How ICD10 Will Change the Doctor's World:

Clinical Documentation Improvement, SNOWMED, ICD10 and EHR

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Clinical framework, screen shots and slides are stolen from CMS ICD10 Medical Officer and OIT

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- ICD-10 Basic Review
- Documentation Tensions
  - Clinical Documentation Principles
  - Technical Documentation Principles
- SNOWMED Implementation
- RPMS Conversion – Patch 13
- Using ICD-10 to Energize CDI (Clinical Doc. Improvement)

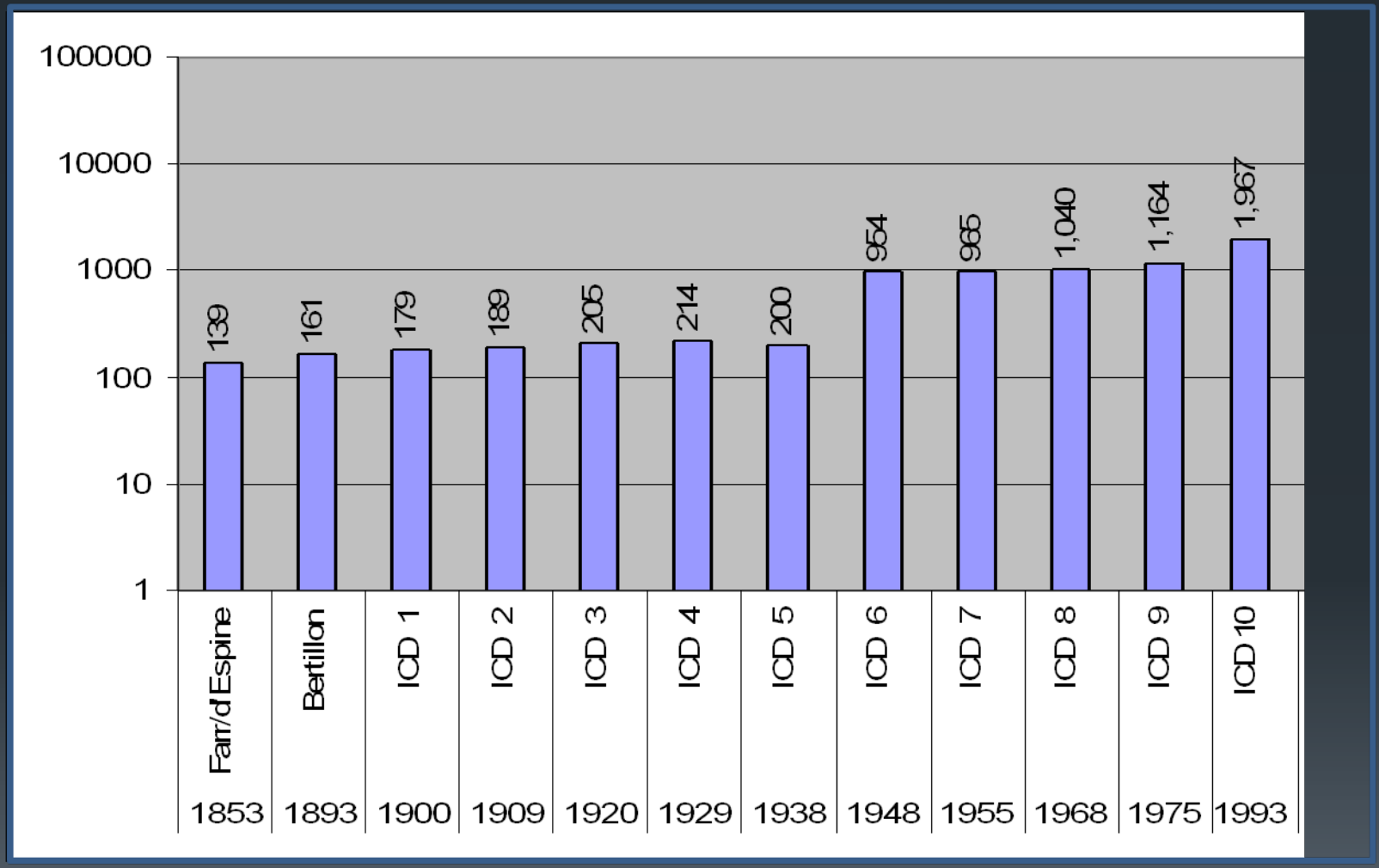
ICD-10-CM Review

What is ICD-10?

- ICD-10
  - International Classification of Diseases- World Health Organization (WHO)
  - Approximately 2000 diseases (families)
- ICD-10-CM
  - "Clinical Modification"
  - US expansion to meet US reporting needs
  - Approximately 70,000 specific codes
- ICD-10-PCS
  - "Procedure Coding System"
  - Inpatient (hospital) coding only
  - Replaces ICD-9-CM procedures; ***CPT/HCPCS are unaffected***

Why ICD10?

- Physicians asked for it!
- Specialty Society detail
- Clinical Improvement – Safety and Quality
- High Resolution v. Low Resolution Clinical Detail



Adapted from Ustun at www.who.int

ICD-9 CM Diagnosis Codes	ICD-10 CM Diagnosis Codes
3- 5 characters in length	3-7 characters in length
14,315 codes	69,099
First digit alpha or numeric Digits 2 – 5 numeric	Digit 1 is alpha Digit 2 is numeric Digits 3 – 7 are alpha or numeric
Limited space for new codes	Flexibility for adding new codes
Lack detail	Very specific
Lacks laterality	Includes laterality

Recurring Concepts

Concept	#Number of Codes
Initial Encounter	13,932
Subsequent Encounter	21,389
Sequela	11,974
Right	12,704
Left	12,393
Routine Healing	2,913
Delayed Healing	2,913
Nonunion	2,895
Malunion	2,595
Assault	1096
Self-harm	1057
Accidental	1262

Changes by Clinical Area

Clinical Area	ICD-9	ICD-10
Fracture	747	17099
Toxins/poisons	244	4662
Pregnancy	1104	2155
Brain Injury	292	574
Diabetes	69	239
Migraine	40	44
Bleeding DO	26	29
Mood DO	78	71
HTN	33	14
ESRD	11	5
Resp Failure	7	4

Diagnosis Code Example

- ICD-10 Codes Provide Greater Specificity in Some Cases
  - ICD-9 code - Striking against or struck accidentally in sports without subsequent fall (E917.0)
  - 24 ICD-10-CM Detail Codes

- W21.00 Struck by hit or thrown ball, unspecified type
- W21.01 Struck by football
- W21.02 Struck by soccer ball
- W21.03 Struck by baseball
- W21.04 Struck by golf ball
- W21.05 Struck by basketball
- W21.06 Struck by volleyball
- W21.07 Struck by softball
- W21.09 Struck by other hit or
- thrown ball
- W21.31 Struck by shoe cleats
- Stepped on by shoe cleats
- W21.32 Struck by skate blades
- Skated over by skate blades
- W21.39 Struck by other sports
- foot wear
- W21.4 Striking against diving board

- W21.11 Struck by baseball bat
- W21.12 Struck by tennis racquet
- W21.13 Struck by golf club
- W21.19 Struck by other bat, racquet or club
- W21.210 Struck by ice hockey stick
- W21.211 Struck by field hockey stick
- W21.220 Struck by ice hockey puck
- W21.221 Struck by field hockey puck
- W21.81 Striking against or struck by football helmet
- W21.89 Striking against or struck by other sports equipment
- W21.9 Striking against or struck by unspecified sports equipment

Clinical Documentation

Purpose of Clinical Documentation

- Paint a Picture
- Understand a Trend
- Explain a Plan
- *Case Centered and Physician Centered*

Purpose of Coding

- Aggregation
- Decomposition
- *Data (Population) Centered and Machine Centered*

