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**Medizinische Informatik –
Begriffssystem zur Unterstützung der Kontinuität der Versorgung –
Teil 1: Grundbegriffe;
Englische Fassung EN 13940-1:2007**

Health informatics –
System of concepts to support continuity of care –
Part 1: Basic concepts;
English version EN 13940-1:2007

Informatique de santé –
Système de concepts en appui de la continuité des soins –
Partie 1: Concepts de base;
Version anglaise EN 13940-1:2007

Gesamtumfang 115 Seiten

Normenausschuss Medizin (NAMed) im DIN

Nationales Vorwort

Diese Norm enthält unter Berücksichtigung des Präsidialbeschlusses 13/1983 den englischen Originaltext der Europäischen Norm EN 13940-1:2007-06. Diese Europäische Norm wurde in der WG II „Terminology and knowledge representation“ des CEN/TC 251 „Medizinische Informatik“ erarbeitet, dessen Sekretariat von NEN (Niederlande) gehalten wird. Der Arbeitsausschuss NA 063-07-03 AA „Terminologie“ des Fachbereichs 7 „Medizinische Informatik“ des Normenausschusses Medizin im DIN hat an der Erarbeitung mitgewirkt.

Diese Norm beschreibt ein Begriffssystem und kategorialen Strukturen zur Beschreibung und Unterstützung einer Kontinuität der Versorgung in der Pflege unter zwei unterschiedlichen Perspektiven:

- das lokale Management der Informationen über den Pflegebedürftigen und Gegenstand der Pflege aus Sicht der Bereitstellung und Erbringung der Leistungen sowie
- den Austausch der Daten zwischen verschiedenen Anbietern des Gesundheitswesens.

Diese Norm dient der Identifikation und Festlegung von Prozessen, die eine Kontinuität der Versorgung erfordern. Es werden hierbei insbesondere die Aspekte der Mehrfachnutzung von für den Patienten benötigten relevanten Informationen im Pflegeprozess angesprochen. Es werden relevante Daten und Informationsflüsse identifiziert und festgelegt sowie deren Beziehung zu „Zeitvorgaben“. Zur Unterstützung einer hochqualitativen Versorgung jedes Patienten und seiner kontinuierlichen Versorgung ist ein vollständiges Verständnis für temporäre Aspekte der Bereitstellung der Gesundheitsversorgung sowie für die Rolle der unterschiedlichen Parteien im Gesundheitswesen und deren Wechselbeziehung im Verhältnis zum Patienten notwendig. Das Begriffssystem beschreibt die Charakteristika im laufenden Pflegeprozess und sollte sich in seiner Beschaffenheit nicht von der Struktur und Organisation der vor Ort verwendeten Daten der elektronischen Gesundheitsakte unterscheiden.

Für die im Abschnitt 2 zitierten Internationalen Normen wird im Folgenden auf die entsprechenden Deutschen Normen hingewiesen:

ISO 704:2000	siehe DIN 2330:1993-12, modifiziert
ISO/IEC 1087-1:2000	siehe DIN 2342-1:1992-10, modifiziert
ISO/IEC 10241:1992	siehe DIN 2344:2005-05, modifiziert

Änderungen

Gegenüber DIN V ENV 13940:2002-10 wurden folgende Änderungen vorgenommen:

- a) Vornormcharakter wurde aufgehoben;
- b) der Inhalt wurde redaktionell überarbeitet;
- c) der Inhalt wurde mit neuen Definitionen, z. B. für „health care“ und „health record“ auf ISO-Ebene harmonisiert.

Frühere Ausgaben

DIN V ENV 13940: 2002-10

Nationaler Anhang NA (informativ)

Literaturhinweise

DIN 2330:1993-12, *Begriffe und Benennungen — Allgemeine Grundsätze*

DIN 2342-1:1992-10, *Begriffe der Terminologielehre — Grundbegriffe*

DIN 2344:2000-05, *Ausarbeitung und Gestaltung von terminologischen Festlegungen in Normen*

— Leerseite —

English Version

**Health informatics -
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Part 1: Basic concepts**

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Versorgung - Teil 1: Grundbegriffe

This European Standard was approved by CEN on 10 May 2007.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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Foreword

This document (EN 13940-1:2007) has been prepared by Technical Committee 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 December 2007, and conflicting national standards shall be withdrawn at the latest by December 2007.

This document supersedes ENV 13940:2001.

This two-part standard under the general heading *Health informatics — System of concepts to support continuity of care* consists of the following parts:

Part 1: Basic concepts

Part 2: Core process and work flow in health care

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

0 Introduction

0.1 General

Continuity of care is increasingly invoked nowadays as one of the most important issues in health care. What is in perspective is both an improvement of the quality of care, and a reduction of costs. Continuity of care is now seen as prerequisite to improve at the same time efficacy, effectiveness and efficiency of health care.

Thus there is a need for clinicians, private and public health care providers, health managers, and funding organisations to base their decisions, in terms of re-organisation of services, on a good understanding of the concepts involved.

This European Standard defines the classes of concepts and their descriptive terms, regarding all processes of care, especially considering patient-centred continuity of care, shared care and seamless care.

Continuity of care depends on the effective transfer and linkage of data and information about both the clinical situation and the health care provided to a subject of care, between different parties involved in the process, within the framework of ethical, professional and legal rules. The description and formalisation of continuity of care in information systems implies that the related concepts and descriptive terms be defined, so establishing a common conceptual framework across national, cultural and professional barriers.

0.2 Target groups

The system of concepts and the terms defined in this European Standard are designed to support the management of health care related information over time and the delivery of care by different health care actors who are working together. This includes primary care professionals and teams, health care funding organisations, managers, patients, secondary and tertiary health care providers, and community care teams.

This harmonised system of concepts will be used to facilitate clinical and administrative decision making, and to enhance relationships between health care professionals and their patients.

Among other applications, the content of this European Standard will prove of utmost importance for the development of well designed clinical networks, either at regional — possibly cross-border —, or at local level, either including hospital settings or not; it will help the correct management of personal health data, and of Electronic Health Records in that context. It provides a clear conceptual framework to establish the terms of reference of health information systems, to be used for tenders.

0.3 Notes

0.3.1 General

These notes apply to this European Standard in general.

