



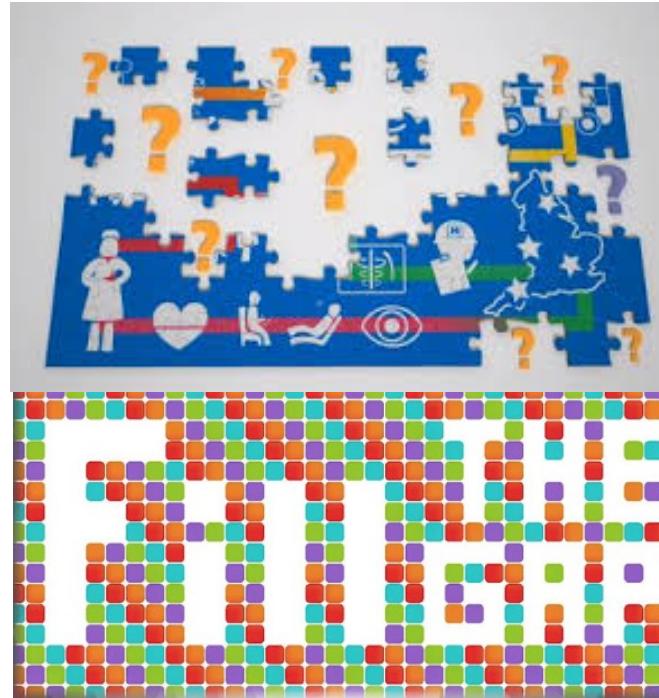
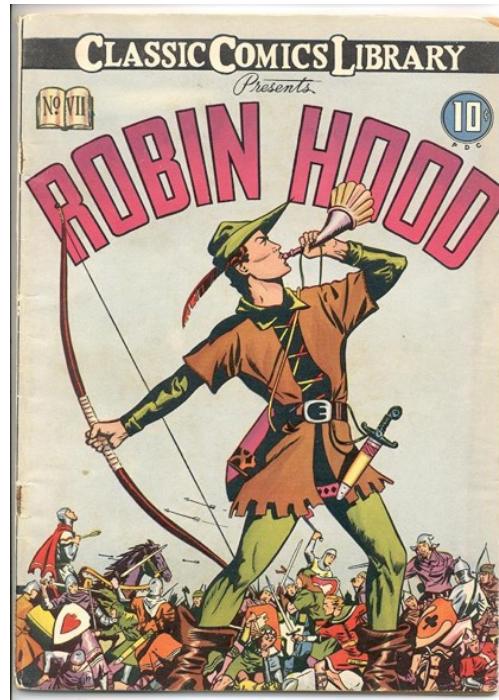
INTEROPen

HL7® FHIR®

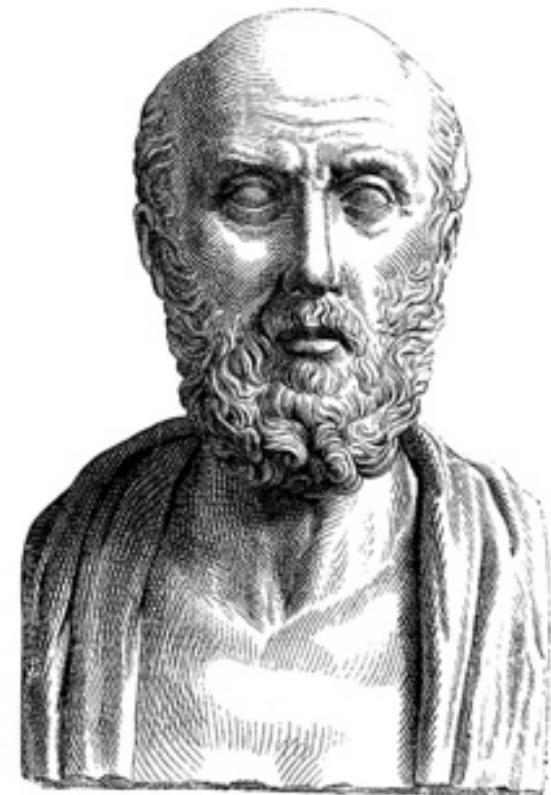
EHI LIVE 2016 – CCIO CONFERENCE
DR AMIR MEHRKAR – CCIO ORION HEALTH



'Robin Hood' Principle: INFORMATION RICH share with INFORMATION POOR



INTEROPERABILITY = #PatientSatefy



The real cost of interoperability?