Principles for Clinical Documentation

Inclusive – Not too little

Uncluttered – Not too much

Ordered – A place for everything

Prioritized – Important jumps out

Insightful – Thought into value

Expedient – No time spent on non-value work

Inclusive/Uncluttered

- Anything you might need later for the clinical care of the patient should be in the note
  - Not enough is the problem of handwritten notes
- Anything you won't need later for the clinical care of the patient is just clutter that makes it hard to find the gems
  - Too much is the problem of Electronic Records
- **Low value is a problem in both systems**

Ordered/Prioritized

- *Why is the patient here?*

  Chief Complaint

- *What do you think is going on and what did you do?* **Assessment and treatment**
- *Where are you going from here?* **Plan**
- *How did you reach that conclusion?*

  Pertinent History Symptoms and Signs
- *Who did I just treat?* **Demographics and record keeping**
- *When am I going to get paid?* **Documenting for reimbursement and legal defense**

Clinical Value

- Value added - SOAP
  - Pertinent history, physical, assessment and plan
- Business necessary
  - Demographics, **coding**
  - System or staff
- Non value added (clinically)
  - Automate from triggers, auto import
  - Ensure relevance with stated goal for visit

  Do automated – added checklists/negatives demonstrate compliance with necessity?

Clinical Documentation and ICD-10-CM

- In the discussion of Clinical Documentation, coding only appears as business necessary
- Coding is NOT assigning a diagnosis, although coding systems can help consistency
- ICD-10-CM granularity (detail) exceeds current documentation practices
- ICD-***9***-CM granularity (detail) exceeds current documentation practices
- Expected Solution: Code what is available (NOS)
- Code Dx in SNOWMED – map to ICD

Physician Impact

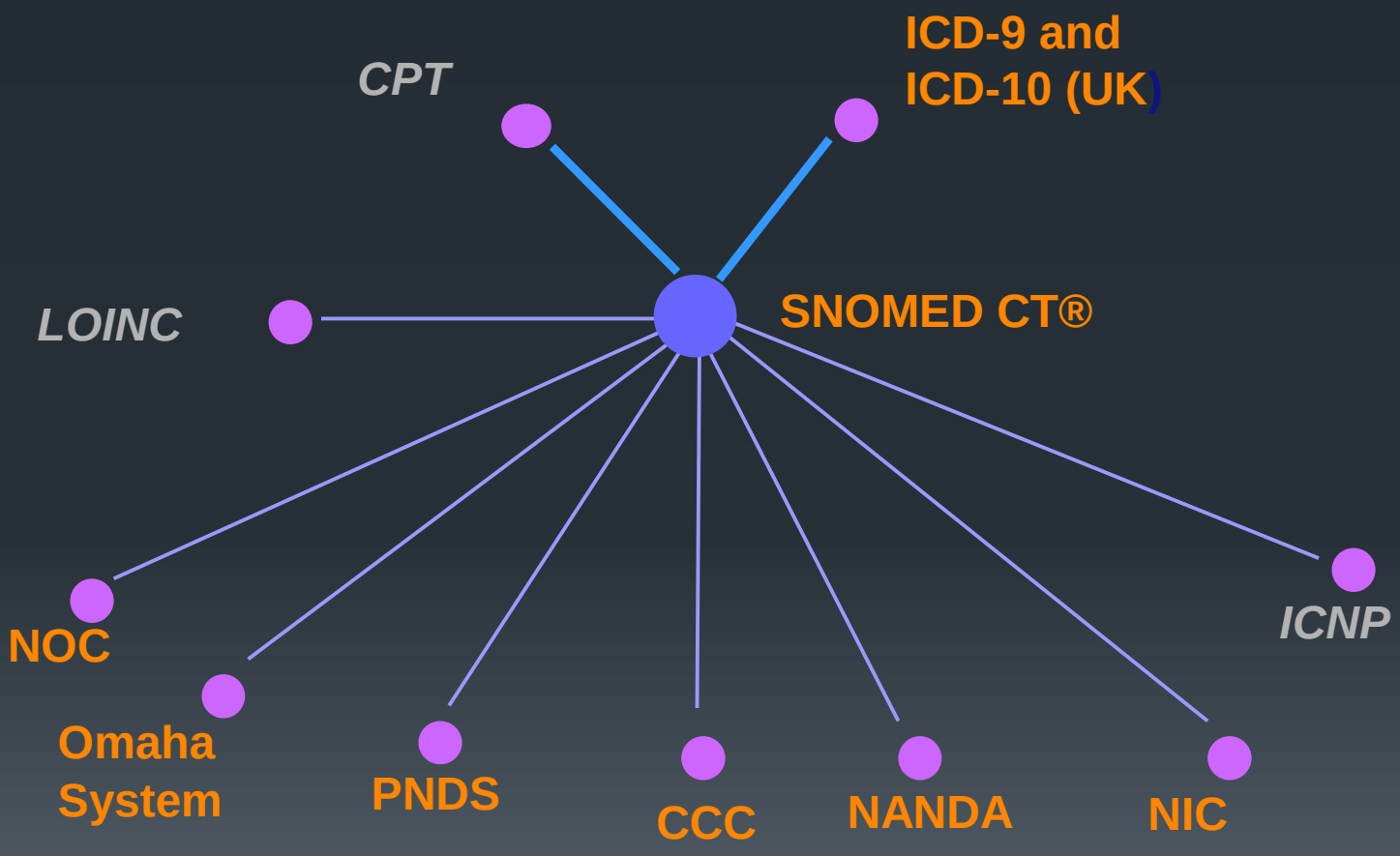
- Physicians deal with diagnoses not codes
- Should you learn new ICD-10 codes??
  - How many ICD-9 codes do you know by heart?
  - A dozen? None?
- Can you learn how to use an index?
  - Index is still alphabetical
- ***Create a new job aid or superbill!
  - Pick lists!

Introduction to SNOMED CT®

What is SNOMED CT® ?

- Systematized Nomenclature of Medicine Clinical Terms® (SNOMED CT®)
- A comprehensive multilingual clinical healthcare terminology
- Enables the computer to understand medical language and act on it
- Extremely large set of concepts and descriptions representing many standard terminologies

Standardized Terminologies Integrated within SNOMED CT®



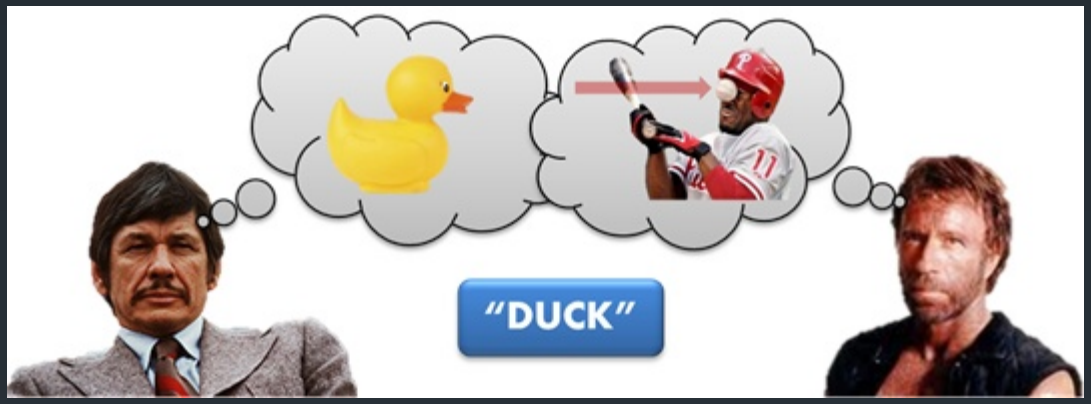
Mappings

- Relevant maps for current IHS projects:
  - SNOMED CT® to ICD-9
  - SNOMED CT® to ICD-10
  - ICD-9 to SNOMED CT® reverse map
  - SNOMED to CPT

SNOMED CT® - Concept and Descriptions

- Concept: The concept is a unit of meaning which is given a unique numeric string which is computer readable
  - e.g. 823660015 represents Common Cold (disorder)
- Description: This concept may have many descriptions that are humanly readable
  - Common cold (disorder) – fully specified name which is unique
  - Common cold – preferred term
  - Acute coryza – synonym
  - Acute infective rhinitis – synonym
  - Cold – synonym
  - Head cold – synonym
  - And so on…

SNOMED CT®
Reduces Ambiguity



This is particularly important for health information exchange but also extremely important for improved documentation, communication between members of the health delivery team, decision support, clinical quality measures and research.

