



Strategy for archetype development and terminology binding in Sweden

Copenhagen 20100825
Jessica Rosenälv
Expert health informatics officer



National Information Structure

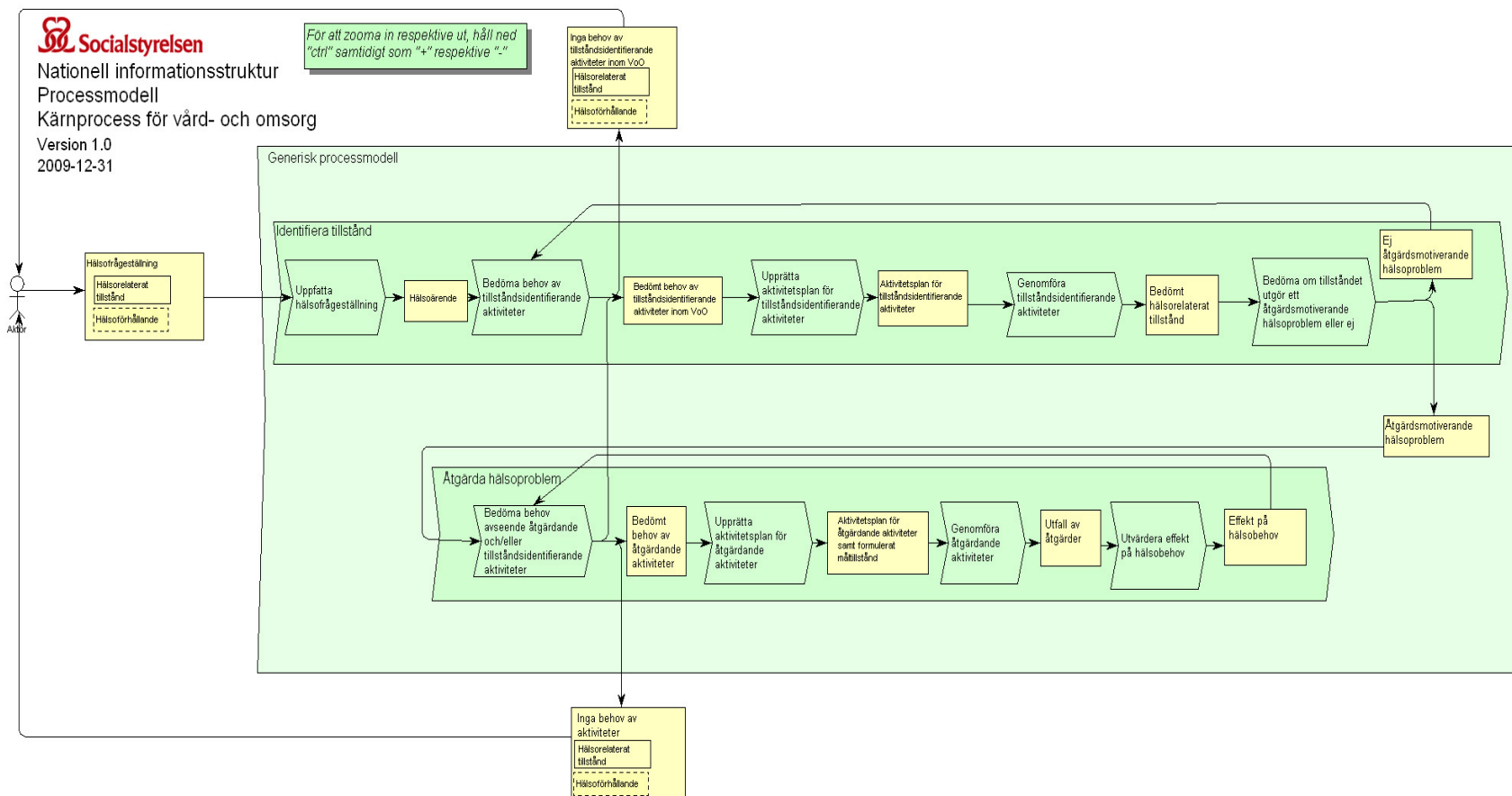
- The National Board of Health and Welfare is a governmental agency in Sweden under the Ministry of Health and Social Affairs. It has been tasked by the Government under the National IT strategy for health care services to develop a national information structure.
- The commission was carried out under NI project between 2007-2009.
- A common information structure as a foundation for documentation provides the basic prerequisites needed to ensure that relevant information accompanies the individual throughout the care process.
- A common information structure enables process analysis at individual as well as aggregated levels.
- The main result of NI project was business-oriented dynamic models: the process, concepts and information models on a generic level that describe the health care core process and stakeholder information needs.

