

HealthInfoNet

Stakeholder Process  
Fourth Meeting - Draft Summary Report

Friday, September 26, 2008  
Dirigo Health Agency and Maine Quality Forum, 211 Water Street,  
Augusta, Maine

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# About the Meeting

## ***Attendance***

### **Stakeholders**

Doug Carr\*, Rite Aid, Perkins Thompson  
Dan Coffey\*, HealthInfoNet Board  
Katherine Pelletreau\*, Maine Association of Health Plans  
Rod Prior\*, M.D., Mainecare  
Jim McGregor\*, Maine Merchants Association  
Sergio Santiviago\*, PhRMA  
Sarah Gagne-Holmes, Maine Equal Justice Project  
Nancy Kelleher, AARP  
Kala Ladenheim, Maine Center for Public Health  
Kevin Lewis, Maine Primary Care Association  
Cathy McGuire, Muskie School of Public Service  
Gordon Smith, Maine Medical Association

### **Interested Parties**

Jim Howard\*, Maine Department of Corrections Health Services  
Robert Ross\*, Maine Center for Public health  
Wendy Wolf, M.D., Maine Health Access Foundation  
Sharon Young, Maine Education Association Benefits Trust  
Peter Gore, Maine State Chamber of Commerce  
Len Bartel, Maine Health Access Foundation  
Al Prysunka, Maine Health Data Organization  
Jim Leonard, Maine Quality Forum

### **Staff**

Jim Harnar\*, HealthInfoNet  
Devore Culver\*, HealthInfoNet  
Craig Freshley\*, Good Group Decisions

\* = Present for the entire meeting

## ***Planned Agenda***

- 9:30           **Opening**
- Welcome  
    Devore Culver, co-convenor
  - Announcements/Reminders  
    Today's Agenda  
    Our decision process and ground rules  
    Website  
    Meeting Notes of June 24, 2008
  - Introductions
- 9:40           **Past Progress and Future Steps**
- We will briefly review work done by the stakeholders to date and take stock of what needs to be done over the next three months to complete our charge. In particular, we will review expectations regarding our final report and how to develop and finalize our recommendations in a timely manner.
- 9:50           **Health Information Technology Fund**
- Presentation and clarifications  
    - Jim Harnar, HealthInfoNet
  - Adjustments to the recommendations
  - Next steps toward finalizing recommendations
- 10:45          **Break**
- 11:00          **Return on Investment Findings and Discussion**
- Presentation and clarifications  
    - Shaun Alfreds, University of Massachusetts Medical School
  - Initial reactions and implications for potential revenue sources
  - Next steps toward developing recommendations
- 12:10          **Review Conclusions and Next Steps**
- Before adjourning, we'll make sure we're clear on what will happen next and who will do what.
- 12:20          **Closing Comments**
- Stakeholder and observers will have a chance to make brief closing comments.
- 12:30          **Adjourn**

## **Ground Rules**

- All stakeholder perspectives considered
- Observers welcome – participation at appropriate times
- Phone listeners welcome
- Recognized before speaking
- Minimize distractions
- Neutral facilitation and summary report

## **Update on HealthInfoNet**

Devore Culver provided an update on the HealthInfoNet demonstration project, as follows:

- **Phase 1: HIN is beginning the testing phase**
  - Six clinical organizations are validating the work we have done to date
  - We are targeting November for the first data exchange
    - Focusing on lab and imaging results
- **Phase 2: Will commence April 2009**
  - Will be available to clinicians
- **All data is encrypted**
- **Recent Declaration of HealthInfoNet from the state**
  - A very important step

## **Past Progress and Future Steps**

The group heard a brief presentation by Craig Freshley about progress to date and future plans. The group reviewed expectations regarding our final report and decided how to develop and finalize our recommendations in a timely manner. The following outline summarizes the presentation.

### **First Three Meetings**

1. Established Process Guidelines
  - The rules by which we interact with each other and make decisions

2. Identified benefits of HealthInfoNet
3. Established clarity about our charge
4. Reviewed other state models for health information exchanges
5. Discussed and preliminarily identified potential revenue streams
6. Discussed the Technology Investment Fund including a look at other state models

### **Future Plans**

This is our 4<sup>th</sup> of 6 meetings. To be on track, we will likely need to establish work groups to work between now and the next meeting scheduled for October 30.