0.3.2 Subject of care

In this European Standard, 'subject of care' refers to an individual. It is assumed that in those cases where a health care activity addresses a group of more than one individual (e.g. a family, a community), and where a single health record is used to capture the health care activities provided to the group, each individual within the group will be referenced explicitly within that health record. This issue is further discussed in Annex A "On the issue of the subject of care being a group of persons", page 94.

0.3.3 Description and display of concepts

This European Standard aims to identify and describe concepts important to continuity of care, and to establish a system of concepts that is to be used when setting up information systems, especially when dealing with health record communication. The primary focus of the standard is terminology and ontology.

Descriptions framed in tables having the same pattern of rubrics are systematically provided for all the concepts presented in Clauses 6 to 11. Whenever not felt relevant to a given concept, some of these rubrics may intentionally be left blank. In the headings of these tables, the names of those concepts that are purely abstract constructs and therefore are not instantiable but through their specialization, are shown in italic characters.

Examples are provided wherever felt relevant and necessary. However, in general, examples for superordinate concepts are to be sought at the level of the corresponding subordinate concepts.

In order to help the readers understand more easily the relationships between these concepts, diagrams have been introduced based on UML conventions. Thus, for each one of the concepts described in Clauses 6 to 11, a subset of the general and comprehensive diagram is provided as an illustrative part of the monograph, showing only its direct relationships with other concepts belonging to the current system of concepts.

Diagrams providing partial views of the system of concepts are also proposed at the beginning of each one of Clauses 6 to 11. These diagrams are focused on the topic addressed in the corresponding clause. For instance: actors, or health data management. For a better clarity, they only show the relationships between the concepts defined in that clause and, except for Clause 6, all relationships between those concepts and concepts defined in other clauses of this European Standard. For Clause 6 the relationship with a number of concepts that are not defined in this standard is shown. For clarity of reading, concepts defined in the clause the diagram is a part of are shown in white. Concepts defined in other clauses of the standard are shown in grey while concepts not defined in this standard is light grey, without frames.

The purpose of using UML diagrams in this European Standard is to highlight the relationships between concepts. Their attributes, which actually do not belong to the field of concept modelling, are not addressed in this European Standard. This means that additional attributes may be felt useful or necessary in the course of implementation, without conformance with the current European Standard being at stake.

Besides, there are related features and other related entities which may be considered as concepts in their own right. They are usually of a generic nature, and do not belong to the system of concepts which is the focus of this European Standard. As a consequence, they are not described any further. An example of this is: a subject of care may have an undefined number of addresses, and an address may be associated with an undefined number of subjects of care. The resolution of this 'many to many' relationship is not within the scope of this European Standard.

In order to differentiate them both from normal attributes and from concepts with which direct relationships are explicitly mentioned, these features are shown apart, in a rubric called "features or related entities not described in this document".

0.3.4 Concept modelling vs. information modelling

[The concepts designated by terms printed in italic in this sub-section are defined in ISO 1087:2002].

Concept modelling may be used for two purposes. The main purpose is to graphically describe a *concept system* within a *subject field*. This description can clarify the relationships between the *concepts*, and illustrate some of their *definitions*. The other purpose is to let a concept modelling tool set up a data base organising the *concept system*, in order to keep track of its *concepts* and relationships, as well as check its consistency.

Information modelling has the purpose of organising the information objects, each one representing

knowledge about a concept. There is however additional information in an information model about the properties of the information objects, shown as attributes to the objects, and operations describing behaviour of the objects.

All *concepts* have the same degree of integrity, and in a concept model all *concepts* should be modelled in the same way. In UML this means that a *concept* is represented by a class. There are no attributes or operations in the classes. A *characteristic* of a *concept* is also a *concept*, and its function as *characteristic* is therefore modelled as a relation to the core *concept*. Relations may be *generic* making the *specific concept* inherit all *characteristics* of its *generic concept*. The *specific concept* has additional *characteristics* modelled as *concepts* associated to the *specific concept*.

Beside *associative relations* and *generic relations* there are *partitive relations* describing *partitive concepts* being parts of a *comprehensive concepts*.

If a relation between two *concepts* denotes an *essential characteristic* of the core concept, this relation can probably be used when the core *concept* is to be textually defined. Also *concepts* not being *characteristics* of another *concept* may be related, and it may be clarifying to show this relation graphically. Equally, not all *characteristics* used in a *definition* have to be shown in the graph.

In an information model a lot of information objects should be added. They are often modelled as attributes. The relations between the information objects, drawn as classes in the UML are often the same as in the concept model. Some related *concepts* are not necessary to show as classes of their own, and they may then be represented as attributes of their class. Even some *characteristics of concepts* may be better represented as attributes than as separate classes in the information model. The information model needs to be a robust template for a data model, which can be used in the creation of a data base keeping information of those objects which have been conceptually analysed in the concept model.

In this European Standard *concepts* are described in text and models. The models comply with the principles described here above. The tables list the relationships of each *concept*, but they also list those attributes that are considered important to be included in an information model though they are not necessary to describe the *concept system*.

0.3.5 Frequent use of the term 'care' instead of 'health care'

The scope of this European Standard regards topics related to continuity of health care. However, in this document the shorter term 'care' is often used and is to be understood as a synonym for the longer term 'health care'. Examples of this are: 'continuity of care', 'subject of care', 'episode of care', 'period of care', 'care plan', 'programme of care'... Would the concepts hereby described be used in another context, the complete phrase 'health care' might have to be systematically used wherever relevant in order to provide full consistency in that context.

1 Scope

1.1 Main purpose

Continuity of care implies the management of health information in two different perspectives:

- local management of information about the subject of care, at the site of care provision;
- information interchange between health care providers.

NOTE Record management: Continuity of care requires that every contact and every health care provider activity, in or out of the presence of the subject of care, be recorded. Those health care activities that are performed by health care third parties should also be recorded in order to support continuity. If ever a contact or a health care activity is not recorded, while it remains a contact or health care activity, its contribution to seamless or integrated care can be ignored, and continuity of care jeopardized.

This European Standard seeks to identify and define those processes which relate to the continuity of health care provided to human beings (to the exclusion of other living subjects). It specifically addresses aspects of sharing subject of care related information needed in the process of health care. It identifies and defines relevant data and information flows, together with their relationships to "time slots".