March 2015 - NHS Litigation Authority set aside

£26.1 billion



The formation of www.INTEROPen.org ACTION GROUP March 2016

 **INTEROPen** An Open Collaborative Leading Healthcare IT Interoperability

Home About Standards development Meetings & events News & media Discuss

Leading organisations and individuals have come together to create INTEROPen, an action group to accelerate the development of open standards for interoperability in the health and social care sector.

[Learn more »](#)

Upcoming events

28 SEP BCS - Fast Healthcare Interoperability: What you need to know about how HL7 FHIR® is changing the game

TBA INTEROPen 5

[View full events list »](#)



News

12 Sep CareConnect Candidate FHIR profiles online

12 Sep PRSB clinical validation of FHIR profiles

12 Sep Proposal for INTEROPen to "OPEN" its membership

12 Sep Welcome Liam King, from Healthcare Gateway

[View all news »](#)

In the media

6 Sep Calling the FHIR brigade

17 Aug Ade Memoire: how long?

15 Aug Fantastic digital developments as we aim to go paperless

23 Jun INTEROPen accelerates development of NHS interoperability standards

20 Jun Q&A: NHS England's new drive for open data standards in healthcare

14 Jun UK health authorities back supplier IT interoperability group

27 May Being INTEROPen Care-Coordination is not an Option for Providers and Footprints...

[View all In the media »](#)

Tweets

INTEROPen Retweeted
Philip Scott @CH-Scott
@HL7UK @HL7 @INTEROPenAPI @NHSDigital
#HL7UK 8 Nov event on #interoperability
eventbrite.co.uk/e/nhsmed-d-in.../



SNOMED CT Interoperability Forum
Co-chaired by Ann Wigginson (Harmony Syst...
eventbrite.co.uk

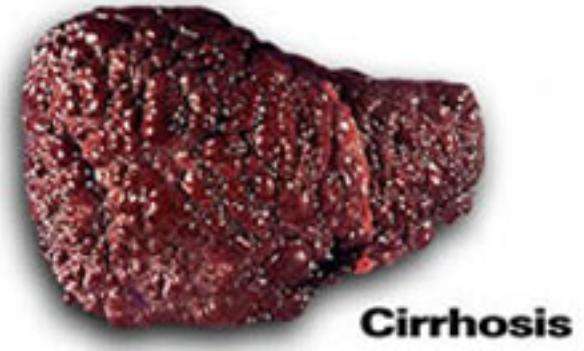
[View all tweets »](#)

OPEN collaboration of individuals, industry, standards organisations and health and care providers, who have agreed to work together to accelerate the development of open standards for interoperability

