0. Introduction

This is the 2002AB documentation addendum to the 2002AA documentation. Changes to the documentation due to addition or deletion of new content in 2002AB are outlined here. Some sections, like String Count by Source and Precedence, are shown in their entirety since there are significant changes to these sections with each release.

As an addendum, the content is presented in the order of the January (2002AA) documentation with the same section numbers and structure.

0.1 What’s New for 2002AB UMLS

0.1.0 Introduction

The UMLS Knowledge Sources are now released quarterly. This Spring 2002 release is named 2002AB; the Summer release will be called 2002AC; and so on. When necessary, releases may become even more frequent; it will be up to each user to decide how frequently to load new updates. This What’s New section will help a user decide by outlining changes present in a new release.

0.1.1 Metathesaurus

The 2002AB edition of the Metathesaurus includes 871,584 concepts and 2.10 million concept names in its source vocabularies. There are 94,644 more concepts; 142,338 more names in MRCON; and 151,870 more names in MRSO.

There are three new sources for the 2002AB release—NCBI2001, Taxonomy from National Center for Biotechnology Information; NLM02, RxNorm work done by the National Library of Medicine; and NLM03, RxNorm relationship work done by the National Library of Medicine.

Three sources were updated for the 2002AB release—INS2002, French translation of MeSH; MDR41, Medical Dictionary for Regulatory Activities Terminology (MedDRA) version 4.1; and MSH2002_02_10, Medical Subject Headings (MeSH) February 10, 2002.

VANDF01 now has a Restriction Level of 0.
MTHMSTFRE and MTHMSTITA now have a Restriction Level of 0.

The file sizes in MRFILES now show the correct sizes for each format (note that ISO/PC text files have one more character per line than Unix text files).

**RxNorm**

This release contains about 16,000 concepts created by the National Library of Medicine which express the meaning of a drug name in a normalized form. These concepts relate the names of orderable medications to a dose forms from a set proposed by the HL7 Vocabulary Technical Committee as a value set, and the components of those medications. For further discussion, see the article at:


**Problems Identified in 2002AA Release and Repaired for 2002AB Release**

1. 2002AA MRCXT ICPC2E/ICPC2P Problem

1. Problem

There are two problems in the 2002AA MRCXT that affect International Classification of Primary Care, Version 2-Plus (ICPC2P) and International Classification of Primary Care, 2nd ed. Electronic form (ICPC2E). First, there are a number of incomplete contexts present containing only the second level ANC row (typically with context numbers 3 or 4) without the higher or lower ANC rows, and without any CCP, SIB, or CHD rows.

For example,

C0000731|S0351958|ICPC2P|D25|3|ANC|2|Symptoms and Complaints Component|C0497525|1|||

Second, there are a number of contexts attributed to ICPC2E that have "ICPC2-Plus" as the context tree-top.

For example,

C0000731|S0351958|ICPC2E|D25|4|ANC|2|DIGESTIVE|C0521361|D|||
C0000731|S0351958|ICPC2E|D25|4|ANC|2|ABDOMINAL DISTENSION|C0000731|D25||+

... CHD rows not shown ...

II. Scope
These errors affect only ICPC2P and ICPC2E MRCXT data.

The first problem affects about 2500 rows of MRCXT and the second problem affects another 23,000 rows. In total, about 2500 "contexts" are affected (where a "context" is a CUI,SUI,SOC,SCD,CXN tuple).

These problems will cause a failure to correctly display these 2500 contexts. Additionally, exceptions will occur in applications that expect the complete ANC tree to be available for contexts represented in MRCXT.

2. MetamorphoSys 2002AA Configuration File Problem

I. Problem

There is a bug in the configuration file distributed with MetamorphoSys that affects the ability of the user to configure both the precedence and suppressibility of LOINC term types. This does not affect the ability of the user to exclude the entire LOINC vocabulary from using MetamorphoSys.

II. Scope

This problem is limited to a users' ability to change the precedence and suppressibility within LOINC. Other sources are not affected.

3. MRXNS.ENG, MRXNW.ENG Problem

I. Problem

The version of LVG used to compute the MRXNW.ENG and MRXNS.ENG files was slightly different from the version distributed with the 2002AA UMLS, causing small variations in the normalized forms of some strings in MRCON.

