			2
0		Diabetic peripheral neuropathy screening	Diabetic peripheral neuropathy screening			17
0		Diabetic retinopathy screening	Diabetic retinopathy screening			1
0		Drug screening test	Drug screening test		394642008	1488367018
0		Education of caregiver	Education of caregiver		460617003	2922918015
0		Family reconnection activation	Family reconnection activation		382610004	2426291016



The screenshot shows the 'Manage Quick Picks' dialog with the 'PickList' set to 'Preventive Care - Test'. A table of items is displayed with columns for Freq, Group, SNOMED Desc, Preferred Term, Status, SNOMED Concept ID, and SNOMED Desc ID. A 'Default Statuses' button is highlighted in red on the right-hand side of the dialog.

Freq	Group	SNOMED Desc	Preferred Term	Status	SNOMED Concept ID	SNOMED Desc ID
0		Screening for malignant neoplasm of cervix	Screening for malignant neoplasm of cervix	Routine/Admin	171149006	2821322017
0		Screening for malignant neoplasm of colon	Screening for malignant neoplasm of colon	Routine/Admin	275978004	2821318010
0		Screening for malignant neoplasm of prostate	Screening for malignant neoplasm of prostate	Routine/Admin	444822002	2872725016
0		Screening for malignant neoplasm of skin	Screening for malignant neoplasm of skin	Routine/Admin	444638005	2872563014
0		Screening for osteoporosis	Screening for osteoporosis	Routine/Admin	300004007	440991014
0		Thyroid disorder screening	Thyroid disorder screening	Routine/Admin	171182009	265248016
0		Tobacco usage screening	Tobacco usage screening	Routine/Admin	171209009	265302011
0		Tuberculosis screening	Tuberculosis screening	Routine/Admin	171126009	265169012
0		Venereal disease screening	Venereal disease screening	Routine/Admin	171128005	265171012
0		Vision screening	Vision screening	Routine/Admin	408760009	2470621017
0		Well child visit	Well child visit	Routine/Admin	410620009	2472274014
0		Well child visit, newborn	Well child visit, newborn	Routine/Admin	410621008	2472275010
0		Well child visit, newborn 8 to 28 days old	Well child visit, newborn 8 to 28 days old	Routine/Admin	44638100012410	67246100012411
0		Well child visit, newborn less than 8 days old	Well child visit, newborn less than 8 days old	Routine/Admin	446301000124101	669081000124111
0		Well man health examination	Well man health examination	Routine/Admin	281029006	418926017
0		Well woman health examination	Well woman health examination	Routine/Admin	281031002	418928016



POV Management

POV Management

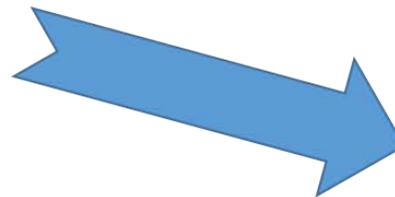
- Add **Edit Today's POVs** button on IPL and Visit Diagnosis component brings up **POV** dialog.

Problem List | Family History | Surgical Hx | Patient Goals | AMI | Anticoagulation | Asthma | Eyeglass | Stroke

Integrated Problem List | Expand All | Ed | i | **Update POVs** | Get SCT | Pick List | POV | Add | Edit | Delete

Core Problems | Chronic | Personal Hx | Episodic | Social / Environmental | Routine / Admin | Inactive

Status	Onset Date	Priority	Provider Narrative	Comments	Freq	PHx	PIP	IP	POV	ICD
Personal Hx			Adult health examination		1	✓			✓	ZZZ 999
Chronic			Type 2 diabetes mellitus		0					E11.9
Chronic			Essential hypertension		0					I10.



