

# Glossary

The definitions in this Glossary are derived from the HL7 Glossary, SNOMED CT User Guide, 2008, CEN EN 13606, HIMSS Dictionary of Healthcare Information Technology Terms, Acronyms, and Organizations, 2006 and other sources.

**Abstract message:** The basic level definition of an HL7 V2 message associated with a particular trigger event. It includes the data fields that will be sent within a message, the valid response messages, and the treatment of application level errors.

**Access control:** Means of ensuring that the resources of a data processing system can be accessed only by authorized entities in authorized ways.

**Accountability:** Property that ensures that the actions of an entity may be traced uniquely to that entity

**ACK:** Acknowledgement message

**ACR:** American College of Radiology

**Acronym:** An abbreviation formed by using the initial components in a phrase or name.

**Act:** Any action of interest. Something that has happened or may happen.

**Actor:** An abstraction for entities outside a system that interact directly with the system. An actor participates in a use case or a coherent set of use cases to accomplish an overall purpose.

**ActRelationship:** A relationship between two Acts

**ADT:** Admission Discharge and Transfer

**AFNOR:** Association Francaise de Normalisation

**AMIA:** American Medical Informatics Association

**ANSI:** American National Standards Institute. ANSI represents US interests on International standards organizations such as ISO.

**ANSI accreditation:** ANSI accreditation dictates that any standard submitted to ANSI for approval, be developed and ratified by a process that adheres to ANSI's procedures for open consensus and meets a balance of interest requirement by attaining near equal participation in the voting process by the various constituencies that are materially affected by the standard (e.g., vendors, providers, government

agencies, consultants, non-profit organizations). This balance of interest goal ensures that a particular constituency is neither refused participation nor is it allowed to dominate the development and ratification of a proposed standard.

**Anonymization:** Removal of identifiable personal elements from the data, making it less sensitive and potentially not subject to stringent regulations governing privacy of personal data – while retaining its value for legitimate secondary uses like research and reporting

**API:** Application Program Interface

**Application:** A software program or set of related programs that provide some useful healthcare capability or functionality.

**Application layer:** The seventh and highest layer of the OSI model. Provides resources for the interaction that takes place between a user and an application.

**Application role:** An abstraction that expresses a portion of the messaging behavior of an information system.

**Archetype:** Reusable, structured models of clinical information concepts that appear in EHRs, such as “test result,” “physical examination,” and “medication order,” and are expressed in terms of constraints on the reference model.

**Artifact:** Any deliverable resulting from the discovery, analysis, and design activities leading to the creation of HL7 message specifications.

**Architecture:** A framework from which computer system components can be developed in a coherent manner and in which every part fits together without containing a mass of design detail

**AS IS Model:** Model of the present system as it is currently working

**ASCII:** American Standard Code for Information Interchange

**Association:** A reference from one class to another class or to itself, or a connection between two objects (instances of classes).

**Association role name:** A name for each end of an association. The name is a short verb phrase depicting the role of the class at the opposite end of the association from the perspective of the class adjacent to the role.

**ASTM:** American Society for the Testing of Materials

**Attestation:** Process of certifying and recording legal responsibility for a particular unit of information.

**Attribute:** Attributes express characteristics of concepts. SNOMED CT concepts form relationships to other SNOMED CT concepts through attributes. All of the attributes used in modeling SNOMED CT concepts are themselves SNOMED CT concepts and can be found in the Linkage concept hierarchy.

**Attribute-value pair:** The combination of an attribute with a value that is appropriate for that attribute. Example: FINDING SITE = Lung structure

**Audit trail:** Chronological record of activities of information system users which enables prior states of the information to be faithfully reconstructed

**Authentication:** Process of reliably identifying security subjects by securely associating an identifier and its authenticator.

**Authorization:** Authorization is the process of giving someone permission to do or have something. Authorization is sometimes seen as both the preliminary setting up of permissions by a system administrator and the actual checking of the permission values that have been set up when a user is getting access.

**BCS:** British Computer Society

**Browser:** A tool for exploring and searching the terminology content. A browser can display hierarchy sections and concept details (relationships between concepts, descriptions and Ids, etc.).

**BSI:** British Standards Institute. BSI represents British interests on International standards organizations such as CEN and ISO.

**caBIG:** Cancer Biomedical Informatics Grid

**Canonical equivalence:** When two SNOMED-CT concepts or post-coordinated expressions have the same meaning. Equivalence can occur when a post-coordinated expression has the same meaning as a pre-coordinated concept; or when two different post-coordinated expressions have the same meaning.

**CAP:** College of American Pathologists

**Cardinality:** Property of a data element (the number of times a data element MAY repeat within an individual occurrence of an object view) or column in the Hierarchical Message Description (the minimum and maximum number of occurrences of the message element).

**Care Plan:** A care plan is an ordered assembly of expected or planned activities, including observations, goals, services, appointments, and procedures, usually organized in phases or sessions, which have the objective of organizing and managing healthcare activity for the patient, often focused upon one or more of the patient's healthcare problems. Care plans may include order sets as actionable elements, usually supporting a single session or phase. Also known as Treatment Plan.

**CCD:** Continuity of Care Document

**CCITT:** Comité Consultatif International Télégraphique et Téléphonique

**CCOW:** Clinical Context Object Workgroup; HL7 standard for single sign on.

**CCR:** ASTM E2369 – 05 Standard Specification for Continuity of Care Record.

**CD:** Concept descriptor data type

**CDA:** Clinical Document Architecture

**CDC:** Centers for Disease Control

**CDISC:** Clinical Data Interchange Standards Consortium. CDISC mission is to develop and support global, platform-independent data standards that enable information system interoperability to improve medical research and related areas of healthcare.

