



Wisconsin Health Information Exchange

Connecting the Dots in Wisconsin

Seth Foldy, WHIE

Discussants:

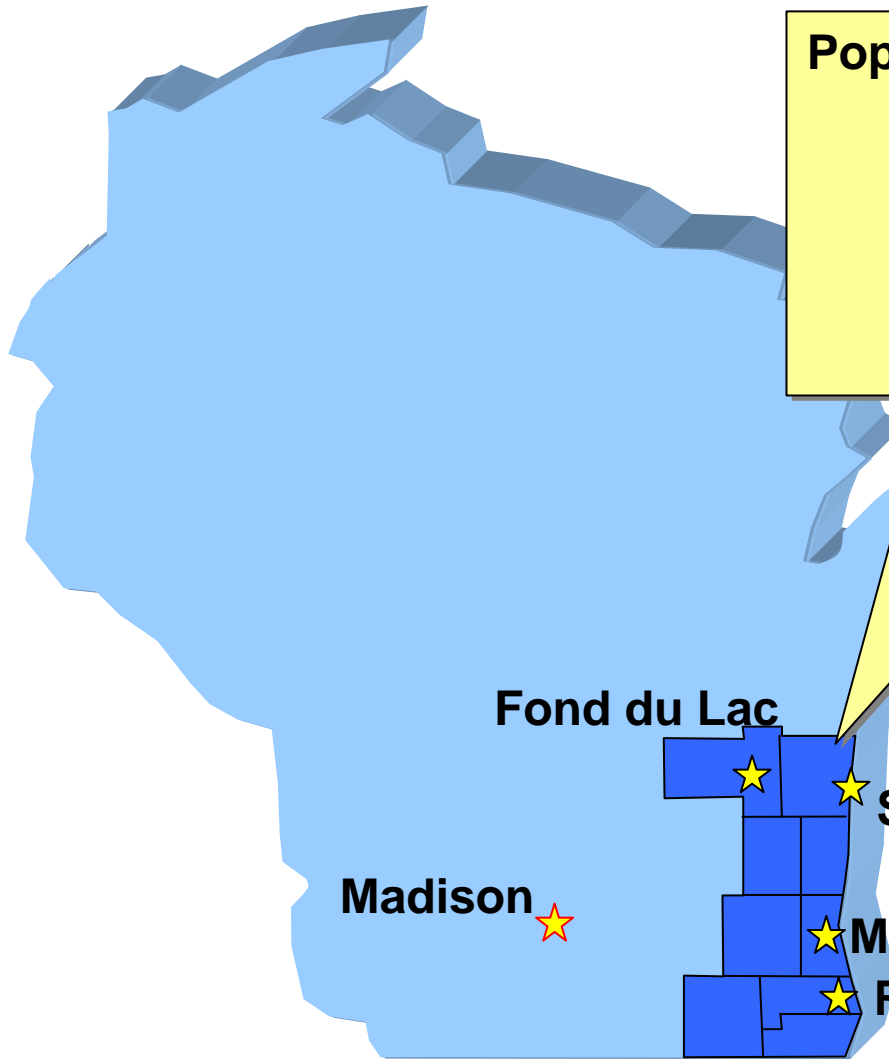
Helene Nelson, DHFS

Mark Gottlieb, MetaStar

Kim Pemble, SynergyHealth

Digital Healthcare Conference, Madison, WI , June 9, 2005

WHIE SE Wisconsin



Population 2.06 million (40% of WI)

- 42 hospitals
- 5419 physicians
- 25 health departments
- 478 pharmacies
- 1506 laboratories

COMMUNICATING BY PAPER

Fond du Lac

Sheboygan

Madison

Milwaukee

Racine

Chicago

- **Adverse drug effects in SE Wisconsin**
 - **50 deaths yearly** ⁽¹⁾
 - (minimum estimate—up to 525 deaths/year)
 - **Cost of *inpatient* ADEs alone \$10.9-39.2 million/year** ⁽²⁾
 - **18% associated with lack of patient information** ⁽³⁾
 - **Improved information sharing may reduce costs by \$1.96 million/year** ⁽⁴⁾
 - **Interoperable information with decision support may reduce costs by \$7 million/year** ⁽⁴⁾

