

***Clinical Information Interoperability  
Council (CIIC) – Providing a Shared  
Repository of Detailed Clinical Models  
for all of Health and Healthcare***

**NIH HCS Collaboratory and PCORnet**

**December 1, 2017**

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# Agenda

- Why?
- What we want to do
- How?
- Questions, comments, and discussion



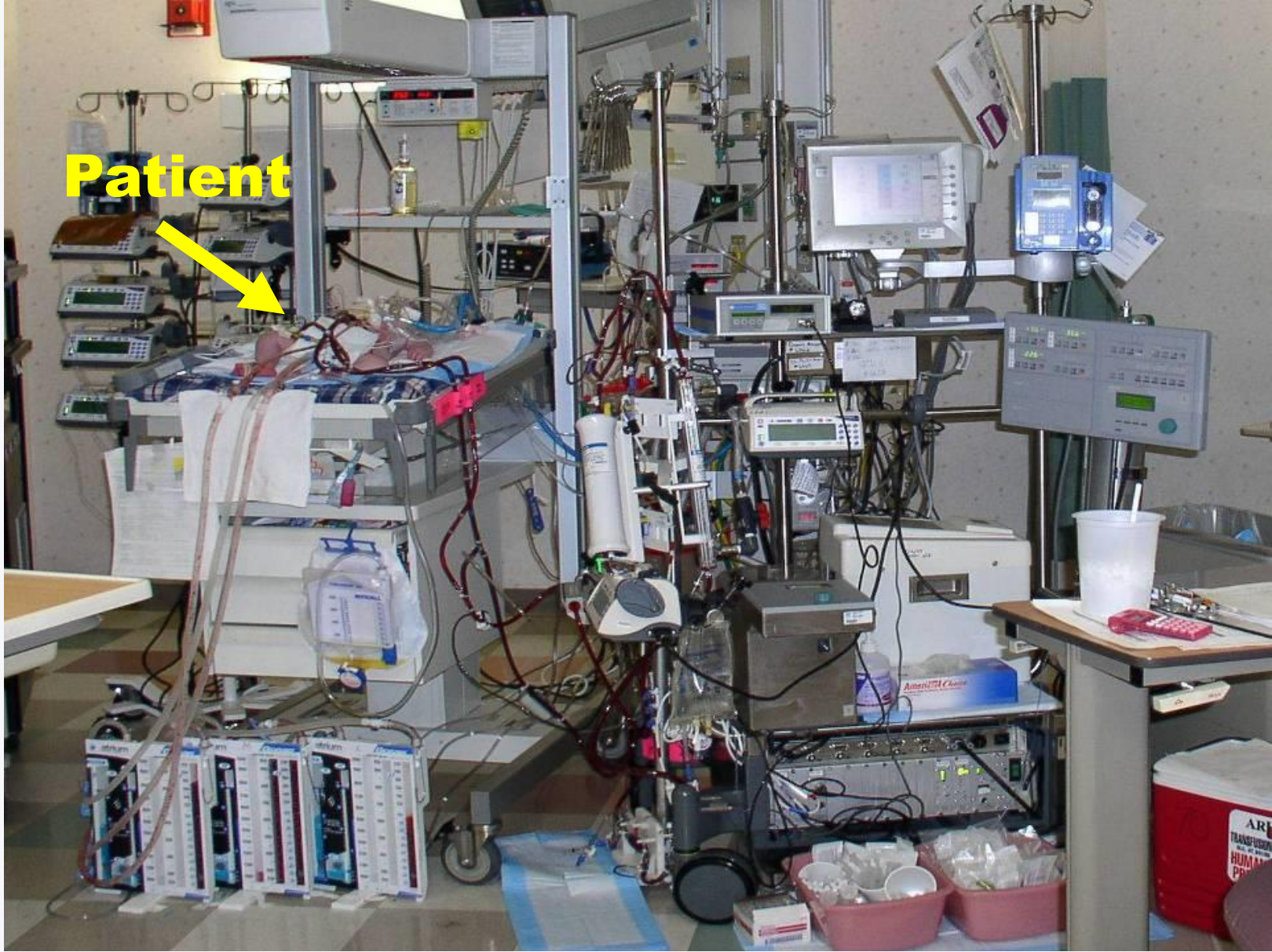
# Why?



# Why?

“To help people live the healthiest lives possible.”





## Core Assumptions

‘The complexity of modern medicine exceeds the inherent limitations of the unaided human mind.’

~ David M. Eddy, MD, Ph.D.

‘... man is not perfectible. There are limits to man’s capabilities as an information processor that assure the occurrence of random errors in his activities.’