## **Health Information Technology Fund**

The group heard a presentation by Jim Harnar on recent work of the Health Information Technology (HIT) Fund workgroup. See Appendix A for the handout that was distributed and discussed.

The presentation was followed by a group discussion.

### **Presentation**

- **The Resolve**
  - Calls for recommendations for a Health Information Technology Fund
  - Gather funds from broad-based sources to:
    - complete demonstration phase
    - pay for a portion of the ongoing operational sources
  - Make available funds to providers that don't otherwise have resources to access the Exchange
- **Recent Process**
  - All stakeholders discussed
  - Three content experts were consulted
    - Bob Lenna, Maine municipal bond bank
    - Beth Bordowitz, FAME
    - Betsy Biemann, MTI
  - Workgroup asked:

- Where would it be housed?
  - What would be the priorities for dispersing funds?
  - How we define “providers”?
  - Who should have access to the fund?
- **Overview of Recommendations**
  - *Fund Duration*
    - Sunset review: who would do the review?
  - *Role of the Fund*
    - Engage an organization (or organizations) with a proven track record to administer, for example:
      - FAME
      - MHHEFA
      - Private enterprises
      - Clarified that Maine Technology Fund not appropriate
    - Grants and loans given to organizations that wish to acquire medical records, including e-prescribing
  - *Governance*
    - The Fund’s Government should reflect a public-private partnership
      - Perhaps housed at an organization other than HealthInfoNet, for example:
        - FAME
        - MHHEFA
      - Each of these organizations expressed concern about taking on both governance and management
      - Perhaps HealthInfoNet should play an advisory role
  - *Priorities*
    - Should look to already established priorities for guidance
      - Add into 4. 1. the legislative resolve
    - Funding priorities reviewed on an annual basis
    - Two distinct accounts
    - Review after 5-year period
  - *Eligibility*
    - Tied to prioritization process
    - Rely on federal definitions of “provider”
    - Use already established tools to determine readiness

## ***Discussion***

- **Clarity of Terms**
  - Governance
    - Establish in rule making, not statute
    - What:
      - Set policy in keeping with legislative guidance
      - Advisory role
      - Oversight
      - Set policy for disbursement of funds
      - Establish ratio of funding to the two functions
    - Who:
      - HealthInfoNet
      - public/private
      - expertise
      - charitable non-profit status
      - State government involvement in establishing composition of board
  - Housed/Administered
    - What:
      - Where is the money (the bank)
      - Responsibility for administering the program
      - Custodial
    - Who:
      - FAME or MHHEFA
- **Judicial Model**
  - Look at as a model for bonding to build new buildings
- **Two Parts of the Fund**
  - HealthInfoNet Operations
    - This calls into question the appropriateness of HealthInfoNet administering this part of the fund
  - Assistance for providers
- **Adaptability**
  - We may want to make changes to how the fund is governed and administered depending on revenue sources
- **Funding**
  - We don't yet know where funding will come from – we are working on this question in parallel
    - Not yet sure if or how much will be requested from the general fund

- The state is both a payer and a representative of the public good
- The goal of this business is to be self-sustaining
  - Use of funds for HealthInfoNet is similar to use of funds for start-up R&D
  - Given this goal, let's not be too constraining in terms of allocation – the organization needs to be flexible in the future
- **Role of HealthInfoNet**
  - We should not be concerned about HealthInfoNet playing a governance role
- **Priorities for Eligibility**
  - We need to consider what sort of services, what sort of providers are included in eligibility
  - Let's consider funding prevention (such as public health practitioners) along with other services
    - Pyramid of treatment: prevention dollars go a lot farther
  - A loan or a grant ought not be made to a provider not likely to succeed – we should fund providers that are “ready”
  - Applying criteria and deciding who gets funded should be done by an organization with appropriate expertise
- **Order of Events - Considerations**
  - We to consider building the infrastructure AND use of information simultaneously
  - Before the funds get disperse, there should be some work in the field
    - Readiness assessment
    - Evaluation of impact
    - Technical assistance
- **Other Considerations**
  - MeHAF and private hospitals are the largest contributors, even more than the state
    - For this reason, we need to be careful about not giving the state too large a role which may deter other investors
  - Dan Coffey interested in joining the group
- **HIT Fund Work Group Issues**
  - Pros and Cons of HealthInfoNet in Governance
  - Needs to be revisited after we look at revenue sources
  - Who should do sunset review
  - How to be proactive and ready
  - How prescriptive (in the rules) to be with eligibility requirements
    - What kind of providers? Alternative providers?