POV

ID	Status	Prov. Narrative	POV	Episodicity	Alternate POV Provider Text	Goal Note	Care Plane	Visit Instructions	Pt Ed	Tx/Regimen/ FU	Tx/Regimen/
		Adult health examination	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> First episode <input type="checkbox"/> New episode <input type="checkbox"/> Old episode <input type="checkbox"/> Ongoing episode					<input type="checkbox"/> DP <input type="checkbox"/> N <input type="checkbox"/> EX <input type="checkbox"/> LA	Treatment/Regimen/	

Primary POV: Adult health examination

*** General Exam POV Finding**

Narrative: Adult health examini

w/o abn find
 w/abn find
 not examined/unk

E&M: New Established

Selected	History & Exam	Complexity	Approx Time	CPT Code
<input type="checkbox"/>	Brief	Nurse Visit	5 min	99211
<input type="checkbox"/>	Problem Focused	Straightforward	10 min	99212
<input type="checkbox"/>	Expanded	Low	15 min	99213
<input type="checkbox"/>	Detailed	Moderate	25 min	99214
<input type="checkbox"/>	Comprehensive	High	40 min	99215

* Required Field

Save Cancel



POV Management

- Expose “Asthma Control” prompt on POV dialog if Asthma diagnosis selected as POV.

POV

ID	Status	Prov. Narrative	POV	Episodicity	Alternate POV Provider Text	Goal Notes	Care Plans	Visit Instructions	Pt Ed	Tx/Regimen/FU	Tx/Regimen/FU display only
138478	Chronic	Mild intermittent asthma	<input checked="" type="checkbox"/>	<input type="radio"/> First episode <input type="radio"/> New episode <input type="radio"/> Old episode <input type="radio"/> Ongoing episode <input type="radio"/> Undefined episodicity					<input type="checkbox"/> DP <input type="checkbox"/> N <input type="checkbox"/> EX <input type="checkbox"/> LA <input type="checkbox"/> M <input type="checkbox"/> P	Treatment/Regimen	

Primary POV
Chart evaluation by healthcare professional

E&M New Established

Selected	History & Exam	Complexity	Approx Time	CPT Code
<input type="checkbox"/>	Brief	Nurse Visit	5 min	99211
<input type="checkbox"/>	Problem Focused	Straightforward	10 min	99212
<input type="checkbox"/>	Expanded	Low	15 min	99213
<input type="checkbox"/>	Detailed	Moderate	25 min	99214
<input type="checkbox"/>	Comprehensive	High	40 min	99215

