



3M™ Healthcare Data Dictionary

- Allows multiple legacy information systems to effectively share information
- Enables users to perform outcomes analysis and reporting by individual patient or across enterprise populations
- Helps provide healthcare decision support logic at the point of care

Lots of data, very little information

Huge amounts of healthcare data are gathered by legacy information systems, but very little of that data is shared between systems. Even less of it is useful in the format it is received in. A caregiver can seldom rely on it to justify treatment, and an administrator cannot analyze it for outcomes. Most importantly, an enterprise cannot create comprehensive, electronic, longitudinal patient records until it can accurately aggregate all of John Doe's glucose test results—no matter when or where they were performed—into his uniquely identified record. Even the so-called “one solution” or “one vendor” systems sold today do not interpret and integrate the data that users enter into their various application modules. Before computerized healthcare data can be put to work, it must be concretely defined and consistently translated into a common, meaningful language.

What is a healthcare data dictionary?

A healthcare data dictionary is a specialized database that allows you to translate and integrate healthcare data. In essence, a healthcare data dictionary can help:

- Provide a road map to the content and structure of patient data.
- Define and translate every data element and healthcare concept that can possibly occur in a computerized patient record.
- Remove ambiguity by including all possible names/numbers healthcare professionals use for a clinical or administrative concept in any language.

It is through the data dictionary that users are able to exchange, compare, query, and report on data contained in independent computer systems. The 3M Healthcare Data Dictionary (3M HDD) has rich content, flexible data structure, and is built with standard healthcare data sources as well as selected, specific vocabularies. It provides coded, computable data that people can understand and that software applications can use and process in real-time.

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™ Healthcare Data Dictionary

Do you need the 3M Healthcare Data Dictionary?

If your enterprise is only using its computers to store and retrieve text or other information, you don't need a data dictionary, and the computer doesn't have to "understand" what it stores and retrieves.

However, the whole philosophy behind the 3M Healthcare Data Dictionary (3M HDD) is that data should support the decisions that healthcare professionals face daily. Unless the product can help deliver real-time translation services as the 3M HDD does, the value of the data diminishes for users who want to analyze it now, not retrospectively. By providing regular updates, the 3M HDD can also help a site keep current and reduce its own support costs.

Why do you need 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 codes data consistently:

- Information can be gathered from and made available to all types of users, ranging from caregivers to administrators. Coded data can be clinical (diagnosis, lab test, medication), encounter-related (insurance), or demographic (gender, religion).
- Data gathered from diverse sources can be stored and reviewed in one form in the 3M™ Clinical Data Repository (3M CDR).
- Data can be "normalized." The 3M HDD provides unique identifiers and meanings for unique concepts. It clearly defines healthcare terms so they can be used correctly by the computer system and provided in a meaningful form to the user.
- 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.

The 3M HDD advantage

The 3M HDD provides an integrated view of aggregated data for individual patients and enterprise populations. Since the 3M HDD uniquely identifies such lab test results as hemoglobin and serum glucose within the 3M CDR, a user can examine these values for trends and changes. In addition, analyzing a comprehensive data set of values can help identify physicians whose patients have values dramatically out of line with the values of other physicians' patients.

Decision-support information at the point of care

Using the 3M HDD in conjunction with the 3M CDR can help an enterprise in its efforts to uniformly apply protocols, rules, and clinical recommendations regarding the treatment of specific conditions across the continuum of patient care.

Call today

For more information on how 3M solutions can assist your organization, contact your 3M sales representative, call us toll-free at **1-888-833-4341** or visit us online at **www.3M.com/CA/HIS**.



Health Information Systems

3M Canada
P.O. Box 5757
London, ON N6A 4T1
Canada
www.3M.com/CA/HIS

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