II. Scope

A total of 26 strings were affected by this problem. There are 28 lines in the old MRXNS.ENG that have incorrect NSTR fields. The new MRXNS.ENG replaces those lines with 36 new ones which are both corrected normalized forms and additional normalized strings.

Following is an example of a corrected NSTR. The original MRXNS.ENG has this line,

ENG|02 14 19 19 19 19 2 2 2 5 5 5 alpha beta chaetocin dide dideoxy diphenyl epidithio phenylethenyl|C0292271|L0354632|S2175084|

The corrected MRXNS.ENG replaces it with this line,
Here is another example. The following line comes from the original MRXNS.ENG

ENG|3r capsanthin|C0951566|L1862217|S2191205|

This is replaced in the corrected MRXNS.ENG by two lines.

ENG|13 3 3r 5 capsanthin ci isomer r|C0951566|L1862217|S2191205|
ENG|13 3 3r 5 capsanthin cis isomer r|C0951566|L1862217|S2191205|

The original MRXNW.ENG contained no incorrect lines, however there were some missing lines. The corrected MRXNW.ENG has an additional 88 lines. For example,

ENG|15|C0292271|L0354632|S2175084|

This corresponds with the first MRXNS.ENG example shown above.

This problem only affects users who make use of the normalized index files.

The incorrect normalized strings and normalized words come from the following list of sources:

RCD99, MSH2002

4. MRCXT (CST95, SNM2) Problem

I. Problem

There are cases of multiple CST95 and SNM2 contexts being assigned the same context number for a single CUI, SUI, SAB, SCD tuple, leading to cases of overlapping contexts. In one case, specifically, this causes a single context to have two CCP rows.

II. Scope

There are contexts in 52 CUIs affected by this problem. The CST95 case appears like this in MRCXT:

C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|1|COSTART: coding symbols for thesaurus of adverse reaction terms|C0220949|||
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|2|HEMATOLOGIC DISORDERS|C0018939|HEM|||
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|2|Hemic and Lymphatic System|C0549527|HAL|||
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|3|Erythrocyte

C0019054|S0376154|CST95|HEMOLYSIS|2|ANC|2|HEMATOLOGIC DISORDERS|C0018939|HEM|||
C0019054|S0376154|CST95|HEMOLYSIS|2|ANC|4|Hemolytic disorders|C0020935|||
C0019054|S0376154|CST95|HEMOLYSIS|2|ANC|5|Anemia|C0019054|S0376154|CST95|HEMOLYSIS|3|ANC|5|Anemia|||
Abnormalities[C0391870|HAL/RBC]|  
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|1|erythrocytes decreased[C0236147|HAL/RBC/DEC]|  
C0019054|S0376154|CST95|HEMOLYSIS|1|CCP|HEMOLYSIS|C0019054|HAL/RBC/DEC/HEMOLYSIS|  
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|2|Hemic and Lymphatic System[C0549527|HAL]|  
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|3|Erythrocyte Abnormalities[C0391870|HAL/RBC]|  
C0019054|S0376154|CST95|HEMOLYSIS|1|ANC|4|erythrocytes decreased[C0236147|HAL/RBC/DEC]|  
C0019054|S0376154|CST95|HEMOLYSIS|1|CCP|HEMOLYSIS|C0019054|HAL/RBC/DEC/HEMOLYSIS|  

...  
C0019054|S0376154|CST95|HEMOLYSIS|3|ANC|1|COSTART: coding symbols for thesaurus of adverse reaction terms[C0220949]|  
C0019054|S0376154|CST95|HEMOLYSIS|3|ANC|2|HEMATOLOGIC DISORDERS[C0018939|HEM]|  
C0019054|S0376154|CST95|HEMOLYSIS|3|ANC|1|COSTART: coding symbols for thesaurus of adverse reaction terms[C0220949]|  
C0019054|S0376154|CST95|HEMOLYSIS|3|ANC|2|HEMATOLOGIC DISORDERS[C0018939|HEM]|  
The SNM2 cases are less obvious because they involve cases where a particular CUI,SUI,SAB,SCD is its own child. In the original MRCXT it appears like this:

C0334970|S0637124|SNM2|NOCODE|1|ANC|1|Systematized Nomenclature of Medicine, 2nd ed.[C0220966]|  
C0334970|S0637124|SNM2|NOCODE|1|ANC|2|Occupation Axis[C0334705]|  
C0334970|S0637124|SNM2|NOCODE|1|ANC|3|Professional, Technical and Related Workers[C0334704]|  
C0334970|S0637124|SNM2|NOCODE|1|ANC|4|Economists[C0334970]|  
C0334970|S0637124|SNM2|NOCODE|1|CCP|Economists[C0334970]|+

In the corrected MRCXT, it shows up as two separate contexts:

C0334970|S0637124|SNM2|NOCODE|1|ANC|1|Systematized Nomenclature of Medicine, 2nd ed.[C0220966]|  
C0334970|S0637124|SNM2|NOCODE|1|ANC|2|Occupation Axis[C0334705]|  
C0334970|S0637124|SNM2|NOCODE|1|ANC|3|Professional, Technical and Related Workers[C0334704]|  
C0334970|S0637124|SNM2|NOCODE|1|ANC|4|Economists[C0334970]|+
The CST problem affects just one CUI, but the SNM2 problem affects 51 CUIs.

5. MRCOC COA Sort Order

I. Problem

The ordering of the subheading frequency listings in the COA field of MRCOC changed. Although not specifically documented, the subheading frequencies have historically been listed in decreasing frequency order but were instead listed in alphabetical order.

II. Scope

All cases with multiple subheadings where the frequency order did not match the alphabetical order were affected. For example, 2001AA MRCOC had the following entry:

C0000039|C0012456|MED01|L|10|CH=8,ME=2,<>=1,AN=1|

CH is the highest frequency subheading so it appears first. The corresponding entry from the 2002AA MRCOC is this:

C0000039|C0012456|MED02|L|12|<>=1,AN=1,CH=10,ME=2|

Again, CH is the highest frequency subheading, yet it appears third because the list is sorted alphabetically. In the corrected 2002AA MRCOC, this line appears as follows:

C0000039|C0012456|MED01|L|12|CH=10,ME=2,<>=1,AN=1|

This problem affects 2007720 lines in the 2002AA MRCOC, or 17% of the total file.

0.1.2 Semantic Network
No changes to the Semantic Network.

**0.1.3 SPECIALIST Lexicon and Lexical Programs**

No Changes to the SPECIALIST Lexicon or Lexical Programs.

**0.1.4 UMLS Knowledge Source Server**

There is a new version of the UMLS Knowledge Source Server. To find out more about the new features, please go to:


This page has a section on *What’s New* and a link to a FAQ page. For users already registered, there is documentation describing the changes once in the system.

**2. Metathesaurus**

**2.1 Source Vocabularies**

The Metathesaurus contains relationships, attributes and concept names from more than 60 vocabularies and classifications, some in multiple editions. Many of the source vocabularies are included in their entirety; for others the Metathesaurus has partial coverage. Some material in the UMLS Metathesaurus is from copyrighted sources of the respective copyright claimants.

The Metathesaurus source vocabularies include terminologies designed for varied uses: in patient-record systems; large disease and procedure classifications used for statistical reporting and billing; more narrowly focused vocabularies used to record data related to psychiatry, nursing, medical devices, adverse drug reactions, etc.; disease and finding terminologies from expert diagnostic systems, and some thesauri used in information retrieval.

Metathesaurus sources may have markedly differing purposes and views. Some of these sources may match your needs exactly, while others may be useless or even harmful in your applications. For this reason, it is important to select appropriate sources and reject others, using MetamorphoSys or with queries using the Source Abbreviation (SAB) in the distribution files.

The Metathesaurus structure can incorporate translations of its source vocabularies into languages other than English. The 2002AB Metathesaurus includes the Dutch, French, Finnish, German, Italian, Portuguese, Russian (transliterated), and Spanish translations of NLM's Medical Subject Headings (MeSH). This edition also includes German
translations of ICD10 and UMDNS; ICPC terms in Basque, Danish, Dutch, Finnish, French, German, Hebrew, Hungarian, Italian, Norwegian, Spanish, and Swedish; CPT terms in Spanish; Metathesaurus Version of Minimal Standard Terminology Digestive Endoscopy in French and Italian; and WHOART terms in French, German, Portuguese, and Spanish.

Users should also determine which vocabularies would require additional license arrangements for the anticipated use. MetamorphoSys (see Section 2.8 in 2002AA documentation) should be used to exclude vocabularies; it removes all vocabulary information and thus ensures compliance with the UMLS License Agreement.

