

HealthInfoNet Sustainability Stakeholder Process

Final Report (complete)

(Approved by Stakeholders on December 15, 2008)

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Executive Summary of Findings and Recommendations

Overview

The final version of this report was approved by the stakeholders on December 15, 2008 (a version identical to this one without meeting notes was approved on December 9, 2008). The entire report has been approved by unanimous consent except three sections which, while not unanimously approved, were none-the-less approved by a strong majority. The three sections are identified within the report and minority opinions regarding these sections appear in Appendix F.

More than 20 stakeholders representing a wide range of interests took part in a seven-month process in 2008 aimed at accelerating the adoption of electronic medical records and identifying ways to help insure the long term sustainability of Maine's statewide electronic Health Information Exchange (HIE).

Established by the Legislature and the Governor in the spring of 2008, the make up of the stakeholder group reflected the public-private partnership that first established---and now governs Maine's HIE, known as HealthInfoNet. The stakeholder group was convened by a public entity, Maine Quality Forum, and the private, nonprofit HealthInfoNet.

Over the course of six meetings of the full Stakeholder Group and a number of work group sessions, the process led to the development of a set of recommendations for presentation to the Legislature's Health and Human Services Committee. The recommendations call for public financing for a new Health Information Technology Fund as well as financing for a portion of HealthInfoNet's ongoing operations.

The recommendations are based in part on the findings of an independent analysis that shows that HealthInfoNet holds considerable promise for moderating the growth of health care costs by improving productivity and reducing the number of duplicative and unnecessary tests, treatments and hospitalizations.

Given this analysis and the impact that HealthInfoNet is expected to have on improving the coordination and the quality of care across the state, the Group concluded that all Maine citizens will benefit in one way or another from the development of a HIE and greater usage of electronic medical records.

Background on the Stakeholder Process

Legislative Charge

The HealthInfoNet stakeholder input process was created by LD 1797: An Act to Fund Maine's HealthInfoNet Program, a Resolve that establishes a broadly representative stakeholder group to study and make recommendations regarding establishing and financing a new statewide health information technology and quality improvement fund. See Appendix A for the text of the Charter Resolve.

The Resolve stipulates that the work of the stakeholder input process include:

1. **identification of broad-based, stable, ongoing revenue sources;**
2. **development of a technology investment account** to first help ensure the establishment of the HealthInfoNet and then to provide financial assistance in the future to health care providers with limited resources with the costs of electronic medical records and e-prescribing;
3. **estimating return on investment** from shared electronic clinical information;
4. establishing **eligibility criteria for funding assistance;**
5. developing a **methodology for measuring the quality and cost impact** of HealthInfoNet and shared electronic clinical information

It was generally understood among stakeholders that the first priority is to help HealthInfoNet get established and demonstrate success in the demonstration project, then expand services and participation.

Stakeholder Input Over Six Meetings

To fulfill the charge, a stakeholder input group was established reflecting a broad spectrum of interests: providers, consumers, payers, regulators, and others. The full Stakeholder group met six times between May and November, 2008 and held a conference call in early December. In addition, work groups held additional meetings and conference calls to explore key questions and develop recommendations for the full group.

All meetings were announced in advance and open to the public. A list of “interested parties” was developed and a number of individuals regularly attended sessions as observers. Meeting notes and background information was posted on a special section of the HealthInfoNet website (www.hinfonyet.org). The Legislature was kept abreast of the Stakeholder Groups through regular email contact with committee staff.

Three organizations served as “Content Experts” to help inform discussions about the formation of a new Health Information Technology Fund. They included: The Finance

Authority of Maine, the Maine Health and Higher Education Facilities Authority and the Maine Technology Institute.

To ensure neutrality and efficiency, all meetings were professionally facilitated by Craig Freshley of Good Group Decisions. Craig also prepared notes of all meetings and this report.

See the following appendices for details:

Appendix B – List of Participants

Appendix C – Meeting Notes

Health Information Exchange Return on Investment (ROI) Analysis

As directed in the Resolve that established the Stakeholder process, an independent analysis was commissioned to study and estimate potential annual savings that may be realized during HealthInfoNet's 24-month Demonstration Phase.

This study:

- Assessed the potential return on investment (ROI) associated with electronic health information exchange (HIE) in Maine in follow up to the study conducted by Baker Newman & Noyes in 2004;
 - Considered the best available approach at the time to estimate potential Health Information Technology (HIT) savings for Maine.
- Reviewed and modeled recent national estimates of the impact of HIE;
- Obtained Maine specific population, payment, and utilization statistics; and
- Quantitatively applied national savings models to Maine statistics based on their applicability to the services delivered and anticipated provider participation in the HealthInfoNet demonstration phase. Several assumptions were used to generate potential savings estimates:
 - Estimation of savings using multiple approaches applied with a standardized method and updated to 2008 dollars;
 - Conservative recognition of savings already being achieved by existing levels of HIT/HIE adoption (30%) and maximum achievable benefits (80%).

The study was conducted by the University of Massachusetts Medical School Center for Health Policy and Research (CHPR), in collaboration with Witter & Associates, which had previously conducted a similar analysis in Oregon.

See Appendix D – Health Information Exchange Return on Investment Analysis

Findings

Potential Benefits

Financial Savings

In an effort to ensure objective, credible analysis of the data, the Stakeholder Group engaged outside, independent consultants with expertise in business planning for health information exchanges. The stakeholder group has relied on independent estimates of future savings.

Stakeholders were presented with information that estimates that the services being provided by HealthInfoNet during the demonstration phase will generate broad annual healthcare savings. The savings estimates are based on the reduction of unnecessary or duplicative laboratory testing and avoided imaging studies (referred to as “avoided services”), as well as improved productivity among providers as more information is exchanged electronically.

- Demonstration phase savings are estimated to range from \$10.6 - \$12.5 million annually in the first phase of implementation during 2009, up to \$20 million annually by 2011, as HealthInfoNet becomes fully operational.
- The eventual rollout of these specific services statewide to all providers may generate between \$40 million and \$52 million in annual health care savings.

If realized as planned, the HealthInfoNet demonstration phase savings are estimated to accrue across all health care stakeholders.

- Participating providers are estimated to realize between 37% and 44% of the total savings as a result of improved productivity and avoided services provided to the uninsured. These annual savings range from \$4.6 million in HealthInfoNet’s demonstration phase, to up to \$7.6 million by the time the health information exchange is fully operational.
- Maine commercial payers may realize substantial savings (30% to 33%) as a result of avoided services during the demonstration phase. The value of annual savings resulting from avoided services range from \$3.5 million in the demonstration phase to, up to \$6.2 million by the time HIN is fully operational.
- MaineCare (Maine’s Medicaid program) may expect to see a savings of \$900,000 due to avoided services in the demonstration. This figure may double as the HIN system is fully implemented.

- Medicare may see significant savings due to avoided services, representing 15% to 22% of the total savings or about \$1.6 million during the demonstration phase, ranging up to and \$4.4 million as HIN grows.
- Although not assessed in this analysis, some savings will also accrue to patients for reduced co-pays and deductibles for unnecessary services as well as downstream benefits of reduced costs for plan coverage.

The valuation analysis focused exclusively on a narrow range of clinical content that will be included in the initial offering delivered to participating provider organizations during the demonstration phase. As such, the analysis understates the potential for return on investment both during the demonstration phase and beyond because it does not entertain the impact that including prescription medication history information in the content offered to providers will have during the demonstration phase. There is limited empirical research currently developed that examines the financial and quality impact of providing comprehensive prescription medication history profiles at the time of a provider is treating a patient. Projects in Florida and Michigan involving the electronic presentation of prescription medication history profiles for Medicaid patients have demonstrated positive early findings in terms of reducing the average number of active prescriptions per member. Maine residents currently spend more than \$1 billion dollars annually on prescription medications.

See Appendix D – Health Information Exchange Return on Investment Analysis

This section (Financial Savings) is supported by a majority of stakeholders but not by all stakeholders. Opinions of those in the minority are expressed in Appendix F – Minority Opinions.

Economic Growth Benefits

Savings achieved through this initiative could help the State of Maine achieve important economic growth goals in the following ways:

1. Cost reductions resulting from fewer tests and procedures will decrease provider losses on governmental business (because providers are currently reimbursed less than actual costs).
2. Lower governmental losses will decrease cost shifting to private payers and self insured businesses.
3. Less cost shifting can result in lower provider prices which would result in lower health insurance premiums.

4. Savings for MaineCare can be redirected to other needs in the State.
5. Lower MaineCare costs, and lower health insurance premiums will make Maine more attractive for the business environment."

Other Benefits

In addition to the financial savings estimated in the Return on Investment Analysis, HealthInfoNet is expected to result in several additional benefits. Many of these benefits are even more valuable than the financial savings, although difficult to quantify.

- **Expanded access to healthcare**
 - Barriers reduced
 - Lower costs
 - Less confusing and onerous for consumers
- **Increased quality of care**
 - Decreased likelihood of misdiagnosis
 - Improved continuity of care in a different settings
 - Increased knowledge base for decision making
- **Improved emergency response**
 - State-wide emergency response resource withstanding natural or man-made disaster
- **Consumer friendly**
 - Encourages consumers to be more active in the health care process
 - Peace of mind for consumers – medical information is available wherever they need care in Maine
- **A more unified system**
 - Integrated public health and clinical practices
 - Improved coordination of care across patient sites
- **National potential**
 - Builds potential for moving to a regional exchange
 - Potentially sell/market this approach to other states
- **Better future decisions**
 - Provides a mechanism to measure cost, quality and access

Potential Costs

Annual Operating Costs

We estimate that the Health Information Exchange will cost about \$6 million per year to operate. About two-thirds of this amount -- or \$4 million-- is expected to come from user fees and/or subscriptions paid by providers, employers and payers, as well as from technical services provided by HealthInfoNet for provider organizations such as Maine Centers for Disease Control and others. One-third of the amount – or \$2 million – is expected to address that portion of the annual operating expenses that are being defined as benefiting the public good value of the annual operating cost required to bring HealthInfoNet to statewide status.

This projection includes the cost of securing the capital required to develop the statewide exchange over a five year period.

Infrastructure Investment

The total capital investment required to make the Health Information Exchange a reality over a five year period is projected to be \$14 million. Of this amount, \$3 million of capital investment is required for the twenty-four month health information exchange demonstration phase now under way.

In addition, HealthInfoNet has estimated that the cost of helping a critical mass of primary care providers make the transition to electronic medical record and electronic prescribing systems will be \$26 million over a seven year period. This is an important investment in infrastructure that will make a measurable impact on health care delivery improvement and the impact/value of the exchange. This \$26 million projection is based on an analysis of the difference between the current adoption of electronic medical record systems by primary care physicians in Maine compared to the total number of primary care physicians now practicing in Maine. It assumes that electronic medical record systems are adopted by 80 percent of these providers over the seven year investment initiative.

See Appendix E – Health Information Technology Fund Investment Projection Analysis

Further, we estimate that \$11 million of additional capital will be required to complete the build-out of the central Health Information Exchange Infrastructure over a five year period.

Summary of Funding Strategies

The following table summarizes recommended funding strategies to address the Annual Operating Costs and Infrastructure Investment needs described above.

Summary of Recommended Funding Strategies for Statewide Health Information Exchange (HIE) and Health Information Technology (HIT) Adoption		
Funding Purpose	Recommended Funding Source	Recommended Funding Amount
Support 1/3 of the projected annual operating expense associated with maintaining the statewide health information exchange to realize the public good value that will be derived from the health exchange. Applying these funds in FY2010 would cover the current funding shortfall associated with completing the 24 month demonstration phase project that started in February of 2008.	<ul style="list-style-type: none"> • General Funds Appropriation • Redirect portions of funding from existing agencies and programs that will directly benefit from the health exchange 	\$2 million annually
Support a portion of the projected \$11 million of capital investment needed to build out the statewide health information exchange over a five year period	<ul style="list-style-type: none"> • General Obligation Bond 	\$4 million
Support the expedited adoption of electronic medical record systems and electronic e-prescribing systems by primary care providers across the State over a seven year period. The goal would be to automate 80% of practices in the State. Funding would be offered as grants and low interest loans.	<ul style="list-style-type: none"> • General Obligation Bond 	\$20 million

Other Costs

While other costs are difficult to quantify, it is appropriate to acknowledge that participating providers will need to invest considerable time and resources of their own. To be successful, providers will need to reengineer their practice work flows and retrain practice staff in addition to installing electronic systems and learning how to use these systems.

Recommendations

Basis for Recommendations

1. Broad Public Benefit

A statewide Health Information Exchange such as HealthInfoNet should benefit every resident of Maine over time. This is consistent with the State Health Plan's prioritization of HealthInfoNet, electronic medical records, and efforts aimed at strengthening primary care across the state. HealthInfoNet will be of particular benefit to those who participate in the system in the ways described above.

HealthInfoNet will also generate benefit across Maine's economy by slowing the overall growth in health care expenses and by decreasing governmental losses. Lower governmental losses will decrease cost shifting to private payers and self insured businesses and can result in lower provider prices which would result in lower health insurance premiums.

For these reasons, we believe it appropriate for the Health Information Exchange to receive broad public support in the form of general appropriation and a general obligation bond.

2. Voluntary Participation

Participation of providers, payers, and consumers in the Health Information Exchange will be entirely voluntary.

3. Substantial Fee-For-Service Funding

Over the next few years, we expect 2/3 of the operating costs of the Health Information Exchange to be provided by fee-for-service revenues such as user fees, subscriptions and contracts.

4. Benefits to Accrue Over Time

Like most infrastructure investments and new ventures, benefits will be realized over a period of years and are expected to multiply over time. While HealthInfoNet should be able to begin to demonstrate a return on investment over the first five years of operation, a full understanding of the ROI will take a much longer period to achieve. We need to be in this for the long haul.

5. Investment in Electronic Medical Record Systems

Investment in electronic medical record and medication prescribing systems by providers is restrained because only a small portion of the return on investment in these systems currently accrues to the provider. The implementation of these systems is generally a long term process that is disruptive to the provider practice and frequently a source of near term productivity loss in the practice.

6. Long Term Optimization of Investing in a Statewide Health Information Exchange

The long term optimization of the projected quality and cost reduction returns projected to result from the development of a robust statewide health information exchange is dependent on adoption of electronic medical record and medication prescribing systems by providers across the State.

7. No New Taxes or Fees

We do not support instituting any new taxes or fees to support the Health Information Exchange.

This clause (7. No New Taxes or Fees) is supported by a strong majority of stakeholders but not by all stakeholders. Opinions of those in the minority are expressed in Appendix F – Minority Opinions.

8. Work in Progress – Need to Address Privacy and Security

Privacy and security are among HealthInfoNet's highest priorities. This prioritization is recorded in the organization's bylaws. While considerable work has been done to design a highly secure Health Information Exchange that safeguards privacy, the HealthInfoNet Board of Directors has pledged to continuously make refinements and improvements in privacy and security policies and procedures as the system moves from its Demonstration Phase to full statewide implementation.

Recommendations

Given the basis for our recommendations noted above, broad public benefit in particular, stakeholders recommend the following:

A. General Obligation Bond - \$24 million

A bond should be used to establish the proposed Health Information Technology (HIT) Fund. Bond funding is appropriate because the HIT Fund will focus on the development of a key element of Maine's healthcare infrastructure, i.e. the acquisition of electronic medical records, electronic prescribing, and the development of a statewide health information exchange designed to support improved quality, better care coordination and efficiencies that will lead to a moderation in the growth of costs.

We envision that \$20 million of the fund will be used to improve information technology infrastructure of providers so they can transform patient care management at the point of care and effectively participate in the health information exchange. Eligible providers will initially include all primary care physicians and nurse practitioners; although it is hoped that in the future other types of providers will be eligible also. An application process will be established that awards or loans necessary start-up funding to those providers most likely to appreciate benefits, most likely to realize operational inter-connectivity, and those who are most likely to serve consumers most in need.

We also envision that \$4 million of the fund will be used to develop infrastructure of the Health Information Exchange itself. These funds would be used to cover a portion of the capital investment projected for building the exchange out as a statewide resource over a five year period.

B. General Appropriation - \$2 million Annually in the FY2010 State Budget

We recommend the appropriation of general funds to HealthInfoNet in the amount of \$2 million annually, to be matched by \$4 million in annual funds from other sources. The Legislature should consider appropriations of two types, as follows.

New Appropriation: While we are sensitive to the current political and economic climate, this approach spreads the cost burden most widely and evenly among Maine people. This approach also provides the Legislature the opportunity to evaluate the Health Information Exchange relative to other public needs. Further, a new appropriation in any amount will establish a framework for future appropriations in an improved political and economic climate.

Redirect Funds: Because HealthInfoNet is expected to play a key role in supporting specific high-priority, quality-related issues (such as improved management of chronic illnesses, the future sustainability of primary care services, greater focus on disease prevention, further efforts to better coordinate emergency preparedness and e-prescribing), the Legislature should re-direct some portion of funds now spent in these areas to HealthInfoNet. In particular, sources of funds should be from agencies/programs expected to benefit the most from HealthInfoNet. The following is a listing of some of the agencies/programs that may meet this criteria (note: this is not a comprehensive list; others should be considered as legislation takes shape): the Maine Emergency Management Agency, Maine CDC, MaineCare, the Department of Corrections, the Fund for Healthy Maine, Maine Emergency Medical Services and the Maine State Employee Health Benefits Program.

This clause (A. General Appropriation) is supported by a strong majority of stakeholders but not by all stakeholders. Opinions of those in the minority are expressed in Appendix F – Minority Opinions.

C. Governance and Administration

The Health Information Exchange and the Health Information Technology Fund should be governed by HealthInfoNet and the administration of the Health Information Technology Fund should be performed by a separate entity, perhaps the Finance Authority of Maine or the Maine Health and Higher Educational Facilities Authority.

HealthInfoNet is the appropriate governing entity because the board or directors has significant government representation including ex-officio seats, the group as a whole has considerable expertise in this arena, and they already exist. As the governing entity, HealthInfoNet should take the lead role in planning and budget development, fundraising, policy development, and capacity development. They should also advise the establishment of the Health Information Technology Fund and the distribution of its funds.

The administrative entity should contract with HealthInfoNet to administer the Health Information Technology Fund grant and/or loan program, including refinement of criteria, establishment of an application process, and adjudication of awards.

D. Federal Support

Given that the Federal Government is expected to benefit considerably from HealthInfoNet (because of cost savings to Medicare), it is appropriate to request federal government contributions to HealthInfoNet. We recommend a strategy aimed at better coordinating efforts by state government and Maine's Congressional Delegation toward the goal of securing substantial new federal funding.

E. Executive Order and Other Profile-Raising Activities

Several steps should be taken to raise HealthInfoNet's prioritization and visibility and create a greater sense of urgency in Maine state government. For instance, there should be an Executive Order from Governor setting a goal for the adoption of electronic health records by a certain date in the future. Further, state agencies that will benefit should be encouraged to participate in HealthInfoNet in preference to other stand alone information handling options.

F. Develop and Refine Assessment Methodologies

The Legislature should direct HealthInfoNet to refine its methodology for estimating return on investment. There should be a particular emphasis on how to measure the impact of the inclusion of prescription medication profile history for groups like Medicaid and emphasis on how to assess savings to patients. Further, HealthInfoNet should develop a methodology for measuring the quality and cost impact of HealthInfoNet and shared electronic clinical information.

Appendix A - Charter Resolve

Committee Amendment to LD 1797 An Act to Fund Maine's HealthInfoNet Program

Amend the bill by striking the title and inserting a new title to read: "Resolve, To Advance Maine's HealthInfoNet Program."

Amend the bill by striking everything from line 1 through the summary and inserting the following:

Sec. 1. Stakeholder process. Resolved: That the Maine Quality Forum and the HealthInfoNet shall work together to convene a broadly representative stakeholder group to study and make recommendations for establishing and financing a quality improvement and technology fund that would initially contribute to HealthInfoNet's establishment and sustainability, and then eventually help make it possible for health care providers with limited financial resources to obtain electronic medical record systems.

A. The work of the stakeholder process must include: identification of broad-based, stable, ongoing revenue sources; development of a technology investment account to help ensure the establishment of the HealthInfoNet and provide financial assistance in the future to health care providers with limited resources with the costs of electronic medical records and e-prescribing; estimating return on investment from shared electronic clinical information; establishing eligibility criteria for funding assistance; developing a methodology for measuring the quality and cost impact of HealthInfoNet and shared electronic clinical information; and providing recommendations, including legislation, to the joint standing committee having jurisdiction over health and human services matters by December 1, 2008.

B. The stakeholder group must be broadly representative of persons and entities in the health care field, and representatives must be invited, at a minimum, from the following: providers and payers of health care services, associations of providers and payers, providers of long-term care and assisted living services, rural health clinics and associations representing those providers, Maine pharmacies, the pharmaceutical manufacturing industry, public health, state agencies that provide and pay for health care services, the Governor's Office of Health Policy and Finance, the Muskie School of Public Policy, the MaineCare Advisory Committee, the MaineCare Provider Advisory Group, the American Association of Retired Persons, the Finance Authority of Maine, the Maine Health and Higher Education Financing Authority, the Maine Technology Institute, the Maine Chamber of Commerce and Industry and HealthInfoNet.

C. The stakeholder group must meet in May, June, July, September, October and November. All meetings must be public meetings. Legislators must be provided notice of the meeting dates and encouraged to attend as observers.

D. The expenses of convening the stakeholder group must be borne by the HealthInfoNet.

The joint standing committee having jurisdiction over health and human services matters is authorized to submit legislation to the 124th Legislature pertaining to establishing and financing a patient safety and high quality improvement fund.

SUMMARY

This amendment replaces the bill with a resolve. The resolve establishes a broadly representative stakeholder group to study and make recommendations regarding establishing and financing a patient safety and high quality improvement fund.

Appendix B – List of Participants

Name	Organization
<u>Stakeholders</u>	
Betsy Bieman	Maine Technology Institute
Doug Carr	Rite Aid (Perkins Thompson)
Beth Bodoritz	Finance Authority of Maine
Christine Burke	Maine Education Association Benefits Trust
Dan Coffey	HealthInfoNet
Andy Coburn	Muskie School of Public Service
Josh Cutler, M.D.	Maine Quality Forum
Devore Culver	HealthInfoNet
Rick Erb	Maine Health Care Association
Sara Gagne-Holmes	Maine Equal Justice Partners
Anne Fellows	National Assn Chain Drug Stores
Katie Fullam Harris*	MaineHealth
Ana Hicks	MaineCare Advisory Committee
Valli Geiger	Maine Primary Care Association and Maine Osteopathic Association
Nancy Kelleher	AARP
Kala Ladenheim	Public Health Consultant
Robert Lenna	Maine Health & Higher Education Authority
Kevin Lewis	Maine Primary Care Association
Doug Libby	Maine Health Management Coalition
Andrew MacLean	Maine Medical Association
Tony Marple	MaineCare
Jim McGregor	Maine Merchants Association
Cathy McGuire	Muskie School of Public Service
Patricia Negron	MaineCare Provider Advisory Committee
Kristine Ossenfort	Maine Chamber of Commerce
Sandra Parker	Maine Hospital Association
Katherine Pelletreau	Maine Association of Health Plans
Kathy Plante	Maine Department of Corrections Health Services
Trish Riley	Governor's Office
Rod Prior, M.D.	MaineCare
Bob Ross, Ph.D.	Maine Center for Public Health
Ann Robinson	PhRMA (Preti Flaherty)
Sergio Santiviago	PhRMA
Gordon Smith	Maine Medical Association
Denise Vachon	NNEAHSA
David Winslow	Maine Hospital Association

* Katie Fullam Harris began the process as a representative of Anthem.

Interested Parties

Deb Hart	Representing Hannaford
Wendy Wolf, M.D.	Maine Health Access Foundation
Will Kilbreth	Dirigo Health Agency
Melissa Libby	Maine Primary Care Association
Alexandra Serra	PhRMA (Preti Flaherty)
Peter Kraut	Governor's Office
Rep. Lisa Miller	HHS Committee
Mary Violette	EMHS
Jane Orbeton	HHS Committee
Sharon Young	MEA Benefits Trust
Dan Mingle, M.D.	
Kevin Bourque	PhRMA
Alan Prysunka	MHDO
George Hill	Family Planning Association of Maine
Shenna Bellows	Maine Civil Liberties Union
Len Bartel	Maine Health Access Foundation

Staff

Craig Freshley	Good Group Decisions
Jim Harnar	HealthInfoNet

Appendix C – Meeting Notes

HealthInfoNet Stakeholder Process First Meeting – Summary Report

(Approved by stakeholders on June 24, 2008)

Friday, May 30, 2008, Dirigo Health Agency and Maine Quality Forum, 211
Water Street, Augusta, Maine

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About the Meeting

Attendance

Stakeholders

Betsy Bieman (speaker phone), Maine Technology Institute
Doug Carr, Rite Aid, Perkins Thompson
Beth Bodoritz, Finance Authority of Maine
Dan Coffey, HealthInfoNet Board
Catherine McGuire, Muskie School of Public Service
Rick Erb, Maine Health Care Association
Jack Ginty, Maine Osteopathic Association
Nancy Kelleher, AARP
Kala Ladenheim, Maine Center for Public Health
Robert Lenna, Maine Health & Higher Education Authority
Kevin Lewis, Maine Primary Care Association
Tony Marple, MaineCare
Jim McGregor, Maine Merchants Association
Khalil Nuri, Pharma
Kristine Ossenfort, Maine Chamber of Commerce
Katherine Pelletreau, Maine Association of Health Plans
Kathy Plante, Maine Department of Corrections Health Services
Rod Prior, Mainecare
Ann Robinson, Pharma
Gordon Smith, Maine Medical Association
Denise Vachon, NNEAHSA

Observers

Deb Hart, Hannaford
Wendy Wolf, Maine Health Access Foundation

Staff

Josh Cutler
Devore Culver
Jim Harnar
Craig Freshley
Chris McCabe

Planned Agenda

- 9:00 **Opening**
 Welcome
 Josh Cutler and Devore Culver, co-conveners
 About Today's Meeting
 Craig Freshley, Facilitator
 Introductions
- 9:15 **About HealthInfoNet**
 Devore Culver and Josh Cutler will provide a brief overview of the following:
 Genesis of the Project
 The Project As A Public-Private Partnership
 How the project is envisioned in the State Health Plan and the recent Legislative Resolve
 About Health Information Exchanges nationally
 The nature of an HIE and how are they forming in other states
 Institutional Structure
 How HealthInfoNet is structured as a partnership with the Maine Quality Forum, other Maine government organizations and the private care delivery structure
- 9:45 **Benefits of HealthInfoNet**
 Presentation
 Dr. Wendy Wolf, President & CEO, Maine Health Access Foundation, will provide a brief overview of the importance and relevance of this work, for patients, providers, payers, and businesses.
 Discussion
 What do we, the stakeholders, see as the benefits of HealthInfoNet? We will brainstorm and discuss a list of practical benefits.
- 10:30 **Break**
- 10:45 **Understanding Our Charge**
 We will have a general discussion about the meaning of our charge and come to some shared conclusions regarding specific goals. Generally, we're thinking it useful if the group could achieve the following:

1. Consensus on 2-3 funding options for the Legislature to consider
2. Consensus on how the technology fund will work and criteria for distributing the money

11:15 **Deciding our Process**

We will discuss and arrive at preliminary consensus regarding the following:

1. Decision making
 - a. How will we decide things as a group?
Majority? Consensus?
 - b. Use of committees to gather info and develop options
2. Membership of the Group
 - a. What it means to be a member – what is our commitment?
 - b. Should anyone else be invited to participate?
3. Nature of meetings
 - a. Schedule
 - b. Venue
 - c. Facilitation
 - d. Agenda setting
 - e. Public participation
 - f. Minutes

11:45 **Closing Comments**

Each stakeholder and observer will have a chance to make a brief closing comment, perhaps a reflection about the meeting or about the overall stakeholder process.