	ICD-9-CM	ICD-10-CM	SNOMED CT
Asperger's disorder	299.8 Other specified pervasive developmental disorders	F84.5 Asperger's disorder	23560001 Asperger's disorder
Apert syndrome	755.55 Acrocephalosyndactyly	Q87.0 Congenital malformation syndromes predominantly affecting facial appearance	205258009 Apert syndrome
Metabolic acidosis	276.2 Acidosis	E87.2 Acidosis	59455009 Metabolic acidosis
Respiratory acidosis	276.2 Acidosis	E87.2 Acidosis	12326000 Respiratory acidosis
Lactic acidosis	276.2 Acidosis	E87.2 Acidosis	91273001 Lactic acidosis

SNOMED CT® implementation in RPMS

Mapping/Storage of Data

RPMS/EHR data	Stores additional data
Measurements	LOINC and/or SNOMED
Health Factors	LOINC and/or SNOMED
Exams	SNOMED
Immunizations	SNOMED
Infant feeding	SNOMED
Education	SNOMED
Reasons not done (refusals)	SNOMED
Type of referral (RCIS, Consults)	SNOMED

Mapping/Storage of Data

RPMS/EHR data	Stores additional data
Labs	LOINC
Radiology	LOINC and/or SNOMED
AMI data	SNOMED
Stroke data	SNOMED
Medications	RxNorm
Allergy ingredients	RxNorm and/or UNII
Allergy reactions	SNOMED
Medication reconciliation	SNOMED

Integrated Problem List

Why the Change?

Stage 2 meaningful use

- SNOMED CT® for problem list
- Care planning
- Clinical Quality Measures

Stabilize the user interface in advance of ICD-10 changes to reduce impact on clinical users

Improve clinical documentation of problems and encounter diagnoses

Support interdisciplinary problem focused documentation

Integrated Problem List

- Non redundant SNOMED based
- Automatic mappings to ICD 9 and ICD 10
  - Coders will refine as needed
  - If not mapped, will default to .9999
- **Selection of POV from IPL**
- Care planning documentation
- Patient Ed documentation
- Reverse mapping tool to assist in transition

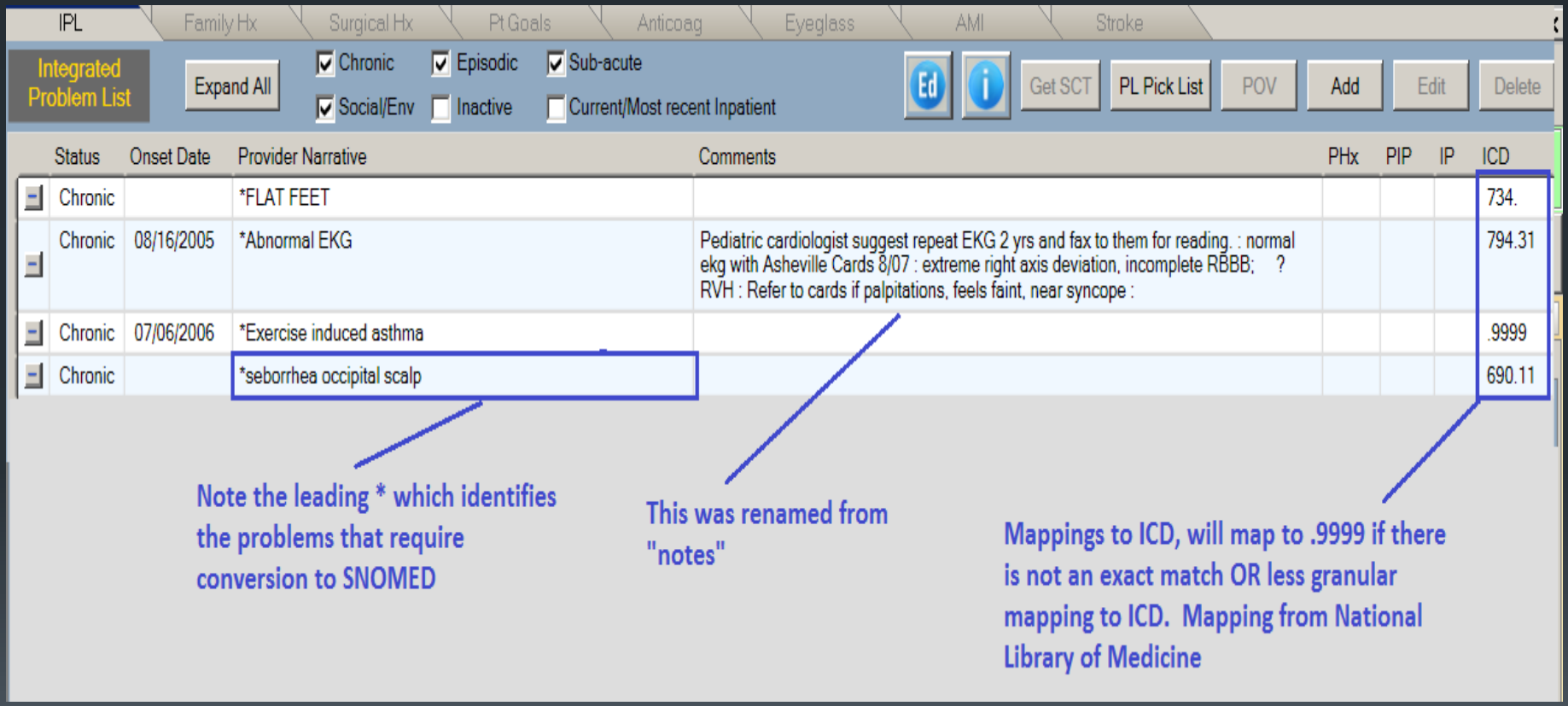
IPL New Features

- Used for ALL problems addressed for patients – chronic, episodic, sub-acute
- Used by ALL clinicians who document care for patient
- Clinician uses only SNOMED CT® to document diagnoses/problems/indications
- Additional optional field of “Provider Text” will allow clinicians to add clarification

Problem Statuses

Current	Migrate to	Examples
Active	***Chronic***	***Diabetes, Hypertension, Asthma***
	Sub-acute	Breast mass, ankle injury – something you are working up or needs shorter term follow up
	Episodic	***Cold, Female UTI – disposition straightforward "follow up PRN or if not improving"***
	Social /Environmental	Homeless, lack of running water, alcoholic in home
Personal History	***Inactive***	***Inactive problem of Chicken Pox***
Inactive	***Inactive***	

