SNOMED CT: en nøgle til standardisering i det digitale sundhedsvæsen

E-sundhedsobservatoriet, 9. oktober 2024
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SUNDHEDSDATA-
STYRELSEN

SNOMED CT

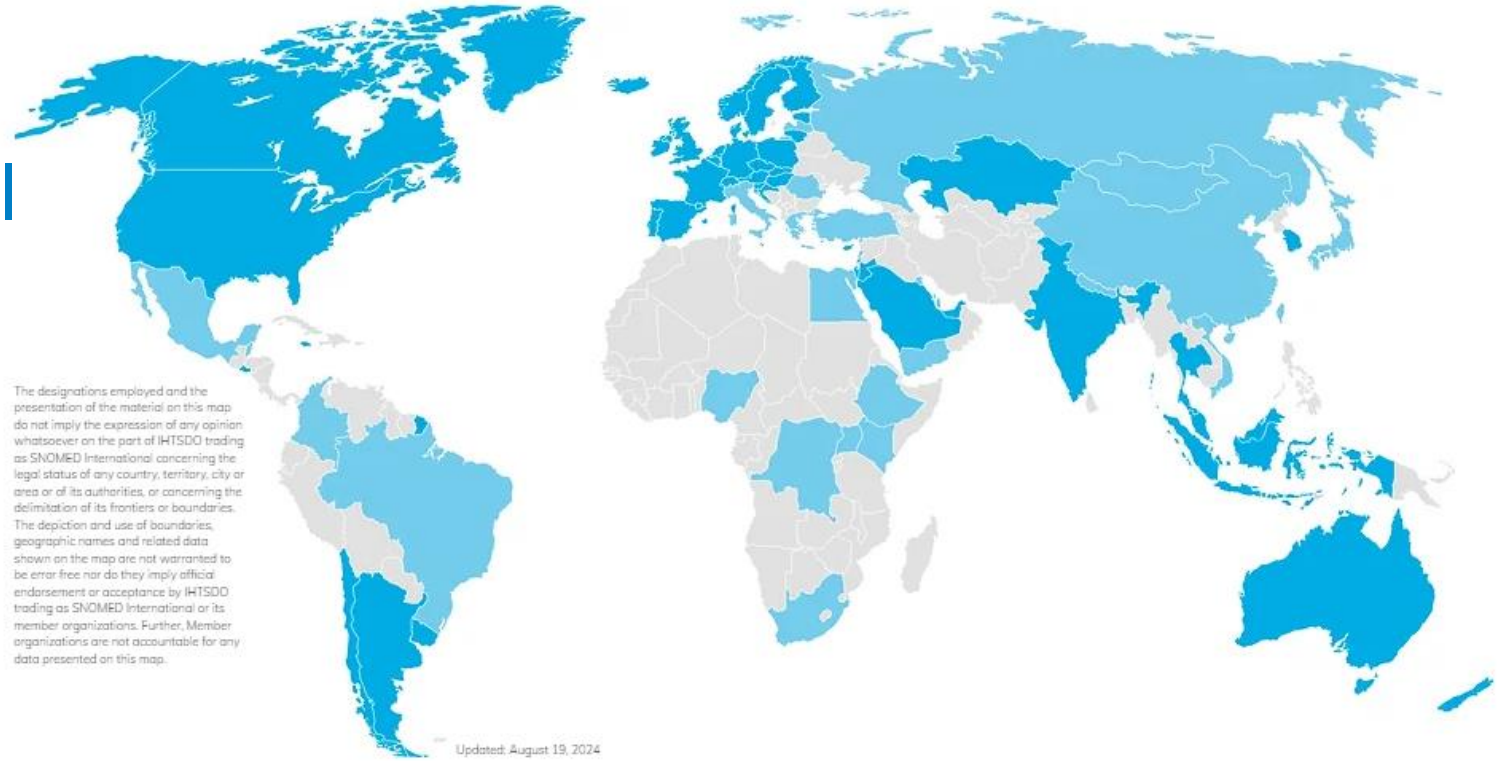
- Systematized Nomenclature of Medicine – Clinical Terms

- SNOMED CT blev dannet i 1999 af NHS og CAP
  - Read Codes Clinical Terms version 3
  - SNOMED Reference Terminology (SNOMED RT)
  - I 2007 etableredes International Health Terminology Standards Development Organisation = SNOMED International