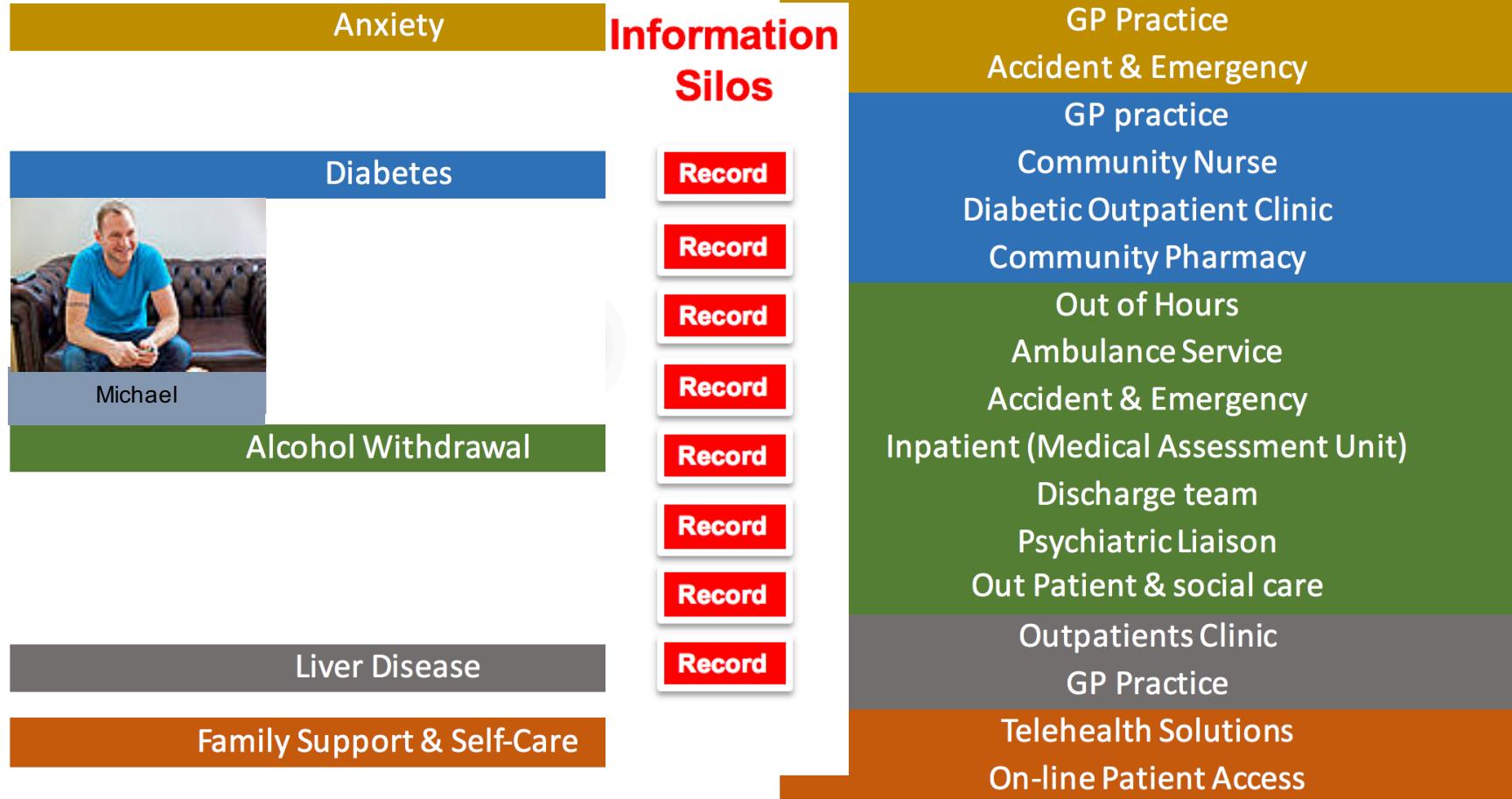


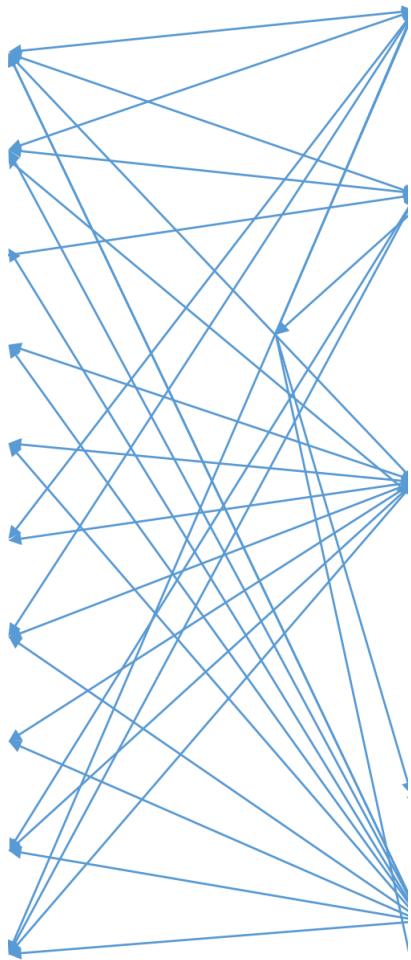
membership@interopen.org

Michael's journey | Interoperability in action



Michael's Journey – Care Domains