Quality

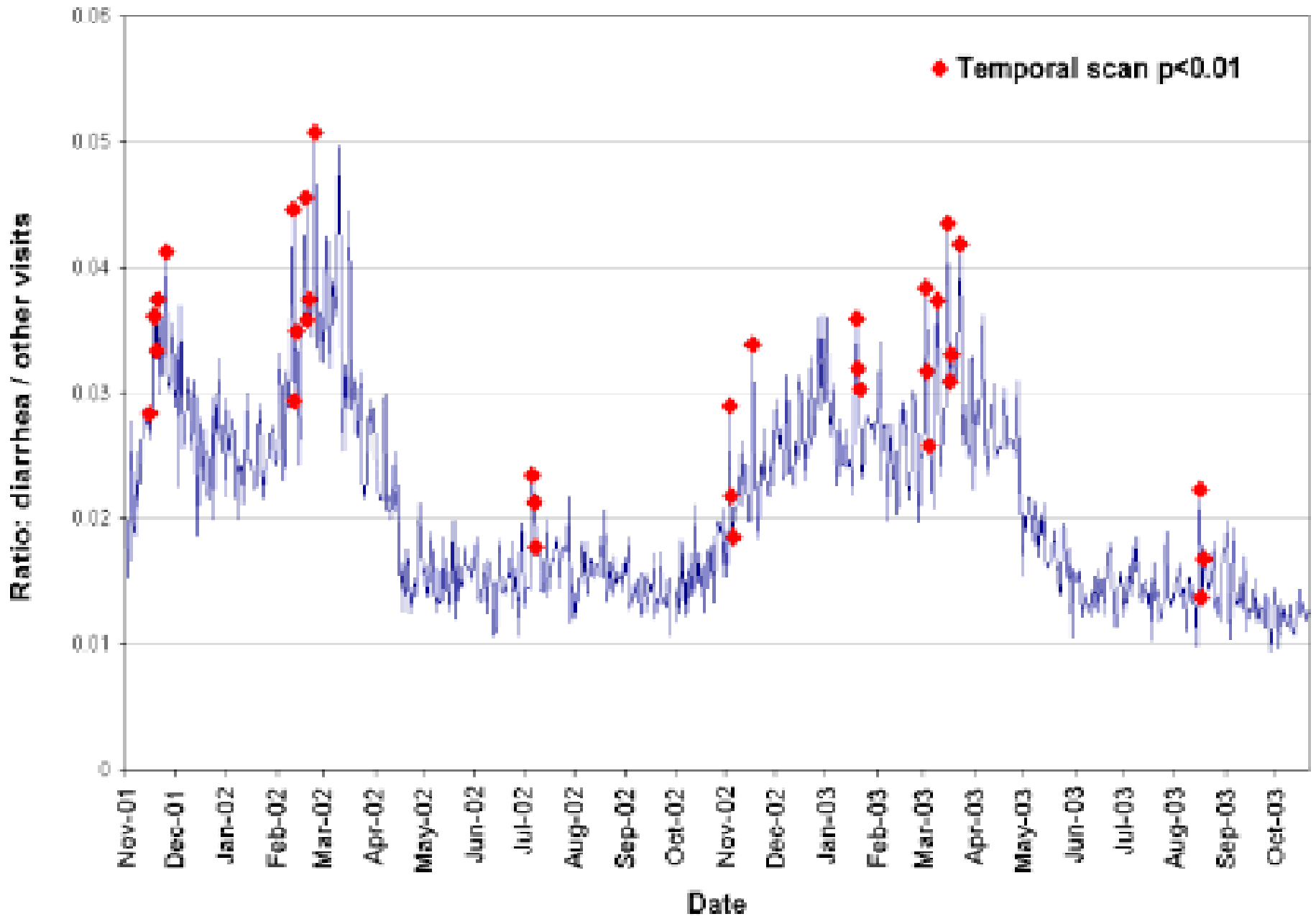
- **Missed prevention opportunities in SE Wisconsin:**
 - **400 people die yearly for lack of recommended care** ⁽¹⁾
 - **55% of patients fail to receive recommended evidence-based care** ⁽²⁾
 - **Missed prevention opportunities cost \$7 million in hospital bills and \$80.5 million in lost work days** ⁽¹⁾
 - **Computer assisted decision support increases adherence 25-800% (*but without exchange will likely increase redundant costs*)**

Efficiency

- **Redundant or unneeded care in SE Wisconsin:**
 - **1 in 7 hospitalizations relate to missing information in outpatient care** ⁽¹⁾
 - **14% of outpatient visits lack important information, leading to redundant diagnostics, prescriptions, procedures** ⁽²⁾
 - **Milwaukee-area practice pattern variability and costs significantly higher (27%) than comparable metropolitan areas** ⁽³⁾
 - **\$543 million can be saved in paper-shuffling and \$65 million in redundant testing by interoperable information exchange** ⁽⁴⁾