# Return on Investment Analysis

The group heard a presentation and held a discussion on recent analysis of potential return on investment of the proposed health information exchange (HIE). The presentation was delivered by Shaun Alfreds of the University of Massachusetts Medical School with assistance from David Witter, of Witter & Associates, Portland, Oregon. See Appendix B for the slides presented.

Clarifications, initial reactions, implications for potential revenue sources, and next steps were topics of discussion.

## **Presentation**

- **Objective of the Presentation**
  - To understand the modeling and the analysis
    - This is high level analysis: complex data and analysis underneath
    - It is an analysis of Phase 1 – what HealthInfoNet is likely to do at the start, not over the life of the project
  
- **About the Study**
  - Purpose of the Study: To estimate potential achievable savings associated with HIE in Maine
    - Based on recent work by Baker Newman & Noyes in 2004 in Maine and national studies
  - Done by Shaun Alfreds and David Witter
  
- **Synthesis Findings to Date: Range of Potential Savings for HIE in Maine**
  - Avoidable services
    - \$28m to \$36m
  - Improved productivity
    - \$10m
  - Additional areas of potential savings exist
  
- **Methods**
  - Studies that we looked at key national studies:
    - RAND
    - Center for Information Technology Leadership
    - Smith et al – Colorado study on the effect of missing information in primary care practices
    - Overage et al – savings associated with ER visits
  - Updated all financial figures to reflect 2008 dollars
  - Tried to avoid double counting
  - Used best methodology and data available

- **Two Large Assumptions** (reflect a conservative analysis)
  - Current information sharing practices are already resulting in savings (30% relative to national models)
  - Only 80% of all savings will actually be captured
  - 30% floor and 80% ceiling results in effectively reducing savings by 50%
- **Rural vs. Urban**
  - Clarified that Maine is more rural than most of the nation and also there is a disparity between urban and rural areas
- **National Estimates**
  - CITL estimated that HIE and interoperability could save \$90b nationally
  - RAND estimated that HIT-Enabled efficiency would save \$77b nationally
  - Important to recognize that these national studies aggregate all benefit
  - Maine Study Application Assumptions
    - Attribution of savings to different functions
      - HIE – 40%
      - EMR – 20%
      - CPOE – 20%
      - CDSS – 20%
    - Clarified that while the study does not assume a specific percentage of Maine people participating, there are some assumptions about participation rates of providers
- **Savings Distribution**
  - It was noted that there has been analysis about which savings are expected to accrue to different types of payers – to be provided later.
- **What does the analysis mean for HIN today?**
  - Potential savings associated with HIN in year 1 may range between \$6.9m and \$9.5m
- **Underestimate?**
  - Savings figures here may under-report total savings associated with HIN

## ***Discussion***

- **Question and Answer**
  - Q: What do the savings include?
  - A: First year HIN savings include both avoidable and productivity savings

Q: Regarding imaging savings – is there an assumption that radiologists and labs have a self-interest in not reducing costs?

A: We looked at “potentially avoidable” costs and did not address the issue of incentive to actually avoid tests

Q: Do the savings estimated represent the “low hanging fruit?”

A: these savings represent anticipate HIN phase 1 activities.

Q: How do you account for market trends such as hospitals buying up private practices?

