

The Eighth National HIPAA Summit
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The National Perspective: National Health Information Infrastructure (NHI): Key to the Future of Health Care

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“The committee believes that establishing this information technology infrastructure [NHII] should be the highest priority for all health care stakeholders.”

**-- Committee on Data Standards for Patient Safety:
“Patient Safety: Achieving a New Standard for Care”
Institute of Medicine, November, 2003
(Executive Summary)**



Overview

- I. Why does health care need NHII?
- II. What is NHII?
- III. Current status of NHII
- IV. Accelerating NHII progress
- V. Summary and what you can do



I. Health Care System Challenges

- Error rates are too high
- Quality is inconsistent
- Research results are not rapidly used
- Costs are escalating
- New technologies continue to drive up costs
- Demographics of baby boomers will greatly increase demand
- Capacity for early detection of bioterrorism is minimal



Solution: Information Technology (IT) for Health Care

- **20% of labs and x-rays done because prior results unavailable**
- **1 in 7 hospitalizations occur because information about patient not available**
- **“NHII is required to make patient safety a standard of care” – IOM, 2003**
- **Ambulatory CPOE could save \$44 B/yr**
- **Potential net efficiency gain from use of information technology in health care:
> \$87 Billion/yr**



Agreement that the NHII is Needed

IOM	1991 1997	Computer-Based Patient Record
IOM	2000	To Err is Human
NRC/ CSTB	2001	Networking Health: Prescriptions for the Internet
IOM	2001	Crossing the Quality Chasm
PITAC	2001	Transforming Health Care Through Information Technology
NCVHS	2001	NHII
IOM	2002	The Future of the Public's Health in the 21st Century
IOM	2002	Fostering Rapid Advances in Health Care: Learning from System Demos



II. What is NHII?

- **“Anywhere, anytime health care information and decision support”**
 - **Comprehensive knowledge-based network of interoperable systems**
 - **Capable of providing information for sound decisions about health when and where needed**
- **NOT a central database of medical records**
- **It is NOT a Federal mandate**