### 2.3.1 Relationships in the Metathesaurus

Relationships in the Metathesaurus may come from the sources themselves or may be created by Metathesaurus editors to link concepts that would not otherwise be connected. Some relationships (RELs) are further refined by a Relationship Attribute (RELA, see Appendix B.1.1 in 2002AA Documentation).

Note that the nature and purpose of a relationship depends on its source, as indicated in the “Source Abbreviation for source vocabulary” (SAB) and the “Source of Relationship labels,” (SL). The source is the authority which asserts a relationship which is represented as transparently as possible within the Metathesaurus. Thus, relationships may adhere to pragmatic or esoteric principles; some are co-occurrences, statistical relationships, or mappings; some may even be self-referential (CUI1 = CUI2) where there are differing views of synonymy. Therefore it is important to select the RELs, RELAs, SABs, and SLs that match a user’s views and purposes. Note also that a variety of relationships from earlier editions of the Metathesaurus as well as editor-asserted relationships may carry the SAB and/or SL of “MTH.”

There are eleven types of relationships that exist in the Metathesaurus.

- **Broader (RB)** has a broader relationship.
- **Narrower (RN)** has a narrower relationship.
- **Other related (RO)** has relationship other than synonymous, narrower, or broader.
- **Like (RL)** the two concepts are similar or "alike". In the current edition of the Metathesaurus, most relationships with this attribute are mappings provided by a source. In previous releases, some MeSH Supplementary Concept relationships were represented in this way.
- **RQ** unspecified source asserted relatedness, possibly synonymous.
- **SY** source asserted synonymy.
Parent (PAR) has parent relationship in a Metathesaurus source vocabulary.

Child (CHD) has child relationship in a Metathesaurus source vocabulary.

Sibling (SIB) has sibling relationship in a Metathesaurus source vocabulary.

AQ is an allowed qualifier for a concept in a Metathesaurus source vocabulary.

QB can be qualified by a concept in a Metathesaurus source vocabulary.

### 2.3.2 Context in the Metathesaurus

Updates to Context description include:

**Change:**
MDR40:FULL-MULTIPLE --> MDR41: FULL-MULTIPLE
MSH2002:FULL-MULTIPLE --> MSH2002_02_10:FULL-MULTIPLE

**Add:**
NCBI2001: FULL-NOSIB

### 2.7.1.2.1 Relation Relation (File=MRFILES)

Corrected Column Information:

BTS  Size in bytes in this format (ISO/PC or Unix)

### Section 6

#### 6.1 Content of the CD-ROMS

The 2002AB edition of the UMLS Knowledge Sources is available only in compressed formats: Unix (TGZ) and PC (ZIP). Two CD-ROMs are required for each format. To use the UMLS, you must uncompress BOTH discs to a local hard disk, which will then contain the complete distribution including the MetamorphoSys tool to customize your version.

The PC format discs (2002AB_1_ZIP and 2002AB_2_ZIP) contain the UMLS Knowledge Sources in ZIP format, with PC line termination in the ASCII files. Use this
format for Windows (version 3.1 and up), Windows NT and 2000 (v4.0 and up), XP, and
OS/2. PKZIP or WINZIP programs may be used to extract the data; they may be obtained
using these URLs: http://www.pkware.com or http://www.winzip.com. To extract the
files to your disk, assign the target directory in which you wish to create UMLS2002AB
(see below) and unzip the ZIP files on BOTH CD-ROMs. NOTE that your file system
must support large file sizes, e.g. NTFS or FAT32.

The Unix format CD-ROMs (2002AB_1_TAR and 2002AB_2_TAR) contain the
UMLS Knowledge Sources in tar GNU ZIP (gzip) format (.tar.gz), with Unix line
termination in the ASCII files. Use this format for operating systems that support
UNIX line termination (all flavors of UNIX and Linux). To unpack this you will
need the free gzip or gunzip utility available from http://www.gnu.org. 'cd' to the
target directory for UMLS2002AB (see below), then type the following
commands:

    gzip -dc [cdrom_path]/2002AB_1.TGZ | tar xvf –

and then

    gzip -dc [cdrom_path]/2002AB_2.TGZ | tar xvf -

where [cdrom_path] is the path to the TGZ file on your CD-ROM.