In order to support the delivery of high quality care to each subject of care, and to facilitate continuity of care, a full understanding is needed of the temporal aspects of the delivery of health care, the role of each party in the health care process, and their interaction in the subject's of care environment. The concepts describing the characteristics of the ongoing process of care should not differ in nature from those that are used to structure and organise the data locally in the Electronic Health Record.

This European Standard addresses such topics as:

- organisational principles of health care;
- health care actors, health care parties, subjects of care, health care providers, provider organisations, health care professionals and third parties;
- health issues and their management;
- time-related concepts: contacts, encounters, episodes of care and periods of care;
- concepts related to decision support, use of clinical knowledge, and activity: activities, protocols, programmes of care, care plans, care pathways;
- concepts related to responsibility and information flows within the clinical process: health mandates and their notification;
- concepts related to health data management.

In order to establish a common conceptual framework for continuity of care across national, cultural and professional barriers, all these concepts are defined in this document, and their inter-relationships identified.

1.2 Topics outside the scope

The scope of this European Standard definitely addresses those concepts that support continuity of health care. Even if the WHO definition of health acknowledgedly establishes the social well being as one of several determinants of health in general, social welfare is out of the scope of this European Standard. If certain concepts addressed in this European Standard might be felt useful for other kinds of care provision than health care, it is not recommended to do so without carefully re-appraising their specific relevance to these distinct uses; this could be the topic for other future standards.

This European Standard does not intend to define how the processes should be performed in a particular health care framework. It does not intend to have any regulatory impact on the actual delivery of care. For example, it defines what "a hospital stay" is, but it does not specify in any way the events that may occur during a hospital stay.

The specific management of prescriptions for drug therapy and of laboratory tests and their results are not part of this European Standard; nor does the standard define any other aspects of the health care process, such as security, act specific management, the life cycle of acts, terminology and classification, or the financing mechanism of health care delivery.

As stated above, continuity of care depends on the effective transfer and linkage of data and information about the clinical situation and the care provided to a subject of care, between different parties involved in the process, within the framework of ethical, professional and legal, rules.

The communication or sharing of personal health data between health care parties imply that such requirements as confidentiality, privacy protection, and security are properly covered by an adequate set of relevant policies. However, while this European Standard addresses the transfer of responsibilities between subjects of care and health care providers, which by the use of mandates includes some aspects of the assignment of access rights, it does not address those policies.

In practice, clinical data and information take the form of Record Components, as defined in EN 13606-1:2007. The management of security, access control, access rules etc. is tightly linked to EHR communication, and therefore it actually belongs to the scope of EN 13606 as a whole, and more particularly of its Part 4. In this respect as in others, and in the view of consistency between standards, this European standard follows the provisions of EN 13606.

While this European standard can help manage the logistics of health care delivery, particularly in its Part 2: "Core process and work flow in health care" (to be published), it does not intend to refer specifically to the issue of resources needed in the provision of health care activities.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12264:2005, *Health Informatics — Categorial structures for systems of concepts*

EN 12381:2005, *Health Informatics — Time standards for health care specific problems*

EN 13606-1:2007, *Health Informatics — Electronic health record communication
Part 1: Reference model*

EN 13606-4:2007, *Health Informatics — Electronic health record communication
Part 4: Security*

EN 14822-2:2005, *Health Informatics — General purpose information components — Part 2: Non clinical*

EN 14822-3:2005, *Health Informatics — General purpose information components — Part 3: Clinical*

ISO 704:2000, *Terminology work — Principles and methods*

ISO/IEC 1087-1:2000, *Terminology work — Vocabulary — Part 1: Theory and application*

ISO/IEC 6523-1:1998, *Information technology — Structure for the identification of organisations and organisation parts — Part 1: Identification of organisation identification schemes*

ISO 10241:1992, *International terminology standards - Preparation and layout*

ISO/IEC 15414:2002, *Information technology — Open distributed processing — Reference model — Enterprise language*

ISO TS 18308:2004, *Health informatics — Requirements for an electronic health record architecture*

ISO TR 20514:2005, *Health informatics — Electronic health record — Definition, scope, and context*

3 Terms and definitions

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

3.1

access rule

rule intended to govern access to data or information

3.2

clinical data

recorded facts regarding the health of a **subject of care** (3.14)

3.3

clinical information

set of **clinical data** (3.2) processed for use in a specific context

NOTE This definition deliberately departs from the one provided by EN 14822-3 where clinical information is defined as the "information about a patient, relevant to the health or treatment of this patient, that is recorded by or on behalf of a health care professional", with a note stating that "Clinical information about a patient may include information about the patient's environment, or, wherever relevant, about related people."

3.4

concept modelling

graphical description of a **concept system** (3.15) within a subject field, in order to keep track of the concepts and their relationships in this concept system, and to check its consistency

3.5

deprecated term

term rejected by an authoritative body

[ISO 1087-1:2000]

3.6

episode [time]

situation considered to occupy a time interval

[EN 12381:2005]

3.7

health care

activities, services, or supplies related to the health of an individual

[ISO/TR 18307:2001, modified]

NOTE 1 This includes more than performing procedures on **subjects of care** (3.14). It includes also, for example, the management of the information about patients, their health status and their relations within the health care framework.

NOTE 2 In the current European standard, the term 'care' is to be understood as a synonym for 'health care'.

3.8

health record

repository of information regarding the health of a **subject of care** (3.14)

[ISO/TR 20514:2005]

3.9**multiplicity**

specification of the range of allowable cardinalities that a set may assume

NOTE In the UML specification, *cardinality* is defined as the number of objects in a set. In this European Standard multiplicity is used in associations and aggregation, i.e. in associative and partitive relationships. The multiplicity at an end of a relationship shows the possible numbers of objects represented by the concept at that end which can be related to one object represented by the concept at the other end of this relationship.

3.10**organisation**

unique framework of authority within which a person or persons act, or are designated to act towards some purpose

[ISO 6523-1:1998]

NOTE 1 Groupings or subdivisions of organisations may also be considered as organisations where there is need to identify them in this way for purposes of information interchange.

NOTE 2 In this European Standard, this definition applies to any kind of organisations, whatever their legal status.

