

A new approach to clinical standards

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SCIMP/SNUG conference Sept 2015

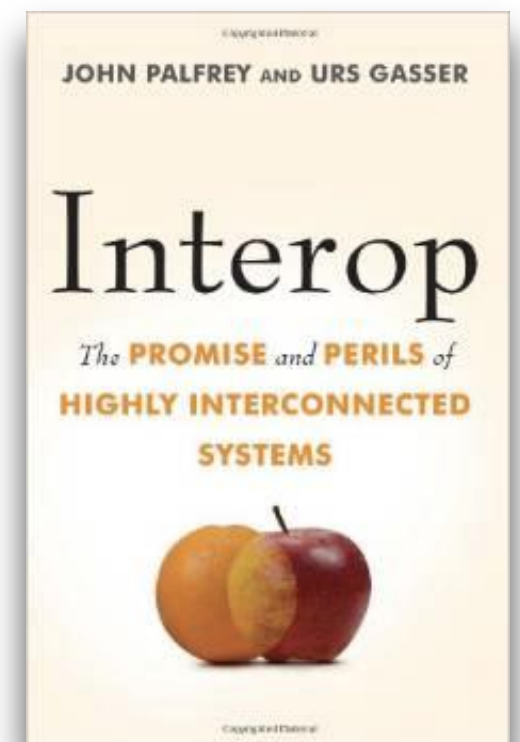
Current scenario

- Patient often only the knows the whole picture
- No clear governance
- Non- standardised representation of medication between systems
- No clear visibility of other prescribers actions