NOTE that if you do not include the pipe to tar, the extraction will fail when the
intermediate file exceeds most Unix file system's 2 GB size limits on single files.

Appropriate Java Runtime Environments (jre) for MetamorphoSys are included for each
format.

All users should extract the full 2002AB UMLS Knowledge Sources to hard disk,
creating the Standard UMLS2002AB Directory Structure below which occupies 4.2 GB.
We recommend a minimum of 8 GB available disk space.

PLEASE NOTE that you must have the full 2002AB UMLS Knowledge Sources on a
local hard disk to use MetamorphoSys; you will need MetamorphoSys to comply with the
license agreement and to customize the Metathesaurus to meet your needs.

**Standard 2002AB UMLS Knowledge Source Directory Structure**

```
2002AB/   root UMLS directory

DOC/ UMLS Knowledge Source documentation (this manual) in ASCII,
       PDF, and HTML.
```
META/ Metathesaurus concepts in ASCII relational format

CHANGE/ Files identifying significant differences from the previous edition.

METAMSYS/ MetamorphoSys system

METASUBSET/ Your customized Metathesaurus (initially empty)

NET/ Semantic Network in ASCII relational format and unit record formats; and Semantic Network documentation in ASCII format.

LEX/ SPECIALIST lexicon in ASCII relational and unit record formats and SPECIALIST documentation in ASCII format.

DOCS/ SPECIALIST Documentation

LEX_DB/

LEX_PGMS/ SPECIALIST lexicon related lexical programs in executable and C source code.

MISC/

A.1 Appendix to the License Agreement for Use of the UMLS Knowledge Sources

Additions to the Appendix include the following (new sources, updates and restriction level changes):

UMLS METATHESAURUS SOURCE VOCABULARIES -- Spring 2002AB Edition

Source information for new or updated sources for the 2002AB release:
Contact: http://meddramsso.com


This source has been translated into many languages. To date, eight of the translations have been incorporated into the UMLS Metathesaurus.

Contact: Stuart Nelson, M.D., Head, MeSH Section; e-mail: nelson@nlm.nih.gov; http://www.nlm.nih.gov/mesh/meshhome.html


*NOTE: Now a CATEGORY 0.

Contact: Michele Tringali, tringali.michele@aoud.sanita.fvg.it


*NOTE: Now a CATEGORY 0.

Contact: Michele Tringali, tringali.michele@aoud.sanita.fvg.it


Contact: www.ncbi.nlm.nih.gov/Taxonomy/

NLM02 RxNorm work done by the National Library of Medicine (NLM), Bethesda (MD), National Library of Medicine.

This release contains concepts created by the National Library of Medicine which express the meaning of a drug name in a normalized form. These concepts relate the names of
NLM03  RxNorm relationship work done by the National Library of Medicine (NLM), Bethesda (MD), National Library of Medicine.

This release contains concepts created by the National Library of Medicine which express the meaning of a drug name in a normalized form. These concepts relate the names of orderable medications to a dose form and the components of those medications. For further discussion, see the article at:


Contact: Stuart Nelson, M.D., Head, MeSH Section; e-mail: nelson@nlm.nih.gov


*NOTE: Now a CATEGORY 0.

Contact: http://www.vapbm.org/PBM/natform1.htm

Appendix B Metathesaurus Data Elements and Source Vocabulary Information

B.1.1 Column Descriptions

Updates to Column Descriptions for 2002AB:

COT  Type of Co-occurrence

Found in MRCOC
Valid values for Type of Co-occurrence:

- **L**: Co-occurrence of primary or main subject headings in citations to the published literature
- **LQ**: second concept occurs as a MeSH topical qualifier of the first in citations to the published literature. Where CUI2 is not present, the count of citations of CUI1 with no MeSH qualifiers is reported.
- **LQB**: second concept is qualified by the first (a MeSH topical qualifier) in citations to the published literature
- **KP**: positive association in Knowledge Base
- **KN**: negative association in Knowledge Base, e.g., a finding that is inconsistent with a disease.
- **MP**: Co-occurrence of modifier and problem within a patient record
- **PP**: Co-occurrence of two problems within a patient record

Note that in some circumstances patient record co-occurrences may be self-referential due to differing views of synonymy or to data anomalies.