12:00 **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

About HealthInfoNet

Devore Culver and Josh Cutler provided a brief overview of the genesis of HealthInfoNet, about Health Information Exchanges (HIE) nationally and the institutional structure.

See Appendix A for the slides presented.

Presentation

Genesis

- **Three key organizations helped start HealthInfoNet**
 - Maine Health Access Foundation
 - Main Quality Forum
 - Maine Center for Disease Control
- **2004**
 - Examined feasibility of a health information network
 - Developed a vision for MHINT
- **2006**
 - Transition from planning to implementation
- **2007**
 - Prepared for demonstration phase
 - Contracted with a technology vendor
 - Began legislative cycle
- **2008**
 - Demonstration phase
 - LD 1797: a resolve to establish a stakeholder study group
 - State Health Plan mentions HealthInfoNet
 - Public infrastructure
 - Efficiency and effectiveness initiatives

About Health Information Exchanges

- Patient moves between parts of health service, but information doesn't move with the patient
- HealthInfoNet Fills the Gaps
 - Person-centric critical information in order to make a diagnosis
 - Data standardization
 - Workflow integration – how people care for people at the point of service
 - Workflow optimization
- National Progress
 - 75% of states are pursuing strategies in various stages of development
 - Delaware is farthest along
 - All are different
 - Antony Rogers in Arizona is a leader
 - Fascinating, promising business model
 - No other business models have freed themselves from grant funding
- Examples of “Public Good” Efforts
 - Vermont – taxes uses on claims
 - Massachusetts – package ready to be acted on
 - Louisiana – out of a crisis, received money from the state budge to install information system in all hospitals
 - Minnesota – received state money for low interest rates

Institutional Structure

- HealthInfoNet is waiting for 501c(3) charitable status from the IRS
- Partnership with other organizations
- A governing organization
- Mission: reduce the damage to patients and increase efficiency

Discussion

- “Long-term care” silo was mistakenly omitted from a slide that depicted points of health service in the presentation. Dev assured the group that the long-term care sector is a major priority.
- There was no mention of the Community Health Information Network (CHIN) project that took place the previous 10 years. CHIN failed, but was an important precursor to HealthInfoNet.
- The Quality Forum hasn’t had too much input to HealthInfoNet thus far, but they (the Quality Forum and HealthInfoNet) will partner more significantly around legislative priorities and other initiatives, such as the Charter Value Exchange.

The Benefits of HealthInfoNet

Wendy Wolf, President and CEO of Maine Health Access Foundation, gave a brief presentation on the benefits of HealthInfoNet. The group then held a discussion during which additional benefits were named. The presentation and discussion are outlined below.

Wendy Wolf’s Presentation

- Thanks to the hospitals in particular
- Karen Bell of Anthem was an important part of the genesis of HealthInfoNet. She was trying to get physicians offices to use electronic medical records
- Maine Health Access Foundation
 - Largest healthcare foundation in Maine
- HealthInfoNet is so valuable because it provides “virtual access” until such a time that we have actual universal access. It is a step toward universal access
- Other benefits
 - Expands access
 - Contains costs
 - Integrates public health and clinical practices
 - Brings consumers into the process
 - Helps patients across systems

- Right care at the time in the safest way
- A public service, much like a public utility

Benefits Identified by Stakeholders

Stakeholders created a list via brainstorming (grouped by Craig).

- Peace of mind for consumers – medical information is available wherever they need care in Maine
- Citizen-centric rather than provider-centric source of health information.
- Capture value data for public health

- Efficient means of accessing all lab values, regardless of EMR and extant interfaces
- Reduce repeated testing/procedures by improving timely access to previous results
- Reduce duplicative tests, and related costs
- A platform for clinical and administrative efficiency
- Eliminate duplication of services
- Builds a unified system

- Opportunity for enhanced communication between patients and providers
- Continuity of care in a different settings
- Increased knowledge base for decision making
- Timely, efficient identification of identity, allergies and med list upon presentation to E.D.
- Improve timeliness of clinical decision-making
- Coordination of care
- Foundation for achieving care delivery transformation in Maine.
 - Example: support of “patient medical home” concept
- Medication management, which now causes more healthcare problems and higher costs

- Technology leadership fro Maine
- State-wide emergency response resource withstanding natural or man-made disaster
- Highest/best use of limited (diminishing?) resources (funding, clinical staff, reducing redundancy)
- Reducing isolation among providers and residents
- Opportunity to bring consumer into care management process more directly with increased information access
- Potential for moving to a regional exchange

- Potentially sell/market this to other states
- Long-term benefits are clear: coordination of care; improved care management; improved patient access to information; reduced cost as a result; and freeing up of resources
- Helps expand access
- Helps contain costs
- Helps integrate clinical and public health information
- Potential excellent model for cross-state information access
- Moves us closer to portability of records
- Long-term investment
- Low-cost alternative medical records
- Focal point – EMR management
- Time, money and quality
- Satisfy public expectation of how technical work is done (medical)
- A mechanism to measure cost, quality and access

Understanding Our Charge

The group held a discussion about the meaning of our charge as articulated the HealthInfoNet Stakeholder Resolve.

See Appendix B for the full text of the Chartering Resolve.

Elements of our Work

Craig divided the charge (language from the actual resolve) into specific elements, as follows:

The work of the stakeholder process must include:

6. **identification of broad-based, stable, ongoing revenue sources;**
7. **development of a technology investment account** to help ensure the establishment of the HealthInfoNet and provide financial assistance in the future to health care providers with limited resources with the costs of electronic medical records and e-prescribing;
8. **estimating return on investment** from shared electronic clinical information;
9. establishing **eligibility criteria for funding assistance;**

10. developing a **methodology for measuring the quality and cost impact** of HealthInfoNet and shared electronic clinical information

This proved a useful way to discuss the specifics of the charge and draw conclusions, below.

Conclusions

Below are the shared conclusions regarding our charge and conclusions about how to proceed with our work.

1. Let's be sure to include all study elements identified in the resolve
2. We will "borrow" from other study efforts
3. There are two funding needs
 - i. The system - HealthInfoNet
 - ii. EMR's for providers with limited resources
4. Clarified that the information exchange will be voluntary system for users, providers, payers (health plans) and consumers
 - i. Perhaps mandatory for funders
5. Acknowledged that all stakeholders are not 100% bought-in, although most everyone seems to support the concept
6. Maine's system must be compatible with evolving national standards, with a national system
7. Let's also try to identify potential costs
8. We are not assuming it will be a 100% public funded venture
9. It's important to be able to demonstrate that this will lower costs over the long run
10. Hybrid approach to providing recommendations
 - i. A preferred single recommendation
 - ii. A few alternative options
11. Let's not leave writing of the report to the last minute

12. Work plan next steps
 - a. Estimate Return on Investment (element #3) and Develop Quality/Cost Measurements (element #5)
 - i. To be done by HealthInfoNet staff with participation of any interested stakeholders
 - b. Identify Revenue Sources (element #1)
 - i. To be done by all stakeholders as a group - start with a blank slate
 - c. Develop Technology Investment Account (element #2) and Create Eligibility Criteria for Funding Assistance (element #4)
 - i. Could begin simultaneously with Step B
 - ii. Details yet to be decided about how to do this

Deciding Our Process

Meeting Schedule

The group agreed to the following dates for meetings (each meeting to occur 9:00am to 12:00noon in the Augusta area:

Tuesday, June 24, 2008

Thursday, July 24, 2008

Friday, September, 26, 2008

The group tentatively agreed to the following meeting dates, pending some research about conflicts and alternatives:

Thursday, October 30, 2008

Thursday, November 20, 2008

The group agreed to explore Maine Hospital Association and Maine Medical Association as possible locations for future meetings.

Participation

The group confirmed that all meetings are open to the public and that observers are welcome.

Proxies

The group agreed that proxies would be welcome with the understanding that proxies would be:

- Properly informed about past activities of the group
- Empowered to make decisions on behalf of the organization they represent

Other Stakeholders

The group agreed that representatives from the following organizations should be invited to participate. Josh Cutler and Devore Culver will make invitations accordingly.

- Maine Equal Justice Partners
- Maine Health Management
- Public Purchases Collaborative

It was also generally agreed that Josh Cutler and Devore Culver would explore the extent to which Maine Hospital Association is appropriate to represent Maine Health and other large hospital systems.

It was generally acknowledged that Maine Association of Health Plans is appropriate to represent Anthem and other large health plans.

Other Process Guidelines

Craig handed out a document called Stakeholder Process Guidelines - Draft for Discussion.

See Appendix C for the document as revised to include conclusions about proxies and other minor revision.

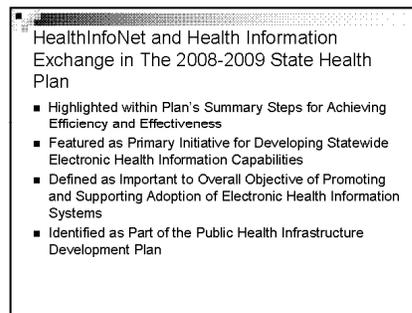
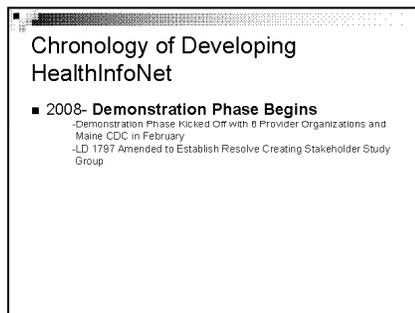
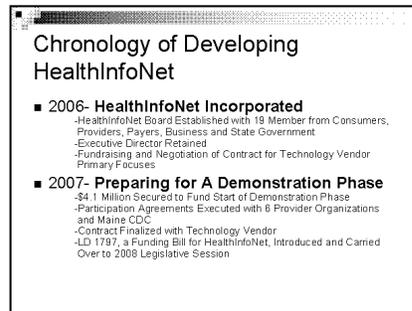
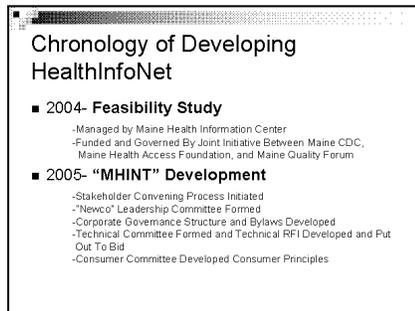
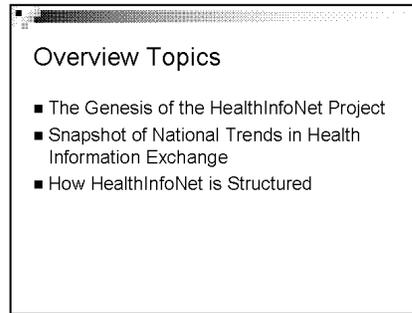
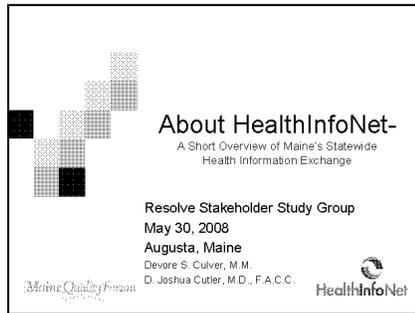
Stakeholders were asked to review the document and be prepared to discuss it and approved it at the next meeting.

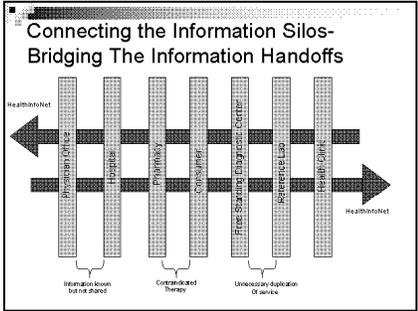
Next Meeting

Craig identified the following topics as likely to be on the agenda for the next meeting.

- Explore other state experiences (staff)
- Explore business models (staff), ROI projections (staff)
- Identify prospective revenue streams (full stakeholder group)
- Identify information needs
- Establish study groups
- Decide our process

Appendix A – About HealthInfoNet Slide Presentation





- ### Primary Functions of Maine's Health Information Exchange
- Person-Centric Clinical Content Aggregation Across Points of Care Delivery (Electronic Health Record)
 - Data Standardization
 - Workflow Integration
 - Workflow Optimization

There Is National Progress Toward Realization of Statewide HIEs

"Three quarters of states are now pursuing strategies varying in levels of development and including the launch of health information exchange (HIE) entities with goals to provide statewide governance and facilitate statewide interoperability."

Lynn Dieder, AHIMA State Level Health Information Exchange Consensus Testimony to American Health Information Community 4-22-08

- ### Seen One Statewide Health Information Exchange--
- Full Spectrum of Founding Origins
 - Governor Executive Order
 - Public/Private Partnership
 - Provider or Payer Controlled
 - Medical Initiative
 - Different Funding and Business Models
 - Developing Focus on "Public Good" Valuation and Funding

- ### Recent Examples of "Public Good" Funding for HIE/HIT Investment
- Vermont- \$27 million over 7 years based on 1/10th of 1% fee on all claims for both HIE and EMR investment
 - Massachusetts*- \$125 million over 5 years out of general funds for EMR investment
 - Louisiana- \$18.6 million in Governor's budget for statewide health information exchange (\$15.1 million) and \$3.5 million for incentives to encourage doctors to adopt EMRs
 - Minnesota- \$6.3 million biennium no interest loan for EHR purchase, \$7 million biennium EHR grant program
- * Legislation still pending

- ### What Is HealthInfoNet
- 501(c)(3)* Public-Private Partnership
 - Stake Holder Organization Involving Consumers, Providers, Payers, Business and Government
 - An Organization Focused on Support Collaboration and Innovation
- * 501(c)(3) application pending

HealthInfoNet Board of Directors

OFFICERS

<p>CHIEF EXECUTIVE OFFICER Charles Howell, M.D., MBA, Chief Chief Operating Officer, Jackson Laboratory, Bar Harbor</p> <p>CHIEF FINANCIAL OFFICER Daniel Stone, M.D., MBA, Chief President & Chief Medical Officer, Western Piedmont Health Care, Portland</p> <p>CHIEF INFORMATION OFFICER David Conroy, MBA, President Executive Vice President, Eastern Maine Healthcare System, Brewer</p> <p>CHIEF LEGAL OFFICER Wanda Boyne, MBA, General Counsel President, HealthTrust Network & Manufacturing Group, Portland</p> <p>CHIEF MARKETING OFFICER Jeffrey Spivey, President CEO, Chart Science Hospital, Bar Harbor</p> <p>CHIEF OPERATIONS OFFICER Ann Douglas, Director Maine Dept. of Health & Human Services, Augusta</p> <p>CHIEF STRATEGIC OFFICER Ann Conway, M.D., President President, Consulting, Orono</p> <p>CHIEF TECHNOLOGY OFFICER David Harris, Chief Information Officer Maine Dept. of Health & Human Services</p>	<p>CHIEF MEDICAL OFFICER Larry Popper (Ret.), M.D., Chief Medical Officer Central Maine Medical Center, Lewiston</p> <p>CHIEF NURSING OFFICER Douglas Longenecker, D.D. Executive Director, MaineHealth, Bangor</p> <p>CHIEF QUALITY OFFICER Robert Manton President of Care, MaineCare</p> <p>CHIEF SECURITY OFFICER Dore Hill, M.D., Director Maine Center for Disease Control, Augusta</p> <p>CHIEF TRAINING OFFICER Roberta Poirer, B.S., Regional Director, Office of Public Care Services Maine Dept. of Health & Human Services, Augusta</p> <p>CHIEF COMPLIANCE OFFICER Therese Ryan, Director Governor's Office of Health Policy & Research, Augusta</p> <p>CHIEF EVALUATION OFFICER Kate Turner, BBA, Director Staff Director, Bureau of Health Statistics, Bangor</p> <p>CHIEF RESEARCH OFFICER Richard Tang, M.D., Medical Service Leader Orono Healthcare of Bangor, Bangor</p>
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The Mission of HealthInfoNet

Develop, promote and sustain an integrated, secure and reliable regional information network dedicated to delivering authorized, rapid access to person-specific healthcare data across points of care that will support

- Improved patient safety
- Enhanced quality of clinical care
- Increased clinical and administrative efficiency
- Reduced duplication of services
- Enhanced identification of threats to public health
- Expanded consumers access to their own personal health care information

Appendix B – Charter Resolve

Committee Amendment to LD 1797 An Act to Fund Maine’s HealthInfoNet Program

Amend the bill by striking the title and inserting a new title to read: “Resolve, To Advance Maine’s HealthInfoNet Program.”

Amend the bill by striking everything from line 1 through the summary and inserting the following:

Sec. 1. Stakeholder process. Resolved: That the Maine Quality Forum and the HealthInfoNet shall work together to convene a broadly representative stakeholder group to study and make recommendations for establishing and financing a quality improvement and technology fund that would initially contribute to HealthInfoNet’s establishment and sustainability, and then eventually help make it possible for health care providers with limited financial resources to obtain electronic medical record systems.

A. The work of the stakeholder process must include: identification of broad-based, stable, ongoing revenue sources; development of a technology investment account to help ensure the establishment of the HealthInfoNet and provide financial assistance in the future to health care providers with limited resources with the costs of electronic medical records and e-prescribing; estimating return on investment from shared electronic clinical information; establishing eligibility criteria for funding assistance; developing a methodology for measuring the quality and cost impact of HealthInfoNet and shared electronic clinical information; and providing recommendations, including legislation, to the joint standing committee having jurisdiction over health and human services matters by December 1, 2008.

B. The stakeholder group must be broadly representative of persons and entities in the health care field, and representatives must be invited, at a minimum, from the following: providers and payors of health care services, associations of providers and payors, providers of long-term care and assisted living services, rural health clinics and associations representing those providers, Maine pharmacies, the pharmaceutical manufacturing industry, public health, state agencies that provide and pay for health care services, the Governor’s Office of Health Policy and Finance, the Muskie School of Public Policy, the MaineCare Advisory Committee, the MaineCare Provider Advisory Group, the American Association of Retired Persons, the Finance Authority of Maine, the Maine Health and Higher Education Financing Authority, the Maine Technology Institute, the Maine Chamber of Commerce and Industry and HealthInfoNet.

C. The stakeholder group must meet in May, June, July, September, October and November. All meetings must be public meetings. Legislators must be provided notice of the meeting dates and encouraged to attend as observers.

D. The expenses of convening the stakeholder group must be borne by the HealthInfoNet.

The joint standing committee having jurisdiction over health and human services matters is authorized to submit legislation to the 124th Legislature pertaining to establishing and financing a patient safety and high quality improvement fund.

SUMMARY

This amendment replaces the bill with a resolve. The resolve establishes a broadly representative stakeholder group to study and make recommendations regarding establishing and financing a patient safety and high quality improvement fund.

Appendix C – Draft Stakeholder Process Guidelines

HealthInfoNet

Stakeholder Process Guidelines

DRAFT FOR DISCUSSION

A. Decision Making

1. Stakeholders will try to reach consensus on all issues
 - a. All perspectives will be heard and considered
 - b. The group will attempt to accommodate all concerns
 - c. Consensus will be formally affirmed when no one objects to a written proposal (although some stakeholders may “stand aside”)
2. When consensus cannot be reached, stakeholders will decide by majority vote of those present
 - a. The facilitator will determine if/when consensus cannot be reached
 - b. There must be a written proposal under consideration
 - c. When possible, a vote will be announced in advance

B. Information Gathering

1. Stakeholders are invited to share information and research findings with the group as a whole
 - a. All research findings will be properly cited
 - b. It is helpful if information and research findings are provided electronically to the facilitator
2. At times, committees may be established to gather information and develop options
 - a. Committees will have specific charges
 - b. Committees may include people other than stakeholders

C. Information Sharing (including meeting minutes)

1. Minutes
 - a. Minutes will include attendance and a summary of key points of discussion and decision. They will not include all comments
 - b. Draft minutes of each meeting will be circulated by e-mail among those who attended for editing and approval
 - c. Once approved by e-mail, minutes will be:
 - i. Circulated by e-mail to all stakeholders and observers
 - ii. Posted at the HealthInfoNet Stakeholder Process Website
2. Minutes will include presentations
3. Agendas
 - a. Agendas will be

- i. Circulated in advance by e-mail to all stakeholders and observers
 - ii. Posted in advance at the HealthInfoNet Stakeholder Process Website
 - b. Agendas will include major points of business and also details about the meeting location including how to get there
- 4. Other Information
 - a. Information and research findings that any stakeholder wants shared with the group will be
 - i. Circulated by e-mail to all stakeholders and observers
 - ii. Posted at the HealthInfoNet Stakeholder Process Website

D. Membership

- 1. Stakeholders
 - a. Stakeholders have been initially invited by the co-conveners, Josh Cutler and Devore Culver, in accordance with the enabling resolve.
 - b. Additional stakeholders will be invited by the co-conveners upon recommendation of existing stakeholders.
 - c. Stakeholders are committed to participating fully throughout the process and honoring these guidelines.
- 2. Proxies
 - Proxies are welcome with the understanding that they are:
 - a. Properly informed about past activities of the group
 - b. Empowered to make decisions on behalf of the organization they represent
- 3. Observers
 - a. Anyone may request to be an observer by providing their contact information to the facilitator.
 - b. All such requests will be honored.

E. Meetings

- 1. Schedule and locations
 - a. The schedule and locations of meetings will be determined by the group upon recommendation of the co-conveners.
 - b. The schedule and locations will be circulated and posted as far in advance as possible
- 2. Agenda setting
 - a. Agendas for meeting will be established by the facilitator and co-conveners based on
 - i. Decisions and discussion of the previous meeting
 - ii. Need to achieve outcomes in a timely manner
 - iii. Specific requests for agenda items
 - b. Stakeholders are welcome to suggest agenda items by submitting them in writing to the facilitator at least two weeks in advance of any meeting.

3. Facilitation and ground rules
 - a. Meetings will be facilitated by a third-party, independent facilitator selected by the co-conveners
 - b. The following ground rules will be used for meetings
 - i. All stakeholder perspectives considered
 - ii. Observers welcome – participation at appropriate times
 - iii. Phone listners welcome
 - iv. Recognized before speaking
 - v. Minimize distractions
 - vi. Neutral facilitation and summary report
4. Participation
 - a. All meetings are public and anyone is welcome to attend
 - b. Discussion is limited to stakeholders except at specific times when observers are invited to contribute
 - i. There will be time near the end of every meeting to hear comments from observers
 - ii. There may be times during meetings when the facilitator or a stakeholder may ask and observer for comment
 - c. Phone participation
 - i. Phone participation in meetings is accommodated but in-person participation is encouraged
 - ii. Phone participants are expected to listen and should not be expected to participate in the same way as in-person participants
 - iii. If you want to participate by phone, please notify the facilitator at least three days in advance of the meeting.
5. Preparation
 - a. Meeting participants are expected to be prepared for meetings by having read advance materials

Stakeholder Process

Second Meeting - Summary Report

(Approved by stakeholders on July 24, 2008)

Tuesday, June 24, 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
Rick Erb, Maine Health Care Association
Katie Fullam Harris, Anthem Blue Cross
Ana Hicks, MaineCare Advisory Committee
Nancy Kelleher, AARP
Kala Ladenheim, Maine Center for Public Health
Kevin Lewis, Maine Primary Care Association
Jim McGregor, Maine Merchants Association
Cathy McGuire, Muskie School of Public Service
Sergio Santiviago, PhRMA
Kristine Ossenfort, Maine Chamber of Commerce
Rod Prior, Mainecare
Gordon Smith, Maine Medical Association
David Winslow, Maine Hospital Association

Observers

Deb Hart, Hannaford
Rep. Lisa Miller, HHS Committee
Will Kilbreth, Dirigo Health Agency
Alexandra Serra, Preti Flaherty
Shaun Alfreds, University of Massachusetts Medical School

Staff

Josh Cutler
Devore Culver
Jim Harnar
Craig Freshley

Planned Agenda

9:00 **Opening**
 Welcome
 Josh Cutler and Devore Culver, co-conveners
 House Keeping
 Reminder about our decision process and ground rules
 Meeting Notes of May 30, 2008
 Meeting Calendar
 Website Reminder

Today's Agenda
Introductions

- 9:15 **Valuation Models and Other State Experiences**
1. We will begin with an overview of the results of the June 20 conference call regarding valuation and return on investment models. What are the pros and cons of various methods? Are there one or two methods that seem to make the most sense for Maine?
2. We will also hear about other state approaches to Health Information Exchanges and which approaches potentially make the most sense for Maine.
- 10:00 **Potential Revenue Streams (and Information Needs)**
1. Even though there may be unanswered questions about value, we will begin to brainstorm potential ways in which to pay for a Maine Health Information Exchange AND pay for a Technology Investment Account. We will begin by getting all the ideas out on the table and then try to organize into specific categories.
2. As we have our discussion, we will also identify specific needs for more information required to help us make decisions. Before completing the discussion, we will make a plan for how to gather need information – perhaps establish study groups.
- 11:25 **Deciding our Process**
Based on the draft provided at the May meeting, we will discuss and hopefully agree on our decision making process and operational details regarding our meetings and communications.
- 11:40 **Next Meeting Agenda**
- 11:45 **Closing Comments**
Stakeholder and observers will have a chance to make brief closing comments.
- 12:00 **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

Valuation Models and Other State Experiences

Valuation Models Conference Call

The group heard an overview of the results of the June 20 conference call regarding valuation and return on investment models. Six people participated in the conference call but few, if any, had read the advance materials.

The following reflect comments made by those who participated in the call:

- Several good resources at the website
- Objective
 - Use an existing model as a point of departure
- Next week or two
 - Settle on a few preferred models
 - Runs some numbers through the preferred models
- End goal: We want to come to consensus on a basis for attributing value to this project
- The papers that we were asked to review were macro-level analysis, not specific business models
 - They estimated savings in a general way
- Challenge: Who are our customers?
 - Answer: The Legislature
- Helpful to realize we are not trying to develop a set of “sellable” products
- It was valuable to focus in on the most relevant research
 - Focused on Oregon study
- Realized that many other similar projects are still in their infancy
- Concluded that we are not going to be able to show a benefits realization in the near term
 - This is because we need to build an infrastructure before we can leverage value
- Need to make sure we don’t over-promise and under-deliver in terms of benefits

Other State Experiences Presentation Highlights

The group heard about other state approaches to Health Information Exchanges (HIE) and which approaches potentially make the most sense for Maine. Shaun Alfreds of the University of Massachusetts Medical School made a presentation using PowerPoint. **See Appendix A for the slides presented.**

The following comments were made by Mr. Alfreds in conjunction with this slide presentation and/or by stakeholders during the presentation.