National estimates extrapolated to SEWI (0.7%)

5/28/2005



Provisional Members

- Advanced Healthcare
- All Saints Health Care
- Allergy Research & Care
- Aurora Health Care
- Beloit Area Community Health Center
- Business Healthcare Group of SE WI
- Childrens Health System
- Columbia ♦ St. Mary's Health System
- Covenant Healthcare System
- EMSsystem
- Froedtert and Community Health
- Greater Milwaukee Business Foundation on Health
- Greater Milwaukee Committee
- Health Information Consulting
- Humana
- Infinity HealthCare
- Kenosha Community Health Center
- Louise Trubek, UW Law School
- Medical Associates HealthCare
- Medical Society of Milwaukee County
- MetaStar
- Milwaukee School of Engineering
- New Resources Consulting, LLC
- Quad Counties Emergency Public Health Consortium
- ProHealth Care
- St. Agnes Hospital
- Synergy Health
- TeraMedica
- United Hospital System
- University of Milwaukee-Wisconsin College of Health Sciences
- WI Chapter, Am. College of Emergency Physicians
- WI Health Information Network
- WI Health Information Management Association
- WI Heart & Vascular Clinics
- WI Heart Hospital
- WI Primary Health Care Association
- Wisconsin Society for Clinical Laboratory Science

Vision:

Information improving the **quality, safety, efficiency and accessibility** of healthcare and public health

Mission:

Collaborating to enable secure delivery of timely, accurate, electronic health information to authorized users **across institutional boundaries**

WHIE Goals

Improve the quality, safety, efficiency and accessibility of care for individual patients

Facilitate coordinated, informed response to public health issues

Enable greater participation of patients in their own care

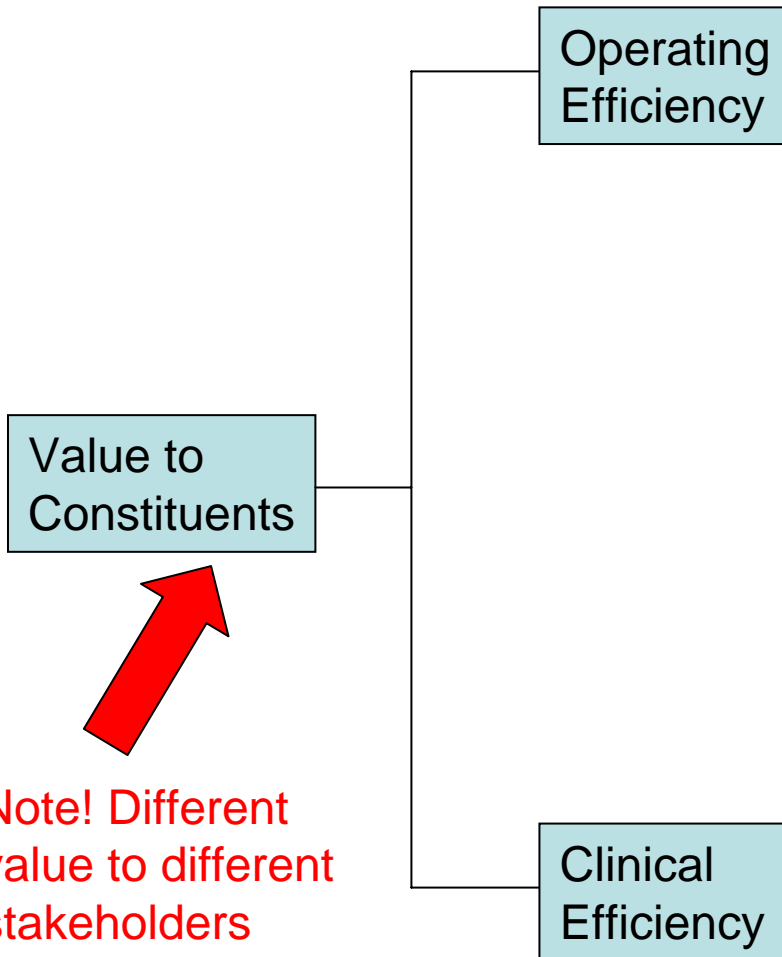
Enable study and improvement of care to groups of people sharing similar problems, services or plans

Document the benefits and costs of improved information access

Achieve a stable, sustainable governance and business model for development and operation in SE Wisconsin, scalable for state-wide expansion.