**CEN:** Comité Européen de Normalisation (European Committee for Standardization)

CENELEC: Comité Européen de Normalisation Electrotechnique

CEN/TC 251: CEN Technical Committee 251 responsible for standards within health informatics in Europe

Character Data: Text in a particular coding (e.g., ASCII), as distinguished from binary data.

Check-digit: SNOMED CT uses integers up to 18 digits in length as component identifiers known as SNOMED CT Identifiers (SCTIDs). The check-digit is the last digit of the SNOMED CT Identifier. It can be used to check the validity of SCTIDs. Clinical information systems can use the check-digit to identify SNOMED CT codes that have been entered incorrectly (typo errors, etc.).

Choice: A message construct that includes alternative portions of the message. For a choice due to specialization, the sender picks one of the alternatives and sends it along with a flag.

CIM: Constrained Information Model

Class: An abstraction of a thing or concept in a particular application domain.

Class: A class represents a concept within the system being modeled.

Classification: Classification is the systematic placement of things or concepts into categories which share some common attribute, quality, or property.

Clinical Decision Support (CDS): Clinical Decision Support (CDS) refers broadly to providing clinicians or patients with clinical knowledge and patient-related information, intelligently filtered or presented at appropriate times, to enhance patient care. Clinical knowledge of interest could range from simple facts and relationships to best practices for managing patients with specific disease states, new medical knowledge from clinical research and other types of information.

Clinical Document: A Clinical Document is a documentation of clinical observations and services, with the following characteristics:

- Persistence – A clinical document continues to exist in an unaltered state, for a time period defined by local and regulatory requirements.
- Stewardship – A clinical document is maintained by a person or organization entrusted with its care.
- Potential for authentication – A clinical document is an assemblage of information that is intended to be legally authenticated.
- Wholeness – Authentication of a clinical document applies to the whole and does not apply to portions of the document without the full context of the document.
- Human readability – A clinical document is human readable.

Clinical information: Data/information related to the health and healthcare of an individual collected from or about an individual receiving healthcare services. It includes a caregiver's objective measurement or subjective evaluation of a patient's physical or mental state of health; descriptions of an individual's health history and family health history; diagnostic studies; decision rationale; descriptions of procedures performed; findings; therapeutic interventions; medications prescribed;

description of responses to treatment; prognostic statements; and descriptions of socio-economic and environmental factors related to the patient's health.

**Clone:** A class from the Reference Information Model (RIM) that has been used in a specialized context and whose name differs from the RIM class from which it was replicated. This makes it possible to represent specialized uses of more general classes to support the needs of messaging.

**Cluster:** The means of organising nested multi-part data structures such as time series, and to represent the columns of a table.

**CMS:** Centers for Medicare and Medicaid Services

**CNE:** Coded No Exceptions

**CMET:** Common message element type (CMET) is a specialized message type in a Hierarchical Message Description (HMD) that MAY be included by reference in other HMD's.

**Code:** A fixed sequence of signs or symbols, alphabetic or numeric characters, serving to designate an object or concept.

**Coding Scheme:** A system of classifying objects or entities such as diseases, procedures, or symptoms, using a finite set of numeric or alphanumeric identifiers.

**Component:** An identifiable item in the main body of SNOMED CT, or in an authorized Extension. Each component is a uniquely identifiable instance of one of the following: Concept, Description, Relationship, Subset, Subset Member, Cross Map Set, Cross Map Target, History Component.

**ComponentID:** A general term used to refer to the primary identifier of any SNOMED CT Component. All ComponentIDs follow the form of the SCTID specification.

**Composite data type:** A data type assigned to a message element type that contains one or more components, each of which is represented by an assigned data type.

**Composition:** The set of information committed to one EHR by one agent, as a result of a single clinical encounter or record documentation session.

**Concept:** A clinical idea to which a unique ConceptID has been assigned in SNOMED CT. Each Concept is represented by a row in the Concepts Table.

**Concept equivalence:** When two SNOMED CT concepts or post-coordinated expressions have the same meaning. Concept equivalence can occur when a post-coordinated expression has the same meaning as a pre-coordinated Concept; or when two different post-coordinated expressions have the same meaning.

**Concept Model:** The SNOMED CT Concept Model is the complete set of rules that govern the ways in which concepts are permitted to be modeled using relationships to other concepts.

**ConceptID:** The unique identifier (code) for each SNOMED CT concept. Refer to the SNOMED Technical Reference Guide for a full explanation of how this identifier is structured.

**Example:** For the concept Pneumonia (disorder), the ConceptID is 233604007

**Concepts Table:** A table that includes all SNOMED CT concepts. Each concept is represented by a row.

**Confidentiality:** Property that information is not made available or disclosed to unauthorized individuals, entities, or processes.

**Conformance Profile:** A conformance profile is a constraint to either an underlying standard or another conformance profile. Normally, it specifies a single message or document.

**Constraint:** Narrowing down of the possible values for an attribute; a suggestion of legal values for an attribute (by indicating the data type that applies, by restriction of the data type, or by definition of the domain of an attribute as a subset of the domain of its data type). MAY also include providing restrictions on data types. A constraint imposed on an association MAY limit the cardinality of the association or alter the navigability of the association (direction in which the association can be navigated). A Refined Message Information Model (R-MIM) class MAY be constrained by choosing a subset of its Reference Information Model (RIM) properties (i.e., classes and attributes) or by cloning, in which the class' name is changed.