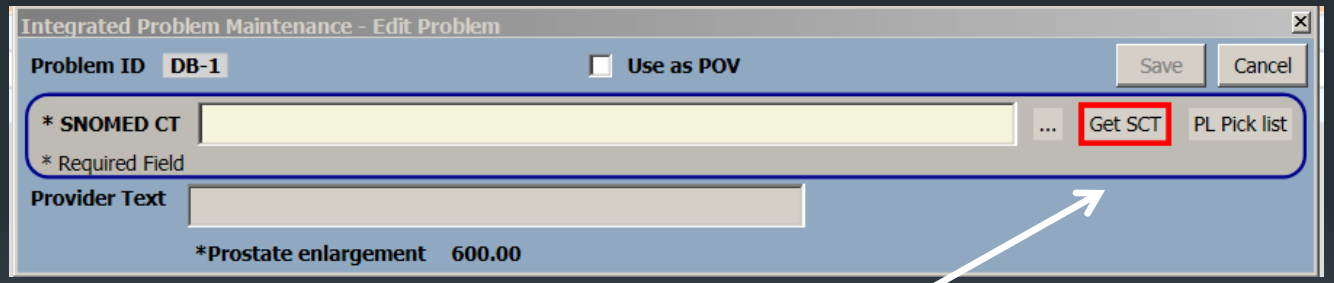
Nationally vetted and released Pick Lists
Clinical Indications for orders selected from Problem List
Care planning done from Problem List


IPL
Family Hx
Surgical Hx
Pt Goals
Anticoag
Eyeglass
AMI
Stroke
Integrated Problem List
Expand All
Chronic
Episodic
Sub-acute
Social/Env
Inactive
Current/Most recent Inpatient
Ed
Get SCT
PL Pick List
POV
Add
Edit
Delete
Status
Onset Date
Provider Narrative
Comments
PHx
PIP
IP
ICD
Chronic
*FLAT FEET
734.
Chronic
08/16/2005
*Abnormal EKG
Pediatric cardiologist suggest repeat EKG 2 yrs and fax to them for reading. : normal ekg with Asheville Cards 8/07 : extreme right axis deviation, incomplete RBBB; ? RVH : Refer to cards if palpitations, feels faint, near syncope :
794.31
Chronic
07/06/2006
*Exercise induced asthma
.9999
Chronic
*seborrhea occipital scalp
690.11
Note the leading * which identifies the problems that require conversion to SNOMED
This was renamed from "notes"
Mappings to ICD, will map to .9999 if there is not an exact match OR less granular mapping to ICD. Mapping from National Library of Medicine

Add/Edit Problem

SNOMED CT and status are the only user entered required fields to add a problem.

- Default status from search is “episodic”.
- Add prompts for SNOMED which is required for New problem
- Edit prompts for SNOMED if problem is ICD encoded



If you are editing a problem that has not been update to SNOMED, you will see the existing Provider Narrative and ICD9

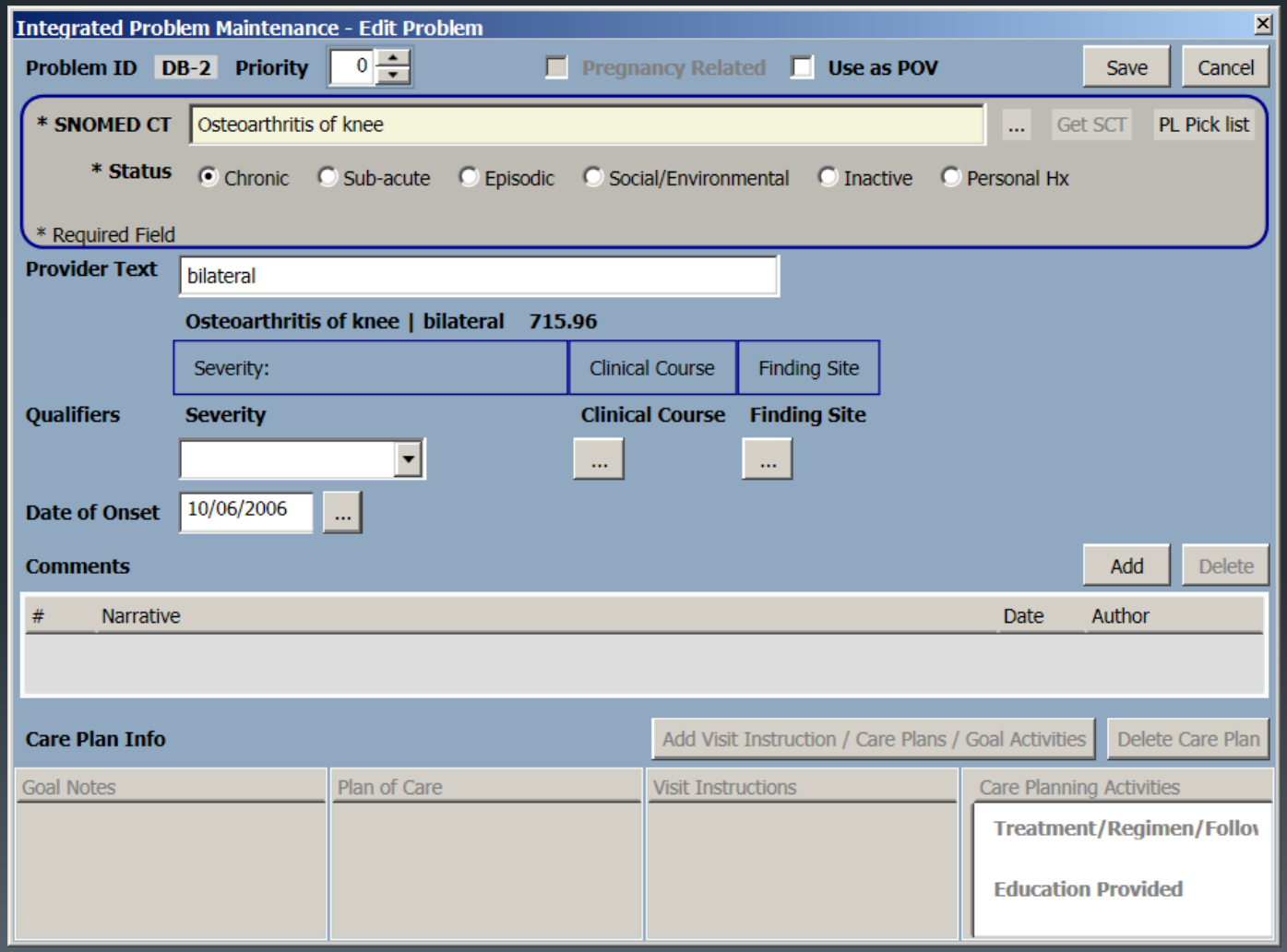
You may then click “Get SCT” to retrieve the reverse mapped SNOMED terms (ICD9 to SNOMED) OR you may search for a new term OR from a picklist to update