WHIE Principles

- **Respect and protect the privacy and rights of individuals**
- **Respect and protect the integrity, rights and responsibilities of those exchanging information**
- **Seek the highest possible level of information accuracy and integrity**
- **Smoothly integrate with and improve the daily work processes of our varied users**
- **Pursue standards-based approaches for interoperability among various system and software platforms**
- **Meaningful participation by all stakeholders in the governance and support of information exchange**
- **Emphasize cost-effective solutions and best practices learned elsewhere**



Note! Different value to different stakeholders (providers, payors patients, ancillary services)!

- Labor savings (diagnostics, orders)
 - Result delivery
 - Staff time
- Fulfilling external requests for information
- Requesting information
- Payor transaction costs
- Lower barriers to HIT implementation*

- Decreased admissions
- Decreased readmissions
- Decreased medical errors
- Shortened length of stay
- Enhanced revenue from proper coding
- Test duplication avoidance

The EHR Adoption Deadlock

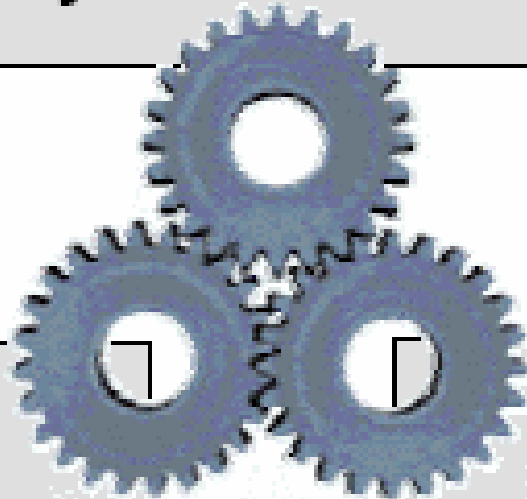
Won't offer incentives
unless benefits and
interoperability of EHRs
are assured
Payers/Purchasers

IT Vendors

Can't bring down
costs until provider
adoption accelerates

Providers

Won't buy EHRs until
costs and risks are lower
and/or incentives higher



Added Value of Exchange

Paper Charts

- missing information
- slow access
- poor access out of office
- no simultaneous viewing
- no automated safety checks
- no automated decision support
- poor public health info flow
- manual transcription of info