A: The 30% floor is meant to address that dynamic

- **Clarifications**

- Many other areas of savings could be analyzed
- Not included in the study is dispensing of prescription medications
  - That is a focus of HIN demonstration phase
  - It’s not clear that ability to look at medication history results in cost savings
- “Savings” = payments not costs
- There is an assumption that 100% of providers would participate
  - However, the 80% ceiling assumes that we wont get 100% participation of providers
- Year 1 potential savings assumes first year of full start up

- **Comments**

- This is very helpful
- Would be helpful to document the uniqueness of Maine
- We should take credit as a state – we have been able to provide a lot of data

## **Next Steps**

### **Comments**

- The primary purpose of this work is to inform the state government and legislature
- This ought to be a self-funding proposition
- We should go after seed money to build the infrastructure
- We don’t know the magnitude of additional savings from other areas (avoidables and productivity)
  - The value proposition goes beyond the public good
- The study assumes that we flip a switch and get to this place

- We need to know what it would cost to get to this place
  - Current HIN investment plan: \$24m

## **Specifics**

### **1. Establish Revenue Sources Work Group**

- Charge
  - Identify potential revenue sources in light of preliminary valuation findings
  - Identify pros and cons of each potential source
- Members
  - The following people have already volunteered to serve on the Revenue Sources Work Group:
    - Katherine Pelletreau
    - Rod Prior
    - Jim McGregor
    - Dan Coffey
    - Dev Culver

### **2. Convene the HIT Fund Workgroup**

- Issues to Address
  - Pros and Cons of HealthInfoNet involvement in Governance
  - Who should do sunset review?
  - How prescriptive (in the rules) to be with eligibility requirements?
    - What kind of providers? Alternative providers?
  - All needs to be revisited again after we look at revenue sources

### **3. Survey All Stakeholders**

- Would you like to participate in Revenue Sources work group?
  - If so, when could you meet in early October?
- When would you like the full stakeholder group to meet in December?
- If we have to change the November 20 date, when is an alternative date that would work for you?

# Appendix A – HIT Handout

## DRAFT Health Information Technology Fund Work Group

### Participants in September 3, 2008 Conference Call

Jim McGregor  
Valli Geiger  
Kala Ladenheim  
Sergio Santiviago  
Dr. Dan Mingle  
Dr. Rod Prior  
Kelly Miller  
Kris Ossenfort  
Sandy Parker  
Bob Lenna  
Dr. Josh Cutler  
Devore Culver  
Jim Harnar

### Participants in September 20, 2008 Conference Call

Jim McGregor  
Kala Ladenheim  
Dr. Dan Mingle  
Dr. Rod Prior  
Gordon Smith  
Dr. Josh Cutler  
Devore Culver  
Jim Harnar

## Work Group Recommendations

### 1. Fund Duration

#### Recommendations

1. While the Fund should be viewed as a long term commitment to building Maine's health IT infrastructure, the Fund's effectiveness should be reviewed after a set period of time;
2. This period should be adequate to allow the Fund to be established and to demonstrate its effectiveness
3. Review (not "sunset") that is consistent with funds currently managed by government instrumentalities such as FAME & MHHEFA (5-7 years)

## 2. Role of Fund

### Recommendations

1. The Fund's primary purpose should be to support the implementation & sustainability of a statewide health information exchange
2. Because the effectiveness of the exchange is directly dependent upon widespread use of electronic systems, the Fund should make available both loans and grants to accelerate adoption of EMR and other electronic systems, including e-prescribing (Maine should embrace established definition of EMR\*\*) and other HIT systems across Maine
3. Grants and loans should be administered by entities with proven capabilities and track records in these areas

The following organizations should be considered for these roles:

Loan Administration: FAME, MHHEFA

Grants: -

## 3. Governance

### Recommendations

1. The Fund should be governed by an existing entity rather than be dependent on the formation of a new organization expressly for this purpose
2. The Fund's Governance should reflect the public-private partnership approach that led to the development of Maine's health information exchange
3. The Fund should be governed by a body that would offer transparency and accountability but would provide a high level of protection from becoming a source of revenue for other needs during periods when state government faces severe budget shortfalls.
4. The Fund should be housed at an organization such as FAME or MHHEFA, with the HealthInfoNet Board of Directors, an established independent nonprofit organization with a public-private board of directors, serving in an advisory capacity (more definition needed here). Note: The Work Group requested that staff contact MHHEFA and FAME to explore how this might be set up. Staff will report to the entire Stakeholder Group on what has been learned).

