NEMSIS V3 Use of Suggested Lists

Date

January 5, 2012
March 25, 2016 - updated to include all elements using health care standards

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Abstract

A number of NEMSIS V3 data elements rely on existing national and international standards to provide element values. For example, the element "eMedications.03" (the medications given to the patient) relies on the RxNorm standard to provide code values for medications used in the pre-hospital setting. RxNorm is a standardized nomenclature for clinical drugs and drug delivery devices (http://www.nlm.nih.gov/research/umls/rxnorm/overview.html). A shortcoming to this approach is that national standards, such as RxNorm, contain literally thousands of codes that are not applicable to the pre-hospital setting.

In an effort to facilitate the use of national standards, the NEMSIS TAC has prepared "suggested lists" of values associated with national standards that are appropriate for use in the pre-hospital setting. These code lists are not entirely inclusive and may need to be expanded to meet the special needs of a local agency or state. Adding additional codes, not found on the appropriate suggested list, will not break the NEMSIS XML schema.

The use of "suggested lists" provides three important capabilities:

1. An authoritative source of information
2. The ability to use the information in a consistent way
3. The ability to evolve the lists to accommodate changing business needs

"Suggested Lists" can be trusted to be a high-quality collection of data that follows a well-defined and agreed-upon structure. Clean data has been standardized (for instance, all diagnosis code information follows the same format). Duplicates have been rationalized. The currency of the information is maintained through continuous or periodic updates. The information is complete, secure, and accurate.

NEMSIS V3 Elements with "Suggested Lists"

The following NEMSIS V3 elements rely on national standards for element code values.

Elements utilizing the International Classification of Disease (ICD-10) standard

http://www.cdc.gov/nchs/icd/icd10.htm

ICD-10 CM Codes

- eScene.09 – Incident Location Type
- eSituation.09 – Primary Symptom
- eSituation.10 – Other Associated Symptoms
- eSituation.11 – Provider's Primary Impression
- eSituation.12 – Provider's Secondary Impressions
- eSituation.17 – Patient Activity
- eInjury.01 – Cause of Injury
- eHistory.06 – Medication Allergies
- eHistory.08 – Medical/Surgical History
- eOutcome.08 – Emergency Department Recorded Cause of Injury
- eOutcome.10 – Emergency Department Diagnosis
- eOutcome.13 – Hospital Diagnosis
- ePayment.51 – EMS Condition Code

ICD-10 PCS (Procedure) Codes

- eOutcome.09 – Emergency Department Procedures
- eOutcome.12 – Hospital Procedures

Elements utilizing the RxNorm standard

http://www.nlm.nih.gov/research/umls/rxnorm/overview.html

RxNorm (Medication) Codes

- dConfiguration.04 – Medications Permitted by the State
- dConfiguration.09 – EMS Agency Medications
- eHistory.06 – Medication Allergies
- eHistory.12 – Current Medications
- eMedications.03 – Medications Given

Elements utilizing the SNOMED CT® standard

http://www.nlm.nih.gov/research/umls/Snomed/snomed_main.html

SNOMED CT (Procedure) Codes

- dConfiguration.03 – Procedures Permitted by the State
- dConfiguration.07 – EMS Agency Procedures
- eHistory.07 – Environmental/Food Allergies
- eProcedures.03 – Procedure

Licensed "Suggested Lists"

Several of the national standards used to populate NEMSIS V3 elements are maintained by federal entities or professional organizations and, therefore, require permission to utilize the value codes. A single source may be contacted to gain access to ICD-10, RxNorm and SNOMED CT® code sets. The U.S. National Library of Medicine provides access to the ICD-10, RxNorm and SNOMED CT® through the Unified Medical Language System (UMLS). An applicant must accept the terms of the UMLS Metathesaurus License and create a UMLS Terminology Services (UTS) account for access to UMLS datasets and terminology browsers. More information can be found at: http://www.nlm.nih.gov/databases/umls.html. RxNorm codes may also be accessed through http://rxnav.nlm.nih.gov/

The NEMSIS TAC may only distribute suggested lists with specific value codes from the UMLS system to entities licensed through the UMLS system. Thus, each software developer must seek licensing and provide proof of licensing before gaining access to all of the pre-defined suggested lists available through the NEMSIS TAC.

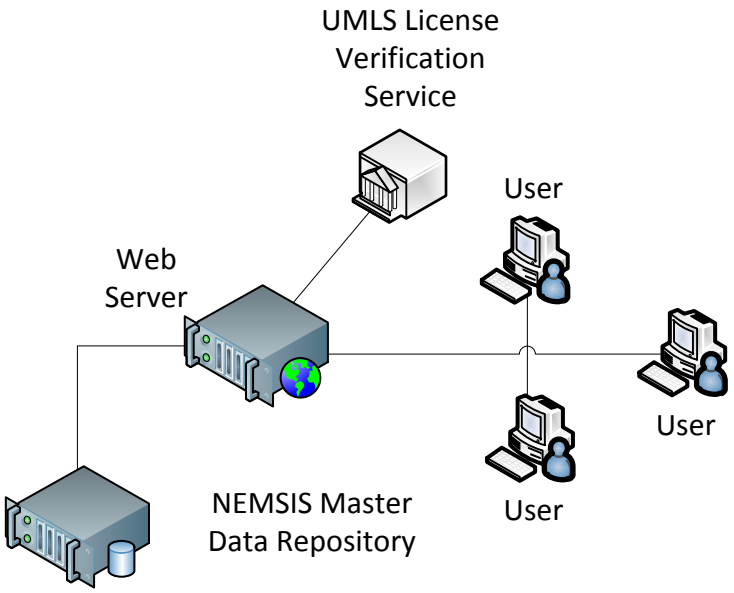
Access to "Suggested List" Archive Files

Access to suggested code lists will be provided on a special section of the NEMSIS TAC's website. A licensed user will be able to login to the site and download the appropriate archive file, including ICD-10, RxNorm or, SNOMED® codes.

