

# How an HIE Creates Value for a Rural Clinical Community

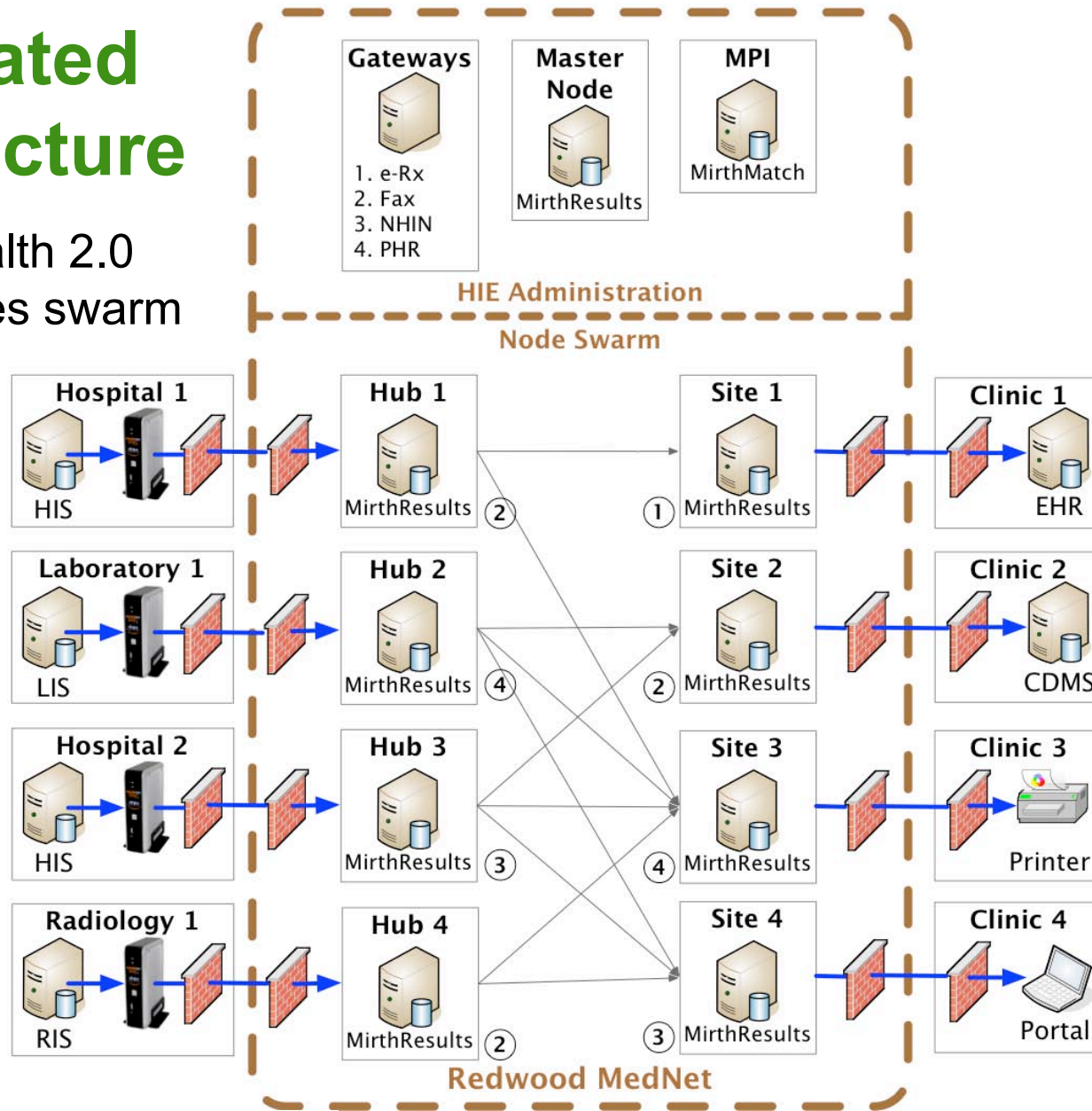


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**himss**  
**HIE Symposium**  
Chicago, Illinois  
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# federated architecture