HIE Stages of Development

- **Survey**
 - 130 Organizations responded to the survey
 - Responses clarified that the definition of HIE is very broad
- **HealthInfoNet's Stage of Development**
 - HealthInfoNet is at Stage 4 (see Appendix A for detail)

HIE Organization and Governance

- **Stakeholder Importance**
 - Stakeholders need to be bought in
- **Challenges**
 - How to involve consumers?
- **Four Basic Models**
 - Nonprofits
 - Public utility models
 - Physician/payer collaborations
 - For-profit HIE's

Examples of Services

- **Varieties**
 - There is a wide variety of services being offered
- **Products to Offer**
 - HealthInfoNet plans to offer three products initially (those with 'x' marks on the chart)
 - Services with '?' marks are represent additional services that are expected to contribute to return on investment
 - Suggestions (from group)

- All cells for HealthInfoNet should have ‘?’ marks
- **Clarifications**
 - Indiana gets revenue from clinical messaging (among other services) – could be expanded to include two-way communications and clinical decision support

Sustainability

- **Determinant of Sustainability**
 - Primary determinant of sustainability is the service mix, not the architecture
- **Fees for Service**
 - Mature HIE’s are providing services that stakeholders are willing to pay for:
 - Transaction fees
 - Membership/subscription fees
 - Charging for administrative data exchange
 - Value-added service fees
- **Public Support**
 - Claims tax (.02% in Vermont)
 - State authority charges
- **Clarifications**
 - 8% of doctors today are using interoperable EMR’s

Discussion

- **Projected Cost**
 - The projected cost of HealthInfoNet is \$6 million
 - \$4 million for operations from fee for service
- **Prioritization of Service**
 - Sharing clinical data at time and point of care
 - Medication history
 - Public health surveillance/reporting
- **Clarifications**
 - HealthInfoNet doesn’t plan to get into claims management

Potential Revenue Streams

Brainstorming Discussion

The group brainstormed potential ways in which to pay for a Maine Health Information Exchange AND pay for a Technology Investment Account. The group got all ideas up on the wall and then Craig organized them into categories as follows:

System

1. Fee for Service

- a. Value-added service fees
- b. Charging for administrative data exchange
- c. Membership/subscription fees
- d. Transaction fees
- e. Clinical messaging
- f. Training and technical assistance

2. Public Support

- a. New Taxes
 - i. Tax on prescriptions
 - ii. Charges to payers
 - iii. Claims tax
 - iv. Tax on medical services
- b. State Funding
 - i. General Fund (state budget)
 - ii. Revenue bonds
 - iii. Appropriation with private sector match
 - iv. Hit funds established by legislation
- c. Medicaid
 - i. Medicaid leverage
 1. Build off claims management system
 2. Transformation grants
 3. MMIS match
- d. Reallocation
 - i. Federal money for OMS needs
 - ii. All payer claims data-base
 - iii. State money reallocated from other contracts
 - iv. OSA monitoring program
- e. Other

- i. Donations and grants
- ii. State authority charges for services

3. Incentives

- a. CON (Certification of Need) certification incentive

Provider Access

1. Tax credits for providers

Conclusions

What Would Be Worth Paying For?

Craig reflected earlier comments about the value of something like HealthInfoNet and the experience of other states that in order to succeed, stakeholders need to perceive and experience value.

He challenged stakeholders to identify what they might be willing to pay for if they believe that it has value.

The following reflects comments made:

- Payers
 - Lab test results
 - Real time information for emergency room visits
 - Reduction of duplication of testing – reduces work
 - Need to explore why physicians are ordering duplicative tests
 - Care coordination
 - Medication management
- Consumers
 - Personal health record
 - Care coordination
- Clinical Providers
 - Ability to access information outside existing structure
 - Awareness of info that you wouldn't otherwise even know exists
 - Real time information for emergency room visits
 - Reduction of duplication of testing – reduces work
 - Care coordination
 - Medication management

- Pharmaceutical Providers
 - Medication management
 - Management of unused medications
 - Potential improvements to access
 - Emergency response – access to medicines
 - Capture public data

Ability to Pay is Questionable

In spite of the identifications of many valuable aspects of HealthInfoNet, actual ability to pay for it is another matter.

It was noted that “Ability to Pay” is questionable for

- Community Health Centers
- Nursing home providers
- Payers
 - We’re already paying for a lot of this
 - Proprietary
 - Competitive environment
- Consumers

Areas of Consideration

In conclusion, it was generally agreed that there are five types of potential revenue streams worthy of consideration, as follows:

- State funding
 - General Revenue
 - Bonding
- Medicaid
 - Leverage and other changes
- Reallocation
- New taxes
- Fee for service

Stakeholder Process Guidelines

The group discussed the proposed stakeholder process guidelines and agreed to some revisions. In particular, the group agreed that a draft report should be presented and discussed at the fifth meeting and that it should be written by an independent third party such as Craig Freshley, the facilitator.

See Appendix B for the Stakeholder Process Guidelines as revised and agreed to by the group.

Next Steps

It was confirmed that the group will meet next on Thursday, July 24 from 9:00am to 12:00am at the Maine Hospital Association in Augusta. Perhaps we will break up into five study groups at the meeting to explore the five “areas of consideration.”

Appendix A – Shaun Alfreds' Presentation


Center for Health Policy and Research
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL

**HealthInfoNet Stakeholder Meeting:
HIE Services, Sustainability, and the Role of the State**

June 24, 2008

Shaun T. Alfreds MBA, CPHIT
 University of Massachusetts Medical School,
 Center for Health Policy and Research

Agenda

- Introduction
- Current State of HIE Organizations / RHIOs
 - Business Processes and Services
 - Sustainability
 - Public Support Options
 - What does this mean for MEHIN?

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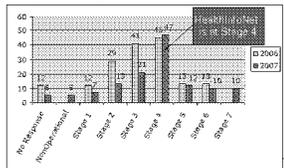
**University of Massachusetts Medical School
Center for Health Policy and Research**

- The mission of the UMass Center for Health Policy and Research (CHPR) is to promote and conduct applied research, evaluation, and education aimed at informing policy decisions that improve the health and well-being of people served by public agencies
- CHPR's work in this field includes collaborations with the State Health and Human Services Agencies, the Agency for Health Care Research and Quality (AHRQ), the Office of the National Coordinator for HIT (ONC) and the National Governors Association (NGA) State Alliance for e-Health. Focus areas include:
 - HIT/HIE to improve the quality of population healthcare delivery and consumer outcomes for those served by public agencies
 - HIT/HIE to improve public agency efficiencies
 - Policy, business, legal, and data sharing issues related to HIT/HIE adoption and participation by public agencies

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HIE Organization / RHIO Stages of Development: eHI Survey (2006 – 2007)

- Stage 1: Recognition of need
- Stage 2: Organization of stakeholders, vision, and objectives
- Stage 3: Business planning, securing funding
- Stage 4: Implementation: technical, financial and legal (pilot or multi-year)
- Stage 5: Fully operational HIE; transmitting data
- Stage 6: Operational HIE: "sustainable" business model
- Stage 7: Expansion of organization to a broader coalition of stakeholders



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HIE Organization and Governance

- Key to successful HIE operation is buy-in and willingness of those sharing the data to use the system (including competing HIEs)
- Consumers
 - Varying degrees of consumer involvement and representation
 - Most exchanges appear to follow an opt-out consent model
- Legal entity status
 - Not-for-profit HIEs entities are most common
 - Public Utility (few)
 - Physician / Payer Collaborative
 - For-profit HIEs (few)

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Examples HIE Organization Services

HIE Service Function	PHR	HIE	Local RWJ	Health	Specialty / Home	WTL	Health/Event
Direct Messaging	2	2	1	2	1	1	1
Shared Care/Referral	1	1	1	1	1	1	1
State & Local e-Info	1	1	1	1	1	1	1
Medication Safety	1	1	1	1	1	1	1
Quality Monitor / Clinical	1	1	1	1	1	1	1
PHR	1	1	1	1	1	1	1
Healthcare Case	1	1	1	1	1	1	1
Electronic	1	1	1	1	1	1	1
Public Health Surveillance	1	1	1	1	1	1	1
Regulatory	1	1	1	1	1	1	1
Insurance Companies	1	1	1	1	1	1	1
Government	1	1	1	1	1	1	1
PHR	1	1	1	1	1	1	1
Local e-Info	1	1	1	1	1	1	1
Secondary Care Services	1	1	1	1	1	1	1
Emergency Services	1	1	1	1	1	1	1
Information	1	1	1	1	1	1	1
Quality Monitoring	1	1	1	1	1	1	1
Local e-Info	1	1	1	1	1	1	1

Note: The sources of the information in the above table include empirical and industry publications as well as personal communications. These data have not been verified with the institutions represented. Do not cite or reproduce.

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HIE Organization Costs

- Challenging to identify the total cost of establishing and operating an HIE
- Initial costs include
 - Convening stakeholders and establishing governance
 - Establishing committees, policies and procedures
 - Identification of transactions to be supported by the HIE
 - Conducting inventory of the data sources
- Operational costs are most often apportioned by:
 - Professional Services (legal costs, policy development, etc.)
 - Central HIE Personnel Costs
 - Overhead / Indirect Costs
 - Technology
 - Training / Help Desk (end-user support)
 - Other (accreditation, certification, marketing, stakeholder management)
- Tendency to underestimate the magnitude of legal and liability insurance costs (VITL ~\$200K/yr)

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HIE Sustainability Planning

- Opinions vary on the link between architecture and sustainability
- Sustainability planning is a major issue for all HIEs
 - High reliance on state/federal funding
 - Identifying services that participants will pay for can be challenging
 - Need critical mass to demonstrate value (network value)
- HIEs at a mature state of sustainability planning are providing services that stakeholders are willing to pay for
 - Use of transaction and membership/subscription fees for core services
 - Some charging for administrative data exchange / clearinghouse services
 - Value-add service fees for EHR 'lite', quality measurement and reporting, and HIT implementation assistance
- Operational public 'utility' financing models for HIE are limited:
 - VT: Legislatively mandated claims 'tax' for state-wide HIT fund to support HIE
 - DE: State-wide HIE is a Public Authority. Cost allocation methodology (transaction and subscription) to recoup authority expenditures

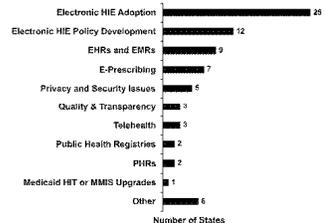
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Examples of HIE Organization Start Up and Sustainability Financing

HIE	Start-Up Financing	Ongoing Sustainability Financing
Delaware HIT	2004 HIT Business Plan (State of Delaware) HIT Business Plan (State of Delaware) State Health Care Information System (SHCIS) Initiative	Operating HIT Business Plan (State of Delaware) Operating HIT Business Plan (State of Delaware) Operating HIT Business Plan (State of Delaware)
Nebraska HIT	2004 HIT Business Plan (State of Nebraska) 2004 HIT Business Plan (State of Nebraska)	Operating HIT Business Plan (State of Nebraska) Operating HIT Business Plan (State of Nebraska)
Ohio HIT	2004 HIT Business Plan (State of Ohio) 2004 HIT Business Plan (State of Ohio)	Operating HIT Business Plan (State of Ohio) Operating HIT Business Plan (State of Ohio)
Virginia HIT	2004 HIT Business Plan (State of Virginia) 2004 HIT Business Plan (State of Virginia)	Operating HIT Business Plan (State of Virginia) Operating HIT Business Plan (State of Virginia)
Washington HIT	2004 HIT Business Plan (State of Washington) 2004 HIT Business Plan (State of Washington)	Operating HIT Business Plan (State of Washington) Operating HIT Business Plan (State of Washington)

Note: The source of the information in the above table include empirical and industry publications as well as personal communications. These data have not been verified with the individuals or agencies provided. Do not cite or reproduce without written permission. LEAF MEDICAL SCHOOL, COMPREHENSIVE MEDICAL CENTER AND HEALTH CARE SERVICES

Top E-Health Priorities for State Governors in the Next 2 Years



Source: The Commonwealth Fund and National Governors Association E-Health Survey, conducted by Health Management Associates, 2007. LEAF MEDICAL SCHOOL, COMPREHENSIVE MEDICAL CENTER AND HEALTH CARE SERVICES

Federal Initiative to Drive State Policy Action: NGA State Alliance for e-Health

- Created (2007) by Office of the National Coordinator for HIT (ONC) and managed by the National Governors Association
- Membership includes: 2 Governors (co-chairs, VT, TN), 2 Attorney Generals, 2 Insurance Commissioners, 2 former Governors, and technical, private sector, and other govt. experts
- Their charge:
 - Identify, assess and, through consensus solutions, map ways to resolve state health IT issues that affect multiple states and pose challenges to interoperable electronic health information exchange
 - Provide a forum in which states may collaborate so as to increase the efficiency and effectiveness of the health IT initiatives that they develop

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State Alliance Recommendations for HIE 2007

- The State Alliance should direct NGA to provide states guidance for the development of **executive orders** and direct NCSL to provide guidance related to **legislation**
- Each state should develop or adopt a vision for state eHIE that leverages existing and planned public and private eHIE efforts and outline an **eHIE roadmap** by the end of 2008
- Governors should **designate a single authority** for the state to coordinate state government-based eHIE implementation activities and work, in collaboration, with public/private eHIE effort
- Governors and state legislatures should align to establish **flexible financial mechanisms** to support and ensure sustainable eHIE
- States should fund greater development of technical assistance resources for state Medicaid/SCHIP to **build workforce competency** on eHIE
- State Medicaid agencies should **implement incentive programs** and, or **reimbursement policies** that will encourage provider adoption and use of HIT systems and participation in eHIE
- States should establish **quality, prevention and safety goals** from which to base the development of their HIT/eHIE infrastructure planning. States should then establish HIT infrastructure objectives to support these broader quality, prevention, and safety goals

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How States are Supporting/Funding HIT and HIE

- Executive orders and legislative action establishing workgroups to convene stakeholders/develop Roadmaps (often are associated with funding)
 - AL, CA, CO, IA, MA, ME, MO, ND, NJ, UT
- Establish HIT funds for development and support
 - AK, ID, LA, MO, VT
- Authorize entities to collect or receive funds
 - Vermont H 229 (2007) "VITL ... may accept any and all donations, gifts, and grants of money, equipment, supplies, materials, and services from the federal or any local government, or any agency thereof, and from any person, firm, or corporation..."

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How States are Supporting/Funding HIT and HIE (Cont.)

- Grants: States often target groups otherwise not able to afford HIT such as CHCs, small practices and rural providers
 - Minnesota HE 1078 (2007) gives preference to projects benefiting providers located in rural and underserved areas of Minnesota which have an unmet need for the development and funding of electronic health records. Grant funds awarded on a three-to-one match basis with maximum grant of \$400,000.
- Tax Incentives: Credits and Deductions
 - Wisconsin enacted a tax credit for providers who purchase electronic medical records. Providers can claim up to 50% of the cost of the system with a maximum of \$10 million a year.
- Purchasing Power: Driving HIT and HIE adoption and support through existing programs
 - Targeted reimbursement (e.g. Medicaid reimbursement for home and community services delivered via telemedicine (CO, ME))
 - Requirement for HIT standards purchased with state funds (CT, IA, VA, IN, MN, UT)

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Sources of State Support/Funding

- States are looking at various means to fund HIT – States primarily look at HIT as a means to generate savings
- Medicaid and federal transfers dominate
 - 37 States have eHealth activities in Medicaid (many of which focus on sharing claims based data)
 - DRA Transformation Grants have been a primary driver
 - MITA offers potential opportunities for enhanced match funding
 - Quality improvement / programmatic match funds available
- State employee health plans have recently increased activity
 - MN SEHP requires eRx by 2015; grants and incentives available
 - CalPERS partnership with CALRHIO: \$25/ED visit charge for participating plans
- Other funding sources include: dues, bonds, loan guarantees, insurer assessments, and user fees

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What Does this Mean for HealthInfoNet?

- Currently there is no competitive pressure from other HIEs in the state
- HealthInfoNet has significant provider participation in the pilot
- Additional support from other stakeholders will be necessary for pilot completion and moving toward a state-wide HIE
 - The State has shown interest but must be cautious in any IT / IIT investments due to recent Medicaid MMIS challenges
 - HealthInfoNet and the State may wish to consider "public utility" funding, but should recognize the accountability requirements associated
- A sustainable business plan will require careful formulation of the specific service set that stakeholders (public and private) see value in and will pay for

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Thank You!

For Further Information:

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UMass Medical School Center for Health Policy and Research
<http://www.umassmed.edu/healthpolicy/HIT/PolicyDevelopment.aspx>

Also See:
National Governors Association State Alliance for eHealth at:
www.nga.org/center/ehealth/

National Conference of State Legislatures: Searchable database of state health IT bills is at:
http://www.ncsl.org/programs/health/forum/HIT/HIT_database.cfm

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Appendix B – Process Guidelines

HealthInfoNet

Stakeholder Process Guidelines

Approved: June 24, 2008

F. Decision Making

1. Stakeholders will try to reach consensus on all issues
 - a. All perspectives will be heard and considered
 - b. The group will attempt to accommodate all concerns
 - c. Consensus will be formally affirmed when no one objects to a written proposal (although some stakeholders may “stand aside”)
2. When consensus cannot be reached, stakeholders will decide by majority vote of those present
 - a. The facilitator will determine if/when consensus cannot be reached
 - b. There must be a written proposal under consideration
 - c. When possible, a vote will be announced in advance

G. Information Gathering

1. Stakeholders are invited to share information and research findings with the group as a whole
 - a. All research findings will be properly cited
 - b. It is helpful if information and research findings are provided electronically to the facilitator
2. At times, committees may be established to gather information and develop options
 - a. Committees will have specific charges
 - b. Committees may include people other than stakeholders

H. Information Sharing (including meeting minutes)

1. Minutes
 - a. Minutes will include attendance and a summary of key points of discussion and decision. They will not include all comments
 - b. Draft minutes of each meeting will be circulated by e-mail among those who attended for editing and approval
 - c. Once approved by e-mail, minutes will be:
 - i. Circulated by e-mail to all stakeholders and observers
 - ii. Posted at the HealthInfoNet Stakeholder Process Website
2. Minutes will include presentations
3. Agendas
 - a. Agendas will be
 - i. Circulated in advance by e-mail to all stakeholders and observers

- ii. Posted in advance at the HealthInfoNet Stakeholder Process Website
 - b. Agendas will include major points of business and also details about the meeting location including how to get there
- 4. Other Information
 - a. Information and research findings that any stakeholder wants shared with the group will be
 - i. Circulated by e-mail to all stakeholders and observers
 - ii. Posted at the HealthInfoNet Stakeholder Process Website

I. Membership

- 1. Stakeholders
 - a. Stakeholders have been initially invited by the co-conveners, Josh Cutler and Devore Culver, in accordance with the enabling resolve.
 - b. Additional stakeholders will be invited by the co-conveners upon recommendation of existing stakeholders.
 - c. Stakeholders are committed to participating fully throughout the process and honoring these guidelines.
- 2. Proxies

Proxies are welcome with the understanding that they are:

 - a. Properly informed about past activities of the group
 - b. Empowered to make decisions on behalf of the organization they represent
- 3. Observers
 - a. Anyone may request to be an observer by providing their contact information to the facilitator.
 - b. All such requests will be honored.

J. Meetings

- 1. Schedule and locations
 - a. The schedule and locations of meetings will be determined by the group upon recommendation of the co-conveners.
 - b. The schedule and locations will be circulated and posted as far in advance as possible
- 2. Agenda setting
 - a. Agendas for meeting will be established by the facilitator and co-conveners based on
 - i. Decisions and discussion of the previous meeting
 - ii. Need to achieve outcomes in a timely manner
 - iii. Specific requests for agenda items
 - b. Stakeholders are welcome to suggest agenda items by submitting them in writing to the facilitator at least two weeks in advance of any meeting.
- 3. Facilitation and ground rules

- a. Meetings will be facilitated by a third-party, independent facilitator selected by the co-conveners
 - b. The following ground rules will be used for meetings
 - i. All stakeholder perspectives considered
 - ii. Observers welcome – participation at appropriate times
 - iii. Phone listeners welcome
 - iv. Recognized before speaking
 - v. Minimize distractions
 - vi. Neutral facilitation and summary report
4. Participation
- a. All meetings are public and anyone is welcome to attend
 - b. Discussion is limited to stakeholders except at specific times when observers are invited to contribute
 - i. There will be time near the end of every meeting to hear comments from observers
 - ii. There may be times during meetings when the facilitator or a stakeholder may ask and observer for comment
 - c. Phone participation
 - i. Phone participation in meetings is accommodated but in-person participation is encouraged
 - ii. Phone participants are expected to listen and should not be expected to participate in the same way as in-person participants
 - iii. If you want to participate by phone, please notify the facilitator at least three days in advance of the meeting.
5. Preparation
- a. Meeting participants are expected to be prepared for meetings by having read advance materials
 - b. Presentations will be provided in handout form at meetings when possible

K. Final Report

- 1. Draft to be provided prior to the fifth meeting
 - a. Report to be drafted by the facilitator (if possible)
(Perhaps with the help of Shaun Alfreds, Muskie and/or other resources)
- 2. If consensus is not reached on the final report and it is approved by majority vote, minority comments will be included

Stakeholder Process

Third Meeting - Summary Report

(Approved by stakeholders on September 26, 2008)

Thursday, July 24, 2008, Maine Hospital Association, Augusta, Maine

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About the Meeting

Attendance

Stakeholders

Doug Carr, Rite Aid, Perkins Thompson
Dan Coffey, HealthInfoNet Board
Bernardo Feliciano, Good Group Decisions
Vallie Geiger, Maine Primary Care Association
Peter Gore, Maine State Chamber of Commerce
Ana Hicks, MaineCare Advisory Committee
Kala Ladenheim, Maine Center for Public Health
Tony Marple, MaineCare
Jim McGregor, Maine Merchants Association
Sandra Parker, Maine Hospital Association
Rod Prior, Mainecare
Gordon Smith, Maine Medical Association

Interested Parties

Deb Hart, Hannaford
Don Mingle, M.D., MaineMSO
Alexandra Serra, PhRMA
Sharon Young, MEA Benefits Trust

Staff

Josh Cutler
Devore Culver
Craig Freshley, Good Group Decisions

Planned Agenda

9:00 **Opening**
 Welcome
 Josh Cutler and Devore Culver, co-conveners
 Announcements/Reminders
 Today's Agenda
 Our decision process and ground rules
 Website
 Future meeting dates
 Meeting Notes of June 24, 2008
 Introductions

- 9:15 **Technology Investment Fund**
 How other funds work
 We will hear about similar funds in other states and also explore lessons learned from similar Maine funds.
 Draft Guiding Principles
 We will discuss ideas regarding the governance, administration and eligibility of the fund. Perhaps some guiding principles will begin to emerge.
- 10:15 **Break**
- 10:35 **Potential Revenue Streams**
 Even without quantification of the benefits (a benefit analysis is due September, 2008), there is general agreement that a HealthInfoNet-type system would benefit the public good. Based on this premise alone, we continue our dialogue about there might be public support for the effort.
- For each of the following five topics we will discuss benefits, barriers, and strategies to move forward.
1. **State funding: general revenue and/or bonding**
 2. **Medicaid: leverage and other changes**
 3. **Reallocation from existing sources**
 4. **New taxes**
 5. **Fee for service**
- Perhaps we will work in small groups, depending on our size and composition.
- 11:40 **Next Meeting Agenda**
- 11:50 **Closing Comments**
 Stakeholder and observers will have a chance to make brief closing comments.
- 12:00 **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

Technology Investment Fund

The group heard a presentation on how other technology investment funds work in other states. Devore Culver prepared and distributed a handout. See **Appendix A – Technology Fund State Approaches**.

The group was also presented with a handout prepared by Jim Harnar titled: Questions & Considerations to Help Shape Development of the Technology Investment. See **Appendix B - Technology Questions and Considerations**.

Following these presentations, the group discussed ideas regarding the governance, administration and eligibility of the fund in hopes of drafting Guiding Principles.

Other State Approaches

- **Introduction**
 - The five states referenced are not the only five states doing this work.
- **Louisiana**
 - They have a surplus
 - Used some Katrina relief money (\$10 million)
 - Has a pay for performance system
 - Terrific success with Medicaid compliance
- **Massachusetts**
 - Not yet signed into law
 - 3 years into an ambitious project to make three states full automated
 - Serve as research laboratory
 - Created the E-Health Institute – public/private partnership
 - \$25 million per year from general fund
 - Focused on primary care and high value user served populations
 - Focused on EMR adoption
 - Advisory structure – strictly public
- **Minnesota**
 - Legislature mandate that every citizen must be on an electronic medical record by 2014
 - 2% service fee on providers – currently existing – reallocated to help fund EMR grants and loans
 - We should consider: “Every citizen will have an EMR.”

- Puts focus on the individual rather than the provider
- **Tennessee**
 - Governor has been driving this at the national level
 - Has best developed local exchanges in the country
 - Executive order created an office
 - Now devolving into a public/private partnership
 - \$13.6 million investment pool created by legislature
 - Use funds for seed grants
 - Initial focus on rural physicians – asked them to invest in infrastructure and commit to all of the following for a duration of two years in order to receive \$3,500 up front:
 - Do e-prescribing
 - Keep up the Medicaid record
 - Maintain Medicaid immunization record
 - Now some program is being broadened
 - Allowed providers to participate in state telecommunications infrastructure
 - State measured volume of use
- **Vermont**
 - New service fee
 - 1.99% of 1% on all claims extended to self-insured market
 - State Medicaid pays \$500,000 per year
 - \$32 million over 7 years
 - \$10 million > Exchange
 - \$22 million > EMR

Discussion and Comments

- Establish two funds?
 - One for technology assistance and one for infrastructure?
 - Undecided
- A strategic plan (vision of the future) would help us determine how much effort to put toward HIE (Health Information Exchange) vs. EMR (Electronic Medical Record)
 - There is a wide variety of types of EMR's and levels of sophistication
- Elements to be considered in prioritization
 - Need
 - Readiness (infrastructure)
 - Readiness for system change
 - Note – VY and MA require a readiness assessment
 - Certification by CCHIT not adequate

- This is a federal certification program
- Strategic planning guidance
 - State health plan
 - HealthInfoNet strategic plan
- Provider ROI: 20% - this suggests that most of the funding should go out in grants rather than loans
- Could use the grant and loan funds to incentivize standardization
- To be successful, we must do careful, ongoing evaluation
- Would be helpful for us to define “provider”
- Ideas for initial assistance recipients
 - Primary care practices
 - Could be affiliated with large groups or hospitals
 - Build on the demonstration project
 - 2-year project
 - Connecting hospitals and ambulatory care providers
 - 52% of Maine annual hospital discharges
 - 41% of Maine annual ambulatory visits
 - Seeking to demonstrate
 - We can connect specific records to specific people
 - We can impact the workflow of the provider
 - Meaningful initial impact on key areas
 - Improving our management of medication
 - Emergency room utilization of resources
 - Focus on E-Prescribing
 - Mail order e-prescribing is a super red flag issue among pharmacists
- The primary barriers to using EMR’s is not financial
 - Technical assistance?
 - Lack of standardization?

Technology Fund Conclusions

Questions to Address

1. Where housed?
2. Priorities?
3. Definition of an EMR
4. Defining “Providers”

Technology Fund Work Group Established

The Technology Fund Work Group, made up of the following individuals, was established by the stakeholder coalition. The group will be convened by Dev Culver.

- Dev Culver
- Kala Ladenheim
- Josh Cutler
- Dan Mingle
- Valli Geiger
- Gordon Smith
- Sandy Parke
- Rod Prior
- Jim McGregor
- Christine Ossenfort (?)
- Sergio Santiago (?)