Add/Edit Problem

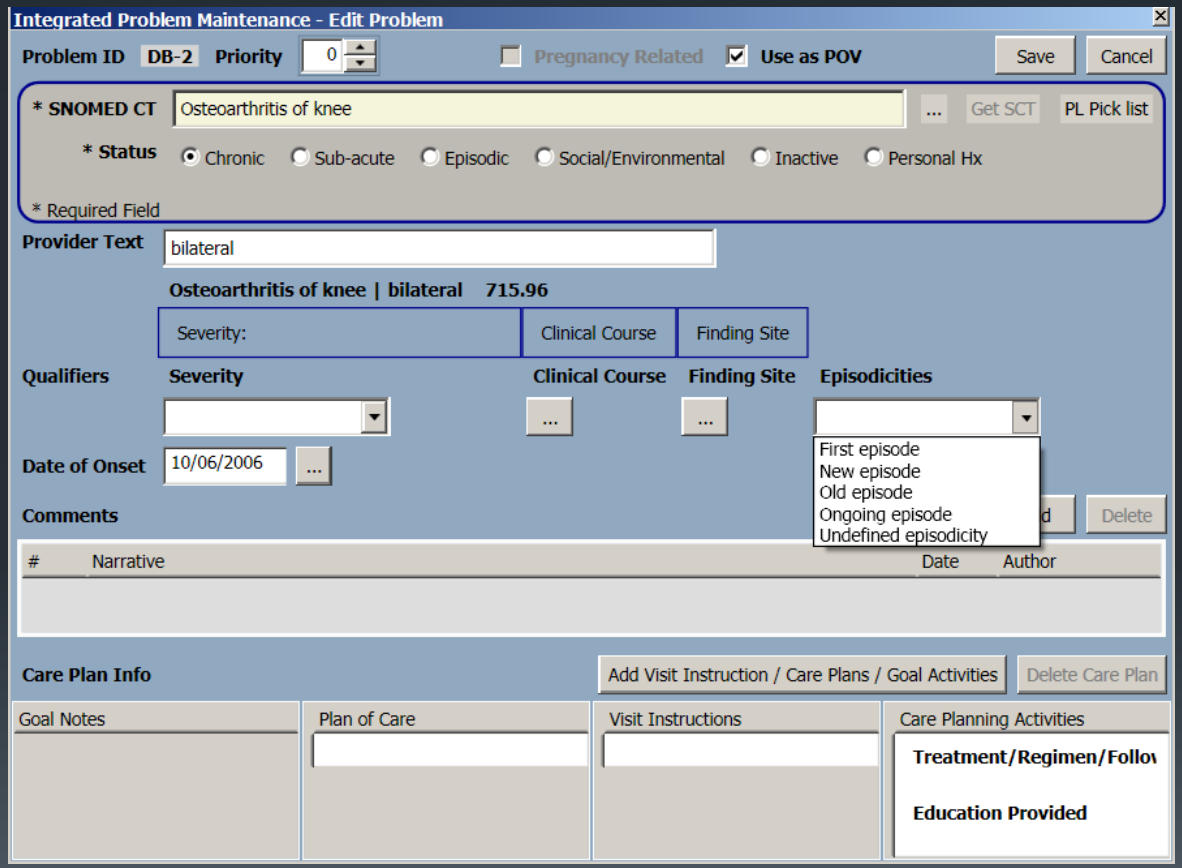
Only SNOMED Term and Status are required fields

