



**CONNECTING FOR HEALTH  
COMMON FRAMEWORK**

---

Resources for Implementing Private and  
Secure Health Information Exchange

**Technical Overview of the Common  
Framework**

# Common Framework



## Connecting for Health principles

- Builds on existing systems (“incremental”) and creates early value for doctors and patients
- Designed to safeguard privacy – imposed the requirements and then designed the solution
- Consists of an interoperable, open standards-based “network of networks” built on the Internet
- Leverages both “bottom-up” and “top-down” strategies

# The Connecting for Health Model for Health Information Sharing

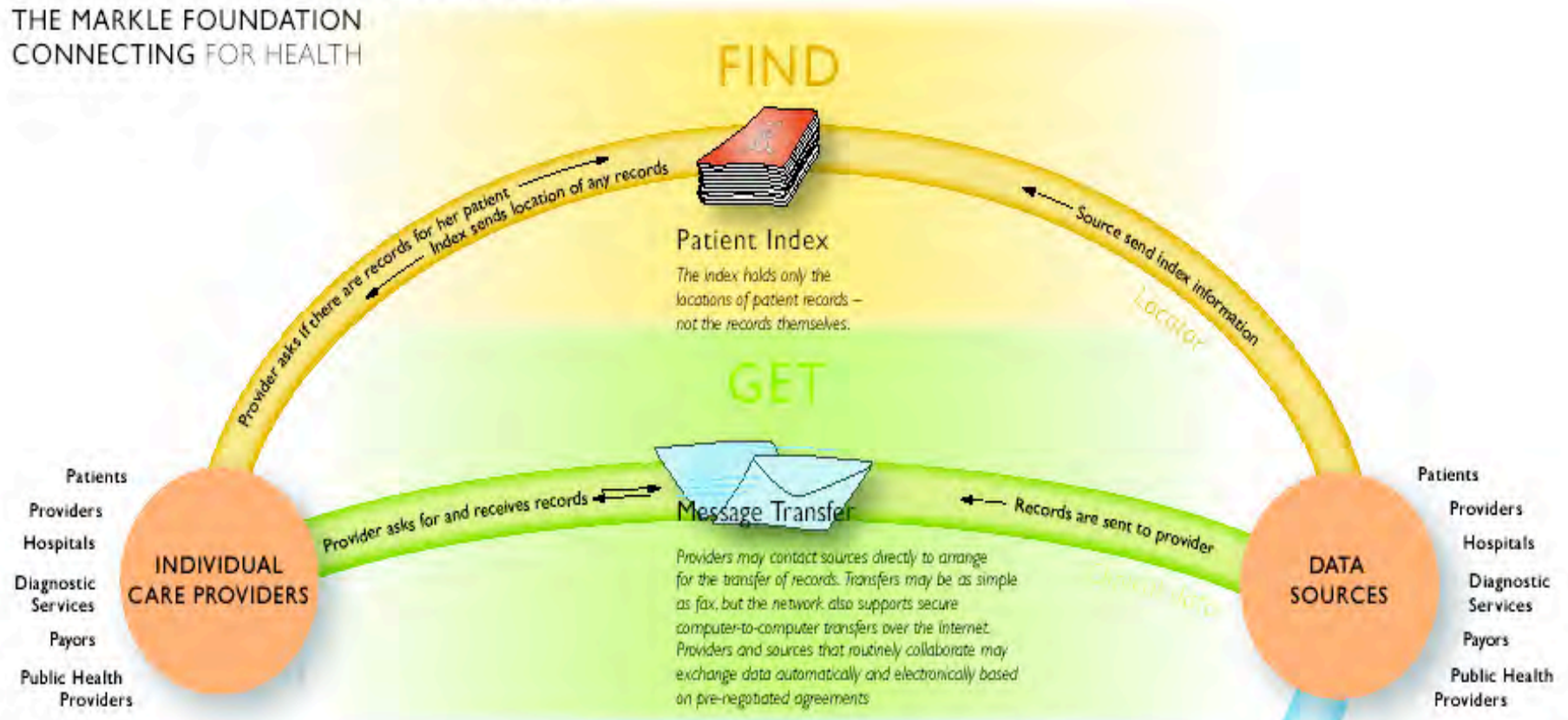
- Sharing occurs via a network of networks—not a completely new architecture
- The nationwide “network” is made up of smaller communities or SNOs (Sub Network Organizations)
- The model relies on an RLS (Record Locator Service) to locate patient records