Dev will send to the Group info about the demonstration project

Potential Revenue Streams

Discussion

- General
 - To help this be successful
 - Align funding sources with benefits
 - Relate this project to primary care
 - Link to Primary Care Study Group
 - Relate this to the Patient Centered Medical Home
 - Consider how to get Medicare Funding
- State Funding – Appropriation from general fund or bond
 - Benefit – could leverage Medicaid funding
 - Barrier – may result in cuts in other places
 - Strategies

- Put in a bill for several \$100k
 - Bond for infrastructure investment
 - Bond for the hardware
- Medicaid
 - Benefit – could result in large federal contribution
 - Barrier – difficult to measure the impact, especially in one or two fiscal years
 - Potential Strategies
 - Currently a 50% match for administrative services – could be a 90% match
 - Need to show return within the biennium
- Reallocation
 - Benefit – could be sustainable over the long run
 - Potential Strategies
 - Look to R.O.I. results to establish reallocations
 - Cost recapture from Emergency Room fee
 - Reallocate from MHDO
 - Need to learn more about this
- New taxes
 - Barriers
 - Savings don't go back to private practices
 - Puts the burden on rate payers
 - Free-rider issue
 - People benefiting who have not paid
 - Makes healthcare more expensive
 - Results in health care rationing
 - There will be temperamental opposition to any kind of new tax
 - Perceived similarities to MHDO
 - Strategies
 - Types of taxes identified, including at pervious meeting
 - Tax on prescriptions
 - Charges to payers
 - Health insurance claims tax
 - Tax on medical services
 - Recommend all or recommend none
 - General agreement: recommend none
 - Political infeasibility would jeopardize other revenue ideas
- Fee for service
 - Benefits
 - Could be sustainable over long term
 - Access to data

- Barriers
 - Won't happen right away
 - Lack of sustainable funding
 - Legal and liability issues
 - Measuring impact will be a challenge
- Questions
 - Need to wait for the R.O.I. results
- Strategies
 - Offer technical assistance for fee

Revenue Conclusions

- We assume that electronic medical records serve the public good
- Benefits
 - Will help us address the most complex cases within the system
 - Fewer hospital visits
 - Reduced duplication
 - Fewer medical errors
- Electronic medical records should be focused around the person
 - Rather than around a provider or payer
- First year of funding should include the development of a strategic plan
- Use already existing vehicles to guide our focus
 - State Health Plan
 - Others
- We are considering not recommending any new taxes or increasing any existing taxes

Appendix A – Technology Fund - State Approaches

Summary Sample of State Approaches to “Public Good” Funding for Electronic Medical Record (EMR) and Health Information Exchange HIE Adoption and Use
07/23/08

State	Nature of Investment Plan	Core Principles Behind Investment Plan	Eligibility Criteria	Terms and Duration	Application and Fund Management	Post-Implementation Evaluation Criteria
LA	<p>Medicaid Incentive Payments Part of \$100 million development funding provided to LA by federal government after Katrina</p> <p>\$10 million of fund devoted to Health Information Technology investment through Medicaid</p> <p>\$7 million directed to EMR/HIE adoption</p> <p>\$3 million to HIE development</p>	HIE adoption is something that needs to be encouraged by the state	<ul style="list-style-type: none"> -Focused on primary care providers serving Medicaid patients agreeing to participate in automated immunization documentation and maintenance -HIE eligibility defined in competitive RFP that is now being finalized (no specific details yet available) 	<ul style="list-style-type: none"> -\$0.25 per Medicaid recipient under 21 utilizing VFC and LDNS (state automated immunization management system) < 75% of recipients aged 24 months up to date with vaccine series -\$0.50 per Medicaid recipient under 21 utilizing VFC and LDNS (state automated immunization management system) 75%-89% of recipients aged 24 months up to date with vaccine series -\$1.00 per Medicaid recipient under 21 utilizing VFC and LDNS (state automated immunization management system) 90% or more of recipients aged 24 months up to date with vaccine series -Payment calculations done monthly and paid quarterly -Provider must manage the enrollment and maintenance of recipients in to the Vaccines for Children (VFC) program -Provider must enroll in and use the LDNS immunization management system -Provider must be enrolled in 	<ul style="list-style-type: none"> -Provider is enrolled as a Medicaid PCP -LA Medicaid manages funds 	<ul style="list-style-type: none"> -Evaluation is ongoing and current to any given month -Evaluation is based on actual usage compared against registered Medicaid members

State	Nature of Investment Plan	Core Principles Behind Investment Plan	Eligibility Criteria	Terms and Duration	Application and Fund Management	Post-Implementation Evaluation Criteria
MA	<p>E-Health Institute Fund (final adoption of bill Pending): General Fund dollars</p> <p>Defined as grants not to exceed \$25 million in any one year.</p>	<p>Transform care delivery and the utilization of care process redesign supported by a statewide, interoperable electronic health records system in order to improve patient safety and quality and to lower costs in the state's health care system</p> <ul style="list-style-type: none"> -Identify regions where compelling opportunities to make strategic investments appear to be present. -Provide development support more generally to organizations to assist in quality improvement activities and the formation and growth of emerging health technology sectors in regions. 	<p>Primary focus of grant program is on "ambulatory care providers with a particular focus on providers" such as community health centers that care for a significant number of persons in underserved populations."</p> <ol style="list-style-type: none"> 1. Organizations seeking grants under this program must agree to use the grant to: 2. Redesign care processes 3. Utilize case management techniques 4. Develop and implement an electronic health record system <p>In selecting grant recipients, the institute shall consider: Existing technology and organizational infrastructure upon which the health information network will be built</p> <p>The extent of stakeholder participation</p> <p>Health care provider participation commitments</p> <p>Capacity to measure quality and efficiency improvements</p> <p>The extent of the opportunity for a plan to improve health care quality and the health outcomes of patients in the region to be served</p>	<p>1.A Medicaid as a Community Care PCP</p> <ul style="list-style-type: none"> -The fund, as proposed, does not have a stated end date either for funding from the general fund or for how long an individual grant awarded will be funded. -Organizations approved for grant funding must begin implementation of their plan no later than the beginning of the second year of receiving the grant 	<ul style="list-style-type: none"> -Fund is organized under a public-private corporation (the e-health institute). -In conjunction with a standing advisory committee to the institute (chaired by the MA secretary of health and human services and includes the secretary of administration and finance, and the director of the health care cost and quality council) the institute develops and submits an annual grant fund plan for projects and objectives that are projected to cost no more than \$25 million per year. -The institute entertains applications from individual organizations seeking grant monies to support EMR and health information exchange (HIE) planning, installation and operating dollars (the application form is not yet defined) 	<p>Based on the grant plan as proposed by individual applicants, annual reporting by the defined objectives for quality and efficiency improvement will be submitted to the institute by the organization(s) receiving grant funds.</p>

State	Nature of Investment Plan	Core Principles Behind Investment Plan	Eligibility Criteria	Terms and Duration	Application and Fund Management	Post-Implementation Evaluation Criteria
MN	<p>No Interest Loan Program: Minnesota Health Care Access Fund based on health care provider tax. Tax is applied to all providers (hospitals and physicians) at a rate of 2% of all invoiced services. The main purpose of this Fund is to support MN's Medicaid program.</p> <p>No interest loan program funded at \$3.15 million available for FY 2007-2008 and \$3.15 million available for FY 2008-FY2009</p>	<p>2007 MN Legislature mandated:</p> <ul style="list-style-type: none"> All health care providers and hospitals have an interoperable electronic health record (EHR) system by 2015. All newly acquired electronic health record (EHR) products must be certified by the Certification Commission for Healthcare Information Technology (CCHIT) or its successor. Applies to settings covered by CCHIT certification. A requirement to develop a statewide implementation plan to meet the 2015 interoperable EHR mandate A requirement that all health care providers and payers establish and use an e-prescribing system by January 1, 2011. 	<p>Participation in health information exchange efforts</p> <ul style="list-style-type: none"> Community Clinics as defined in MN Statutes Hospitals eligible for rural hospital capital improvement grants (50 or fewer beds) Physician clinics located in communities with populations less than 50,000 Nursing facilities Other providers of health or health care services approved by the Commissioner of Health 	<ul style="list-style-type: none"> First come first serve 0% interest rate Six year loan duration Repayment quarterly starting no later than two years from date of loan agreement Maximum loan amount \$1,500,000 Pre-Application approval required to submit full application Non-Refundable application fee of \$750 No other loan closing costs EHR loan application must address the interoperable exchange of health care information between the applicant and, at a minimum, a hospital system, pharmacy, and a health care clinic or other physician group EHR selected must be certified by the Certification Commission for Healthcare Information Technology (CCHIT) 	<ul style="list-style-type: none"> MN Office of Rural Health and Primary Care Manages the Fund Formal written application form published and available 	<p>Mid-Year report and final report has questions that seek information from loan recipients on what care goals have been accomplished and what changes/improvements have been achieved as a result of implementing the EHR.</p>
MN	<p>Grant Program: Minnesota Health Care Access Fund based on health care provider tax. Tax is applied to all providers (hospitals and physicians) at a rate of 2% of</p>	<p>2007 MN Legislature mandated:</p> <ul style="list-style-type: none"> All health care providers and hospitals have an interoperable electronic health record (EHR) system by 	<p>A Community e-Health Collaboratives Eligible organizations. Two or more health care organizations that are</p>	<ul style="list-style-type: none"> Readiness Assessment and \$50,000 Implementation: up to \$750,000 A one-to-three match is 	<ul style="list-style-type: none"> MN Office of Rural Health and Primary Care Manages the Fund Formal written application form published and 	<p>Mid-Year report and final report has questions that seek information from loan recipients on what care goals have been accomplished and what</p>

State	Nature of Investment Plan	Core Principles Behind Investment Plan	Eligibility Criteria	Terms and Duration	Application and Fund Management	Post-Implementation Evaluation Criteria
	<p>all invoiced services. The main purpose of this Fund is to support MN's Medicaid program.</p> <p>Grant Program: funded at \$3.5 million available for FY 2007-2008 and \$3.5 million available for FY 2008-2009</p>	<p>2015 All newly acquired electronic health record (EHR) products must be certified by the Certification Commission for Healthcare Information Technology (CCHIT) or its successor. Applies to settings covered by CCHIT certification</p> <ul style="list-style-type: none"> A requirement to develop a statewide implementation plan to meet the 2015 interoperable EHR mandate A requirement that all health care providers and payers establish and use an e-prescribing system by January 1, 2011. <p>The goals of the grant program are to:</p> <ol style="list-style-type: none"> Support expanded adoption and effective use of interoperable electronic health record (EHR) systems and electronic health information exchange, in rural and underserved areas to: <ul style="list-style-type: none"> improve health care outcomes and the provider-patient relationship increase health service delivery efficiencies in rural and underserved areas Encourage collaboration to leverage resources and 	<p>distinct corporate or governmental entities representing at least two of the following types of health care settings:</p> <ul style="list-style-type: none"> Community clinics as defined in Minnesota Statutes, section 143.0268 Hospitals eligible for Rural Hospital Capital Improvement Grants as defined in Minnesota Statutes, section 144.148 Physician clinics located in communities with populations of less than 50,000 according to U.S. Census Bureau statistics and outside the seven-county metropolitan area Nursing facilities licensed under Minnesota Statutes, sections 144A.01 to 144A.27 Community health boards or boards of health as established in Minnesota Statutes, chapter 145A Nonprofit entities with a purpose to provide health information exchange coordination governed by a representative, multi-stakeholder board of directors Other providers of health or health care services approved by the Commissioner of Health 	<p>required. Applicants must provide one dollar in the form of cash or in-kind services for every three dollars provided by the grant program.</p> <ul style="list-style-type: none"> Meet the minimum requirements of eligible applicants and activities 	<p>available</p>	<p>changes/improvements have been achieved as a result of implementing the EHR.</p>

State	Nature of Investment Plan	Core Principles Behind Investment Plan	Eligibility Criteria	Terms and Duration	Application and Fund Management	Post-Implementation Evaluation Criteria
		<ul style="list-style-type: none"> expand/standardize health information technology 3. Support improvements in prevention services and population health. 	<ul style="list-style-type: none"> for which interoperable electronic health records would improve quality of care, patient safety, or community health. B. Community clinics C. Regional or community-based health information organizations including health information exchanges. 			
TN	<p>e-Health: Physician Grants and HIE Seed Grants</p> <p>Organization created by executive order of the TN governor to staff an e-health advisory board and manage the promotion of e-health and information exchange in TN</p> <p>Governor funded e-Health office with \$10 million from executive budget in FY 2007 with carry over to FY 2008 and FY 2009. Office has issued \$8 million of seed grants to two health information exchanges (one time) to support start up investment. Another two HIE seed grant applications are under consideration.</p> <p>TN Legislature appropriated \$13.6 million to connect rural health providers to statewide e-health "exchange zone" in FY 2007 with carry over to FY 2008 and FY 2009</p>	<ul style="list-style-type: none"> Connect rural providers to broad based Internet services and a statewide electronic health information network Promote the adoption and use of HIE tools in rural, primary care practices Reward providers for active use of key electronic services supporting TN Medicaid members 	<ul style="list-style-type: none"> Initial physician grant offering limited to rural primary care MDs/Dos delivering family practice, internal medicine, pediatric and OB/GYN services Physician grant eligibility now expanded to include mid-level providers who have prescribing authority Physician grant now extended to all rural physician practices regardless of specialty and for urban physicians serving large Medicaid populations HIE seed grants require completion of formal proposal that establishes multi-stakeholder collaborative initiative and clear plan for execution (scope of service) and impact. Specific milestones are defined for measurement and evaluation 	<ul style="list-style-type: none"> Physician grant offers \$5,500 one time per provider (now includes physicians and mid-level providers with prescribing authority) Physician grant money can be used for purchasing and installing e-prescribing solution, and/or EMR, and/or hardware and office network Physician grant participants offered to Internet broadband access through TN state communication network, for \$10 per provider per month (must pay for their connectivity to the network) However, TN pays for the first year of connectivity costs and may extend further Practices participating in grant must commit to minimum of two years e-prescribing for Medicaid patients, validating current state of Medicaid clinical content on statewide 	<ul style="list-style-type: none"> Physician grants requests managed through standard application available on line Physician grant program monies held and managed by e-Health office Application for physician grants managed by sub-contractor groups working under contract to e-Health office HIE seed grants requested through written proposal from HIE. Scope, dollars and duration are awarded specific to what is defined in proposal HIE seed grant dollars are held and managed by e-Health office 	<ul style="list-style-type: none"> SureScripts electronic prescribing volume reporting used to validate usage of e-prescribing by participating practices SharedHealth (Medicaid HIE) validates immunization update and EHR content update by participating practices HIE seed grant progress is measured against defined milestones

State	Nature of Investment Plan	Core Principles Behind Investment Plan	Eligibility Criteria	Terms and Duration	Application and Fund Management	Post-Implementation Evaluation Criteria
VT	<p>Grant Program for EMR Adoption and Health Information Exchange development/operations</p> <p>Based on new Service Fee of 1.99% of 1% of all medical claims filed in VT.</p> <p>VT Medicaid pay a flat annual fee of \$500 K</p> <p>Self-insured pay through TPAs.</p> <p>Estimated total funding over seven year commitment \$32 million</p>	<ul style="list-style-type: none"> Expand the rate and scope of EMR adoption within VT's independent primary care delivery system. Support achieving electronic health information interoperability between points of care by focusing on health information exchange and interface development 	<ol style="list-style-type: none"> Must be an independent primary care provider Must have significant underserved patient population in practice (VT still determining percent) Must demonstrate readiness of practice to adopt EMR technology in terms of workflow reengineering, staff education, and commitment to change Participating practices must commit to paying 25% of total cost of investing in EMR 	<p>Medicaid HER, and documenting immunization for children covered by Medicaid</p> <p>HIN seed grants are one time cash commitments based on proposal submitted by HIE</p> <ol style="list-style-type: none"> No more than \$150K, in total grant contribution for a practice per clinical FTE (MD or mid-level) over life of grant Participating practices are paid committed grant funds based on expenses incurred (not prospectively) Must successfully complete Clinical Micro System Primer which is a "boot camp" for training that demonstrates overall readiness of practice for EMR implementation as per #3 under Eligibility Criteria 	<ol style="list-style-type: none"> Grant application form and content is still being developed at this time as funding law was just signed within past few weeks. Funds for grant program are managed within the office of the VT secretary of administration Vermont Information Technology Leaders (VITL) manages the grant application, review, and approval process. VITL makes an overall grant application for funds to the secretary of administration on an annual basis to secure the dollars projected for EMR and health information exchange grant activities 	<ol style="list-style-type: none"> Secretary of Administration will retain independent third party reviewer to assess performance of grant program and the provider organizations participating in the grant. Evaluation criteria are still being defined at this time but will include both quality and efficiency measures

Appendix B - Technology Fund - Questions and Considerations

DRAFT HIN Stakeholder Process

Questions & Considerations To Help Shape Development of the Technology Investment Fund

Background

At least three organizations that are part of the HIN Stakeholder process have substantial experience in establishing and administering statewide funds and/or loan programs in Maine: FAME, the Maine Technology Institute and the Maine Health & Higher Education Facilities Authority. In preparation for the July 24 HIN Stakeholder process, staff spoke with the leaders of each of these organizations to help inform the discussion about Guiding Principles. Although all three individuals (Beth Bordowitz, Betsy Bieman and Bob Lenna are highly interested and engaged in the Stakeholder process, none can be present for the July 24 meeting. They do, however, expect to be available to attend upcoming sessions during which the establishment of a new Health IT fund will be further explored. All organizations agreed to share information and policies that they have in place relating to criteria, eligibility, etc.

Key Questions/Suggestions Relating to the Development of Guiding Principles

1. It may make sense for the fund to make available both loans and grants
 - Loans might be targeted toward organizations that have the resources to repay them
 - Grants might be targeted at organizations with a greater need or serve as “safety net” providers; or that may not have the financial ability to repay loans
 - Some organizations identified as having a high priority might be eligible for a combination of loans and grants
2. A revolving loan mechanism could be an important strategy for leveraging additional funds over the long term; i.e., over time the fund grows through a combination of investments and interest payments

3. Eligibility for funding should be prioritized based on a larger strategy relating to system implementation:
 - Examples:
 - HIN's vision for long term system implementation
 - State Health Plan
 - Other strategic needs
4. How will the size of the fund be determined? By need? (how will need be established); By limitations of the revenue-producing mechanism? Should it be designed to grow over time?
5. Every effort should be made to focus and prioritize eligibility--- problems will emerge if too many organizations must compete at the same time for a limited pool of funds
6. If existing strategies do not provide sufficient focus and prioritization, eligibility might be shaped in response to these questions:
 - Should the fund be designed to rapidly build the overall volume of providers who use electronic systems; or,
 - Is the fund be designed to target “safety net” providers or rural providers----or certain geographic areas of the state that may have specific needs;
 - Will funding be available to for profit enterprises (example: independent physician practices, for profit nursing homes, etc.) or nonprofit organizations?
7. Eligibility could be phased in over time; example: “high priority” provider organizations might be the only eligible entities for the first few years, followed by other organizations over time based on the overall strategic direction
8. Consideration should be made to “locating” the fund within an organization where it can be protected from being used for other purposes as state revenues ebb and flow. Should the loan-making and grant-making functions be located in the same or in different organizations? Must the fund be located within a public agency or could it be administered by a bank or other private institution?
9. Will there be a need for two distinct “buckets” within the Fund---one designated for HealthInfoNet and another for other eligible organizations?
10. Can organizations use revenue from the fund to leverage other funding or as collateral for borrowing purposes?

Stakeholder Process

Fourth Meeting - Summary Report

(Approved by stakeholders on November 20, 2008)

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-convener
 - 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 4th 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.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
Total Potential Savings	\$38.4M	\$46.7M

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	159,627		97,905	18,547	266,079
18-64	582,555	43,801	140,164	109,503	876,023
65+	5,098	398,628		2,040	203,365
Total	747,281	240,627	228,069	120,190	1,346,167

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

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Potential Savings Estimates for Maine HIE: CCTL and RAND Laboratory and Imaging

CCTL Model Application to Maine HIE	Estimated Annual Savings
Savings from Avoidable Outpatient Laboratory Tests	\$9.1M
Savings from Avoidable Outpatient Imaging Studies	\$18.2M
Combined Avoidable Service Savings	\$27.3M
RAND Model Application to Maine HIE	
Savings from Avoidable Outpatient Laboratory Tests	\$14.4M
Savings from Avoidable Outpatient Imaging Studies	\$17.8M
Combined Avoidable Service Savings	\$32.2M

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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)	\$9.4M	
Avoidable Imaging Studies (Smith)	\$10.0M	
Avoidable Outpatient Imaging Studies (CCTL)		\$18.2M
Avoidable Outpatient Laboratory Tests (RAND)		\$14.4M
Emergency Room Savings (Overhage)	\$10.7M	
Potential Avoidable Services	\$28.3M	\$36.6M
Productivity Opportunities (Smith)	\$10.1M	\$10.1M
Total Potential Savings	\$38.4M	\$46.7M

Note: These estimates represent preliminary findings still being analyzed. CCTL 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
Total ER Savings	\$10.7M

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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
Avoided Services in Ambulatory Settings	
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
Total Avoided Services in Ambulatory Settings	\$17.5M
Productivity Savings in Ambulatory Settings	
Physician/Staff Productivity Loss - Looking for Information	\$2.8M
Physician Productivity Impact - Repeated Work: HSP/Med Lists	\$7.9M
Total Productivity Savings in Ambulatory Settings	\$10.1M

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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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- Additional sources will be cited in the final report

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Thank You!

For Further Information:

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<http://www.umassmed.edu/healthpolicy/HT/PolicyDevelopment.aspx>

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UMASS MEDICAL SCHOOL, COMPREHENSIVE MEDICAL CENTER FOR HEALTH POLICY AND RESEARCH

HealthInfoNet Stakeholder Process
Revenue Sources Work Group
Summary Report
Tuesday, October 21, 2008, 2:30-4:30 PM
Maine Health Information Center, Manchester, Maine

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About the Meeting

Attendance

Doug Carr, Rite Aid, Perkins Thompson (by phone) (left at 3:55 PM)
Valli Geiger, Maine Primary Care Association
Nancy Kelleher, AARP
Kala Ladenheim, Maine Center for Public Health
Jim McGregor, Maine Merchants Association
Kelli Miller, Maine Medical Association
Katherine Pelletreau, Maine Association of Health Plans
Rod Prior, M.D., Mainecare
Sandra Parker, Maine Hospital Association
Sergio Santiviago, PhRMA (by phone)
Gordon Smith, Maine Medical Association
Len Bartel, Maine Health Access Foundation
Dustin Brooks, PhRMA, Preti Flaherty
Sharon Young, Maine Education Association Benefits Trust
Jim Harnar, HealthInfoNet
Craig Freshley, Good Group Decisions
Alison Harris, Good Group Decisions
Josh Cutler, Dirigo Health and Maine Quality Forum
Devore Culver, HealthInfoNet

Agenda

- 2:30 **Opening**
- Overview of Agenda and Ground Rules
 - Introductions
- 2:35 **Context and Background**
- Work Group Charge
 - Identify potential revenue sources in light of preliminary valuation findings
 - Identify pros and cons of each potential source
 - Work to date
 - Benefits – a reminder of those we have already identified
 - Revenue Sources – a reminder of those we have already identified
 - Valuation Study – a reminder of the highlights
 - Funding strategy
 - We will remind ourselves about the overall funding strategy for HealthInfoNet and how new revenue sources fit into the strategy

- 2:50 **Revenue Sources Discussion**
For each major category of potential revenue, we will discuss and identify the pros and cons. We will also discuss who will benefit and who will be burdened in the case of each approach. Major sources include:
- General fund appropriation
 - New taxes or Fees
 - Bonds
 - Re-allocation from existing sources
- 4:20 **Closing Comments**
Stakeholder and observers will have a chance to make brief closing comments.
- 4:30 **Adjourn**

Ground Rules

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

Opening

Craig Freshley welcomed the work group, reviewed the agenda for the meeting, and called the participants' attention to a handout that included excerpts from notes of the previous meetings. Developing recommendations for funding would be the focus of the day's meeting. He acknowledged that the working group might not be able to agree on recommendations taken forward to the next meeting, scheduled for Thursday, October 30, 2008.

In reviewing the ground rules, Craig noted that all options, as well as all stakeholder perspectives would be considered. Everything should be put on the table for discussion, recognizing that the current economic climate could impact the final recommendations. He reminded the group that observers were welcome and encouraged them to participate.

The participants then introduced themselves, including those participating by phone.

Context and Background

Work Group Charge

Craig reminded the participants that the HealthInfoNet Stakeholder Process was charged with submitting recommendations to the Legislature in December 2008. The recommendations would include proposed funding sources for both the exchange and a technology fund for providers, based on preliminary valuation findings.

He reminded the group of the specific charge for this Work Group:

- Identify potential revenue sources in light of preliminary valuation findings
- Identify pros and cons of each potential source

Work to Date

Benefits

Craig reminded the group that the benefits of HealthInfoNet were identified at the first meeting on May 30, 2008, and he highlighted some as follows:

- Expands access
- Contains costs
- Integrates public health and clinical practices
- Brings consumers into the process
- Peace of mind for consumers – medical information is available wherever they need care in Maine
- Reduce duplicative tests, and related costs
- Builds a unified system
- Continuity of care in a different settings
- Increased knowledge base for decision making
- Coordination of care
- State-wide emergency response resource withstanding natural or man-made disaster
- Potential for moving to a regional exchange
- Potentially sell/market this to other states
- A mechanism to measure cost, quality and access

Revenue Sources

- Four proposed types of revenue sources discussed to date:
 - General fund appropriation
 - New Taxes or Fees
 - Bonds
 - Re-allocation from existing sources
- Ideally, payment systems would be aligned with specific benefits

- However, in light of the large public benefit, funding sources might not link to specific categories

Valuation Study

Devore Culver reviewed highlights of the Valuation Study:

- Assumptions
 - 30% of savings are already being accrued
 - We will only appreciate 80% efficiencies
- Based on real Maine data
- Focused on immediate access to lab and radiology information and productivity costs
- Results
 - \$28m - \$36m per year potential savings
 - Reduced impacts of duplicative testing and productivity gains
 - Spread across provider and payers/employers

Funding Strategy

Devore Culver reviewed and clarified the current HealthInfoNet business model. It was discussed and clarified as follows:

- \$6m per year required
 - 2/3 from contracts - \$4m
 - 1/3 from public sources - \$2m
 - Clarified that funds are also needed for HIT fund
- General consensus that funding should be universal
 - For public good
 - Because eventually all Maine citizens will benefit
- Some support for blending universal with limited fees and taxes
- State should press Feds to pay for major share
- State needs to make funding HealthInfoNet a priority

Revenue Sources Discussion

The group spent considerable time discussing the pros and cons of various revenue sources. Following the conclusions below is a summary of the discussion points.

In the end, the group developed consensus on a blend of funding sources (described in the conclusions below). While an appeal was made to include a tax on pharmaceuticals in the blend, there was almost unanimous support for NOT including any new taxes or fees in our recommendation.