- SNOMED CT er organiseret i 18 overordnede kliniske hierarkier med forskellig detaljegrad

- SNOMED CT er tværfaglig og multihierarkisk

SNOMED International



Americas

Argentina
Canada
Chile
El Salvador
Jamaica
United States
Uruguay

Europe, Middle East & Africa

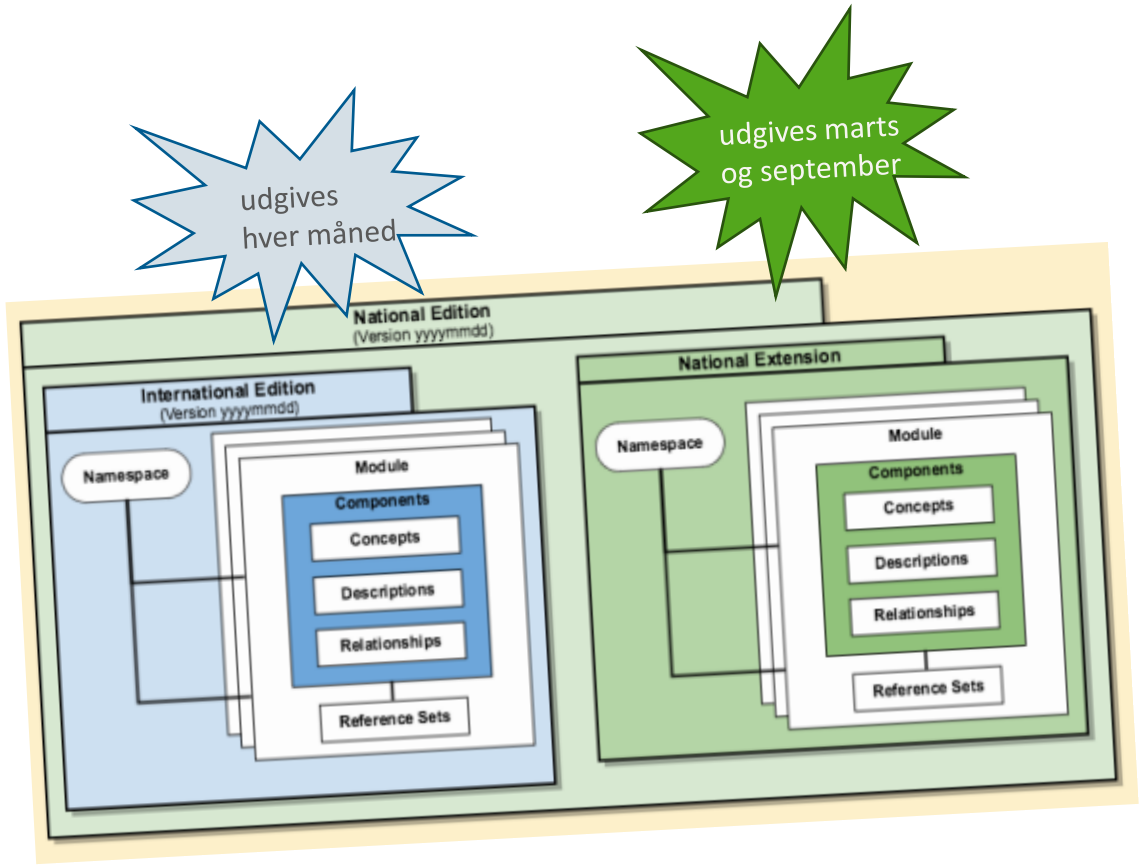
Andorra
Austria
Belgium
Croatia
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Hungary
Iceland
Ireland
Israel
Jordan
Lithuania
Luxembourg
Malta
Netherlands
Norway
Poland
Portugal
Republic of Slovenia
Saudi Arabia
Slovak Republic
Spain
Sweden
Switzerland
United Arab Emirates
United Kingdom

Asia Pacific

Australia
Brunei
Hong Kong, China
India
Indonesia
Kazakhstan
Malaysia
New Zealand
Republic of Korea
Singapore
Thailand

Nationalt Release Center for SNOMED CT i Danmark

- vedligeholdelse af SNOMED CT på dansk
- kontaktpunkt for alle, som har interesse for SNOMED CT
- vejledning i anvendelse, sparring og mapping
- administration af adgang til og anvendelse af SNOMED CT
- ansvar for udgivelse af den danske udgave af SNOMED CT
- samarbejde med andre NRC'er
- den direkte kontakt til SNOMED International



