FHIR vs + OpenEHR

• Alastair Allen, CTO Healthcare
# hello my name is...

Alastair Allen
Healthcare CTO, Kainos

@alastairallen  alastair-allen
Evolution of health standards in Kainos

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1st Customer

Ipswich Hospital NHS Trust select Kainos to deliver an Electronic Document Management System to digitise their legacy and day-forward case-notes.

1st Mobile App and Public API

Our first secure, offline-first mobile app and accompanying REST API’s are released, starting our interoperability journey.

1st Live FHIR Application

We adopt a cloud-first policy for all new product lines and go live with our first application using FHIR for data exchange and persistence.

FHIR + OpenEHR

Combine FHIR and OpenEHR to provide a rich vendor neutral data platform with industry standard API’s.

Monolithic architecture with proprietary data model

RESTful API’s with proprietary data model

Microservices architecture with standards based services
FHIR vs OpenEHR

Alastair Allen
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Today I attended an event on the NHS and openEHR, hosted by Salford Royal NHS Foundation Trust. It was a great event with lots of interesting and inspiring stories about how people are combining innovation and open standards to help enable the delivery of better care to patients. As someone who has been working with FHIR for a number years to help solve similar problems I was interested to learn more about openEHR, how people are using it and also how it aligns with FHIR.

https://medium.com/@alastairallen/fhir-vs-openehr-75a0a7c6e5a7
FHIR Use Cases

1. EXCHANGE
   - Integration Engine
   - v2
   - v3

2. FACADE
   - Application
   - Translation Interface
   - Database

3. PERSISTENCE
   - Application
   - Database

FHIR Scope
Challenges
FHIR vs openEHR
FHIR + OpenEHR (Exchange)

Pattern:

- Use FHIR API for exchanging summary data between systems e.g. Secondary Care to Primary Care
- Use OpenEHR API for writes to applications that need to capture a broad dataset
**FHIR + OpenEHR (Facade)**

**Pattern:**
- Don’t use OpenEHR (unless there is a need/desire to move database to OpenEHR)
FHIR + OpenEHR (Persistence)

Pattern:
- Use FHIR API for READS
- Use OpenEHR API for WRITES
Use Case Summary

**OpenEHR** optimized for:
- Storage of data in vendor neutral format
- Clinically designed models following “maximal dataset”
- Semantic querying of data through AQL

**FHIR** optimized for:
- Exchange of information between systems
- Common models following “80/20” rule
- Exposing data through industry adopted API’s
Learns

• Translation and normalization of data between systems must be clinically led. Standards will not address this challenge.

• Translation between FHIR and OpenEHR is improving but still limited. Maturity is needed for a FHIR+OpenEHR partnership to thrive.

• Education is important to get beyond the hype.
In summary

FHIR and OpenEHR are **complimentary, not competitive**. Combine both to create an open, interoperable eco-system
Thank you