How the Health IT Revolution is Saving Lives & Dollars

Senator Richard T. Moore, Massachusetts
President, National Conference of State Legislatures

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Massachusetts eHealth Institute (MeHI)

• Established within the Massachusetts Technology Collaborative through Chapter 305 of the Acts of 2008

• Created to promote cost containment, transparency, and efficiency in the delivery of quality health care through the deployment of Electronic Health Record (EHR) systems in all health care provider settings and to network those systems through a statewide interoperable Health Information Exchange (HIE)
Roadmap to the Future

By April 2010, the Institute had developed a Health Information Technology Strategic Plan that serves as a roadmap for the future with annual updates.

Strategic plan and Chapter 305 objectives are tightly aligned with CMS Medicaid Health IT incentives.

- Medicaid Health IT incentive funds provide a significant source of financing to promote the adoption and meaningful use goals of Chapter 305.

MeHI has entered into a multi-year contract to assist MassHealth with administering the Medicaid EHR Incentive Payment Program

MeHI will be providing Eligibility, Verification, Outreach, and Training for both Medicaid Eligible Providers and Hospitals from 2011-2021.

Federal funding for Massachusetts

- **Regional Extension Center** - $14 million for 4 years

- **Statewide Health Information Exchange (HIE)** - $10.6 million

- **Massachusetts Broadband Institute** –
  - Network infrastructure for Western MA - $80 million

- **HIE Challenge Grants**
  - Improving Post-Acute Care Transfers - $1.7 million
  - MA Dept. of Public Health Network - $1.7 million

- **Critical Access Hospitals Supplemental Award** - $198,000
Massachusetts Health Information Exchange

- **Principles of the Federal Privacy Network** - patient consent applied universally vs. patient control by provider/geography/provider groups, etc.

- **Public Health Reporting** – electronic reporting pilots have successfully transmitted data to an HL-7 gateway, but additional investment is required to scale the solution to small office providers.

- **Reporting for Quality and other initiatives** – facilitating the routing of appropriate data to appropriate reporting tools and supporting the possible linkage to registries in the future.

- **Bi-Directional Date Exchange** – ultimately, all HIE participants, including patients, must be able to contribute data, allowing others to retrieve data from the exchange (with consent implied).

Massachusetts Health Information Exchange

- **Exchange of Standardized Clinical Data Summaries** – in order to provide clinicians with actionable data at the point of care (integrated with provider EHR’s) the exchange must adopt and use, and support the standards needed to exchange summary data.

- **Financial Stability** – Given federal funds will not support the entire HIE infrastructure, the HIE must provide value stakeholders willing to support it financially.
Computerized Physician Order Entry

In 2008, the Massachusetts Technology Collaborative and the New England Healthcare Institute (NEHI) published research showing that 1 in 10 patients admitted to a Massachusetts community hospital suffered a preventable medication error.

The study found that Massachusetts hospitals could prevent 55,000 adverse drug events per year and save $170 million annually if they fully implemented CPOE. System costs would be paid back within 26 months, and they could reduce preventable adverse drug events by 80%.

The findings prompted the Legislature to enact legislation (Chapter 305 of the Acts of 2008) requiring all hospitals to implement CPOE by 2012 as a condition of licensure.

Tele-ICU – Saving Lives

The University of Massachusetts Medical Center in Worcester, MA has utilized a tele-ICU system, which allows intensive care specialists outside the hospital to see and hear patients, monitor vital signs, and access medical records in real-time. In addition to their own facilities, they also partner with two area community hospitals to oversee their combined 20 ICU beds.

A May 2011 study found that its use results in lower mortality rates, shorter hospital and ICU stays, and lower rates of preventable complications.

For instance, ICU mortality rate was 10.7% before the tele-ICU was introduced, compared to 8.6% afterward, and the mean length of an ICU stay was 6.4 days before, and 4.5 days after. Even more impressive, before the tele-ICU experiment, 13% of patients developed ventilator-associated pneumonia, but during the tele-ICU trial, only 1.6% experienced that preventable complication.
**Tele-ICU – Saving Dollars**

According to PricewaterhouseCoopers, UMass invested $7.1 million into the tele-ICU, but was able to recover all of that within one year. The tele-ICU produced a 30% length of stay reduction overall, resulting in lower costs and net financial improvement of $5,400/case.

In a similar review by PwC, community hospitals invested $400,000 each and they too recovered their costs within one year. By maintaining a higher volume (45% average) of patients of greater severity, they produced increased revenue and net financial improvement of $2,500/case.

Overall, while utilizing the tele-ICU, there were 24,426 clinically significant interventions. 483 of those interventions were initiated at the bedside, and 23,943 were initiated by the off-site team.

**Workforce Development**

- With the expansion of HIT will also come a need to expand the workforce associated with implementing, maintaining, and updating these programs.

- MeHI established a workgroup to identify issues surrounding workforce development, which including training needs, clinical experience, hiring and salary costs, and recruiting tools. MeHI estimates that full deployment of HIT could result in 2,000 – 2,500 new jobs in Massachusetts, in addition to the existing 6,600 existing jobs that could utilize additional training.
Our health care system is in the midst of a significant transformation, which is supported by Health IT

- Primary care as the cornerstone.
- Electronic health records is fast becoming the standard of care.
- Quick access to patient records.
- Legible and complete documentation.
- Safe and more reliable prescribing.
- Enhanced security and privacy.
- Enhanced clinical decision support.
- Ability to exchange information providing higher quality and safety for patients.

States have been moving very quickly on issues of Health Information Exchange and Health Information Technology

167 individual HIE Networks, and counting…
Issues to be resolved:

- Technology Quality Standards
- Ensuring Privacy
- Application to Public Health
- Linking Physical Health data with Mental Health & Substance Abuse
- Interstate Professional Licensure Issues
- Developing a Trained and Tech-Savvy Workforce
- Sustainable Funding for IT

Questions?

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