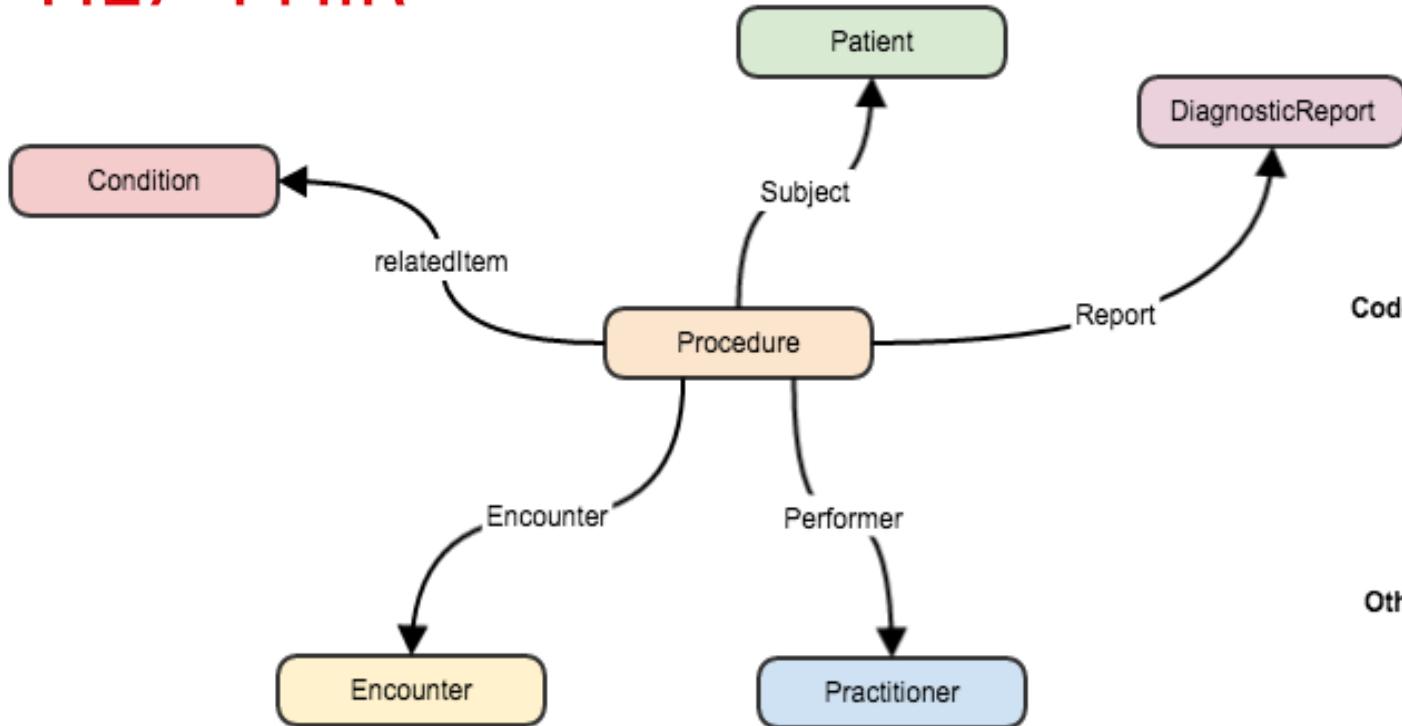




PRIORITY
INFORMATION

Conditions
Medications
Allergy
Immunisations
Procedures
Observations
Encounters
Tasks and Notes
Appointments
Referrals