Conclusions

- 1. Broad Public Benefit.** Because HealthInfoNet will, over time, benefit every resident of Maine, it is appropriate for approximately 1/3 (or about \$2 million) of HIN's annual operating costs to be shared by a broad base of taxpayers, paid from public sources.
Note: It is expected that the other 2/3 (or about \$4 million) of the annual revenue HIN requires will come from subscription fees and contracts with providers, government agencies, etc.
- 2. Public Funding of Two Types.** Public funding to support a portion of HealthInfoNet's infrastructure development and annual operating costs should be drawn from 2 primary sources:
 - An Appropriation from the General Fund**
Note: this approach spreads the cost burden most widely and evenly and provides the Legislature the opportunity to evaluate HIN relative to other public needs
 - General Obligation Bond**
Note: this approach recognizes the need for substantial investment in a segment of Maine's healthcare infrastructure that will lead to improved quality and a moderation in the growth of costs
- 3. General Obligation Bond:** A bond should be pursued to establish the proposed Health Information Technology (HIT) Fund. Bond funding is appropriate because the HIT Fund will focus on the development of a key element of Maine's healthcare infrastructure, i.e. the acquisition of electronic medical reports and the development of a statewide health information exchange designed to support improved quality, better care coordination and efficiencies that will lead to a moderation in the growth of costs. We envision that the primary purpose of the fund will be to improve the infrastructure of providers so they can effectively access the health information exchange and a portion of the fund will also be used to develop central infrastructure of the exchange.
- 4. Redirect Funding as Appropriate.** Because HealthInfoNet is expected to play a key role in supporting specific high-priority, quality-related issues (such as improved management of chronic illnesses, the future sustainability of primary care services, greater focus on disease prevention, further efforts to better coordinate emergency preparedness and e-prescribing), the Legislature should re-direct some portion of funds now spent in these areas to the HealthInfoNet Information Exchange. For example, some funding could be re-directed from the Fund for a Healthy Maine, the Maine Emergency Management Agency, Maine CDC, etc.
- 5. Federal Support.** Given that the Federal Government is expected to benefit considerably from HealthInfoNet (because of cost savings to Medicare), it is appropriate to request federal government contributions to HealthInfoNet. A strategy aimed at better coordinating efforts by state government and Maine's Congressional Delegation toward the goal of securing substantial new federal funding

6. **High Priority Profile in State Government.** Several steps should be taken to raise HealthInfoNet's prioritization and visibility and create a greater sense of urgency in Maine state government. For instance, there should be an Executive Order from Governor setting a goal for the adoption of electronic health records by a certain date in the future

Outline from the Chart drafted on the spot

- General Fund Appropriation
 - Fairest, most broad-based
 - Huge ROI - \$2m/year spent for \$26m/year saved
 - Supports prevention
 - Expect to diminish over time
 - Sunset review
 - 2-4 years, then assess benefits
- Re-allocation
 - Commensurate w/ types of public good
 - Medicaid
 - Healthy Maine Partnership
 - Emergency Response (Connect Me)
- Bonds
 - For HIT for providers
 - For HealthInfoNet infrastructure (small piece)
 - Perhaps revolving capital
 - Leverage will yield interoperability
 - General obligation bond
- Fed should pay because they benefit

Research for October 30, 2008 Meeting

- Dev to ask Tim Agnew to look into bonding for HIT
- Dev to review Massachusetts study regarding bond valuation
- Dev to update research on other states
 - To be attached to final report

Discussion

The following notes attempt to capture major points of discussion and should not be viewed as conclusions or even comments of the group as a whole.

- General fund appropriation
 - Pros
 - Fairest way
 - forces a priority decision among other priorities
 - no single group pays the prices
 - Cons
 - Hard sell
 - Have to ask every two years

- New Taxes or Fees

See conclusions above – they do not include any new taxes or fees. The group none-the-less explored the topic of new taxes and fees as follows.

- Approaches
 - General Observations
 - With all approaches, the consumers end up paying
 - HealthInfoNet will benefit consumers of medical services and pharmaceuticals
 - Ideas
 - Tax on claims (Vermont model)
 - Tax on medical services and pharmacy
 - Cons
 - Burden falls to private payers unless Feds and health insurance providers sign off on the tax
 - Much is Medicare or Medicaid based
 - 90% is borne by third-party payers under current contracts
 - All health care services providers strongly oppose imposition of any tax on their services or RX prescriptions
 - Pros
 - Some medical services and pharmacy scripts are currently not taxed
 - Tax on telecom charges
 - Like federal model
 - Tax on services from providers
 - Minnesota model
 - Funds raised returned as no-interest loans to providers

- Pros
 - Certainty - The source and the projection are known
 - Cons
 - Not as fair as a general appropriation
 - Got to come out of someone's wallet
- Bonds
 - Pros
 - Historically achieves widespread support
 - Could be used for supporting provider access to the system
 - Can be used for short-lived capital, i.e. computers
 - Cons
 - Not a revenue source – simply defers payment
 - Cannot be used for operating expenses
 - Hard to value revenue stream to pay back bonds
 - Likely to be general obligation, not revenue, bond
 - Bonds will cost state more than general fund appropriation
 - But savings might make it worth it – especially for Feds (Medicaid/Medicare)
- Re-allocation from existing sources
 - Pros
 - Certain funding stream
 - Cons
 - Politically painful
 - Fund for a Healthy Maine
 - Pros
 - Already existing
 - \$60m over next two years
 - Approach
 - This is prevention
 - Fit into the eight criteria
 - Maine Health Access Foundation
 - Cons
 - Different from what they have traditionally funded
- Other Sources
 - Federal Stimulus Package to states
 - \$150b nation-wide – for infrastructure
 - CMS has in place a system to improve Medicaid information systems
 - CMS interested in funding infonet for Medicare
 - Might require only 10% state contribution
 - Might require a change in our business model
 - HRSA funding for HIT

- 911/FCC/Telecomm charges
 - \$30m from FCC to New England States, based on infrastructure
 - Only \$2-\$3/person
 - Billions of dollars potentially available in FCC Fund
- Grants
 - Not predictable, sustainable source
 - Maine Health Access Fund
 - Are currently funding demo
 - Usually only funds short-term projects (3 years)
- General Discussion
 - Look at establishing revolving fund
 - Perhaps Massachusetts model
 - \$25m from general fund for EMRs
 - Not for exchange, because Boston area prohibited from sharing information
 - Will \$2m annually be required forever?
 - Perhaps not, but hard to predict
 - Most states typically require long-term funding
 - Federal funding
 - CMS solution proposed by Rod not widespread
 - Hard to get Feds to sign-off on fees
 - Third-party contracts won't pay
 - Private payers end up paying everything
 - Philosophical basis of recommendations
 - Universal or user-based?
 - Universal (Public Good)
 - Every Maine citizen will benefit, so state should pay
 - Veterans model – go anywhere, records are available
 - Make it criteria
 - What if you can't meet criteria? - Objection for paying for others
 - Already happening
 - Commercial & self-pay already pay more than others
 - Drive down usage & cost – better for all
 - Blended
 - If you want more, pay more (base price + add-ons)
 - Potential for manipulation
 - Race to get a free ride
 - User Fees
 - Must be considered, based on other states
 - Given tough economy, bad time to propose new taxes
 - Can't demonstrate direct line between fee & benefit

- Talking points for recommendations
 - Only requesting 1/3 of cost of project
 - We have realistic projection of revenue stream
 - Already taking in \$1m from demo project
 - Participation in HealthInfoNet is voluntary, not mandatory
 - Propose Executive Order to bump up HealthInfoNet ion state's priorities
 - Call for Resolution asking for Federal support
 - Because Feds benefit, they should pay

Closing Comments

- Thanks to the group for dealing with tough issues and arriving at innovative recommendations.
- Thanks to Craig for facilitation

Stakeholder Process

Fifth Meeting - Summary Report

(Approved by stakeholders on November 20, 2008)

Thursday, October 30, 2008

Dirigo Health Agency and Maine Quality Forum, 211 Water Street, Augusta,
Maine

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About the Meeting

Attendance

Doug Carr, Rite Aid, Perkins Thompson
Dan Coffey, HealthInfoNet Board
Dustin Brooks, PhRMA, Preti Flaherty
Beth Beausang, PhRMA, Preti Flaherty
Betsy Biemann, Maine Technology Institute
Mark Lowell, Northern New England Homes and Services for the Aging Association
Jim Mitchell, PhRMA
Katherine Pelletreau, Maine Association of Health Plans
Rod Prior, M.D., Mainecare
Cathy McGuire, Muskie School of Public Service
David Winslow, Maine Hospital Association
Sarah Gagne-Holmes, Maine Equal Justice Project
Chris Roney, FAME
Jim McGregor, Maine Merchants Association
Kristine Ossenfort, Maine Chamber of Commerce
Nancy Kelleher, AARP
Sergio Santiago, PhRMA
Kelli Miller, Maine Medical Association
Gordon Smith, Maine Medical Association
Josh Cutler, Dirigo Health and Maine Quality Forum

Devore Culver, HealthInfoNet
Jim Harnar, HealthInfoNet
Craig Freshley, Facilitator, Good Group Decisions

Planned Agenda

9:00 **Opening**
 Welcome
 Dr. Josh Cutler and Devore Culver, co-conveners
 Announcements/Reminders
 Today's Agenda
 Our decision process and ground rules
 Website
 Meeting Notes of September 26, 2008
 Introductions

9:10 **Revenue Sources – Emerging Framework**
We will review the work of the recent Revenue Sources Work Group and the emerging framework of our recommendations. We will make sure we understand and generally approve of this framework before proceeding.

9:50 **Health Information Technology Fund Details**

We'll take a
break in here
some where →

Amount

We will discuss and draw preliminary conclusions about how much may be needed to adequately capitalize the fund.

Eligibility Criteria

We will discuss and draw preliminary conclusions about what types of providers will be eligible now and in the future.

Governance

We will revisit our preliminary discussion about how the Fund might be governed; then discuss, revise, and draw preliminary conclusions about the governance structure.

11:10 **Bond Details**

We will discuss and draw preliminary conclusions about how much a bond should be for and also what type of bond might be most appropriate.

11:40 **December Meeting**

We'll take a few minutes and decide a date for our December meeting. Potential dates are December 4, 11, or 18.

11:50 **Closing Comments**

Stakeholder and observers will have a chance to make brief closing comments.

12:00 **Adjourn**

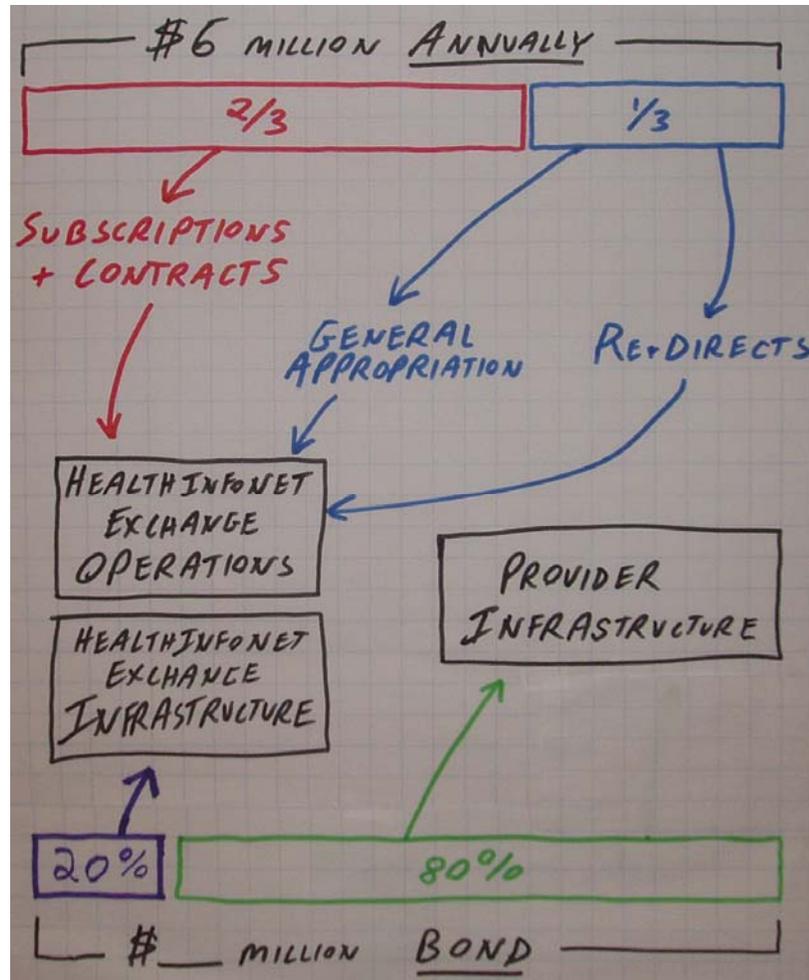
Ground Rules

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

Revenue Sources – Emerging Framework

Presentation

Craig presented conclusions of the Revenue Sources Work Group that met on September 26. Below is a graphic he used to depict how key elements would be funded.



Here are the conclusions of the September 26 meeting.

7. **Broad Public Benefit.** Because HealthInfoNet will, over time, benefit every resident of Maine, it is appropriate for approximately 1/3 (or about \$2 million) of HIN's annual operating costs to be shared by a broad base of taxpayers, paid from public sources.

Note: It is expected that the other 2/3 (or about \$4 million) of the annual revenue HIN requires will come from subscription fees and contracts with providers, government agencies, etc.

8. **Public Funding of Two Types.** Public funding to support a portion of HealthInfoNet's infrastructure development and annual operating costs should be drawn from 2 primary sources:

An Appropriation from the General Fund

Note: this approach spreads the cost burden most widely and evenly and provides the Legislature the opportunity to evaluate HIN relative to other public needs

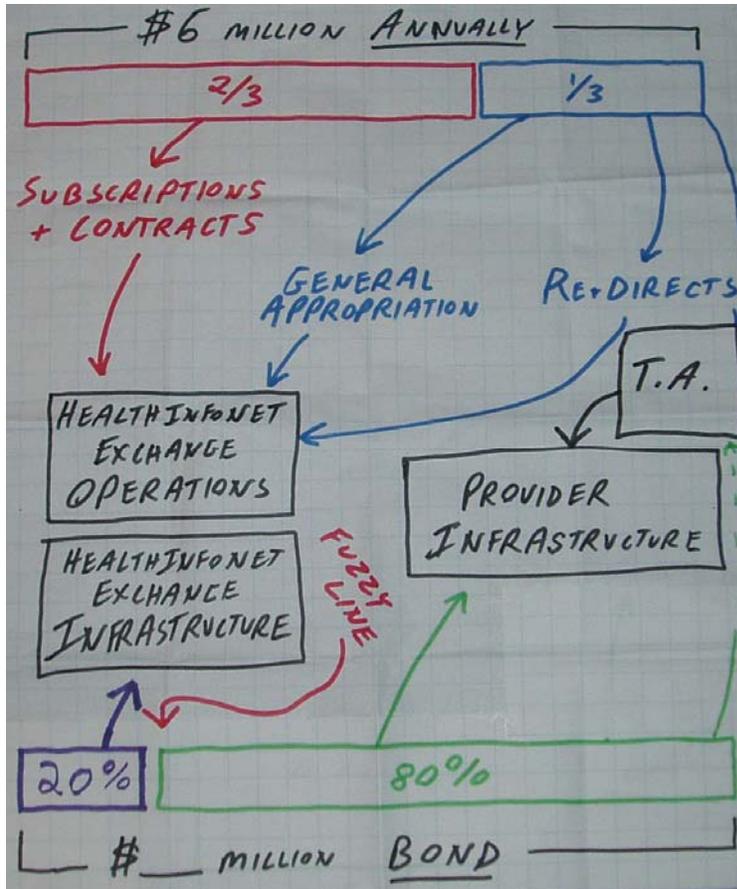
General Obligation Bond

Note: this approach recognizes the need for substantial investment in a segment of Maine's healthcare infrastructure that will lead to improved quality and a moderation in the growth of costs

9. **General Obligation Bond:** A bond should be pursued to establish the proposed Health Information Technology (HIT) Fund. Bond funding is appropriate because the HIT Fund will focus on the development of a key element of Maine's healthcare infrastructure, i.e. the acquisition of electronic medical reports and the development of a statewide health information exchange designed to support improved quality, better care coordination and efficiencies that will lead to a moderation in the growth of costs. We envision that the primary purpose of the fund will be to improve the infrastructure of providers so they can effectively access the health information exchange and a portion of the fund will also be used to develop central infrastructure of the exchange.
10. **Redirect Funding as Appropriate.** Because HealthInfoNet is expected to play a key role in supporting specific high-priority, quality-related issues (such as improved management of chronic illnesses, the future sustainability of primary care services, greater focus on disease prevention, further efforts to better coordinate emergency preparedness and e-prescribing), the Legislature should re-direct some portion of funds now spent in these areas to the HealthInfoNet Information Exchange. For example, some funding could be re-directed from the Fund for a Healthy Maine, the Maine Emergency Management Agency, Maine CDC, etc.
11. **Federal Support.** Given that the Federal Government is expected to benefit considerably from HealthInfoNet (because of cost savings to Medicare), it is appropriate to request federal government contributions to HealthInfoNet. A strategy aimed at better coordinating efforts by state government and Maine's Congressional Delegation toward the goal of securing substantial new federal funding
12. **High Priority Profile in State Government.** Several steps should be taken to raise HealthInfoNet's prioritization and visibility and create a greater sense of urgency in Maine state government. For instance, there should be an Executive Order from Governor setting a goal for the adoption of electronic health records by a certain date in the future

Discussion

The chart was amended as follows:



- Acknowledgement that we don't really know how much of the bond should go to providers vs. HealthInfoNet infrastructure. It's a fuzzy line.
- Recognition that technical assistance will be needed to help providers use their new infrastructure.
- Technical assistance might be paid for by bond funds (as allowed) and from general appropriation or redirects.

in the course of the discussion:

- Investing is making the asset viable
- HIT infrastructure is a long-term investment
- Under the current plan, we are leasing hardware
- Good model – very credible
 - Will be difficult in the political arena
- This model is like R.I. where the government plays a 1/3 share
- While this model does not call for any new taxes or fees, several potential taxes and fees have been discussed by the group in the past.
 - One view
 - Don't take fees off the table

The following points were made

- If it's a real benefit, special tax appropriate
 - Another view
 - But this fee would be paid through an insurance system and thus will result in unfair cost shifting
 - Medicare premiums recently doubled and seniors have trouble getting their prescriptions – they cannot afford higher costs
 - Concluding view
 - To encourage acceptance of our preferred model, perhaps we could suggest a special fee as an alternative.
- Be very careful not to overstate the savings
 - Need to back up the return on investment projections with as much evidence as possible
 - We don't expect to see the impact for 5 years
- Perhaps there should be a performance consequence
 - If we have not achieved _____ projected savings by _____ date, then _____.
 - Could provide evaluation criteria

Health Information Technology Fund Details

Clarifications

- “Providers” includes PA's and Nurse Practitioners
- Clarified that the estimate includes training and technical assistance
- Clarified that the cost does not include provider costs of lost productivity
 - Their training and learning time
- Perhaps 2 funds will be set up
 - Providers
 - HealthInfoNet

Eligibility

Discussion

- Widen the criteria to get early, visible victories
- Could focus by population group

- Could do it in clusters
 - Start with where we can win
- Loose definition of provider would be best
- Make sure we have good ways to measure performance
- Potentially align with “medical home”
- Eligibility needs to be balancing act

Conclusion

- Start with a focus on Primary Care Providers – widen the circle as we go
- Go with winners – invest in those most likely to appreciate benefits
- Invest where there is potential for operational interconnectivity
- Start narrow
- Address those who need it most
- Address disparities

Governance

Discussion

- Conflict of interest
 - Concern with HealthInfoNet in a governing role – conflict of interest
 - Benefit of HealthInfoNet in a governing role is that “Yes, we intend to make investments that will build the business – that’s what we’re being evaluated against.”
- Portion of the fund to HealthInfoNet could be named in statute
 - Remove some conflict of interest
- The management organization would need some resources to learn about health information management
 - Might need some help adjudicating awards
- Who might be the Management Organization?
 - Maine Health Access Foundation – not interested
 - MIT – not interested

Conclusions

Craig provided a summary of previous governance discussions. The group discussed and amended Craig’s outline as follows:

- **Governance**
 - HealthInfoNet Board of Directors
 - Why
 - Public-private members of the board
 - Government representation on the board
 - Ex-officio seats on the board
 - This group has the expertise
 - Already exists
 - Roles
 - Planning
 - Strategic direction
 - Business and financial planning
 - Fundraising
 - Ensure adequate resources
 - Policy
 - Key objectives – Areas of focus
 - HIT grant and loan criteria

- Advise
 - Give advice to the Administrating Organization as appropriate
 - Budget
 - Develop and implement
 - Capacity building
 - Guide infrastructure development
 - Personnel development
 - Information technology development
 - **Management**
 - Contracted services with a non-profit
 - FAME
 - MHHEFA
 - Roles
 - Grants and Loans administration
 - Apply criteria decided by HealthInfoNet Board of Directors
 - Implement and adjudicate grant and loan awards
 - ~~Budget~~
 - ~~Develop and implement~~
 - ~~Capacity building~~
 - ~~Guide infrastructure development~~
 - ~~Personnel development~~
 - ~~Information technology development~~



Bond Support

The group discussed various approaches to bonding, as follows:

- Two primary strategies
 - General Obligation Bond
 - Loans
- Other ideas
 - Revenue Bonds
 - Expected to be paid back from expected revenues
- General Obligation Bonds
 - Difficult to get authorized
 - Can be used to capitalize a revolving loan fund
 - Closest to “free use” funds

- The State is responsible for payment for the debt
- The State can also claiming back the money if the purposes are no longer valid
- Revolving loan funds
 - Many advantages
- FAME Bonds
 - FAME loans money and underwrites the credit
 - There has to be a stream of re-payment
- Could be all grants rather than loans
 - With “some skin in the game”
- Could offer adoption incentives
 - The more EMR is used and institutionalized, increased financial incentives
- Could be a blend of
 - Grants
 - Loans
 - Incentives will considered
 - Perhaps forgive last payments
- For a General Obligation bond to pass
 - From Governor
 - Through Committee
 - Legislative approval (2/3 of House and Senate)
 - Voter approval
- Concern raised about having a general obligation bond for HealthInfoNet when people need services. Services are more important.
- Incentives – could be very complex
- General Obligation Bond is like a general appropriation with a longer time cycle
- Plan B could be a Revenue Bond to be paid from a dedicated revenue stream

Closing Comments

- Acknowledge concern about privacy
- Nervous about recommending general appropriation or general obligation beyond given the current economic and political reality
 - The policy is right – the timing is wrong

- There are severe other needs for this type of money
- The chart was very helpful
- Look at the difference between governance and custody
- In this industry, we have to innovate and change to help resolve many issues - and this is a promising innovation
- Political realities of two-year cycle are such that we will run ourselves out of business if we don't take cost and risk out of the equation

Stakeholder Process

Sixth Meeting - Summary Report

Thursday, November 20, 2008
Maine Hospital Association, Augusta, Maine

Also included here: Notes of December 4, 2008 Conference Call

(Approved by Stakeholders on December 16, 2008)

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About the Meeting

Attendance

David Winslow, Maine Hospital Association
Kala Ladenheim, Maine Center for Public Health
Deb Hart, Hannaford
Jim McGregor, Maine Merchants Association
Catherine McGuire, Muskie School of Public Service
Josh Cutler, Dirigo Health and Maine Quality Forum
Rod Prior, M.D., Mainecare
Dan Coffey, HealthInfoNet
Elizabeth Bordowitz, FAME
Kevin Lewis, Maine Primary Care Association
Doug Carr, Rite Aid, Perkins Thompson
Sharon Young, Maine Education Association Benefits Trust
Sarah Gagne-Holmes, Maine Equal Justice Project
Jim Harnar, HealthInfoNet
Katherine Pelletreau, Maine Association of Health Plans
Gordon Smith, Maine Medical Association
Devore Culver, HealthInfoNet (arrived 10:00am)
Shaun Alfreds, University of Massachusetts Medical School
Craig Freshley, Good Group Decisions
John Newlin, Good Group Decisions

Planned Agenda

- 9:00 **Opening**
 Welcome
 Dr. Josh Cutler and Devore Culver, co-conveners
 Announcements/Reminders
 Today's Agenda
 Our decision process and ground rules
 Meeting Notes of September 26, 2008
 Meeting Notes of October 30, 2008
 Introductions
- 9:10 **Final Draft Valuation Report**
 We will have Shaun Alfreds with us by telephone to explain recent
 enhancements to the valuation study and to answer questions.
- 9:45 **Final Draft Report of Findings and Recommendations**

We'll take a
break in here
some where



We will discuss and refine the Final Draft Report with particular attention to the following:

- Overall Format
- Contents of the Summary
- Appendices
- Recommendations
- Basis
- Recommendations
- Other Aspects of Special Interest

11:30

December Meeting?

We'll take a few minutes and decide if we need to meet on December 4, a date that we have tentatively identified.

11:50

Closing Comments

Stakeholder and observers will have a chance to make brief closing comments.

12:00

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

Valuation Report

Shaun Alfreds, University of Massachusetts Medical School, joined the meeting by telephone to explain recent enhancements to the valuation study and to answer questions.

The Latest from Washington

Before discussing the report, Shaun was asked to brief stakeholders on the latest federal developments regarding implications for medical information in particular.

- Obama Administration
 - \$10b / year for next five years for health related efforts – has been suggested
 - Tom Daschle, new Health and Human Services Secretary
 - Health reformer
 - Revamped CMS from admin perspective
 - Focus on infrastructure and health IT
 - Likely to see increases in support for medical information
- Several projects coming to conclusion right now
 - Office of National Health Coordinator Grant recipients meeting in December
 - Will develop presidential briefing for health information exchange
 - Will address multi-stakeholder, collaborative decision-making
 - Support of state efforts
- Timing
 - Office of National Coordinator is being very cautious about timing expectations
 - Health IT bill being drafted right now
 - Senator Kennedy is the sponsor
 - Incentives for prescribing being developed
 - Part of a stimulus package?
 - Don't know

Valuation Report

- Updated
 - New issues addressed
 - Physician productivity
 - Information gathering and reconciling
 - Previous study based on ambulatory care

- Assumed that 70% of patients in emergency rooms have a medical record somewhere
 - 90% of that information is immediately unavailable
 - Estimate increased to \$15.6m annually
 - More detail on where savings accrue to
 - Phase 1 → 2009
 - Participation
 - 15% of ambulatory providers
 - 50% of emergency room physicians
 - Phase 2
 - 20% of ambulatory providers
 - 60% of emergency room physicians
 - Phase 3
 - 30% of ambulatory providers
 - 70% of emergency room physicians
- Concern about rates of adoption and impact on estimated productivity savings
 - All estimates have two major assumptions
 - 30% of the potential benefits are already being accrued by providers
 - Rand study assumed that health information systems would be adopted by just 85% of all providers – we are using 80%
 - This results in a window between 30%-80%
- Where savings accrue to
 - Table 9, page 19
 - Clarified
 - Used the rates of payors
 - Savings are “gross” saving
 - Don’t include operational costs
 - Most savings are due to
 - reduction of duplicative services
 - reduction in amount of time spent gathering records
 - No discussion in this report of how much savings expected to accrue to patients
 - However, should help reduce cost shifting to patients

Final Draft Report of Findings and Recommendations

The stakeholders discussed Draft 8 of the Final Report and made the following comments:

- In the description of the Legislative Charge, reinforce the following priorities:
 - Help HealthInfoNet
 - Then expand
- In the Financial Savings section of the Findings:
 - Clarify that the Stakeholder Group does not “endorse” these findings
 - Also applies to Appendix E analysis
 - Revise language of report to reflect fact that stakeholders were “presented with information” on financial savings...something like that
 - There was some skepticism that these levels of savings will be realized
 - Especially among small, rural health centers
- In Basis for Recommendations No. 1: Broad Public Benefit:
 - Need to be very clear about how taxpayers benefit
 - Not as much cost shifting
- In Basis for Recommendation No. 7: No New Taxes or Fees
 - Minority opinion to appear in an Appendix
 - Some want to be open to the possibility of taxes or fees
 - Now and/or in the future
 - Concern about mention of a tax or fee
 - Could be a “minority report”
 - PhARMA opposes any new taxes or fees
 - Proposals for new taxes and fees have been summarily rejected in the past
 - Will undermine our recommendation
 - Given the common good benefit, build HealthInfoNet super highway
 - Deserves public financing
- In the Recommendations section:
 - Reiterate the benefits
 - Recommendations to which some stakeholders are opposed should note level of support among stakeholders
 - General Appropriation - \$2 million Annually in the 2009-2010 State Budget section:
 - Clarify that General Appropriation will be matched by \$4m
 - New Appropriation section:

- Note sensitivity to current political climate yet stakeholders still seek a general appropriation
 - At least it may establish a framework for future appropriations
- Should not support general appropriation for health IT when services are being dramatically cut
 - Going forward with this report will set people against each other who should be allies
 - This is a good policy at a bad time
- Redirect Funds section:
 - Do not be specific about where funds might come from
 - Indicate that sources of funds should be agencies that will most benefit
 - Give some examples
- Minority Opinion (to appear in an Appendix):
 - While there is considerable opposition among our group to any new taxes or fees, some stakeholders think new taxes or fees should be considered.
- Executive Order and Other Profile-Raising Activities section:
 - Name HealthInfoNet as the vendor of first resort
- Develop Impact Assessment Methodology section:
 - Add that HealthInfoNet will refine our methodology for estimating return on investment

Appendix: Notes of December 4, 2008 Conference Call

Participants

Jim Harnar, HealthInfoNet
 Dan Coffey, HealthInfoNet
 Jim McGregor, Maine Merchants Association
 Ann Robinson, PhRMA
 Kala Ladenheim, Maine Center for Public Health
 Rod Prior, M.D., Mainecare
 Josh Cutler, Dirigo Health and Maine Quality Forum
 Catherine McGuire, Muskie School of Public Service
 Len Bartel, Maine Health Access Foundation
 Sergio Santiviago, PhRMA
 David Winslow, Maine Hospital Association

Sharon Young, Maine Education Association Benefits Trust
Kristine Ossenfort, Maine Chamber of Commerce
Doug Carr, Rite Aid, Perkins Thompson
Craig Freshley, Good Group Decisions

Discussion and Conclusions

The focus of the conference call was on revising the Final Report. Draft 10 was circulated several days before the call and comments were invited. All such comments were incorporated into Draft 11 which was circulated just prior to the call. Draft 12 was developed as a result of the call and included all points of discussion made during the call. Draft 12 was later cleaned up and circulated among stakeholders as Draft 14.

