NEMSIS V3 Suggested List – dConfiguration.09 - EMS Agency Medications

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dConfiguration.09 - EMS Agency Medications

The code list associated with dConfiguration.09 (EMS Agency Medications) is represented by a selected group of values found in RxNorm. RxNorm is a standardized nomenclature for clinical drugs and drug delivery devices. The process for gaining access to the RxNorm code values is provided at the end of this document.

RxNorm Code Usage Recommendations

RxNorm provides various codes for medications based on the Term Type (TTY). These include but are not limited to: Ingredient (IN), Precise Ingredient (PIN), Brand Name (BN), Semantic Clinical Drug Form (SCDF), Semantic Clinical Drug Component (SCDC), codes indicating the medication strength or concentration or mixtures (Synonym of Another TTY = SY), and many term type dosing options.

The NEMSIS TAC recommends that medications administered by EMS professionals in the pre-hospital setting be recorded and submitted using the Ingredient (IN) code for the large majority of medication names. This is frequently the generic name of the medication. The NEMSIS Version 3 dataset has elements that allow for the separate documentation of the medication route, dosage, and dosage unit using the following three elements:

1. eMedications.04 - Medication Administered Route
2. eMedications.05 - Medication Dosage
3. eMedications.06 - Medication Dosage Units

To review the RxNorm overview, including an introduction, purpose and examples of RxNorm, and its usage please visit http://www.nlm.nih.gov/research/umls/rxnorm/overview.html. To see the explanation of the term types see page five (5) of this document.

Suggested List for dConfiguration.09 - EMS Agency Medications

The suggested medication description and RxNorm (RxCUI) Code list is designed for the pre-hospital setting. The medication list was developed based upon collaboration between the NEMSIS TAC and EMS Medical Directors at the agency and state level.

Please note the medications are provided based on the Term Type (TTY) and its corresponding RxNorm description (unless otherwise indicated *via italics*). There are 114 medications and five (5) parenteral solutions included in the lists below.

The collaborators recommend the use of "Dextrose" for parenteral administration and "Glucose" for oral administration of sugar based medications/solutions.

RxNorm Medications for EMS in the pre-hospital environment

Medication	TTY Code	Medication	TTY Code
Abciximab	IN	Ketorolac	IN
Acetaminophen	IN	Labetalol	IN
Activated Charcoal	IN	Levalbuterol	IN
Adenosine	IN	Lidocaine -- To be used for parenteral administration.	IN
Albumin Human, USP -- To cover one aspect of blood products.	IN	Lidocaine *Topical* -- To be used for topical use administration.	SCDF
Albuterol	IN	Lorazepam	IN
Alteplase	IN	Magnesium Sulfate	IN
Amiodarone	IN	Mannitol	IN
Aspirin	IN	Meperidine	IN
Atropine	IN	Metaclopramide	IN
Benzocaine	IN	Methylprednisolone	IN
Bumetanide	IN	Metoprolol	IN
Butorphanol	IN	Midazolam	IN
Calcium Chloride	IN	Morphine	IN
Calcium Gluconate	IN	Nalbuphine	IN
Captopril	IN	Naloxone	IN
Chitosan -- Topical Hemostatic Agent - Chitosan based	IN	Nicardipine	IN
Clonidine	IN	Nitroglycerin	IN
Clopidogrel	IN	Nitroprusside	IN
D10 (dextrose 10 % Injectable Solution)	SY	Nitrous Oxide	IN
D25 (dextrose 250 MG/ML Injectable Solution)	SY	Norepinephrine	IN
D50 (dextrose 50 % Injectable Solution)	SY	Normal Saline -- To be used for irrigation: burns, eyes, etc.	IN
Dexamethasone	IN	Ondansetron	IN
Diazepam	IN	Oxygen	IN

Medication	TTY Code	Medication	TTY Code
Diltiazem	IN	Oxymetazoline	IN
Diphenhydramine	IN	Oxytocin	IN
Dobutamine	IN	Pancuronium	IN
Dopamine	IN	Phenobarbital	IN
Droperidol	IN	Phenylephrine	IN
Enalapril	IN	Phenytoin	IN
Epinephrine 0.1mg/ml *(Epi 1:10,000)*	SCDC	Plasma Protein Fraction	IN
Epinephrine 1 mg/ml *(Epi 1:1,000)*	SCDC	Potassium Chloride	IN
Epinephrine, Racemic Hydrochloride	PIN	Potassium Iodide	IN
Eptifibatide	IN	Pralidoxime	IN
Esmolol	IN	Prednisone	IN
Etomidate	IN	Procainamide	IN
Factor IX	IN	Prochlorperazine	IN
Factor VIIa	IN	Promethazine	IN
Famotidine	IN	Proparacaine hydrochloride	IN
Fentanyl	IN	Propofol	IN
Flumazenil	IN	Propranolol	IN
Fosphenytoin	IN	Quinidine	IN
Furosemide	IN	Ranitidine	IN
Glucagon	IN	Reteplase	IN
Glucose *(any oral form or by mouth)*	IN	Rocuronium	IN
Haloperidol	IN	Sodium Bicarbonate	IN
Heparin	IN	Sterile Water -- Included for irrigation.	PIN
Hetastarch	IN	Succinylcholine	IN
Hydromorphone	IN	Tenecteplase	IN
Hydroxocobalamin	IN	Terbutaline	IN
Hydroxyzine	IN	Tetracaine	IN
Ibuprofen	IN	Thiamine	IN
Insulin	IN	Tirofiban	IN
Ipecac	IN	Vasopressin	IN
Ipratropium	IN	Vecuronium	IN
Isoproterenol	IN	Verapamil	IN
Ketamine	IN	Ziprasidone	IN