Det arbejder vi aktuelt med i Danmark

- Graviditetsmappen
  - kernen i digitaliseringen af vandre- og svangerskabsjournalen

    SNOMED CT er referenceterminologi for at mappe mellem de mange anvendersystemers datasæt

- Sygeplejefaglig terminologi
  - International Classification for Nursing Practice – ICNP

- International Patient Summary
  - et udtræk fra SNOMED CT defineret i ISO/EN 17269: 2019 bl.a. til brug for EHDS

- Den danske mikrobiologidatabase – MiBa
  - et projekt på vej 2025-2029

Ejerskab til terminologien

- Supervigtigt for kvaliteten af terminologien at faglige selskaber og projekter bakker op med
  - faglige ressourcer
  - klinikergrupper
  - besvarelse af spørgsmål osv.

- Behov for mere udbredt viden om SNOMED CT i Danmark og dansk indflydelse på terminologien
  - deltag i SNOMED Internationals klinikergrupper
    https://www.snomed.org/clinicians

- Lær om SNOMED CT via
  - tutorials
  - e-learning-kurser
  - præsentationer om SNOMED CT
    https://www.snomed.org/education

EHDS-forordningen – Article 5
Priority categories of personal electronic health data for primary use

- (a) patient summaries
- (b) electronic prescriptions
- (c) electronic dispensations
- (d) medical images and image reports
- (e) laboratory results
- (f) hospital discharge reports

European Health Data Space

EHDS skal tilbyde sikker deling, brug og genbrug af sundhedsdata til gavn for patienter, forskere, udviklere og lovgivere.