Generic level

Business-oriented dynamic models
NI's concepts, process and information models



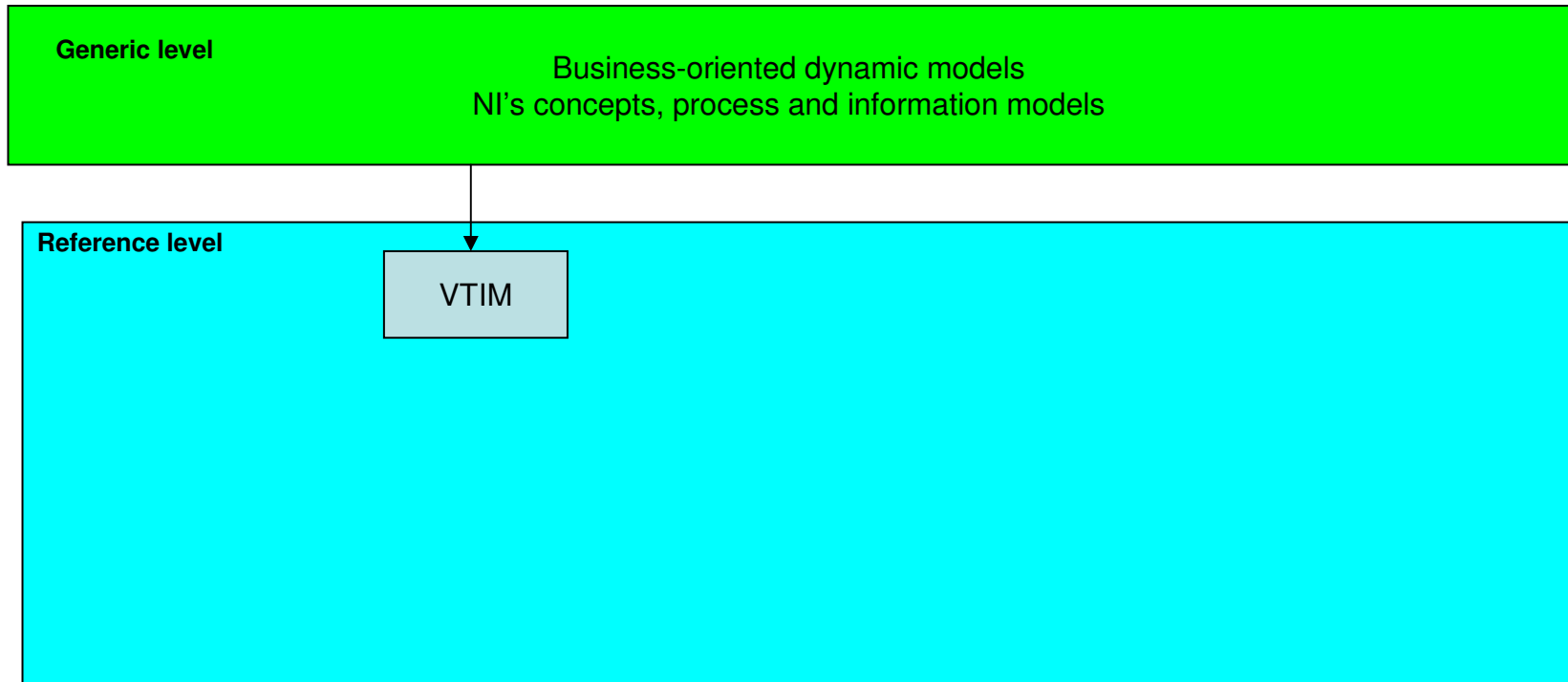
NI process model



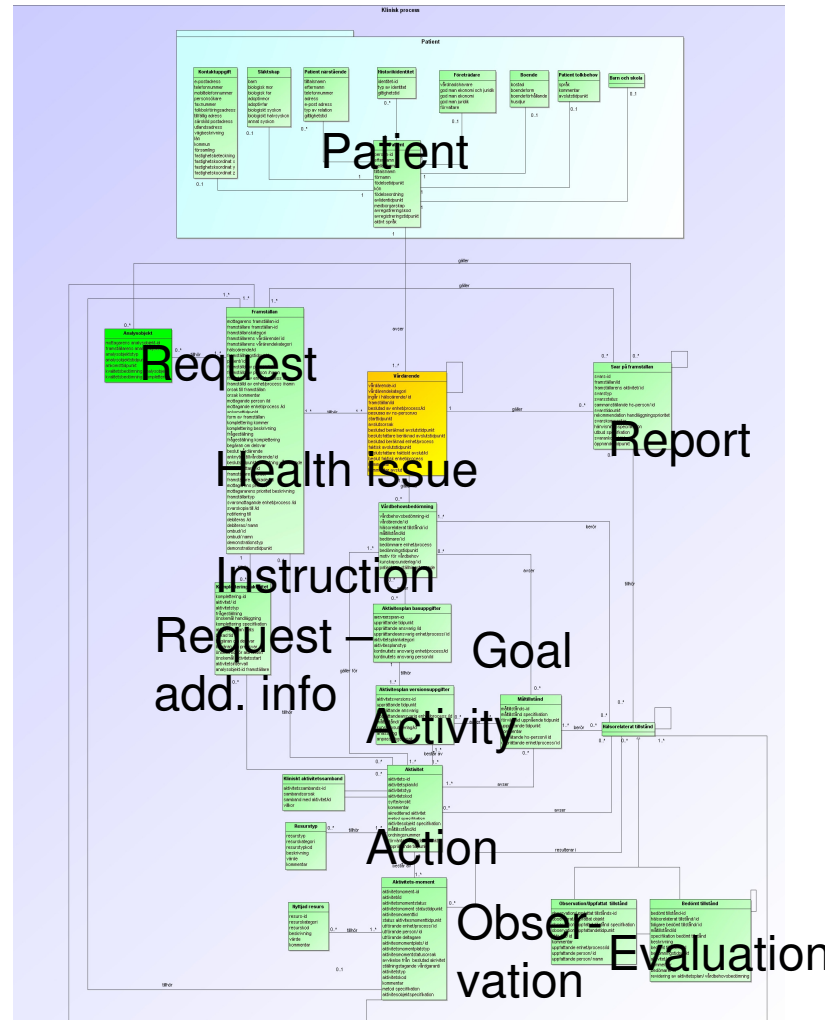
The Centre for eHealth in Sweden coordinates the work of the county councils and the regions in implementing the National strategy for eHealth – safe and accessible information in health and social care. The Center shall create the long-term conditions necessary for developing and introducing joint eHealth solutions that improve accessibility of information, quality and patient safety.