**Context Model:** A model that specifies relationships relating to semantic context that has been defined outside of the SNOMED-CT Concept Model.

**Continua Alliance:** Continua Health Alliance is a non-profit, open industry coalition of healthcare and technology companies joining together in collaboration to improve the quality of personal healthcare, such as those used in the home.

**Control event wrapper:** A wrapper that contains domain specific administrative information related to the "controlled event" which is being communicated as a messaging interaction. The control event wrapper is used only in messages that convey status, or in commands for logical operations being coordinated between applications (e.g., the coordination of query specification/query response interactions).

**Core:** A SNOMED CT Component released by the IHTSDO.

**CPT-4:** Current Procedural Terminology. Coding system used in the US as a guide to services for which patients may be billed.

**Cross Map:** A Cross Map links a single SNOMED CT concept to one or more codes in a target classification (such as ICD-9-CM) or terminology. Each Cross Map is represented as a row in the Cross Maps Table.

**CRE:** Care record element

**CRS:** Care Record Service (NHS)

**CTS:** Common Terminology Services. The CTS defines the minimum set of functions required for terminology interoperability within the scope of HL7's messaging and vocabulary browsing requirements.

**CTV3:** Clinical Terms Version 3 (Read Codes)

**CTV3ID:** A five-character code allocated to a concept or term in CTV3. For data compatibility and mapping purposes, SNOMED CT concepts include a record

of the corresponding concept codes from the Clinical Terms Version 3 (CTV3, previously known as Read Codes) and SNOMED RT.

**CUI:** Microsoft Health/NHS CFH Common User Interface (CUI) provides user interface design guidance and toolkit controls that address a wide range of patient safety concerns for healthcare organizations worldwide, enabling a new generation of safer, more usable, and compelling health applications to be quickly and easily created [<http://www.mscai.net>]

**CWE:** Coded With Exceptions

**DAM:** Domain Analysis Model

**Database:** A collection of stored data typically organized into fields records and files and an associated description (schema)

**Data type:** The structural format of the data carried in an attribute. It MAY constrain the set of values an attribute may assume.

**Delimiter:** To mark or set off. For example the day, month, and year in a string such as 2/5/2009 are delimited by the “/” symbol.

**Description:** A row in the Descriptions table. Each Description is assigned a unique DescriptionID and connects a Term and a Concept.

**DescriptionID:** An SCTID that uniquely identifies a Description. Refer to the SNOMED Technical Reference Guide for a full explanation of how this identifier is structured.

**Diagnosis:** The cause of a patient’s problem. Various qualifiers such as provisional, working, primary, secondary, admitting, are applied to diagnosis. A differential diagnosis is a list of plausible possibilities as to the cause.

**Dialect:** A language modified by the vocabulary and grammatical conventions applied in a particular geographical or cultural environment.

**DICOM:** Digital Imaging and Communications in Medicine

**Digital:** Representation of an entity based on binary (on/off) signals.

**DIN:** Deutsches Institut für Normung – the German national standards organization.

**DH:** Department of Health (UK)

**DMIM:** Domain Message Information Model

**Domain expert:** Individual who is knowledgeable about the concepts in a particular problem area within the healthcare arena and/or is experienced with using or providing the functionality of that area.

**Domain Message Information Model (DMIM):** A form of Refined Message Information Model (R-MIM) constructed to represent the totality of concepts embodied in the individual R-MIMs needed to support the communication requirements of a particular HL7 domain.

**DRG:** Diagnosis Related Group

**DSTU:** Draft Standard for Trial Use

DTD: Document Type Definition (XML)

EAI: Enterprise Application Integration

ED: Encapsulated Data Type

EDI: Electronic Data Interchange – based on electronic sending and receiving of messages

EDIFACT: Electronic Data Interchange For Administration, Commerce, and Transport – a set of rules and syntax for EDI maintained by the UN.

EDM: Electronic Document Management

eGIF: Electronic Government Interoperability Framework

EHR: Electronic Health Record. A comprehensive, structured set of clinical, demographic, environmental, social, and financial data, and information in electronic form, documenting the health care given to a single individual.

EHR-S FM: EHR System Functional Model (provides a reference list of over 160 functions that may be present in an Electronic Health Record System (EHR-S))

EHR System: The set of components that form the mechanism by which patient records are created, used, stored, and retrieved.

Element: The leaf node of the EHR hierarchy, containing a single data value

EN: Norme Europeene (European Standard) approved by CEN and which normally takes precedence over local or national standards.

Encounter: Encounter serves as a focal point linking clinical, administrative, and financial information. Encounters occur in many different settings - ambulatory care, inpatient care, emergency care, home health care, field, and virtual (telemedicine).

Entity: A person, animal, organization, or thing. Something that has separate and distinct existence and objective or conceptual reality. Something that exists as a particular and discrete unit. An organization (as a business or governmental unit) that has an identity separate from those of its members.

Entry: The information recorded in an EHR as a result of one clinical action, one observation, one clinical interpretation, or an intention. This is also known as a clinical statement.

ENV: Europaische Vornorm (European Pre-standard) – a standard that has yet to be put into a final and definitive form for approval as an EN.

EOM: End of Message

Eponym: The use of a person's name to describe an entity.

EPR: Electronic Patient Record (owned by the patient)

ESC: Escape

ETP: Electronic Transfer of Prescriptions

Expression: A collection of references to one or more concepts used to express an instance of a clinical idea. An expression containing a single concept identifier is referred to as a pre-coordinated expression. An expression that contains two or



more concept identifiers is a post-coordinated expression. The concept identifiers within a post-coordinated expression are related to one another in accordance with rules expressed in the SNOMED CT Concept Model.