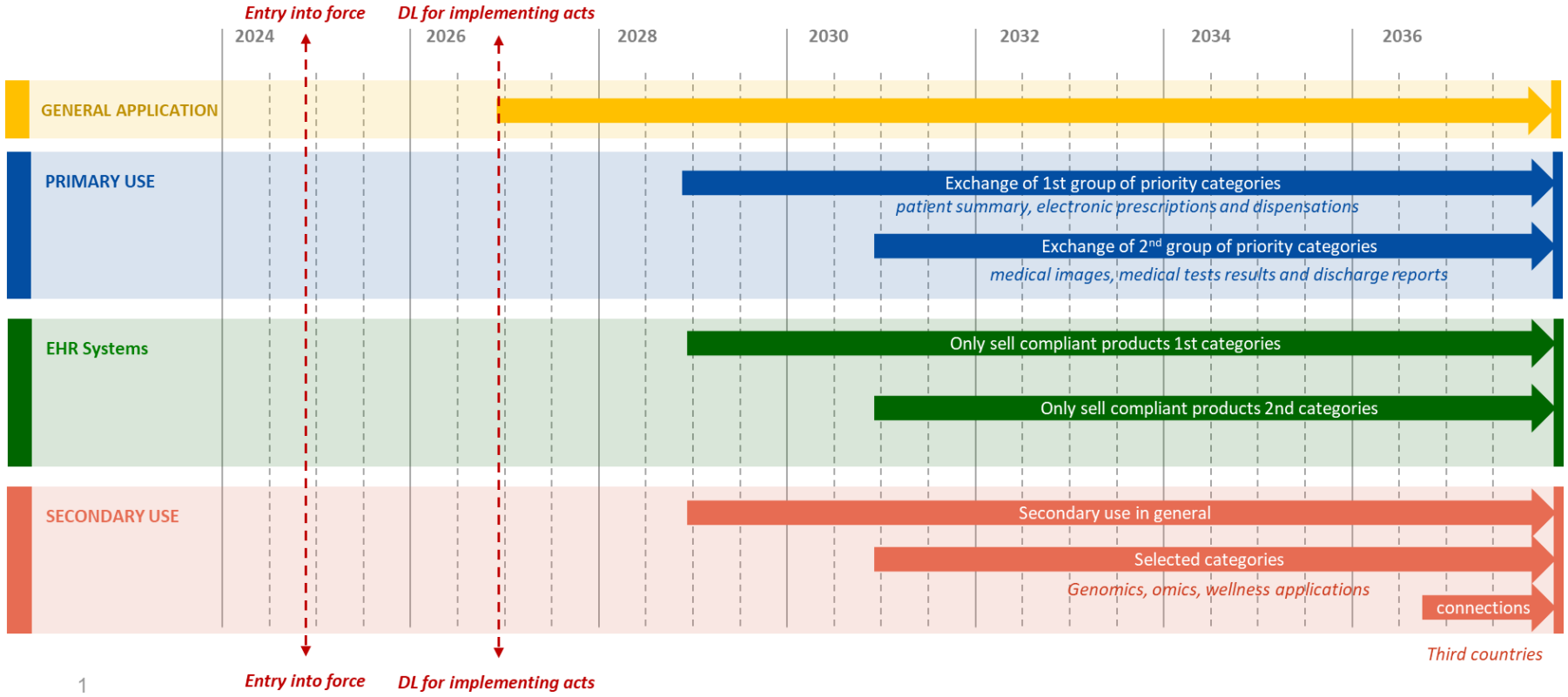
ePrescription

ePatient Summary

Hospital Discharge Report

Laboratory result reports

Medical Imaging



EU tilfører midler til delvis dækning af Danmarks licens vedr. SNOMED CT i 2023-24 og i 2025-27

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SUNDHEDSDATA-
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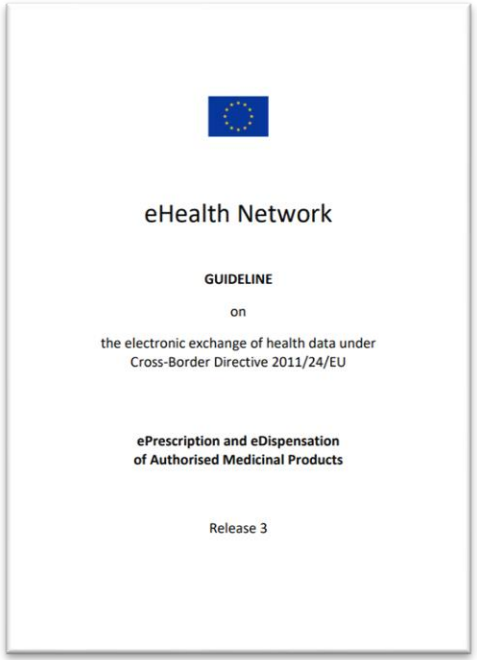
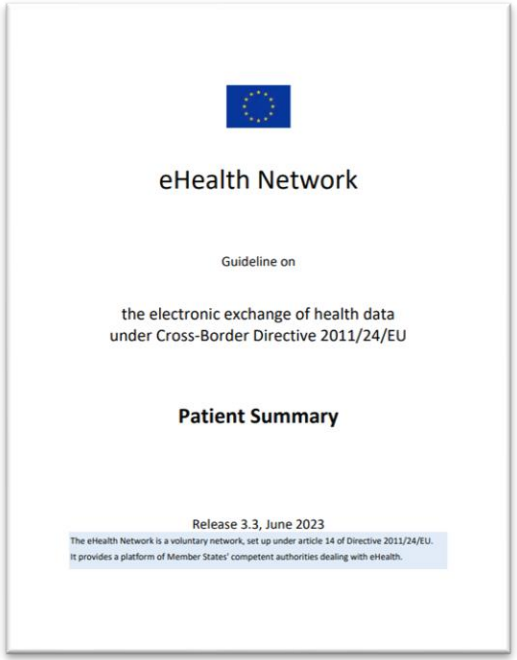
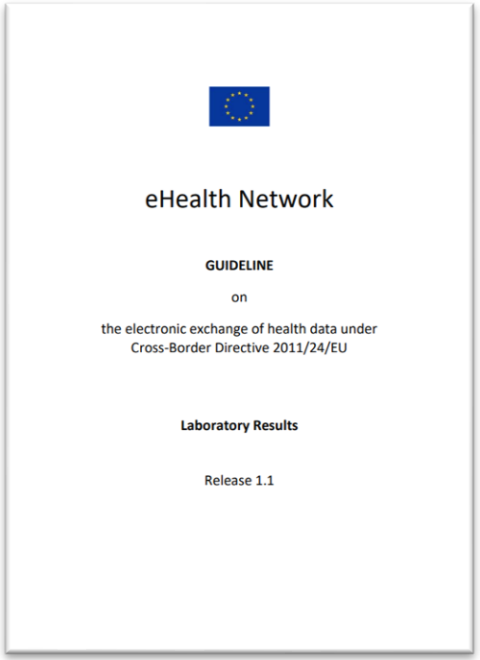
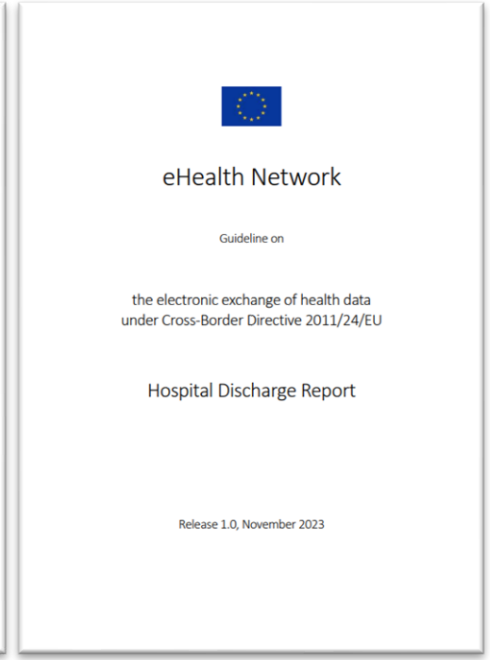
eHealth Network guidelines