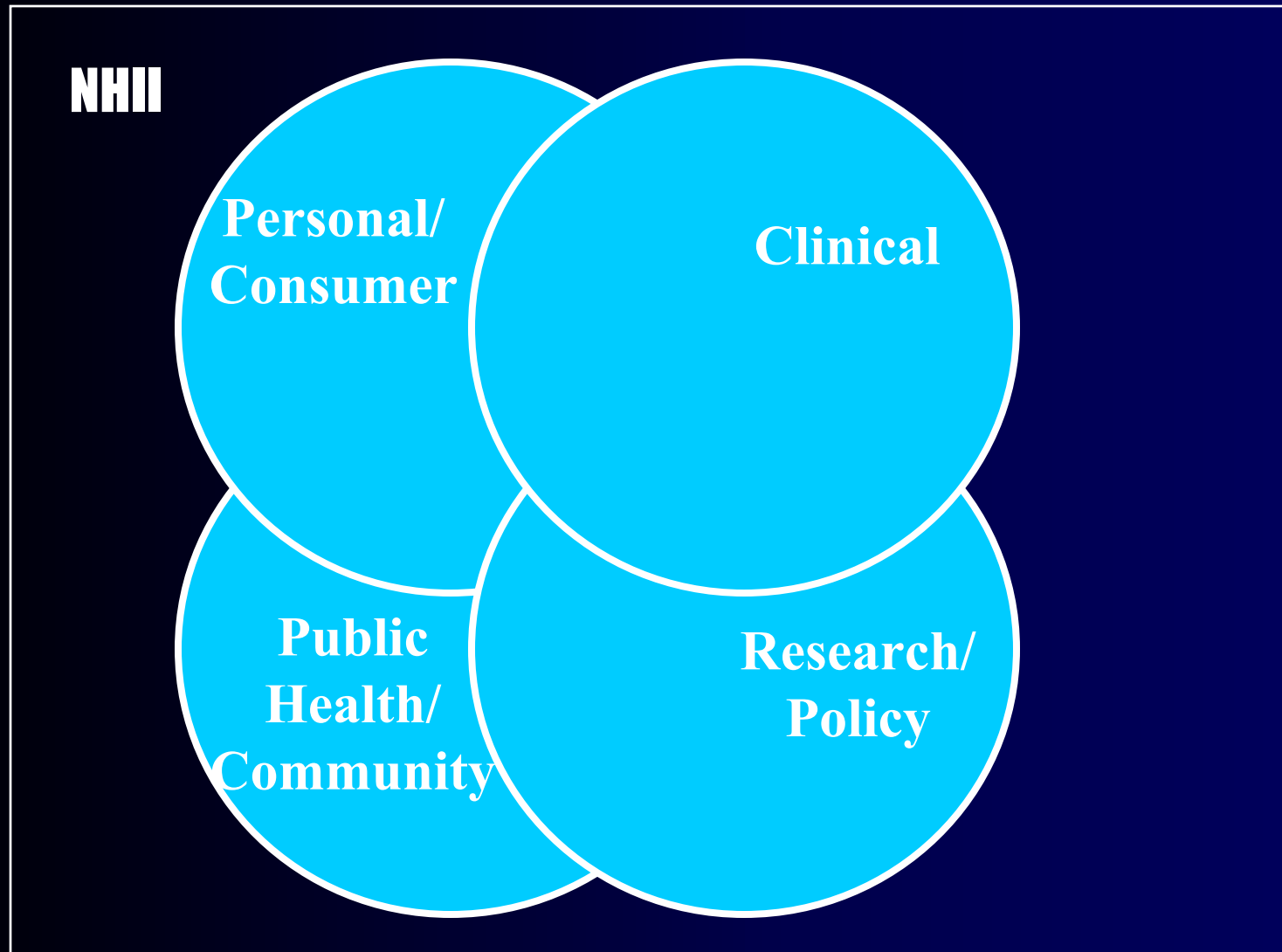


Benefits of NHII

- Monitor and Protect Public Health (e.g. rapid disease detection)
- Improve Patient Safety
 - IOM: 44,000-98,000 preventable deaths/year (more than motor vehicle accidents, breast cancer, or AIDS)
- Improve Quality of Care
- Effectively Share Decision Support
- Increase Efficiency
- Better-informed Health Care Consumers