*n*-tier health 2.0  
web services swarm



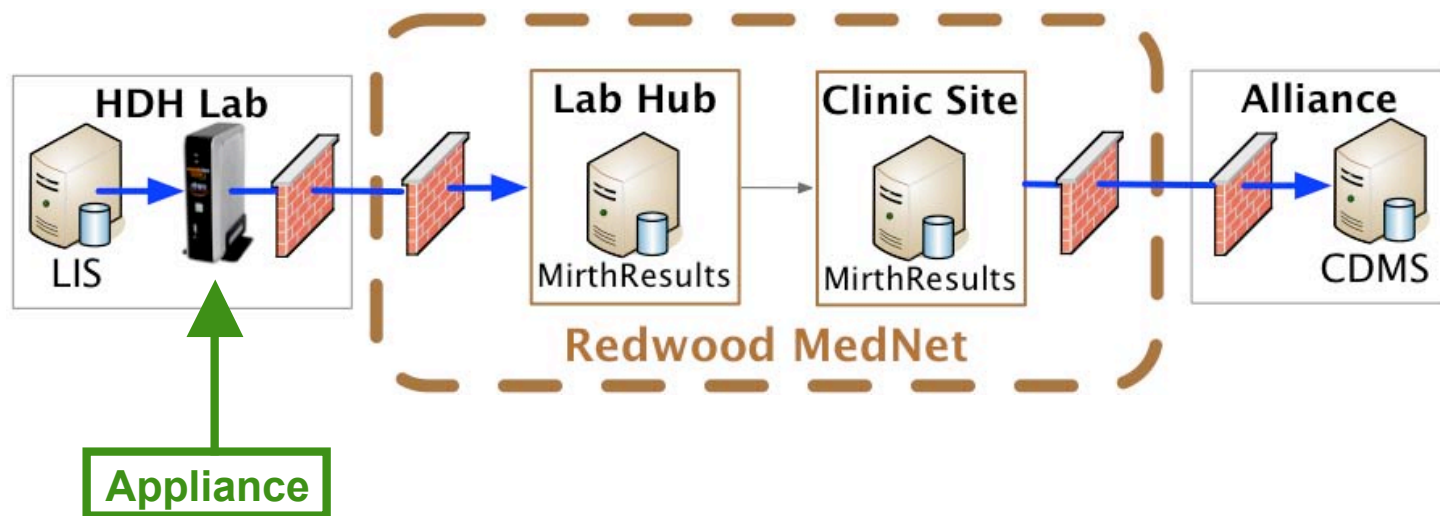
built with open source software



# Sample Data Path

Redwood MedNet uses open source tools to

- transport electronic laboratory test results
- from a rural Critical Access Hospital (CAH)
- to a Chronic Disease Management System (CDMS)
- at a Federally Qualified Health Center (FQHC)