- guidelines indeholder cirka 750 strukturerede dataelementer
- heraf anvender cirka 100 SNOMED CT som udfaldsrum.

SUNDHEDSDATA-STYRELSEN

Patient Summary

Title	Description	Preferred Code System
Type of propensity	This element describes whether this condition refers to an allergy, non-allergy intolerance, or unknown class of intolerance (not known to be allergy or intolerance)	SNOMED CT GPS
Allergy manifestation	Description of the clinical manifestation of the allergic reaction. Example: anaphylactic shock, angioedema (the clinical manifestation also gives information about the severity of the observed reaction)	SNOMED CT GPS
Severity	Severity of the clinical manifestation of the allergic reaction.	SNOMED CT GPS
Criticality	Potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction.	SNOMED CT GPS
Status	Current status of the allergy or intolerance, for example, whether it is active, in remission, resolved, etc.	SNOMED CT GPS
Certainty	Assertion about the certainty associated with a propensity, or potential risk, of a reaction to the identified substance. Diagnostic and/or clinical evidence of condition.	SNOMED CT GPS
Agent or Allergen	A specific allergen or other agent/substance (drug, food, chemical agent, etc.) to which the patient has an adverse reaction propensity.	SNOMED CT GPS (for non-drug allergy) or ATC* (for drug allergy) (IDMP, when available)
Disease or agent targeted	Disease or agent that the vaccination provides protection against	ICD-10* SNOMED CT GPS
Vaccine/prophyl axis	Generic description of the vaccine/prophylaxis or its component(s)	SNOMED CT GPS ATC* (IDMP, when available)
Problem description	Problems or diagnoses that the patient suffered in the past, and which have been resolved, closed or declared as inactive (not included in "current problems or diagnosis") Example: hepatic cyst (the patient has been treated with a hepatic cystectomy that solved the problem and the problem is therefore closed)	ICD-10* SNOMED CT GPS Orphacode if rare disease is diagnosed
Problem / diagnosis description	Health conditions affecting the health of the patient and are important to be known for a health professional during a health encounter.	ICD-10* SNOMED CT GPS Orphacode if rare disease is diagnosed
Device and implant description	Describes the patient's implanted and external medical devices and equipment upon which their health status depends. Includes devices such as cardiac pacemakers, implantable fibrillator, prosthesis, ferromagnetic bone implants, etc. of which the HP needs to be aware.	SNOMED CT GPS* EMDN
Procedure description	Describes the type of procedure	SNOMED CT GPS*
Body site	Procedure target body site	SNOMED CT GPS*
Medication reason	The reason why the medication is or was prescribed, or used This is the reason why the medication is being prescribed or used. It provides a link to the Past or current health conditions or problems that the patient has had or has.	ICD-10* SNOMED CT GPS Orphacode if rare disease is diagnosed
Social history observations related to health	Health related lifestyle factors or lifestyle observations and social determinants of health. Example: cigarette smoker, alcohol consumption	SNOMED CT GPS
Status	Provides the woman's current state at the date the observation was made: e.g. pregnant, not pregnant, unknown	SNOMED CT GPS
Previous pregnancies status	Information on the woman's previous pregnancies: Yes, previous pregnancies; No, previous pregnancies; Unknown	SNOMED CT GPS
Outcome	Outcome of the previous pregnancies	SNOMED CT GPS
Documentation	Existence of documentation on living will	SNOMED CT GPS
Observation details	Observation details including code that identifies observation, specification of the observed body structure or specimen, date and time of the specimen collection.	LOINC SNOMED CT GPS NPU
Observation results	Result of the observation including numeric and coded results of the measurement, details about how the tests were done to get the result values, information about referential ranges and result interpretation. Content of the observation result will vary according to the type of the observation.	SNOMED CT GPS (for ordinal or nominal scale results) UCUM (for units)

