Call for Action
Enabling Healthcare Reform Using Information Technology

FREQUENTLY ASKED QUESTIONS ABOUT HEALTH IT

The Economy, Employment, Cost Savings

The US is currently in a recession. What is the business case for spending money to implement health IT?

According to the McKinsey & Company, the US **healthcare system consumes more than 15% of total expenditures on processing payments**. In addition, it is **estimated that providers spend $100 billion or more a year in managing claims and $150 billion is spent among public and private payors**. While much of the high costs are associated with such activities as contract management and revenue cycle processes, one of the most important factors is the high cost of transmitting paper-based claims and payment of claims among payors and providers.

McKinsey & Company finds that **approximately 60% of all claims payments are paper-based**, involving a paper claims that are sent between payors and providers manually submitting and reconciling claims and depositing checks. As a result, **paper-based claims cost approximately $8 per item**. Each year in the US, the volume of claim payments is 2.5 million. **As the majority of reimbursements are based on paper checks, this costs healthcare $15 - $20 billion a year in postage, processing, and accounting**. It is estimated that **increasing the rate of electronic payment of claims to 90% from the current 40% could save $6 billion or more** across the country.[i]

What impact will health IT have on the workforce?

The following information is from Dr. William Hersh, Oregon Health and Science University: Health IT has the **potential to create jobs**. **Research conducted by Oregon Health & Science University in 2008 showed that to achieve the full benefits of health IT, an additional 40,000 IT professionals will be required**. Although this seems like a large number, it will pay for itself with increased efficiency of the healthcare system.

Investment in health IT also has the potential to ameliorate some of the biggest job casualties of the current economic downturn. Investing in the retooling of IT professionals from other industries to work in health IT will also benefit educational programs that cater to such individuals.

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How did the Workgroup arrive at the recommended figure for non-governmental hospitals and physician practices -- $25 billion?

The figure is **developed from estimates of the current cost for all non-governmental ambulatory and acute care providers to adopt EMRs**. The cost estimates for private sector ambulatory care providers are as follows: Using data from the U.S. Department of Labor's Bureau of Labor Statistics' "Occupational Outlook Handbook, 2008-2009," we can determine that there are approximately **411,450 physicians who are either solo practitioners, partners in, or employed by, physician practices**. According to "Evidence on the Costs and Benefits of Health Information Technology," by the Congressional Budget Office (CBO), **12% physicians in ambulatory practice have an EMR in their practice**.

Between these two data points, we can postulate that the 88% of physicians in private practices without EMRs equates to a number of 362,076. In addition, in reports by the American Academy of Family Physicians Center for Health Information Technology entitled "Partners for Patients Electronic Health Record Market Survey" and "Medical Groups' Adoption of Electronic Health Records and Information Systems," by Gans et al, we are able to derive **a cost estimate between $30,000 and $33,000 per physician for a practice to adopt an EMR system**.

From the estimations of physicians in physician practices in the US, and the average cost of an EMR per physician, **we can estimate that the initial cost of for these 362,076 physicians to adopt an EMR is $11.94 billion**. In addition, **according to "Can Electronic Medical Record Systems Transform Health Care: Potential Health Benefits, Savings, and Cost," by Hillestad et al., published in the September/October 2005 edition of *Health Affairs*, the authors estimate that to achieve a 90% adoption of EMRs among physician practices would cost $17.2 billion over 15 years**.

Given the successes in EMR adoption to date, this number can be assumed to have lessened over the past three years. Using these data sources, **we can determine that the cost estimate for all physicians working in physician practices to adopt an EMR is between $11-15 billion**. The cost estimates for acute care providers are as follows: **HIMSS Analytics estimates that the low-end estimate for all civilian US hospitals to achieve a "Stage 4" functionality is $13.5 billion with an estimate of $19.6 billion on the high end**. As a result, we can **estimate that it would cost $13-20 billion for all non-federal US hospitals to achieve Stage 4 functionality**. From the ambulatory and acute care cost estimate, we can arrive at the estimate of a range of $24 - $35 billion that is needed for clinical practices and non-federal acute care providers to adopt EMRs. **For this recommendation, the minimum cost estimate per year is rounded to $5 billion, resulting in an estimated minimum level of funding at $25 billion**.

