



Health & Social Care
Information Centre

Adoption of FHIR in HSCIC projects

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The current HSCIC HL7 landscape

- National architecture is massively invested in HL7v3 and web services
- Very widely deployed
 - Over 100 “live” messages
 - Thousands of service end points
 - Billions of messages flowing
- However; it is almost universally disliked by the supplier base in England
- The cost of development is reportedly high due to niche skills required for HL7v3

HSCIC standards horizon

- HSCIC have been tracking FHIR since its inception (originally RFH)
- Fed back into successive development iterations and ballots to ensure it met HSCIC known requirements
- Recognised FHIR as a candidate replacement to HL7v3 when it achieved a point of stability.

Can we have FHIR please?

- New projects an opportunity for re-evaluating the HL7 standards used
- “Can we use FHIR please?”
 - Nobody ever asked for HL7v3
 - Do they know what they are asking for?
- Industry are currently seeing FHIR as an obvious way to go (mostly)
 - GPSoc IM2 and IDCR APIs
 - though few (if any) of them have any implementation experience yet..

Introducing FHIR into the National Architecture

- FGM Risk System is a new national requirement to be deployed across England
- A new messaging capability required to query a national repository
- Technical complexity is low and offers an ideal test case for trialling FHIR
- Infrastructure, timelines and existing supplier base mandated a “messaging” solution
- Internal reluctance to move away from HL7v3

Development Team Feedback

- Development of FHIR interfaces via technical “proof of concepts” and “demonstrator” systems.
- Trialling new “agile” development processes internally within HSCIC
- Development team reportedly liked
 - Open accessibility of the FHIR standard
 - Simple modular constructs (i.e. the resources)
- Managing resource identifiers perceived to be a challenge for the future
- Engaged and looking for the next FHIR project

Utilising the FHIR ecosystem

- The creation of “Profiles” within FHIR have been created using the “Forge” developed by Furore and free to use for the FHIR community.
- HSCIC created “publication” software to build the actual implementation guide, published online here <http://data.developer.nhs.uk/fhir/fgm/> This was evolved from Furore’s open source work in this area.
- HSCIC have created open source exemplar software to create/consume FHIR messages being produced.
 - C# version using Ewout Kramer’s API being used here https://github.com/im2admin/FGM_CSHARP
 - Java version will be added - we intend to use the HAPI API
- Early days, but when compared to HL7v3 the FHIR community is more closely aligned and the tooling more functionally advanced. It’s rate of progression seems to be accelerating.

HSCIC Projects using FHIR

GPSoc IM2 API Development

- APIs to create an open, consistent interface to primary care systems.
- Initial focus on
 - Demographics
 - Appointment Booking
 - Task Management
- Collaborative work with the Primary Care systems suppliers through GPSoc

HSCIC Projects using FHIR

eRS - API Development

- Initial tranche of APIs for technology preview.
- Initial focus on
 - Service Discovery
 - Reference Data
- Several use cases that stretch the capabilities of FHIR are being fed back to the FHIR core team.

HSCIC Projects using FHIR

IDCR - API Development

- An NHSE initiative to facilitate the collaborative development of APIs
- Initial project board draft TOR being created now.
- Several Work Groups envisaged
 - Requirements
 - API Standards
 - Architecture
 - Testing & Accreditation

HSCIC Projects using FHIR

Diagnostic Data Services

- Development of a “Technology Preview” of a FHIR enabled “Pathology Results” message.
- Based on the existing PMIP EDIFACT message deployed into primary care systems
- First version expected early 2016
- A number of further iterations planned to encompass new requirements for Pathology results over and above EDIFACT

HSCIC Projects using FHIR

Maternity Pathways Messaging

- Development for Public Health England and Central London Community Hospital.
- First “Draft” message for “Birth Notification” delivered using FHIR DSTU1
- Currently being refactored to DSTU2 for release later this month
- Several other message flows anticipated over the next 3-6 months

HSCIC Projects using FHIR

eRedbook - Vaccination Profiling

- Vaccination profiles a common need across multiple projects
- Required for eRedbook in the short term and GPSoc IM2 APIs in due course.
- Collaborative development of FHIR profile for vaccination to be initiated shortly.

HSCIC and FHIR – The next steps

- Testing and Validation tooling
 - Validation of FHIR payloads against published profiles
- FHIR Repository
 - Online repository for HSCIC's FHIR assets
 - Potentially to include a mechanism for collaborative review of FHIR profiles
- Implementation Feedback
 - FHIR is a DSTU it will only improve via the learnings discovered through implementation
- Prepare for change
 - DSTU2 will be superseded at some point we need to ensure we have a robust policy for handling this

Any Questions



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