# Overview of Connecting for Health Architecture

- A sub-network organization (SNO) brings together a number of providers and other health information sources
- They are linked together by contract
- Agree to follow common policies and procedures
- Agree to create and use a shared index to where patient records are located (RLS)
- Agree to create and use a common gateway to share information with other networks (ISB)

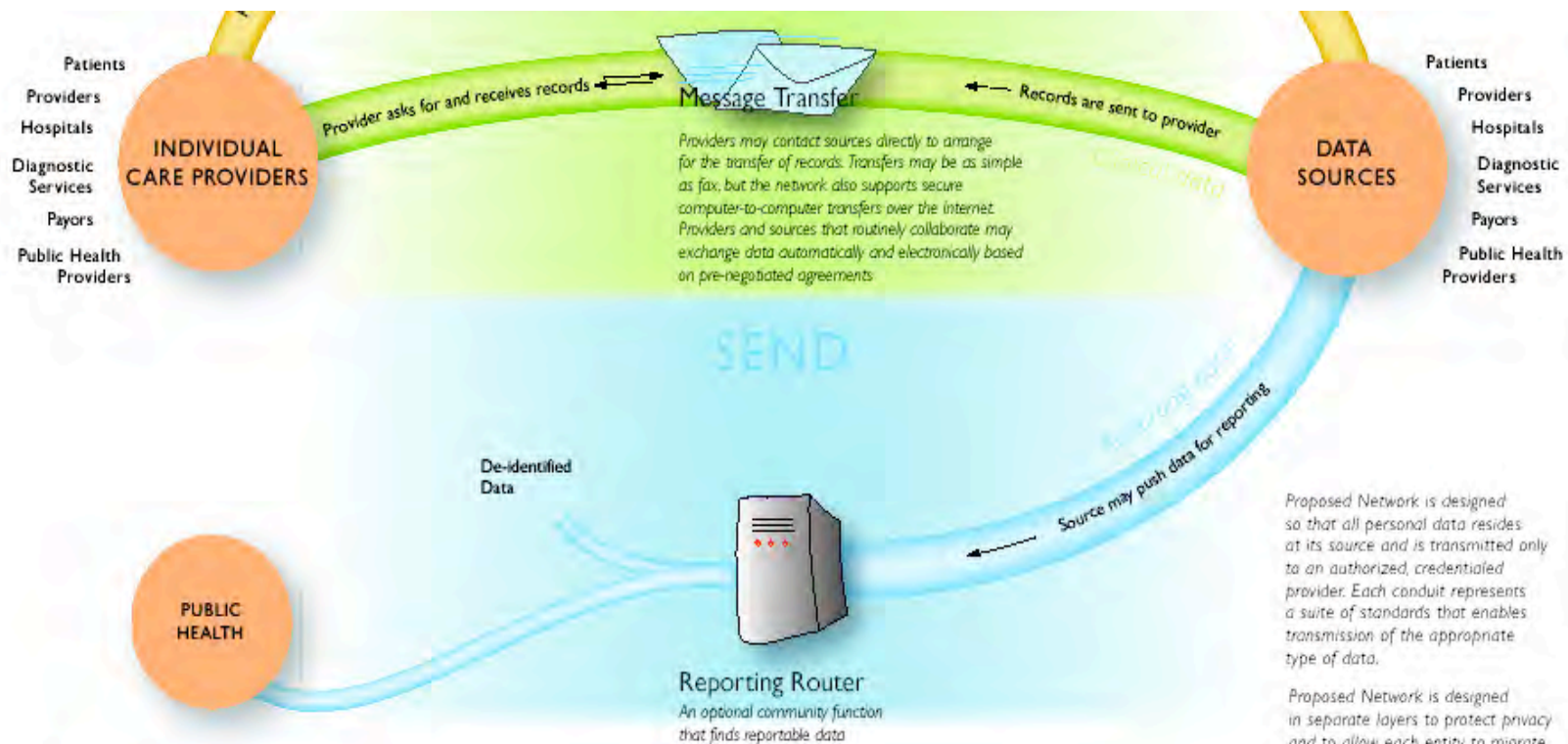
# Architecture is Federated and Decentralized: Once records are located, the health information flows peer-to-peer – with patient's authorization

