Future of Clinical Specialty Registries
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The legacy of registries is a paper form for abstraction of data from paper charts.
Electronic means web forms, CDA and data from HL7 v2 messages.
There is still a human involved in many transactions.
2006: 7 clinical specialty registries

2016: 165 clinical specialty registries
Interoperability: 2000
Data about an individual is growing relentlessly

William Stead, et al
Interoperability: 2020

Data for an individual or population located in multiple systems is accessible, and data is viewable from one system and usable in the workflow of the viewer
REST: The Essence of FHIR

REpresentational State

Google, Twitter, FaceBook

Your favorite travel website
FHIR is both the technology and the meaning of the data.
The Challenge
A black horse with white stripes
…… or a white horse with black stripes?
What if you took scissors and cut a History & Physical into data elements?
Detailed Clinical Models = FHIR Profiles

When is a blood pressure not a blood pressure?

Detailed Clinical Models:
Profiles that give data context and semantic interoperability.
Clinical Information Modeling Initiative

- Fostered by HL7 in 2010
- Create reference detailed models of clinical data
- Create processes to transform reference models into implementable artifacts
FHIR Profiles

Profiles are implementation guides
- Built for specific use cases ranging from simple to complex
- Encompass the entire scenario

Profiles include entire implementation
- Multiple Resources & Extensions, the building blocks of FHIR
- Vocabulary/terminology/code binding

Interoperability is in the FHIR Profiles
- FHIR Profiles are based on formal information models
- Shared profiles create interoperability
Functions of Future Registries

Patient index
Functions of Future Registries

- Patient index
- Key characteristics
Functions of Future Registries

- Patient index
- Key characteristics
- Consent management
Functions of Future Registries

- Patient index
- Key characteristics
- Consent management
- Data locator service
Functions of Future Registries

- Patient index
- Key characteristics
- Consent management
- Data locator service
  - Data subscriptions
SMART enabled EHR System

Mobile App

EMR
LIS
PACS

FHIR Layer

Presentation

Services

Open Health APIs

OATH
REST
JSON
FHIR
Health Information Exchange Platform

Mobile App/ Web App

Data Repository
EMR
LIS
RLS

FHIR Layer

Presentation

Open Health APIs

OATH
REST
JSON
FHIR

Services
Thank You

Questions?

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