VTIM – Applied Information Model

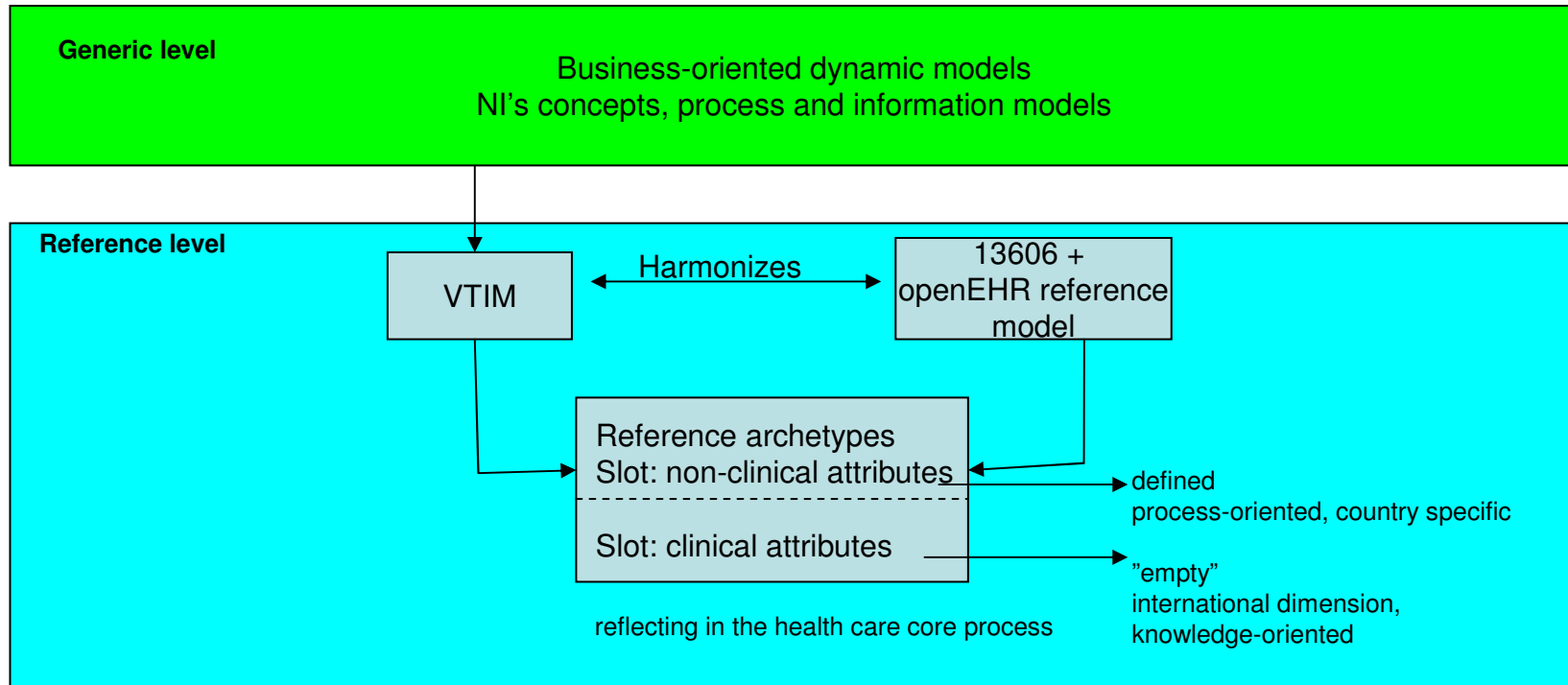
- Swedish Association of Local Authorities and Regions (SALAR) carrying out work on the development of Business Applied Information Model VTIM under 2007-2009.
- In 2007 the Swedish county council directors decided that the VTIM is the basis for national projects.
- VTIM - framework for the "content" in the information model in the health case core process where the patient's needs are in focus.
- VTIM - result of national and regional work.
- Reviewed by the reference group in which the various competences in health care are represented.