THE MARKLE FOUNDATION  
CONNECTING FOR HEALTH



CONNECTING FOR HEALTH COMMON FRAMEWORK

# The architecture supports point of care information sharing and population-based reporting



V 1.9 © 2004 The Mariké Foundation Graphic by Tom Bentlin

# Connecting for Health's Guiding Technical Principles

1. Make it “Thin”
2. Avoid “Rip and Replace”
3. Separate Applications from the Network
4. Local Control of Protected Health Information
5. Federation
6. Flexibility
7. Privacy and Security
8. Accuracy

# What is a Record Locator Service (RLS)?



# What is a Record Locator Service (RLS)?

- An index containing patient demographic information and the location of a patient's medical records
- Contains no clinical information – obtaining the clinical record is a separate transaction NOT involving the RLS
- Participating entities decide whether or not to put record locations into the RLS
- Designed to take a query in the form of demographic details and return only the location of matching records

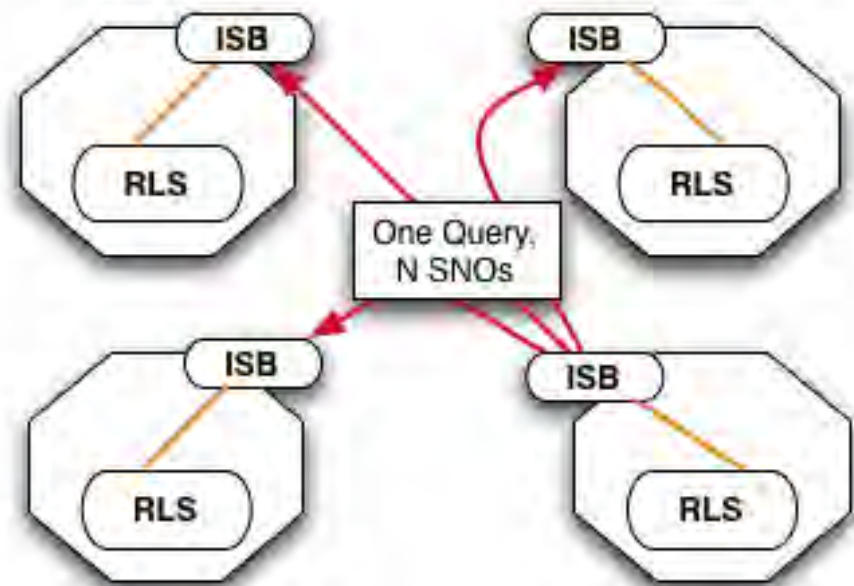
# What is a SNO?

- A group of entities (regional or non-regional) that agree to share information with each other
- Implements the Common Framework
- Provides an Inter-SNO Bridge for all external traffic
- Runs an RLS internally



# How Multiple SNOs Connect

- A SNO queries other SNOs when it knows:
  - An institution where the patient received care
  - A region where the patient received care
- Same query formatted for all remote SNOs
- Only need location of ISBs



# From Theory to Prototype

- We built a prototype to test the model and develop the Common Framework
- Three geographic regions: IN; MA; Mendocino County, CA
  - Different technology, systems
  - Different organizational histories and structures

# Questions for the Prototype to Answer

“Where are records for Patient X, and how can I get them?”