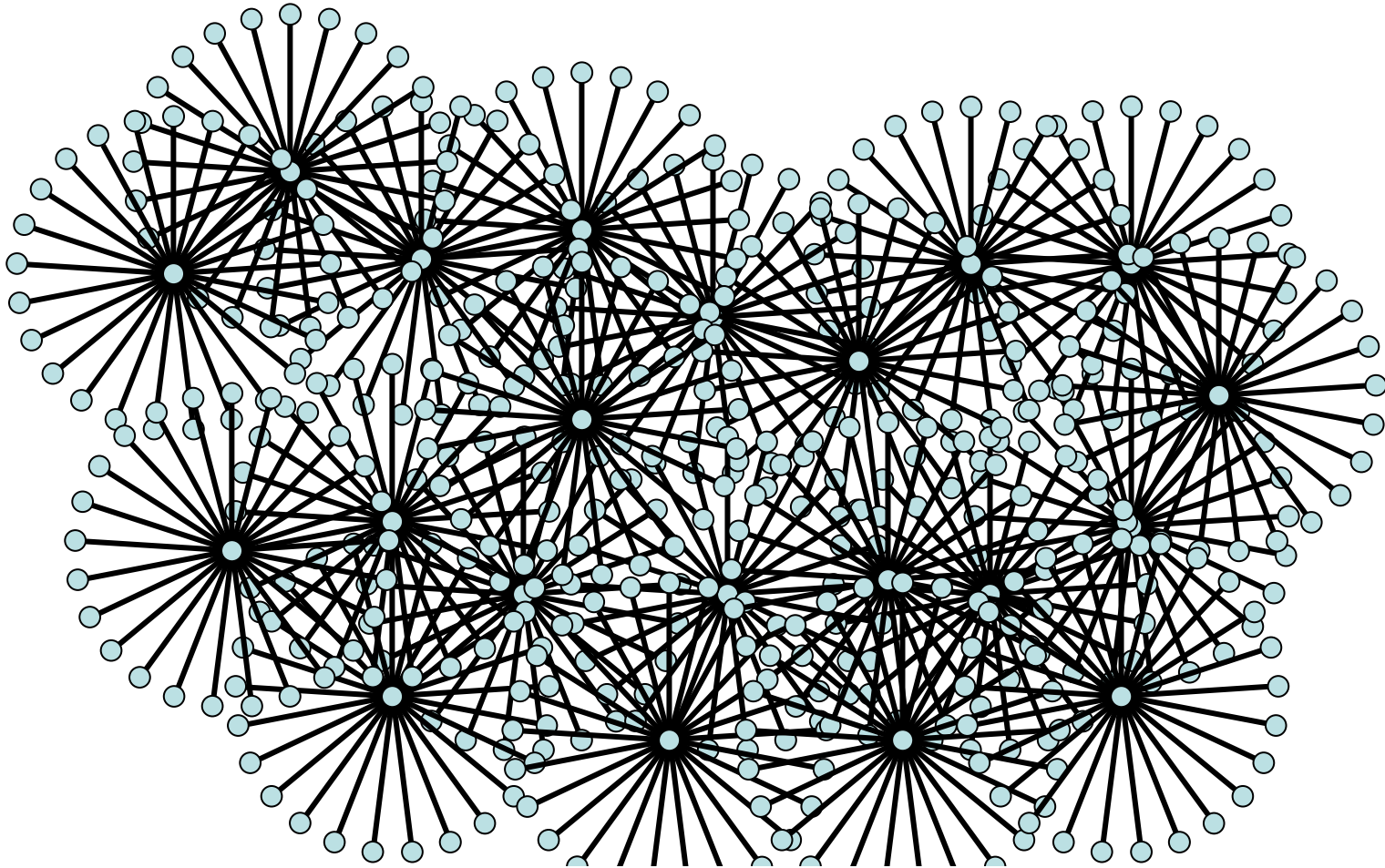
EMR inside organization

- more complete information
- rapid access anywhere
- can view simultaneously with others
- some automated safety checks possible
- some automated decision support possible
- poor public health info flow
- multiple agreements with other organizations
- multiple interfaces
- manual handling of most external information
- continuity and back-up needed

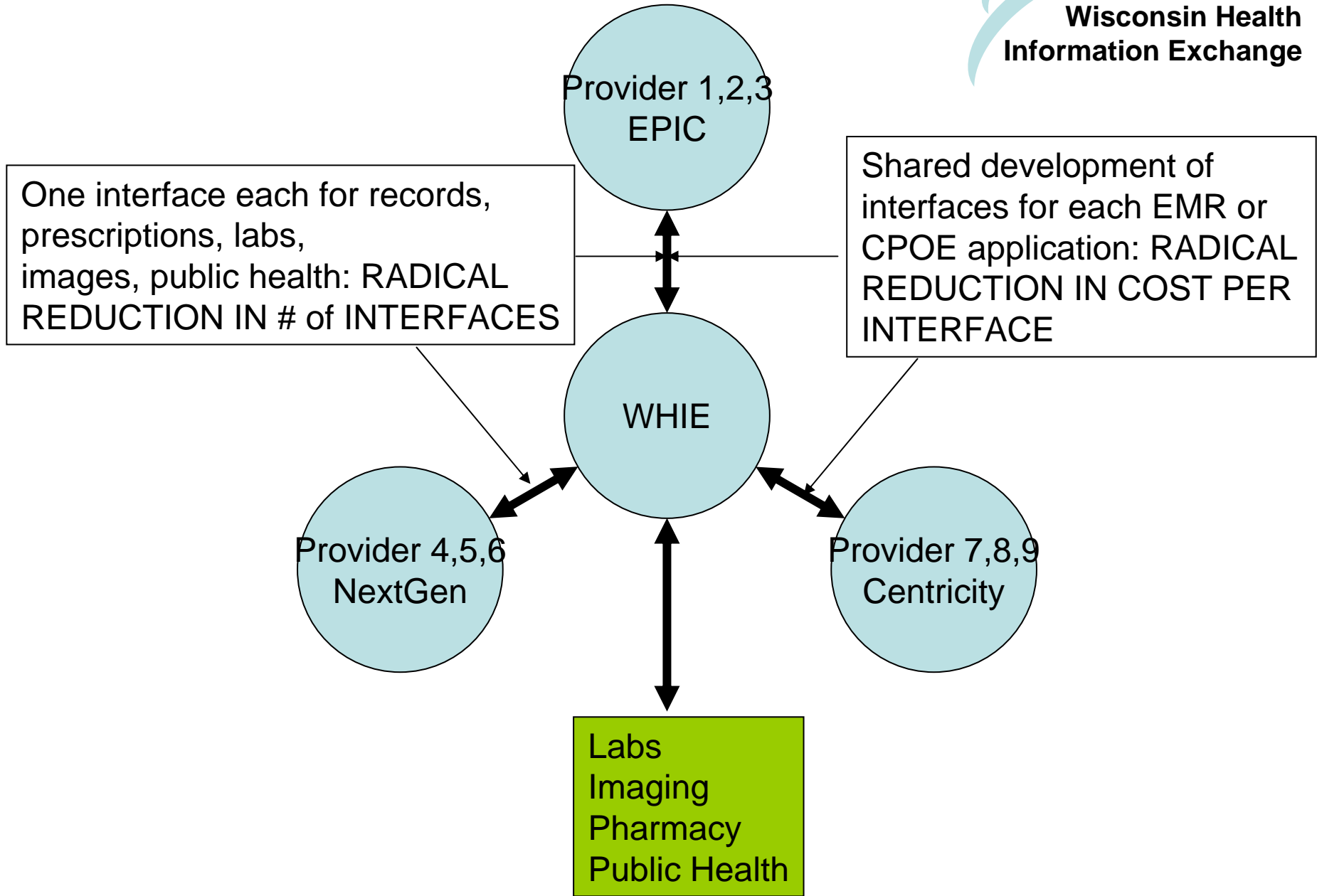
WHIE ADDS VALUE:

- comprehensive information
- comprehensive safety checks
- shared decision support tools across systems
- enhanced public health info flow. enabled
- few data sharing agreements/contracts
- few interfaces between organizations
- communication enhanced, handling reduced
- possible shared continuity/back-up costs

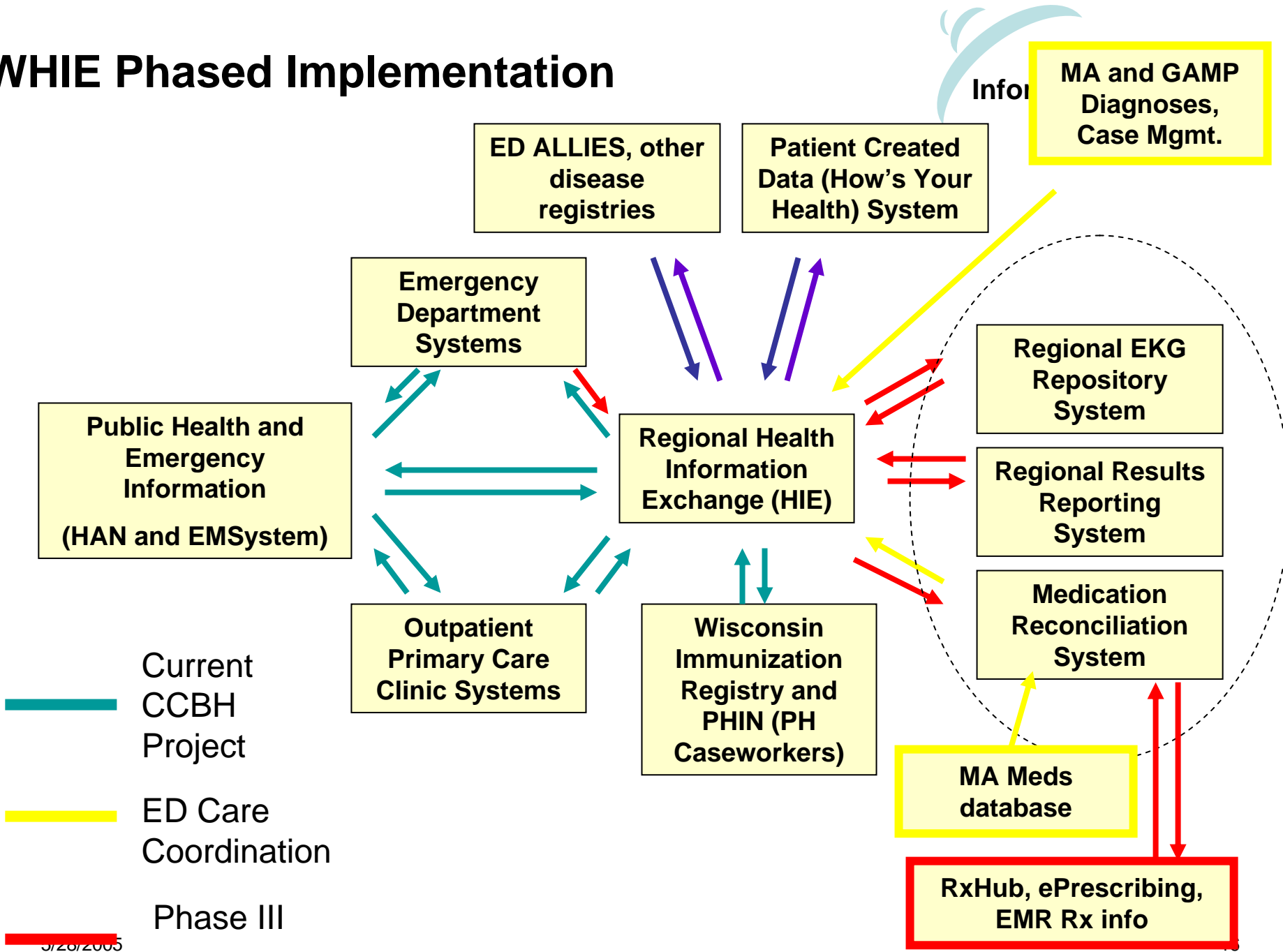
How Many Interfaces?



