



## 3M™ Healthcare Data Dictionary: Controlled medical vocabulary server

- Allows multiple legacy information systems to effectively share information, facilitating communication between applications and reference terminology via standard services
- Maps legacy terminologies to standards and provides services and strategies for keeping them synchronized
- Enables users to perform outcomes analysis and reporting by individual patient or across enterprise populations

### Lots of data, very little information

Huge amounts of healthcare data are gathered by legacy information systems, but very little can be shared or aggregated in a meaningful way. A caregiver can seldom rely on it to justify treatment, and an administrator cannot analyze it for outcomes.

Most importantly, an enterprise cannot assemble comprehensive, electronic, longitudinal patient records until it can accurately aggregate all of a patient's test results—no matter when or where they were performed—into a uniquely identified record. Before computerized healthcare data can be put to work, it must be concretely defined and consistently translated into a standard, meaningful language.

### What is the 3M Healthcare Data Dictionary (3M HDD)?

The 3M HDD is a controlled medical vocabulary server that allows you to translate and integrate healthcare data by:

- Providing a road map to the content and structure of patient data
- Defining and translating every data element and healthcare concept that occurs in a computerized patient record
- Removing ambiguity by including all possible names/numbers healthcare professionals use for a clinical or administrative concept

Accessing the 3M HDD via HL7 Common Terminology Services (HL7 CTS) allows point-of-service applications and clinical databases to exchange, compare, query, and report on meaningful data. The 3M HDD has rich content and a flexible data structure, built with standard healthcare data sources as well as selected, specific vocabularies. It provides coded, computable data that people can understand and applications can use and process in real-time.

### What is HL7 Common Terminology Services (HL7 CTS)?

HL7 CTS is a functional specification standard that describes the functionality supported by terminology service implementations. This standard enables client applications to query and access terminological content.

The 3M HDD implements the HL7 CTS standard to enable communication between the 3M HDD and other applications without requiring those other applications to have an understanding of the 3M HDD data structure. This approach allows a wide variety of terminological content and functions to be integrated across multiple applications and in messaging without the need for significant migration or rewrite.

This approach also frees the electronic medical record (EMR) application developers from being locked into a specific terminology server implementation and allows them to develop applications that are indifferent to the internal machinery of the terminology service implementation. In addition, HL7 CTS provides specific functionality to ease the adoption of HL7 v3 messaging.



## 3M™ Healthcare Data Dictionary

### You need interfaces, but you need data mapping even more

Every healthcare enterprise and integrated delivery network understands the importance of interfacing their information systems, but the value that a powerful data dictionary brings to the process of information integration and data mapping is often overlooked. Unless a data dictionary is robust enough to “translate” data elements, interpret data relationships, and map each data element to an actual concept, data as basic as vital signs cannot be shared between systems or integrated into a patient’s record.

The data dictionary must “know” how vital signs are expressed and stored in each of the enterprise’s information systems and be able to reconcile and relate those expressions. When the data dictionary can do this, an enterprise decreases the time and costs of adding, supporting, and maintaining interfaces. Data mapping also brings the value of ad hoc reporting capabilities to a healthcare enterprise.

For example, during its strategic planning, an enterprise can perform population studies by facility to see how and where resources and specialties (e.g., cardiology) are best deployed. 3M provides 3M™ Terminology Consulting Services (3M TCS) to help organizations perform both initial and maintenance mapping of their legacy data to reference terminologies.

### Why do you need the 3M HDD and coded data?

Coded data is the key to communicating healthcare data between information systems and disseminating medical knowledge and expertise throughout an enterprise. The value of the 3M HDD is that it allows data to be stored in a coded format. Because the 3M HDD defines and encodes data consistently:

- Information can be gathered from and made available to all types of users, ranging from patients to caregivers to administrators.

- Data gathered from diverse sources can be stored and reviewed in one consistent form.
- Data can be “normalized” because the 3M HDD provides unique identifiers and meanings for unique concepts. It clearly and unambiguously defines healthcare terms so they can be interpreted and used correctly by the computer system.
- The data’s content can be preserved. The 3M HDD provides a method of defining data that captures its context in time, space and in relationship with other data. This means:
  - Legacy information systems can remain viable data sources for a longer period of time
  - A data record can be provided to the user in its original context
  - Clinical information can be displayed in a meaningful way to the caregiver
- Both clinical and administrative decision support can be based on either individual patients or populations.
- Care management (guidelines, pathways, etc.) can be more easily implemented.
- Outcomes research (data warehousing, population queries, etc.) can be performed.

A simple case in point: unless such key data as diagnosis, allergies, medications, laboratory findings, etc., are encoded, it is impossible to combine patient data from multiple legacy systems into one coherent, concise, and integrated display for the clinician. Encoding the data also means you have the complete data “picture” needed for population reporting.

### Call today

For more information on how 3M solutions can assist your organization, contact your 3M sales representative, call us toll-free at **800-367-2447**, or visit us online at **[www.3Mhis.com](http://www.3Mhis.com)**.



#### Health Information Systems

575 West Murray Boulevard  
Salt Lake City, UT 84123  
U.S.A.  
800 367 2447  
[www.3Mhis.com](http://www.3Mhis.com)

3M is a trademark of 3M Company.

Please recycle. Printed in U.S.A.  
© 3M 2009. All rights reserved.  
Published 03/09  
70-2009-9025-0