Laboratory Results

Title	Description	Preferred Code System
Study type	Type (or types) of the laboratory study performed.	LOINC SNOMED CT
Problem / diagnosis / condition description	Health conditions affecting the health of the patient and are important to be known for a health professional during a health encounter. Clinical conditions of the subject relevant for the results interpretation.	ICD-10 (ICD-11 when available) SNOMED CT Orphacode
Type of species	Biologic type of species for laboratory result reports bound to non- human subjects.	SNOMED CT
Material	Specimen material.	SNOMED CT
Anatomic location	Anatomic location (body location, laterality) where the material is collected, e.g. Elbow, left	SNOMED CT
Morphology	Morphological abnormalities of the anatomical location where the material is taken, for example wound, ulcer.	SNOMED CT
Source Device	If the material is not collected directly from the patient but comes from a patient-related object, e.g. a catheter	SNOMED CT EMDN
Collection procedure/method	If relevant for the results, the method of obtaining the specimen.	SNOMED CT
Observation code	Code representing the observation using the agreed code systems.	LOINC NPU SNOMED CT
Observation method	Observation method (measurement principle) to obtain the result.	SNOMED CT
Observation device	Device (analyser), laboratory test kit and used calibrator information (identifier, type, name, model, manufacturer)	SNOMED CT EMDN
Observation result	Result of the observation including text, numeric and coded results of the measurement with measurement units and measurement uncertainty and other aspects necessary for proper interpretation and comparability of the result of the observation. Content of the observation result will vary according to the type of the observation.	SNOMED CT (for ordinal or nominal scale results and result interpretation) UCUM (for units)
Observation interpretation	Information about reference intervals and result interpretation.	SNOMED CT HL7 v3 Code System ObservationInterpretation