* Required Field

Asthma Control

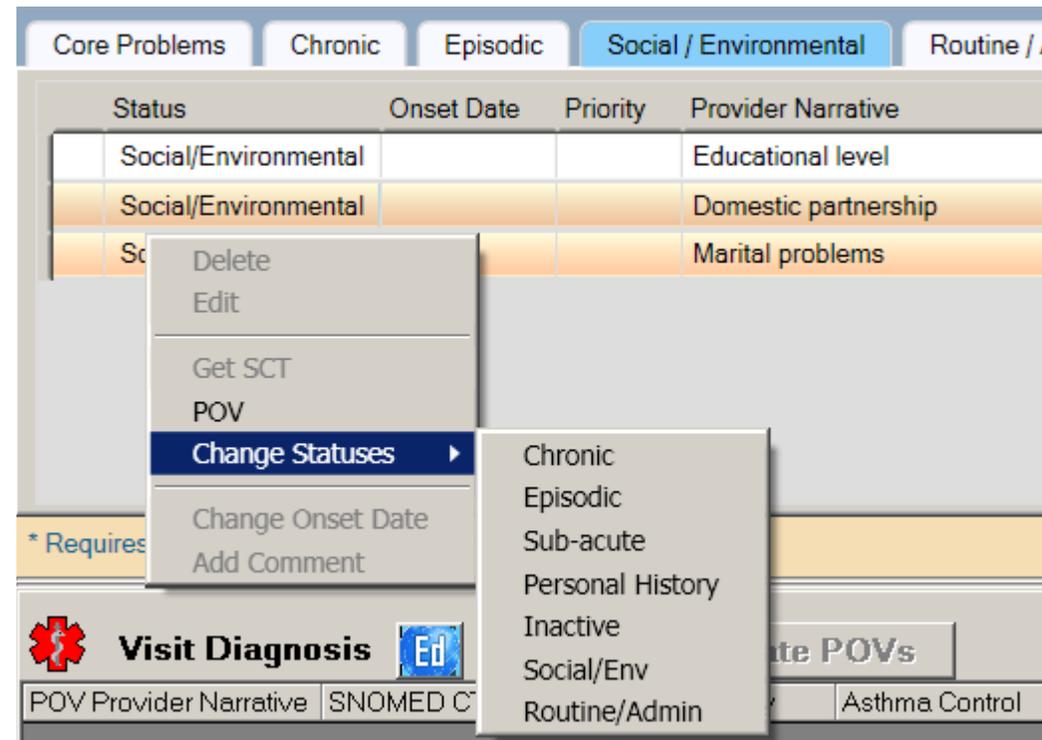
WELL CONTROLLED
NOT WELL CONTROLLED
VERY POORLY CONTROLLED

Save Cancel

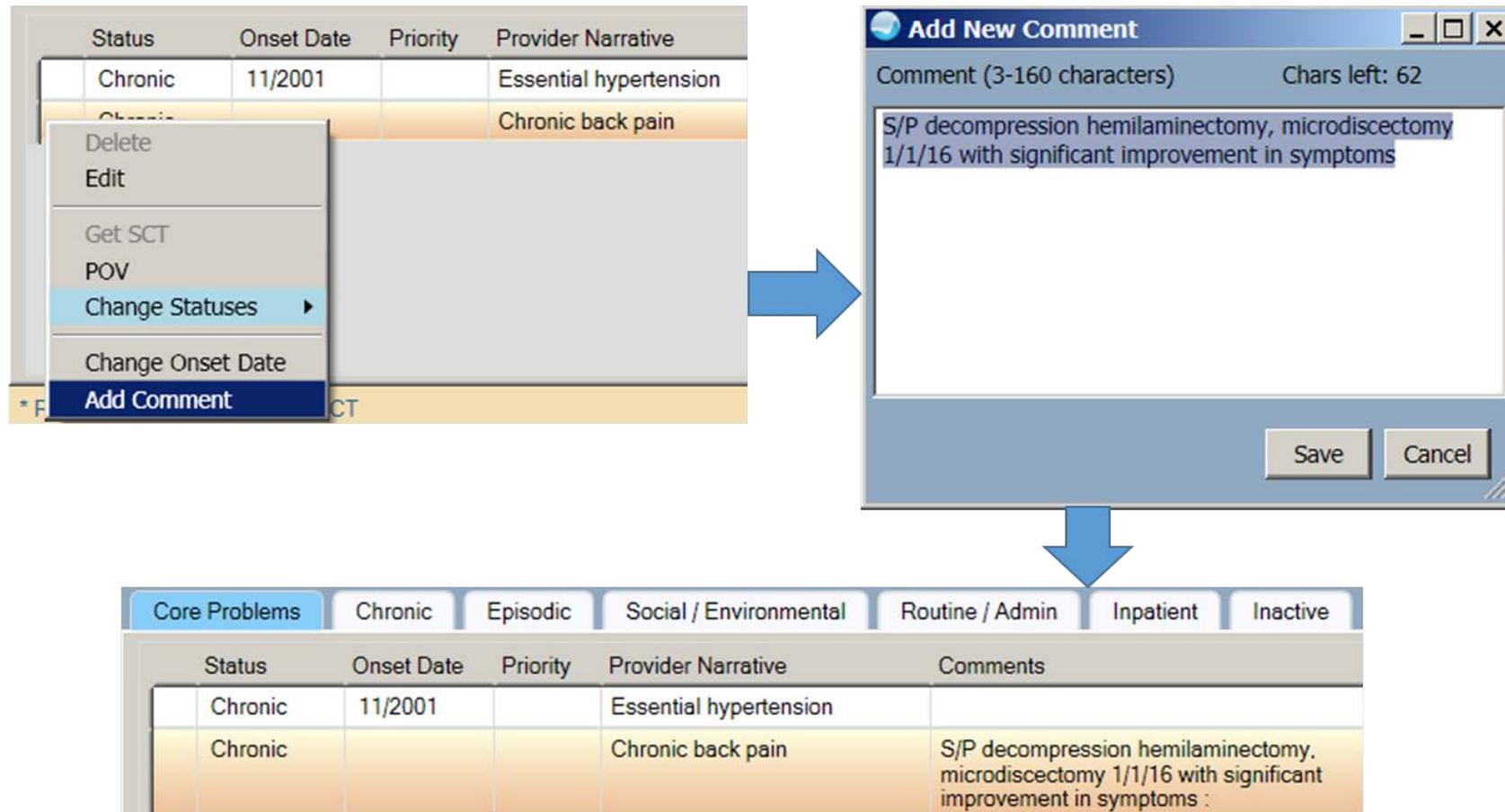
Problem Update Improvements

- Select multiple problems and change status of selected
- Right click to add comments, Right click set/change priority
- Search and selection of problems
 - If SNOMED selected is on problem list, system will bring up edit dialog instead of just notifying user is on problem list
- Laterality is used in conditional maps