**Coded properties**

type
bodySite
indication
performer.role
complication
relatedItem.type

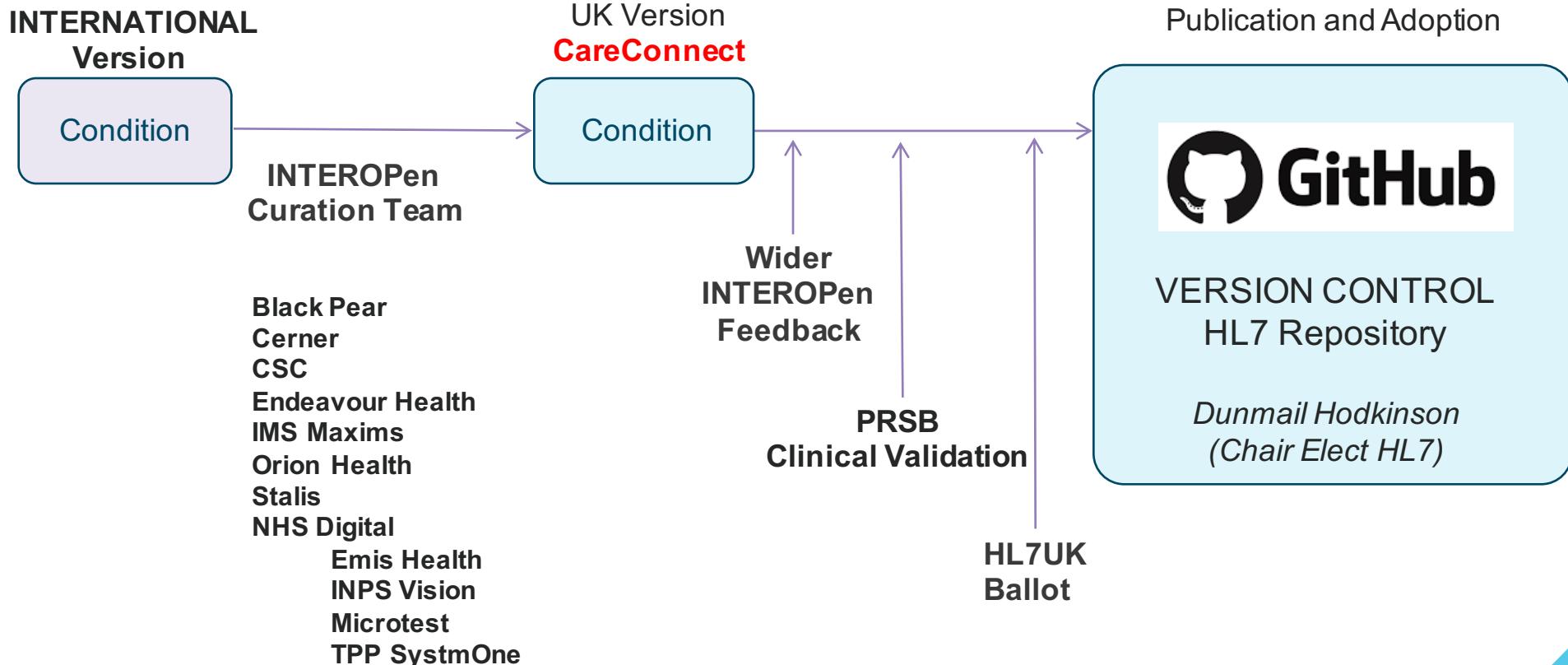
Other properties

identifier (Identifier)
outcome (String)