RxNorm Parenteral Solutions for EMS in the pre-hospital environment

Parenteral Solutions Name	TTY Code	Parenteral Solutions Name	TTY Code
Lactated Ringer's Solution	IN	Sodium Chloride 3% Injectable Solution	SY
Sodium Chloride 0.45% Injectable Solution	SY	D5 (dextrose 5% Injectable Solution)	SY
Sodium Chloride 0.9% Injectable Solution	SY		

Licensed "Suggested Lists"

The U.S. National Library of Medicine provides access to the RxNorm code values 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 SharePoint site. A licensed user will be able to login to the SharePoint site and download the appropriate archive file (RxNorm, ICD-10, etc).

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 will be 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.

Viewing and Using the "Suggested List" Archive Files

The downloaded suggested list appears in a pipe-delimited text format. The proper code to utilize for medications is the "RxNormCode". Please note that the RXCUI, RXAUI and TTY fields are included for reference purposes. These codes allow one to locate the exact code and description in the UML S Metathesaurus that was selected for inclusion in the suggested list.

The list provides additional fields indicating when a record became active in the NEMSIS TAC's master data repository as well as the version of the source used for a particular code and description in a suggested list.

Conclusions

By maintaining a single source of these 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.

RxNorm Medication Term Types (TTY)

From the National Library of Medicine website: http://www.nlm.nih.gov/research/umls/rxnorm/overview.html .

TTY	Name	Definition	Example(s)
IN	Ingredient	A compound or moiety that gives the drug its distinctive clinical properties. The preferred name is usually the USAN name.	Fluoxetine, Insulin, Isophane, Human Gentamicin Sulfate (USP)
PIN	Precise Ingredient	A specified form of the ingredient that may or may not be clinically active. Most precise ingredients are salt or isomer forms.	Fluoxetine Hydrochloride
MIN	Multiple Ingredients	Two or more ingredients created from SCDF. In rare cases when IN/PIN or PIN/PIN combinations of the same base ingredient exist, created from SCD.	Fluoxetine / Olanzapine
DF	Dose Form	A complete list of Dose Forms can be found in Appendix 2 of the RxNorm Documentation.	Topical Solution, Oral Tablet
SCDC	Semantic Clinical Drug Component	Ingredient plus strength—see section on Rules and Conventions, below, for units of measurement and for rules pertaining to the calculation of strengths.	Fluoxetine 4 MG/ML
SCDF	Semantic Clinical Drug Form	Ingredient plus dose form.	Fluoxetine Oral Solution
SCD	Semantic Clinical Drug	Ingredient plus strength and dose form.	Fluoxetine 4 MG/ML Oral Solution
BN	Brand Name	A proprietary name for a family of products containing a specific active ingredient.	Prozac
SBDC	Semantic Branded Drug Component	Branded ingredient plus strength.	Fluoxetine 4 MG/ML [Prozac]
SBDF	Semantic Branded Drug Form	Branded ingredient plus dose form.	Fluoxetine Oral Solution [Prozac]
SBD	Semantic Branded Drug	Ingredient, strength, and dose form plus brand name.	Fluoxetine 4 MG/ML Oral Solution [Prozac]
SY	Synonym of another TTY	Given for clarity.	Prozac 4 MG/ML Oral Solution
TMSY	Tall Man Lettering synonym of another TTY	Given to distinguish between commonly confused drugs.	FLUoxetine 10 MG Oral Capsule [PROzac]
BPCK	Brand Name Pack	Branded Drug Delivery Device.	{12 (Ethinyl Estradiol 0.035 MG / Norethindrone 0.5 MG Oral Tablet) / 9 (Ethinyl Estradiol 0.035 MG / Norethindrone 1 MG Oral Tablet) / 7 (Inert Ingredients 1 MG Oral Tablet) } Pack [Leena 28 Day]
GPCK	Generic Pack	Generic Drug Delivery Device.	{11 (varenicline 0.5 MG Oral Tablet) / 42 (varenicline 1 MG Oral Tablet) } Pack