



U.S. Department
of Veterans Affairs

LEXICON

Overview

Functionality

Maintenance

Future



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OVERVIEW

What is Lexicon

- Standard reference for terminology across VA
- Provides a basis for a common language of terminology so that all members of a healthcare team may communicate with each other.
- Provides terminology that is well-defined, understandable, unique in concept, and encodable, using a variety of coding schemes.

What is Lexicon

- Provides the ability to upgrade coding systems (for example, ICD9-CM was upgraded to ICD-10) and to add, change, and delete codes.
- Provides for a limited view of vocabulary in the form of Lexicon subsets.

What we do:

- HIPAA mandated updates to billing code sets
- Quarterly updates to clinical code sets
- Problem List Standardization
- VistA Lexicon and Coding Systems APIs

Who we support:

- VistA Applications
- VA Billing
- VETS (VA Enterprise Terminology Server)

VistA Applications

- Patient Care Encounter (PCE)
- Event Capture
- Home-based Primary Care
- Clinical Reminders
- TIU (Text Integration Utility)
- Lab Data Sharing and Interoperability (LDSI)
- Problem List
- Automated Information Collection System (AICS)
- ICD-9-CM to VBA Disability Code Mappings

Code Systems

- Clinical Procedural Terminology (CPT)
- CPT Modifiers
- Healthcare Common Procedure Coding System (HCPCS)
- Clinical Dental Terminology (CDT)
- International Classification of Diseases Diagnoses and Procedures (ICD-10)
- Systematized Nomenclature of Medicine – Clinical Terminology (SNOMED-CT)

ICD-10

- State of the VA with ICD-10
- Last 2 years of work (Aug 2014)
- Refining content for searching
 - Accurate search
 - Expected results



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FUNCTIONALITY

Lexicon Access

- APIs allow applications to search and retrieve Lexicon terminology.
- Direct clinical user interface through the Lexicon Utility menu option

Lexicon API's example

- **LOOK^LEXA**
 - (string, package, list length, subset, effective date)
- **CODE^LEXTRAN**
 - (code, source, date, return array)
- **EN^LEXA1**
 - Can filter by code set, specialty, user, semantic type, etc.

Lexicon Look up

- Type in problem text
 - Problem: *Diabetes*
- Lexicon returns a list of matching entries:
 - Diabetes Insipidus (ICD-10-CM E23.2)
 - Neonatal diabetes mellitus (ICD-10-CM P70.2)
 - Nephrogenic Diabetes Insipidus (ICD-10-CM N25.1)
 - Family History of Diabetes mellitus (ICD-10-CM Z83.3)

Lexicon Look up

Clinician chooses term that most accurately represents the problem:

Nephrogenic Diabetes Insipidus (ICD-10-CM N25.1)

Problem list application then stores information:

1. A pointer to Lexicon Expressions file (757.01) for expression 'Nephrogenic Diabetes Insipidus (ICD-10-CM N25.1)'
2. A pointer to ICD file (80) for the ICD10 code 'N25.1'

VistA Lexicon and Coding System Files

Lexicon

- Concepts (757)
- Designations (757.01)
- Codes (757.02)
- Coding Systems (757.03)
- Mapping definitions (757.32)
- Mappings (757.33)

Coding System Files

SDO fields

- ICD-10 Diagnosis (80)
- ICD-10 Procedures (80.1)
- CPT & HCPCS (81)
- CPT & HCPCS Modifiers (81.3)

Maintained by VMP

- DRG (80.2)
- Major Diagnostic Category (80.3)

Lexicon Main Files

- Lexicon contains code sets
e.g. CPT, HCPCS, ICD, DMIS-ID, SNOMED CT
- Three main files:
 - 757.02 Codes
 - 757.01 Expressions
 - 757 Concepts

Lexicon Codes

- Codes file stores codes
- Each code has pointer to an expression in file 757.01
- Each code has pointer to a concept in file 757

Lexicon Expressions

- Expressions file stores expressions which may be concepts, synonyms, lexical variants, plural forms, etc.
- Each expression has a pointer to a concept in file 757
- Each expression may have a number of look-up words

Lexicon Concepts

- Lexicon concept file stores pointers to those expressions in the expressions file that are concepts.
- Lexicon concept file is pointed to by expressions in the expressions file that are associated with a concept



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MAINTENANCE

What is business need?

- Required to maintain many files
- Required to release updates quickly
- Required to release updates frequently
- Auditable
- Repeatable
- Past procedures resulted in a process time that exceeded period between successive updates

Maintenance

- Code Set Updates at the 1st of each Quarter
 - Oct 1 (Q1) - ICD, SNOMED CT Int.
 - Jan 1 (Q2) - CPT, HCPCS, modifiers, SNOMED CT US
 - Apr 1 (Q3) - SNOMED CT Int., HCPCS, ICD
 - Jul 1 (Q4) – CPT, HCPCS, SNOMED CT US
- Software updates as needed

Code Set Updates

- Content differences obtained from third party contract or created in house
 - File format specific to Lexicon loading utility
 - Text formatted for Lexicon (no special characters)
 - Content either Added, Updated or Inactivated
 - Effective date supplied for each code

Code Set Updates

- Differences loaded into development account
- Data exported to compare with supplied diff file
- Test plan written to spot compare updated codes
- Patch and test plan released to SQA

Code Set Updates

- Patch and test plan released to test sites
- Installed in test environments
- Installed in production environments
- Site signoff
- National release

Software Updates

- Remedy tickets entered from the field
- Requests examined by team for accuracy
- Approved requests added to next quarterly patch



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RECENT/FUTURE

Recent/Future

- Recent
 - Problem List moved away from ICD-9 to use SNOMED CT
 - CVX and MVX have been standardized and now updated monthly
- Future
 - LOINC and RxNorm in LEX
 - LOINC replacing LAB LOINC file
 - PCE National Standardization
 - Further integrate Vista Lexicon and Code Sets content and services with VETS content and services



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QUESTIONS?



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THANK YOU