## 4. Priorities

### Recommendations

1. The use of the Fund's revenue should be guided by the priorities established in the State Health Plan, the recommendations from the state's Primary Care Study Commission and by HealthInfoNet's long term implementation strategy
2. The annual allocation of funding should be driven by a funding ratio policy that is established by statute (more work needs to be done to determine this ratio?)
3. The Fund's Governing Body should determine its funding priorities on an annual basis to assure consistency with the State Health Plan, the recommendations of the state's Primary Care Study Commission and HealthInfoNet's long term strategy and other state policies.
4. Two distinct accounts should be established within the fund, one for HealthInfoNet and one for other providers (defined below), the latter to be available through grants and loans.
5. The amount of funds allotted to each of these accounts should be based, during the first five year period, on HealthInfoNet's needs to complete the Demonstration Phase (through the end of 2010) and then to meet the "public good" portion of its annual operating costs (through 2014); the remainder of funds during this period should be made available to other providers. This approach would be revised and updated following the initial five year period.

## 5. Eligibility

### Recommendations

1. Because the Resolve creating the Stakeholder process does not define "providers" who are intended to benefit from assistance from the Fund, a clear definition must be articulated
2. Eligibility should be closely tied to the prioritization process (see above)
3. An important element of eligibility must be an organization's "readiness" to transition to electronic systems; Maine should look recognized readiness assessment tools available through AHRQ or the CMS Doc It program.
4. Use the definition of "provider" established at the national level by current legislation pending in Congress (HR 6357):

**HEALTH CARE PROVIDER.**—The term ‘health care provider’ means a hospital, skilled nursing facility, nursing facility, home health entity, health care clinic, Federally qualified health center, group practice (as defined in section 1877(h)(4) of the Social Security Act), a pharmacist, a pharmacy, a laboratory, a physician (as defined in section 1861(r) of the Social Security Act), a practitioner (as described in section 1842(b)(18)(C) of the Social Security Act), a provider operated by, or under contract with, the Indian Health Service or by an Indian tribe (as defined in the Indian Self-Determination and Education Assistance Act), tribal organization, or urban Indian organization (as defined in section 4 of the Indian Health Care Improvement Act), a rural health clinic, and any other category of facility or clinician determined appropriate by the Secretary (of the federal Department of Health and Human Services).

Other established definitions & sources to be considered:

[Section 1842\(b\)\(18\)\(C\) of the Social Security Act](#)

(C) A practitioner described in this subparagraph is any of the following:

- (i) A physician assistant, nurse practitioner, or clinical nurse specialist (as defined in section [1861\(aa\)\(5\)](#)).
- (ii) A certified registered nurse anesthetist (as defined in section [1861\(bb\)\(2\)](#)).
- (iii) A certified nurse-midwife (as defined in section [1861\(gg\)\(2\)](#)).
- (iv) A clinical social worker (as defined in section [1861\(hh\)\(1\)](#)).
- (v) A clinical psychologist (as defined by the Secretary for purposes of section [1861\(ii\)](#)).
- (vi) A registered dietitian or nutrition professional.

[Definition of group practice from section 1877\(h\)\(4\) of the Social Security Act](#)

(4) Group practice.—

(A) Definition of group practice.—The term “group practice” means a group of 2 or more physicians legally organized as a partnership, professional corporation, foundation, not-for-profit corporation, faculty practice plan, or similar association—

- (i) in which each physician who is a member of the group provides substantially the full range of services which the physician routinely provides, including medical care,

consultation, diagnosis, or treatment, through the joint use of shared office space, facilities, equipment and personnel,

(ii) for which substantially all of the services of the physicians who are members of the group are provided through the group and are billed under a billing number assigned to the group and amounts so received are treated as receipts of the group,

(iii) in which the overhead expenses of and the income from the practice are distributed in accordance with methods previously determined,

(iv) except as provided in subparagraph (B)(i), in which no physician who is a member of the group directly or indirectly receives compensation based on the volume or value of referrals by the physician,

(v) in which members of the group personally conduct no less than 75 percent of the physician-patient encounters of the group practice, and

(vi) which meets such other standards as the Secretary may impose by regulation.