Right Click Option – Change Status >1 Problem

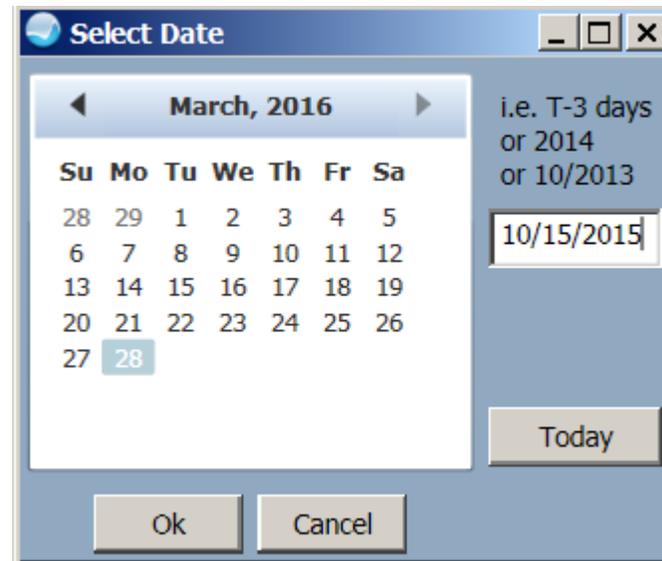
A screenshot of a medical software interface. At the top, there are tabs for "Core Problems", "Chronic", "Episodic", "Social / Environmental", and "Routine / A". Below the tabs is a table with columns for "Status", "Onset Date", "Priority", and "Provider Narrative". The table contains three rows of data: "Social/Environmental", "Social/Environmental", and "Social/Environmental". A right-click context menu is open over the second row, showing options: "Delete", "Edit", "Get SCT", "POV", "Change Statuses", "Change Onset Date", and "Add Comment". The "Change Statuses" option is highlighted, and a sub-menu is open showing a list of status options: "Chronic", "Episodic", "Sub-acute", "Personal History", "Inactive", "Social/Env", and "Routine/Admin". At the bottom of the interface, there is a "Visit Diagnosis" section with a red cross icon and an "Ed" button. Below this, there are fields for "POV Provider Narrative", "SNOMED C", and "Asthma Control".

Right Click Option - Add Comment

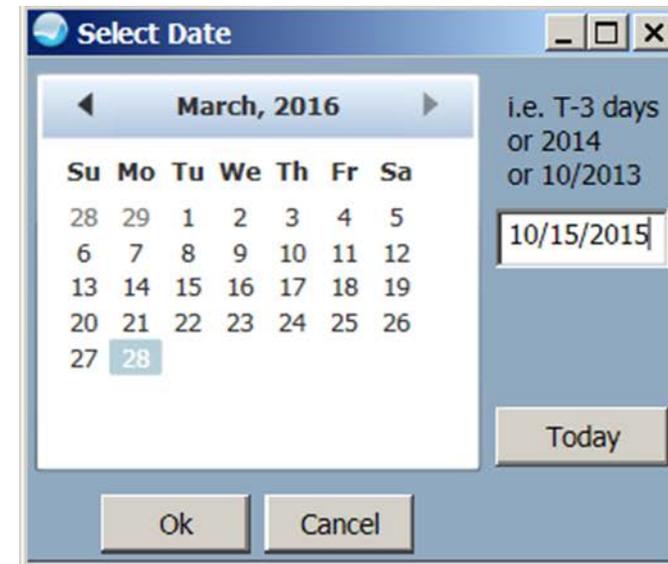
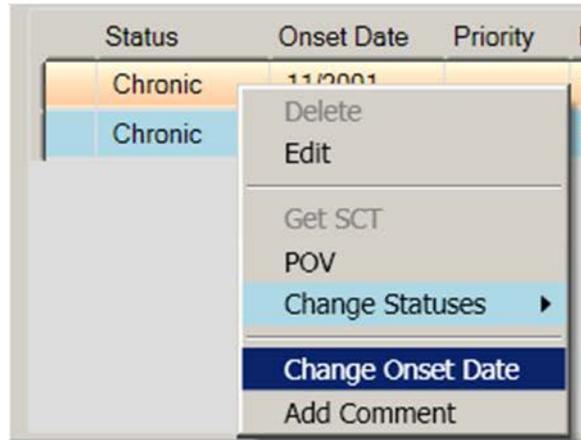