### B.1.2 Attribute Descriptions

Attribute additions and deletions include the following:

- **MISO**: MedDRA Serial Code International SOC Sort Order Digit (01-26)
  
  Examples:
  
  MISO|07
  MISO|05
  MISO|09
  MISO|14
  MISO|11

- **DID**: Descriptor Identifier.
  
  The identifier for the "descriptor class" in a given source, this value may be the same as the source code.

  2002AB has DID attributes from two sources:
MeSH: The DID is the descriptor identifier, e.g. D012711

MedDRA: The DID is the preferred MedDRA code. In MedDRA, a lower level term may have a different code from its preferred term. A DID is present for all preferred and lower level MedDRA terms, with the value of the code of the preferred term. This attribute was formerly called "MPC" for MedDRA. In the future, many sources will include a "DID" attribute.

Examples:

(MDR41)
DID|10000085
DID|10000060

(MSH2002_02_10)
DID|D012711
DID|D015060

Attributes used in the previous release, not found in current release:

MPC  This was a precursor to the MDR41 DID attribute. See the note above.

NST  Normalized Strength (VANDF01)

---

**B.2 Source Vocabularies and their Abbreviations**

Complete list of Source Abbreviations with the new updates and new sources for 2002AB included:

<table>
<thead>
<tr>
<th>Source Abbreviation</th>
<th>Description</th>
</tr>
</thead>
</table>


COS89  Computer-Stored Ambulatory Records (COSTAR). Boston (MA): Massachusetts General Hospital, 1989. (List of terms that occur frequently at 3 COSTAR sites, supplied by Massachusetts General Hospital)

COS92  Computer-Stored Ambulatory Records (COSTAR). Boston (MA): Massachusetts General Hospital, 1992. (List of terms that occur frequently at 3 COSTAR sites, supplied by Massachusetts General Hospital)

COS93  Computer-Stored Ambulatory Records (COSTAR). Boston (MA): Massachusetts General Hospital, 1993. (List of terms that occur frequently at 3 COSTAR sites, supplied by Massachusetts General Hospital)

COS95  Computer-Stored Ambulatory Records (COSTAR). Boston (MA): Massachusetts General Hospital, 1995. (List of terms that occur frequently at 3 COSTAR sites, supplied by Massachusetts General Hospital)


DMD2002  German translation of MeSH. Cologne (Germany): Deutsches Institut fuer Medizinische Dokumentation und Information, 2002.


ICPC2E International Classification of Primary Care (ICPC) / prepared by the Classification Committee of the World Organization of National Colleges, Academies, and Academic Associations of General Practitioners/Family Physicians (WONCA), known more briefly as the World Organization of Family Doctors. 2nd ed. Henk Lamberts and Inge Hofmans-Oekkes, 1998.


ICPCBAQ Basque translation of ICPC93; see ICPC93

ICPCDAN Danish translation of ICPC93; see ICPC93
ICPCDUT Dutch translation of ICPC93; see ICPC93
ICPCFIN Finnish translation of ICPC93; see ICPC93
ICPCFRE French translation of ICPC93; see ICPC93
ICPCGER German translation of ICPC93; see ICPC93
ICPCHEB Hebrew translation of ICPC93; see ICPC93
ICPCHUN Hungarian translation of ICPC93; see ICPC93
ICPCITA Italian translation of ICPC93; see ICPC93
ICPCNOR Norwegian translation of ICPC93; see ICPC93
ICPCPOR Portuguese translation of ICPC93; see ICPC93
ICPCSPA Spanish translation of ICPC93; see ICPC93
ICPCSWE Swedish translation of ICPC93; see ICPC93
MCM92 Glossary of Methodologic Terms for Clinical Epidemiologic Studies of Human Disorders. Canada: McMaster University.
Requirements for Registration of Pharmaceuticals for Human Use (ICH), November 2001.


MTHCH02 Metathesaurus Hierarchical CPT Terms (These terms were created by the NLM to provide contextual information for CPT). Bethesda (MD): National Library of Medicine.

MTHHH02 Metathesaurus Hierarchical HCPCS Terms (These terms were created by the NLM to provide contextual information for HCPCS). Bethesda (MD): National Library of Medicine.


MTHMSTFRE Metathesaurus Version of Minimal Standard Terminology Digestive


NLM02 RxNorm work done by the National Library of Medicine (NLM). Bethesda (MD): National Library of Medicine.