# Redwood MedNet

## Region

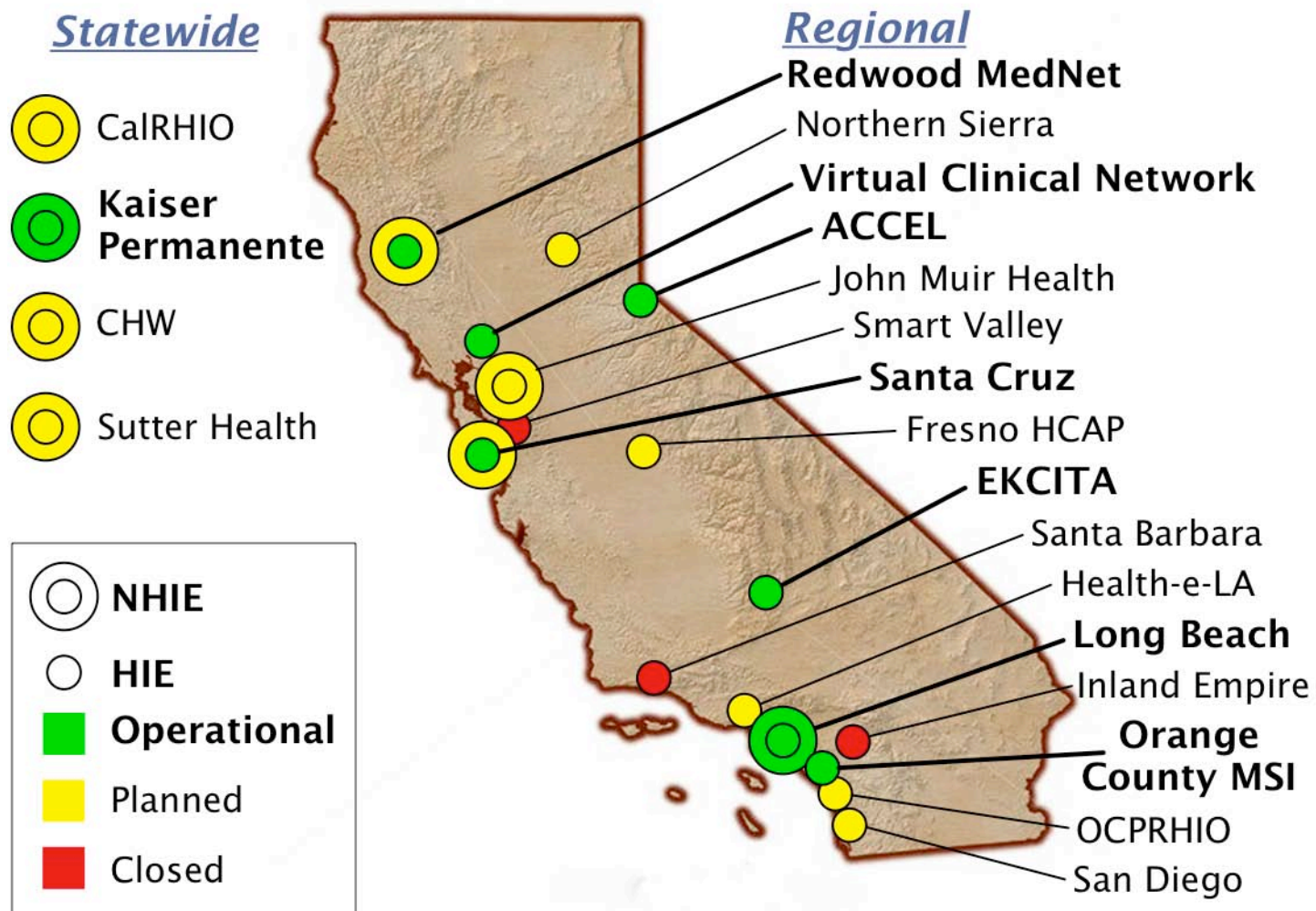
- 5,000 sq. mi. in rural Northern California (= size of CT)
- 2+ hours north of San Francisco
- 200,000 patients
- 6 hospitals / 247 beds total
- largest city 16,000
- no interstate highway

## HIE

- 501(c)(3) established 2005
- Grant funding \$800,000
- Electronic result deliveries started April 2008
- All open source software



# HIEs in California



# Redwood MedNet Road Map

## **Grant funded during startup**

- Building enterprise services
- Current territory too small, need to expand

## **Services**

- Health facility gateway for bidirectional clinical data traffic
- Electronic laboratory test results, ordering & delivery
- e-Prescribing
- Support for disease management tools
- Neutral platform for community clinical collaboration

## **Sustainability model**

- Estimated breakeven point requires 400+ physicians using HIE service
- At current pace Redwood MedNet will reach 400 physicians in 2010