Calendar Controls on IPL

- Now allows entry of T-DAYS and MM/DD/YYYY format



Right Click Option – Add/Update Date of Onset

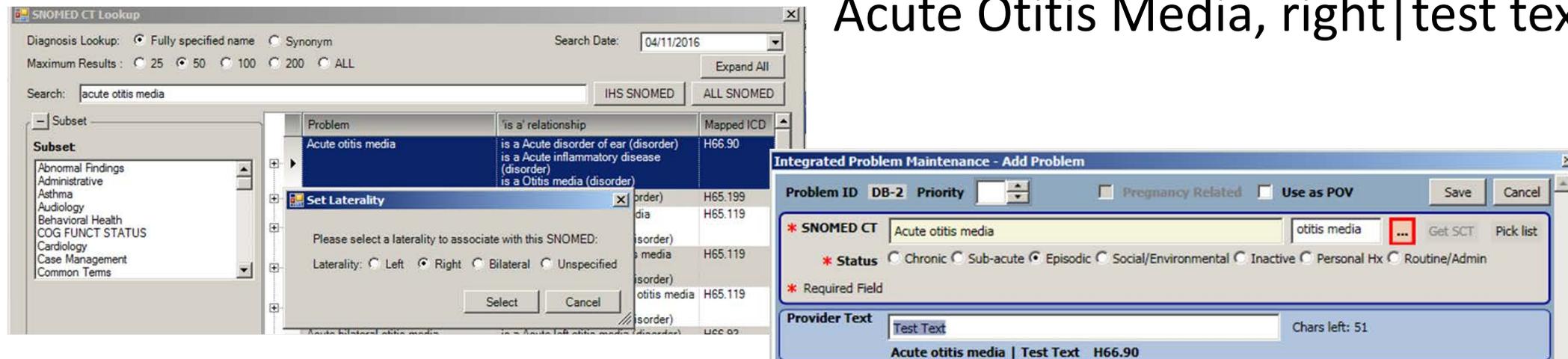


Laterality

When a user selects a SNOMED term for which laterality is appropriate, a selection dialog is presented. Both the Problem SNOMED and the Laterality SNOMED are stored and are displayed as:

