

**DIN EN ISO 1828**

ICS 35.240.80

Einsprüche bis 2010-01-16  
Vorgesehen als Ersatz für  
DIN EN 1828:2002-09

**Entwurf**

**Medizinische Informatik –  
Kategoriale Struktur für Klassifikationen und Kodierungssysteme für  
chirurgische Prozeduren;  
Englische Fassung prEN ISO 1828:2009**

Health informatics –

Categorical structure for classifications and coding systems of surgical procedures;  
English version prEN ISO 1828:2009

Informatique de santé –

Structure catégorielle pour les classifications et systèmes de codage des interventions  
chirurgicales;

Version anglaise prEN ISO 1828:2009

**Anwendungswarnvermerk**

Dieser Norm-Entwurf mit Erscheinungsdatum 2009-11-16 wird der Öffentlichkeit zur Prüfung und  
Stellungnahme vorgelegt.

Weil die beabsichtigte Norm von der vorliegenden Fassung abweichen kann, ist die Anwendung dieses  
Entwurfes besonders zu vereinbaren.

Stellungnahmen werden erbeten

- vorzugsweise als Datei per E-Mail an [named@din.de](mailto:named@din.de) in Form einer Tabelle. Die Vorlage dieser Tabelle  
kann im Internet unter [www.din.de/stellungnahme](http://www.din.de/stellungnahme) abgerufen werden;
- oder in Papierform an den Normenausschuss Medizin (NAMed) im DIN, 10772 Berlin (Hausanschrift:  
Burggrafenstr. 6, 10787 Berlin).

Die Empfänger dieses Norm-Entwurfs werden gebeten, mit ihren Kommentaren jegliche relevante  
Patentrechte, die sie kennen, mitzuteilen und unterstützende Dokumentationen zur Verfügung zu stellen.

Gesamtumfang 21 Seiten

Normenausschuss Medizin (NAMed) im DIN

## Nationales Vorwort

Das Dokument beinhaltet die Kategorienstruktur zur Klassifikation und Kodierungssysteme chirurgischer Prozeduren in der medizinischen Informatik. Die Norm ist vorgesehen als Ersatz für die 2002 veröffentlichte DIN EN 1828. Der vorliegende internationale Norm-Entwurf ist vom technischen und inhaltlichen Aufbau im wesentlichen identisch mit der Europäischen Norm.

Diese Norm wurde vom Technischen Komitee ISO/TC 215 "Medizinische Informatik" erarbeitet und wird parallel im CEN/TC 251 "Medizinische Informatik" abgestimmt. Der Fachbereich 7 "Medizinische Informatik" und insbesondere die Mitarbeiter des Arbeitsausschusses NA 063-07-03 AA "Terminologie" des Normenausschusses Medizin (NAMed) im DIN haben an der Erarbeitung mitgewirkt. Dieser Norm-Entwurf enthält unter Berücksichtigung des Präsidialbeschlusses 13/1983 den englischen Originaltext der internationalen Norm prEN ISO 1828, Ausgabe August 2009.

## Änderungen

Gegenüber DIN EN ISO:2002-09 wurden folgende Änderungen vorgenommen:

- a) die Norm wird als internationale Norm überarbeitet und ist bisher vom technischen und inhaltlichen Aufbau im wesentlichen identisch mit der Europäischen Norm.

**ISO/TC 215**

Date: 2009-08-10

**prEN ISO/DIS 1828**

ISO/TC 215/WG 3

Secretariat: ANSI

## **Health informatics — Categorical structure for classifications and coding systems of surgical procedures**

*Élément introductif — Élément central — Élément complémentaire*

### **Warning**

This document is not an ISO International Standard. It is distributed for review and comment. It is subject to change without notice and may not be referred to as an International Standard.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Document type: International Standard  
Document subtype:  
Document stage: (40) Enquiry  
Document language: E

## Contents

Page

|                                                                                                                                                                  |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Foreword.....                                                                                                                                                    | 3  |
| Introduction .....                                                                                                                                               | 4  |
| 1 Scope .....                                                                                                                                                    | 5  |
| 2 Conformance .....                                                                                                                                              | 5  |
| 3 Normative references .....                                                                                                                                     | 6  |
| 4 Terms and definitions .....                                                                                                                                    | 6  |
| 5 Categorial structure for terminological systems of surgical procedures description .....                                                                       | 8  |
| 5.1 Principles .....                                                                                                                                             | 8  |
| 5.2 Categories (3.3) of health care entities for terminological systems of surgical procedures.....                                                              | 8  |
| 5.3 List of authorised representations of relations (3.4).....                                                                                                   | 9  |
| 5.4 Goal of the terminological system for which the categorial structure (3.1) is set.....                                                                       | 10 |
| 5.5 List of minimal domain constraints (3.2).....                                                                                                                | 10 |
| 6 UML Diagram.....                                                                                                                                               | 11 |
| Annex A (informative) REMINDER to ISO 17115 2007 clause 2.7 terminological systems definitions.....                                                              | 12 |
| Annex B (informative) Categorial structures of the most recent and/or more widespread terminological systems (in use or in progress) of surgical procedures..... | 13 |
| Annex C (informative) Reminder to EN 15521 .....                                                                                                                 | 15 |
| Annex D (informative) The main terminological systems of surgical procedures developed since the edition of the standard.....                                    | 18 |

## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

prEN ISO 1828 was prepared by Technical Committee CEN/TC 251, *Health informatics*, and by Technical Committee ISO/TC 215, *Health informatics* in collaboration.