Any of these drafts are available from Craig Freshley upon request.

**The Impact of Electronic Health Information
Exchange (HIE) Services in Maine:
Avoidable Service and Productivity Savings
Estimates Related to HealthInfoNet Services**
DRAFT

Shaun T. Alfreds, MBA
David M. Witter, Jr., MA

Prepared for
The Maine HealthInfoNet Stakeholder Group
Maine Quality Forum

Project Support Provided by
HealthInfoNet

November 2008

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Acknowledgements:

The project team wishes to acknowledge the support of the Maine Health Information Center (MHIC) and the Muskie School of Public Service in assisting in the collection of the data needed to conduct this analysis. Also, the project team extends its appreciation to Devore Culver, Alice Chapin, and James Harner for their valuable feedback on the research and earlier drafts of this report. Finally the project team wishes to thank Noelle Savageau from the University of Massachusetts Medical School for her research support. The statements expressed in this report are those of the authors and do not necessarily reflect the views or policies of the University of Massachusetts Medical School or HealthInfoNet.

Executive Summary

Project Overview

To support the HealthInfoNet stakeholder group, the University of Massachusetts Medical School Center for Health Policy and Research (CHPR), in collaboration with Witter & Associates, conducted an analysis of the potential annual savings associated with the services currently being implemented by HealthInfoNet during its demonstration project. This study:

- Assessed the potential return on investment (ROI) associated with electronic health information exchange (HIE) in Maine in follow up to the study conducted by Baker Newman & Noyes in 2004;
 - Considered the best available approach at the time to estimate potential HIT savings for Maine.
- Reviewed and modeled recent national estimates of the impact of HIE;
- Obtained Maine specific population, payment, and utilization statistics; and
- Quantitatively applied the national savings models to Maine statistics based on their applicability to the services delivered and anticipated provider participation in the HealthInfoNet demonstration project. Several assumptions were used to generate potential savings estimates:
 - Estimation of savings using multiple approaches applied with a standardized method and updated to 2008 dollars;
 - Conservative recognition of savings already being achieved by existing levels of HIT/HIE adoption (30%) and maximum achievable benefits (80%).

HealthInfoNet Electronic HIE Savings Estimates

It is estimated that the services being provided by HealthInfoNet during the demonstration project will generate broad annual healthcare savings. The savings estimates are based on avoided laboratory testing, avoided imaging studies, and provider productivity improvements.

- Demonstration project savings are estimated to range from \$10.6 - \$12.5 million annually in the first phase of implementation during 2009, up to \$20 million annually by phase 3 of implementation in 2011.
- The eventual rollout of these specific services statewide to all providers may generate between \$40 and \$52 million in annual healthcare savings.

The HealthInfoNet demonstration project savings will accrue across all healthcare stakeholders.

- Participating providers are estimated to realize between 37% and 44% of the total savings as a result of improved productivity and avoided services provided to the uninsured. These annual savings range from \$4.6 million in phase 1, up to \$7.6 million by phase 3.

- Maine commercial payers may realize 30% to 33% of total annual savings resulting from avoided services. The value of these annual savings range from \$3.5 million in phase 1, up to \$6.2 million by phase 3 from avoided services.
- MaineCare (Maine's Medicaid program) will accrue approximately 10% of the annual avoided service savings, from a low of \$900,000 in phase 1 up to \$1.8 million by phase 3.
- Medicare avoided service savings represent 15% to 22% of the total savings estimated, between \$1.6 million and \$4.4 million through phase 3.
- Although not assessed in this analysis, some savings will also accrue to patients for reduced co-pays and deductibles for unnecessary services as well as downstream benefits of reduced costs for plan coverage.

This analysis only assessed the avoided service and productivity savings associated with the HealthInfoNet demonstration project rollout. This analysis did not assess other potential savings areas that may substantially increase the impact of electronic HIE in Maine. Some notable areas in which savings related to electronic HIE use have been described in the literature that may be applicable to HealthInfoNet activities include the impact of medication list and history availability on generic substitution, overall prescription drug use, and reductions in adverse drug events (ADEs), and reductions in overall medical errors and improvements in broad public health monitoring and prevention efforts from general health information sharing.

The savings estimates presented here cannot fully dictate the investment distribution and commitments of healthcare stakeholders. As with any new venture, there are up-front costs that will need to be borne by some stakeholders unequally. The current investments and the broad stakeholder involvement in HealthInfoNet activities to date demonstrate strong commitment that if sustained throughout the demonstration pilot will likely materialize significant statewide healthcare savings. The estimated annual savings associated with the HealthInfoNet demonstration project make a compelling argument for ongoing investment in electronic HIE by the healthcare stakeholder community of Maine.

About the Authors

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Mr. Alfreds has lead HIT and HIE policy analysis and evaluation projects supported by the Office of the National Coordinator for HIT, the Agency for Healthcare Research and Quality, State Medicaid Agencies, and public/private health information exchange organizations.

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- Oregon statewide benefits analysis of the widespread adoption of advanced health technologies; extensive analysis and report on Oregon 2006 EHR survey.
- Oregon and Metro Portland health information exchange planning including business plan development, cost-benefit and financing assessments, operational and governance plans.

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Introduction

HealthInfoNet is an independent, nonprofit organization whose mission is to create an integrated statewide clinical sharing infrastructure that will provide a secure data sharing network for both public and private healthcare stakeholders across the state of Maine. The concept of HealthInfoNet began in 2004 when the Maine Health Access Foundation (MeHAF), the Maine CDC, the Maine Quality Forum (MQF), and the Maine Health Information Center (MHIC) coordinated the Maine Health Information Network Technology (MHINT) project to study the feasibility of a statewide electronic health information exchange (HIE) network. The study found that strong support existed among multiple public and private healthcare stakeholders for such a system.

By 2005, the MHINT project organized a process for bringing together a larger group of stakeholders to explore what it would take to create an electronic HIE network in Maine. An extensive planning and development process ensued. This process resulted in the establishment of HealthInfoNet as an independent nonprofit organization whose mission is to develop a statewide HIE network that will allow healthcare providers rapid access to patient-specific healthcare data at the point of care. Maximizing the effectiveness of available electronic HIE technologies from such vendors as 3M and Orion Networks, HealthInfoNet will provide the necessary tools to ensure accurate, secure, and current clinical and administrative healthcare data is available to providers across the state. In 2009 HealthInfoNet will begin rolling out a 24-month electronic HIE demonstration project. This demonstration includes the following participating organizations:

- Central Maine HealthCare
- Eastern Maine Healthcare Systems
- Franklin Memorial Hospital
- Maine Centers for Disease Control and Prevention (CDC)
- Maine General Health
- MaineHealth
- Martin's Point Healthcare

The demonstration project will include a broad data set including a subset of the Continuity of Care Record (CCR). The CCR is a patient health summary standard developed jointly by ASTM International, the Massachusetts Medical Society, the Health Information Management Systems Society (HIMSS), the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP), and other health informatics vendors. The CCR standard is an electronic representation of the most relevant and timely components of a patient's medical records that need to be shared between providers to promote quality of care across settings. It contains various standardized data sets including patient demographics, insurance information, diagnosis and problem lists, medications, laboratory results, radiology reports, allergies, and care plans.

These represent a "snapshot" of a patient's health data that can be useful or possibly lifesaving, if available at the time of clinical encounter.

HealthInfoNet's demonstration project will incorporate multiple data sets to provide a broad clinical information set to providers. The information that will be included in the demonstration project includes:

- Registration and encounter data;
 - Necessary information for accurate patient identification; and
 - Encounter history;
- Conditions, diagnoses, and problem lists;
- Allergies and adverse reactions;
- Prescription medications;
- Laboratory and microbiology results;
- Radiology reports; and
- Text based, dictated, and transcribed documents.

In April of 2008, the Maine State Legislature established a resolve (Chapter 198) to "Advance Maine's HealthInfoNet Program." This resolve required the Maine Quality Forum and HealthInfoNet to convene a broadly representative stakeholder group to study and make recommendations for establishing and financing a quality improvement and technology fund that would contribute to HealthInfoNet's sustainability, both in the current demonstration phase and in scaling the electronic HIE services for statewide deployment.

To support the stakeholder group, the University of Massachusetts Medical School Center for Health Policy and Research (CHPR), in collaboration with Witter & Associates, conducted an analysis of the potential state wide annual savings associated with the services currently being implemented in the HealthInfoNet demonstration project. This analysis is designed to assist the HealthInfoNet Stakeholder Study Group in developing and valuing initial and ongoing funding strategies for electronic HIE activities in the state of Maine by estimating the potential, achievable savings associated with HealthInfoNet demonstration project services. The goals of the study are to:

- Revisit potential return on investment (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; and
 - Achievable to the stakeholders participating currently and in the future;
- Assist the HealthInfoNet Stakeholder group in understanding the potential range of financial impact of HIE; and

- Inform the business planning processes of HealthInfoNet to assure that the development work currently being conducted will lead to a sustainable business plan.

The findings of this analysis review potential annual healthcare savings opportunities resulting from the implementation of the scope of electronic HIE services proposed by HealthInfoNet during its demonstration project. Specific savings presented relate to potential avoidable services in emergency room (ER) and ambulatory care settings, as well as productivity gains by providers who have access to the electronic HIE network. These savings were reviewed through the following parameters:

- Statewide aggregate savings associated with current HealthInfoNet rollout of services statewide;
- Savings by specific phases of the HealthInfoNet demonstration as identified by HealthInfoNet leadership; and
- Savings by healthcare payer category.

Background

The substantial challenges and opportunities to improve the quality of healthcare in the U.S. made national headlines in 1999 and 2001 with the release of the milestone reports from the Institute of Medicine (IOM): *To Err is Human*¹ and *Crossing the Quality Chasm*.² These reports highlighted medical errors as a major cause of death in the United States and revealed that healthcare quality in the nation “falls short of established benchmarks based on the best available evidence.”³ They concluded that a fundamental redesign of the healthcare delivery system is necessary to improve quality. One of the primary recommendations from the IOM was the creation of an information infrastructure to support evidence-based decision-making by providers, patients, and members of the healthcare delivery team.

In 2003, the Center for Studying Health System Change (CSHSC), conducted a study that assessed the extent to which a representative sample of the U.S. population received evidence-based care for a broad spectrum of conditions.⁴ It was noted that, on average, patients received evidence based care only 50% of the time with little difference in performance between areas of acute care, preventive care, and care for chronic conditions. With only half of the American population receiving recommended medical care, and healthcare expenditures consistently rising year after year, the need for innovations in the U.S. healthcare

¹ Institute of Medicine, (1999): *To Err is Human: Building a Safer Health System*. Washington, DC: The National Academies Press.

² Institute of Medicine, (2001): *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: The National Academies Press.

³ Institute of Medicine (1999).

⁴ Elizabeth McGlynn et al., “The Quality of Health Care Delivered to Adults in the United States,” *The New England Journal of Medicine*, 348, no. 26 (June 26, 2003): 2635-2645.

system is clear. Health information technology (HIT) and electronic HIE have been identified as critical tools to assist in addressing these issues. Although not the panacea, there is growing evidence that these tools have the potential to greatly improve care delivery and reduce costs.

Administrative electronic healthcare systems that share claims and billing information are in use in most healthcare settings today.⁵ The investment in administrative systems in healthcare has been directly related to their financial return. A recent study from the New England Electronic Data Interchange Network found that the average labor and material cost of a single claim transaction submitted via paper or fax was \$5, whereas the same transaction exchanged electronically was \$0.25, representing a 95% savings from moving to electronic transactions.⁶

Recent studies have demonstrated that clinical HIT and electronic HIE can enhance the effectiveness of healthcare delivery by helping providers make informed decisions via access to patient specific evidenced-based guidelines for preventive and other types of care, decision support tools for chronic care, and real-time access to laboratory results, imaging studies, and other clinical information. A recent meta analysis of HIT literature revealed that increased access to information through the use of clinical HIT contributed to a statistically significant enhancement of primary and secondary preventive care measures, chronic care treatment, appropriate laboratory testing, and the use of advance directives. There was also evidence that electronic health records (EHRs) or electronic medical records (EMRs) and computerized provider order entry (CPOE), and the electronic exchange of the information contained within them, can better inform providers and reduce medical errors.⁷ Nearly half of serious medication errors in the country have been associated with providers' lack of information on medications and patients' medical histories at the point of care.⁸

Despite the potential for benefit, recent surveys estimate that the current adoption and use of these technologies is low, with only 17-25% of physicians in ambulatory settings using EMRs and only 4-21% of hospitals using CPOE.⁹ The

⁵ Stires, D.: Technology Has Transformed the VA. May 15, 2006. Internet address: http://money.cnn.com/magazines/fortune/fortune_archive/2006/05/15/8376846/ (Accessed February 2008).

⁶ Halamka, J., Aranow, M., Ascenzo, C., Bates, D., Debor, G., Glaser, J., Goroll, A., Stowe, J., Tripathi, M., and Vineyard, G.: Health Care IT Collaboration in Massachusetts: The Experience of Creating Regional Connectivity. *Journal of American Medical Informatics Association* 12(6):596–601, Nov/Dec 2005.

⁷ Chaudhry, B., Wang, J., Wu, S., Maglione, M., Mojica, W., Roth, E., Morton, S.C., and Shekelle, P.G.: Systematic Review: Impact of Health Information Technology on Quality, Efficiency, and Costs of Medical Care. *Annals of Internal Medicine* 144(10):742-752, May 16, 2006.

⁸ Bates, D.W. and Gawande, A.A.: Improving Safety with Information Technology. *The New England Journal of Medicine* 348(25):2526-2534, June 19, 2003.

⁹ Jha, A.K., Ferris, T.G., Donelan, K., DesRoches, C., Shields, A., Rosenbaum, S. Blumenthal, D. How Common are Electronic Health Records in the United States? A Summary of the Evidence. *Health Affairs*, Web Exclusives, 25, no. 6 (October 2006): pp. w496-w507.

costs of clinical HIT systems are high are generally borne by healthcare providers. However, the return on investment for these clinical systems is gradual and does not fully accrue to providers. Since the current healthcare payment system primarily pays providers on a fee-for-service basis, providers have limited financial incentive to invest in technologies that reduce the number of services they are paid for. The gradual returns for these technologies benefit the healthcare system as a whole, but do not necessarily benefit any one party enough to offset the significant up-front investments. The underinvestment in electronic HIE throughout the healthcare system is a result of these factors as well as the fragmentation and competition in the healthcare marketplace between both providers and payers that has prevented the collaboration necessary to promote standardized health information sharing.

The increased focus on healthcare safety and quality as evidenced in recent IOM reports, combined with the need to control rising healthcare costs, and the challenges related to HIT and electronic HIE adoption, have elicited a national drive toward supporting the adoption and appropriate use of administrative and clinical HIT and electronic HIE across the healthcare continuum. There are multiple efforts at the national level to assist in and organize these efforts. The Office of the National Coordinator for HIT, since its creation in 2004, has provided significant guidance and funding to support these initiatives.¹⁰ The Agency for Healthcare Research and Quality (AHRQ) has provided seed funding through multiple HIT and electronic HIE initiatives such as its Patient Safety and Health IT program. The Health Resources and Services Administration, through its Office of Health IT, has been providing technical support and seed grants for HIT and electronic HIE implementation by safety net providers and clinics. CMS has also allocated resources for HIT and electronic HIE in the Medicaid program by promoting the Medicaid Information Technology Architecture (MITA)¹¹ and in the Medicare program by providing grants for eRx, quality measurement and improvement initiatives, and physician adoption of EMRs. In addition, many healthcare entities have developed public and private collaborations to individually facilitate electronic HIE within communities and regional areas.¹² Electronic HIE, however, is still at a nascent stage and the return on investment for broad scale HIE projects has not been fully demonstrated, as many initiatives are still early in their implementation phases.

¹⁰ For more information on ONC activities see: <http://www.hhs.gov/healthit/>

¹¹ MITA is a CMS led Medicaid Management Information System (MMIS) modernization initiative. The goal of MITA is to promote an integrated Medicaid IT infrastructure that supports data exchange between state agencies, public and private payers and providers, and other stakeholders by minimizing the technical barriers to data exchange between systems and organizations. MITA provides a mechanism whereby state Medicaid agencies can use their federal matching funds for IT development and maintenance to incorporate infrastructure within the MMIS system that supports interoperability with the wider healthcare community. For more information on MITA see: www.cms.hhs.gov/MedicaidInfoTechArch/

¹² See the State-Level HIE Consensus project at www.staterhio.org/

Prior HIE Benefit Analyses in Maine

Early Maine efforts in considering electronic HIE opportunities included an analysis conducted for the Maine Health Information Center (MHIC) in 2004 by Baker, Newman, and Noyes (BNN).¹³ This report assessed the state of health information technology (HIT) developments in Maine, the readiness and opportunity of clinical information sharing, potential savings to be realized, and made recommendations for health information technology deployment in Maine. This analysis estimated HIT savings using a model described in the Patient Safety Institute's (PSI) March 2004 White Paper: "Economic Value of a Community Clinical Information Sharing Network Part I – Value to Payers" prepared by First Consulting Group (FCG).

In 2004, very few comprehensive analyses had been published regarding the impact of and potential savings and costs associated with widespread HIT implementation. The PSI-FCG analysis estimated potential national annual savings of \$46.4 billion from advanced clinical information sharing networks. The 2004 BNN analysis estimated that total annual potential savings for the statewide adoption of advanced HIT ranged from \$179 - \$248 million. Table 1 shows the breakdown of savings reported in the BNN study.

Table 1: Potential Annual Savings for Maine from BNN 2004 Analysis

Maine Savings as Derived from National Studies	Low (a)¹⁴	High (b)¹⁵
Avoid unnecessary inpatient hospitalizations due to missing information	\$ 130.0 M	\$ 176.8 M
Decrease preventable inpatient adverse drug reactions	\$2.0 M	\$10.3 M
Decrease outpatient visits related to preventable outpatient ADEs	\$0.1 M	\$0.1 M
Decrease outpatient visits related to missing information	\$5.75 M	\$6.5 M
Decrease unnecessary duplicative laboratory tests	\$10.1 M	\$14.1 M
Decrease unnecessary duplicative x-ray tests	\$15.4 M	\$21.4 M
Decrease redundant medications and overuse of medication	\$10.8 M	\$11.2 M
Decrease emergency department expenses	\$6.7 M	\$6.7 M
Total Potential Savings	\$ 179.5 M	\$ 248.4 M

BNN adjusted the gross potential Maine savings for several factors that would otherwise overestimate the savings, including alternative outpatient services that would be used if an inpatient admission were avoided, conversion of estimates based on billed patient charges to payments made by health plans or patients, and the assessment of the incremental cost impact of savings. The total amounts of these adjustments are shown in Table 2.

¹³ Maine Health Information Network Technology (MHINT). A Statewide Clinical Information Sharing Network Feasibility Study. Phase I Report, December 15, 2004

¹⁴ The low figures represent values with patient-specific clinical data available.

¹⁵ The high figures include the addition of clinical decision support (CDS).

Table 2: Net Maine Savings from 2004 BNN Analysis

Net Maine Savings as Derived from National Studies	Low (a)	High (b)
Total Potential Savings	\$ 179.5 M	\$ 248.4 M
Less: Alternative Services – outpatient services provided in lieu of unnecessary inpatient hospitalizations (33% adjustment)	(\$42.9M)	(\$58.3M)
Subtotal	\$ 136.6 M	\$ 190.1 M
Less: Net revenue – adjustment of charges to payments (40% adjustment)	(\$52.0M)	(\$73.3M)
Subtotal	\$ 84.6 M	\$ 116.8 M
Less: Incremental Cost – adjustment for incremental cost reduction impact to providers (50% adjustment)	(\$42.3M)	(\$58.4M)
Net Potential Savings	\$ 42.3 M	\$ 58.4 M

After these adjustments, the net Maine savings by component are shown in Table 3.

Table 3: Net Maine Savings by Component from 2004 BNN Analysis

Net Maine Savings by Component	Low (a)	High (b)
Avoid unnecessary inpatient hospitalizations due to missing information	\$ 17.6 M	\$ 22.60 M
Decrease preventable inpatient adverse drug reactions	\$1.0 M	\$5.2 M
Decrease outpatient visits related to preventable outpatient ADEs	\$0.03 M	\$0.1 M
Decrease outpatient visits related to missing information	\$2.9 M	\$3.3 M
Decrease unnecessary duplicative laboratory tests	\$5.1 M	\$7.7 M
Decrease unnecessary duplicative x-ray tests	\$7.0 M	\$10.7 M
Decrease redundant medications and overuse of medication	\$5.4 M	\$5.6 M
Decrease emergency department expenses	\$3.4 M	\$3.4 M
Total Potential Savings	\$ 42.3 M	\$ 58.4 M

BNN in their analysis used the PSI-FCG valuation model, which was considered the best available approach at the time to estimate potential HIT savings for Maine. The PSI-FCG model itself relied on a limited number of studies and parameters. The PSI-FCG and BNN methodology have subsequently been used by Colorado in estimating potential HIT savings. Oregon and others have used the PSI-FCG analyses in developing their saving estimates.¹⁶ However, the individual savings component estimates include a mix of HIT functionalities including EMR adoption, CPOE, clinical decision support, and information exchange, but did not estimate the components of savings specifically related to HIE functions or consider the differential impacts of primary payer categories.

Since 2004, a number of additional studies have been completed that assess the potential savings and benefits of various HIT systems. In May 2004, the Center for Information Technology Leadership (CITL) released an analysis on “The Value of Healthcare Information Exchange and Interoperability” that estimates potential national annual savings of \$90 billion with the adoption of the most advanced levels of electronic HIE and interoperability (HIE&I) functionality. In 2005, RAND completed a series of studies on HIT adoption, potential annual savings, and adoption phasing, with a national estimate of HIT enabled annual efficiency savings of \$77 billion. Summaries of the CITL HIE&I and the RAND studies were published in the journal *Health Affairs* in 2005. These two efforts added substantially to the methodologies, scope of literature, and data documented on the financial impact of electronic HIE.

A number of communities and states have also developed estimates of potential savings and costs for electronic HIE functions based on related methodologies and approaches. In Oregon, estimates of the statewide impact on health expenditures from the widespread adoption of HIT and specific savings estimates

¹⁶ Metropolitan Portland Health Information Exchange Business Plan 2.0 (May 2007) prepared for the Oregon Business Council by the Oregon Healthcare Quality Corporation, available at <http://www.q-corp.org/q-corp/images/public/pdfs/MPHIE%20BizPlan2%20053007.pdf>.

for electronic HIE have been used to prioritize options for statewide HIT and electronic HIE development and inform business planning processes. The Oregon studies developed a standardized approach that could be applied for multiple purposes and HIT/HIE functionalities.^{17,18}

The goal of this study is to use the standardized approach developed in Oregon to specifically assess potential annual healthcare expenditure savings related to the electronic HIE services proposed by HealthInfoNet during their demonstration project and its phased implementation.

Methods for 2008 HealthInfoNet Savings Analysis

This analysis, conducted in the fall of 2008, targets savings from avoided services and physician productivity directly related to the specific electronic HIE functions planned for HealthInfoNet during its demonstration project. In addition, it estimates the impacts of those savings by phase (1, 2, & 3) of implementation across healthcare payer categories. This analysis estimates savings for the following components:

- Outpatient – Ambulatory Care Settings:
 - Avoidable laboratory testing caused by missing information;
 - Avoidable imaging studies caused by missing information;
 - Avoidable visits caused by missing information;
 - Physician/staff productivity loss looking for missing information; and
 - Physician productivity impact for repeated work for history taking and medication reconciliation.
- Emergency Room Settings:
 - Avoidable emergency room costs for outpatient ER visits;
 - Avoidable emergency room costs related to inpatient admissions;
 - Avoidable admissions through the emergency room caused by missing information;
 - Avoidable ER laboratory testing caused by missing information;
 - Avoidable ER imaging studies caused by missing information;
 - Physician/staff productivity loss looking for missing information; and
 - Physician productivity impact for repeated work for history taking and medication reconciliation.

While this analysis uses many of the same functional areas as the original BNN study conducted in 2004, the current analysis incorporates a number of refinements including:

- The latest modeling methods based on recent national and regional studies (discussed below);

¹⁷. Ibid..

¹⁸ Witter DM, Ricciardi 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.

- The latest available data:
 - Maine population coverage by payer category;
 - Healthcare claim payment and service utilization rates from most recent available studies and local data sources; and
 - Hospital discharges, visits, and ER rates.
- Estimation of savings using multiple approaches applied with a standardized method and updated to 2008 dollars;
- Estimation of savings by primary payer/sponsor categories;
- Recognition of savings already being achieved by existing levels of HIT adoption and maximum achievable benefits:
 - Assuming that 30% of potential savings proposed by the national estimates are already being accrued as a result of current information sharing practices in participating Maine healthcare organizations (floor);
 - Assuming that only up to 80% of the savings could be captured due to the inability to involve all providers in the HIE efforts and health system issues preventing the realization of additional savings (ceiling).
- Estimation of savings associated with the specific services that will be provided by HealthInfoNet during its demonstration project including:
 - Savings developed by demonstration project estimated provider participation and ER visit capture rate in three phases:
 - Phase 1 (2009): Estimate of 15% of Maine ambulatory providers and 50% of Maine ER visits.
 - Phase 2 (2010): Estimate of 20% of Maine ambulatory providers and 60% of Maine ER visits; and
 - Phase 3 (2011): Estimate of 30% of Maine ambulatory providers and 70% of Maine ER visits.
 - Savings developed for state wide-rollout of demonstration services (to all ambulatory providers and encompassing all ER visits)

Summary of Data Used to Calculate Potential HIE Savings

In order to accurately reflect aggregate savings associated with avoidable services and productivity increases resulting from electronic HIE in Maine, it was critical to have an accurate population estimate for the state. Table 4 presents the estimated 2008 Maine population by age and primary healthcare payer source.