Problem, Laterality | Provider text

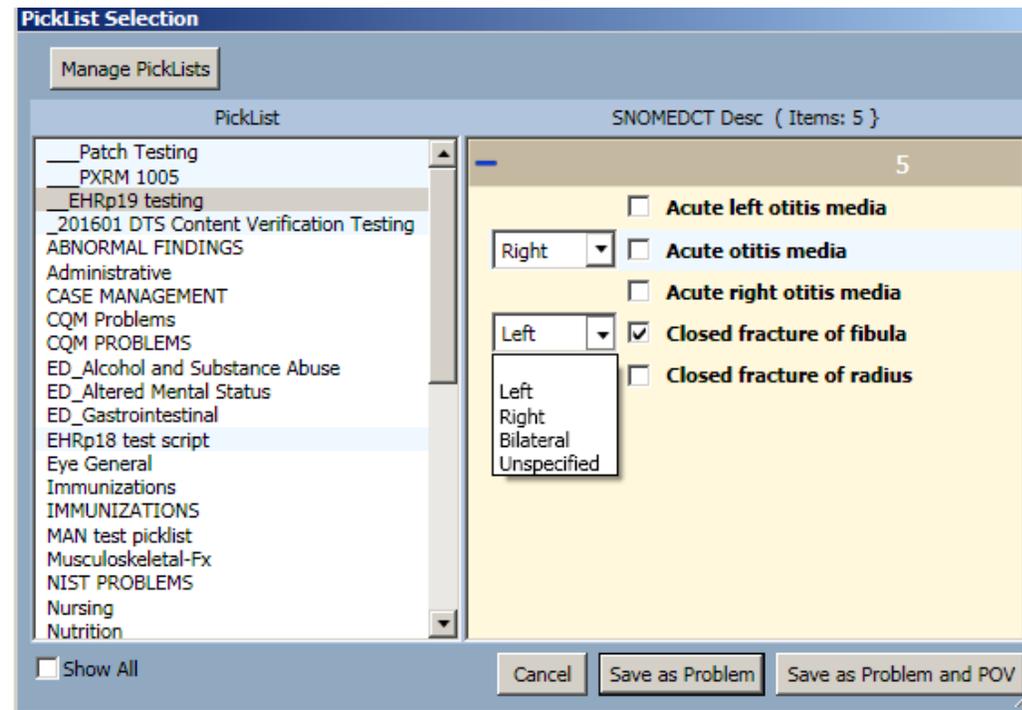
Acute Otitis Media, right | test text



The screenshot displays two overlapping software windows. The background window is titled "SNOMED CT Lookup" and shows a search for "acute otitis media". A table of results is visible, with one entry selected. Overlaid on this is a "Set Laterality" dialog box with radio buttons for "Left", "Right", "Bilateral", and "Unspecified". The "Right" option is selected. In the foreground, the "Integrated Problem Maintenance - Add Problem" dialog box is open. It contains fields for "Problem ID", "DB-2", "Priority", "Pregnancy Related", and "Use as POV". The "SNOMED CT" field contains "Acute otitis media" and "otitis media". The "Status" field has radio buttons for "Chronic", "Sub-acute", "Episodic", "Social/Environmental", "Inactive", "Personal Hx", and "Routine/Admin". The "Provider Text" field contains "Test Text". At the bottom, the text "Acute otitis media | Test Text H66.90" is displayed.

Laterality Picklists

- Similar to the SNOMED search tool, if you select a term for which laterality is appropriate, you must select laterality (or unspecified) before saving.

A screenshot of a software dialog box titled "PickList Selection". The dialog has a "Manage PickLists" button at the top left. It is divided into two main panes. The left pane, titled "PickList", contains a scrollable list of categories such as "Patch Testing", "PXR 1005", "EHRp19 testing", "ABNORMAL FINDINGS", "Administrative", "CASE MANAGEMENT", "CQM Problems", "CQM PROBLEMS", "ED_Alcohol and Substance Abuse", "ED_Altered Mental Status", "ED_Gastrointestinal", "EHRp18 test script", "Eye General", "Immunizations", "IMMUNIZATIONS", "MAN test picklist", "Musculoskeletal-Fx", "NIST PROBLEMS", "Nursing", and "Nutrition". The right pane, titled "SNOMEDCT Desc (Items: 5)", displays a list of medical terms with checkboxes and a laterality dropdown menu. The terms are: "Acute left otitis media" (checkbox unchecked), "Acute otitis media" (checkbox unchecked), "Acute right otitis media" (checkbox unchecked), "Closed fracture of fibula" (checkbox checked), and "Closed fracture of radius" (checkbox unchecked). The laterality dropdown menu is currently set to "Right" and is open, showing options: "Left", "Right", "Bilateral", and "Unspecified". At the bottom of the dialog, there is a "Show All" checkbox, and three buttons: "Cancel", "Save as Problem", and "Save as Problem and POV".



What are Equivalence Rules and How are the Rules Invoked?

Pre-coordination vs Post-coordination

Pre-coordinated expression: single code represents a clinical expression

Expression: acute left otitis media

Code(s): 194288009

Post-coordinated expression: ≥ 2 codes to represent a clinical expression

Expression: acute otitis media + laterality + left

Codes(s): 3110003:272741003=7771000

These mean the same thing. More importantly, the computer can recognize these as the same because of the coding.

