



BSI Standards Publication

Health informatics — Terminological resources

Part 1: Characteristics

National foreword

This British Standard is the UK implementation of EN ISO 17117-1:2025. It is identical to ISO 17117-1:2025. It supersedes BS EN ISO 17117-1:2023, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IST/35, Health informatics.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 29765 2

ICS 01.020; 35.240.80

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 December 2025.

Amendments/corrigenda issued since publication

Date	Text affected
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English Version

Health informatics - Terminological resources - Part 1: Characteristics (ISO 17117-1:2025)

Informatique de santé - Ressources terminologiques -
Partie 1: Caractéristiques (ISO 17117-1:2025)

Medizinische Informatik - Terminologische Ressourcen
- Teil 1: Merkmale (ISO 17117-1:2025)

This European Standard was approved by CEN on 28 November 2025.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN ISO 17117-1:2025) has been prepared by Technical Committee ISO/TC 215 "Health informatics" in collaboration with Technical Committee CEN/TC 251 "Health informatics" the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2026, and conflicting national standards shall be withdrawn at the latest by June 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 17117-1:2023.

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Endorsement notice

The text of ISO 17117-1:2025 has been approved by CEN as EN ISO 17117-1:2025 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 215, Health informatics, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 251, Health informatics, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 17117-1:2018), which has been technically revised.

The main changes are as follows:

- The document has been updated to reflect the state of medical and technical practices at a time, and incorporating relevant new normative references.

A list of all parts in the ISO 17117 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Health terminology is complex and multifaceted. It has been estimated that up to 45 million different terms are needed to adequately describe health-related concepts such as conditions of patients and populations, actions in healthcare, and related concepts, such as medicines, biomedical molecules, genes, organisms, technical methods and social concepts (see ISO 17115). Many formal and less formal terminological resources exist to represent this complexity. These can be called terminological systems, coding systems, formal concept representation systems, classification systems, and others. Specific features of different terminological resources make them more or less useful for particular purposes and technological environments.

The need for formal terminological resources to support health information management has been widely recognized.^{[13][14][15]} Such resources are required for precise data collection, accurate interpretation of data and interoperability among information systems that exchange such data.^[14] National governments, healthcare organizations and others are currently concerned with the question of which of the available terminological resources will meet their requirements, i.e. they wish to 'assign value' to specific terminological resources to decide which are suitable for their purposes and healthcare contexts.

A set of criteria to support such evaluations was originally published in ISO/TS 17117:2002¹⁾. The main purpose was to enable users to assess whether a terminological resource has the characteristics that will support their specified requirements, since the characteristics of a terminological resource influence its utility and appropriateness in applications. There has been much progress in the study and use of terminological resources since that time and some experience of formal evaluations.^{[16][17]}

As the first part of the entire revision work, this document identifies the characteristics of terminological resources in healthcare ([Clause 4](#)) and functions or roles invoked by those characteristics ([Clause 5](#)). This document also provides a framework to identify different types of terminological resources using a combination of those characteristics and functions, which is essential for the development of criteria for the categorization of terminological resources in healthcare. Requirements for, and evaluation criteria of, terminological resources in healthcare, addressed in other parts of ISO 17117, are tightly related to the characteristics of terminological resources and functions that they can provide.

The target groups for this document are:

- a) organizations wishing to select terminological systems for use in healthcare information systems;
- b) developers of terminological systems;
- c) developers of terminology standards;
- d) those undertaking independent evaluations or academic reviews of terminological resources;
- e) terminology Registration Authorities.

1) Withdrawn.

Health informatics — Terminological resources —

Part 1: Characteristics

1 Scope

This document defines universal and specialized characteristics of health terminological resources that make them fit for the purposes required of various applications. It covers only terminological resources that are primarily designed to be used for clinical concept representation or to those parts of other terminological resources designed to be used for clinical concept representation.

This document helps users to assess whether a terminology has the characteristics or provides the functions that will support their specified requirements. In order to do that, this document focuses on defining characteristics and functions of terminological resources in healthcare that can be used to identify different types of terminological resources for categorization purposes.

NOTE 1 Categorization of healthcare terminological systems according to the name of the system might not be helpful and has caused confusion in the past.

The following aspects are not covered in this document:

- evaluations of terminological resources;
- health service requirements for terminological resources and evaluation criteria based on the characteristics and functions;
- the nature and quality of mappings between different terminologies;

NOTE 2 It is unlikely that a single terminology will meet all the terminology requirements of a healthcare organization: some terminology providers produce mappings to administrative or classification systems such as the International Classification of Diseases (ICD). The presence of such maps would be a consideration in the evaluation of the terminology.

- the nature and quality of mappings between different versions of the same terminology;

NOTE 3 To support data migration and historical retrieval, terminology providers can provide maps between versions of their terminology. The presence of such maps would be a consideration in the evaluation of the terminology.

- terminology server requirements and techniques and tools for terminology developers;
- characteristics for computational biology terminology.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 General terms

3.1.1

concept

unit of knowledge created by a unique combination of *characteristics* (3.1.3)

Note 1 to entry: Informally, the term ‘concept’ is often used when what is meant is ‘concept representation’. However, this leads to confusion when precise meanings are required. Concepts arise out of human individuals and social conceptualizations of the world around them. Concept representations are artefacts constructed of symbols.

Note 2 to entry: Concept representations are not necessarily bound to particular languages. However, they are influenced by the social or cultural context of use often leading to different categorizations.

[SOURCE: ISO 1087:2019, 3.2.7, modified — The notes to entry were changed.]

3.1.2

term

linguistic representation of a *concept* (3.1.1) in a specific *subject field* (3.1.15)

3.1.3

characteristic

abstraction of a property

EXAMPLE ‘Being a disease of the nervous system’ is a characteristic of the concept ‘Functional parkinsonism’.

Note 1 to entry: Characteristics are used for describing *concepts* (3.1.1).

[SOURCE: ISO 1087:2019, 3.2.1, modified — The example was changed.]

3.1.4

term identifier

sequence of letters, numbers or symbols, capable of uniquely identifying a *term* (3.1.2) within the *terminological resource* (3.4.1)

Note 1 to entry: Term identifier shall be unique within the terminological resource.

3.1.5

concept identifier

canonical expression (3.3.5), or sequence of letters, numbers or symbols, capable of uniquely identifying a *concept* (3.1.1) within the *terminological resource* (3.4.1)

Note 1 to entry: Concept identifier shall be unique within the terminological resource, so terms shall not be used as concept identifiers in case polysemy exists.

3.1.6

code

identifier expressed by a series of letters, numbers, or symbols

Note 1 to entry: A code is a *concept identifier* (3.1.5) when used in a *coding system* (3.4.4).

3.1.7

terminological resource identifier

unique permanent identifier of a *terminological resource* (3.4.1) for use in information interchange

Note 1 to entry: This is equivalent to Health Coding Scheme Designator in EN 1068:2005 for registration of coding systems.

Note 2 to entry: Globally unique schemes such as OIDs, UUIDs, and URIs may be used for this purpose.