Four Domains of NHII



NHII 03

Final Recommendations

I. Management

- 1) Governance
- 2) Education
- 3) Shared Resources
- 4) Metrics

II. Enablers

- 1) Financial Incentives*
- 2) Standards*
- 3) Legal Issues

III. Implementation Strategy

- 1) Demonstration Projects
- 2) Architecture*
- 3) Identifiers

IV. Targeted Domains

- 1) Consumer Health*
- 2) Research*

*original breakout track



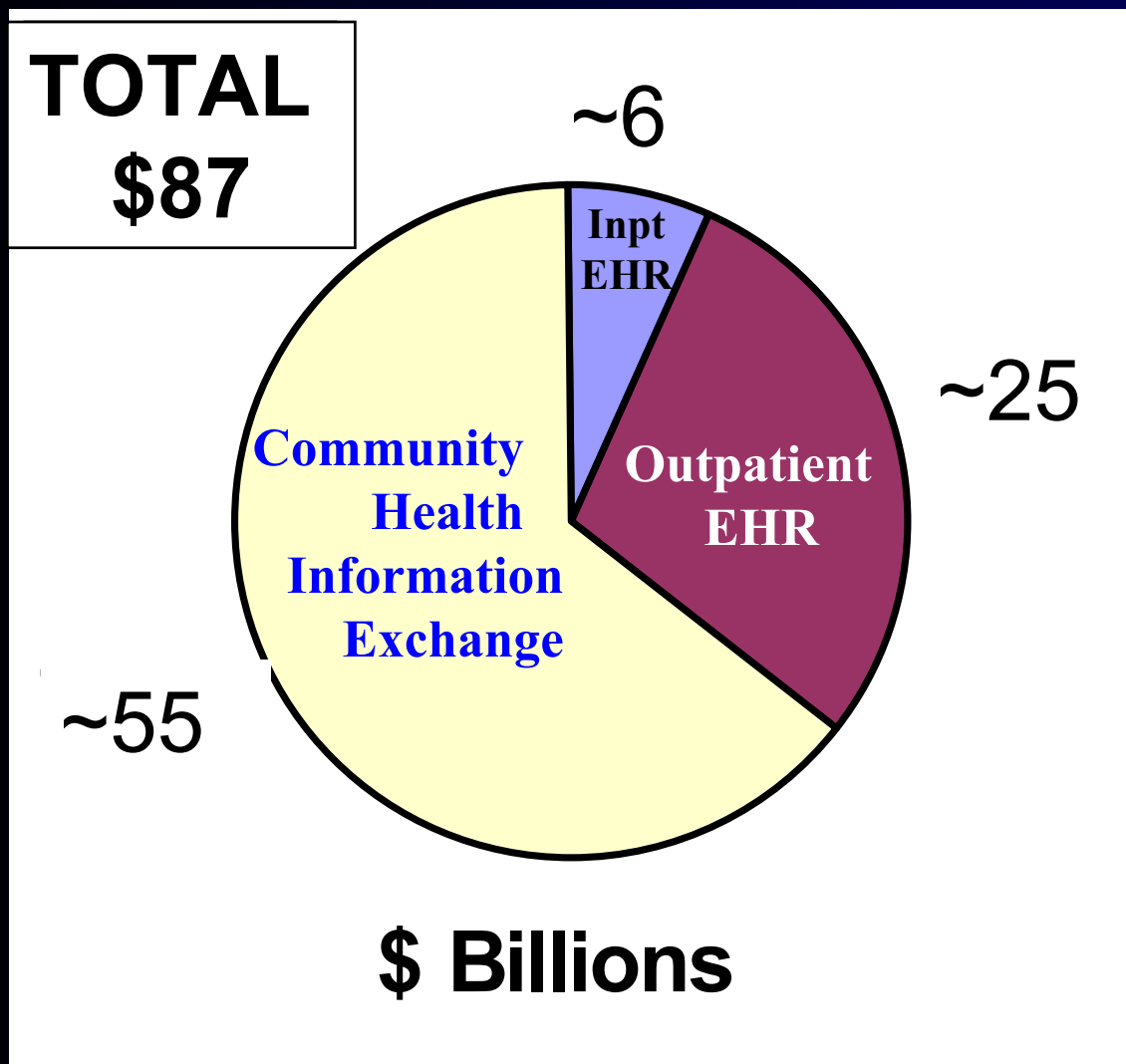
NHII Requirements: Functions

Overall: “Anytime, anywhere health care information and decision support”

- **Immediate availability of complete medical record (compiled from all sources) to any point-of-care**
- **Enable up-to-date decision support at any point of care**
- **Enable selective reporting (e.g. for public health)**
- **Enable use of tools to facilitate delivery of care (e.g. e-prescribing)**
- **Allow patients to control access to their information**