The UMLS license verification service helps determine if the remote user has a license to use and/or distribute certain code sets. If the user does not have a current license, access to the "suggested lists" archive is denied.

The "suggested list" files will be zipped archives that are automatically created each time one of the licensed code databases is updated in the NEMSIS master data repository.

System Diagram



(For a detailed system diagram, see appendix #2)

Conclusions

By maintaining a single source of this data and making it available internally as well as to our customers, we improve our data quality and consistency. This will reduce reporting errors in data submissions provided it is used as part of our own and our customer's data management best practices.

Appendix 1 - National Standard Source Links

Other national standards utilized in the NEMSIS V3 standard are maintained in free and non-free accessible forms.

ANSI Country Codes (ISO 3166)

Website - http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm

Census Tract Data

Website (files and descriptions) -
http://www.census.gov/geo/www/2010census/tract_rel/tract_rel.html

GNIS Codes

Website - http://geonames.usgs.gov/domestic/download_data.htm

National Provider Identifier Standard (NPI)

Website - http://www.cms.gov/NationalProvIdentStand/06a_DataDissemination.asp#TopOfPage

RxNorm, SNOMED CT®, ICD-10-CM and ICD-10-PCS

Website - http://uts.nlm.nih.gov

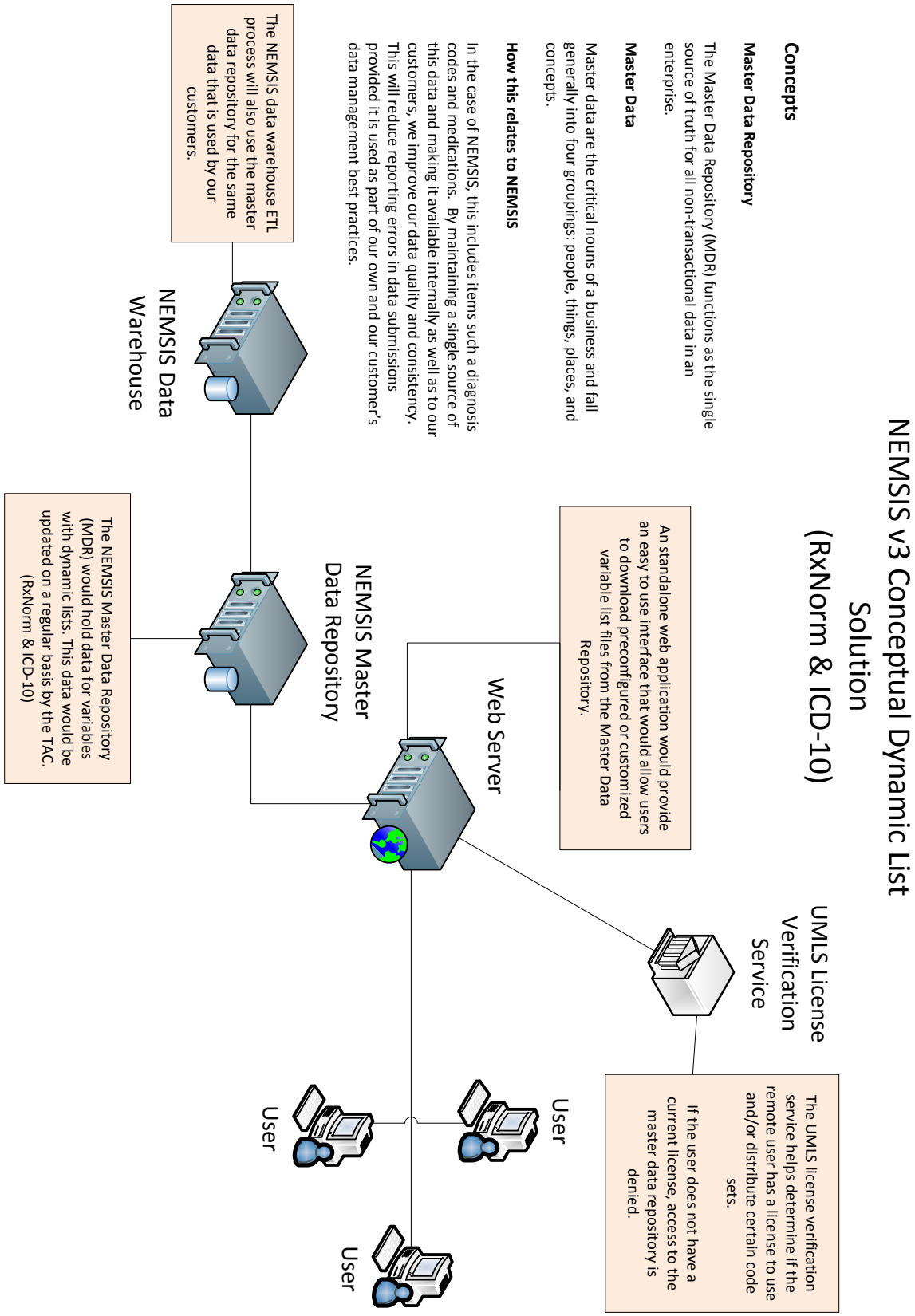
Product - UMLS Metathesaurus

Website - http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html

Product - RxNorm Full Monthly Release

Zip Codes

Product Website -
https://www.zipcodedownload.com/Products/Product/Z5Commercial/Standard/Overview/

Product - USA - 5-digit ZIP Code Database, Commercial Edition

Appendix 2 - Detailed System Diagram