3.11**organisational pattern**

description of the relationships between the various parts of an **organisation** (3.10)

3.12**party**

enterprise object modelling a natural person or any other entity considered to have some of the rights, powers and duties of a natural person

[ISO/IEC 15414:2002]

NOTE 1 Examples of parties include enterprise objects representing natural persons, legal entities, governments and their parts, and other associations or groups of natural persons.

NOTE 2 Parties are responsible for their actions and the actions of their agents.

3.13**role**

specific function expected to be assumed by a person or an **organisation** (3.10)

NOTE In EN 13606-1 'role' is defined as: "name of a set of behaviours that is associated with a task".

3.14**subject of care****subject of health care**

person seeking to receive, receiving, or having received **health care** (3.7)

[EN 14822-2:2005, modified]

3.15**system of concepts****concept system**

set of concepts structured according to the relations among them

[ISO 1087-1:2000] [EN 12264:2005]

4 Symbols and abbreviations

The following abbreviations are used for the terms defined in this European Standard.

ACG	Ambulatory Care Group
DRG	Diagnosis-Related Group
EHR	Electronic Health Record
GP	General Medical Practitioner
JCAHO	Joint Commission for Accreditation of Health care Organisations
UML	Unified Modelling Language

5 Domain description and organisational principles

Various terms have been commonly used to designate and qualify the continuing process of the health care to a subject of care. Without clear definition, there is potential for confusion, and this European Standard addresses the need to clarify the use of those terms and define the concepts they designate.

Continuity of Care

Continuity of Health Care

organisational principle focusing on the time-related links between health care provider activities.

NOTE 1 Continuity of care: component of patient care quality consisting of the degree to which the care needed by a patient is co-ordinated among practitioners and across organisations and time [ISO/TR 18307:2001] [JCAHO]

Shared Care

Shared Health Care

organisational principle focusing on joint objectives and responsibilities of health care providers who co-operate to provide health care provider activities about a health issue.

Seamless Care

Seamless Health Care

quality principle focusing on the timely and appropriate transfer of activity and information, when responsibility for the delivery of health care activities is wholly or partly transferred from a health care provider to another.

NOTE 2 Though related, this concept of seamless care differs from the organisational principle of "24-hours service", which may be required from a health care provider involved in a process of care. A consequence is that health care providers are not to be regarded in this document through their actual identities but rather through their roles.

Integrated Care

Integrated Health Care

organisational principle, encompassing at the same time each of continuity of care, shared care and seamless care.