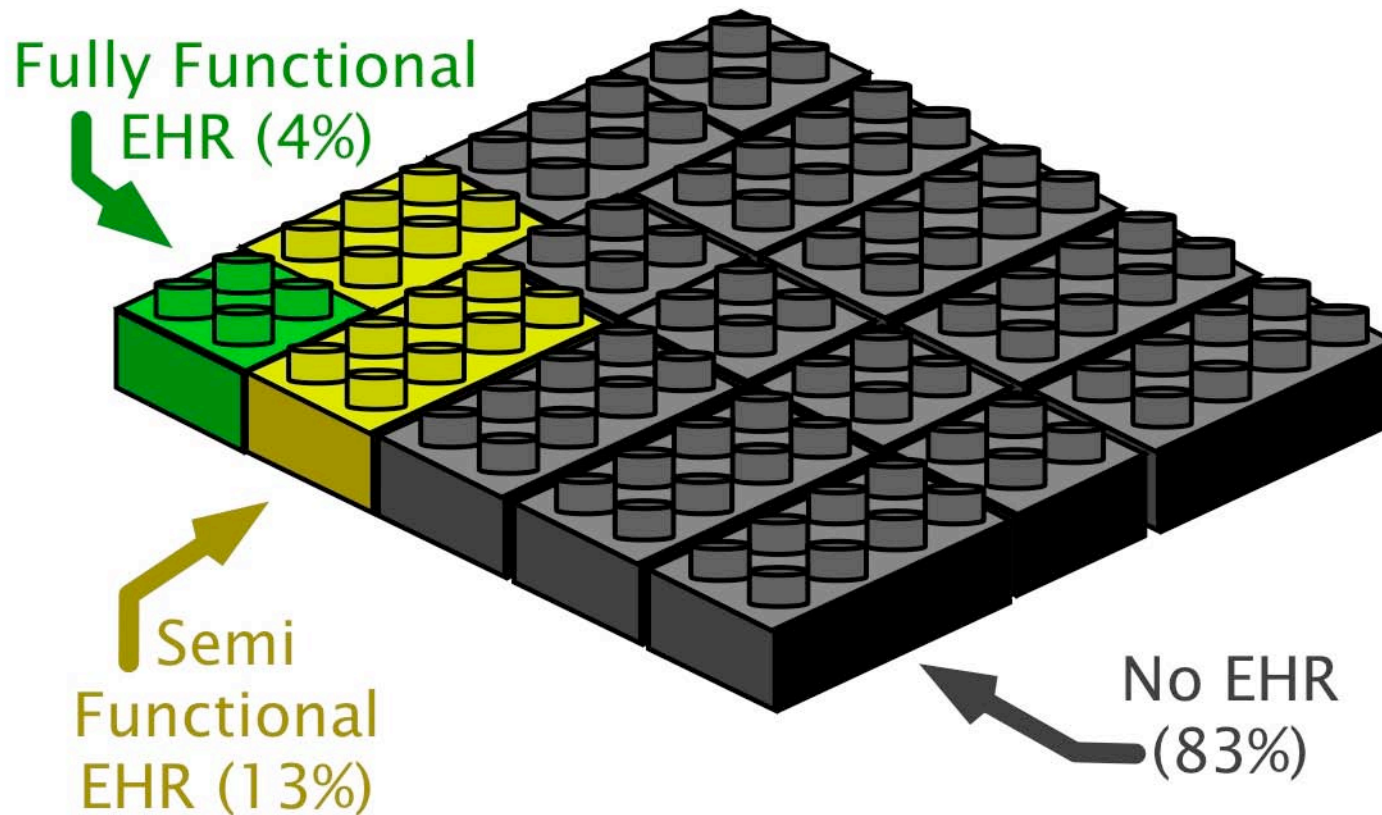
# EHR Reality Check

- 4% of American ambulatory physicians have an extensive, fully functional electronic health record (EHR)
- 13% have a basic EHR system
- 83% do not have EHR

DesRoches, Campbell, Rao, et al., "EHR in Ambulatory Care: A National Survey of Physicians." *New England Journal of Medicine*, July 3, 2008

# 2008 Survey of American Physicians

*NEJM 2008;359:50-60*



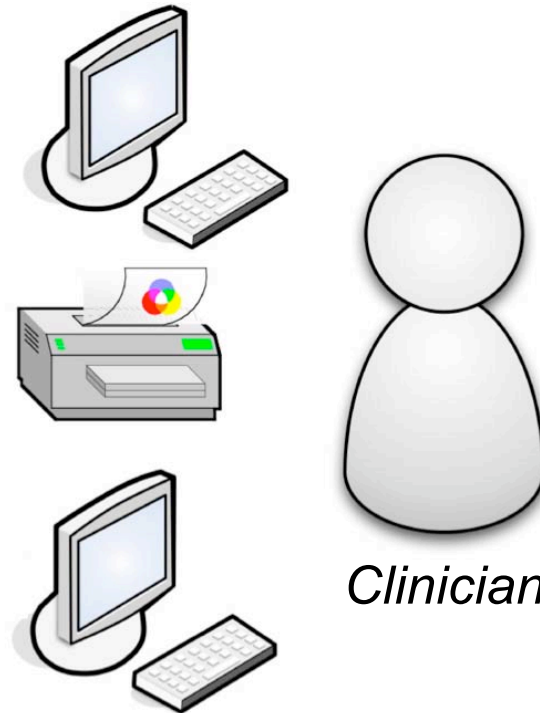
# If 80% of practices have no EHR, then what is the HIE value proposition?