~ Clement J. McDonald, MD



Eileen



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THE HEALTHCARE INNOVATION ECOSYSTEM

# Why?

- We need to
  - Provide better care
    - By sharing **executable** clinical decision support modules
  - Decrease cost
    - By providing better care
    - By eliminating point-to-point mapping of data elements
  - Make clinicians and patients happier
  - Provide accurate computable data as the foundation of a learning health system (LHS)





# What we want to do

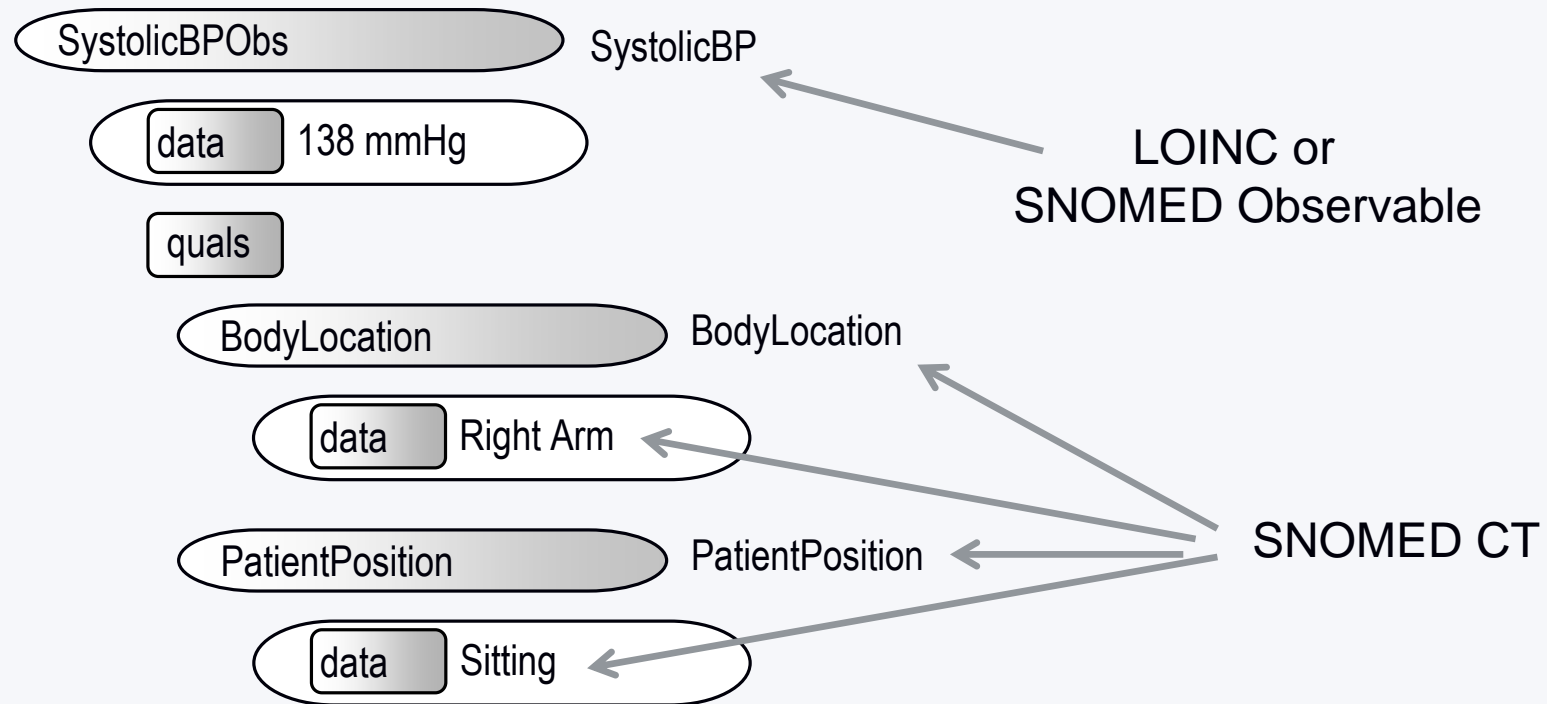


# What

- We want to create ubiquitous sharing of standardized data across the breadth of medicine for:
  - Direct patient care
  - Patient entered data and outcomes
  - Research and learning
  - Public health
  - Clinical trials
  - Data from devices
  - Post market surveillance
  - Quality and disease specific registries
  - Billing and health administration
  - **Any where that we share health related data and information .....**



