NeHTA

Clinical Knowledge Manager

The Clinical Knowledge Manager (CKM) is the collaborative environment which NEHTA is trialing to engage the Australian healthcare community – clinicians, jurisdictions, vendors, professional bodies and informed key stakeholders in the development of computable clinical concept definitions to be used in the development of e-Health clinical technical solutions, known as archetypes.

The archetypes on CKM are a list of data groups and elements that have been drawn from stakeholder requirement statements and based on clinical/domain expert views of best practice. The proposed archetypes will be subjected to privacy and legal assessment by NEHTA.

The NEHTA archetypes, known as Detailed Clinical Models. (DCMs), are intended to provide the content building blocks (information and terminology) for technical specifications for e-health solutions.

http://www.nehta.gov.au/connecting-australia/terminology-and-information/clinical-knowledge-manager

Detailed Clinical Models

NEHTA is actively engaging with the healthcare community to develop computable clinical content definitions known as Detailed Clinical Models (DCMs). Each Detailed Clinical Model is inclusive of all data attributes and potentially terminology bindings that are useful to describe a single, discrete clinical concept for use in a broad range of clinical scenarios. Examples of DCMs include: Problem/Diagnosis, Adverse Reaction, Medication order, Blood Pressure measurement, and a symptom.

If you would like to become actively involved in developing these DCMs, please self-register using the 'Sign Up' button in the top right of the Clinical Knowledge Manager (CKM) screen

What will the collaboration produce?

The collaboration process in the NEHTA Clinical Knowledge Manager (CKM) will result in a library of archetypes (initially *open*EHR archetypes) based upon requirements identified by Australian clinicians and other health domain experts, and drawing from comparable work overseas. *To create the DCMs, these archetypes will be transformed into platform and reference model agnostic models (based upon ISO 11179).* They will then be uploaded to the National Information Component Library that NEHTA is in the process of building.

What can be done with the DCMs produced?

Published DCMs will become a core national resource for expressing clinical content in a consistent, re-usable and standardised way. Multiple DCMs can be constrained and/or combined together into implementable specifications that can be used across all of Australia's eHealth activities, including the Personally Controlled Electronic Health Record (PCEHR) and all health information exchanges, such as Health Summaries and eReferrals.

Who should get involved?

NEHTA invites any interested individuals to self-register in the Clinical Knowledge Manager and become actively involved in the CKM online community and DCM development process. This includes the broadest range of clinicians, health domain experts and consumers. We encourage

organisations to nominate individuals to join the community review process on behalf of their organisation.

There is a very important need for non-technical contributions from grassroots clinicians to warrant that the clinical content of each DCM itself is correct and appropriately defined. Review of the more technical aspects of each DCM will be covered by team members who have been identified as having technical, terminology and informatics expertise
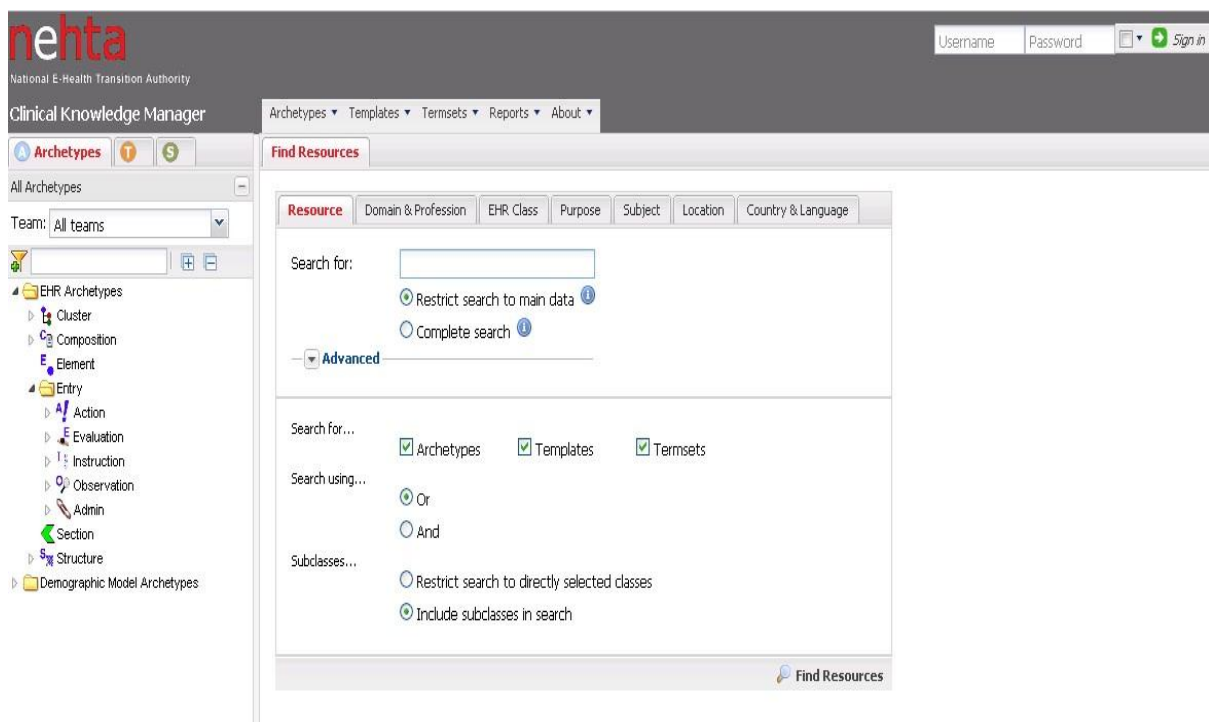
How can I get involved?

All DCMs in the Clinical Knowledge Manager are publicly available, however if you would like to become actively involved please self-register using the 'Sign Up' button in the top right of the CKM screen.

Once registered, you can:

1. **Adopt a DCM** - register your interest in participating in the review of an unpublished DCM either prior to, or during, a team review.
2. **Discuss** – contribute to threaded discussions with other members of the CKM community about each DCM. This will feed into a formal team review process at a later date.
3. **Volunteer** to review the clinical content of DCMs – technical knowledge is NOT required; however informatics knowledge is useful and sound clinical knowledge highly sought! Input from consumers is also sought to ensure that these models can be utilised in personally controlled records as well as in clinician records. ***Please adopt each DCM in which you would like to participate in the team review process.***

http://www.nehta.gov.au/connecting-australia/terminology-and-information/detailed-clinical-models

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Archetypes ▾ | Templates ▾ | Termsets ▾ | Reviews ▾ | Teams ▾ | Release Sets ▾ | Reports ▾ | Tools ▾ | About ▾

Ⓐ Archetypes | Ⓣ | Ⓢ

All Archetypes

Team: All teams

Find Resources | Dashboard | Introduction to CKM ✕

Dashboard › Health Information Models › Clinical Knowledge Manager | Browse ▾ | Log In | Sign Up | Search

open EHR Clinical Knowledge Manager

⚙ Tools ▾

📎 6 Added by Heather Leslie, last edited by Heather Leslie on 03-Dec-2010 (view change)

The *open*EHR Clinical Knowledge Manager (CKM) is an international, online clinical knowledge resource. It has gathered an active Web 2.0 community of interested and motivated individuals focused on furthering an open and international approach to clinical informatics - an application- and message-independent lingua franca for sharing health information between individuals, clinicians and organisations; between applications, and across regional and national borders. All contributions to CKM is on a voluntary basis, and all CKM content is open source and freely available under a Creative Commons licence.

See the live instance of CKM: http://openehr.org/knowledge

The latest release of CKM:

- is a library of clinical knowledge artefacts - currently *open*EHR archetypes and templates;
- supports the full life cycle management of *open*EHR archetypes through a review and publication process;
- provides governance of the knowledge artefacts

In the near future we anticipate a complementary repository for other related artefacts including terminology subsets.

The Clinical Knowledge Manager provides the opportunity and means for users interested in modelling clinical content to become participate in the creation and/or enhancement of an international set of archetypes, and these in turn have the potential to provide the foundation for interoperable Electronic Health Records.

- Overview
  - Update - State of the CKM! - September 2010
- Functional Overview
- Archetype authoring, review and publication overview
- Content publication, terminology binding and language translations
- Archetype checklist
- Frequently Asked Questions
- CKM Releases
- Result of openEHR Community poll - Top 10 archetypes for use in an Emergency

NEW - CKM Video Guides: Clinical Knowledge Manager Overview and Registering on CKM

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Archetypes ▾ | Templates ▾ | Termsets ▾ | Reviews ▾ | Teams ▾ | Release Sets ▾ | Reports ▾ | Tools ▾ | About ▾

Ⓐ Archetypes | Ⓣ | Ⓢ

All Archetypes

Team: All teams

Find Resources | Dashboard | Introduction to CKM ✕ | Mindmap Overview ✕ | Ⓐ Blood Pressure ✕

Blood Pressure (v1)

English ▾   Adopt Archetype

- EHR Archetypes
  - Cluster
  - Composition
  - Element
  - Entry
    - Action
    - Evaluation
    - Instruction
      - Healthcare service request (v1)
      - Medication instruction (v1)
    - Observation
      - Blood Pressure (v1)
      - Body mass index (v1)
      - Body weight (v1)
      - Demonstration
      - Examination findings (v1)
      - Heart rate and rhythm (v1)
      - Histopathology (v1)
      - Imaging examination result (v1)
      - Immunology titres (v1)
      - Indirect oximetry (v1)
      - Lipid studies (v1)
      - Menstrual cycle (v1)
      - Microbiology (v1)
      - Pathology test result (v1)
      - Respirations (v1)
    - Admin
  - Section
  - Structure
- Demographic Model Archetypes

Blood Pressure mindmap:

- **Data**
  - Q Systolic
  - Q Diastolic
  - Q Mean Arterial Pressure
  - Q Pulse Pressure
  - T Comment
- **State**
  - T Position
  - T Confounding factors
  - A Exertion
  - T Sleep status
  - Q Tilt
- **Events**
  - ? Any event
  - H 24 hour average
- **Blood Pressure**
- **Protocol**
  - T Cuff size
  - Location
  - T Method
  - T Mean Arterial Pressure Formula
  - T Diastolic endpoint
  - A Device
- **Description**

Screenshot 1

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Archetypes | T | S

All Archetypes

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  - Admin
- Section
- Structure
- Demographic Model Archetypes

Archetypes ▾ | Templates ▾ | Termsets ▾ | Reviews ▾ | Teams ▾ | Release Sets ▾ | Reports ▾ | Tools ▾ | About ▾

Find Resources | Dashboard | Introduction to CKM | Mindmap Overview ✕ | Blood Pressure ✕

Blood Pressure (v1)

English ▾   Adopt Archetype

Archetype: Blood Pressure (openEHR-EHR-OBSERVATION.blood_pressure.v1)

Header | Data | State | Protocol | Events

Archetype ID	openEHR-EHR-OBSERVATION.blood_pressure.v1
Concept name	Blood Pressure Bound to: [SNOMED-CT(2003)::163020007] (On examination - blood pressure reading (finding))
Concept description	The local measurement of arterial blood pressure which is a surrogate for arterial. pressure in the systemic circulation. Most commonly, use of the term 'blood pressure' refers to measurement of brachial artery pressure in the upper arm.
Keywords	observations, measurement, bp, vital signs, mean arterial pressure, pulse pressure, systolic, diastolic, RR, NIBP
Purpose	To record the systemic arterial blood pressure of an individual.
Copyright	© 2011 NEHTA
Use	Use to record all representations of systemic arterial blood pressure measurement, no matter which method or body location is used to record it. The archetype is intended to capture blood pressure measurements in all clinical scenarios - for example, self-measurement with a home blood pressure machine; an emergency assessment of systolic using palpation and a sphygmomanometer; measurements taken in clinical consultations or during exercise stress testing; and a series of measurements made by a machine in Intensive Care. There is a rich state model that supports interpretation of measurements through identifying patient position, exercise, confounding factors and angle of a tilt table in research. Named events have been limited to average over a 24 hour period, however templates can further constrain the default 'any event' to cater for specific requirements for blood pressure measurements such as recording Blood Pressure against specific points in time, or over a range of intervals (+/- mathematical functions).
Misuse	Not to be used for intravenous pressure. Not to be used for the measurement of arterial blood pressure which is NOT a surrogate for arterial pressure in the systemic circulation eg specific measurement of right Pulmonary artery pressure. Use OBSERVATION.intravascular_pressure and related specialisations in both of these situations.

Screenshot 2

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Archetypes | T | S

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- Section
- Structure
- Demographic Model Archetypes

Archetypes ▾ | Templates ▾ | Termsets ▾ | Reviews ▾ | Teams ▾ | Release Sets ▾ | Reports ▾ | Tools ▾ | About ▾

Find Resources | Dashboard | Introduction to CKM | Mindmap Overview ✕ | Blood Pressure ✕

Blood Pressure (v1)

English ▾   Adopt Archetype

Archetype: Blood Pressure (openEHR-EHR-OBSERVATION.blood_pressure.v1)

Header | **Data** | State | Protocol | Events

Structure: Tree
Occurrences: 1..1 (mandatory)
Cardinality: 0..* (optional, repeating, unordered)

Q	**Systolic** Quantity Occurrences: 0..1 (optional) [SNOMED-CT(2003)::163030003] (On examination - Systolic BP reading (finding))	Peak systemic arterial blood pressure - measured in systolic or contraction phase of the heart cycle.	Property: Pressure Units: • 0.0..<1000.0 mm[Hg] Limit decimal places: 0
Q	**Diastolic** Quantity Occurrences: 0..1 (optional) [SNOMED-CT(2003)::163031004] (On examination - Diastolic blood pressure reading (finding))	Minimum systemic arterial blood pressure - measured in the diastolic or relaxation phase of the heart cycle.	Property: Pressure Units: • 0.0..<1000.0 mm[Hg] Limit decimal places: 0
Q	**Mean Arterial Pressure** Quantity Occurrences: 0..1 (optional)	The average arterial pressure that occurs over the entire course of the heart contraction and relaxation cycle.	Property: Pressure Units: • 0.0..<1000.0 mm[Hg] Limit decimal places: 0
Q	**Pulse Pressure** Quantity Occurrences: 0..1 (optional)	The difference between the systolic and diastolic pressure.	Property: Pressure Units: • 0.0..<1000.0 mm[Hg] Limit decimal places: 0
T	**Comment** Text Occurrences: 0..1 (optional)	Comment on blood pressure measurement.	Free or coded text

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Clinical Knowledge Manager

Archetypes | T | S

All Archetypes

Team: All teams

Archetypes ▾ Templates ▾ Termsets ▾ Reviews ▾ Teams ▾ Release Sets ▾ Reports ▾ Tools ▾ About ▾

Find Resources | Dashboard | Introduction to CKM | Mindmap Overview | Blood Pressure

EHR Archetypes
  ▷ Cluster
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Blood Pressure (v1)

English ▾   Adopt Archetype

Archetype: Blood Pressure (openEHR-EHR-OBSERVATION.blood_pressure.v1)

Header | Data | State | Protocol | Events

Structure: Tree
Occurrences: 1..1 (mandatory)
Cardinality: 0..* (optional, repeating, unordered)

T Cuff size
Coded Text
Occurrences: 0..1 (optional)
[SNOMED-CT(2003)::246153002] (Type of cuff (attribute))

The size of the cuff used for blood pressure measurement.
Comment: Perloff D, Grim C, Flack J, Frohlich ED, Hill M, McDonald M, Morgenstern BZ. Human blood pressure determination by sphygmomanometry. Circulation 1993;88;2460-2470.

• Adult Thigh [A cuff used for an adult thigh - bladder approx 20cm x 42cm.]
• Large Adult [A cuff for adults with larger arms - bladder approx 16cm x 38cm.]
• Adult [A cuff that is standard for an adult - bladder approx 13cm x 30cm.]
• Small Adult [A cuff used for a small adult - bladder approx 10cm x 24cm.]
• Paediatric/Child [A cuff that is appropriate for a child or adult with a thin arm - bladder approx 8cm x 21cm.]
• Infant [A cuff used for infants - bladder approx 5cm x 15cm.]
• Neonatal [A cuff used for a neonate, assuming cuff is the appropriate size for maturity and birthweight of the neonate.]

Location
Cluster
Occurrences: 0..1 (optional)
Cardinality: 1..* (mandatory, repeating, unordered)

Body location where blood pressure is measured. Use 'Location of measurement' to select from common sites. Use 'Specific location' to record more specific details or a site that is not in the common set or to refer to an external terminology.

T Location of measurement
Coded Text
Occurrences: 0..1 (optional)

Common body sites where blood pressure is recorded.

• Right arm [The right arm of the person.]
• Left arm [The left arm of the person.]
• Right thigh [The right thigh of the person.]
• Left thigh [The left thigh of the

Healthcare Identifiers

The Federal, state and territory governments have developed a national Healthcare Identifiers Service (HI Service) which will uniquely identify healthcare providers and individuals who seek healthcare. Medicare Australia is the operator of the HI Service.

The HI Service will give individuals and healthcare providers confidence that the right health information is associated with the right individual at the point of care.

The HI Service allocates three types of Healthcare Identifiers.

• Individual Healthcare Identifier (IHI)—allocated to all individuals enrolled in the Medicare program or those who are issued with a Department of Veterans' Affairs (DVA) treatment card and others who seek healthcare in Australia.
• Healthcare Provider Identifier – Individual (HPI-I)—allocated to healthcare providers involved in providing patient care.
• Healthcare Provider Identifier – Organisation (HPI-O)—allocated to organisations that deliver healthcare (such as hospitals and medical practices).Your healthcare identifier has been created to be used by healthcare providers to improve the security and efficient management of your personal health information.

A healthcare identifier is not a health record. The information held by the HI Service is limited to demographic information (such as your name, date of birth and sex) which is needed to uniquely identify you and your healthcare providers. Healthcare identifiers do not replace Medicare or DVA numbers and do not affect the way medical benefits are claimed.

Healthcare Identifiers are an important building block to enable the Personally Controlled Electronic Health Record (PCEHR) system.

Under the *Healthcare Identifiers Act 2010*, an IHI can be allocated to you and used by a healthcare provider without your consent. There are strict privacy laws governing how these identifiers are used.

What is a PCEHR?

A Personally Controlled Electronic Health Record (PCEHR) is a secure, electronic record of your medical history, stored and shared in a network of connected systems. The PCEHR will bring key health information from a number of different systems together and present it in a single view.

Information in a PCEHR will be able to be accessed by you and your authorised healthcare providers. With this information available to them, healthcare providers will be able to make better decisions about your health and treatment advice. Over time you will be able to contribute to your own information and add to the recorded information stored in your PCEHR.

The PCEHR will not hold all the information held in your doctor's records but will complement it by highlighting key infomation. In the future, as the PCEHR becomes more widely available, you will be able to access your own health information anytime you need it and from anywhere in Australia.

http://www.nehta.gov.au/ehealth-implementation/what-is-a-pcher

http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/home

I have placed a link below which is on e-Health and the use of 1 aspect of technology to demonstrate current use of technology in patient care for both acute and community care. The video was undertaken in the Northern Territory (NT) and South Australia (SA). It is currently in use in these states and has been for some time. The NT is a leader in the use of technology in health care in both the acute and community settings.

It is well worth watching and is only 10 minutes in length. This is the type of technology use that is coming very soon to all Australian communities. The unique health identifiers are now in use around Australia and all health professionals have one. We all also have a personal identifier for our own health care and any health care organisation has one also. This is demonstrated clearly in the video. This will also form part of the Personally Controlled Electronic Health Record (PCEHR) that will be in use as of July 1 2012.

The title is "A Patients Journey with eHealth" (http://www.youtube.com/watch?v=tE1LLTNruw8)