

# Vitale parametere, verdsett og SNOMED CT release

FHIR FAG FORUM

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# Vitale parametre

- **Vitale tegn:** Grunnleggende kliniske målinger som gir kritisk informasjon om en pasients fysiologiske tilstand.
- **Vitale parametere:** Helsedata representerer vitale tegn – enkeltvis eller grupper
- **Eksempler:** Puls, blodtrykk, temperatur, respirasjonsfrekvens, oksygensaturasjon i arterielt blod, blodsukker ...

# Verdisett

- FHIR Resource: ValueSet
- Interne ValueSet: Flere enn 60 % er Snomed CT begreper
  - Ex. Body-site

status		
body-site	This value set includes all codes from [SNOMED CT](http://snomed.info/sct) where concept is-a 442083009 (Anatomical or acquired body site (body structure)).	SNOMED CT
bodystructure-	Select SNOMED CT codes. A set of codes that describe a things orientation based on a hourly positions of a clock face.	SNOMED

- Eksterne ValueSet: Terminologiserver: Snowstorm med FHIR API
- [FHIR om the CodeSystem ressource:](#)
  - *The CodeSystem resource is not an appropriate way to distribute the contents of these code systems; the standard FHIR code system resource simply represents the properties of the code system*

# Vital tegn - Profilen i FHIR

- LOINC er obligatorisk

  coding:BPCode	Σ	1..1	Coding	Code defined by a terminology system
 id		0..1	id	Unique id for inter-element referencing
 extension		0..*	Extension	Additional content defined by implementations <b>Slice:</b> Unordered, Open by value:url
 system	Σ	1..1	uri	Identity of the terminology system <b>Fixed Value:</b> <a href="http://loinc.org">http://loinc.org</a>
 version	Σ	0..1	string	Version of the system - if relevant
 code	Σ 	1..1	code	Symbol in syntax defined by the system <b>Fixed Value:</b> 85354-9

- Slicing med Snomed CT equivalent i norsk profil

- Inngår i IPS

# Vital tegn - Profilen i FHIR

- [LOINC er obligatorisk](#)
- [Slicing med Snomed CT equivalent i norsk profil](#)

ORGANIZATION HL7 Norway / PROJECT test basisprofiler R4 test

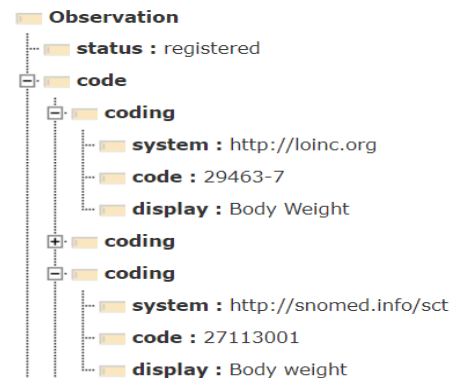
## Body Weight

Observation for Patient/592410

type **Example of Observation** FHIR R4

Overview Table XML JSON Related History Narrative

- [Inngår i IPS](#)



International Patient Summary Implementation Guide, published by HL7 International / Patient Care. This is not an authorized publication; it is the continuous build for version 1.1.0. This version is based on the current content of <https://github.com/HL7/fhir-ips/> and changes regularly. See the [Directory of published versions](#)

## 6 IPS Structure

Page standards status: [Informative](#)