These are optional fields that may be used to add information

Care planning is only editable if selected as POV



Add/Edit Problem



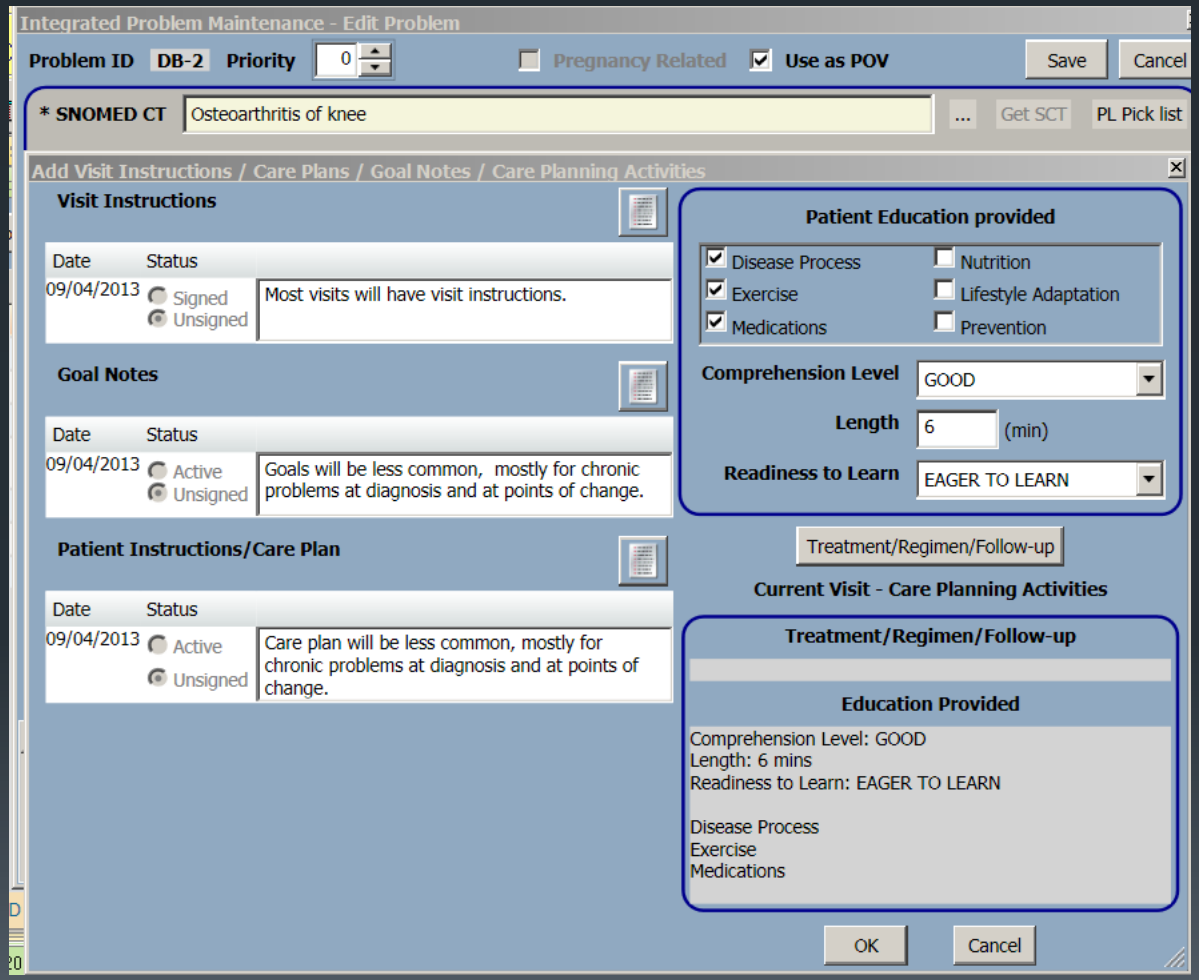
Optional, encounter related

Care planning now editable

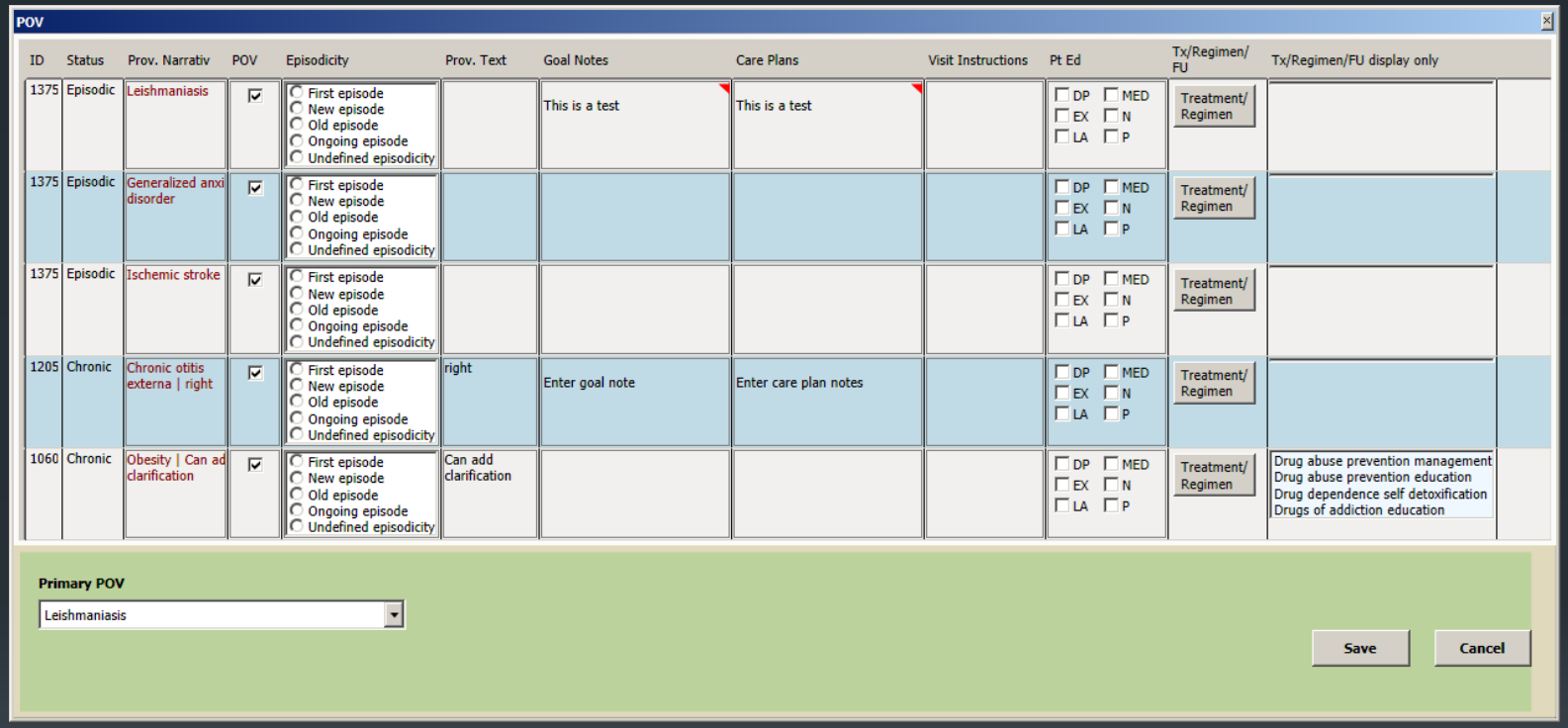
Care Planning

All optional.

- Most visits will have Visit Instructions only.
- Goals and Care Plan is usually set at diagnosis and then updated periodically.
- All fields may be populated using Tiu Templates (note icon on right of each cell).
- You may re-use previous entry and edit.
- Treatment/Regimen/Follow up will be a picklist of items.
- Items entered here will pull into encounter notes via TIU object.



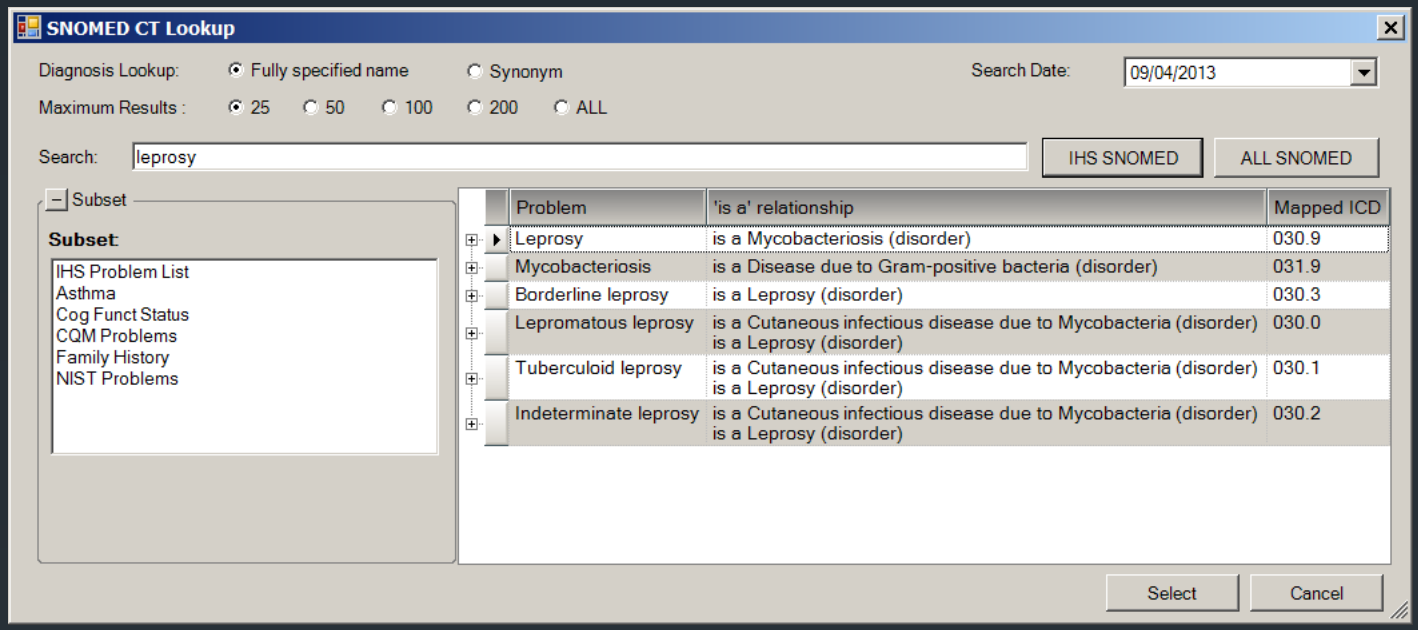
Selecting several POV's



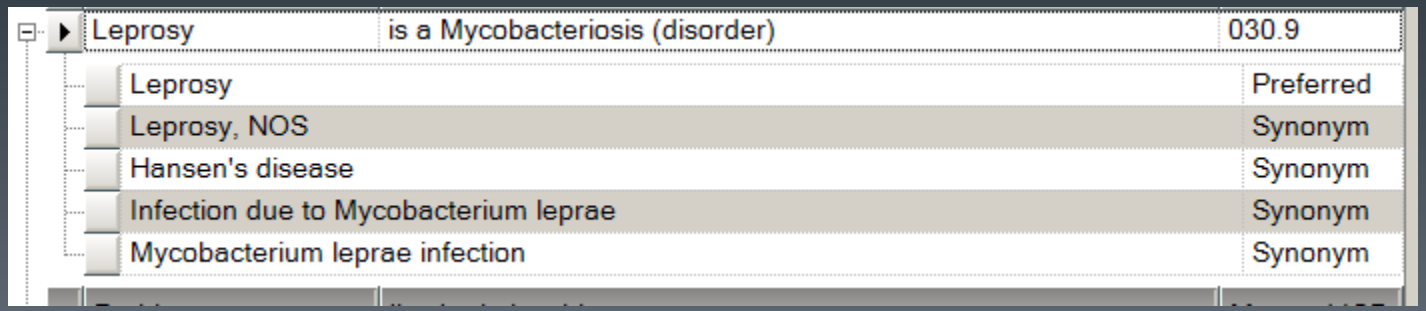
-You may click on several Problems then click "POV" and bring up a quick documentation screen.
-You may document education on several problems, add episodicity, care planning, and follow up if desired.

