CMS/OA/COO/OIT/EADG/Division of Enterprise Architecture

CMS Data Reference Model: Data Taxonomy Description

Version 5, 2017

(formerly known as CMS Data Classification Scheme)

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INTRODUCTION

The purpose of this document is to describe the purpose, structure, and content of the Centers for Medicare & Medicaid Services (CMS) Data Taxonomy. This categorization scheme is a product of the Chief Enterprise Architect and collaboratively managed with Data Administration and Engineering Services.

The Data Taxonomy is a hierarchical structure that describes the types of data that are necessary to accomplish the CMS mission. It is a three-level approach for conceptually grouping CMS data. It is used to:

- Provide a means for relating data creation and usage to other aspects of the Enterprise Architecture (e.g., business functions, IT systems) supporting business assessments and impact analyses.
- Assist discovery, cataloging, and navigation of data assets and information products.
- Provides a means for organizing the content of enterprise data models (e.g., Enterprise Logical Data Model, Unified Medicaid & CHIP Data Model) for use in data engineering solutions.

Subject Area (9)

A *Subject Area* is a broad type of data that that identifies the major entities (e.g., people, organizations, structures, events, and resources) that are of interest and about which information is needed.

Data Category (30)

A *Data Category* is a type of data, within a *Subject Area*, that supports business functions across business lines. It represents sets of information about the major entities (e.g., people, organizations, structures, events, and resources) identified as subject areas.

Category Subtype (19)

A *Category Subtype* is a type of data, within a *Data Category*, that supports business functions within a business line or further defines information about a type of major entity.
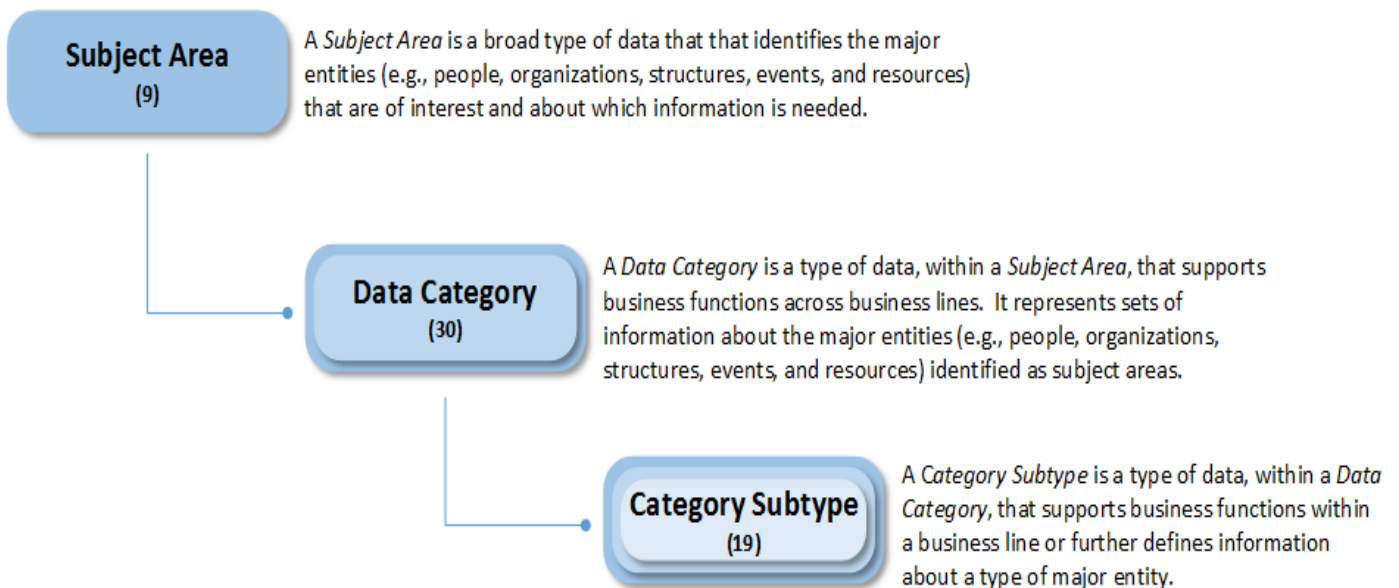
Figure 1 – Data Taxonomy Structure