**Extension:** Extensions are complements to a released version of SNOMED CT. Extensions are components that are created in accordance with the data structures and authoring guidelines applicable to SNOMED CT.

**FCE:** Finished Consultant Episode (NHS)

**Field:** The smallest named unit of data in a database. Fields are grouped together to form records.

**File:** A collection of electronic data. A file has a name by which it is known to the computer and may contain, for example, data, records, text, image, etc.

**Folder:** The high level organization within an EHR, dividing it into compartments relating to care provided for a single condition, by a clinical team or institution, or over a fixed time period such as an episode of care.

**FTP:** File Transfer Protocol

**Fully defined concept:** SNOMED CT concepts are either primitive or fully defined. Fully defined concepts can be differentiated from their parent and sibling concepts by virtue of their relationships. Primitive concepts do not have the unique relationships needed to distinguish them from their parent or sibling concepts. A concept is primitive when its modeling (attributes and parents) does not fully express its meaning.

**Fully Specified Name (FSN):** A phrase that describes a concept uniquely and in a manner that is intended to be unambiguous.

**Generalization:** An association between two classes, referred to as superclass and subclass, in which the subclass is derived from the superclass. The subclass inherits all properties from the superclass, including attributes, relationships, and states, but also adds new ones to extend the capabilities of the parent class. Essentially, a specialization from the point-of-view of the subclass.

**GOSIP:** Government OSI Profile

**GP:** General Medical Practitioner

**GP2GP:** GP to GP record transfer service (NHS)

**Graphical expression:** A visual representation of a model that uses graphic symbols to represent the components of the model and the relationships that exist between those components.

**HDF:** HL7 Development Framework

**HES:** Hospital Episode Statistics (NHS)

**Healthcare agent:** Person, device, or software that performs a role in a healthcare activity

**Healthcare organization:** Organization involved in the direct or indirect provision of healthcare services to an individual or to a population. NOTE Groupings or

subdivisions of an organization, such as departments, may also be considered as organisations where there is a need to identify them.

**Health Care Party:** Person involved in the direct or indirect provision of health-care services to an individual or to a population.

**Health Care Professional:** A person who is authorized by a nationally recognized body to be qualified to perform certain health duties.

**Health Care Provider:** A Health Care Provider is a person licensed, certified or otherwise authorized, or permitted to administer health care in the ordinary course of business or practice of a profession, including a healthcare facility.

**Health Care Service:** Service provided with the intention of directly or indirectly improving the health of the person or populations to whom it is provided.

**Hierarchical Message Description:** A specification of the exact fields of a message and their grouping, sequence, optionality, and cardinality. This specification contains message types for one or more interactions, or that represent one or more common message element types. This is the primary normative structure for HL7 messages.

**Hierarchy:** An ordered organization of concepts. General concepts are at the top of the hierarchy; at each level down the hierarchy, concepts become increasingly specialized. SNOMED CT concepts are arranged into Top-level hierarchies. Each of these hierarchies subdivides into smaller sub-hierarchies. Concepts are related by IS\_A relationships to their more general parent concepts directly above them in a hierarchy. There is one concept from which the Top-level hierarchies descend called SNOMED CT concept or the “Root concept.”

**HIMSS:** Healthcare Information and Management Systems Society

**HIPAA:** Health Insurance Portability and Accountability Act, 1996

**HIS:** Health (or Hospital) Information System

**HITECH:** Health Information Technology for Economic and Clinical Health Act

**History Mechanism:** SNOMED CT includes some information about the history of changes to concepts and descriptions.

**HITSP:** Health Information Technology Planning Panel

**HL7:** Health Level Seven (HL7) is an American National Standards Institute (ANSI) accredited, not-for-profit standards development organization, whose mission is to provide standards for the exchange, integration, sharing, and retrieval of electronic health information; support clinical practice; and support the management, delivery, and evaluation of health services.

**HMD:** Hierarchical Message Description

**Homonym:** One term having two or more independent meanings

**HTML:** Hypertext Markup Language

**HTTP:** Hypertext Transfer Protocol

**ICD:** International Classification of Diseases

ICP: Integrated Care Pathway

ICPC: International Classification of Primary Care

ICPM: International Classification of Procedures in Medicine

ICT: Information and Communication Technology

Identifier: A piece of data that uniquely identifies an item, information, or a person as the subject of this identity within a given context

IEC: International Electrotechnical Commission

IEEE: Institute of Electrical and Electronics Engineers

IHE: Integrating the Health Environment

IHE (Integrating the Healthcare Enterprise) is an industry-led initiative to improve the way computer systems in healthcare share information. IHE promotes the coordinates use of established standards such as HL7 and DICOM to address specific clinical needs. <http://www.ihe.net/>

IHTSDO: International Health Terminology Standards Development Organization

IM&T: Information Management and Technology

IMIA: International Medical Informatics Association

Implementation Technology: A technology selected for use in encoding and sending HL7 messages. For example, XML is being used as an implementation technology for Version 3.

Implementation Technology Specification (ITS): A specification that describes how HL7 messages are sent using a specific implementation technology. It includes, but is not limited to, specifications of the method of encoding the messages, rules for the establishment of connections and transmission timing and procedures for dealing with errors.