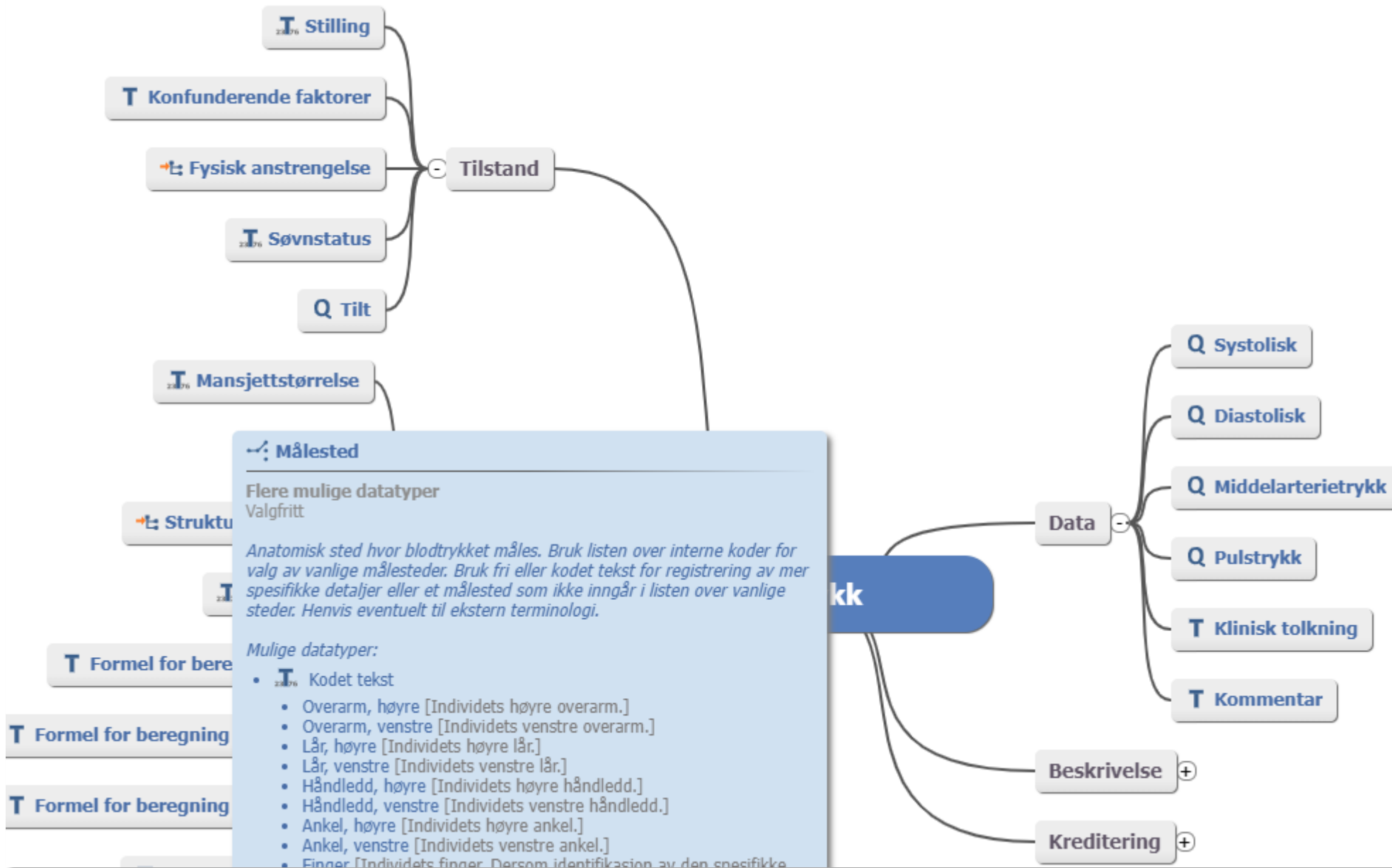
### 6.1 The International Patient Summary Structure

The IPS is composed by the following sections described below.

**Figure 2: The IPS composition**

- [The International Patient Summary Structure](#)
- [Sections description](#)
- [List of Profiles](#)





# Klinisk uttvalg inspirert av arketyper (OpenEHR)

- Samarbeid med NRUA og Helse Nord

- Resultat: 19 ValueSet

6881000202104	Blodtrykk::Målested
6685009	Blodtrykk::Målested::Ankel, høyre
51636004	Blodtrykk::Målested::Ankel, venstre
7569003	Blodtrykk::Målested::Finger
2402003	Blodtrykk::Målested::Fotrygg
9736006	Blodtrykk::Målested::Håndledd, høyre
5951000	Blodtrykk::Målested::Håndledd, venstre
51114001	Blodtrykk::Målested::Intraarterielt
11207009	Blodtrykk::Målested::Lår, høyre
61396006	Blodtrykk::Målested::Lår, venstre
368209003	Blodtrykk::Målested::Overarm, høyre
368208006	Blodtrykk::Målested::Overarm, venstre