This second edition cancels and replaces EN 1828:2002. The preparation of this document indicated an urgent need for review of the family of terminological standards ISO 704, ISO 1087, ISO 17115, and EN 12264 in order to clarify the relations between concept, generic concept, specific concept, object, class, instance, designation, and formal representation. This discussion will also be applicable to ISO PDTR 24156.

## Introduction

The driving factor behind this International and European Standard is the fact that surgical procedures terminological systems are used for a wide range of purposes. Some of the main applications include, for instance, being incorporated as an integral part of a computerised healthcare record, for use in discharge summary information, for clinical research, peer review, quality assurance, reimbursement, workload assessment, resource management, utilisation comparisons, public health management and epidemiological surveys. Unlike diagnoses for which the International Classification of Diseases (ICD) is an accepted de facto standard, there are at least as many coding systems for surgical procedures as countries in developed countries and, very often, several such coding systems for different purposes or for different surgical disciplines in each country. On the other hand most of the countries are unable to satisfy such purposes for they lack such terminological systems or use terminological systems from other countries. This hampers the exchange of meaningful health information for instance for international statistical comparisons,

The definition of a surgical procedure is considered to be a difficult task because there are neither specific criteria to specifically define it nor specific criteria to define the limit between what is a surgical procedure and what is not such a procedure.

Within the present standard, terminological systems of surgical procedures are defined in the following way:

- A terminological system which is defined by its owner/developer as a terminological system of surgical procedures and considers that it deals with surgical procedures.
- It is the responsibility of the terminological system owner/developer to define the content and therefore what must be considered as a surgical procedure.
- When the terminological system owner/developer has defined its terminological system as a terminological system of surgical procedures the terminological system shall be conformant to the present standard
- The terminological systems for surgical procedures group the different types of terminological systems including terminological systems defined by ISO 17115 2007 clause 2.7: classifications, coding schemes, coding systems, reference terminology and clinical terminology

ENV 1828:1995 started by identifying the categories of terms in existing procedure classifications within and outside Europe and also the natural language used in surgical reports. It defined the categorial structure that contains the definition of a set of categories of terms and the internal relations that combine them into a conceptual system.

The final EN 1828:2002 has been widely tested and/or applied in national and European projects (The Nordic NCSP, the French CCAM, for the revision of UK OPCS and by 3 German speaking countries: Austria, Germany and Switzerland; as well as outside Europe in Australia: ACHI and ICHI; and Canada: CCI).

It is presently part of a project of WHO-FIC (World Health Organisation Family of International Classification)) named ICHI (International Classification of Health Intervention) in the sense that ICHI should be based on a concept system that is conformant to this prEN ISO 1828 and SNOMED CT IHTSDO has planned to align the procedures within SNOMED CT with the standard.

International standardisation efforts by CEN and ISO related to Electronic Health Records and semantic interoperability have resulted in a number of categorial structures which are steps towards supporting healthcare terminological systems with a full concept system or ontology that in turn will support multipurpose use and safe communication. In the present categorial structure standard, several of the definitions of basic terms related to categorial structures have been updated to comply with the most recent version of ISO 17115:2007. This is the first revision of a categorial structure standard developed by CEN or ISO since 1995, a number of which must be reviewed in the coming 5 years. These revisions are being processed in common between CEN/TC251/WG2 and ISO/TC215/WG3.

# Health informatics

## Categorial structure for classifications and coding systems of surgical procedures

### 1 Scope

This International and European Standard specifies the characteristics of a categorial structure and the minimal domain constraints required for conformance, in order to support the exchange of meaningful surgical procedure information between different national terminological systems of surgical procedures using different national languages.

Categorial Structures supports interoperability by providing common frameworks with

- a) to develop terminological systems that are able to be related to each other
- b) to analyse the properties of different terminological systems to establish the relationship between them.

This standard is applicable to:

- organisations involved with the development or maintenance of terminological systems for medical procedures, namely for multipurpose terminological systems on a national or international level
- organisations developing and maintaining software tools allowing natural clinical language expressions analysis, generation and mapping to the main existing terminological systems of surgical procedures.

The standard has been developed for use as an integrated part of computer-based applications and for the electronic health record. It would be of limited value for manual use. The standard itself is not suitable for or intended for use by the individual clinician or hospital administrator. It is not the purpose of this standard to standardise the end user terminological system or to conflict with the concept systems embedded in national practice and languages.

This standard is applicable to surgical procedures in all surgical disciplines.

### 2 Conformance

A **categorial structure for a terminological system of surgical procedures** (3.1) claiming conformance to the present standard shall provide the information described by items 4.2, 4.3 and 4.4 in clause 4 of the present International and European standard and shall be conformant to the following six minimal domain constraints (4.5) requirements

**2.1** Each surgical procedure terminological phrase shall, as a minimum, consist of a **surgical deed** (4.2.1) and have the semantic link **'hasObject'** (4.4.1).

**2.2** Each surgical procedure terminological phrase shall contain the **category human anatomy** (4.2.2), in relation with the semantic link **'hasObject'** (4.4.1) or **'hasSite'** (4.4.2). It can also have both.

**2.3** The surgical procedure terminological phrase shall include the category **lesion** (4.2.3) when the surgical deed is applied to a modified human anatomy structure without mention of the disease cause of the lesion.

**NOTE** Pathological conditions that do not affect the description of the surgical procedure shall be recorded elsewhere within the healthcare record using a terminological system for diagnosis statements.