Laterality Equivalence Rules

Selected SNOMED term (coded data)	Selected laterality (coded data)	Provider text (free text)	Display
Acute right otitis media		Test	Acute right otitis media Test
Acute otitis media	Right	Test	Acute otitis media, right Test
This is not equivalent to the computer			The laterality is free text, not code
Acute otitis media		Right Test	Acute otitis media Right Test

- Everything to the left of the “|” is coded.
- Everything to the right of the “|” is free text.
- ***The computer can use coded data to determine duplicates***

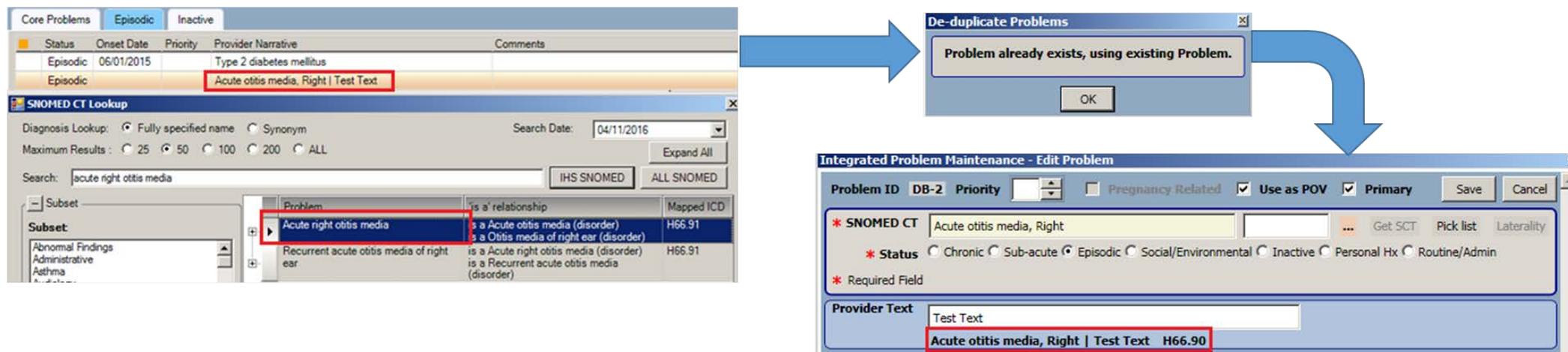
Acute right otitis media = Acute otitis media, right \neq Acute otitis media | *Right*

Search and Select Equivalent Term

Problem entry: “Acute otitis media” + “right”

Search and select: “Acute right otitis media”

- The two are equivalent and your original problem is brought up for edit
- An informational dialog displays and disappears after a few seconds



The screenshot illustrates the workflow for searching and selecting an equivalent term in the SNOMED CT Lookup interface. The search results show "Acute right otitis media" selected. A "De-duplicate Problems" dialog box appears, indicating that the problem already exists. The "Integrated Problem Maintenance - Edit Problem" dialog box then shows the selected problem being edited, with the "SNOMED CT" field containing "Acute otitis media, Right" and the "Provider Text" field containing "Acute otitis media, Right | Test Text H66.90".



De-duplication and Semi-automated Update

Scenario	IPL problem(s)	Search and select	EHR Dialog
Add problem - search and select equivalent term	Acute otitis media, right	Acute right otitis media	
Add problem – search and select “unspecified” AND specific terms exist on IPL	Acute otitis media, right Acute otitis media, bilateral	Acute otitis media, unspecified Add = new IPL entry Edit = select existing IPL entry, no change to IPL entry	
Add problem – search and select specific term AND unspecified term exist on IPL	Acute otitis media text	Acute otitis media, right Add =new IPL entry Replace =replace existing IPL entry with selected term	

De-duplication and Semi-automated Update

Scenario	IPL problem(s)	Search and select	EHR Dialog
Add problem – search and select specific term, new to IPL		Acute right otitis media OR Acute otitis media, right	Adds problem
Add problem – search and select unspecified term, new to IPL		Acute otitis media, unspecified	Adds problem
Set as POV from IPL – set unspecified as POV	Acute otitis media text	Highlight existing - Set as POV will follow rules for equivalency and de-duplication and offer the choice of the selected non-specific term or selection of one with laterality	



What About my Existing Problems

- As you find them, you can update (clinically or for coding)
- Update as you encounter opportunities– we have designed in opportunities to semi-automatically update within clinical workflow