# Klinisk uttvalg inspirert av arketyper (OpenEHR)

- Samarbeid med NRUA og Helse Nord

- Resultat: 19 ValueSet

- For alle systemer

6881000202104
6685009
51636004
7569003
2402003
9736006
5951000
51114001
11207009
61396006
368209003
368208006



# 19 ValueSet

Blodtrykk::Stilling::
Blodtrykk::Målested::
Blodtrykk::Mansjettstørrelse::
Blodtrykk::Målemetode::
Blodtrykk::Søvnstatus::
Høyde/Lengde::Kroppstilling::
Kroppstemperatur::Kroppseksponering::
Kroppstemperatur::Målested::
Kroppsvekt::Påkledning::
Pulsoksymetri::Målested::
Puls::Målested::
Puls::Målemetode::
Puls::Stilling::
Puls::Type uregelmessighet::
Puls::Rytme::
Åndedrett::Dybde::
Åndedrett::Stilling::
Åndedrett::Regelmessighet::
Åndedrett::Spontant åndedrett::

# Puls::Stilling::

```
{
  "resourceType": "ValueSet",
  "id": "f17c2583-ee7b-4fe2-bbcf-fa8c1091933e",
  "url": "http://snomed.info/sct/51000202101/version/20230415?fhir_vs=ecl/^198541000202101{{ M mapTarget = \"Hjertefrekvens::Stilling::\" }}",
  "status": "active",
  "copyright": "This value set includes content from SNOMED CT, which is copyright © 2002+ International Health Terminology Standards Development Organisation (SNOMED International)",
  "expansion": {
    "id": "b811c052-f920-43d2-846e-831c9e936791",
    "timestamp": "2023-10-07T22:48:02+00:00",
    "total": 4,
    "offset": 0,
    "parameter": [ {
      "name": "version",
      "valueUri": "http://snomed.info/sct|http://snomed.info/sct/51000202101/version/20230415"
    }, {
      "name": "displayLanguage",
      "valueString": "nb,no;q=0.9,en;q=0.8,en-GB;q=0.7,en-US;q=0.6,da;q=0.5"
    } ],
    "contains": [ {
      "system": "http://snomed.info/sct",
      "code": "4801000202104",
      "display": "Liggende flatt"
    }, {
      "system": "http://snomed.info/sct",
      "code": "272580008",
      "display": "Semi-recumbent position"
    }, {
      "system": "http://snomed.info/sct",
      "code": "33586001",
      "display": "sittestilling"
    }, {
      "system": "http://snomed.info/sct",
      "code": "10904000",
      "display": "oppreist stilling"
    } ]
  }
}
```

# Puls::Stilling:: Universal Reference by fixed Id

```
{
  "resourceType": "ValueSet",
  "id": "f17c2583-ee7b-4fe2-bbcf-fa8c1091933e",
  "url": "http://snomed.info/sct/51000202101/version/20230415?fhir_vs=ecl/^198541000202101{{ M mapTarget = \"Hjertefrekvens::Stilling::\" }}",
  "status": "active",
  "copyright": "This value set includes content from SNOMED CT, which is copyright © 2002+ International Health Terminology Standards Development Organisation (SNOMED International),",
  "expansion": {
    "id": "b811c052-f920-43d2-846e-831c9e936791",
    "timestamp": "2023-10-07T22:48:02+00:00",
    "total": 4,
    "offset": 0,
    "parameter": [ {
      "name": "version",
      "valueUri": "http://snomed.info/sct|http://snomed.info/sct/51000202101/version/20230415"
    }, {
      "name": "displayLanguage",
      "valueString": "nb,no;q=0.9,en;q=0.8,en-GB;q=0.7,en-US;q=0.6,da;q=0.5"
    } ],
    "contains": [ {
      "system": "http://snomed.info/sct",
      "code": "4801000202104",
      "display": "Liggende flatt"
    }, {
      "system": "http://snomed.info/sct",
      "code": "272580008",
      "display": "Semi-recumbent position"
    }, {
      "system": "http://snomed.info/sct",
      "code": "33586001",
      "display": "sittestilling"
    }, {
      "system": "http://snomed.info/sct",
      "code": "10904000",
      "display": "oppreist stilling"
    } ]
  }
}
```