Information Model: A structured specification, expressed graphically and/or in narrative, of the information requirements of a domain. An information model describes the classes of information required and the properties of those classes, including attributes, relationships, and states. Examples in HL7 are the Domain Reference Information Model, Reference Information Model, and Refined Message Information Model.

Integration Profile: An integration profile describes the workflow for a specific use case. It combines actors and interactions.

Interaction: A single, one-way information flow that supports a communication requirement expressed in a scenario.

Interface: A common boundary between two associated systems across which information may flow. The interface may filter or modify data as it passes across the boundary.

Interface Terminology: Interface terminologies are used to mediate between a user's colloquial conceptualizations of concept descriptions and an underlying reference terminology.

**International Release:** The required international components of the SNOMED CT terminology, along with related works and resources, maintained and distributed by the IHTSDO.

**Internet:** The International network of computers providing support for data exchange, Email and the World-wide Web.

**IOM:** Institute of Medicine

**ISB:** Information Standards Board (NHS)

**ISO:** International Organization for Standardization – the body overseeing endorsement and publication of international standards.

**ISP:** International Standardized Profile

**IT:** Information Technology

**ITS:** Implementation Technology Specification

**ITU:** International Telecommunications Union

**IVR:** Interactive Voice Response

**LAN:** Local Area Network

**Language:** For purposes of SNOMED CT translations, a language is a vocabulary and grammatical form that has been allocated an ISO639-1 language code. See also Dialect.

**Language Subset:** SNOMED CT can be translated into any language or dialect. These translations use existing SNOMED CT concepts, along with new language-specific descriptions. A language subset is a set of references to the descriptions that are members of a language edition of SNOMED CT. Additionally, this subset specifies the type of description (FSN, Preferred Term, or synonym).

**LOINC:** Logical Observation Identifiers Names and Codes

**LR:** Legitimate Relationship

**LSP:** Local Service Provider (NHS)

**Mandatory:** If an attribute is designated as mandatory, all message elements which make use of this attribute SHALL contain a non-null value or they SHALL have a default that is not null.

**Mandatory association:** An association with a multiplicity minimum greater than zero on one end. A fully mandatory association is one with a multiplicity minimum greater than zero on both ends.

**Mapping Mechanism:** SNOMED CT provides a mechanism for mapping concepts to other terminologies and classifications. This mapping mechanism consists of three tables: Cross Map Sets Table, Cross Maps Table, and Cross Map Targets Table

**Markup:** Computer-processable annotations within a document. Markup encodes a description of a document's storage layout and logical structure. In the context of HL7 Version 3, markup syntax is according to the XML Recommendation.

**Master file:** Common lookup table used by one or more application systems.

**May:** The conformance verb MAY is used to indicate a possibility.

**MBDS:** Minimum Basic Data Set

**MeSH:** Medical Subject Headings

**Message:** A package of information communicated from one application to another. See also message type and message instance.

**Message element:** A unit of structure within a message type.

**Message element type:** A portion of a message type that describes one of the elements of the message.

**Message instance:** A message, populated with data values, and formatted for a specific transmission based on a particular message type.

**Message payload:** Data carried in a message.

**Message type:** A set of rules for constructing a message given a specific set of instance data. As such, it also serves as a guide for parsing a message to recover the instance data.

**Meta-model:** A model used to specify other models. For example, the meta-model for a relational database system might specify elements of type “Table,” “Record,” and “Field.”

**MIB:** Medical Information Bus

**MIM:** Message Implementation Manual published by NHS Connecting for Health.

**MIME:** Multipurpose Internet Mail Extension

**MPI:** Master Patient Index

**MT:** Message Type

**Model:** A semantically complete abstraction of a system

**Multiplicity:** In the information model, multiplicity is a specification of the minimum and maximum number of objects from each class that can participate in an association. Multiplicity is specified for each end of the association.

**N3:** National network for the NHS

**Namespace or Namespace-identifier:** When an organization creates an extension to SNOMED CT, the new components in the extension need to be identified as part of that particular organization’s extension. SNOMED CT does this by allocating an identifier to the organization (the Namespace-identifier). The organization would include its namespace-identifiers as part of the identifiers originated in its namespace. The Namespace identifier is part of the SCTID. If no namespace is identified in a SCTID, it is assumed that the component is part of the International Release of SNOMED CT. In these cases, SCTIDs can be used in an abbreviated form, without the seven-digit namespace identifier.

**Navigability:** Direction in which an association can be navigated (either one way or both ways).

**NCPDC:** National Council for Prescription Drug Program

**NDC:** National Drug Code

**Nested qualifiers:** Where the value of a qualifier is a refinement of a refined concept.

**NHS:** National Health Service

**NHSCR:** NHS Central Register

**NHS CFH:** NHS Connecting For Health

**NIST:** National Institute for Science and Technology

**NLM:** National Library of Medicine

**Node:** One of the interconnected computers or devices linked in a communications network.

**NPfIT:** National Programme for Information Technology (NHS)

**Null:** A value for a data element which indicates the absence of data. A number of “flavors” of null are possible.

**Object:** An instance of a class. A part of an information system containing a collection of related data (in the form of attributes) and procedures (methods) for operating on that data

**Object identifier:** A scheme to provide globally unique identifiers. This object identifier (OID) scheme is an ISO standard (ISO 8824:1990).

**ODA:** Open Document Architecture

**ODP:** Open Distributed Processing (ISO/IEC 10746, used for describing distributed systems)

**OHT:** Open Health Tools is a community of open source developers, health professionals, and an ecosystem that brings together members from the health and IT professions to create a common health interoperability framework, exemplary tools, and reference applications to support health information interoperability. The fact that this software framework is available under a commercially friendly open source license means that anyone, any company, any hospital, whether or not they are a member, can build applications using this framework – without any payment required for the software.