Table 4: Maine 2008 Population Estimate by Age and Primary Payer Source

Maine 2008 Population Estimate by Age and Primary Payer Source					
Age	Commercial	Medicare	Medicaid	Uninsured	Total
0-17	159,827	-	87,905	18,647	266,379
18-64	604,455	43,801	113,883	113,883	876,022
65+	4,283	196,826	1,836	1,020	203,965

Total					
(%)	768,565 (57%)	240,627 (18%)	203,624 (15%)	133,550 (10%)	1,346,366 (100%)

Note: Commercial payers include Anthem BCBS, Aetna, Harvard Pilgrim, CHAMPUS/TriCare and other categories.

This estimate is based on a number of sources including the U.S. Census Current Population Survey for 2007, Urban Institute data on 2004-5 Maine insurance coverage, Kaiser Family Foundation data for 2005-6, MaineCare eligibility data from 2004 – 2007, MHIC commercial eligibility data for 2006-7, and MHIC Medicare data for 2003-4.¹⁹ Each of these sources uses different time frames, eligibility/inclusion criteria, and counting methodologies. The population figures presented here therefore, represent the ‘best’ synthesized estimate based on the information available in the fall of 2008. Criteria used to estimate the current Maine population include:

- Population estimates are point in time estimates to reduce the potential for overestimation for the primary type of health plan coverage;
- Under 18: Medicare is assumed to be zero. Some data source report a few cases but this is deemed to be insignificant;
- 65 & Over, Medicaid: Medicare-Medicaid dual eligible individuals were treated as Medicare for services related to the modeling. Medicaid individuals reported as 65 & over include persons waiting for Medicare eligibility due to enrollment lag, varying eligibility requirements, and persons without citizenship; and
- 65 & Over, Other: Many analyses assume all 65 & over individuals are covered by Medicare. There is a small portion of 65 & over individuals that are not eligible for Medicare and are uninsured or have employer-based or individual coverage.

Data for Maine-based healthcare payment and utilization rates were used in this analysis in order to specifically assess the impact of electronic HIE on Maine healthcare expenditures. Commercial payment rate and utilization data were obtained from the Maine Health Information Center (MHIC) commercial and Medicare claims data. Payment rates were adjusted for inflation to 2008 dollars. Medicare and Medicaid standard payment rates were also obtained from public data sources. Some notable assumptions used in the inclusion of specific payment and utilization rate estimates for this analysis include:

- Medicare payment rates were assumed to be approximately equal to cost;
- Average payment rates for laboratory tests and imaging studies are derived from MHIC commercial claims data;
- Uninsured payment rates were assumed to be the equivalent to cost and provider organizations are the primary financing source;

¹⁹ References to these sources can be found in the Bibliography section of this report.

- Uninsured use rates were derived as a percentage of commercial use rates based on a published estimates from the Urban Institute²⁰; and
- Commercial payment rates from 2006-7 MHIC claims data were adjusted to 2008 dollars by an annualized rate of 3.33%. Medicare payment rates from 2003-4 MHIC claims data were adjusted to 2008 by an annualized rate of 2.22%. Each of these adjustments was considered to be conservative to prevent over-estimation of savings and was in line with national estimates.

Table 5 shows the 2008 payment rates used in this analysis.

²⁰ Hadley, J, Holahan J, Coughlin T, Miller D, Covering the uninsured in 2008: Current Costs, Sources of Payment, and Incremental Costs. Health Affairs, June 2008. 25:5w399.

Table 5: Maine 2008 Healthcare Service Payment Rate Estimates

Maine 2008 Payment Rate Estimates (Based on 2008 Dollars)				
	Commercial	Medicaid	Medicare	Uninsured
PCP visits	\$100	\$42	\$78	\$78
Specialty visits	\$115	\$45	\$82	\$82
ER visits	\$400	\$40	\$180	\$180
Laboratory tests	\$70	\$13	\$25	\$25
Standard imaging	\$190	\$58	\$110	\$110
Advanced imaging	\$1000	\$240	\$460	\$460
Combined standard & advance imaging	\$375	\$100	\$184	\$184

Maine hospital inpatient discharges, outpatient visits, and emergency room encounters were obtained from the Maine Health Data Organization (MHDO) for CY 2006. These data can be found in Table 6.

Table 6: Maine Hospital Inpatient Discharges, Outpatient Visits and ER Encounters: CY2006

Maine Hospital Inpatient Discharges, Outpatient Visits and ER Encounters: CY2006					
	Total	Commercial	Medicare	Medicaid	Uninsured
Inpatient Discharges	163,705	52,279	73,004	31,398	7,024
Discharges with an ER service	67,443	17,209	38,189	8,949	3,096
Outpatient ER Visits	666,745	242,074	137,358	206,063	81,250
Total ER Encounters	734,188	259,283	175,547	215,012	84,346
Outpatient Visits	4,731,136	1,965,052	1,567,774	922,751	275,559

Source: Inpatient-MHDO Maine Hospital IP records, Outpatient-MHDO Maine Hospital OP records, CY 2006.

Summary of Savings Studies Applied in this Analysis

The projected annual savings developed in this analysis represent a synthesis of selected savings estimates from various national and regional studies. This section describes the savings estimates from the studies reviewed, and identifies the components used to develop the 2008 Maine electronic HIE annual savings estimates.

A number of models have been published for estimating the benefits of various health information technologies and electronic HIE services. For the most part, these studies have focused on estimating aggregate benefits and savings for the U.S. as a whole or in specific provider settings. Four major studies were used to estimate savings related to the services being implemented by HealthInfoNet during its demonstration project. These studies include analysis and research conducted by the Center for Information Technology Leadership (CITL), the RAND Corporation, Mark Overhage et.al. from two hospital emergency rooms in

Indiana (Community Hospital East, and Wishard Memorial Health Services), and Peter Smith et.al. from 32 primary care clinics in the state of Colorado. Each of these studies is described in detail below.

Savings estimates from the use of electronic HIE components vary among these studies for several reasons including:

- Scope of technologies projected for adoption;
- The relationship between HIT tools and HIE efforts;
- Types of savings estimated; and
- Availability of data to make savings estimates.

To address these issues, the studies modeled for this analysis, were included based on their delineation of savings from the specific HIE services being implemented by HealthInfoNet. Project principles estimated the potential savings associated with the specific electronic HIE services when quantitative information for the model was not available from the published study source. These estimates were developed through interviews with study principles, healthcare providers in Oregon, and HealthInfoNet staff. The final savings estimates presented in the findings section of this paper were selected with an effort to avoid double counting of any functional type of savings. Where a particular type of saving was estimated in multiple studies, a range of potential savings is presented.

Center for Information Technology Leadership²¹

The Center for Information Technology Leadership (CITL) was formed in 2002 by Boston-based Partners HealthCare System as a research organization to help guide the healthcare community in making more informed strategic IT investment decisions. Ambulatory Computerized Provider Order Entry (ACPOE) was the first research topic undertaken by CITL. The goal was to determine the value of ACPOE systems in improving quality and reducing costs.

In 2004, CITL examined the potential value of health information exchange and interoperability (HIE&I) in follow up to its 2003 ACPOE valuation study. The HIE&I study examined the financial benefits and costs of HIE&I of health information. Data was gathered through literature review, expert interviews, and software modeling. CITL created four categories for staging the level of electronic information exchange and information interoperability. The four levels specified are:

- Level 1 – Today’s prevailing phone and mail communications;

²¹ The CITL published reports that formed the basis of this analysis include: Walker J, Pan E, Johnson D, Adler-Milstein J, Bates DW, Middleton B. The Value of Health Care Information Exchange and Interoperability. Health Affairs. January 2005: W5:10-18. Pan E, Johnston D, Walker J, Adler-Milstein J, Bates DW, Middleton B, The value of healthcare information exchange and interoperability. Center for Information Technology Leadership (HIMSS) report 2004.

- Level 2 – Machine-transportable data (standard fax);
- Level 3 – Machine-organizable data (e-mail and electronic messaging);
- Level 4 – Machine-interpretable data (interoperable data exchange with standardized message formats and content).

The study considered the benefits of information flow and interoperability between particular providers and other stakeholders including:

- Outpatient providers and independent laboratories;
- Outpatient providers and radiology centers;
- Outpatient providers and pharmacies;
- Providers and public health departments; and
- Providers and payers.

The 2008 Maine savings analysis uses the Level 4 capabilities in assessing the potential savings that could ultimately be achieved with statewide electronic HIE in the state. Due to the scope of the HealthInfoNet demonstration phase, only savings associated with avoidable laboratory testing and imaging services are included in this analysis.

Avoidable laboratory testing and imaging services under the HEI&I analyses not only include results from the benefits of ACPOE but also enhanced access to prior test results through health information exchange services. For this analysis we estimated 40% of the potential annual savings to be associated with electronic HIE, 20% of the savings associate with Electronic Medical Record (EMR) use, 20% of the savings associated with ACPOE, and 20% of the savings associated with the Clinical Decision Support System (CDSS). See Table A1 in the appendix for the calculated total savings and per member per year (pmpy) savings by Maine payer category based on the CITL methodology.

RAND HIT Project²²

In 2003 and 2004, the RAND Health Information Technology (HIT) Project team conducted a study to better understand the role and importance of HIT in improving healthcare and inform government actions that could maximize the benefits of HIT use. RAND’s analyses and publications use the terms “Health Information Technology” (HIT) and “Electronic Medical Record Systems” (EMR-S) interchangeably. RAND uses EMR to describe a comprehensive cluster of functionalities including:

- The Electronic Medical Record (EMR) containing current and historical patient information;

²² The findings of RAND HIT Project are reported in a series of publications. This analysis is primarily based on: Richard Hillestad, James Bigelow, Anthony Bower, Federico Girosi, Robin Meili, Richard Scoville, and Roger Taylor, “Can Electronic Medical Record Systems Transform Healthcare? Potential Health Benefits, Savings, and Costs,” *Health Affairs*, Vol. 24, No. 5, September 14, 2005. Federico Girosi, Robin Meili, and Richard Scoville, *Extrapolating Evidence of Health Information Technology Savings and Costs*, Santa Monica, Calif.: RAND Corporation, MG-410-HLTH, 2005.

- Clinical Decision Support (CDS) functions providing reminders and best-practice guidance for treatment;
- A Clinical Data Repository (CDR) which stores EMR information; and
- Computerized Physician Order Entry (CPOE) functionality facilitating orders tied to patient-information and -treatment pathways.

RAND conducted an extensive literature review, expert panel interviews, and computer modeling to develop their savings estimates. The estimates developed by RAND look broadly at a number of services. For the Maine analysis, only the savings associated with avoidable outpatient laboratory testing and imaging studies were included. RAND describes laboratory savings from EMR-S equipped with CPOE functions, clinical decision support (CDS), and interoperability with other providers. These technologies together can avoid unnecessary tests by improving physician access to test results ordered by other providers and alerting physicians to new test orders that may be superfluous. Avoidable radiology and imaging services are described as occurring with increased access to prior study results and improved communication between ordering physicians and radiologists, minimizing repeat or inappropriate studies.

As with the CITL study, it was estimated that 40% of the potential annual savings are associated with electronic HIE, 20% of the savings are associated with EMR use, 20% of the savings are associated with CPOE, and 20% of the savings are associated with the CDS. See Table A2 in the appendix for the calculated total savings and pmpy savings by Maine payer category based on the RAND methodology.

Overhage ER Savings Analysis²³

In 2002, researchers from the Indiana University School of Medicine and the Regenstrief Institute for Health Care published a randomized controlled study of information sharing between a large urban hospital and two hospital emergency departments. This study specifically looked at the impact of information sharing from one large urban hospital computer-based patient record (via printed abstract and online access) to two hospital-based emergency departments (ED) located in the same urban area with a demonstrated history of crossover in patient care. At each of the ED locations, physicians rarely used limited online access to institutional data prior to this study.

By providing ED clinicians access to patient information from the electronic medical record, the study found that patient charges for ED care were decreased by an average of \$26 per encounter, \$13 per encounter for discharged patients and \$123 per encounter for admitted patients. These reductions were based on mean charges.

²³ Overhage JM, Dexter PR, Perkins SM, Cordell WH, McGoff J, McGraff R, McDonald CJ. A randomized controlled trial of clinical information shared from another institution. *Ann Emerg Med.* January 2002; 39:14-23.

To apply these savings to the state of Maine and the HealthInfoNet demonstration project, the charges were inflated to 2008 dollars based on an average inflation rate of 5%. In addition, charges were adjusted to commercial payment rates and Medicare costs. See Table A3 in the appendix for the calculated total savings and pmpy savings by Maine payer category based on the Overhage methodology.

Missing Information Savings Analysis (Smith et.al.)²⁴

Quantitative data regarding the impact of missing information on the practice of medicine was obtained from a study conducted by Peter Smith et.al., based on a Colorado practice-based research network, including 32 primary care clinics and 253 clinicians participating in the Applied Strategies for Improving Patient Safety medical error reporting study.

Smith reported that 13.6% of primary care visits had missing information. The consequences of missing clinical information included:

- Delays in care: 25.5% of missing information visits;
- Additional laboratory tests: 22.3% of missing information visits;
- Additional visits: 20.9% of missing information visits;
- Additional imaging studies: 10.9% of missing information visits.

Beyond delays in care and additional services that resulted in missing information at the point of care, clinicians documented productivity losses from not having necessary information at the point of care. These productivity losses included additional time spent by physicians and support staff looking for the missing information, communicating it on the telephone with hospitals, specialists, pharmacies, and each other, as well as additional time spent reconciling divergent information.

This information was sufficient for the development of estimates of avoidable ambulatory visits, laboratory tests, imaging studies, inpatient admissions, and productivity loss in Maine ambulatory care practices and emergency rooms (ERs). Inefficiencies in ambulatory practices from missing information were developed based on time spent unsuccessfully looking for missing information and the additional time physicians spent repeating the collection of the patient's history and medications lists that should have been available. Parameters used to assess the potential savings associated with missing information related to electronic HIE in Maine include:

- Maine specific payment rates inflation adjusted to 2008;
- Adjusted missing information rates for specialty and emergency room services based on interviews and research staff input;
 - Specialty visits were assumed to have 60% of the missing information rates as compared to primary care; and
 - 70% of patients receiving services in the ER have prior medical history data somewhere and 90% of this information is not immediately available in the ER.
- Productivity savings based on \$150/hr for physician and \$40/hr for office staff.

²⁴ Smith PC, Araya-Guerra R, Bublitz C, Parnes B, Dickinson LM, Van Vorst R, Westfall JM, Pace WD, Missing clinical information during primary care visits. JAMA 293(5): 565-571, February 2, 2005.

See Tables A4 and A5 in the appendix for the calculated total savings and per pmpy savings by Maine payer category based on the Smith methodology.

Range of Modeling Estimates

Due to the differences in the methods and the organization of specific savings across the studies reviewed and modeled in this analysis, there are multiple overlapping categories of services that are included in the final savings estimates. To avoid double counting of savings associated with electronic HIE services in Maine, the savings figures in the findings section are presented in a range with the specific savings categories identified by study to help reviewers and healthcare stakeholders understand the source of the savings identified.

Categories of savings were chosen for inclusion in the final Maine estimates based on the specificity of the underlying supporting data and their applicability to the HealthInfoNet demonstration services. The savings estimates presented also assume that 30% of the estimated savings are already being accrued to providers, payers, and purchasers due to existing information sharing capacities (floor). In addition, it was assumed that only 80% of the potential savings could be achieved, in order to address the fact that some healthcare stakeholders will not adopt electronic HIE technologies due to environmental (economic and non-economic) conditions (ceiling).

The savings estimates presented below are grouped by avoided services and productivity savings. The avoided services savings most immediately benefit the payers of those services. Payers include patients, health plans (commercial plans, self-insured employer plans, Medicare, and Medicaid) as well as providers who function as the payers for uncompensated care rendered to the uninsured and under-insured. The productivity savings most immediately benefit the providers and practice sites. Eventually all these savings should translate into lower healthcare expenditures for the community as a whole. Over time, efficiency and productivity savings dampen and/or delay the need for price increases in the fees charged to patients.

Findings

HealthInfoNet Demonstration Phase Savings

In 2008 and 2009, HealthInfoNet will be implementing the first phase of their demonstration project. This initial rollout of the core set of services is targeted for four Maine-based integrated delivery networks (IDNs): MaineHealth, Eastern Maine Healthcare, Central Maine HealthCare, and Maine General. The participating hospitals within these IDNs will encompass approximately 15% of the ambulatory care provision and 50% of ER visits across the state. Future phases of HealthInfoNet rollout will be targeted at increasing provider participation in the demonstration.

- Phase 2 (2010): Estimate of 20% of Maine ambulatory providers and 60% of Maine ER visits.
- Phase 3 (2011): Estimate of 30% of Maine ambulatory providers and 70% of Maine ER visits.

Savings estimates for the three phases of the demonstration project were developed to assist HealthInfoNet and the Stakeholder group in assessing the potential impact of the demonstration services and to develop a business planning process for sustaining the operations and maintenance of the HealthInfoNet electronic HIE efforts in the future. Table 7 presents the aggregate savings associated with each phase of the HealthInfoNet demonstration project.²⁵

Table 7: Low and High Estimates of Total Annual Savings Associated with HealthInfoNet Phases 1-3

Estimated Total Annual Savings for HIN Phases	HIN Demonstration Phase 1 (2009) Savings		HIN Demonstration Phase 2 (2010) Savings		HIN Demonstration Phase 3 (2011) Savings	
	Low	High	Low	High	Low	High
Avoided Services						
Avoided Services in Ambulatory Care	\$2.6 M	\$2.6 M	\$3.5 M	\$3.5 M	\$5.2 M	\$5.2 M
Avoided Services in Emergency Room	\$3.7 M	\$0.3 M (admits)	\$4.5 M	\$0.4 M (Admits)	\$5.2 M	\$0.5 M (Admits)
Reduced ER Costs – Inpatient		\$2.5 M		\$3.0 M		\$3.5 M
Reduced ER Costs – Outpatient		\$2.8 M		\$3.4 M		\$3.9 M
Annual Avoided Service Savings	\$6.3 M	\$8.3 M	\$8.0 M	\$10.3 M	\$10.5 M	\$13.2 M
PRODUCTIVITY						
Ambulatory Care Productivity Savings	\$1.5 M	\$1.5 M	\$2.0 M	\$2.0 M	\$3.1 M	\$3.1 M
ER Productivity Savings	\$2.7 M	\$2.7 M	\$3.2 M	\$3.2 M	\$3.8 M	\$3.8 M
Annual Productivity Savings	\$4.2 M	\$4.2 M	\$5.2 M	\$5.2 M	\$6.8 M	\$6.8 M
Total Estimated Annual Savings	\$10.6 M	\$12.5 M	\$13.2 M	\$15.6 M	\$17.2 M	\$20.0 M

It is estimated that the HealthInfoNet demonstration project will save between \$10.6 and \$12.5 million during the first phase of the project rollout in 2009, with these savings projected to increase to between \$17 and \$20 million by 2011. As

²⁵ CITL and RAND, in their valuation models, did not delineate between outpatient laboratory and imaging services occurring in the ER or ambulatory settings. As a result CITL and RAND estimates were not used in the calculation of estimated savings for the HealthInfoNet demonstration project phases. The CITL and RAND estimates models were used to assess the aggregate savings state wide, resulting in higher relative savings than the Overhage and Smith models. Therefore the estimates presented in Tables 8 and 9 do not take into account the full range of possible savings and may under represent the breadth of potential savings documented by CITL and RAND.

discussed above, the savings presented here were reduced by the floor and ceiling assumptions relating to the current level of HIE occurring and a conservative estimate of the maximum level of HIE diffusion.

To date, few empirical studies have attempted articulate the distribution of HIE benefits among provider, payers, and purchasers of healthcare. The reasons include the nascent stage of electronic HIE implementations, limited availability of necessary data and variations in the size, services, and technological operations of electronic HIE organizations. In addition, many HIE organizations have limited capacity for formal evaluations and have been challenged to identify evaluation measures that can be consistently applied across the varied HIE implementations and stakeholders.²⁶ Due to the focus on the impact of missing information in the healthcare practice site, the Smith study allowed for the estimation of savings that impact providers and the organizations that employ them, while each of the CITL, RAND, and Overhage studies allowed for the estimation of avoidable services whose savings primarily accrue to healthcare payers.

Based on the data available at the time of this analysis, it is estimated that between 33% and 40% of the demonstration project savings, ranging from \$4.2 million in phase 1 to \$6.8 million by phase 3 will accrue to providers and provider organizations. These productivity savings include the time not spent collecting information from other sources, reconciling divergent information, and recreating existing patient history and medication lists. Providers, safety net clinics, and hospitals may also realize an additional 4% of avoided services savings associated with uncompensated care delivered to uninsured and underinsured patients. Due to data limitations for this study, these productivity savings could not be broken down into detailed savings for specific provider organizations.

Savings by Payer Category

The healthcare payment, utilization, and population data available for this analysis allowed for the estimation of HealthInfoNet demonstration project savings by payer category. In 2008, 57% of the population was covered by some form of commercial insurance, 15% of the population was covered by Medicaid, 18% of the population was covered by Medicare, and approximately 10% of the population was uninsured. Savings from avoided services resulting from electronic HIE accrue to these populations based on their relative rates of service utilization and payment rates.

Appendix A includes detailed tables showing savings by each of the studies modeled, the aggregate savings for the state, and the specific savings associated with HealthInfoNet demonstration phases by payer category. Table 8

²⁶ American Health Information Management Association (AHIMA). State-Level HIE Value and Sustainability Workbook: Approaches for Financing and Bringing Interoperable HIE to Scale. November, 2008. (to be released 11/18/2008)

shows the estimated savings by payer category (Commercial, Medicaid, Medicare, and Uninsured) and phase (year) of the demonstration project.

Table 8: Maine Estimated Annual Avoided Service Savings for the Three Phases of the HealthInfoNet Pilot Project by Payer Category

Maine Estimated Annual Avoided Service Savings for HIN Phases by Payer Category	HIN Demonstration Phase 1 (2009) Savings by Payer		HIN Demonstration Phase 2 (2010) Savings by Payer		HIN Demonstration Phase 3 (2011) Savings by Payer	
	Low	High	Low	High	Low	High
Commercial						
Ambulatory Care	\$1.6 M	\$1.6 M	\$2.1 M	\$2.1 M	\$3.1 M	\$3.1 M
ER Savings	\$1.9 M	\$2.2 M	\$2.3 M	\$2.7 M	\$2.7 M	\$3.1 M
Commercial Sub-Total	\$3.5 M	\$3.8 M	\$4.4 M	\$4.7 M	\$5.8 M	\$6.2 M
Medicaid						
Ambulatory Care	\$0.2 M	\$0.2 M	\$0.2 M	\$0.2 M	\$0.3 M	\$0.3 M
ER Savings	\$0.7 M	\$1.1 M	\$0.9 M	\$1.3 M	\$1.0 M	\$1.5 M
Medicaid Sub-Total	\$0.9 M	\$1.3 M	\$1.1 M	\$1.5 M	\$1.4 M	\$1.8 M
Medicare						
Ambulatory Care	\$0.8 M	\$0.8 M	\$1.1 M	\$1.1 M	\$1.6 M	\$1.6 M
ER Savings	\$0.8 M	\$2.0 M	\$0.9 M	\$2.3 M	\$1.1 M	\$2.7 M
Medicare Sub-Total	\$1.6 M	\$2.8 M	\$2.0 M	\$3.4 M	\$2.7 M	\$4.4 M
Uninsured						
Ambulatory Care	\$0.1 M	\$0.1 M	\$0.1 M	\$0.1 M	\$0.2 M	\$0.2 M
ER Savings	\$0.3 M	\$0.4 M	\$0.3 M	\$0.5 M	\$0.4 M	\$0.6 M
Uninsured Sub-Total	\$0.4 M	\$0.5 M	\$0.4 M	\$0.6 M	\$0.6 M	\$0.8 M
Total Estimated Annual Savings	\$6.3 M	\$8.3 M	\$8.0 M	\$10.3 M	\$10.5 M	\$13.2 M

Maine commercial payers will likely realize the highest annual savings associated with avoidable services, ranging from \$3.5 million in phase 1 up to \$6.2 million annually by phase 3. Medicare savings will range from \$1.6 - \$4.4 million between phases 1 and 3. MaineCare (Maine's Medicaid program) will accrue approximately 10% of the annual savings from avoided services, from a low of \$900,000 in phase 1 up to \$1.8 million by phase 3.

Savings for avoided services in ambulatory care and the ER settings in Maine broadly accrue based on the population distribution among payer categories and result in reduced payments for these services by the respective health plans. As a result, the percentage of savings that accrues to each payer category remains relatively unchanged as the demonstration project increases its reach to additional providers. The distribution of avoided service and the total savings estimates, including the productivity estimates by payer category, is presented in Table 9. Since healthcare providers absorb the costs of uncompensated care rendered to the uninsured, providers are included as a payer category in Table 9.

Table 9: Estimated Percentage Distribution of Savings for the HealthInfoNet Demonstration Project by Category

Payer Category	Percentage of Avoidable Service Savings by Category	Percentage of Total Savings (includes productivity savings)
Commercial Payers	45% - 55%	30% - 33%
Medicaid	14% - 16%	9% - 10%
Medicare	25% - 34%	15% - 22%
Providers	6% (Uncompensated care)	37% - 44% (Uncompensated + productivity)

It should be noted that the savings accrued by the healthcare system as a result of electronic HIE will impact the aggregate costs of healthcare services. As providers are more productive and can see more patients in any given time, the fee for service and capitation rates for these services will eventually be reduced accordingly. Both the payers and the purchasers of healthcare in the state will then realize this reduction. The time frame for the realization of benefit across healthcare stakeholders as a result of electronic HIE is not possible to estimate at this time due to the limited examples of electronic HIE evaluations available at this time.

Statewide Savings

The statewide rollout of the services planned for implementation in the HealthInfoNet demonstration project range between \$40.5 million and \$52.8 million.²⁷ These savings include the costs related to avoided laboratory and imaging services in the ambulatory and emergency room settings, ambulatory visits, and hospital admissions from the emergency room. \$15.5 million (>33%) of the total statewide savings are associated with productivity benefits for clinical staff. Table 10 shows the break down of the total savings by category.

Table 10: Range of Potential Annual Savings Associated with HealthInfoNet Demonstration Services Rolled out to All Providers State Wide

Estimated Statewide HIE Savings for Maine: HealthInfoNet Demonstration Project Service Mix	Maine Total		
SMITH: Avoided Services Ambulatory Care Settings	Low	Med	High
Avoidable Visits Caused by Missing Information	\$4.0 M	\$4.0 M	\$4.0 M
Avoidable Laboratory Tests due to Missing Information	\$3.4 M	\$3.4 M	
Avoidable Imaging Studies due to Missing Information	\$10.0 M	\$10.0 M	
SMITH: Avoided Emergency Room Related Services			
Avoidable Admissions Caused by Missing Information	\$0.7 M	\$0.7 M	\$0.7 M
Avoidable Laboratory Tests due to Missing Information	\$1.7 M		
Avoidable Imaging Studies due to Missing Information	\$5.1 M		
CITL			

²⁷ All savings presented here are gross savings. The costs associated with the HealthInfoNet demonstration project are not included. It is estimated that HealthInfoNet costs for the demonstration project will be \$4 - \$6 Million.