Electronic clinical results delivery

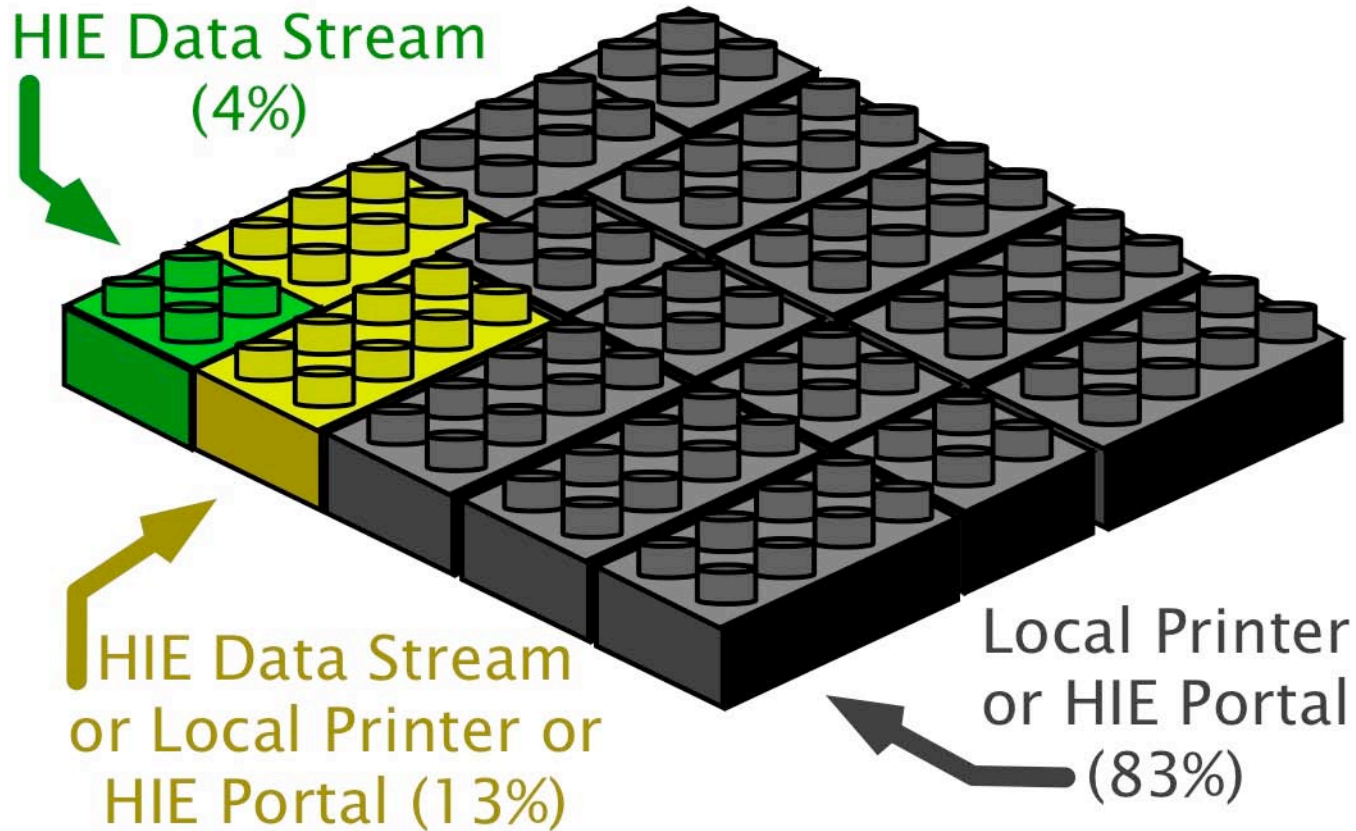
1. Data stream into EHR

2. Direct to printer or fax

3. Access on web portal



# HIE Clinical Data Delivery Method



# HIE: What's in it for the clinical community?

## Hospital Gateway

- Improves competitiveness of hospital
- Reduces administrative workload in lab
- Outsources gateway system administration

## Practices with EHR

- Consolidates and normalizes incoming clinical data
- Low latency external archive of clinical results hosted in swarm
- Outsources tech support for electronic data interfaces

## Practices without EHR

- Consolidates and normalizes incoming clinical data
- Portal & print options to match workflow
- Archive of results if paper printout is lost

# Future Value Propositions

## Quality Reporting

- Provide quality of care metrics based on NQF guidelines
- Enable practices without EHR to qualify for reimbursement incentives
- Registry software support

## e-Prescribing

- Standalone e-Rx environment for small practices
- Qualify for Medicare reimbursement incentives
- Medication reconciliation at inpatient facilities

## Emergency Department

- Patient community health record viewable
- Send discharge summary and schedule follow up visit at primary care provider

# Thank You!



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