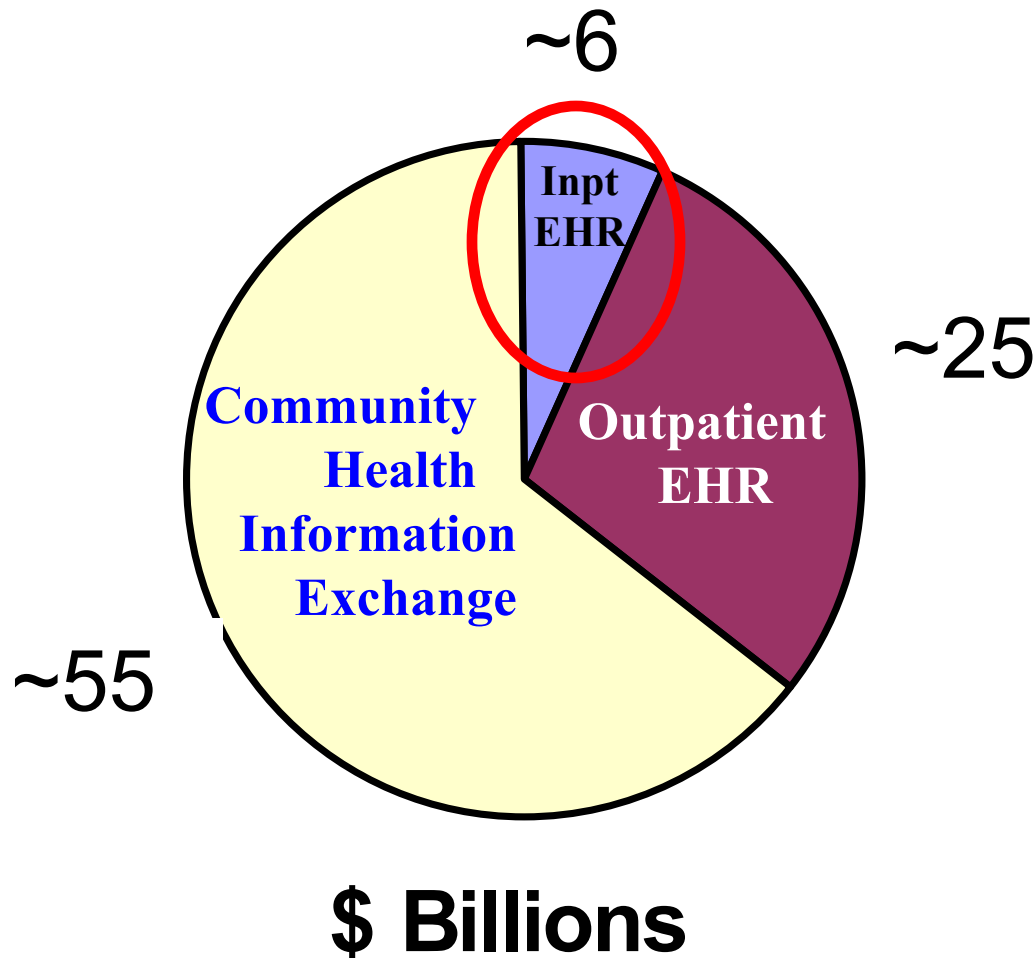
Realizing the Benefits - NHII Net National Savings



Source:
Center for
Information
Technology
Leadership,
Partners
Health
Care,
Harvard
(2004)