Savings from Avoidable Outpatient Imaging Studies			\$18.1 M
RAND			
Savings from Avoidable Outpatient Laboratory Tests			\$14.3 M
OVERHAGE			
Reduced Emergency Room Costs - Visits Leading to Inpatient Admissions		\$5.1 M	
Reduced Emergency Room Costs - Outpatient Visits		\$5.6 M	
Total Estimated Avoided Services Savings	\$24.9 M	\$28.9 M	\$37.2 M
PRODUCTIVITY SAVINGS (SMITH)			
Productivity Improvements in Ambulatory Care			
Physician/Staff Productivity Loss Looking for Information	\$2.9 M	\$2.9 M	\$2.9 M
Physician Productivity Impact - Repeated Work	\$7.3 M	\$7.3 M	\$7.3 M
Productivity Improvements in Emergency Room			
Physician/Staff Productivity Loss Looking for Information	\$1.5 M	\$1.5 M	\$1.5 M
Physician Productivity Impact - Repeated Work	\$3.9 M	\$3.9 M	\$3.9 M
Total Estimated Productivity Savings	\$15.6 M	\$15.6 M	\$15.6 M
Total Estimated Savings	\$40.5 M	\$44.4 M	\$52.8 M

Conclusions

Although using a standardized methodology to conservatively estimate the impact of electronic HIE services being implemented by HealthInfoNet, the potential savings to the Maine healthcare system are significant. It is estimated that the HealthInfoNet demonstration project will generate broad annual healthcare expenditure savings ranging from \$10.6 - \$12.5 million in the first phase of implementation during 2009, that will increase up to \$20 million annually by phase 3 of implementation in 2011. The eventual rollout of these specific services statewide to all providers may generate between \$40 and \$52 million in total healthcare savings.

Participating providers are likely to realize between 37% and 44% of the total savings as a result of improved productivity and avoided services provided to the uninsured and underinsured. Provider and provider organization savings estimates range from \$4.6 million annually in phase 1, up to \$7.6 million annually by phase 3. Maine commercial payers will likely realize 30% to 33% of total savings, ranging from a low of \$3.5 million annually in phase 1 up to \$6.2 million annually by phase 3 from avoided services. MaineCare will accrue approximately 10% of the annual savings from avoided services, from a low of \$900,000 in phase 1 up to \$1.8 million by phase 3. The avoided services savings to Medicare represent 15% to 22% of the total savings estimated (\$1.6- \$4.4 million). Although not separately assessed in this analysis, some savings accrue to patients for reduced co-pays and deductibles for unnecessary services as well as downstream benefits of reduced costs for plan coverage.

Discussion

The savings estimates presented in this analysis likely under-report the total realizable annual savings associated with the electronic HIE in Maine for the following reasons:

- For the state wide aggregate electronic HIE savings, the high range of ER estimates include avoidable outpatient laboratory results and imaging studies from CITL and RAND and admission and visit avoidance from Smith et.al. These estimates likely underestimate the true cost of avoidable admissions and outpatient visits due to the conservative assumptions used to estimate that only 70% of patients visiting the ER have prior medical information that may be useful in that encounter.
- The CITL and RAND ER estimates do not clearly separate avoidable outpatient laboratory results and imaging service savings in the ER and ambulatory settings. To avoid double counting, these figures were not used to calculate the HealthInfoNet demonstration project savings. As a result, the demonstration project savings may underestimate the potential range of savings available to payers and providers for these avoided services.
- A number of potential savings areas are not included in this analysis due to limitations in the reliability of national studies and the availability of data at the time of this analysis. Some notable areas in which savings related to electronic HIE use have been described in the literature that may be applicable to HealthInfoNet include the impact of medication lists on generic substitution and overall prescription drug use, reductions in adverse drug events (ADEs), reductions in overall medical errors, and improvements in broad public health monitoring and prevention efforts, that may increase potential savings associated with HIE.^{28,29,30}

There are a number of technical limitations to this analysis. As is the case with any modeling project it is subject to numerous assumptions and judgments. This project relies on published savings estimates from other projects since those are the only sources of data readily available. Cost information from these studies, in some cases, is several years old, and therefore inflation estimates needed to be included.

²⁸ Wang SJ, Middleton B, et.al. "A Cost Benefit Analysis of Electronic Medical Records in Primary Care," American Journal of Medicine 2003;114:397-403

²⁹ Chaudhry, B., Wang, J., Wu, S., Maglione, M., Mojica, W., Roth, E., Morton, S.C., and Shekelle, P.G.: Systematic Review: Impact of Health Information Technology on Quality, Efficiency, and Costs of Medical Care. Annals of Internal Medicine 144(10):742-752, May 16, 2006.

³⁰ Alfreds, ST. et.al. Facilitating Electronic Health Information Exchange in State Publicly Funded Health Programs: Challenges and Opportunities. Final Report to the State Alliance for eHealth. National Governors Association. April 2008.

In addition to the technical limitations of modeling, some experts have expressed skepticism about HIT and electronic HIE savings and cost modeling due to the nascence of these technologies, the limited empirical evidence of value published to date, the lack of focus on quality care impacts, and the perception that, if improved quality of care is the goal, savings may be elusive.^{31,32,33}

In spite of this skepticism, this analysis makes a major assumption that the providers and IDNs participating in the HealthInfoNet demonstration continue their participation throughout the project. The savings associated with the demonstration project and the statewide rollout, however, may be impacted by other HIE implementation issues. Some of these issues include:

- **HIT Adoption:** The savings presented in this analysis do not take into account the significant investments needed on the part of providers to make clinical information electronic through the adoption and use of electronic medical records (EMR), computerized provider order entry systems (CPOE), electronic prescribing (eRx), clinical decision support and other HIT tools. The quality and patient safety benefits of these technologies do not necessarily accrue to the providers due to the current healthcare payment system attributes. This mismatch of incentives creates significant barriers to the rapid adoption of advanced HIT systems.
- **Avoided Services are Lost Revenues:** Savings generated when services can be avoided represent a loss of revenue to the providers of those services. While most providers would avoid providing unnecessary services, revenue losses may create a real financial impact on some categories of providers. If providers were to increase rates to offset revenue losses, some of the projected saving may erode. If providers are functioning at or near capacity, revenues from services provided to new or existing patients may replace revenue lost from avoided services.
- **Adoption Timelines:** This study does not consider the timelines for the implementation and adoption of electronic HIE services beyond the demonstration phase, and HIT systems in provider settings. Many health systems and physician practices are making substantial investments in advanced HIT systems. The widespread adoption of advanced HIT systems may generate a broader set savings than projected in this report.
- **Workflow Integration and Training:** This report assumes that provider organizations using HealthInfoNet will make the necessary changes to integrate the services and information into their internal workflows and train their staff to take advantage of HealthInfoNet services. The study

³¹ Walker JM. Electronic medical records and health care transformation, Health Affairs, 24:5 September/October 2005, 1118-1120.

³² Himmelstein DU, Woolhandler S. Hope and hype: predicting the impact of electronic medical records, Health Affairs, 24:5 September/October 2005, 1121-1123.

³³ Goodman C, Savings in electronic medical record systems? Do it for the quality, Health Affairs, 24:5 September/October 2005 1124-1126.

does not consider the impact of possible lags in workflow integration or staff training.

- **HIT Costs and Financing:** This report does not address the costs or financing of HealthInfoNet activities or HIT adoption by provider organizations. The nature of the current payment system along with the challenges facing many primary care providers in the state of Maine (individual, small group, and safety net clinics) may impact the capacity of some provider organizations to make HIT and HIE investments.³⁴ In addition, budget shortfalls due to the economic downturn may negatively impact other stakeholder investments in electronic HIE (public and private).

Regardless of the limitations discussed above, the estimated annual savings associated with the specific services being implemented in the HealthInfoNet demonstration project, between \$10 million in phase 1 and \$20 million in phase 3, make a compelling argument for ongoing investment in developmental activities to complete this project by the healthcare stakeholder community of Maine. Future studies may be able to determine additional potential savings and benefits associated with electronic HIE including reduced pharmaceutical utilization and medication management, improved patient safety, and advancements in public health monitoring.

The savings estimates presented here provide an initial look at the “who benefits” question, which is of critical importance to all healthcare stakeholders, especially in an economy that is showing significant downward recessionary trends. However, these estimates cannot fully dictate the investment commitments of healthcare stakeholders.³⁵ Although, according to this analysis, Medicare stands to reap 15% - 22% of savings benefit, direct federal investments in electronic HIE in the near future are unlikely. In addition, to date, national payers for healthcare have been reticent to provide significant support to electronic HIE. Beyond the issues discussed above, due to their presence in multiple states, national payers are conscious of political drivers that may force investments in one state to be replicated in all other states in which they conduct business. This cautionary approach, along with the perceived threat of “free-riding” has limited national payer investments in electronic HIE.³⁶

³⁴ Lenardson, J, McGuire, C, Alfreds, S, & Keith, R. Understanding Changes to Physician Practice Arrangements in Maine and New Hampshire. University of Southern Maine, Muskie School of Public Service. January 2008.

³⁵ Recent work by the American Health Information Association (AHIMA) State Level HIE Consensus project has been an important resource for the development many electronic HIE efforts to date. A new report, “*State-level HIE Value and Sustainability Workbook: Approaches for Financing and Bringing Interoperable HIE to Scale,*” reviews specific financing and investment methodologies (public and private) for multi-stakeholder HIE efforts.

³⁶ Due to its network effect and broad multi-stakeholder benefits, free-riding by payers is a perceived competitive disadvantage preventing many national payers from investing in state and regional electronic HIE efforts.

Finally, the public benefits of electronic HIE have led some stakeholders to ask whether electronic HIE should be considered, to some degree, a public good like air, water, or national defense, or at the least a public utility, like electricity or telecommunications. The various healthcare roles of government (state and federal), as purchasers of healthcare for Medicaid and Medicare-covered individuals and employees, regulators of healthcare through policy setting, licensure and enforcement of regulations, and advocates of general public health make them a critical stakeholders in electronic HIE and benefactors to its potential positive impacts. In addition the critical importance of timely and accurate health related information for complex care coordination, surveillance, and disaster management during emergencies, posits electronic HIE as a necessary public resource. Whether a natural disaster, as exemplified by the tragedies of hurricanes Katrina and Rita or the emergence of a pandemic infectious disease, rapid, accurate, and redundant networks that share health information are needed. The value of such networks cannot easily be delineated among healthcare stakeholders, but there is little question that the societal benefit is high.

The federal government, through ONC and other federal agencies, is supporting the development of a Nationwide Health Information Network. The appropriate roles of state governments however, are yet to be determined. Initiatives such as the NGA State Alliance for eHealth are working with states to inform policy development on electronic HIE.^{37,38} To date, state governments' have shown significant variation in their support of electronic HIE due to many factors. These factors include the current state of electronic HIE and collaboration between healthcare stakeholders within the states, the financial and political capacity of the state to invest in such initiatives, the availability of federal funding, and the leadership demonstrated by state officials in championing electronic HIE initiatives.³⁹

As a result, the Maine state government must consider multiple areas in which to support electronic HIE. These areas may include the alignment of regulatory policies to both promote electronic HIE and protect consumers and industry participants, use of state purchasing power to incent the adoption of technologies that facilitate HIT adoption and electronic HIE, licensing and other regulatory requirements to drive participation by national stakeholders, promotion of electronic HIE in public sector healthcare delivery, and working with HealthInfoNet to assure that a sustainable operational model of electronic HIE develops in Maine that is equitable, effective, and can benefit broader population health and safety.

³⁷ *Accelerating Progress: Using Health Information Technology and Electronic Health Information Exchange to Improve Care. First Annual Report and Recommendations from the State Alliance for eHealth.* National Governors Association Center for Best Practices. September 2008. Internet Address: www.nga.org/Files/pdf/0809EHEALTHREPORT.PDF. (Accessed November 2008).

³⁸ For more information of the State Alliance for eHealth see: www.nga.org/center/ehealth

³⁹ Alfreds, ST et.al. (April, 2008).

Taking these issues into account and supporting HealthInfoNet electronic HIE efforts requires commitment on the part of both public and private stakeholders. The potential benefits associated with this commitment and financial investments are likely to return to those stakeholders in a relatively short time frame as a result of avoided services and productivity increases, in addition to other savings not quantified in this analysis. As the HealthInfoNet Stakeholder group continues its process for developing a fund to support electronic HIE services and HIT adoption across the state of Maine, it should consider the significant potential savings from the HealthInfoNet demonstration project as a baseline for the potential for widespread healthcare savings associated with broader electronic HIE and HIT efforts in Maine.

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Appendices

The following tables A1- A5 provide the detailed savings estimates and per member per year savings by payer category for each of the national studies that were modeled and included in the Maine savings analysis. Table A6 provides the productivity savings estimates and PMPY savings estimates in ambulatory care settings and ER settings for the state.

Table A1: Maine Estimated Annual Avoidable Service Savings with CITL – HIE&I Methodology by Payer Category

Maine Estimated Avoidable Laboratory and Imaging Service Savings HIE&I Methodology					
	Commercial	Medicare	Medicaid	Uninsured	Total
Savings from Avoidable Outpatient Laboratory Tests	\$5.9 M	\$2.4 M	\$0.6 M	\$0.2 M	\$9.1 M
Savings from Avoidable Outpatient Imaging Studies	\$10.6 M	\$5.6 M	\$1.4 M	\$0.5 M	\$18.1 M
Combined Avoidable Service Savings	\$16.6 M	\$8.0 M	\$2.0 M	\$0.7 M	\$27.2 M
Maine Estimated Annual Avoidable Laboratory and Imaging Service Savings HIE&I Methodology PMPY					
	Commercial	Medicare	Medicaid	Uninsured	Total
Savings from Avoidable Outpatient Laboratory Tests	\$7.69	\$10.15	\$2.75	\$1.64	\$6.78
Savings from Avoidable Outpatient Imaging Studies	\$13.84	\$23.26	\$6.79	\$4.05	\$13.48
Combined Avoidable Service Savings	\$21.52	\$33.41	\$9.53	\$5.70	\$20.26

Table A2: Maine Estimated Annual Avoidable Service Savings with RAND Methodology by Payer Category

Maine Estimated Annual Avoidable Service Savings with RAND Methodology					
	Commercial	Medicare	Medicaid	Uninsured	Total
Savings from Avoidable Outpatient Laboratory Tests	\$9.5 M	\$3.8 M	\$0.7 M	\$0.4 M	\$14.4 M
Savings from Avoidable Outpatient Imaging Studies	\$10.6 M	\$5.5 M	\$1.2 M	\$0.5 M	\$17.8 M
Combined Avoidable Service Savings	\$20.0 M	\$9.3 M	\$1.9 M	\$0.9 M	\$32.1 M
Maine Estimated Annual Avoidable Laboratory and Imaging Service Savings RAND Methodology PMPY					
	Commercial	Medicare	Medicaid	Uninsured	Total
Savings from Avoidable Outpatient Laboratory Tests	\$12.29	\$15.90	\$3.65	\$2.69	\$10.68
Savings from Avoidable Outpatient Imaging Studies	\$13.75	\$22.77	\$5.71	\$4.12	\$13.19
Combined Avoidable Service Savings	\$26.04	\$38.67	\$9.36	\$6.81	\$23.87

Table A3: Maine Estimated Annual Emergency Room Savings Related to HIE: Overhage et.al. Methodology by Payer Category

Maine Estimated Annual Emergency Room Savings Related to HIE: Overhage et.al. Methodology					
Reduced Emergency Room (ER) Costs	Commercial	Medicare	Medicaid	Uninsured	Total
Inpatient Admissions	\$1.7 M	\$2.5 M	\$0.6 M	\$0.2 M	\$5.1 M
Outpatient ER Visits	\$2.6 M	\$1.0 M	\$1.5 M	\$0.6 M	\$5.6 M
Combined In & Out-Patient Savings	\$4.3 M	\$3.5 M	\$2.1 M	\$0.8 M	\$10.7 M
Maine Estimated PMPY Savings in the ER Related to HIE: Overhage et.al. Methodology					
Reduced Emergency Room (ER) Costs	Commercial	Medicare	Medicaid	Uninsured	Total
Inpatient Admissions	\$2.24	\$10.57	\$2.93	\$1.54	\$3.76
Outpatient ER Visits	\$3.38	\$4.08	\$7.24	\$4.35	\$4.19
Combined In & Out-Patient Savings	\$5.62	\$14.66	\$10.17	\$5.90	\$7.95

Table A4: Estimated Annual Savings Impact of Missing Information on Avoidable Services in the Ambulatory and ER Settings: Smith et.al. Methodology

Estimated Annual Savings Impact of Missing Information on Avoidable Services in the Ambulatory and ER Settings: Smith Methodology					
Impact of Missing Information in Ambulatory Care Settings	Commercial	Medicare	Medicaid	Uninsured	Total
Avoidable Visits Caused by Missing Information	\$2.1 M	\$1.3 M	\$0.4 M	\$0.2 M	\$4.0 M
Avoidable Laboratory Tests due to Missing Information	\$2.3 M	\$0.9 M	\$0.2 M	\$0.1 M	\$3.4 M
Avoidable Imaging Studies due to Missing Information	\$6.0 M	\$3.2 M	\$0.6 M	\$0.3 M	\$10.0 M
Subtotal Impact of Missing Information in Ambulatory Care Settings	\$10.4 M	\$5.4 M	\$1.1 M	\$0.6 M	\$17.5 M
Impact of Missing Information in ER					
Avoidable Admissions Caused by Missing Information	\$0.2 M	\$0.4 M	\$0.1 M	\$0.03 M	\$0.7 M
Avoidable Laboratory Tests due to Missing Information	\$1.0 M	\$0.2 M	\$0.3 M	\$0.1 M	\$1.7 M
Avoidable Imaging Studies due to Missing Information	\$2.7 M	\$0.9 M	\$1.1 M	\$0.4 M	\$5.1 M
Subtotal Impact of Missing Information in the ER	\$3.9 M	\$1.5 M	\$1.5 M	\$0.6 M	\$7.4 M
Total Avoided Services Savings	\$14.2 M	\$6.9 M	\$2.6 M	\$1.2 M	\$24.9 M

Table A5: Estimated PMPY Savings Impact of Missing Information on Avoidable Services in the Ambulatory and ER Settings: Smith et.al. Methodology

Estimated PMPY Savings Impact of Missing Information on Avoidable Services in the Ambulatory and ER Settings: Smith Methodology					
Impact of Missing Information in Ambulatory Care Practices: Primary Care	Commercial	Medicare	Medicaid	Uninsured	Total
Avoidable Visits Caused by Missing Information	\$2.76	\$5.51	\$2.03	\$1.26	\$2.99
Avoidable Laboratory Tests due to Missing Information	\$2.97	\$3.67	\$0.78	\$0.66	\$2.53
Avoidable Imaging Studies due to Missing Information	\$7.78	\$13.21	\$2.79	\$2.37	\$7.46
Subtotal PMPY Impact of Missing Information in Ambulatory Settings	\$13.51	\$22.39	\$5.59	\$4.30	\$12.98
Impact of Missing Information in ER					
Avoidable Admissions Caused by Missing Information	\$0.22	\$1.60	\$0.44	\$0.24	\$0.51
Avoidable Laboratory Tests due to Missing Information	\$1.33	\$1.02	\$1.48	\$0.89	\$1.25
Avoidable Imaging Studies due to Missing Information	\$3.47	\$3.69	\$5.34	\$3.19	\$3.77
Subtotal PMPY Impact of Missing Information in the ER	\$5.03	\$6.31	\$7.26	\$4.32	\$5.52
Total Avoided Services Savings	\$18.53	\$28.70	\$12.85	\$8.62	\$18.51

Table A6: Estimated Annual Productivity Benefit Estimates for HIE in Maine: Smith Methodology

Estimated Annual Productivity Benefit Estimates for HIE in Maine: Smith Methodology		
Ambulatory Care Practices: Primary Care	Total Savings	PMPY
Physician/Staff Productivity Loss Looking for Information	\$2.1 M	\$2.12
Physician Productivity Impact - Repeated Work H&PE/Med Lists	\$5.4 M	\$5.44
Impact of Missing Information in Emergency Department		
Physician/Staff Productivity Loss Looking for Information	\$1.5 M	\$1.12
Physician Productivity Impact - Repeated Work H&PE/Med Lists	\$3.9 M	\$2.89
Total Productivity Benefits	\$15.6 M	\$30.07

Appendix E - Health Information Fund Investment Projection Analysis

10/30/2008

Projected Number of Primary Care Practices in Maine 1	450
Percent of Maine Primary Care Practices in Reporting Active Use of EMR In Practice 2	22%
Projected number of Maine Primary Care Practices Actively Using an EMR 3	98
Projected Number of Maine Primary Care Practices Not Currently Using and EMR 4	352
Projected Number of Maine Primary Care Physicians in Practice 5	1370
Projected Number of Maine Primary Care Physicians Currently Not Using an EMR in Practice 6	1071
Average Cost of Installing an EMR Per Provider 7	\$ 30,000
Projected Total Investment to Achieve 100% Installation of EMRs in all Maine Primary Care Practices	\$ 32,140,200
Annual Investment Projection for Achieve 100% Installation of EMRs in all Maine Primary Care Practices Over 7 Years	\$ 4,591,457
Projected Total Investment to Achieve 80% Installation of EMRs in all Maine Primary Care Practices	\$ 25,712,160
Annual Investment Projection for Achieve 80% Installation of EMRs in all Maine Primary Care Practices Over 7 Years	\$ 3,673,166

Assumptions and Sources

1. Maine Chartered Value Exchange Application to US Department of Health and Human Services for HHS EHR Grant Proposal, 2007
2. 2007 Office System Survey- Voluntary Practice Assistance Initiative
3. Number of practices x adoption rate in VPAI sample (450 x .218)
4. Total number of PC practices less projected number of practices now using EMRs
5. Maine Chartered Value Exchange Application to US Department of Health and Human Services for HHS EHR Grant Proposal, 2007
6. Projected total number of Maine PCPs less projected number of PCPs who have adopted EMRs calculated as % of practices adopting EMRs (.218%)
7. Based on market experience associated with buying and installing EMRs in medical practices underway (MaineHealth) so total projected investment need is over stated

Appendix F – Minority Opinions

There are some sections of this report which all stakeholders do not fully support. Minority statements about each of these sections are provided below. The sections are addressed below in the order in which they appear in the report.

Financial Savings

What the Report Says

Financial Savings

In an effort to ensure objective, credible analysis of the data, the Stakeholder Group engaged outside, independent consultants with expertise in business planning for health information exchanges. The stakeholder group has relied on independent estimates of future savings.

Stakeholders were presented with information that estimates that the services being provided by HealthInfoNet during the demonstration phase will generate broad annual healthcare savings. The savings estimates are based on the reduction of unnecessary or duplicative laboratory testing and avoided imaging studies (referred to as “avoided services”), as well as improved productivity among providers as more information is exchanged electronically.

- Demonstration phase savings are estimated to range from \$10.6 - \$12.5 million annually in the first phase of implementation during 2009, up to \$20 million annually by 2011, as HealthInfoNet becomes fully operational.
- The eventual rollout of these specific services statewide to all providers may generate between \$40 million and \$52 million in annual health care savings.

If realized as planned, the HealthInfoNet demonstration phase savings are estimated to accrue across all health care stakeholders.

- Participating providers are estimated to realize between 37% and 44% of the total savings as a result of improved productivity and avoided services provided to the uninsured. These annual savings range from \$4.6 million in HealthInfoNet’s demonstration phase, to up to \$7.6 million by the time the health information exchange is fully operational.
- Maine commercial payers may realize substantial savings (30% to 33%) as a result of avoided services during the demonstration phase. The value of annual savings resulting from avoided services range from \$3.5 million in the demonstration phase to, up to \$6.2 million by the time HIN is fully operational.

- MaineCare (Maine’s Medicaid program) may expect to see a savings of \$900,000 due to avoided services in the demonstration. This figure may double as the HIN system is fully implemented.
- Medicare may see significant savings due to avoided services, representing 15% to 22% of the total savings or about \$1.6 million during the demonstration phase, ranging up to and \$4.4 million as HIN grows.
- Although not assessed in this analysis, some savings will also accrue to patients for reduced co-pays and deductibles for unnecessary services as well as downstream benefits of reduced costs for plan coverage.

The valuation analysis focused exclusively on a narrow range of clinical content that will be included in the initial offering delivered to participating provider organizations during the demonstration phase. As such, the analysis understates the potential for return on investment both during the demonstration phase and beyond because it does not entertain the impact that including prescription medication history information in the content offered to providers will have during the demonstration phase. There is limited empirical research currently developed that examines the financial and quality impact of providing comprehensive prescription medication history profiles at the time of a provider is treating a patient. Projects in Florida and Michigan involving the electronic presentation of prescription medication history profiles for Medicaid patients have demonstrated positive early findings in terms of reducing the average number of active prescriptions per member. Maine residents currently spend more than \$1 billion dollars annually on prescription medications.

See Appendix D – Health Information Exchange Return on Investment Analysis

Minority Opinions

- Some stakeholders expressed concern about the lack of adequate time to review and validate the savings analyses presented to the stakeholder group or the methodology underlying those analyses. Some stakeholders also expressed concern about whether participating providers would actually realize annual savings of \$4.6 million in HealthInfoNet’s demonstration phase and up to \$7.6 million by the time the health information exchange is fully operational. There was particular skepticism regarding the ability of small, rural health centers to achieve large savings.
- Given the scope of the study, some stakeholders heard or saw little, if any, research results regarding direct savings to individual consumers.
- Some stakeholders also expressed the concern that any savings generated through HealthInfoNet would be included in future determinations of savings generated by the Dirigo Health program and would be included in the “savings offset payment” used to

fund that program. Some stakeholders expressed the concern that, as a result, no savings would actually accrue to payors or health care consumers, but would instead be used to provide funding for Dirigo Health.

Taxes and Fees

What the Report Says

7. No New Taxes or Fees

We do not support instituting any new taxes or fees to support the Health Information Exchange.

Minority Opinions

- While some stakeholders indicated that they understand the political impracticality of a new tax or fee at this time, they expressed the hope the Legislature is open to potential new taxes or fees to support HealthInfoNet in the future.
- Given the broad public benefit that HealthInfoNet is estimated to achieve, HealthInfoNet deserves public financing.
- The legislative resolve called for recommendations about stable and broad-based funding sources for health information technology and HealthInfoNet. Some stakeholders felt that funding of health information technology via fees on healthcare services, healthcare claims, or pharmacy services would tax the primary beneficiaries of health information technology and would be both broad based and more stable than a General Fund source.

General Appropriation

What the Report Says

B. General Appropriation - \$2 million Annually in the FY2010 State Budget

We recommend the appropriation of general funds to HealthInfoNet in the amount of \$2 million annually, to be matched by \$4 million in annual funds from other sources. The Legislature should consider appropriations of two types, as follows.

New Appropriation: While we are sensitive to the current political and economic climate, this approach spreads the cost burden most widely and evenly among Maine people. This approach also provides the Legislature the opportunity to evaluate the Health Information Exchange relative to other public needs. Further, a new appropriation in any amount will establish a framework for future appropriations in an improved political and economic climate.

Redirect Funds: Because HealthInfoNet is expected to play a key role in supporting specific high-priority, quality-related issues (such as improved management of chronic illnesses, the future sustainability of primary care services, greater focus on disease prevention, further efforts to better coordinate emergency preparedness and e-prescribing), the Legislature should re-direct some portion of funds now spent in these areas to HealthInfoNet. In particular, sources of funds should be from agencies/programs expected to benefit the most from HealthInfoNet. The following is a listing of some of the agencies/programs that may meet this criteria (note: this is not a comprehensive list; others should be considered as legislation takes shape): the Maine Emergency Management Agency, Maine CDC, MaineCare, the Department of Corrections, the Fund for Healthy Maine, Maine Emergency Medical Services and the Maine State Employee Health Benefits Program.

Minority Opinions

- Given the extremely challenging economic climate in which some Maine people are in dire need of basic services such as housing, food, heat, and healthcare, we do not think it appropriate to direct funds away from such services toward HealthInfoNet at this time. HealthInfoNet is a good policy at the wrong time.
- The majority considered that, since the value of health information technology and health information was societal, funding via the General Fund was the fairest method. However, this view fails to consider that such funding is likely the least stable funding source and stability is something that our charge calls for.