**Estimated cost per interface for office practice: \$20,000;
Estimated cost per interface for hospital: \$50,000;
Number needed 8-20 (CITL 2004)**



WHIE Phased Implementation



- Current CCBH Project
- ED Care Coordination
- Phase III

“Level 3” Example

- Machine-exchanged information
- Physician CAN review allergies, meds, lab tests before ordering
- Physician can also order WITHOUT reviewing historical results

Wisconsin Health Information Exchange

SOUTHEAST WISCONSIN EMERGENCY DATA COORDINATION PROJECT

AVAILABLE INFORMATION FOR:
Stanikowski / Frank / N / 24yo / M / 12-03-81 / 312 Maple St / Milwaukee

Disclaimer language will be inserted here

DIAGNOSES	LOCATION	CITY	DATE
Diabetes Mellitus	Mt. Sinai Hospital Emerg Dept	Milwaukee	5-03-01
Hypertension	MLK Clinic	Milwaukee	6-12-02
Renal Insufficiency	Columbia St. Mary's FP Clinic	Milwaukee	4-05-03

MEDICATIONS	SCHEDULE	PRESCRIBED BY	DATE	DATA SOURCE
Glyburide	10 mg po qd	Dr. Anderson	5-03-01	Patient report
HCTZ	50 mg po qd	Dr. Smith	6-12-02	RxHub Pharmacy report

ALLERGIES	REACTION	NOTED BY	DATE
NSAIDs	Hives	Dr. Anderson	5-03-01

PRIMARY PROVIDER ASSIGNED

Dr. Sam Adams Office Phone 414-290-5555 Pager 414-555-9090 After Hrs 414-444-7777
13111 N. Main Stree Milwaukee 53211

CASE WORKER ASSIGNED

Ms Carolyn Jones Office Phone 414-290-5555 Pager 414-555-9090 After Hrs 414-444-7777

SPECIAL NEEDS / COMMENTS

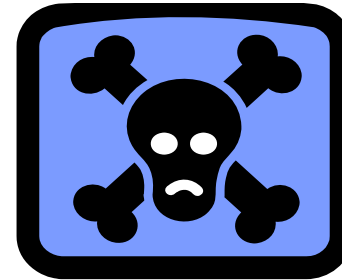
Patient is not able to read English. Care coordinated by aunt – Ms. Jane Parker Phone 414-222-6666