6 Actors in Continuity of Care

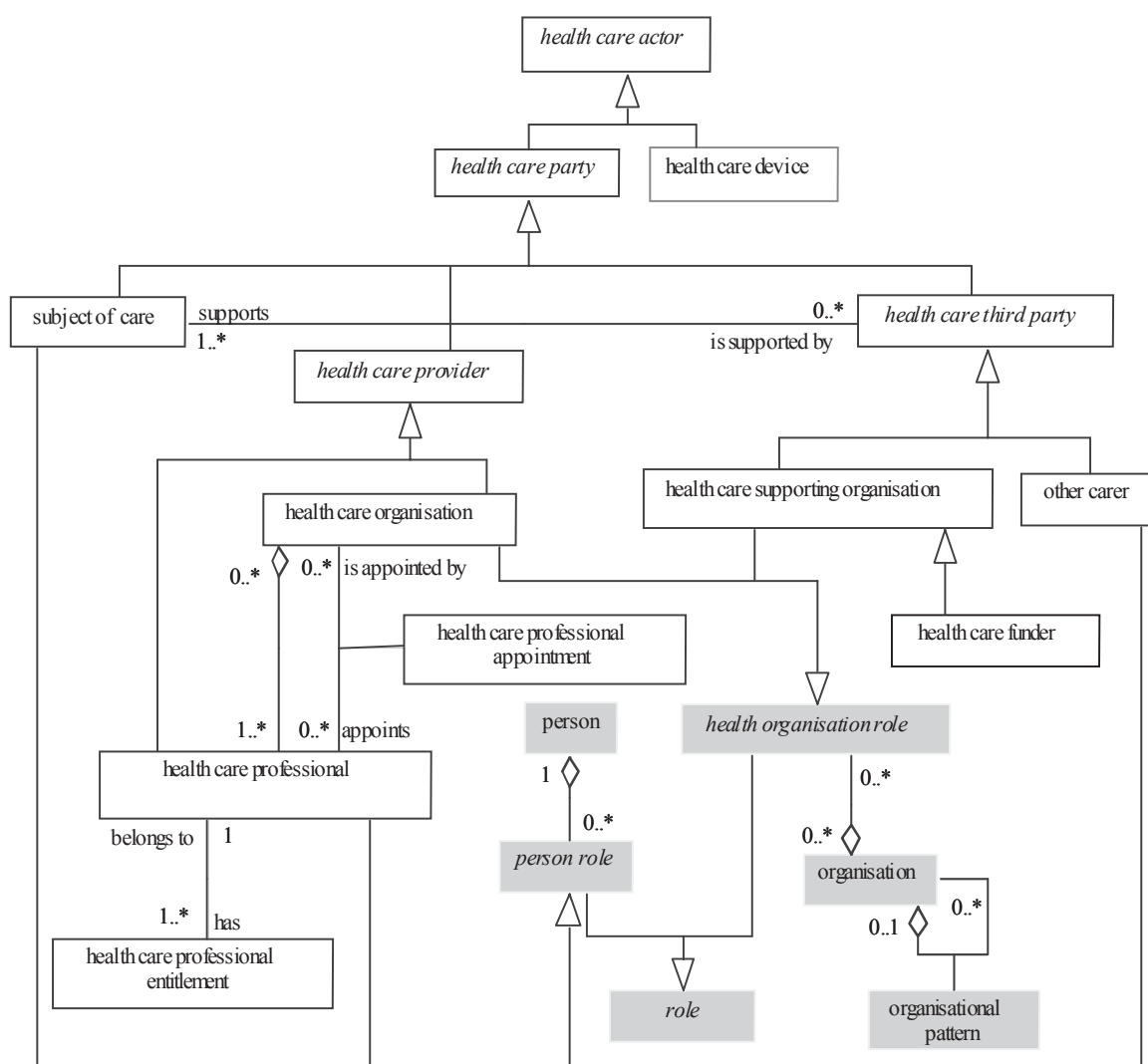


Figure 1 — Comprehensive UML diagram of actors in Continuity of Care

6.1 Health care actor

Concept name: <i>health care actor</i>			
Definition: person, organisation, device, or software that performs a role in a <i>health care activity</i>			
NOTE 1 This concept of <i>health care actor</i> can include the patients themselves, in that patients can themselves administer their own <i>health care activities</i> and take an active part in those <i>health care provider activities</i> which concern them.			
NOTE 2 This concept of <i>health care actor</i> can be used to represent any entity that produces data or information which may be included in an EHR.			
NOTE 3 This superordinate concept can only be instantiated by one of its subordinate concepts.			
Specialisation of:		Generalisation of: health care party health care device	
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
Features or related entities not described in this document (<i>Informative</i>):		Type (examples):	Multiplicity:
Direct relationship with: health care activity		Name of relationship: performs	Multiplicity: zero to many
UML representation: <pre>classDiagram class health_care_actor["health care actor"] class health_care_party["health care party"] class health_care_device["health care device"] class health_care_activity["health care activity"] health_care_party -- > health_care_actor health_care_device -- > health_care_actor health_care_actor -- "0..*" health_care_activity : is performed by health_care_actor -- "1..*" health_care_activity : performs</pre>			

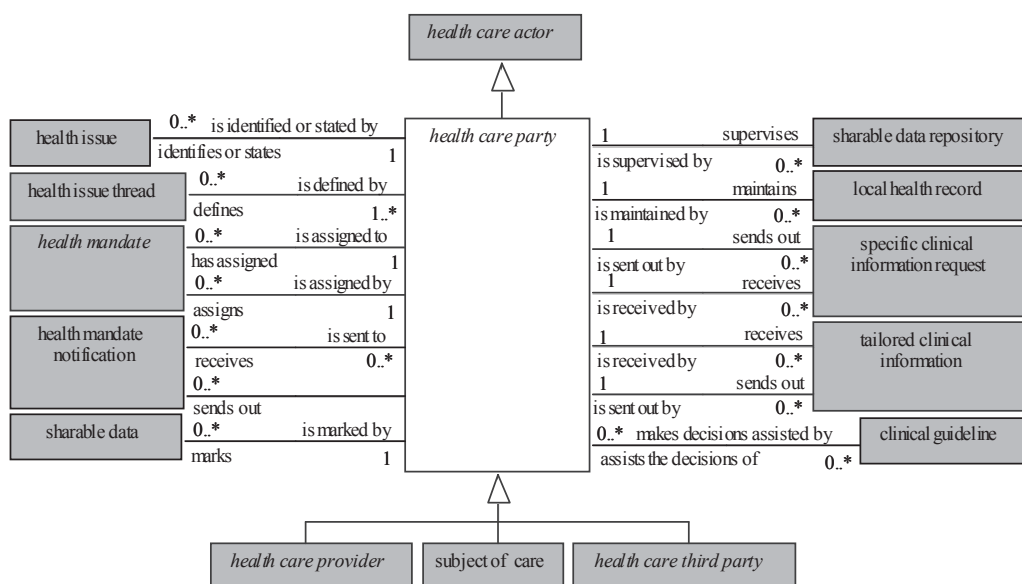
6.1.1 Health Care Device

Concept name: health care device			
Definition: device or equipment, possibly including a piece of software, involved in the provision of <i>health care activities</i> [EN 13606-1:2007, modified] <p>NOTE In order to perform some specific tasks, various <i>health care devices</i> may include pieces of software. However, in spite of the the draft revised directive 93/42/EEC dated 2005-04-05, and because their operation usually depends on direct commands from <i>health care parties</i>, in the context of this European standard <i>Electronic Health Records</i>, Electronic Health Record systems and any other standalone pieces of software are excluded from this definition.</p> <p>EXAMPLES A specific identifiable ECG machine, auto-analyser, syringe pump. Standalone pieces of software such as decision support software, viewing tools, or software used to compute radiation dosage in radiotherapy are excluded from this definition.</p>			
Specialisation of: health care actor		Generalisation of:	
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
Features or related entities not described in this document (Informative): device manufacturer device package device ID software manufacturer software package software ID		Type (examples):	Multiplicity:
			One
			One
			One
			One
			One
			One
Direct relationship with: health care automated activity		Name of relationship: performs	Multiplicity: zero to many
UML representation:			
<pre> classDiagram class HealthCareActor["health care actor"] class HealthCareDevice["health care device"] class HealthCareAutomatedActivity["health care automated activity"] HealthCareActor < -- HealthCareDevice HealthCareDevice "1..*" -- "0..*" HealthCareAutomatedActivity : performs HealthCareDevice "0..*" -- "1..*" HealthCareAutomatedActivity : is performed by </pre>			

6.1.2 Health care party

Concept name: <i>health care party</i>		
Definition: organisation or person involved in the process of <i>health care</i>		
<p>NOTE 1 The involvement of the <i>health care party</i> may be direct (for example the actual provision of care), or indirect (for example at organisational level).</p> <p>NOTE 2 According to this definition, persons or organisations responsible for the funding, payment, or reimbursement of health care provision are <i>health care parties</i>, as well as organisations responsible for health care delivery. Thus, according to this definition, <i>health care party</i> is a superordinate concept to <i>health care provider</i>, (i.e. <i>health care organisation</i> and <i>health care professional</i>), <i>health care third party</i>, and also <i>subject of care</i>.</p> <p>NOTE 3 This superordinate concept can only be instantiated by one of its subordinate concepts.</p>		
Specialisation of:		Generalisation of:
health care actor		subject of care health care provider health care third party
Component of:	Multiplicity:	Aggregation of:
		Multiplicity:
Features or related entities not described in this document (<i>informative</i>):		Type (examples):
		Multiplicity:
Direct relationship with:	Name of relationship:	Multiplicity:
health mandate	assigns	zero to many
health mandate	has assigned	zero to many
local health record	maintains	zero to many
sharable data	marks	zero to many
sharable data repository	supervises	zero to many
specific clinical information request	sends out	zero to many
specific clinical information request	receives	zero to many
tailored clinical information	sends out	zero to many
tailored clinical information	receives	zero to many
health mandate notification	receives	zero to many
health mandate notification	sends out	zero to many
health issue	identifies or states	zero to many
health issue thread	defines	zero to many
clinical guideline	makes decisions assisted by	zero to many