Select “unspecified” Term

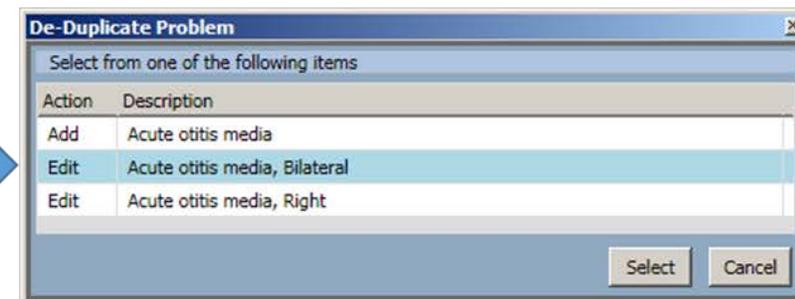
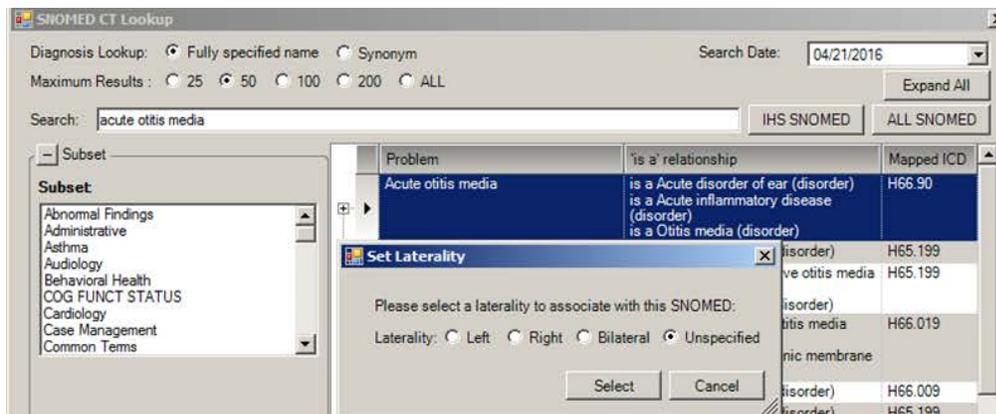
You have an IPL entry: “Acute otitis media” + “right”

“Acute otitis media” + “bilateral”

Search and select: “Acute otitis media” + “unspecified”

Presenting the users with existing laterality specific problems already on the problem list reduces unnecessary clutter being added to the problem list.

- The will be presented as a choice to select existing specified term or add new unspecified term.



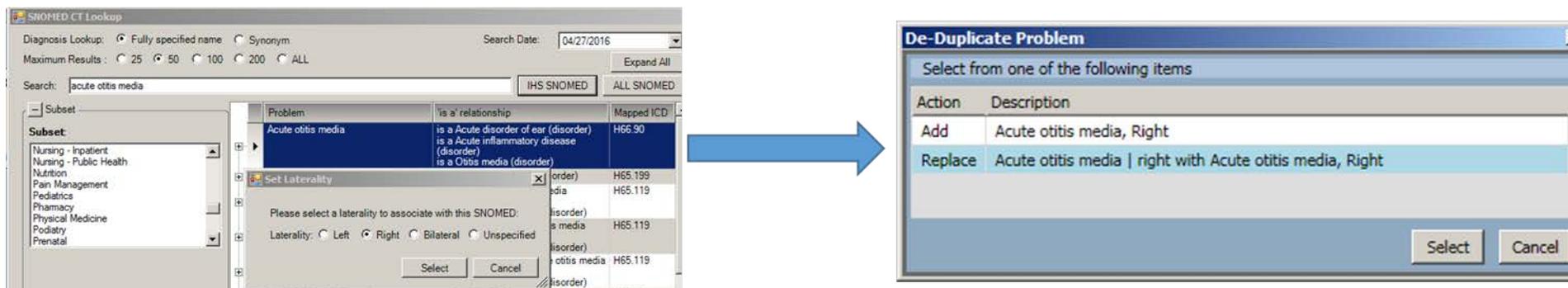
Select “specified” Term

You have an IPL entry: “Acute otitis media” with provider text “right”

Search and select: “Acute otitis media” + “right”

Presenting the users the option of updating an existing problem entry that does not have laterality specified (encoded – left of “|”) helps to imbed the updates in the workflow and reduce clutter.

- To update existing “Acute otitis media|right” with the fully coded “Acute otitis media, right”, choose “replace”.



Questions?