Immunization Information Results Reporting Authorized Referral Physicians

Clear All Print Exit

“Level 4” Example

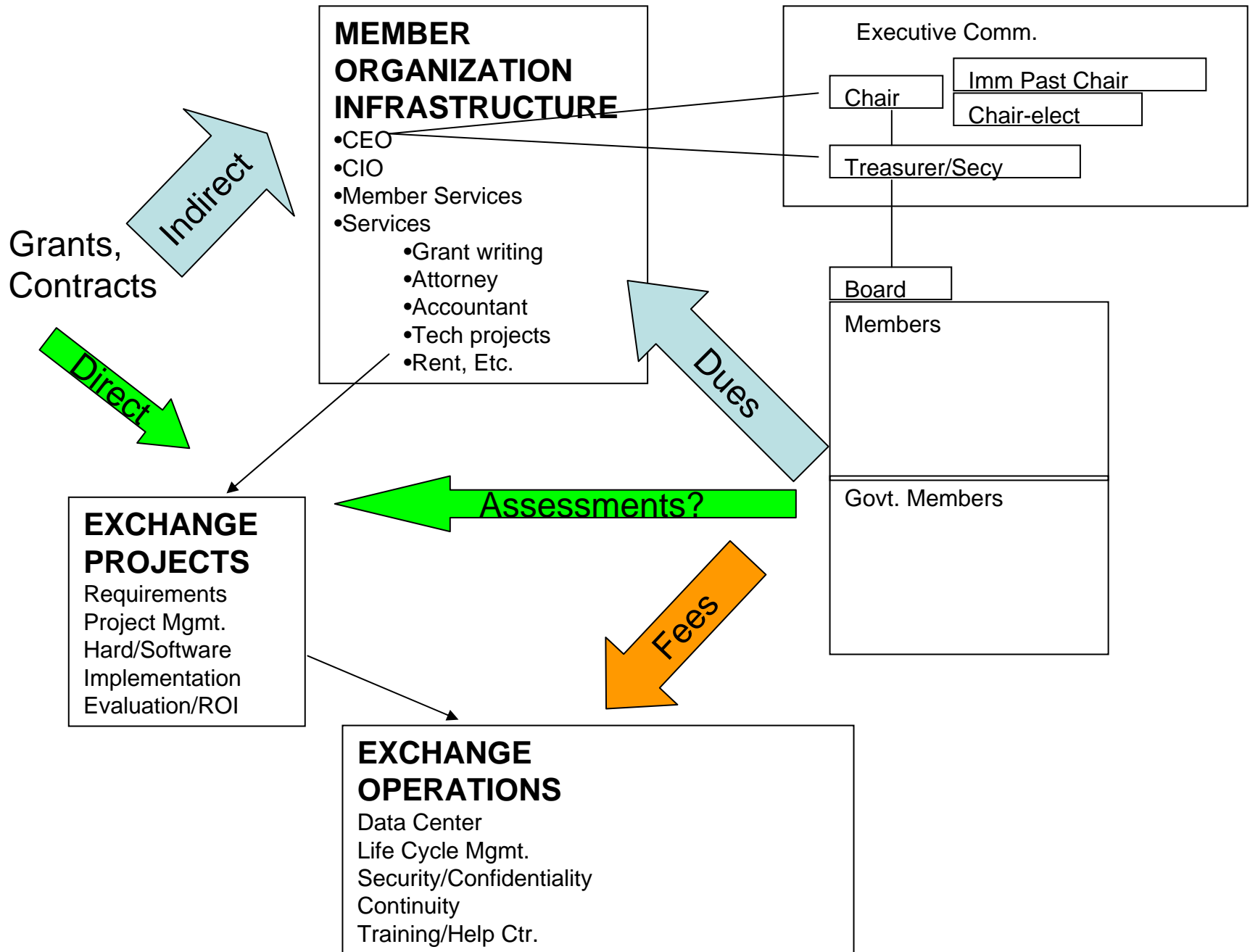
- Machine interpretable information
- Allergies, meds, lab tests automatically reviewed during computerized physician order entry
- Physician automatically warned of conflicts



Do you want to give penicillin to this patient with allergy history?

Who Can Pay – And When?

- **Hospitals and physician practices already bearing early costs (implementation of on-site HIT)**
- **Several years to provider break-even point**
- **Payors/insurers see benefits rapidly (efficiencies and care costs) with little HIT investment**
- **Pharmacy, lab and imaging trade off interface costs, loss of redundant business with administrative efficiency savings**



Question

- **If this is such a great idea, why hasn't an entrepreneur done it?**

Question

- **What should be the role of state government?**
- **Of local government? Feds?**

Question

- **Will payors participate in the cost of building HIE?**
- **Who? Employers, insurers, government?**
- **How can we engage?**

Question

- **What action is needed by health care providers today?**

WHIE is Funded in Part By



A contract with the Foundation for eHealth Initiative and their cooperative agreement with HRSA, Office for the Advancement for Telehealth (OAT). The contents of this presentation are solely the responsibility of the authors and do not necessarily represent the official view of HRSA/OAT or FeHI.

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