**OID:** Object Identifier

**OMG:** Object Management Group

**ONCHIT:** Office of the National Coordinator for Health Information Technology

**OpenEHR:** OpenEHR is a not-for-profit foundation to make EHRs “adaptable and future-proof” through the use of a technology independent architecture.

**OSI:** Open Systems Interconnection

**OWL:** Web Ontology Language

**PACS:** Picture Archiving and Communication System

**Participation:** The involvement of a Role in an Act

**Partition-identifier:** The partition identifier is a two-digit number just to the left of the check-digit in the SCTID. The first of these two digits indicates whether the SCTID refers to a SNOMED CT Component in the International Release (indicated

by a 0 as the first digit in the partition identifier), or a Component in an extension (indicated by a 1 as the first digit in the partition identifier). The second of the two digits in the partition identifier indicates which of the partitions of SNOMED CT the SCTID is identifying.

PAS: Patient Administration System

Patient: One who is suffering from any disease or behavioral disorder and is under treatment for it.

PC: Personal Computer

PDF: Portable Document Format

PDS: Personal Demographics Service (NHS)

PICS: Protocol Implementation Conformance Statement

PIM: Platform-Independent Model

PIN: Personal Identification Number

PKI: Public Key Infrastructure

PN: Person Name data type

POC: Point of Care

POMR: Problem-oriented medical record, originally developed by Dr Larry Weed.

Post-coordination: Representation of a clinical idea using a combination of two or more concept identifiers. A combination of concept identifiers used to represent a single clinical idea is referred to as a post-coordinated expression (see expression). Many clinical ideas can also be represented using a single SNOMED CT concept identifier (see pre-coordination). Some clinical ideas may be represented in several different ways. SNOMED CT technical specifications include guidance of logical transformations that reduce equivalent expressions to a common canonical form.

Pre-coordination: Representation of a clinical idea using a single concept identifier. A single concept identifier used to represent a specific meaning is referred to as a pre-coordinated expression (see expression). SNOMED CT also allows the use of post-coordinated expressions (see post-coordination) to represent a meaning using a combination of two or more concept identifiers. However, including commonly used concepts in a pre-coordinated form makes the terminology easier to use.

Preferred Term: The Term that is deemed to be the most clinically appropriate way of expressing a Concept in a clinical record. Preferred Term is one of the three types of terms that can be indicated by the DescriptionType field in SNOMED.

Primitive Concept: A concept is primitive when its modeling (attributes and parents) does not fully express its meaning. A concept definition is the list of its relationships to other concepts. Primitive concepts do not have the unique relationships needed to distinguish them from their parent or sibling concepts.

Privacy: Freedom from intrusion into the private life or affairs of an individual when that intrusion results from undue or illegal gathering and use of data about that individual.

**Problem List:** The problem list of a given individual can be described by formal diagnosis coding systems (such as ICD-10) or by other professional descriptions of healthcare issues affecting an individual. Problems can be short or long term in nature, chronic, or acute, and have a status. In a longitudinal record, all problems may be of importance in the overall long term care of an individual, and may undergo changes in status repeatedly. Problems are identified during patient visits, and may span multiple visits, encounters, or episodes of care.

**Profile:** A set of functions required in a particular setting or available as part of a particular system or component

**PSIS:** Personal Spine Information Service (NHS)

**PSM:** Platform Specific Model

**QMAS:** Quality Management and Analysis System (NHS)

**QMR:** Quick Medical Reference

**QOF:** Quality and Outcomes Framework (NHS)

**QoS:** Quality of Service

**Qualifying attribute:** Some SNOMED CT concepts can have Qualifying attributes, which are optional non-defining relationships that may be applied by a user or implementer in post-coordination. The qualifier value mechanism in SNOMED CT constrains the possible values an implementer can select in assigning a qualifying characteristic to a concept.

**Query:** Queries are the primary mechanism for retrieving information from computer systems. Many database management systems use the Structured Query Language (SQL) standard query format.

**Realization:** The relationship between a specification and its implementation.

**Realm:** A sphere of authority, expertise, or preference that influences the range of Components required, or the frequency with which they are used. A Realm may be a nation, an organization, a professional discipline, a specialty, or an individual user.

**Receiver:** The application fulfilling the Receiving Application role in an interaction

**Receiver responsibility:** An obligation on an application role that receives an interaction as defined in the interaction model.

**Record:** A writing by which some act or event, or a number of acts or events, is recorded.

**Recursion:** An association that leads from a class directly or indirectly back to that class.

**Reference Information Model (RIM):** The HL7 information model from which all other V3 information models (e.g., R-MIMs) and messages are derived.

**Reference Terminology:** A reference terminology is a terminology in which every concept designation has a formal, machine-usable definition supporting data aggregation and retrieval.



**Refined Message Information Model (R-MIM):** An information structure that represents the requirements for a set of messages. A constrained subset of the Reference Information Model (RIM) which MAY contain additional classes that are cloned from RIM classes. Contains those classes, attributes, associations, and data types that are needed to support one or more Hierarchical Message Descriptions (HMD). A single message can be shown as a particular pathway through the classes within an R-MIM.

**Relationship:** An association between two Concepts. The nature of the association is indicated by a Relationship Type. Each Relationship is represented by a row in the Relationships Table.