CMS Data Reference Model: Data Taxonomy Description

The *Subject Areas* are the most stable level of the taxonomy, as they represent fundamental topics across CMS business lines. They reflect the overall information needs of the core mission and common business functions described in the CMS Business Reference Model (BRM).
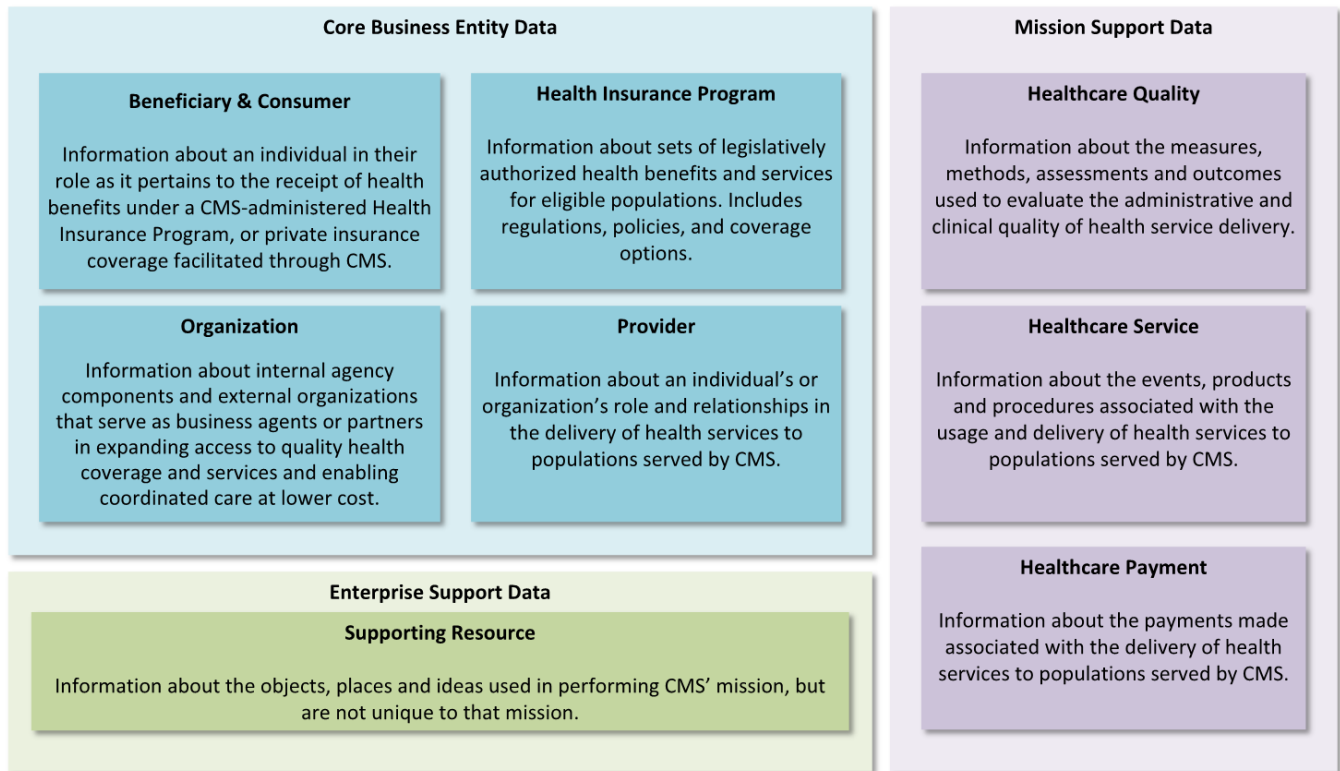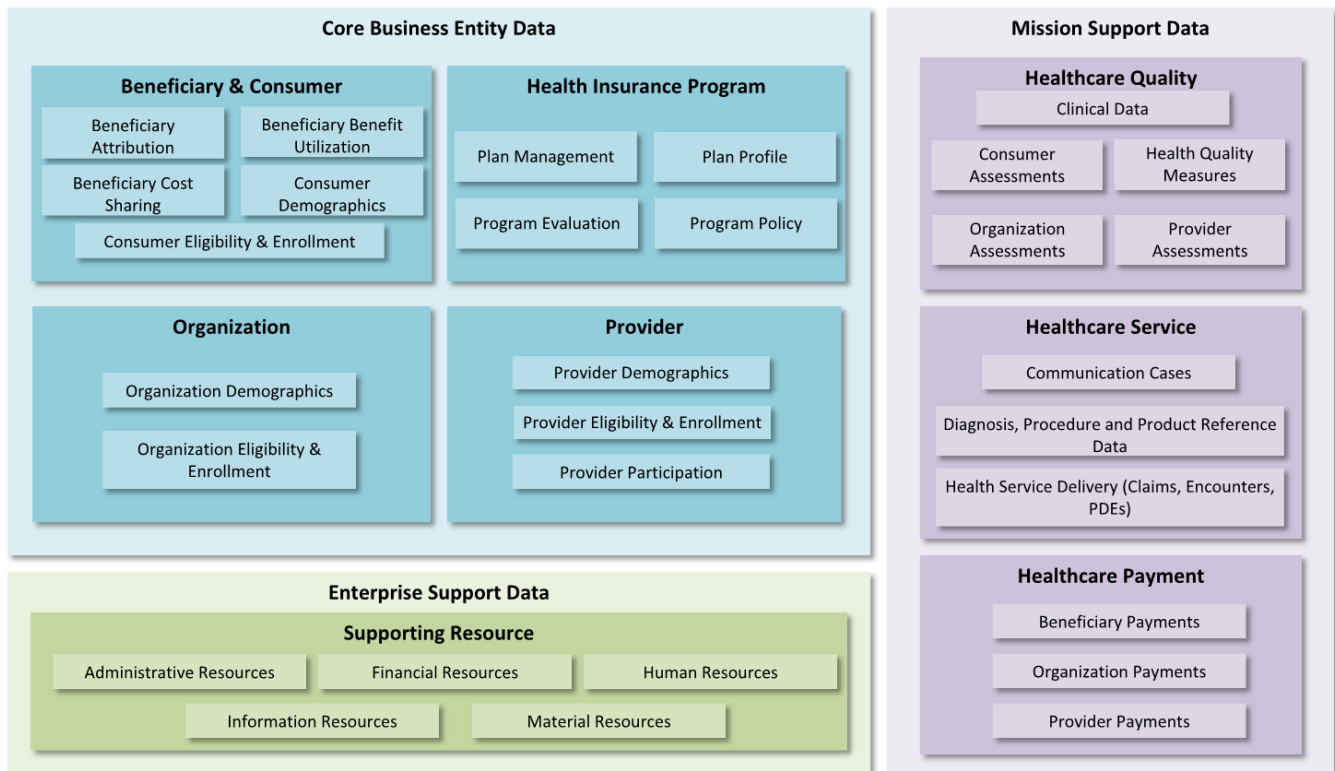
Core Business Entity Data