Medical Imaging Studies and Reports

Title	Description	Preferred Code System
Imaging procedure	Imaging study procedure(s) performed. This element is relevant for the interactive selection of the available studies.	LOINC SNOMED CT
Order placer specialty	Medical specialty of the requester (e.g. Oncology, Neurosurgery, Dermatology, Gastroenterology)	SNOMED CT
Reason	Description of a clinical condition indicating why imaging examination was ordered. The reason could be expressed in coded or textual form. The reason represents the primary condition or finding leading up to a request for an imaging investigation. Example: "Cough lasting for 3 months"	SNOMED CT
Problem / diagnosis / condition	Health conditions affecting the health of the patient are important to be known for a health professional in relation to the imaging encounter. Clinical conditions of the subject are relevant for the interpretation of the results.	ICD-10* SNOMED CT Orphanet
Material	Specimen material (e.g. "Specimen from breast obtained by biopsy").	SNOMED CT
Anatomic location	Anatomic location (body location, laterality) where the material is collected (e.g. "Elbow, left").	SNOMED CT ICD-O-3
Morphology	Morphological abnormalities of the anatomical location where the material is taken, for example wound, ulcer.	SNOMED CT
Source Device	If the material is not collected directly from the patient but comes from a patient-related object, e.g. a catheter	SNOMED CT EMDN
Collection procedure/method	If relevant for the results, the method of obtaining the specimen.	SNOMED CT
Procedure code	Code representing the procedure.	SNOMED CT
Body location	Localisation on/in the body (part of the body focused during the procedure). The element could be repeated to provide information at multiple levels (bigger body location, smaller body location). This element is relevant for the interactive selection of the available studies.	SNOMED CT ICD-O-3
Laterality	Body side of the body location, if needed to distinguish from a similar location on the other side of the body.	SNOMED CT
Additional procedure details	Additional information pertaining imaging procedure, such as imaging phase. e.g., without contrast, arterial phase, venous phase, delayed phase. Only some types of studies have phases.	SNOMED CT
Type of propensity	This element describes whether this condition refers to an allergy, non-allergy intolerance, or unknown class of intolerance (not known to be allergy or intolerance)	SNOMED CT
Allergy manifestation	Description of the clinical manifestation of the allergic reaction. Example: anaphylactic shock, angioedema (the clinical manifestation also gives information about the severity of the observed reaction)	SNOMED CT
Severity	Severity of the clinical manifestation of the allergic reaction.	SNOMED CT
Criticality	Potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction.	SNOMED CT
Certainty	Assertion about the certainty associated with a propensity, or potential risk, of a reaction to the identified substance. Diagnostic and/or clinical evidence of the condition.	SNOMED CT
Agent or Allergen	A specific allergen or other agent/substance (drug, food, chemical agent, etc.) to which the patient has an adverse reaction propensity.	SNOMED CT (for non-drug allergy) or ATC (for drug allergy) (IDMP, when available)
Observation code	Code representing the observation.	SNOMED CT
Observation method	Observation method (measurement principle) to obtain the result.	SNOMED CT
Observation result	Results of the observation including text, numeric and coded results of the measurement and measurement uncertainty. The content of the observation result will vary according to the type of observation. Examples: diameter, density, and number of nodes.	SNOMED CT (for ordinal or nominal scale results and result interpretation) UCUM (for units)
Condition or finding	Condition or finding from imaging investigation.	ICD-10*= SNOMED CT Orphacode
Body location	Anatomic location (body location, laterality) where the material is collected, e.g. Elbow, left	SNOMED CT
Device	The device used to perform an imaging study	SNOMED CT EMDN