**Relationship Type:** The nature of a Relationship between two Concepts. The RelationshipType field indicates the ConceptID for the concept in SNOMED that forms the relationship between two other concepts (ConceptID1 and ConceptID2)

**RelationshipID:** A SCTID that uniquely identifies a Relationship between three concepts: a source concept (ConceptID1), a target concept (ConceptID2), and a relationship type.

Each row in the Relationships Table represents a relationship “triplet” (ConceptID1 – RelationshipType - ConceptID2) identified by a RelationshipID.

**Relationships Table:** A table consisting of rows, each of which represents a Relationship.

**Release Version:** A version of SNOMED CT released on a particular date. Except for the initial release of SNOMED CT that was called “SNOMED CT First Release,” subsequent releases use the release data. Example: “SNOMED CT July 2008 Release”

**Required:** One of the allowed values in conformance requirements, it means that the message elements SHALL appear every time that particular message type is used for an interaction. If the data is available, the element SHALL carry the data, otherwise a null value MAY be sent.

**Requirement:** A desired feature, property, or behavior of a system.

**RFID:** Radio frequency identification (RFID) is a generic term that is used to describe a system that transmits the identity (in the form of a unique serial number) of an object or person wirelessly, using radio waves.

**RIM:** HL7 Reference Information Model

**RHIO:** Regional Health Information Organization

**RMIM:** HL7 Refined Message Information Model

**Role:** A part played by or the responsibility of an Entity

**RoleLink:** A relationship between two Roles.

**Root Concept:** The single Concept “SNOMED CT Concept” that is at the top of the entire SNOMED CT hierarchy of concepts.

**SAEF:** Services Aware Enterprise Architecture Framework. HL7's SAEAF defines the artifacts and specification semantics needed to support interoperability in healthcare, life sciences, and clinical research.

**Sanctioned relationships:** Relationships between SNOMED-CT concepts that are sanctioned by the SNOMED-CT Concept Model. Sanctioned relationships are specified in a row in the SNOMED-CT Relationships table, as opposed to "Allowable" relationships, which are a pattern in the Concept Model.

**Scenario:** A sequence of actions that illustrates behavior. A scenario may be used to illustrate an interaction or the execution of a use case instance.

**Schematron:** Schematron is an XML structure validation language for making assertions about the presence or absence of patterns in trees. It is a simple and powerful structural schema language.

**SCR:** Summary Care Record

**SCT:** SNOMED Clinical Terms

**SCT Enabled Application:** A software application designed to support the use of SNOMED CT.

**SCTID:** SNOMED Clinical Terms Identifier

**SDO:** Standards Development Organization

**SDS:** Spine Directory Service (NHS)

**Section:** EHR data within a composition that belongs under one clinical heading, usually reflecting the flow of information gathering during a clinical encounter, or structured for the benefit of future human readership.

**Semantics:** Meaning of symbols and codes

**Semantic interoperability:** Ability for data shared by systems to be understood at the level of fully defined domain concepts.

**Sender:** The application fulfilling the Sending Application role in an interaction.

**Service:** A consultation, diagnosis, treatment, or intervention performed for a person and/or other activity performed for a person. Includes health, goods, and support services.

**Set:** A form of collection which contains an unordered list of unique elements of a single type.

**SGML:** Standardized General Markup Language

**Shall:** The conformance verb SHALL is used to indicate a requirement.

**Should:** The conformance verb SHOULD is used to indicate a recommendation.

**SIG:** Special Interest Group

**SMTP:** Simple Mail Transport Protocol

**SNOMED:** An acronym for the Systematized Nomenclature of Human and Veterinary Medicine originally developed by the College of American Pathologists.

**SNOMED Clinical Terms (SNOMED CT):** The clinical terminology maintained and distributed by the IHTSDO. The First Release of SNOMED Clinical Terms was the result of the merger of the CTV3 and SNOMED RT.

**SNOMED Clinical Terms Identifier (SCTID):** A unique identifier applied to each SNOMED CT component (Concept, Description, Relationship, Subset, etc.). The SCTID can include an item identifier, namespace identifier, a check-digit, and a partition identifier. It doesn't always include a namespace identifier.

**SOA:** Service Oriented Architecture provides methods for systems development and integration where systems package functionality as interoperable services. A SOA infrastructure allows different applications to exchange data with one another. Service-orientation aims at a loose coupling of services with operating systems, programming languages, and other technologies that underlie applications. SOA separates functions into distinct units, or services, which developers make accessible over a network in order that users can combine and reuse them in the production of applications. These services communicate with each other by passing data from one service to another, or by coordinating an activity between two or more services.

**Specialization:** An association between two classes (designated superclass and subclass), in which the subclass is derived from the superclass. The subclass inherits all properties from the superclass, including attributes, relationships, and states, but also adds new ones to extend the capabilities of the superclass.

**Specification:** A detailed description of the required characteristics of a product.

**Standard:** A document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

**Storyboard:** Defines what happens from the users point of view. A narrative of relevant events defined using interaction or activity diagrams or use cases. The storyboard provides one set of interactions that will typically occur in the domain.

**String:** A sequence of text characters.

**Stylesheet:** A file that describes how to display an XML document of a given type.

**Subclass:** A class that is the specialization of another class (superclass).

**Subset:** A group of Components (e.g., Concepts, Descriptions, or Relationships) that share a specified common characteristic or common type of characteristic.

**Example:** UK English Subset

**Superclass:** A class that is the generalization of one or more other classes (subclasses).

**Swimlane:** A partition on activity graphs for organizing responsibilities for activities, often corresponding to the organizational units in a business model.