# Puls::Stilling:: Universal Reference by URI

```
{
  "resourceType": "ValueSet",
  "id": "f17c2583-ee7h-4fe2-bhcf-fa8c1091933e",
  "url": "http://snomed.info/sct/51000202101/version/20230415?fhir_vs=ecl/^198541000202101{{ M mapTarget = \"Hjertefrekvens::Stilling::\" }}",
  "status": "active",
  "copyright": "This value set includes content from SNOMED CT, which is copyright © 2002+ International Health Terminology Standards Development Organisation (SNOMED International)",
  "expansion": {
    "id": "b811c052-f920-43d2-846e-831c9e936791",
    "timestamp": "2023-10-07T22:48:02+00:00",
    "total": 4,
    "offset": 0,
    "parameter": [ {
      "name": "version",
      "valueUri": "http://snomed.info/sct|http://snomed.info/sct/51000202101/version/20230415"
    }, {
      "name": "displayLanguage",
      "valueString": "nb,no;q=0.9,en;q=0.8,en-GB;q=0.7,en-US;q=0.6,da;q=0.5"
    } ],
    "contains": [ {
      "system": "http://snomed.info/sct",
      "code": "4801000202104",
      "display": "Liggende flatt"
    }, {
      "system": "http://snomed.info/sct",
      "code": "272580008",
      "display": "Semi-recumbent position"
    }, {
      "system": "http://snomed.info/sct",
      "code": "33586001",
      "display": "sittestilling"
    }, {
      "system": "http://snomed.info/sct",
      "code": "10904000",
      "display": "oppreist stilling"
    } ]
  }
}
```

# Puls::Stilling:: The EXPANSION

```
{
  "resourceType": "ValueSet",
  "id": "f17c2583-ee7b-4fe2-bbcf-fa8c1091933e",
  "url": "http://snomed.info/sct/51000202101/version/20230415?fhir_vs=ecl/^198541000202101{{ M mapTarget =\"Hjertefrekvens::Stilling::\" }}",
  "status": "active",
  "copyright": "This value set includes content from SNOMED CT, which is copyright © 2002+ International Health Terminology Standards Development Organisation (SNOMED International),
  "expansion": [
    {
      "id": "b811c052-f920-43d2-846e-831c9e936791",
      "timestamp": "2023-10-07T22:48:02+00:00",
      "total": 4,
      "offset": 0,
      "parameter": [
        {
          "name": "version",
          "valueUri": "http://snomed.info/sct|http://snomed.info/sct/51000202101/version/20230415"
        },
        {
          "name": "displayLanguage",
          "valueString": "nb,no;q=0.9,en;q=0.8,en-GB;q=0.7,en-US;q=0.6,da;q=0.5"
        }
      ],
      "contains": [
        {
          "system": "http://snomed.info/sct",
          "code": "4801000202104",
          "display": "Liggende flatt"
        },
        {
          "system": "http://snomed.info/sct",
          "code": "272580008",
          "display": "Semi-recumbent position"
        },
        {
          "system": "http://snomed.info/sct",
          "code": "33586001",
          "display": "sittestilling"
        },
        {
          "system": "http://snomed.info/sct",
          "code": "10904000",
          "display": "oppreist stilling"
        }
      ]
    }
  ]
}
```

Vi har presentert et eksempel av fysisk implementering, mens de logiske definisjonene er unike og versjonerte

- En ekstern terminologitjeneste med en FHIR-API støtter distribusjon av terminologien ved hjelp av FHIR-standardmetoder.
- En sentral terminologiserver kan effektivisere implementering i mange systemer:

