

Medication and Treatment



Background Information: Medication and Treatment



Potential data elements related to Medication and Treatment



- Medication Administered
- Medication Route
- Medication Dose
- Medication Dose Unit
- Date Treatment Prescribed
- Treatment Location
- Treatment Duration
- Date Treatment or Therapy Started
- Date Treatment or Therapy Stopped
- Treatment Taken as Prescribed
- Reason Medication Not Completed
- Adverse Event Related to Treatment
- Medication Frequency
- Medication Frequency Unit

Medications (Version 1)

Pharmacologic agent used in the diagnosis, cure, mitigation, treatment, or prevention of disease.

- Vocabulary standards: RxNorm; Optional: National Drug Code

Dose (Version 3)

Amount of a medication for each administration.

Dose Unit of Measure (Version 3)

Unit of measure of a medication. Examples include but are not limited to milligram (mg) and milliliter (mL).

- Vocabulary standards: The Unified Code for Units of Measure

Indication (Version 3)

Sign, symptom, or medical condition that is the reason for giving or taking a medication.

- Vocabulary standards: SNOMED CT, ICD-10-CM

Fill Status (Version 3)

State of a medication with regards to dispensing or other activity.

Medication Instructions (Version 4)

Directions for administering or taking a medication

Medication Adherence (Version 4)

Statement of whether a medication has been consumed according to instructions.

Route (Version 5)

Physiological administration path of a therapeutic agent into or onto a patient. Examples include but are not limited to oral, topical, and intravenous.

- Vocabulary Standard: SNOMED CT

Date Medication Prescribed (Level 0)

The date when the prescription was initially written or authored.

Date Medication Administered (Level 0)

A specific date/time or interval of time during which the administration took place

Electronic Case Reporting (eCR)



Profiles:

- FHIR: Medication Administration Resource
- CDA: Medication activity template

Content:

- Medications administered (using RxNorm codes)
- Start and end time of administration
- Amount of medication per dose
- Dose quantity per unit of time
- Path of substance into body
- Body site administered to
- How the drug was administered
- Reason administration performed

- Terminology that contains all medications (generic and branded) available on the US market.
- Receives drug names from many data sources and provides normalized names and unique identifiers for medicines and drugs.
- Sample source data:
 - NAPROXEN 250 mg ORAL TABLET
 - NAPROXEN 250MG TAB,UD
 - Product containing precisely naproxen (as naproxen sodium) 250 milligram/1 each conventional release oral tablet (clinical drug)
 - naproxen@250 mg@ORAL@TABLET
 - NAPROXEN SODIUM 250 mg ORAL TABLET [Naproxen]
 - **naproxen 250 MG Oral Tablet**

RXNORM uses term types (TTYs) to indicate generic and branded drug names at different levels of specificity.

Name	Description	Example
Ingredient	A compound or moiety that gives the drug its distinctive clinical properties.	Fluoxetine
Semantic Clinical Drug	Ingredient + Strength + Dose Form	Fluoxetine 4 MG/ML Oral Solution
Semantic Brand Drug	Ingredient + Strength + Dose Form + Brand Name	Fluoxetine 4 MG/ML Oral Solution [Prozac]
Generic Pack	{# (Ingredient + Strength + Dose Form) / # (Ingredient + Strength + Dose Form)} Pack	{11 (varenicline 0.5 MG Oral Tablet) / 42 (varenicline 1 MG Oral Tablet) } Pack
Brand Name Pack	{# (Ingredient Strength Dose Form) / # (Ingredient Strength Dose Form)} Pack [Brand Name]	{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]

Case Notifications to CDC Message Mapping Guides (MMGs)



- Foodborne and Diarrheal Disease, Malaria, Lyme/TBRD, Varicella, Pertussis, RIBD MMGs

Data Element Name	Data Element Description	Data Type	Value Set Name
Antibiotic used for current illness	Did the subject take antibiotics for this illness?	Coded	Yes No Unknown (YNU)
START: Treatments Repeating Questions			
Name Of The Antibiotic Used For Current Illness	If antibiotics were taken, provide the names of antibiotics	Coded	Antibiotics (FDD)
Date of Start of Treatment or Therapy	Date Treatment Started	Date	N/A
Date of End of Treatment or Therapy	Date Treatment Stopped	Date	N/A
END: Treatments Repeating Question			

Case Notifications to CDC Message Mapping Guides (MMGs)



STD MMG

Data Element Name	Data Element Description	Data Type	Value Set Name
START: Treatment Repeating Block			
Medication	Medication	Coded	Medication Treatment (STD)
Medication Dose	Medication dose	Numeric	N/A
Medication Dosage Unit	Medication dosage unit	Coded	Dose Unit (STD)
Date Treatment Prescribed	Date treatment prescribed	Date	N/A
Date Medication Started	Date the medication was initiated.	Date	N/A
Medication Route	Medication route	Coded	Medication Route (STD)
Medication Frequency	Medication frequency	Numeric	N/A
Medication Frequency Unit	Medication frequency unit	Coded	Medication Frequency Unit (STD)
Medication Duration	Medication duration	Numeric	N/A
Duration Units	Duration units	Coded	Duration Units (STD)
END: Treatment Repeating Block			

Proposed Core Data Elements (with vocabulary standards)



Date Element Name	Data Element Description	Data Type	Preferred Value Set	Allowable Value Set	Implementation Note
START: Medication Questions					
Medication Indicator	Indicator that the person was prescribed medication for treatment of this condition	Coded		Yes, No, Unknown	
START: Medication Repeating Group					
Medication Name	Name of medication received for this condition	Coded	Medications (FDD)	RxNorm	
Medication Status	Status of medication	Coded		Prescribed, Administered/ Taken, Unknown	If it is only known that the medication was prescribed, indicate "Prescribed". If it is known that the medication was both prescribed and administration (in-progress, completed, stopped early), indicate "Administered".
Date Medication Prescribed	Date treatment prescribed	Date	N/A	N/A	
Medication Prescribed Duration	Prescribed Duration (in days) of treatment	Numeric	N/A	N/A	
Date Medication Started	Date the medication was started	Date	N/A	N/A	
Date Medication Ended	Date the medication was ended	Date	N/A	N/A	
END: Medication Repeating Group					
END: Medication Questions					