\*\* Definitions of EMR/HER


Here are a couple of different definitions of EMR

[http://www.himss.org/ASP/topics\\_ehr.asp](http://www.himss.org/ASP/topics_ehr.asp)

<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=150354>

<http://content.nejm.org/cgi/content/full/NEJMsa0802005 - T1>

# Appendix B – Return on Investment Presentation



**Valuation of Electronic HIE on Maine Health Care Expenditures: Preliminary Results**

HealthInfoNet Stakeholder Meeting  
September 26, 2008

Shaun T. Alfreds MBA, CPHIT  
University of Massachusetts Medical School

David Witter,  
Witter & Associates, Portland OR

**Purpose of the Study**

- To estimate the potential achievable savings associated with HIE in Maine
  - Revisit potential ROI associated with HIE in Maine following up from the study conducted by Baker Newman & Noyes in 2004
  - Break down more recent national estimates of the impact of HIE
  - Match relevant savings estimates based on Maine data by what is
    - Reasonable based on HIE successes to date
    - Applicable to HealthInfoNet demonstration phase service delivery
    - Achievable to the stakeholders participating currently and in the future
- Assist the the HealthInfoNet Stakeholder group in understanding the potential range of financial impact of HIE

**Agenda**

- Introduction
- Purpose of this Study
- Overview of Preliminary Findings to Date
- Methods
- Impact of Savings Estimates for Maine HIE: Assumptions
- Maine Population Landscape
- Potential Savings Estimates for Maine
- Potential Savings Estimate Range (Low – High)

**Synthesis Findings To Date: Range of Potential Savings for HIE in Maine**

- The range of potential savings to Maine associated with avoidable services and productivity opportunities is from \$38 - \$46 Million / year
  - \$28 - \$36 Million related to avoidable services
  - \$10 Million related to improved productivity
- Multiple assumptions are included in these calculations
  - Total savings represent statewide HIE deployment based on HIN demo phase planning
  - Actual savings will be based on the total providers participating

Range of Potential Annual Savings for Maine HIE	Low	High
Avoided Services	\$28.3M	\$36.6M
Improved Productivity	\$10.1M	\$10.1M
<b>Total Potential Savings</b>	<b>\$38.4M</b>	<b>\$46.7M</b>

**UMass Medical School Center for Health Policy and Research & Witter & Associates**

- The the University of Massachusetts Medical School Center for Health Policy and Research (CHPR) promotes and conducts applied research, evaluation, and education aimed at informing policy decisions that improve the health and well-being of people served by public agencies
  - CHPR is currently collaborating with multiple state Health and Human Services Agencies, AHRQ, the Office of the National Coordinator for HIT (ONC) and the National Governors Association (NGA), and health information exchange organizations to assess policy, business, legal, and data sharing issues related to HIT/HIE adoption and the intersection with public agencies
- Witter & Associates provides consulting support to non-profit organizations and governmental agencies seeking to improve healthcare quality and operational performance through innovative solutions including health information technologies. Recent projects include emphasis on documenting and leveraging HIT value propositions, creating strategic business development opportunities, administrative and policy frameworks, governance and program evaluation.