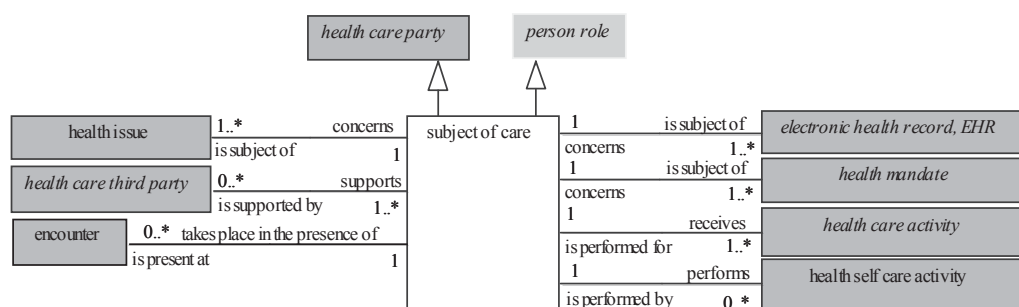
UML representation:



6.1.2.1 Subject of care

Concept name: subject of care subject of health care			
Definition: person seeking to receive, receiving, or having received <i>health care</i> [EN 14822-2:2005, modified]			
<p>NOTE 1 In previous European pre-standards, a <i>subject of care</i> has sometimes been defined as a "person or defined group of persons having received, receiving, or to receive health care". Indeed, it may actually occur that a <i>subject of care</i> is a group of persons: a family, a therapy group, a population based group etc. However, for reasons that are discussed elsewhere in this document (page 94), the choice has been made in this European Standard to restrict this concept to an individual person.</p> <p>In this European standard, 'subject of care' is definitely restricted to an individual. It is assumed that in those cases where a health care activity addresses a group of more than one individual (e.g. a family, a community), and where a single health record is used to capture the health care activities provided to the group, each individual within the group will be referenced explicitly within that health record. This issue is further discussed in Annex A "On the issue of the subject of care being a group of persons", page 94.</p> <p>NOTE 2 In the real world, a <i>subject of care</i> may be designated by different professions using different names, for instance "a patient", "a client" etc.</p> <p>NOTE 3 In most occasions, the <i>subject of care</i> him or herself is fully involved in the performance of <i>health care activities</i>.</p> <p>NOTE 4 A foetus, when receiving health care, is to be considered as a person.</p> <p>NOTE 5 ISO/TS 18308:2004 proposes a slightly different definition of 'subject of care': one or more persons scheduled to receive, receiving, or having received a health service. A note then adds: "the terms 'patient' and 'client' are synonymous with 'subject of care' in a health record context and are commonly used instead of the more formal term 'subject of care'. ISO/TS 18308:2004 also defines separately 'patient' and 'client' as: "individual who is a subject of care".</p>			
EXAMPLES A treated patient, a client of a physiotherapist, each particular member of a target population for screening, each particular member of a group of diabetic persons attending a session of medical education, a person seeking a health advice.			
Specialisation of:		Generalisation of:	
health care party person role			
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
Features or related entities not described in this document (informative):		Type (examples):	Multiplicity:
ID			one to many
address			zero to many
Direct relationship with:	Name of relationship:	Multiplicity:	
health issue	is subject of	one to many	
health mandate	is subject of	one to many	
encounter	is present at	zero to many	
electronic health record	is subject of	one to many	
health care third party	is supported by	zero to many	
health self care activity	performs	zero to many	
health care activity	receives	one to many	

UML representation:



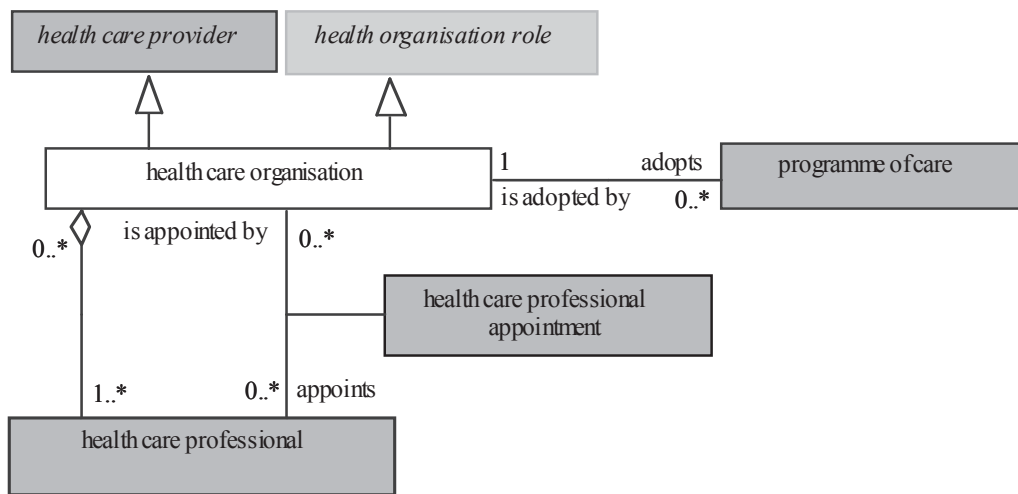
6.1.2.2 Health care provider

Concept name: <i>health care provider</i>			
Definition: <i>health care organisation</i> or <i>health care professional</i> involved in the direct provision of <i>health care</i>			
<p>NOTE 1 According to this definition, organisations responsible for the funding, payment, or reimbursement of health care provision are not <i>health care providers</i>; as per this European Standard they are considered as a <i>health care third parties</i>.</p> <p>NOTE 2 According to this definition, <i>health care provider</i> is a superordinate concept to <i>health care organisation</i>, and <i>health care professional</i>, and it can only be instantiated through these subordinate concepts⁰</p>			
Specialisation of:		Generalisation of:	
health care party		health care organisation health care professional	
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
Features or related entities not described in this document (informative):		Type (examples):	Multiplicity:
Direct relationship with:		Name of relationship:	Multiplicity:
demand for care		receives	zero to many
care mandate		has assigned	zero to many
period of care		has care mandate for	zero to many
episode of care		manages	zero to many
professional health record		is responsible of	zero to many
health care provider activity		performs	one to many
UML representation:			
<pre> classDiagram class health_care_party["health care party"] class health_care_provider["health care provider"] class health_care_professional["health care professional"] class health_care_organisation["health care organisation"] class period_of_care["period of care"] class professional_health_record["professional health record"] class care_mandate["care mandate"] class health_care_provider_activity["health care provider activity"] class demand_for_care["demand for care"] class episode_of_care["episode of care"] health_care_party < -- health_care_provider health_care_provider < -- health_care_professional health_care_provider < -- health_care_organisation health_care_provider --> "0..*" period_of_care : is under responsibility of health_care_provider --> "0..*" professional_health_record : is under responsibility of health_care_provider --> "0..*" care_mandate : is assigned to health_care_provider --> "1..*" health_care_provider_activity : performs health_care_provider --> "1..*" demand_for_care : receives health_care_provider --> "1..*" episode_of_care : manages health_care_provider --> "1..*" health_care_professional : is managed by </pre>			

6.1.2.2.1 Health care organisation

Concept name: health care organisation			
Definition: organisation involved in the direct provision of health care [EN 13606-1:2007, modified]			
<p>NOTE 1 Groupings or subdivisions of an organisation, such as departments or sub-departments, may also be considered as organisations where there is need to identify them. The internal structure of an organisation is described by its organisational pattern. Therefore, an <i>organisation</i> may be considered in itself as a stand alone organisation or as a superstructure containing departments and sub-departments, i.e. other lower level organisations. A <i>health care organisation</i> represents the role any such organisation plays when it is involved in the direct provision of health care activities.</p> <p>NOTE 2 Effectively, a <i>health care organisation</i> relies on the activity performed by <i>health care professionals</i>, employed, contracting, or with temporary informal though functional relationships between them: within <i>health care organisations</i>, the final effectors are <i>health care professionals</i>. A health care team is a kind of <i>health care organisation</i>.</p> <p>NOTE 3 A free-standing self employed solo practising <i>health care professional</i> shall be considered as the only member of his/her own <i>health care organisation</i>.</p> <p>NOTE 4 health care organisation: generic term used to describe many types of organisations that provide healthcare services. [ISO/TR 18307:2001, JCAHO]</p> <p>EXAMPLES A care team, a group practice, a hospital, a hospital department, a hospital care unit.</p>			
Specialisation of:		Generalisation of:	
health care provider health organisation role			
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
		health care professional	one to many
Features or related entities not described in this document (informative):		Type (examples):	Multiplicity:
health care provider ID			one to many
type of organisation		typology of relationships between HCPs organisational pattern	one to many
range of activity		legally authorised / declared health care activities	one
corporate address			one to many
responsibility for health care activities		nature (shared / not shared) and limits of accountability (width, transferability etc.)	one to many
rights of access to information		nature and limits of rights of access to health record, according to role(s)	one to many
responsibility for information support		nature and limits of accountability (e.g. health record maintenance/update etc.)	one to many
Direct relationship with:		Name of relationship:	Multiplicity:
health care professional		appoints	zero to many
programme of care		adopts	zero to many

UML representation:



6.1.2.2.2 Health care professional

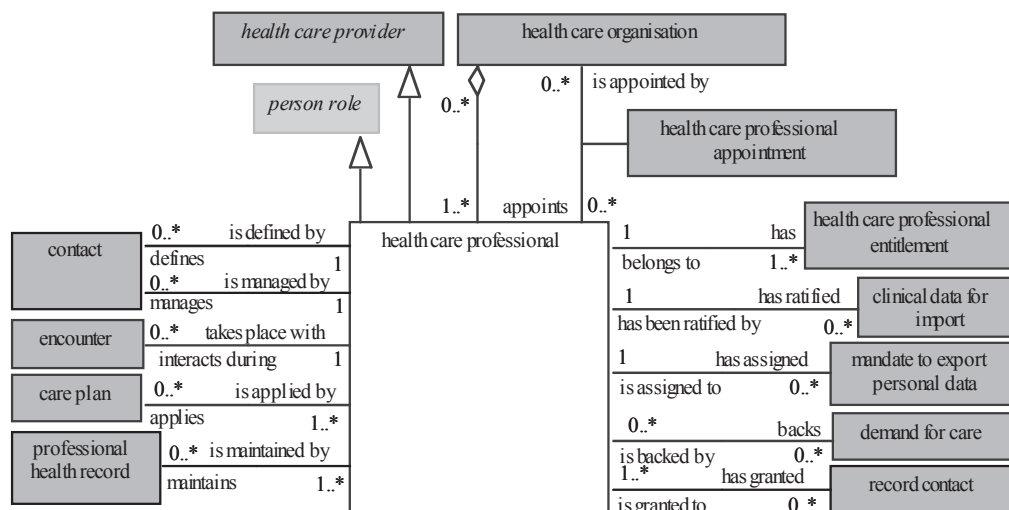
Concept name: health care professional		
Definition: person authorised by a nationally defined mechanism to be involved in the direct provision of certain <i>health care activities</i> EXAMPLES General medical practitioner, medical consultant, therapist, dentist, nurse, social worker, radiographer etc.		
Specialisation of:	Generalisation of:	
health care provider person role		
Component of:	Multiplicity:	Aggregation of:
health care organisation	zero to many	
Attributes:	Type:	Multiplicity:
Features or related entities not described in this document (informative):	Type (examples):	Multiplicity:
health care professional ID		one to many
professional address		one to many
type of professional location	private surgery / outpatient clinic / etc.	one to many
health care professional type	private	one to many
professional qualification		one to many
range of activity	legally authorised / declared health care activities	one
responsibility for health care activities	nature (shared / not shared) and limits of accountability (width, transferability etc.)	one to many
role in organisation	gate-keeping (i.e. static), co-ordinating/leading role (i.e. dynamic), responsibility of team (full/deputised/shared) includes or not overall quality management of process of care	zero to many
rights of access to information	nature and limits of rights of access to health record, according to role(s)	one to many
responsibility for information support	nature and limits of accountability (e.g. health record maintenance/update)	one to many
Direct relationship with:	Name of relationship:	Multiplicity:
health care professional entitlement	has	one to many
health care organisation	is appointed by	zero to many
contact	defines	zero to many
contact	manages	zero to many
encounter	interacts during	zero to many
care plan	applies	zero to many
professional health record	maintains	zero to many
record contact	has granted	zero to many
clinical data for import	has ratified	zero to many

mandate to export personal data
demand for care

has assigned
backs

zero to many
zero to many

UML representation:



6.1.2.2.1 Health care professional entitlement

Concept name: health care professional entitlement			
Definition: registered authorisation given to an individual person according to a nationally defined mechanism, in order to take part with defined possible roles in a delineated range of <i>health care activities</i>			
NOTE 1 Entitlement is usually backed by evidence of having received, or continuously receiving, the necessary qualification, the relevant education, and training.			
NOTE 2 The official entitlement of a <i>health care professional</i> forms the foundation for her/his official duties and rights. No one can accept to be given a <i>care mandate</i> , or to act within the framework given to a <i>health care organisation</i> without being duly entitled to do so.			
EXAMPLES Diploma, official registration (e.g. registered nurse).			
Specialisation of:		Generalisation of:	
Component of:		Aggregation of:	Multiplicity:
Features or related entities not described in this document (informative):		Type (examples):	Multiplicity:
range of health care activities authorised		list of authorised or declared health care activities	one to many
personal ID			one
authorised responsibilities in health care activities		textual description: scope, nature (shared / not shared), and limits of accountability (width, transferability etc.)	one
authorised role in organisation		textual description: responsibility of (full/deputised/shared) e.g. team	one to many
time frame of entitlement		start date, end date	two
Direct relationship with:		Name of relationship:	Multiplicity:
health care professional		belongs to	one
UML representation:			
<div><div>health care professional</div><div>1</div><div>belongs to</div><div>1..*</div><div>has</div><div>health care professional entitlement</div></div>			

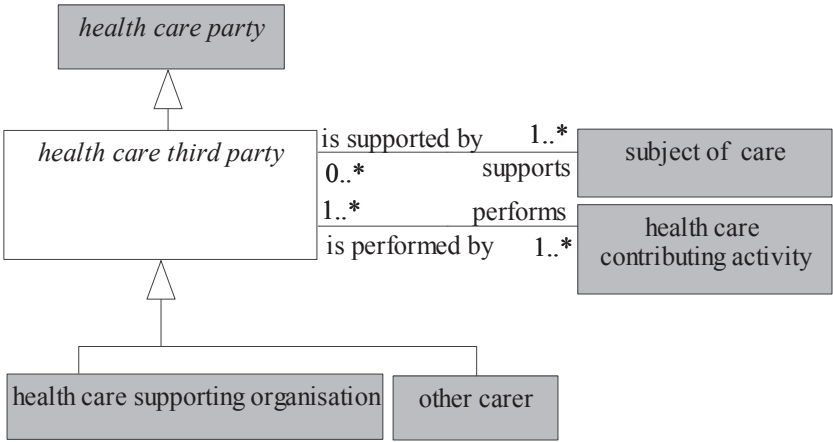
6.1.2.2.2 Health care professional appointment

Concept name: health care professional appointment			
Definition: binding contractual framework between a <i>health care professional</i> and a <i>health care organisation</i> including the description of the role and responsibilities assigned to this <i>health care professional</i> in that <i>health care organisation</i>			
NOTE The appointment results in an employment or in another kind of contractual relationship.			
EXAMPLES Nursing officer, head of department, gate keeper GP, medical consultant.			
Specialisation of:		Generalisation of:	
Component of:		Aggregation of:	Multiplicity:
Features or related entities not described in this document (informative): personal ID health care professional ID professional address type of professional location professional status assigned responsibility for health care activities assigned role in organisation		Type (examples): private surgery / outpatient clinic / etc. salaried, private nature (shared / not shared) and limits of accountability (width, transferability etc.) gate-keeping (i.e. static), co-ordinating/leading role (i.e. dynamic), responsibility of team (full/deputised/shared) includes or not overall quality management of process of care	Multiplicity: one one to many one to many one to many one to many one to many one to many
Direct relationship with:		Name of relationship:	Multiplicity:
UML representation:			
<div><div>health care professional appointment</div><div><div>health care professional</div><div>0..*</div><div>appoints</div></div><div><div>is appointed by</div><div>0..*</div><div>health care organisation</div></div></div>			

6.1.2.3 Health care third party

Concept name: <i>health care third party</i>			
Definition: <i>health care party</i> other than a <i>health care provider</i> , who supports the <i>subject of care</i>			
<p>NOTE 1 According to this definition, a relative, any party responsible for social support, or for the funding, payment, or reimbursement of health care provision are <i>health care third parties</i>.</p> <p>NOTE 2 <i>Health care third party</i> is an abstract superordinate generic concept which is instantiated by one of its subordinate specific concepts.</p> <p>NOTE 3 This superordinate concept can only be instantiated by one of its subordinate concepts.</p>			
Specialisation of:		Generalisation of:	
health care party		other carer health care supporting organisation	
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
Features or related entities not described in this document (informative):		Type (examples):	Multiplicity:
third party ID		personal, corporate etc.	one to many
third party address			one to many
role		for daily living management / organisation for daily financial / materialistic support for health care funding in kind / in cash etc.	one to many
extent of support			
subject of care relationships		relationship to the subject of care: may be family, employer etc.	one to many
availability		dates and times / time intervals	one to many
Direct relationship with:		Name of relationship:	Multiplicity:
health care contributing activity		performs	one to many
subject of care		supports	one to many

UML representation:



6.1.2.3.1 Other carer

Concept name: other carer			
Definition: person providing assistance for activities of daily living or social support			
EXAMPLES A relative, a neighbour, or any natural carer.			
Specialisation of: health care third party person role		Generalisation of:	
Component of:	Multiplicity:	Aggregation of:	Multiplicity:
Features or related entities not described in this document <i>(informative)</i> : ID address role		Type (examples):	Multiplicity: one one to many one to many
Direct relationship with:		Name of relationship:	Multiplicity:
UML representation:			
<div><div>health care third party</div><div>person role</div><div>other carer</div></div>			