**Synonym:** A term that is an acceptable alternative to the Preferred Term as a way of expressing a Concept. Synonyms allow representations of the various ways a concept

may be described. Synonyms and Preferred Terms (unlike FSNs) are not necessarily unique. More than one concept might share the same Preferred term or Synonym.

**Syntax:** Rules for structuring words into sentences or computer commands or electronic messages.

**System:** A collection of connected units organized to accomplish a purpose.

**Table view:** An expression of the Hierarchical Message Description (HMD) common and message type definition condensed in size to fit on a printed page.

**TC:** Technical Committee

**TCP/IP:** Transmission Control; Protocol/Internet Protocol. A protocol for communication between computers, used as a standard for transmitting data over networks and as the basis for standard Internet protocols.

**Template:** A template is an RMIM which is used to constrain another model

**Term:** A text string represents the Concept. The Term is part of the Description. There are multiple descriptions per Concept.

**Terminology:** A terminology is a set of concepts designated by terms belonging to a special domain of knowledge, or subject field.

**Terminology Binding:** An instance of a link between a terminology component and an information model artefact.

**Terminology server:** Software that provides access to SNOMED CT (and/or to other terminologies). A Terminology server typically supports searches and Navigation through Concepts. A server may provide a user interface (e.g., a browser or set of screen controls) or may provide low-level software services to support access to the terminology by other applications.

**Top-Level Concept:** A Concept that is an immediate child of the root concept "SNOMED CT Concept" which is at the top of the entire SNOMED CT hierarchy of concepts.

**Transaction:** A complete set of messages for a particular trigger event, e.g., a message and a response.

**Transport wrapper:** A wrapper that contains information needed by a sending application or message handling service to route the message payload to the designated receiver. All HL7 Version 3 messages require an appropriately configured transport wrapper.

**Trigger Event:** Defines what causes a message to be sent. An event which, when recorded or recognized by an application, indicates the need for an information flow to one or more other applications, resulting in one or more interactions.

**TRUD:** Terminology Reference Data Update Distribution Service (NHS)

**TSC:** Technical Steering Committee (HL7)

**UML:** Unified Modeling Language

**UMLS:** Unified Medical Language System

**UN/CEFACT:** United Nations Centre for Trade Facilitation and Electronic Business

UKTC: UK Terminology Centre (NHS)

UPI: Unique Patient Identifier

Use case: The specification of sequences of actions, including variant sequences and error sequences that a system can perform by interacting with outside actors.

VA: Veterans Administration

Valid document: A document which meets all of the validity constraints in the XML specification.

Value set: A vocabulary domain that has been constrained to a particular realm and coding system.

View: Specific information displayed on a computer monitor after it has been filtered for a different user or purpose.

Vocabulary: The set of all concepts that can be taken as valid values in an instance of a coded attribute or field.

W3C: World Wide Web Consortium

WAN: Wide Area Network

WEDI: Workgroup on Electronic data Interchange

WHO: World Health Organization

Wrapper: The control or envelope information in which the message payload resides.

WWW: World Wide Web

XDS: Cross-enterprise Document Sharing

XML: Extensible Mark-up Language

XSL: Extensible Style sheet Language. The XSL family comprises three languages:

- XSL Transformations (XSLT): an XML language for transforming XML documents
- XSL Formatting Objects (XSL-FO): an XML language for specifying the visual formatting of an XML document
- XML Path Language (XPath): used to address the parts of an XML document

XSLT: Extensible Stylesheet Language Transformations (XSLT) is an XML-based language used for the transformation of XML documents into other XML or “human-readable” documents. The original document is not changed; rather, a new document is created based on the content of an existing one. The new document may be serialized (output) by the processor in standard XML syntax or in another format, such as HTML or plain text. XSLT is most often used to convert data between different XML schemas or to convert XML data into HTML or XHTML documents for web pages, creating a dynamic web page, or into an intermediate XML format that can be converted to PDF documents.

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## On-Line Resources

Business Process Modeling Notation [www.bpmn.org/](http://www.bpmn.org/)  
Canada Standards Collaborative [www.infoway-inforoute.ca/lang-en/standards-collaborative](http://www.infoway-inforoute.ca/lang-en/standards-collaborative)  
Common User Interface Project: [www.mscai.net](http://www.mscai.net)  
Continua Alliance [www.continuaalliance.org](http://www.continuaalliance.org)  
Google Health <http://code.google.com/apis/health/>  
HL7 Terminology [www.hl7.org/Special/committees/terminology/index.cfm](http://www.hl7.org/Special/committees/terminology/index.cfm)  
HL7 (Health Level Seven) [www.hl7.org](http://www.hl7.org)  
IHE (Integrating the Healthcare Enterprise) [www.ihe.net](http://www.ihe.net)  
International Health Terminology Standards Development Organisation (IHTSDO) [www.ihtsdo.org](http://www.ihtsdo.org)  
Microsoft Health Vault <http://msdn.microsoft.com/en-us/healthvault/default.aspx>  
NHS Connecting for Health. [www.connectingforhealth.nhs.uk](http://www.connectingforhealth.nhs.uk)  
NHS Common User Interface. [www.cui.nhs.uk](http://www.cui.nhs.uk)  
Open Health Tools [www.openhealthtools.org](http://www.openhealthtools.org)  
OpenEHR Foundation [www.openehr.org](http://www.openehr.org)  
UML Resource Page <http://www.uml.org/>  
W3C World Wide Web Consortium - [www.w3.org/BooksBibliographyBibliography](http://www.w3.org/BooksBibliographyBibliography)

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