SNOMED CT® search tools

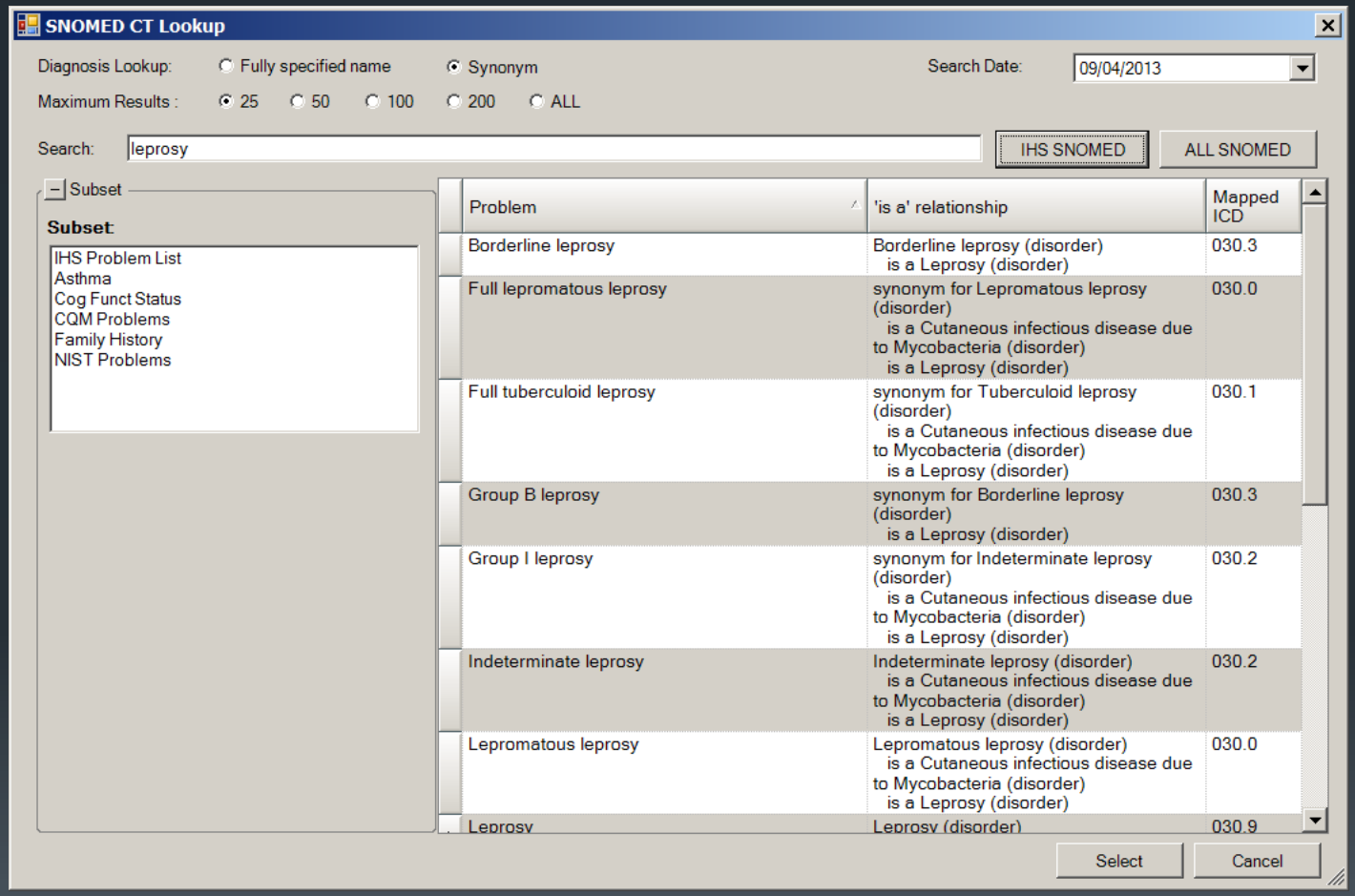
SCT search by FSN



If you select the FSN, it will store the Preferred term.
Clicking “+” allows user to view synonyms from which to choose.



SCT Search by synonym



Displays by synonym and both the fully specified name and “is a” relationship

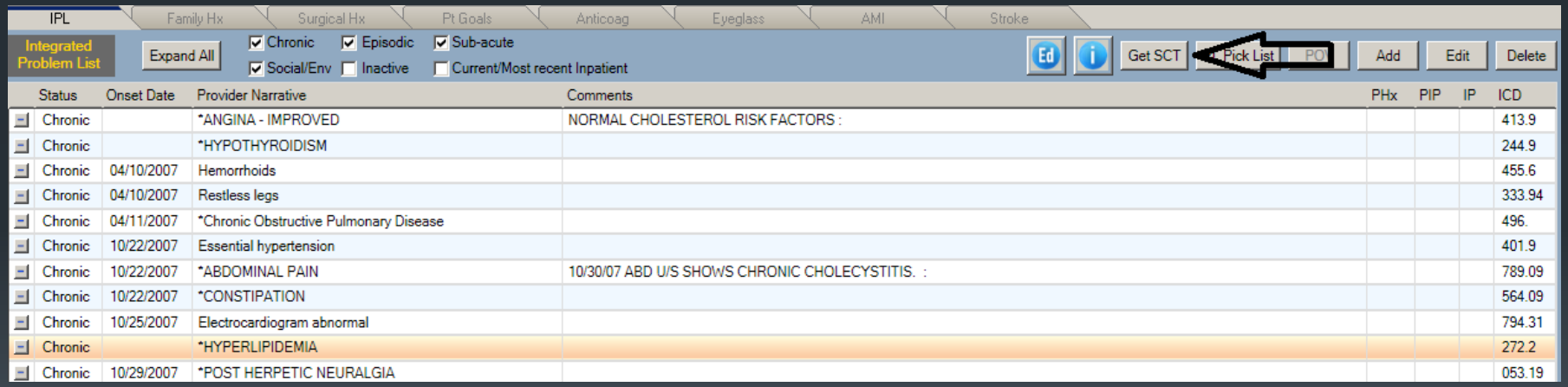
Data migration tools

“Get SCT” – reverse mapping tool

- Allows for quick conversion from ICD9 encoded problem to SNOMED
  - IPL
  - Family History conditions

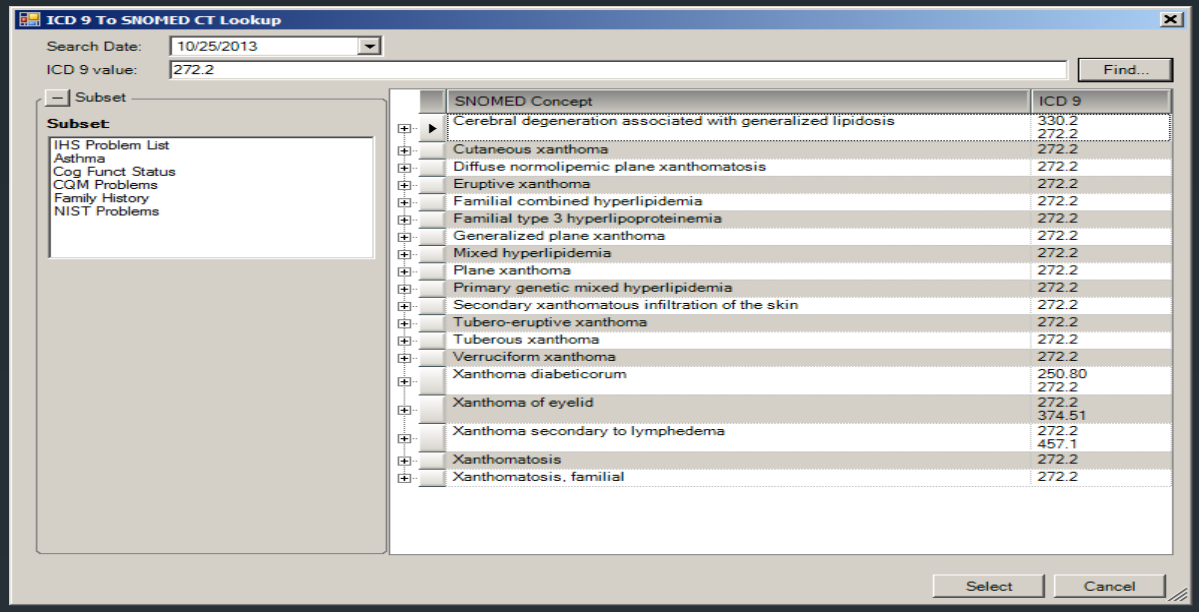
“Get SCT” – Problem List

- Highlight problem and click “Get SCT”

