

New concept proposal

Resuscitation Directive

Author	Julien Ehrsam	Date last updated	06.09.2023
Project	LUCID	Contact	DCC
Dataset release	2024.4	Consulted expert	-

1 Rationale

The intention of this new concept is to represent the patient's or their legal representative's wishes concerning cardio-pulmonary resuscitation (CPR). This information dictates whether a patient will receive CPR or not. While there are other types of advance directives possible, such as the patient's wishes regarding intubation or administration of certain medication, the goal of this concept is to represent only the directives regarding CPR. This has a direct impact on the type and amount of care a patient receives, and is an important metric to consider when analysing mortality.

2 Comparison to other standards/data model

2.1 CDC/LOINC

The CDC PHIN VADS's *Advance Directive Type Value Set* (<https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.1.11.20.2>) is in SNOMED CT and contains the concept 304251008 Resuscitation status (observable entity).

This value set is also used for LOINC's 75320-2 Advance directive concept (<https://loinc.org/75320-2/>).

2.2 HL7

HL7's *Consent category codes* (<https://terminology.hl7.org/5.1.0/CodeSystem-consentcategorycodes.html>) contains the **DNR** - A legal document, signed by both the patient and their provider, stating a desire not to have CPR initiated in case of a cardiac event. Since 2003 replaced by the **POLST** - The Physician Order for Life-Sustaining Treatment form records a person's health care wishes for end of life emergency treatment and translates them into an order by the physician.

2.3 openEHR

openEHR's *Advance intervention decision* archetype (<https://ckm.openehr.org/ckm/archetypes/1013.1.4902>) which contains a data field called *CPR decision* with options Full CPR, Limited CPR, No CPR, Unknown, and defined as "Decision about the extent of cardiopulmonary resuscitation (CPR) intervention appropriate for this individual." This definition will be used for this concept as well.

3 Concept information

Concept or concept compositions or inherited	General concept name	General description	Contextualized concept name	Contextualized description	Type	Standard	Value set or subset	Meaning binding	Cardinality for composedOf
concept	Resuscitation Directive	Decision about the extent of resuscitation interventions appropriate for a specific individual.	Resuscitation Directive	Decision about the extent of cardiopulmonary resuscitation (CPR) intervention appropriate for a specific individual.				SNOMED CT:304251008 Resuscitation status (observable entity)	
composedOf	code	coded information specifying the concept	resuscitation directive code	coded information specifying the patient's wishes concerning cardiopulmonary resuscitation (CPR)	Code	SNOMED CT	descendant of: 365870005 Finding of resuscitation status (finding)		1:1
composedOf	record datetime	datetime the concept was recorded	record datetime	datetime the resuscitation directive was recorded	temporal				0:1

Concept cardinalities:

General concept name	cardinality for concept to Administrative Case	cardinality for concept to Data Provider	cardinality for concept to Subject Pseudo Identifier	cardinality for concept to Source System
Resuscitation Directive	0:1	0:1	1:1	1:1

4 Impact on the SPHN Dataset

None as it is a new standalone concept.

5 Discussion

The added value of this concept is in the addition of a metric which can have an influence on mortality analysis (<https://www.ahajournals.org/doi/full/10.1161/CIRCOUTCOMES.118.005196>, <https://www.jstor.org/stable/3768365>). When analysing a certain cause of death in inpatients for example, the fact that the patient received or not cardio-pulmonary resuscitation (CPR) is important to correctly analyse therapeutic efforts. Since this concept will be primarily used for analysis of mortality in hospitalised patients, the important metric to include was CPR vs no CPR. While other types of advance directives are also possible, they have a less direct impact on mortality, so it was decided not to include them in the value set for the time being. This can always be added in the future.

The concept name was also discussed, with initially proposed names such as Resuscitation Status and Resuscitation Order discarded in order to avoid confusion. Order could be understood as the order in which to do things, and status as whether the procedure was successful or not. Therefore Resuscitation Directive was chosen as it was the least ambiguous choice which accurately represents the intended concept.

6 Example

Resuscitation Directive

code:

identifier: 450476008

name: Not for cardiopulmonary resuscitation (finding)

coding system and version: SNOMED-CT-2023-01-31

record datetime: 2023-08-02T09:23:00+01:00