Inpatient EHR



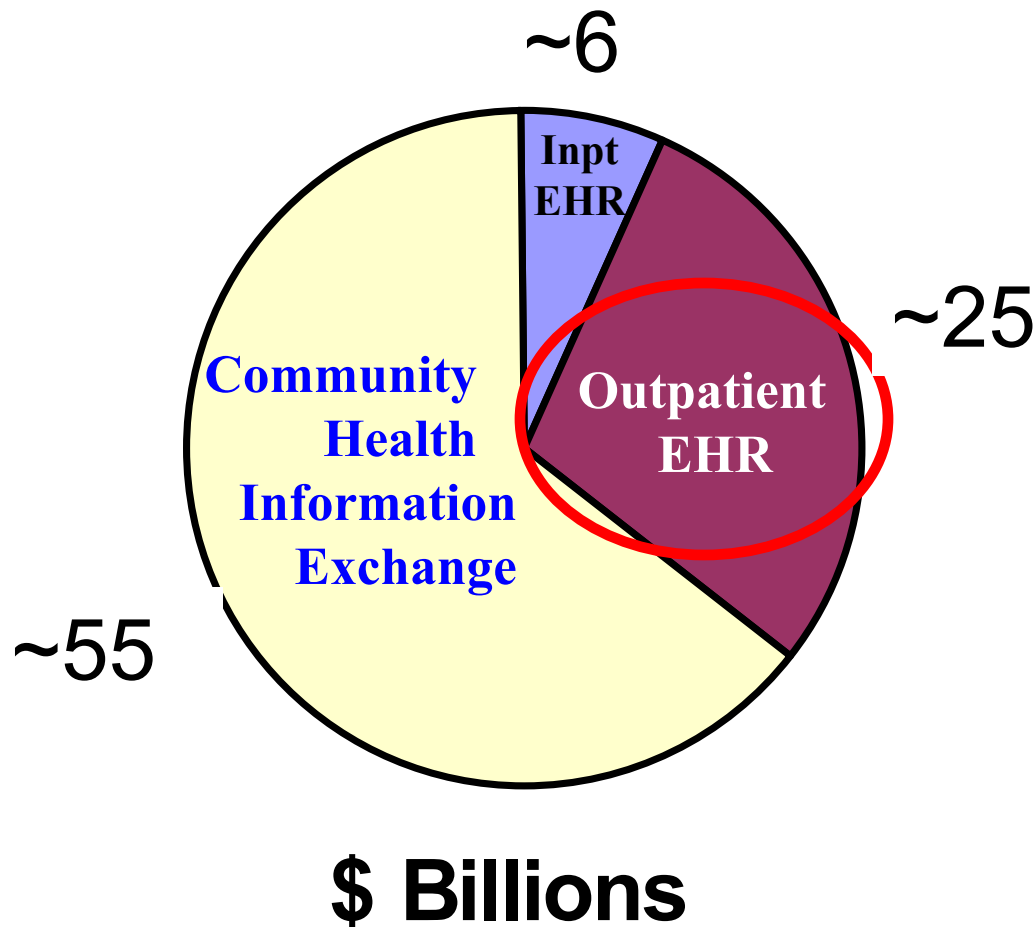
- Benefits go to hospital

- Larger hospitals are investing

- Capital is obstacle for small & rural institutions



Outpatient EHR



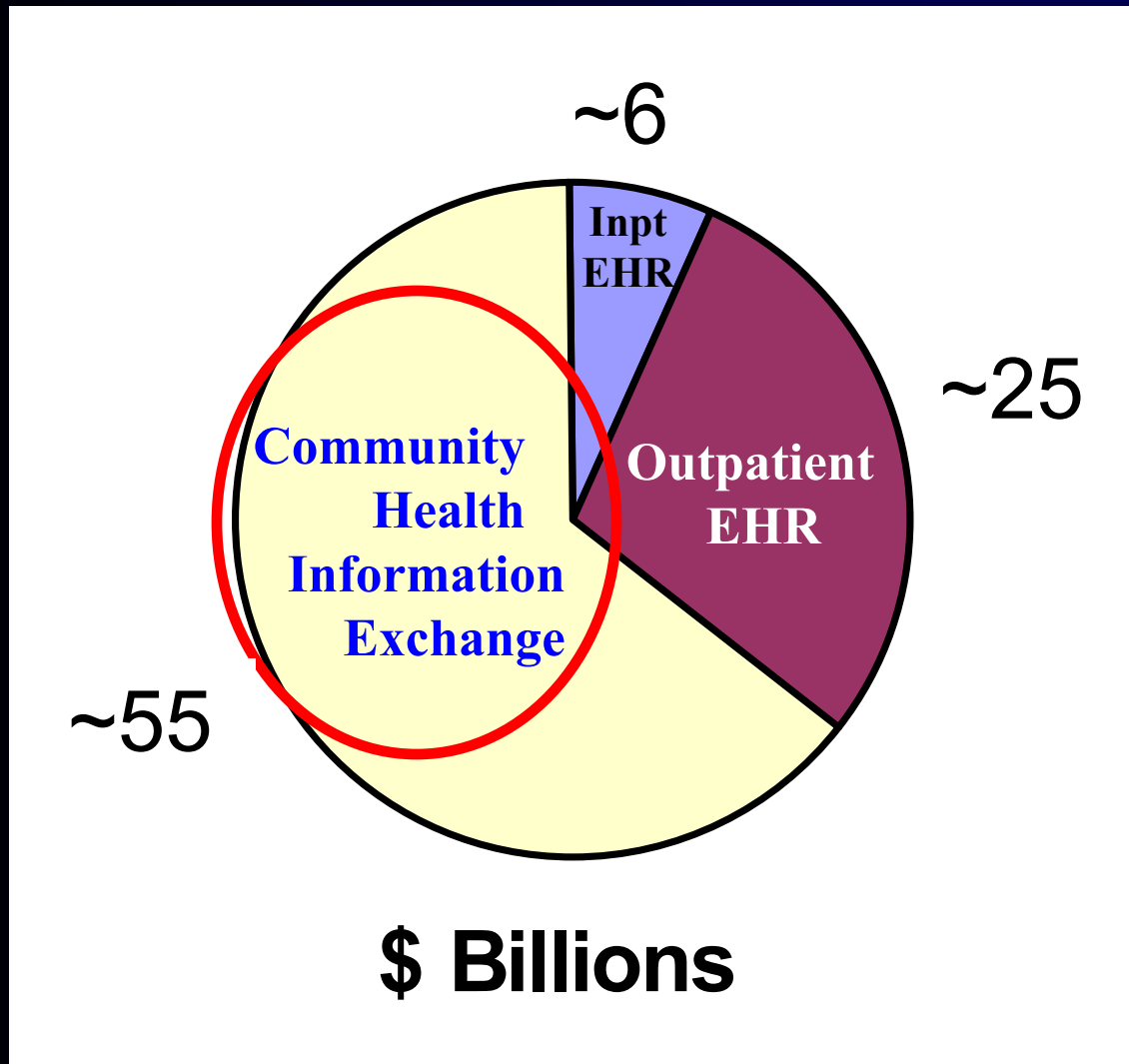
- Benefits go to payer

- No business case for physicians (especially small practices)

- Payer incentives needed (e.g. Maine)



Community Health Information Exchange



- Substantial benefits to all
- First mover disadvantage
- Seed funding needed
- Focus of current Federal initiatives



NHII Requirements: Implementation Strategy

- No national database or identifier
- Alignment of incentives