# Make a shared repository of Detailed Clinical Models (aka a logical models)

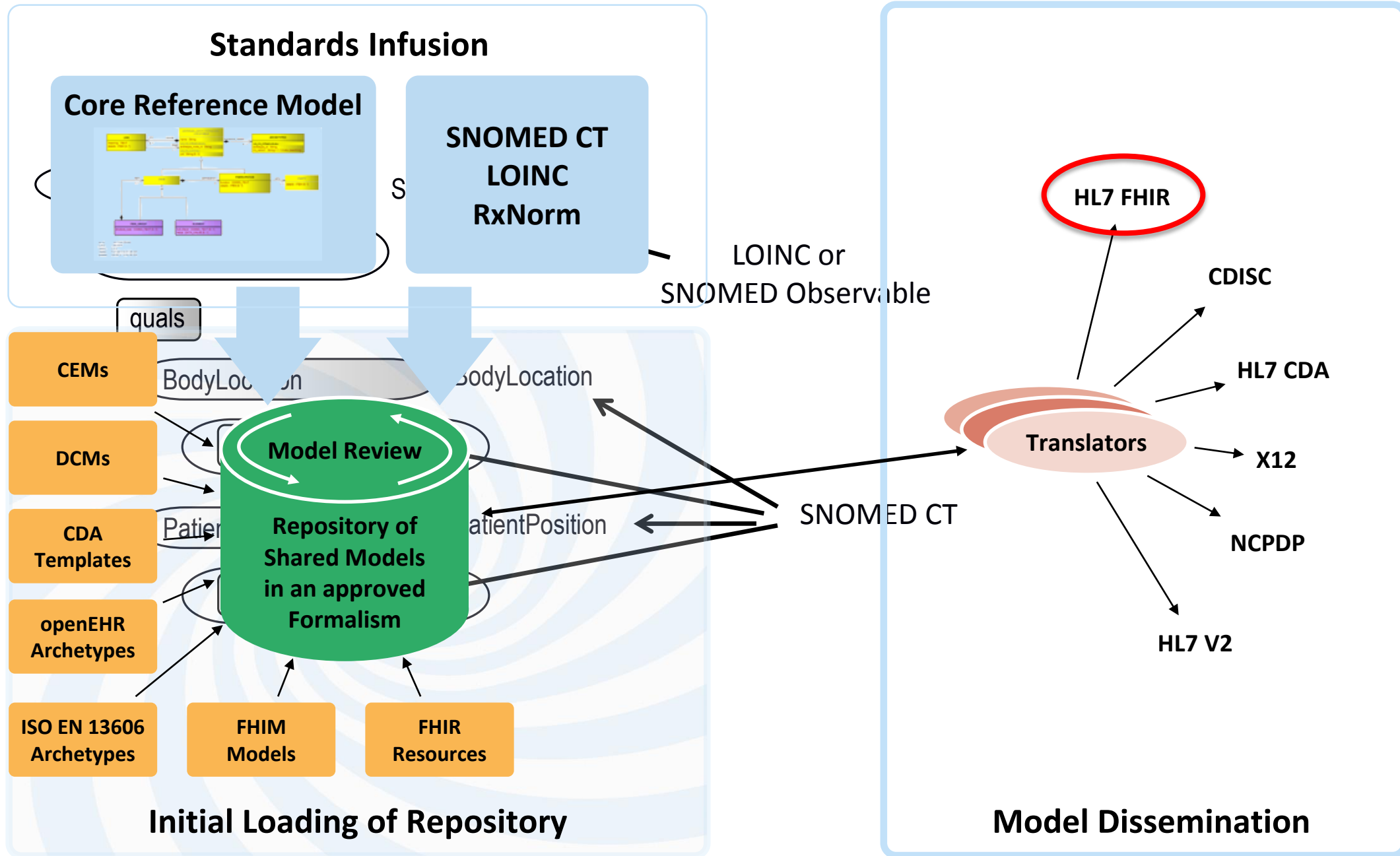


# What

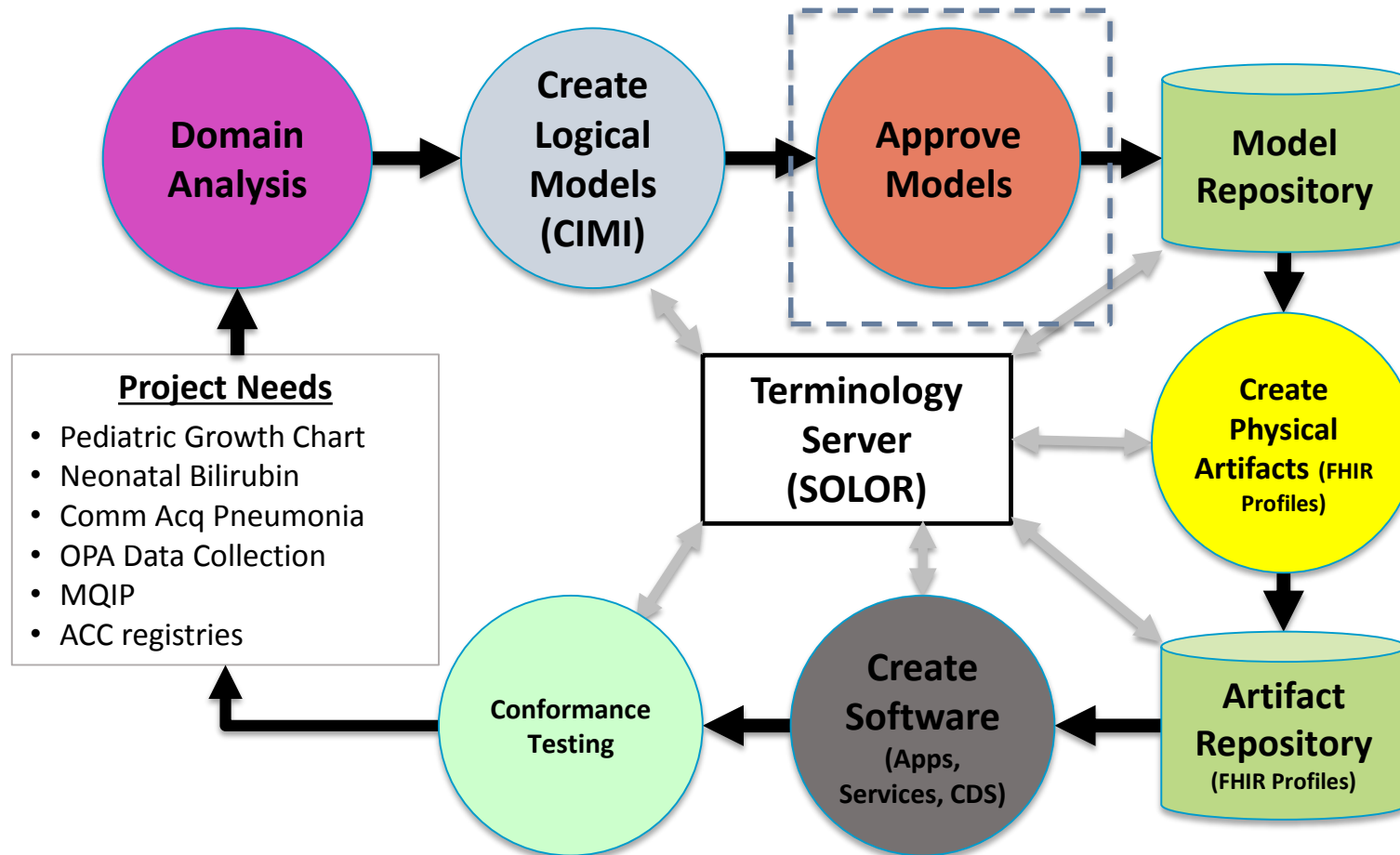
The models are used during software development, which makes the process much faster and more efficient, and it insures that the references to data in the software adhere to the agreed standards.



# Logical Model Development Lifecycle



# The Interoperable App Development Process



# The ultimate value of detailed information models

- Software is developed much faster
  - Clinical knowledge is contained in the models
  - Much easier for software engineers
- The data used in the applications is completely conformant to standards, leading to semantic interoperability
- If you follow the SMART on FHIR development strategy, your software can be shared with any system that supports the approved standards



# Three related but very different questions

- What data should be collected? (part of domain analysis)
  - It will be different for different situations
- How should the data be modelled?
  - Two fields or one (the degree of pre and post coordination)
- What does the data mean?
  - How do we make computable definitions for diabetes mellitus, myocardial infarction, heart failure, chronic renal failure, etc.






# How?



# How

- All stakeholders agree to work together
- Have practicing front-line clinicians direct the work
- Capitalize on the work in existing projects