Beneficiary & Consumer

Information about an individual in their role as it pertains to the receipt of health benefits under a CMS-administered Health Insurance Program, or private insurance coverage facilitated through CMS.

Health Insurance Program

Information about sets of legislatively authorized health benefits and services for eligible populations. Includes regulations, policies, and coverage options.

Organization

Information about internal agency components and external organizations that serve as business agents or partners in expanding access to quality health coverage and services and enabling coordinated care at lower cost.

Provider

Information about an individual's or organization's role and relationships in the delivery of health services to populations served by CMS.

Mission Support Data

Healthcare Quality

Information about the measures, methods, assessments and outcomes used to evaluate the administrative and clinical quality of health service delivery.

Healthcare Service

Information about the events, products and procedures associated with the usage and delivery of health services to populations served by CMS.

Healthcare Payment

Information about the payments made associated with the delivery of health services to populations served by CMS.

Enterprise Support Data

Supporting Resource

Information about the objects, places and ideas used in performing CMS' mission, but are not unique to that mission.

Figure 2 - CMS Data Taxonomy: Subject Areas by Domain

CMS Data Reference Model: Data Taxonomy Description

Data categories provide recognizable subsets of the information needs represented by each subject area. They illustrate the major sets of information within a subject area. For select categories, a third level provides more business line-specific categorization.

Figure 3 - CMS Data Taxonomy: Data Categories

CORE BUSINESS ENTITY DATA TAXONOMY

BENEFICIARY & CONSUMER

Information about an individual in their role as it pertains to the receipt of health benefits under a CMS-administered Health Insurance Program, or private insurance coverage facilitated through CMS.

DATA CATEGORIES:

Beneficiary Attribution

Information about an individual's relationship to an entity (e.g., provider practice, Innovation Model) for the purpose of tracking aspects of care delivery and shared savings.

Beneficiary Benefit Utilization

Information about an individual's use of health care services, particularly those subject to limits, through their coverage under a CMS-administered Health Insurance Program.

Beneficiary Cost Sharing

Information about an individual's financial responsibilities for health care services. Includes payments such as premiums, co-payments, deductibles and subsidy payments.

Consumer Demographics

Information about an individual's identity, basic personal characteristics (e.g., gender, age, ethnicity), location, communication and data sharing preferences, and other attributes that may be used for eligibility and cost sharing determination.

Consumer Eligibility & Enrollment

Information about an individual's qualifications for coverage under a CMS-administered Health Insurance Program, or other minimal essential coverage through a qualified health plan.

CATEGORY SUBTYPES

Medicare FFS, MMA, Medicaid, CHIP, Supplemental Coverage, Other Minimal Essential Coverage

HEALTH INSURANCE PROGRAM

Information about sets of legislatively authorized health benefits and services for eligible populations. Includes regulations, policies, and coverage options.