VTIM 2.0

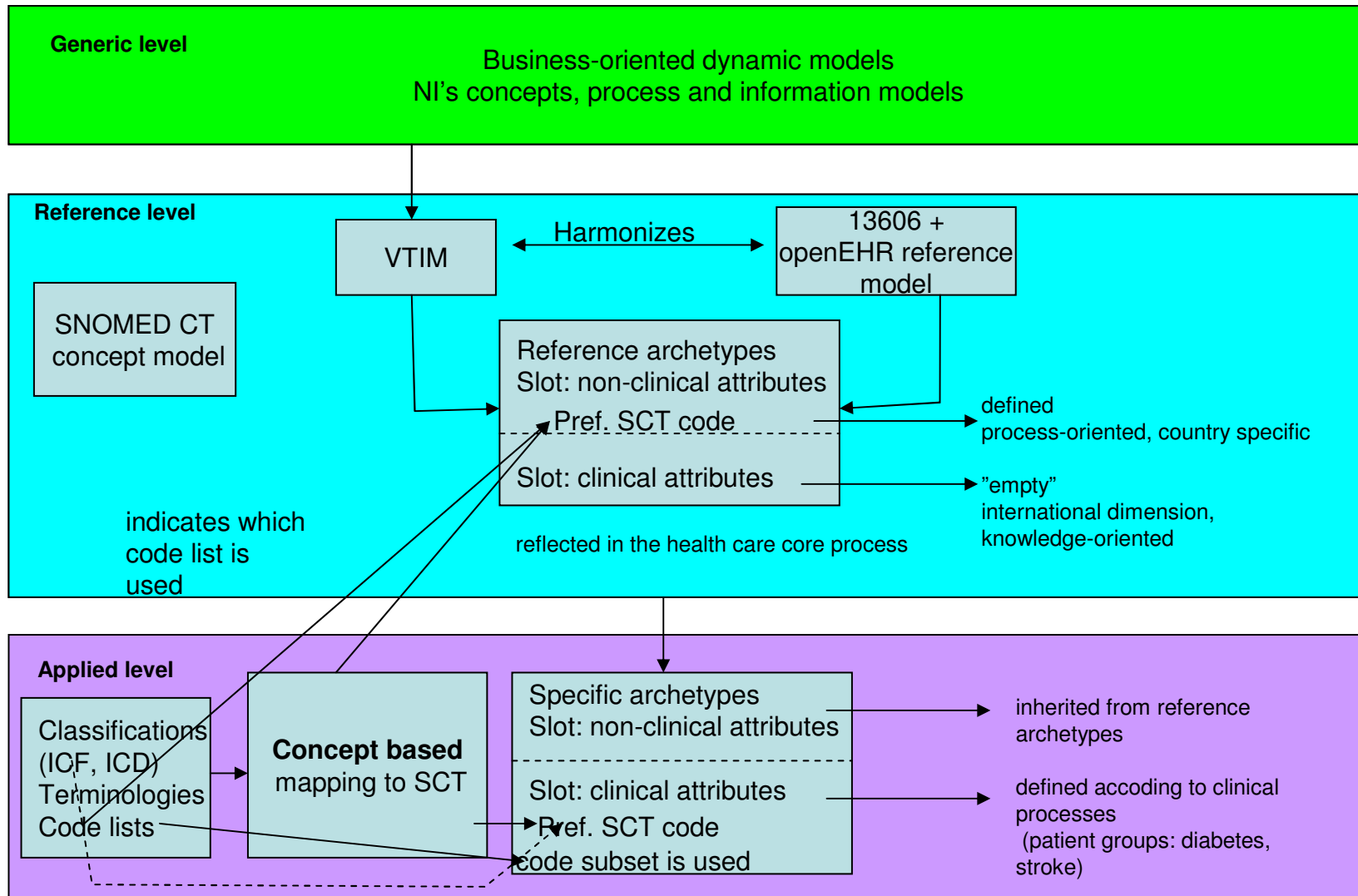


The Centre for eHealth in Sweden coordinates the work of the county councils and the regions in implementing the National strategy for eHealth – safe and accessible information in health and social care. The Center shall create the long-term conditions necessary for developing and introducing joint eHealth solutions that improve accessibility of information, quality and patient safety.



Reference archetypes

- On the basis of VTIM 2.0 reference archetypes were built. They are formal definitions of the clinical concepts that are represented in VTIM.
- Since archetypes were built from VTIM there is an overall clinical picture to how different concepts relate to each other and what each concept consists of.
- Reference archetypes consist of two parts: non-clinical information which is health care process-oriented, and clinical information for different clinical concepts.
- Non-clinical information, is already defined in reference archetypes, and indicates where in the health care process the patient is. The non-clinical part is process- and country specific.
- The clinical part is not specified in reference archetypes and consists of "Empty" specifications. The clinical part has an international dimension and is knowledge-oriented.
- Reference archetypes are reflecting in the health care core process.



Archetypes and Tools

- Because there aren't tools that support 13606, Sweden has been working towards openEHR's reference models at the archetype definitions.
- In work with archetypes Archetype Editor from Ocean Informatics is used.
- For archetype library we use the Ocean Informatics Clinical Knowledge Manager (CKM), <http://sillocean.karolinska.se/ckm/>
- We have built 17 demographic archetypes according to VTIM's demographic classes.
- Those, and 32 clinical reference archetypes are administrated in the Swedish CKM.

Demographic archetypes

The screenshot displays the 'cean Informatics Clinical Knowledge Manager' interface. On the left, a tree view shows 'All archetypes' with a sub-tree for 'Demographic Model Archetypes'. The 'Party' category is expanded, showing 'Person' and 'patient (v1)'. The main window displays the 'patientens kontaktuppgifter (v1)' archetype, which is a table with columns for 'Header' and 'Data'. The table lists various demographic data points with their descriptions and cardinalities.

Header	Data	
A	telekom och adress Slot (Address) Occurrences: 0..* (optional, repeating)	Telekomadresser som e-post och telefon samt adress till patienten. Include: OpenEHR-DEMOGRAPHIC-ADDRESS.telecom_vtim2.v1 OpenEHR-DEMOGRAPHIC-ADDRESS.postal_address_vtim2.v1 <input type="button" value="Included"/>
S	folkbokförings uppgifter List Occurrences: 0..1 (optional) Cardinality: 0..5 (optional, unordered)	Folkbokförings uppgifter om adressen där patienten är folkbokförd.
T	fastighetsbeteckning Text Occurrences: 0..1 (optional)	Fastighetsbeteckning för den fastighet som patienten är folkbokförd i. Free or coded text
T	kommun Text Occurrences: 0..1 (optional)	Kommun som patienten är folkbokförd i. Kommunkod version 3.0 2006-12-21. Free or coded text
T	församling Text Occurrences: 0..1 (optional)	Församling som patienten är folkbokförd i. Församlingskod version 3.1 2008-01-15. Free or coded text
T	län Text Occurrences: 0..1 (optional)	Län som patienten är folkbokförd i. Länskod version 3.1 2009-04-28. Free or coded text
T	vägbeskrivning Text Occurrences: 0..1 (optional)	Vägbeskrivning hem till patienten till stöd för hemsjukvård och ambulans. Free or coded text

At the bottom of the interface, there is a status bar with a warning icon and the text 'Fel på sidan.' and a browser status bar showing 'Internet' and '100%' zoom.

Archetype Patient

The screenshot shows the 'cean Informatics Clinical Knowledge Manager' interface. On the left is a tree view of archetypes under 'EHR Archetypes' and 'Demographic Model Archetypes'. The main area displays the 'patient (v1)' archetype details for 'OpenEHR-DEMOGRAPHIC-PERSON.patient_vtim2.v1'. The details are organized into a table with columns for data type, description, and cardinality.

Header	Identities	Details
Structure: Tree Occurrences: 1..1 (mandatory) Cardinality: 3..* (repeating, unordered)		
T Text Occurrences: 1..1 (mandatory)	kön Kod och klartext som anger patientens kön. Kodverk för kön. Beslut om det är internal or external kodverk.	Free or coded text
A Slot (Cluster) Occurrences: 1..1 (mandatory)	(Missing text) (The code in the archetype definition is not defined in the ontology of the archetype for the current language. See validation report for details.)	Include: OpenEHR-DEMOGRAPHIC-CLUSTER.person_birth_data_vtim2.v1 <input type="button" value="Included"/>
A Slot (Cluster) Occurrences: 0..1 (optional)	(Missing text) (The code in the archetype definition is not defined in the ontology of the archetype for the current language. See validation report for details.)	Include: OpenEHR-DEMOGRAPHIC-CLUSTER.death_data_vtim2.v1 <input type="button" value="Included"/>
A Slot (Cluster) Occurrences: 0..1 (optional)	(Missing text) (The code in the archetype definition is not defined in the ontology of the archetype for the current language. See validation report for details.)	Include: OpenEHR-DEMOGRAPHIC-CLUSTER.unregistration_vtim2.v1 <input type="button" value="Included"/>
T Text Occurrences: 1..* (mandatory, repeating)	medborgarskap Kodverk - land. Land där person har medborgarskap. Om svenskt medborgarskap finns, registreras endast det svenska.	Free or coded text

Navigation: Previous Next