

J P Systems, Inc.

Client Case Studies



Using RxNorm to Normalize Medication Data for DoD and VA Shared Patients

Medication data is recorded and stored in multiple health care record systems for a variety of clinical and financial functions ranging from prescription processing, clinical decision support, medication order entry to insurance. The medication terminology used to capture the underlying data in an electronic medical record differs from one health organization to the next.

The DoD provides health care services to 9.6 million beneficiaries (military, retirees and family members) and the VA provides health care services to over 9 million Veterans. Around 5 million DoD and VA patients are shared patients that can receive health care services at both agencies. Many in the DoD and VA patient populations receive multiple prescription medications, but both agencies operate separate medical record systems, use different clinical decision support tools and medication terminologies to capture, perform checks and store patient medication records. Shared patients would have an increased risk of medication errors if clinical decision support and medication order checks were only performed on the medication record available in a single agency's system not on both agencies' data.

To decrease the risk of medication errors and adverse drug events in their shared patient population, both agencies are engaged in a joint effort to share computable outpatient medication and allergy data between their electronic medical record systems. Medication data can be shared between systems using different standardized medication terminologies by mapping the terminologies to the RxNorm terminology standard.



Normalization of Medication Data with RxNorm for DoD and VA



The joint initiative known as the Clinical Health Data Repository, CHDR, is a bidirectional exchange interface that enables the real time exchange of medication and allergy data between the DoD's Clinical Data Repository and the VA's Health Data Repository for shared DoD and VA patients.

To achieve semantic interoperability between the two agencies for the CHDR initiative, both agencies adopted RxNorm as their standard for medication data exchange. RxNorm is a nonproprietary, standardized drug nomenclature developed and maintained by the National Library of Medicine (NLM) for representing clinical drugs and facilitating the exchange of clinical drug data between clinical systems.

RxNorm creates formal definitions and normalized drug names for clinical drugs provided by multiple source vocabularies and supports semantic interoperability between drug terminologies used in pharmacy systems. RxNorm's normalized drug names and unique identifiers are linked to drug names provided by contributing source vocabularies. These links are used for mediating drug data between drug vocabularies and disparate clinical information systems. Both agencies mapped their medication data to RxNorm which is the adopted standard for medication exchange.

J P Systems provides Terminologists, clinicians and Informaticists who support the VHA in the CHDR effort by mapping VA medication identifiers (VA Unique Identifiers VUIDs) to RxNorm identifiers (RxCUI SCD). Our terminology team maps VUIDs to RxCUI SCD for the outbound exchange of VA medications to DoD medications, and for the inbound exchange of DoD medication to VA medication by mapping incoming RxCUI SCD to VUIDs. For outgoing VA medication data streams, VUIDs mapped to RxNorm identifiers are translated to DoD terms. For the incoming DoD medication data streams, DoD identifiers for DoD Medication terms are mapped to RxNorm identifiers and are translated to the VA medication terms.