**Findings To Date Discussion**

- The analysis to date confirms there is significant opportunity and financial impact related to statewide HIE deployment
- The breadth of the savings demonstrates that there is a value proposition that may be turned into a revenue stream for HealthInfoNet
- Additional figures are currently being developed:
  - Assess the savings associated with the current and future planned pilot phases and years by payer category
- Other analyses may be needed to assess potential savings for additional services not included in the demonstration phase

### Methods

- Assess and break down national study estimates of potential savings associated with electronic HIE
  - RAND
  - Center for Information Technology Leadership (CITL)
  - Smith et al.
  - Overhage et al.
- Apply a standard calculation method and updated financial estimates to 2008 dollars
- Apply appropriate savings estimates to Maine claims and population data
- Develop a reasonable estimate of potential savings associated with the HIN pilot and future activities
  - Avoid double counting
  - Best methodology and data

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### Impact of Missing Clinical Information Availability in the ER for Maine HIE: Assumptions

- Overhage et al. (2002) estimated \$26 decrease in mean charges per ER encounter associated with having clinical information from the medical record available
  - Discharged patients \$13
  - Admitted patients \$123
  - Estimates based on mean charges in 1995-1996
- Maine Study Application Assumptions:
  - Inflated financials to 2008 dollars
  - Discounted charges to commercial payment rates and Medicare costs

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### Estimating Savings for Maine

- National studies have different time periods, scope & study methods
- Maine's health system is not the same as the average of the U.S.
- Assumed that 30% of potential savings proposed by the national estimates are already being accrued as a result of current information sharing practices (floor)
- Assumed that up to 80% of the savings would be captured due to adoption scenarios and health system changes (ceiling)

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### Impact of Missing Information at the Point of Care for Maine HIE: Assumptions

- Smith et al. (2005) conducted a cross-sectional survey of 253 Colorado (urban and rural) primary care clinicians in 32 practices for 8 months (1,614 visits) and found missing clinical information in 13.6% of visits
  - Laboratory & Radiology, Letters/Dictation, History and Examinations, Medication
  - Determined time spent looking for information and repeated work statistics
- Maine Study Application Assumptions:
  - Identified avoided services addressed by HIE in Ambulatory and ER Settings
    - Avoidable Visits, Admissions, Laboratory Tests, & Imaging Studies
  - Applied Maine specific payment rates
  - Adjusted the rates of missing information to different settings
  - Productivity savings based on \$150/hr for physician and \$40/hr for office staff

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### Impact of CITL & RAND Savings Estimates for HIE in Maine HIE: Assumptions

- CITL (2004) and RAND (2005) have modeled annual savings associated with the adoption of advanced clinical HIT and HIE systems
  - CITL: HIE and Interoperability Savings of \$90 Billion/Year
  - RAND: HIT-Enabled Efficiency Savings of \$77 Billion/Year
  - Study estimates based on going from no information sharing to 90-100%
- Maine Study Application Assumptions:
  - Focused on savings components clearly associated with HIE avoidable services
    - Outpatient Laboratory Tests
    - Outpatient Imaging Studies
  - Estimated 40% of the benefit from HIE, 20% EMR, 20% CPOE, 20% CDSS

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### The Maine Population Landscape 2008

- Maine is a small rural state
- Maine has a mix of both rural and urban delivery characteristics

Age	Commercial	Medicare	Medicaid	Uninsured	Total
0-17	159,827	-	97,905	18,647	266,379
18-64	582,555	43,801	140,164	109,503	876,023
65+	5,089	186,828	-	2,840	203,886
<b>Total</b>	<b>747,491</b>	<b>240,627</b>	<b>228,069</b>	<b>130,190</b>	<b>1,346,367</b>

Population estimates based on data received from MHC, the Maine School of Public Services and estimates of the Urban Institute 2008.  
Note: Commercial pays include Anthem BCBS, Aetna, Harvard Pilgrim, etc.

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### Potential Savings Estimates for Maine HIE: CITL and RAND Laboratory and Imaging

CITL Model Application to Maine HIE	Estimated Annual Savings
Savings from Avoidable Outpatient Laboratory Tests	\$9.1M
Savings from Avoidable Outpatient Imaging Studies	\$18.2M
<b>Combined Avoidable Service Savings</b>	<b>\$27.3M</b>
<b>RAND Model Application to Maine HIE</b>	
Savings from Avoidable Outpatient Laboratory Tests	\$13.6M
Savings from Avoidable Outpatient Imaging Studies	\$17.8M
<b>Combined Avoidable Service Savings</b>	<b>\$32.2M</b>

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### Full Range of Potential Savings for HIE in Maine: Synthesis Findings

Range of Potential Savings for Maine HIE	Low	High
Avoidable Visits (Smith)	\$4.0M	\$4.0M
Avoidable Laboratory Tests (Smith)	\$3.4M	
Avoidable Imaging Studies (Smith)	\$10.0M	
Avoidable Outpatient Imaging Studies (CITL)		\$18.2M
Avoidable Outpatient Laboratory Tests (RAND)		\$14.4M
Emergency Room Savings (Overhage)	\$10.7M	
<b>Potential Avoidable Services</b>	<b>\$28.3M</b>	<b>\$36.6M</b>
<b>Productivity Opportunities (Smith)</b>	<b>\$10.1M</b>	<b>\$10.1M</b>
<b>Total Potential Savings</b>	<b>\$38.4M</b>	<b>\$46.7M</b>

Note: These estimates represent preliminary findings still being analyzed. CITL and RAND did not differentiate between outpatient tests performed in the ER or other ambulatory settings. To avoid double counting our high estimate does not include other potential ER savings that may be attributed to admissions and other avoided tests and procedures from Overhage.

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### Potential Savings Estimates for Maine HIE: Overhage et al. Emergency Room Savings

Overhage et al. Model Application to Maine HIE	Estimated Annual Savings
Reduced Emergency Room Costs – Inpatient Admissions	\$5.1M
Reduced Emergency Room Costs – Outpatient ER Visits	\$5.6M
<b>Total ER Savings</b>	<b>\$10.7M</b>

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### So...What do these Figures Mean for HIN Today?

- Approximately 15% of total providers in Maine are participating in year 1 of HIN
- Approximately 50% of total ER visits are accounted for by year 1
- Potential savings associated with HIN for year 1 may range between \$6.9 - \$9.5 Million

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### Potential Savings Estimates for Maine HIE: Missing Information Model Avoided Services and Productivity Savings

Smith et al. Missing Information Model Application to Maine HIE: Avoided Services and Productivity	Estimated Annual Savings
<b>Avoided Services in Ambulatory Settings</b>	
Avoidable Visits Caused by Missing Information	\$4.0M
Avoidable Laboratory Tests due to Missing Information	\$3.4M
Avoidable Imaging Studies due to Missing Information	\$10.1M
<b>Total Avoided Services in Ambulatory Settings</b>	<b>\$17.5M</b>
<b>Productivity Savings in Ambulatory Settings</b>	
Physician/Staff Productivity Loss Looking for Information	\$2.8M
Physician Productivity Impact - Prepared Work HSPC-Med Lists	\$7.9M
<b>Total Productivity Savings in Ambulatory Settings</b>	<b>\$10.1M</b>

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### Study Next Steps

- Continuing to refine and update the analysis
  - Compiling data by payer source and age
  - Developing phasing of savings based on HealthInfoNet Pilot
    - Years 1 - 3
  - Will incorporate feedback from the stakeholders into the modeling assumptions
- Additional analysis incorporated as necessary
- Preparing a report that presents all findings
  - Additional findings to be available in October
  - Final report in November

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## Questions & Discussion

- Applying the national studies provides a range of potential opportunities for Maine
  - Maine population and payment statistics drive the savings figures
  - A potential range of savings offers an opportunity to make reasonable business decisions
- Savings figures reported here likely under-report total savings associated with HIE
  - ER savings reported in our high estimate only include outpatient lab and imaging from CITL and RAND and do not reflect the impact on admissions or other avoided services
  - A number of potential savings areas are not included here including availability of medication lists, reductions in ADEs etc, that may increase potential savings associated with HIE
- Are there areas that are unclear or that seem unreasonable?
- Are there other areas that should be explored?
- Additional Questions?

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- Witter DM, Riccardi T. Potential Impact of Widespread Adoption of Advanced Health Information Technologies on Oregon Health Expenditures. Prepared for the Oregon Health Care Quality Corporation and the Office of Oregon Health Policy and Research. September 2007.
- Additional sources will be cited in the final report.

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## Thank You!

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