- Agree to use a common format for representing the models
- Use and share common tools to create the models
- Share the models through an open internet accessible repository
- Approve one preferred model for a given kind of data in a given situation
- Use existing models whenever possible



The background features two large trees. The tree on the left is lush with vibrant green leaves, while the tree on the right is a dark silhouette with bare, intricate branches. The text is overlaid on the central area between the two trees.

# **CIIC 2017**

**Meeting Overview**

**July 13, 2017**

# Summary of the July 13<sup>th</sup> meeting in Bethesda

- Keynote speaker – Don Rucker, MD (National Coordinator for HIT)
- About 120 attendees
  - Representing – AAN, AAO, ACOG, ACS, ACC, ACP, APTA, ANA, FDA, CDC, NCI, AHRQ, NIAID, DoD, VA, PCPI, AMIA, SPM, HIMSS and many other organizations
- Meeting outcomes
  - CIIC should continue
    - Create mission, vision, a plan for initial governance
    - Develop a mailing list and a discussion forum
  - Projects
    - ACOG – OPA – FPAR, Cancer DTR, MDEpiNet RAPID, Vital Signs, Skin and Wound Assessment, PCPI Registries on FHIR, ...
  - Upcoming meetings
    - December 5-7 in New Orleans with HL7 Partners in Interoperability
    - January 10-12 at LDS Hospital in Salt Lake City



# The END

(or maybe the  
beginning?)

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