<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Publisher and Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCD99</td>
<td>Clinical Terms Version 3 (Read Codes) (Q199). England: National</td>
<td>Health Service Centre for Coding and Classification,</td>
</tr>
<tr>
<td>RCDAE</td>
<td>American English equivalent of the Read Thesaurus terms produced by</td>
<td>Bethesda (MD): National Library of Medicine,</td>
</tr>
<tr>
<td>RCDSA</td>
<td>American English equivalent of synthesized terms from the Read</td>
<td>Thesaurus produced by NLM. Version 3 (Q199). Bethesda</td>
</tr>
<tr>
<td></td>
<td>Library of Medicine, UMLS project, 1999.</td>
<td></td>
</tr>
<tr>
<td>RCDSY</td>
<td>Synthesized Read terms (without initial bracketed letters) of the</td>
<td>Thesisaurus produced by NLM. Version 3 (Q199).</td>
</tr>
<tr>
<td></td>
<td>National Library of Medicine, UMLS project, 1999.</td>
<td></td>
</tr>
<tr>
<td>RUS2002</td>
<td>Russian Translation of MeSH. Moscow (Russia): State Central Scientific</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Medical Library, 2002.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veterinary Medicine: SNOMED International. Version 3.5. Northfield,</td>
<td>Schaumburg (IL): American Veterinary Medical Association,</td>
</tr>
<tr>
<td></td>
<td>(IL): College of American Pathologists; Schaumburg (IL): American</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Veterinary Medical Association, 1998.</td>
<td></td>
</tr>
<tr>
<td>SPN99</td>
<td>Standard Product Nomenclature (SPN). Rockville (MD): U.S. Food and</td>
<td></td>
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<tr>
<td></td>
<td>Drug Administration, 1999.</td>
<td></td>
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<td></td>
<td>Library of Medicine.</td>
<td></td>
</tr>
</tbody>
</table>
B.2.1 Sources of additional (non-concept name) information

Complete list of source information with the new updates and new sources for 2002AB included:

A small number of sources contribute information to the Metathesaurus but do not contribute concept names (i.e., the SAB does not appear in MRSO). For example, a source may contribute relationships between concepts, but not actually name the concepts. The following SABs do not appear in MRSO:

- **HDA99** Health devices alerts. Plymouth Meeting, PA: ECRI.
- **HLREL** ICPC2E-ICD10 relationships from Dr. Henk Lamberts (HLREL). University of Amsterdam. Contact: H.Lamberts@AMC.UVA.NL.
- **HPC99** Healthcare product comparison system. Plymouth Meeting, PA: ECRI.
- **MBD02** MEDLINE (1992-1996)
- **MED02** MEDLINE (1997-2002)
- **NCISEER** NCI Surveillance, Epidemiology, and End Results (SEER) conversions between ICD-9-CM and ICD-10 neoplasm codes. National Cancer
B.3 Number of Strings from Each Source

Complete list of string counts with the new updates and new sources for 2002AB included:

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**B.4 Types of Names in a Vocabulary - the TTY**

New Term Types included in 2002AB:

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B.5 Order of Precedence of Source Concept Names as Distributed

New Precedence for the 2002AB release:

MTH/PN
MTH/MM
MSH2002_02_10/MH
MSH2002_02_10/HT
MSH2002_02_10/TQ
MSH2002_02_10/EP
MSH2002_02_10/EN
MSH2002_02_10/XQ
MSH2002_02_10/NM
NLM02/SCD
NLM02/SCDC
NLM02/IN
DSM4/PT
DSM3R/PT
SNM98/PT
SNM98/PX
SNM98/HT
SNM98/HX
VANDF01/CD
VANDF01/HT
VANDF01/IN
NDDF01/CD
NDDF01/IN
MDDB99/CD
MMX01/CD
MMX01/IN
RCDSA/PT
RCDSY/PT
RCDAE/PT
RCD99/PT
MSH2002_02_10/N1
MSH2002_02_10/CE
RCDSA/OP
RCDSY/OP
RCDAE/OP
RCD99/OP
**B.6 Relationship Attributes not Listed in the Semantic Network**

Additions to the list for 2002AB:

- form_of
- has_form
- has_tradename
- tradename_of

Deletions from the list for 2002AB:

No deletions