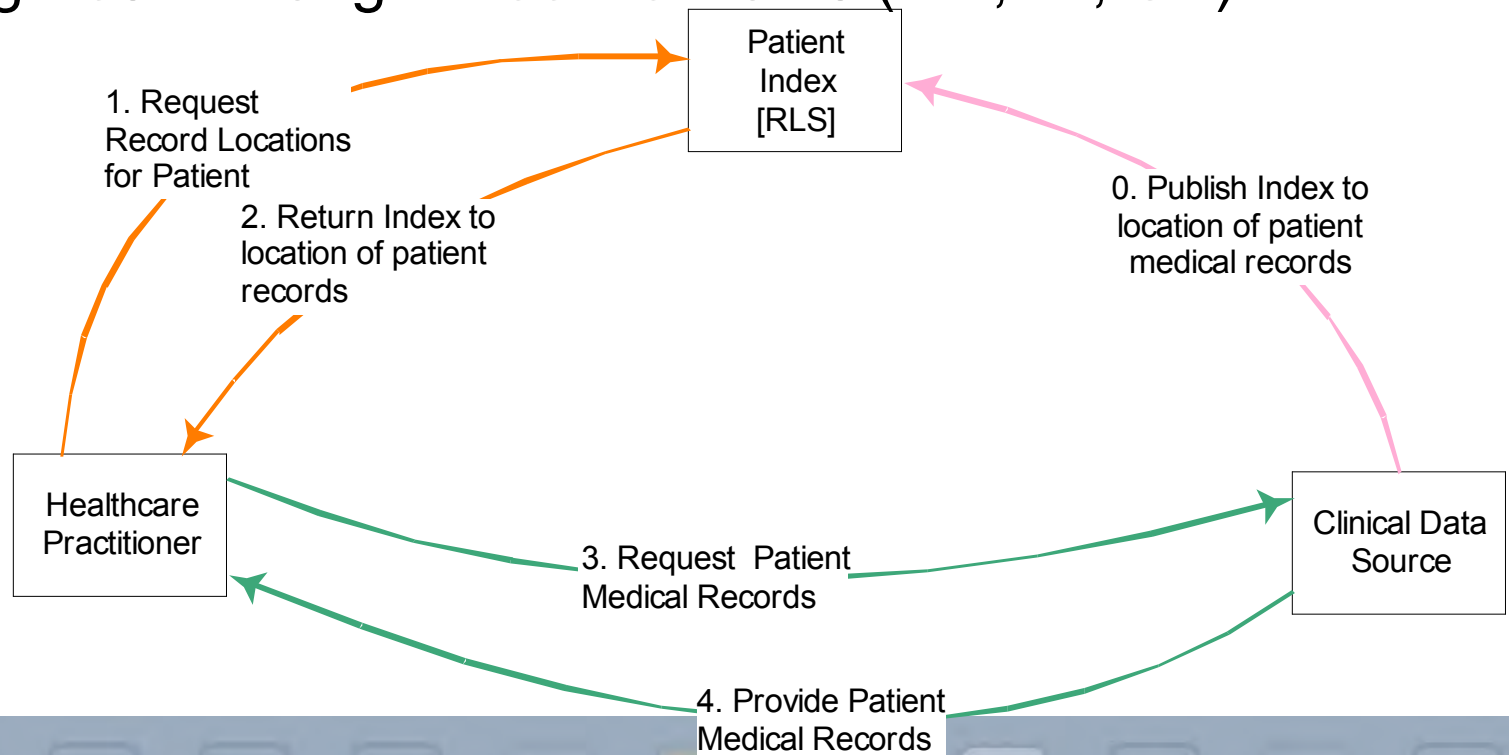
How can we standardize among different participants, so queries will be interoperable?

# Break the Problem Down

1. Location of Records
2. Disambiguation of Identity  $\leftrightarrow$  Record
3. Transport of Records
4. Aggregation of Records

# Three Standard Interfaces Required

- Centralize record *locations*
- Publish local record locations to RLS (Pink)
- Query institution+MRN from RLS (Orange)
- Retrieve clinical data directly from sources (Green)
- Working Test Among Three Networks (MA, IN, CA)



# From Prototype to Common Framework Resources

- Based on the experience of building the prototype in three sites, we were able to flesh out the details of the model
- Teams of experts in all three regions and a Connecting for Health Technical Subcommittee worked to translate the prototype lessons learned into resources others could use



# **What Common Framework Technical Resources are Available?**

# Types of Technical Resources

## Background Information

- On the Technical Architecture and Design Overall (T1)
- On Data Quality (T5)
- On the RLS (from the MA prototype site) (T6)