- Allow each care facility to maintain its own data
- Minimize cost & risk
- Use proven implementation strategies (where possible), e.g. incremental approach
 - Each implementation step benefits all participants
 - Implementation scope coincides with benefits scope



community



Hospital Record



Laboratory Results

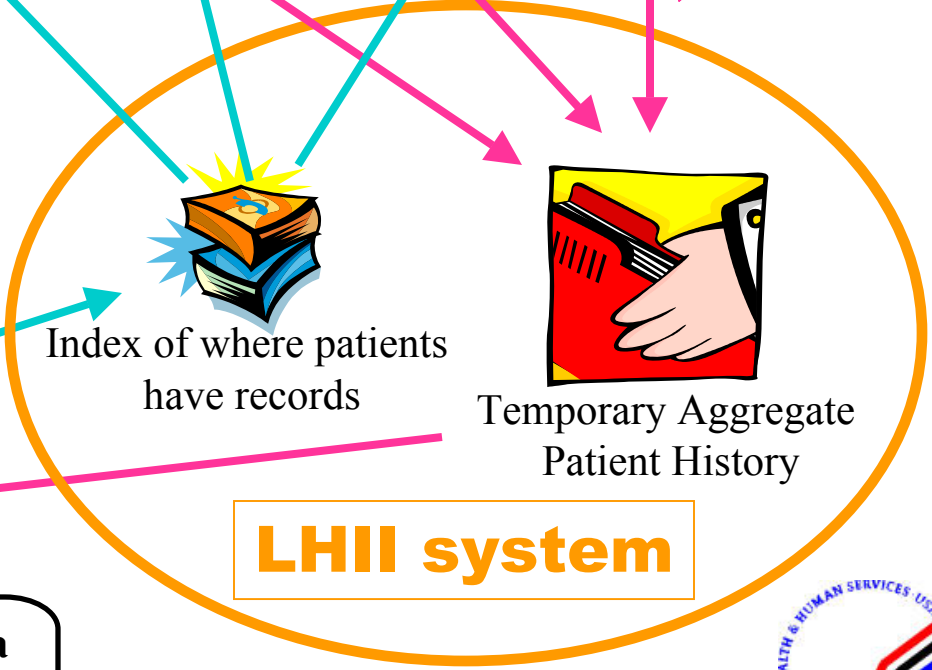


Specialist Record

Requests for Records

Records Returned

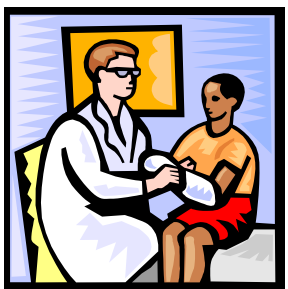
Patient Authorized Inquiry



Index of where patients have records

Temporary Aggregate Patient History

LHII system



Clinical Encounter

Patient data delivered to Physician



U.S.