Hospital Discharge Report

Title	Description
Relationship level	Relationship type with the patient (e.g. father, wife, daughter)
Type	Type of a living will, e.g. Do not resuscitate, donorship statement, power of attorney etc.
Related conditions	The problem or disorder to which the living will applies. Multiple fields could be provided.
Type of propensity	This element describes whether this condition refers to an allergy, non-allergy intolerance, or unknown class of intolerance (not known to be allergy or intolerance)
Allergy manifestation	Description of the clinical manifestation of the allergic reaction including date of manifestation and severity. Example: anaphylactic shock, angioedema (the clinical manifestation also gives information about the severity of the observed reaction). Multiple manifestations could be provided.
Severity	Severity of the clinical manifestation of the allergic reaction.
Criticality	Potential risk for future life-threatening adverse reactions when exposed to a substance known to cause an adverse reaction.
Onset date	Date of onset of allergy, e.g., date of the first observation of the reaction. Could be also expressed using a date, partial date or life period (childhood, adolescence).
End date	Date of resolution of the allergy (e.g. when the clinician deemed there is no longer any need to track the underlying condition)
Certainty	Assertion about the certainty associated with a propensity, or potential risk, of a reaction to the identified substance. Diagnostic and/or clinical evidence of condition.
Agent or Allergen	A specific allergen or other agent/substance (drug, food, chemical agent, etc.) to which the patient has an adverse reaction propensity.
Admission reason	Reason or reasons for admission, e.g. Problem, procedure or finding.
Admission legal status	Legal status/situation at admission. The legal status indicates the basis on which the patient is staying in a healthcare organisation. This can be either voluntary or involuntary, however the legal status is always determined by a court. A patient can also receive healthcare based on a forensic status. (voluntary, involuntary, admission by legal authority).
Organisation Part Details	Address, contact names and contact details, specialty of the organisation part.
Observation details	Observation details include code that identifies observation, specification of the observed body structure or specimen, date and time of the specimen collection, observation method or protocol used and other aspects of the observation..
Observation details	Observation details include code that identifies observation, specification of the observed body structure or specimen, date and time of the specimen collection, observation method or protocol used and other aspects of the observation.
Problem details	Problem details include code that identifies problem, specification of the body structure, laterality, and other aspects of the problem.
Severity	A subjective assessment of the severity of the condition as evaluated by the clinician.
Device and implant description	Describes the patient's implanted and external medical devices and equipment upon which their health status depends. Includes devices such as cardiac pacemakers, implantable fibrillator, prosthesis, ferromagnetic bone implants, etc. of which the HP needs to be aware.
Reason	The medical reason for use of the medical device.
Procedure code	Procedure code
Body site	Procedure target body site and laterality
Procedure reason	The coded reason why the procedure was performed. This may be a coded entity or may simply be present as text.
Outcome	The outcome of the procedure - did it resolve the reasons for the procedure being performed? Applicable mainly on surgical procedures.
Disease or agent targeted	Disease or agent that the vaccination provides protection against
Vaccine/prophylaxi s	Generic description of the vaccine/prophylaxis or its component(s)
Infectious agent	Information about a suspected infectious agent or agents the person was exposed to.
Proximity	Proximity to the source/carrier of the infectious agent during exposure. Proximity could be expressed by text, code (direct, indirect) or value specifying distance from the InfectiousAgentCarrier.
Condition	Medical problems this person suffers or suffered.
Cause of death	Information about disease or condition that was the main cause of death.
House type	Type of home the patient lives in.
Home adaption	Adaptions present in the home that have been made in the context of the illness or disability to make the functioning of the patient safer and more comfortable and to enable independent living. Multiple data elements could be provided.
Living conditions	Conditions that affect the accessibility of the home or the stay in the home. Multiple data elements could be provided.
Family composition	The family composition describes the patient’s home situation and the form of cohabitation. A family can consist of one or more people.
Status	The status of the patient’s alcohol use.
Status	The status of the patient’s tobacco use.
Status	The status of the patient’s drug use.
Drug or medication type	Type of the drug consumption
Problem details	Problem details include code that identifies problem, specification of the body structure, laterality, and other aspects of the problem.
Procedure code	Procedure code
Body site	Procedure target body site and laterality
Procedure reason	The coded reason why the procedure was performed. This may be a coded entity or may simply be present as text.
Outcome	The outcome of the procedure - did it resolve the reasons for the procedure being performed?
Complication	Any complications that occurred during the procedure, or in the immediate post-performance period. These are generally tracked separately from the procedure description, which will typically describe the procedure itself rather than any 'post procedure' issues.
Device and implant description	Describes the patient's implanted and external medical devices and equipment upon which their health status depends. Includes devices such as cardiac pacemakers, implantable fibrillator, prosthesis, ferromagnetic bone implants, etc. of which the HP needs to be aware.
Reason	The medical reason for use of the medical device.
Medication reason	The reason why the medication is or was prescribed or used. It provides a link to the Past or current health conditions or problems that the patient has had or has.
Observation details	Observation details include code that identifies observation, specification of the observed body structure or specimen, date and time of the specimen collection, observation method or protocol used and other aspects of the observation.
Observation result	Result of the observation including numeric and coded results of the measurement, details about how the tests were done to get the result values, information about reference ranges and result interpretation. Content of the observation result will vary according to the type of the observation.
Observation details	Observation details include code that identifies observation, specification of the observed body structure or specimen, date and time of the specimen collection, observation method or protocol used and other aspects of the observation.
Observation details	Observation details include code that identifies observation, specification of the observed body structure or specimen, date and time of the specimen collection, observation method or protocol used and other aspects of the observation.
Addresses	Identifies the conditions/problems/concerns/diagnoses/etc. whose management and/or mitigation are handled by this plan. This element provides a linkage to the conditions recorded in the diagnostic summary section.
Medication reason	The reason why the medication is or was prescribed or used. It provides a link to the Past or current health condition(s) or problem(s) that the patient has had or has and for which this medication was prescribed.

Sundhedsdatastyrelsen og EHDS

Sundhedsdatastyrelsen skal levere mappinger og oversatte begreber til brug for deling af koder

International Patient Summary – IPS

- et refset i SNOMED CT der indeholder væsentlig klinisk informationer til brug for ikke-planlagt behandling og pleje på tværs af grænser oversættes af det danske NRC i 2024

Mapping og oversættelse de steder, hvor der skal anvendes SNOMED CT i Master Value Set

- det er vi så småt i gang med

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Nyttige links

Sundhedsdatastyrelsens hjemmeside om SNOMED CT

SNOMED Internationals hjemmeside

SNOMED Internationals SNOMED CT Browser

Ansøg om licens

Ansøg om ændringer i terminologien

EHDS-forordningen

eHealth Network – Europa-kommissionen

Skriv til os på mail
snomedct@sundhedsdata.dk

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