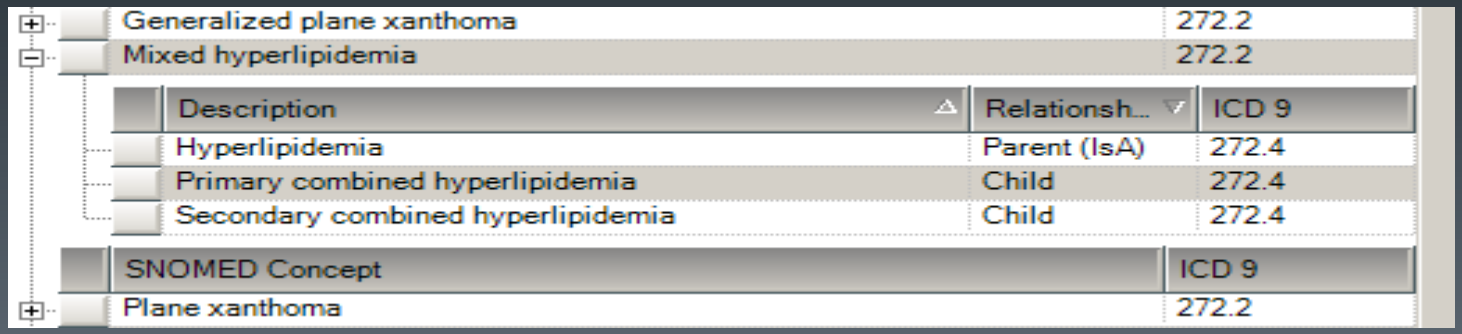


Status	Onset Date	Provider Narrative	Comments	PHx	PIP	IP	ICD
Chronic		*ANGINA - IMPROVED	NORMAL CHOLESTEROL RISK FACTORS :				413.9
Chronic		*HYPOTHYROIDISM					244.9
Chronic	04/10/2007	Hemorrhoids					455.6
Chronic	04/10/2007	Restless legs					333.94
Chronic	04/11/2007	*Chronic Obstructive Pulmonary Disease					496.
Chronic	10/22/2007	Essential hypertension					401.9
Chronic	10/22/2007	*ABDOMINAL PAIN	10/30/07 ABD U/S SHOWS CHRONIC CHOLECYSTITIS. :				789.09
Chronic	10/22/2007	*CONSTIPATION					564.09
Chronic	10/25/2007	Electrocardiogram abnormal					794.31
Chronic		*HYPERLIPIDEMIA					272.2
Chronic	10/29/2007	*POST HERPETIC NEURALGIA					053.19

Return of “Get SCT”

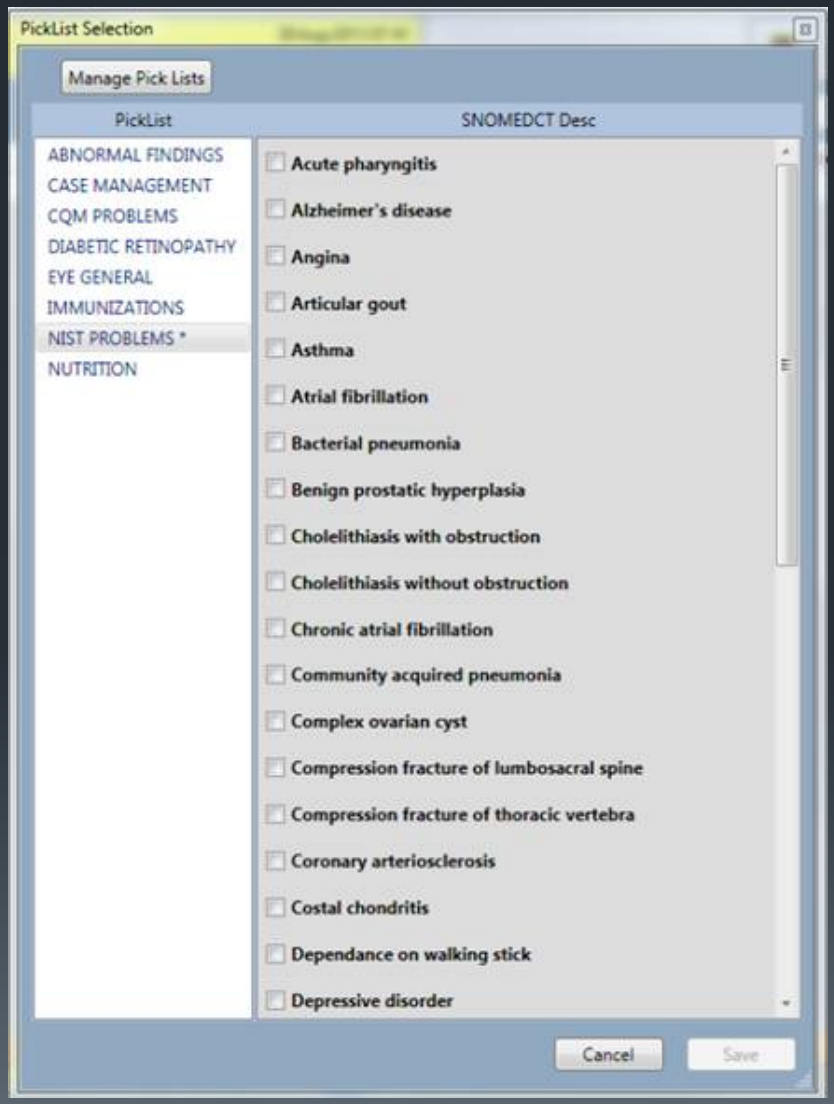


Returns ICD9 to SNOMED matches. Also return the parent (less granular) and children (more granular) of the matches from which clinicians can choose. This does not work for uncoded diagnoses.



Pick lists

- Will deliver nationally vetted pick lists
- Functionality is minimal in this release. More management functionality and improving displays will come in future patch



ICD-10 Initiatives to Improve Clinical Documentation – Excuse for CDI

Manual Processes to Improve Documentation and Coding

- Accurate coding is a 2 step process
  - Diagnosis: The MD converts clinical information into a diagnosis, documenting the process
  - Encoding: Coder extracts info to categorize
- Case Feedback
  - Ask the Doc: Unclear, Incomplete, Ambiguous
- Targeted Documentation Improvement - Board recertification clinical improvement requirements and MU2 CQM
  - Select a clinical condition with inadequate documentation
  - Tie key elements (e.g. renal status) to increased coding detail

Technical Processes to Improve Coding - Future

- Passive automation
  - Pick Lists
  - Code look-ups and Drop-downs
- Active automation
  - Computerized questions
    - Was it R or L?
  - Clinical algorithms with code capture

Technical Processes to Improve Documentation – Decision Support

- Algorithm drives EHR
- Finding of diabetes triggers clinical and coding questions
- Clinical information populates fields while coding information is processed.
- Example
  - Diabetes is entered
  - Last creatinine is requested
  - High Cr triggers MD alert and query to confirm renal status

Data Analysis: Evidence Based Improvement

- What is the OUTCOME you are trying to improve with improved clinical documentation?
  - Reimbursement?
  - Ease of coding?
  - Clear handoff?
  - Clinical pathways?
  - Clinical outcomes?

Conclusion

Conclusion

- Best Documentation Practices under ICD-10 are the same as best practices under ICD-9
  - ICD-10 does not drive Clinical Documentation Improvement
  - ICD-10 benefits depend on Clinical Documentation Improvement
  - ICD-10 can be used as a tool to promote improved documentation and as a tool to facilitate improvement projects
- SNOMED does not drive and does depend on improved documentation, and has future potential to facilitate improvement projects

Recommendations

- Use CDI to grow coders into coding *and documentation* Quality Assurance roles
  - Collaborative Chart Review-Trigger and Review Tools
  - Feedback promotes improvement
- Use ICD-10 and SNOWMED to push software development (EMR/EHR) into *clinically* useful paths
  - EMR algorithms should direct clinical guidelines
- Use targeted initiatives to push documentation for improved outcomes in specific diseases and encounters

Thank You!

- Questions
- Comments
- Rumors
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