Hospital Record



Laboratory Results



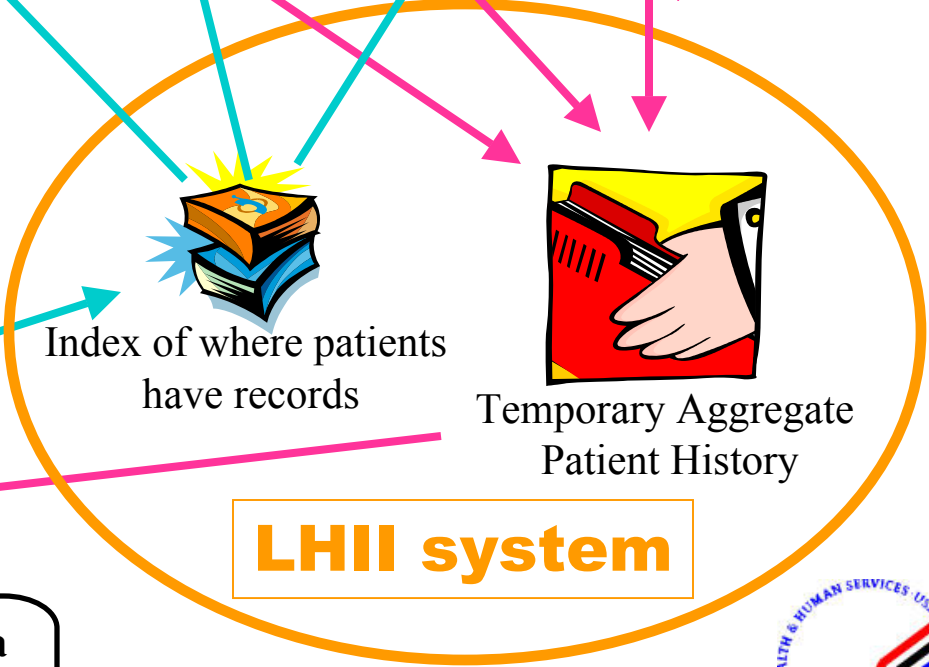
Specialist Record

Requests for Records

Records Returned

Authorized Inquiry from LHII

another LHII



Index of where patients have records

Temporary Aggregate Patient History

LHII system

Patient data delivered to other LHII



Advantages of LHII Approach

- Existing HII systems are local
- Health care is local → benefits are local
- Facilitates high level of trust needed
- Easier to align local incentives
- Local scope increases probability of success
- Specific local needs can be addressed
- Can develop a repeatable implementation process
- Parallel implementation → more rapid progress
- Use of standards allows connectivity between LHII → NHII



III. Current Status of NHII

- Islands of Information
- Fragmentary & isolated elements of NHII exist
 - Uneven distribution
 - Lack of coordination
 - Minimal interoperability
 - Many “one-of-a-kind” systems
- Much duplicative work
 - Limited dissemination of
 - Systems
 - Lessons learned



IV. Accelerating NHII progress

- **Inform**
 - **Disseminate NHII vision**
 - **Catalog NHII activities**
 - **Disseminate “lessons learned”**
- **Collaborate with Stakeholders**
- **Convene**
 - **NHII 04: 7/21-23/2004 in D.C.**
 - **National meeting to**
 - **Refine the consensus action agenda for NHII**
 - **Report on NHII progress**



V. Accelerating NHII progress (2)

- **Standardize**
 - **HL7, DICOM, IEEE 1073, NCPDP SCRIPT**
 - **SNOMED, LOINC**
 - **HL7 project: functional EHR model**
- **Demonstrate**
 - **\$50 million in FY 04 budget for NHII demonstration projects (AHRQ)**
 - **President has requested additional \$50 million for FY 05 for LHII**
- **Evaluate**
 - **Rigorous assessment of NHII benefits**
 - **Policy options for aligning financial incentives**



V. Summary

- Health care is in crisis
- NHI is needed for safety & efficiency
 - Anywhere, anytime health care information
 - Decision support
 - Communication
- Most elements of NHI already exist somewhere
- HHS is working to accelerate progress: inform, collaborate, convene, standardize, demonstrate, evaluate



V. How can you help with NHII?

- **Cost-benefit data needed**
 - **Good data hard to find**
 - **Consider making your internal studies available**
- **Consider starting an LHII**
 - **Convene community partners**
 - **Discuss information sharing**
- **Keep informed on these issues**
 - **Ask for periodic reports**
- **Make your views known**



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Questions?

For more information about
NHII

<http://aspe.hhs.gov/sp/nhii>

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