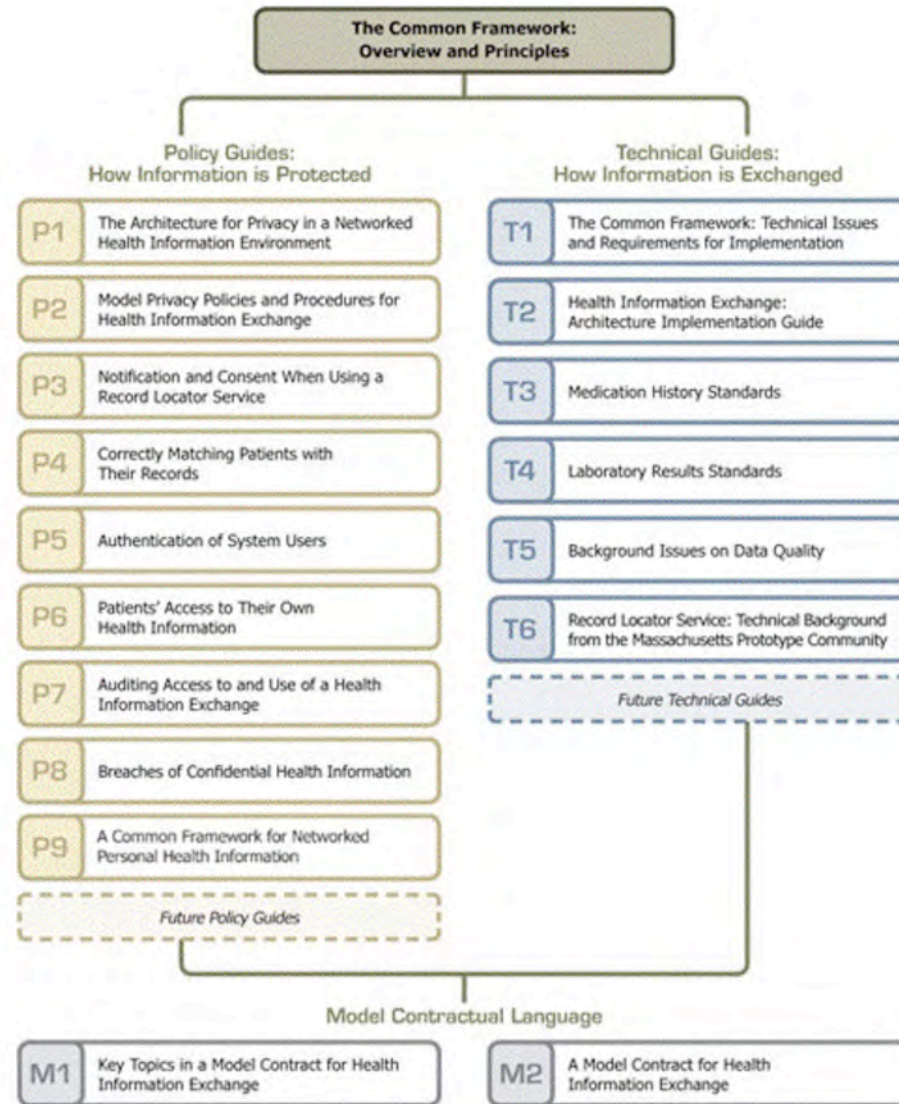
## Implementation Guides

- NHIN Message Implementation Guide including Record Locator Service/Inter-SNO Bridge (T2)
- Standards Guides
  - Medication History: Adapted NCPDP SCRIPT (T3)
  - Laboratory Results: ELINCS 2.0, with modifications (T4)

## Example Code/Interfaces

- Test Interfaces: CA, IN, MA [www.connectingforhealth.org](http://www.connectingforhealth.org) (under T2)
- Code base: CA, IN, MA  
[www.connectingforhealth.org](http://www.connectingforhealth.org) (under T2)

# Technical Documents: T1-T6



# Where to Find More

- All materials available without charge at [www.connectingforhealth.org](http://www.connectingforhealth.org), including:
- Policy and technical guides, model contractual language
- Software code from regional prototype sites: Regenstrief, MASHare, OpenHRE
- Email to [info@markle.org](mailto:info@markle.org)