Extensions

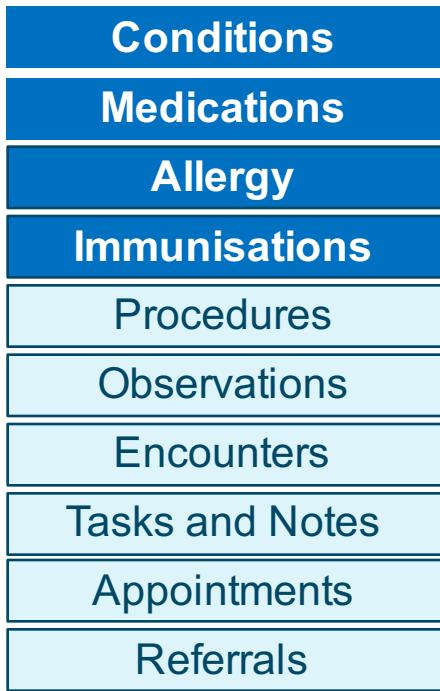
as required...

Evolving INTEROPen methodology – an example with CONDITION





HL7 CareConnect
FHIR MAIN Branch



NHS Digital
GPConnect CareConnect
IMPLEMENTATION FHIR Branch

Vendor Systems
using these
Open Standards

?Vendors ?Providers
?Digital Exemplar
New Use Case CareConnect
IMPLEMENTATION FHIR Branch

FHIR tooling (clinicians and techies) – clinFHIR an example

clinFHIR.com



<http://www.fhirdevdays.com/registration/>

<https://fhirblog.com/category/clinfhir/>
[@David_hay25](https://twitter.com/DAVID_hay25)



[Designer](#)[Mind Map](#)[Table](#)[Mapping report](#)[Json](#)[TreeData](#)

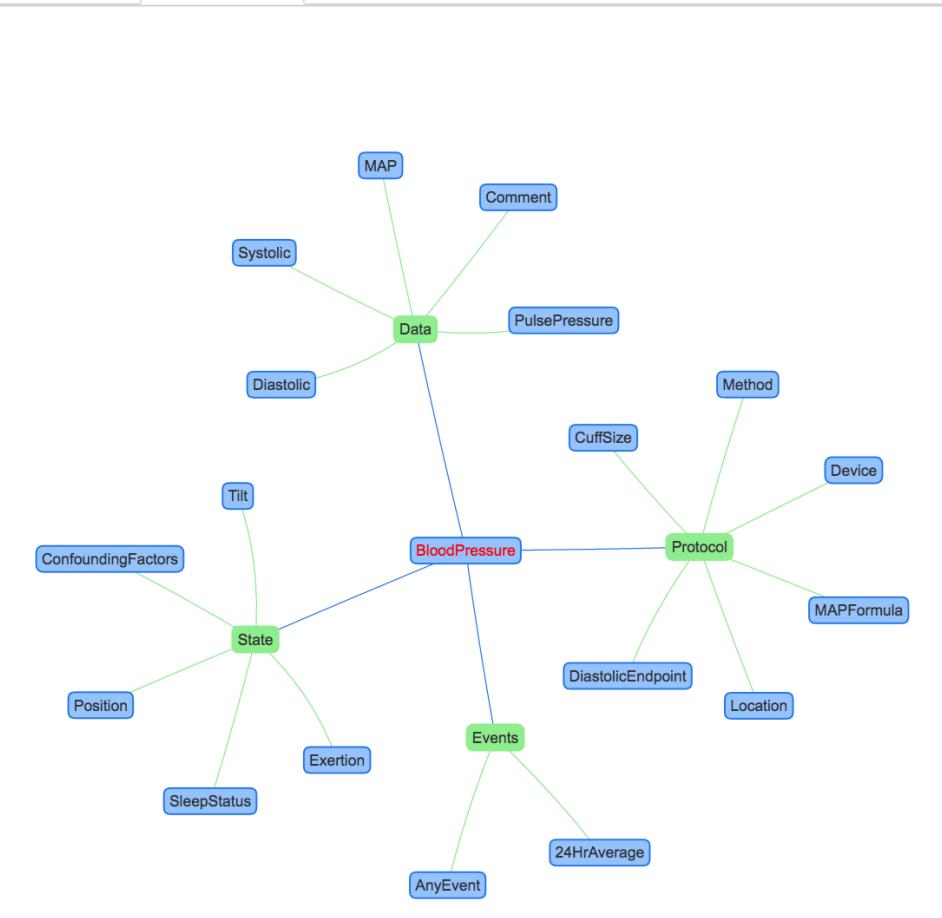
Model properties

[Edit](#)[Summary](#)[History](#)