DATA CATEGORIES:

Plan Management

Information about the organization and legal authorities under which a plan is operated. (e.g., authorizing program, operating organization)

Plan Profile

Information about a plan's characteristics such as covered benefits and services, pricing, service area, plan type (e.g., managed care) and member population demographics.

Program Evaluation

Information about a program's performance in areas such as improving care quality, lowering cost and administrative efficiency.

Program Policy

Information about the rules under which the program is operated. Category includes topics such as population eligibility criteria, benefit and service coverage, beneficiary cost sharing and provider payments.

CATEGORY SUBTYPES

Benefit and Service Coverage, Cost Sharing and Payment, Geographic Coverage, Population Eligibility, Service Delivery System

ORGANIZATION

Information about internal agency components and external organizations that serve as business agents or partners in expanding access to quality health coverage and services and enabling coordinated care at lower cost.

DATA CATEGORIES:

Organization Demographics

Information about an organization's identity, capabilities, relationships, financial status and health care services it may provide to populations served by CMS.

Organization Eligibility and Enrollment

Information about an organization's qualifications to operate health insurance plans, demonstrations, models or other health insurance arrangements under a CMS-administered health insurance program.

PROVIDER

Information about an individual's or organization's role and relationships in the delivery of health services to populations served by CMS.

DATA CATEGORIES:

Provider Demographics

Information about a provider's identity, locations, credentials, specialties, business structure and affiliations.

CATEGORY SUBTYPES

Facility Characteristics, Physician and Professional Provider Characteristics, Pharmacy Characteristics, Supplier Characteristics

Provider Eligibility and Enrollment

Information about a provider's qualifications to render health care services and receive payment under a CMS-administered health insurance program.

Provider Participation

Information about the agreements that a provider has with organizations, either directly or indirectly through another organization (e.g., network), to render health care services to plan enrollees and receive payment for those services.

MISSION SUPPORT DATA TAXONOMY

HEALTHCARE PAYMENT

Information about the payments made associated with the delivery of health services to populations served by CMS.

DATA CATEGORIES:

Beneficiary Payments

Information about the monies distributed to beneficiaries through a CMS-administered health insurance program. (e.g., incentive payments)

Organization Payments

Information about the monies distributed to organizations through a CMS-administered health insurance program.

Provider Payments

Information about the monies distributed to providers through a CMS-administered health insurance program.

HEALTHCARE QUALITY

Information about the measures, methods, assessments and outcomes used to evaluate the administrative and clinical quality of health service delivery.

DATA CATEGORIES:

Clinical Data

Information about an individual's clinical assessment and outcomes; gathered through claims or other medical records.

Consumer Assessments

Information about an individual's assessment, experience and outcomes related to health care delivery; gathered through surveys.

Health Quality Measures

Information about the quantitative tools that provide an indication of an individual's or organization's performance in relation to a specified process or outcome via the measurement of an action, process or outcome of clinical care.

Organization Assessments

Information about an organization's performance in areas such as efficiency, process or outcomes for targeted quality measures.

Provider Assessments

Information about a provider's performance in areas such as efficiency, process and patient outcomes for targeted health quality measures. Category includes sanction and integrity information.

HEALTHCARE SERVICE

Information about the events, products and procedures associated with the usage and delivery of health services to populations served by CMS.

DATA CATEGORIES:

Communication Cases

Information about communication events such as inquiries, complaints, grievances and investigations associated with the delivery of health services to populations served by CMS.

Diagnosis, Procedure, Product and Pricing Reference Data

Information about the standard references and coding systems for identifying products and services provided during the delivery of health services.

Health Service Delivery

Information about the events, products and procedures associated with the usage and delivery of health services to populations served by CMS.

CATEGORY SUBTYPES

Managed Care Encounters, Medicaid Claims, Medicare Claims, Prescription Drug Events

ENTERPRISE SUPPORT DATA TAXONOMY

SUPPORTING RESOURCE

Information about the objects, places and ideas used in performing CMS' mission, but are not unique to that mission.

DATA CATEGORIES:

Administrative Resources

Information about the administrative processes, activities and products required to carry out the day-to-day functions of CMS.

Financial Resources

Information about the costs to support the processes and activities required to carry out the day-to-day functions of CMS.

Human Resources

Information about all aspects of personnel management required to carry out the day-to-day functions of CMS.

Information Resources

Information about data, knowledge, educational materials, internal policy guides, manuals and other products used to support the activities required to carry out the day-to-day functions of CMS.

Material Resources

Information about tangible assets used to support the activities required to carry out the day-to-day functions of CMS.