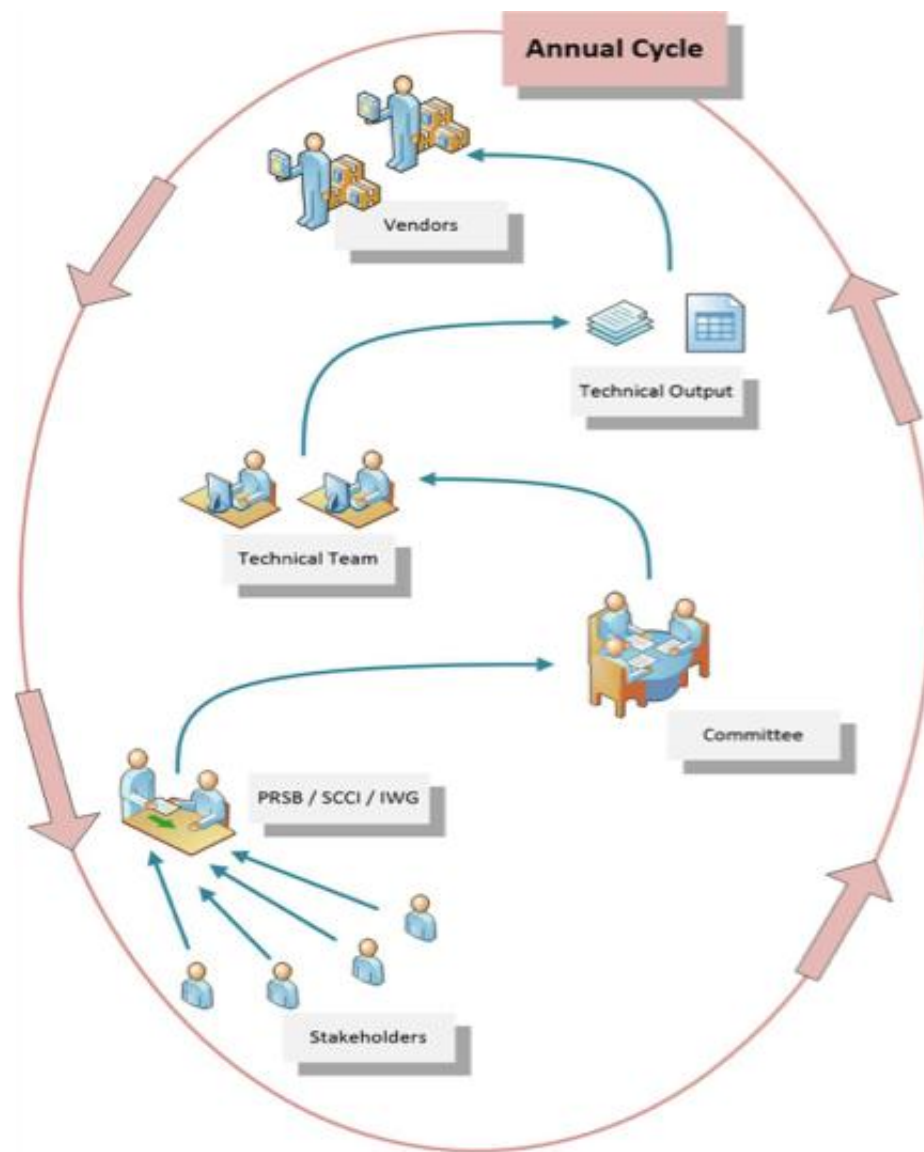
Interoperability is not a tech problem

“The real barriers to practical interoperability are cultural and clinical”

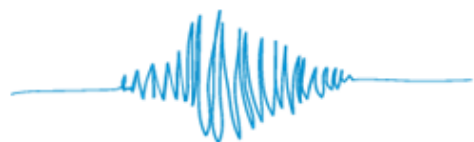
- Diverse recording practice (sometimes arbitrary)
- Diverse recording requirements
- Complexity / contextual nature of health data
- Lack of clinical involvement in standards development
 - Too technical, too philosophical
 - Too time-consuming, too slow



Traditional standards development



- Clinical stakeholders engage through top-down governance
- Committee-based
- Late vendor engagement
- Fixed review cycles
- Unclear / unresponsive change request mechanism



Are 'Standards' necessary?

FAREWELL TO "RUTHLESS STANDARDISATION"

🕒 SEPTEMBER 2, 2014 👤 WOODCOTE 💬 LEAVE A COMMENT

"Ruthless Standardisation" was the failed mantra of the NHS National Programme for IT. The Programme is dead, but in some places this view still persist but it is time to consign it to history as something else that "seemed a good idea at the time"

<http://www.woodcote-consulting.com/farwell-to-ruthless-standardisation/>

Are standards necessary?

November 1, 2013 § 9 Comments

THE GUIDE TO
HEALTH
INFORMATICS
ENRICO COIERA

A COMMON STRATEGY FOR STRUCTURING COMPLEX HUMAN SYSTEMS IS TO demand that everything be standards-based. The standards movement has taken hold in education and healthcare, and technical standards are seen as a prerequisite for information technology.

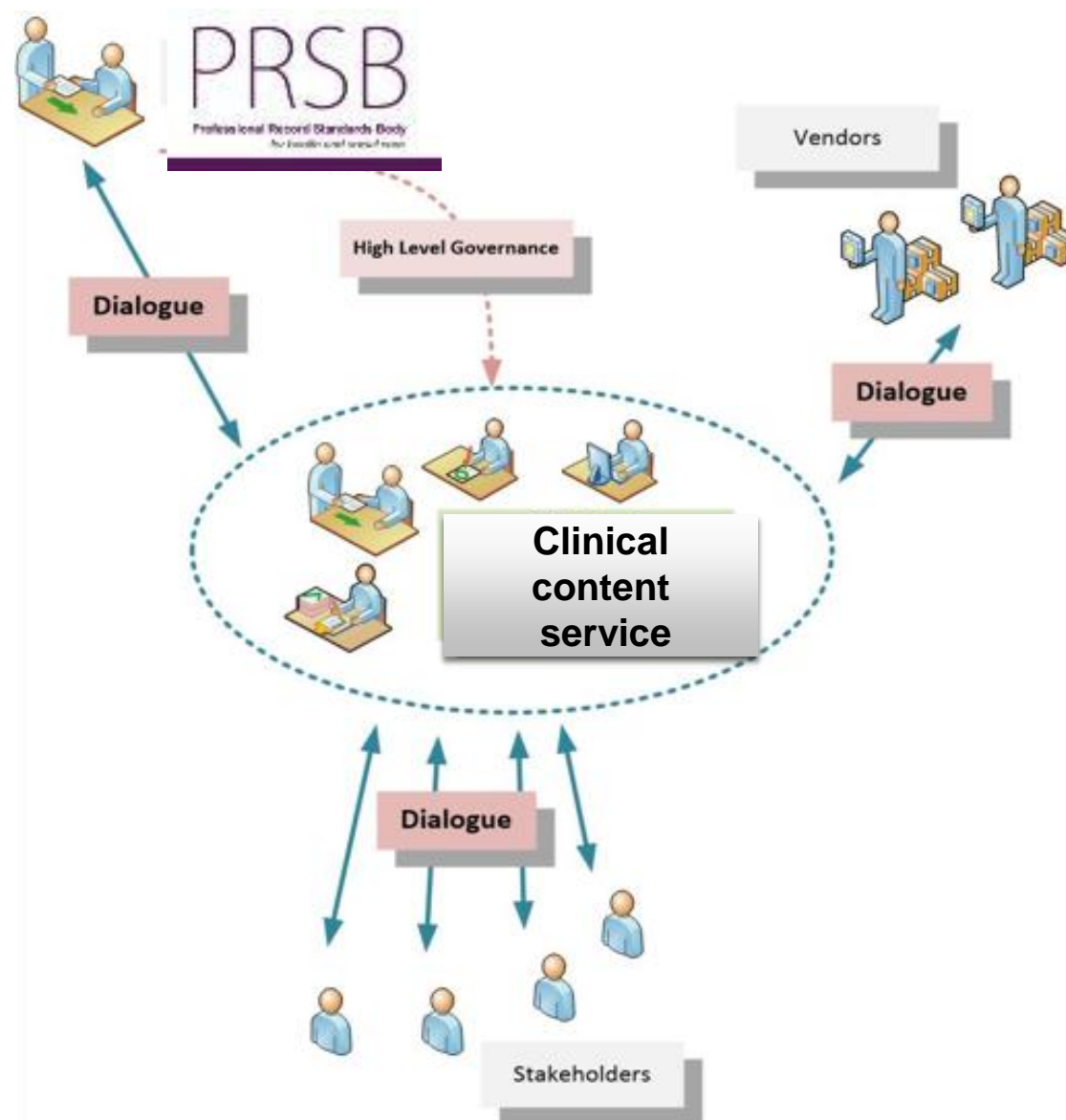
In healthcare, standards are visible in three critical areas, typical of many sectors:

<http://coiera.com/2013/11/01/are-standards-necessary/>

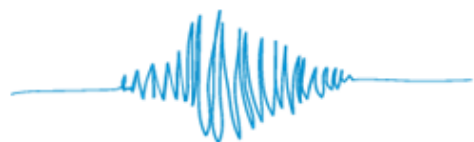


openEHR

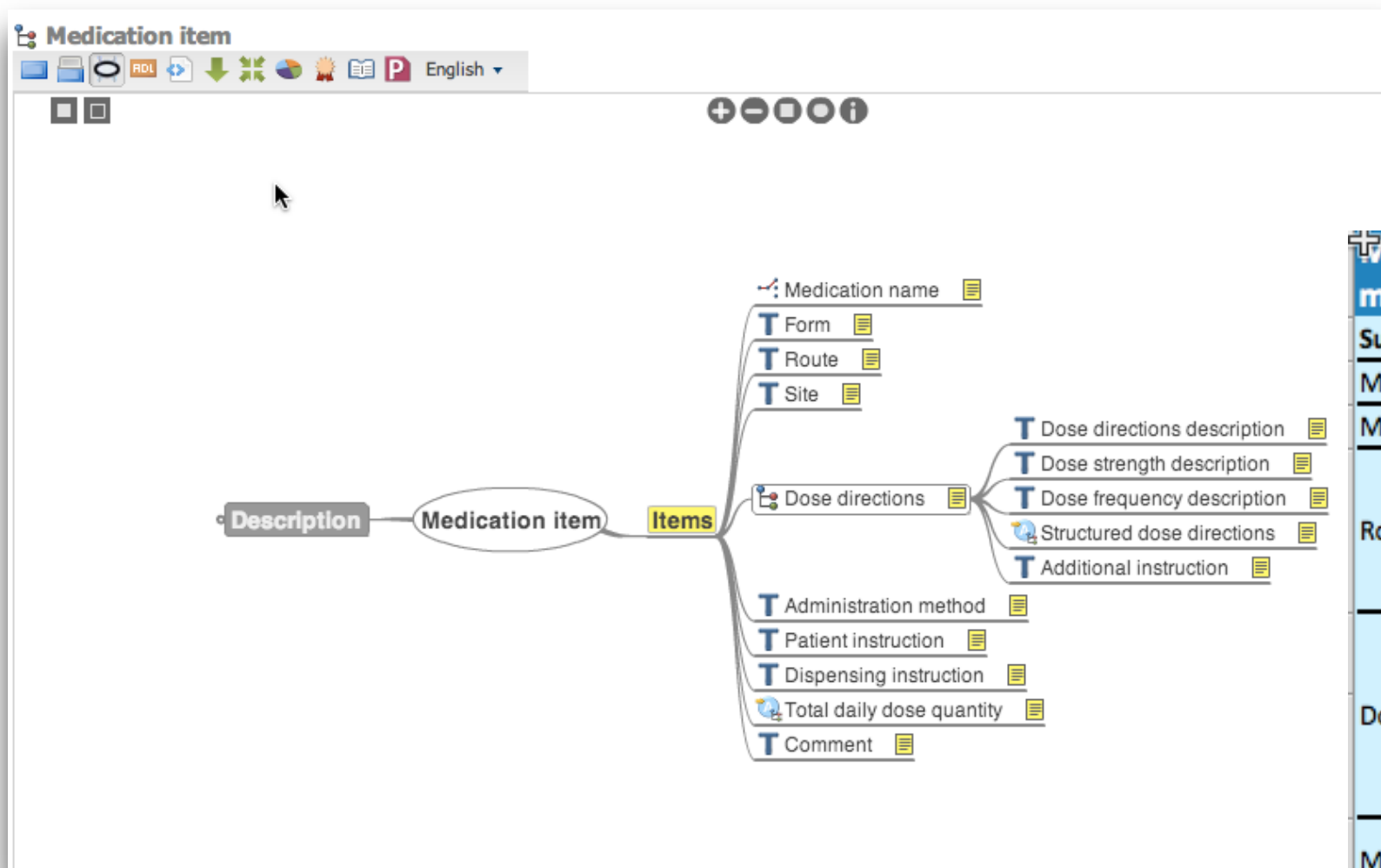
Clinically-led standards development



- Clinical stakeholders, vendors engage directly with clinically-led content service
- Continual dialogue with all stakeholders via web-based collaborative tooling
- No fixed review cycles
- On-demand change request directly to clinical content service
- PRSB has high-level governance role



Medication 'archetype'



Royal College
of Physicians

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What we do | Medical careers & training | CPD, ed

Annual review

Policy

Public affairs

Projects

Committee

Standards for core clinical information

Medications and medical devices

Subheadings	Clinical description
Medication name	May be generic name or brand name (as appropriate).
Medication form	Eg capsule, drops, tablet, lotion etc.
Route	Medication administration description (oral, IM, IV, etc): may include method of administration, (eg, by infusion, via nebuliser, via NG tube) and/or site of use, (eg, 'to wound', 'to left eye', etc).
Dose	This is a record of the total amount of the active ingredient(s) to be given at each administration. It should include, eg, units of measurement, number of tablets, volume/concentration of liquid, number of drops, etc.
Medication frequency	Frequency of taking or administration of the therapeutic agent or medication.
Additional instructions	Allows for: * requirements for adherence support, eg, compliance aids, prompts and packaging requirements * additional information about specific medicines, eg where specific brand required * patient requirements, eg, unable to swallow tablets.
Do not discontinue warning	To be used on a case-by-case basis if it is vital not to discontinue a medicine in a specific patient scenario.
Reason for medication	Reason for medication being prescribed, where known.

Web-based clinical collaboration

The screenshot displays the openEHR Clinical Knowledge Manager (CKM) web interface. The browser address bar shows the URL `clinicalmodels.org.uk/ckm/`. The interface includes a top navigation bar with tabs for various tools and a sidebar on the left for resource management.

Left Sidebar:

- Subdomain:** All subdomains
- Project or Incubator:** All projects
- Filters:** All active, Under review, Published
- Templates:** EHR Templates, Cluster, Composition (selected), SCI Medication Summary, Vital Signs Encounter (Composition), Element, Entry, Action, Evaluation, Observation, Instruction, Admin, Section, Structure
- Projects:** +
- Incubators:** +
- New and modified Resources:** +

Main Content Area:

- GP Encounter Event - LCR (Composition)**
- Purpose:** Not Specified
- Metadata:**
 - Archetype ID: openEHR-EHR-COM
 - Template ID: a494b0f7-5198-4139
 - MetaDataSet: Sample Set
- GP ENCOUNTER EVENT**
Where not otherwise stated, elements are optional ([0..1]).
- Form Fields:**
 - [-] other_context**
 - Encounter identifier
 - [-] openHR heading [0..*]**
 - [-] Allergies**
 - [-] Adverse reaction [0..*]**
 - Causative agent [1..1]
 - Date recorded: 11/05/2014
 - Comment
 - [-] Contraindication [0..*]**
 - Contraindication
 - Evidence/Rationale
 - Date First Verified: 11/05/2014



Web-based clinical review

Content Review Summary: Adverse reaction

Switch to detailed view

Content Review Summary: Adverse reaction (Revision: 6) (SCT)

Invitation

Header

Co

Paul Miller (17-Apr-2013) 

I still feel the name is fundamentally misleading to clinicians as the archetype is to be used for adverse reactions, not just immune mediated reactions.

Heather Leslie (30-Apr-2013) 

There is debate in many circles, but it can commonly be agreed that allergies and intolerances are a subset of the broader notion of an adverse reaction. On the other hand it is not clinically understood that intolerances are a subset of allergies, which is implied by the naming. So being devil's advocate here - I recognise that naming this archetype is largely for historical reasons, but given that this archetype may be in use for many years to come, is it worth considering renaming the concept for posterity? Further, are you recording the allergy or evidence of the allergic reaction? There are many that argue that this is a really important distinction.

Sam Patel (03-May-2013) 

I speak from a secondary care perspective and I will probably rock the boat here, but a distinction is vital between allergy and adverse reaction. The latter can fall within a side effect profile and be addressed if not severe i.e. nausea. I understand that the latter fields may compensate for this, but unless it is clear, agents to treat life threatening conditions may be excluded because of an 'allergy' label. E.g patients with severe streptococcal infection will do better on a penicillin, but this may be excluded because of a vomiting episode on one occasion and the label of 'allergy/adverse reaction'. If there is sufficient detail in the remainder of the archetype then fine, but I feel you can't have one without the other.

Colin Brown (29-Apr-2013) 

prefer "Adverse Reaction" as a more inclusive term for titles etc, it includes "allergies".
As implied by SCT's term
I think BMJ articles supported this a few years ago - could search it out...

Editor Feedback:

@Paul @Colin I agree that adverse reaction would be a better term. This archetype has its roots in the GP2GP 'Drug allergy' archetype where its use is quite limited to the recording of drug allergies and adverse reactions

@Heather

1) I agree that it is worth renaming to 'adverse reaction' in line with thinking elsewhere.

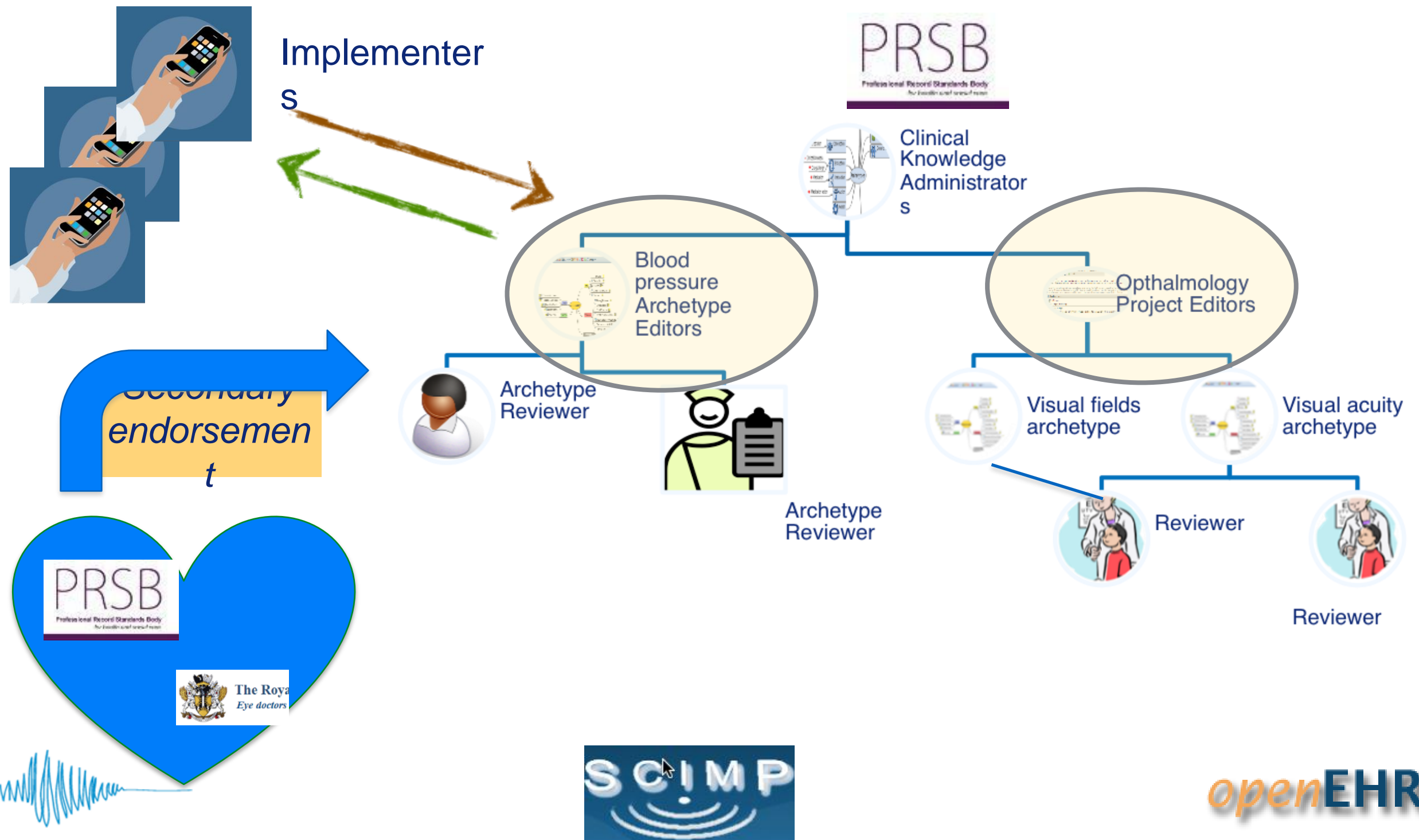
2) We are essentially recording the risk of / propensity to allergy/adverse reaction, with a single code for the reaction observed. UK GP systems all simply capture a single 'allergy' record which mixes the record of the reaction with the assertion of future risk. I know this is hotly debated around the world but at least in the GP systems community we have some real consensus in recording practice.

@Sam This is also one of the aspects that is a hot topic when the recording of allergy is discussed. Should we try to distinguish allergy from adverse reaction from intolerance etc? In practice it has been found that clinicians are pretty poor at making the distinction reliably and, particularly in general practice, the nature of the underlying pathophysiology can be pretty unclear.



openEHR

Evolutionary standardisation 'distributed Governance'



openEHR Foundation openehr.org



An open domain-driven platform for developing flexible e-health systems

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Management Board Election Feb 2015

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[Board elections page](#)

[Current nominations](#)

Industry News

Marand CEO to speak about open health data at HIMSS

Community News

Management Board election update

Release

ADL 2 Work
December 04,

www.openehr.org/home

HSCIC

- have adopted openEHR as primary 'clinical content standards methodology'
- acquiring a separate 'English CKM'
- developing archetypes for
 - PRSB Transfer of Care summary
 - GPOC-R / GP2GP
 - Allergies, Blood pressure, Document metadata

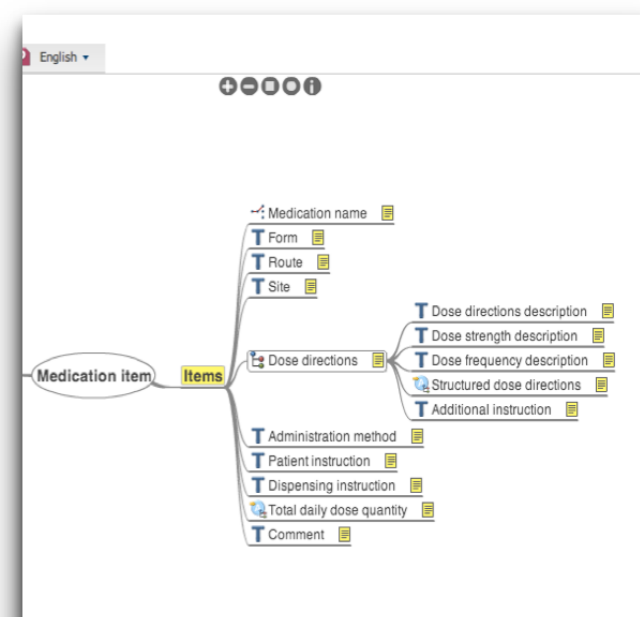


<http://www.infostandards.org/documents/data-structures-v1-0-richard-kavanagh-pptx.pptx>

Professional Records Standards Body



- Professional Records Standard Body (4-country)
 - adopting NHS Scotland / GP2GP medication archetypes?
- Relationship with HSCIC
 - HSCIC (largely) fund PRSB
 - PRSB commission work from HSCIC

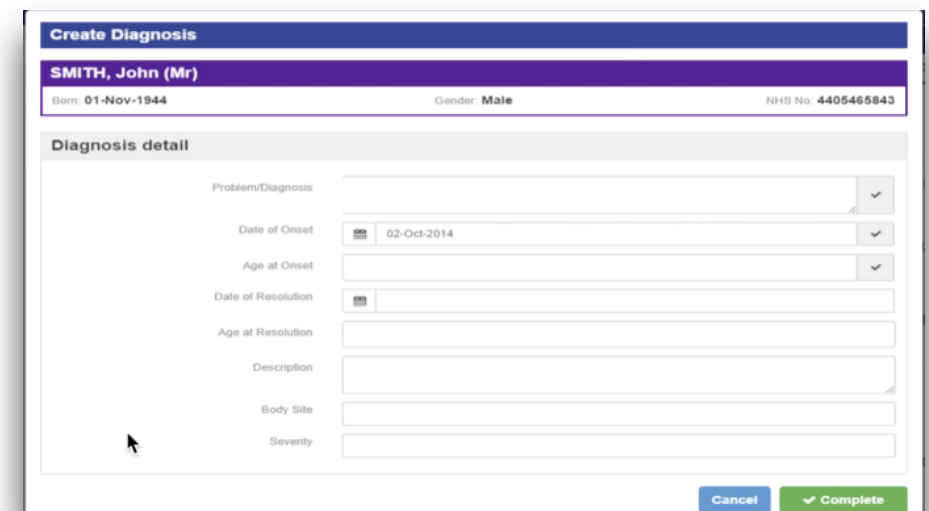
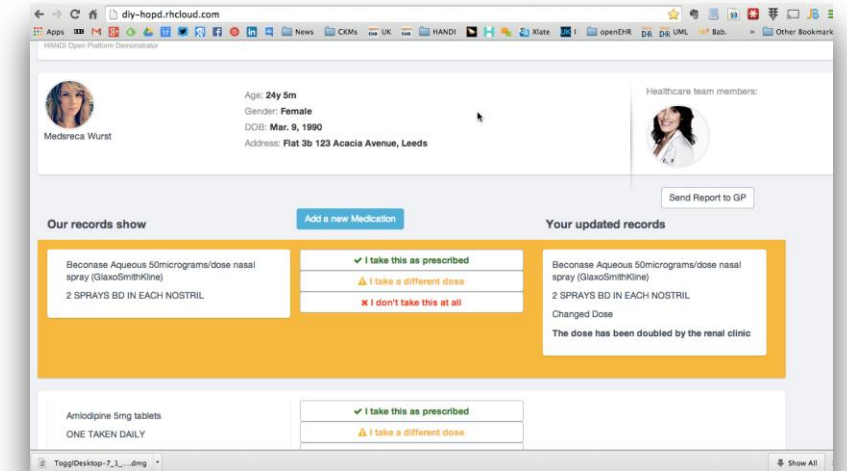


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NHS England



- NHS Code4Health/Open source program
- Using EHRscape engine for SME / clinical training
- Supporting openEHR-based 'Open platform' approach
 - OPENeP
 - Ripple OSI / openDental
 - part share 'UK CKM' licence



NHS-E Interoperability Handbook

7.6 Data structures

Data structures are structured definitions of discrete data entries within care records that are common to ensure that data entries that are determined to have the same logical meaning are represented consistently. They are flagged as either a **Standard**, as **Guidance** or as **Policy**.

Resource	Further information	Link to resource
OpenEHR	<p>OpenEHR is a health record standard prevalent in research and used in provider systems in a number of countries. It utilises a reference model that extends the ISO 13606 reference model as well as archetypes to model care record data structures. These archetypes may then be constructed into templates (to represent datasets) which provide the basis for storing and exchanging electronic health records.</p> <p>A programme of work to collaborate with local organisations on defining data structures for national publication is currently underway within HSCIC. This includes work on the development of Discharge Summary interoperability standards.</p>	http://www.openehr.org/

OPENeP



- open-source HEPMA solution built on openEHR back-end
- will use NHS Scotland medication archetypes for discharge and reconciliation
- tendering for Scottish HEPMA framework

The screenshot shows the EhrScape interface for a patient named Mary Wilkinson. It displays a table of medications with columns for weight, date, and medication details. The medications listed include Clarithromycin, Co-amoxiclav, Metformin, and Midazolam.

Weight	Date	Medication Details
66kg	05-May-2015	Clarithromycin (Clarithromycin) 500 mg – 2X per day – Oral
65kg	06-May-2015	Clarithromycin (Clarithromycin) 500 mg – 2X per day – Oral
65kg	Today 07-May-2015	Clarithromycin (Clarithromycin) DOSE 500 mg – 2X per day – Oral
		Co-amoxiclav (Co-amoxiclav 500mg/125mg tablets) 1 tablet – 3X per day – Oral
		Co-amoxiclav (Co-amoxiclav 500mg/125mg tablets) DOSE 1 tablet – 3X per day – Oral
		Metformin (Metformin) 500 mg – 2X per day – Oral
		Metformin (Metformin) DOSE 500 mg – 2X per day – Oral
		Midazolam 10mg/2ml solution for injection ampoules 12-24-36 ml/h – CONTINUOUS INFUSION – Intramuscular



How is it used : National standards development

The screenshot displays the Clinical Knowledge Manager (CKM) interface, a web-based system for managing clinical knowledge. The browser address bar shows the URL dcm.nehta.org.au/ckm/#. The interface is divided into several sections:

- Header:** Includes the "CENTERMS Centro Nacional de Terminologias em Saúde Clinical Knowledge" logo and navigation links like "Apps", "News", "CKMs", "UK", and "Other Bookmarks".
- Left Sidebar:** Contains the "hscic Health & Social Care Information Centre" logo and the "Clinical Knowledge Manager" title. It features a "Project / Incubator:" dropdown menu set to "All projects", a filter for "All active" (selected), and a list of "EHR Archetypes" including "Cluster", "Composition", "Element", "Entry", "Action", "Evaluation", "Observation", "Instruction", and "Admin". The "Observation" section is expanded, showing a list of resources: "Blood spot screening (v1)", "Gpsoc blood pressure (v0)" (highlighted), "Newborn birth details (v0)", "Newborn hearing examination (v)", and "Newborn physical examination (v)".
- Top Navigation:** Includes a search bar with "Find Resources" and "Newbor...nation" (Newborn nation) and "Gpsoc ...essure" (Gpsoc blood pressure) tabs. A login section with "Username", "Password", "Sign in", and "Forgot your password?" is also present.
- Main Content Area:** Displays the "Gpsoc blood pressure" resource. It features a central diagram with a central node "Gpsoc blood pressure" and three main branches: "Data", "Protocol", and "Description".
 - Data:** Includes "Non-invasive arterial blood pressure" (with sub-nodes "Systolic" and "Diastolic") and "Comment".
 - Protocol:** Includes "Anatomical site", "Cuff size", "Method", and "Korotkoff sound".
 - Description:** (Empty box)

NHS Scotland

- Pioneered clinical-model based standards development
- Full commitment lacking
- Danger of losing 4-country solutions
- What is the alternative?