Model Name	BloodPressure
Model Title	BP model
Model Purpose	from openER archetype
Mapping	Single Observation with multiple extensions

Element path Systolic properties

Path	BloodPressure.Data.Systolic
Short	The systolic blood pressure
Description	The Systolic blood pressure
Comments	
Multiplicity	0..1
Datatypes	Quantity
Mapping notes	Observation.component code = 8462-4 valueQuantity.unit=mmHg
Actions	Edit Element Add Element Remove Element



Profile editor

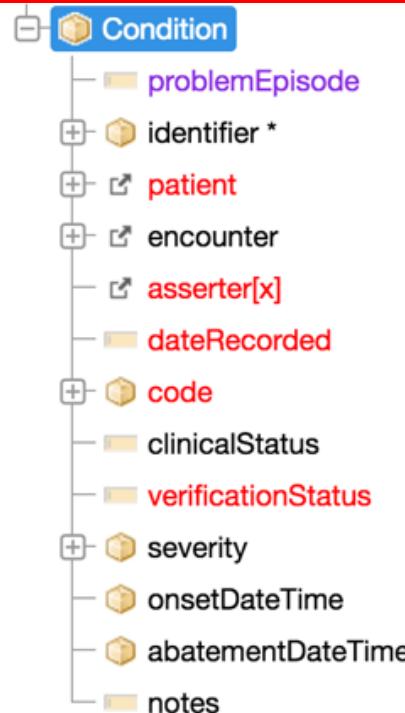
Mind Map

Difference from base

Profile description

Table view

Profile resource (Json)

CareConnect-Condition-1

<https://fhirblog.com/2016/05/10/using-clinfhir-for-profiling/>

[Profile editor](#)[Mind Map](#)[Difference from base](#)[Profile description](#)[Table view](#)[Profile resource \(Json\)](#)**Differences from the base resource: <http://hl7.org/fhir/StructureDefinition/Condition>**

extension	Condition.extension	The problem episode of which this condition is part of. The episodicity type (Review, F and the target problem episode.
extension	Condition.code.coding.extension	Used to qualify or indicate extra information about a coded value e.g. Laterality, Sever
extension	Condition.code.coding.extension	Used to qualify or indicate extra information about a coded value e.g. Laterality, Sever
removed	Condition.category	A category assigned to the condition.
removed	Condition.onset[x]	Estimated or actual date or date-time the condition began, in the opinion of the clinician.
removed	Condition.abatement[x]	The date or estimated date that the condition resolved or went into remission. This is often referred to as "remission" or "resolution" - Conditions are never really resolved, but they can abate.
removed	Condition.stage	Clinical stage or grade of a condition. May include formal severity assessments.
removed	Condition.evidence	Supporting Evidence / manifestations that are the basis on which this condition is suspected.
removed	Condition.bodySite	The anatomical location where this condition manifests itself.





INTEROPen

CODE4HEALTH

CCIO
Network +

Health CIO
Network +



Join us..



@INTEROPSUMMIT

Where we learn a common language to connect our care system

Dr Cian Hughes Senior Research Scientist, DeepMind Health

Dr Amir Mehrkar GP, CCIO Orion Health, INTEROPen

Dr Wai Keong Wong, Haematologist, UCLH, Wachter Review

March 2nd & 3rd 2017
DeepMind Health, King's Cross

Interoperability's timeline | up to US TOGETHER