What is the estimated total cost savings from implementing health IT?

HIMSS' Nicholas E. Davies Award of Excellence documents both hard and soft return on investment for health IT acquisitions. This documentation is available in four healthcare settings: Organizational (hospitals & IDNs); Ambulatory; Community-Health Organizations; and, Public Health. The Award has been in existence for more than 10 years and has a rich library of resources publicly available.

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Two published studies – both from 2005 – focused on the *potential* savings from the widespread, appropriate use of health IT: RAND Corporate and the Center for Information Technology Leadership (CITL).

Finally, the Congressional Budget Office (CBO) published an analysis in 2008 that reviewed all available, published research regarding costs and savings of IT in healthcare.

In early December 2008, The Joint Commission issued a warning that the implementation of technology and related devices is not a guarantee for success of healthcare, and may actually jeopardize the quality and safety of patient care.

Health IT is not a panacea. However appropriately implemented – and used effectively – it can improve quality, decrease costs, and save lives. To improve the quality and safety of care through IT, healthcare entities must engage stakeholders in the acquisition and change management processes, and train their staffs to use the systems.

Is there any proof that health IT actually does improve quality, and reduce errors and costs?

Yes. Since 1994, the HIMSS Nicholas E. Davies Organizational Award of Excellence has recognized excellence in the implementation and derived value of health information technology. Its original and continuing mission is to promote the value of, and provide education about, full implementation of electronic health records (EHRs). The award launched with a focus on hospitals and health systems, and expanded to include physician practices, public health organizations, and most recently, community health organizations.

The Davies Award examines the actual use of HIT based on a set of rigorous criteria including pervasive use of the electronic medical record as the primary source of care information, practitioner order entry, clinical decision support, and documented organizational improvement in patient safety and quality outcomes.

Davies Award recipients must supply documented evidence on the return on investment (ROI) from their utilization of Health IT. Two types of measurements are consistently described; quantifiable returns that can be demonstrated in financial terms and measurable process improvements as well as ROI derived from reduction of medication error, point of care decision support, access to important patient information when and where it is needed and aggregated data analysis.

A very few examples of documented return on investment experienced by recent Davies Award recipients include the following. The Davies Award has been in existence for more than a decade – there are many additional examples available.

At Northshore University Health System in Evanston Illinois, errors and near-misses caused by transcription errors – which, prior to implementation – used to represent 42 percent of total errors, were eliminated.

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Allina Hospitals and Clinics in Minneapolis anticipate a $65 million in return on investment from their health IT, once it is fully rolled out to all facilities.

Thanks to appropriately implemented health IT, Wayne Obstetrics and Gynecology in Jessup Georgia increased the number of patients clinicians could see by 225 percent – while reducing the hours clinicians spent documenting patient encounters. More time with patients – less time with paperwork.

And, in the Cherokee Indian Hospital Authority, post-implementation the Nation was able to achieve tangible improvements in public health in many areas: increased use of screenings for tobacco use, domestic violence, and cervical and breast cancer; assessments alcohol use and dependence among women of child-bearing age, provision of pneumovax to citizens over the age of 65, higher percentages of citizens with an LDL in goal range, and assessment of hypertension resulting in reductions in the percentage of patients with uncontrolled hypertension.

ELECTRONIC MEDICAL RECORDS ADOPTION MODEL

What is the EMR Adoption Model?

HIMSS Analytics, the HIMSS research arm, surveys **every non-federal medical/surgical hospital in the US every year**, and gathers comprehensive data on the hospitals' use of healthcare IT. It has created a model for measuring the progress that American hospitals are making in the implementation and use of electronic medical records, and, in a word, the progress is "slow."

The EMR Adoption Model shows, as of September 30, 2008, only **4.3 percent of American non-federal hospitals are at Stage 4 and above**, meaning those that have gone beyond having a clinical data repository and nursing documentation implemented, and have computerized practitioner order entry and full clinical decision support on at least one in-patient unit, closed loop medication administration on at least one in-patient unit, physician documentation on at least one in-patient unit, or the ability to fully populate a Continuity of Care Document standard transaction to other stakeholders in a health information exchange and the ability to use data warehousing and data mining tools to analyze patient data to create and improve protocols.

We have a long way to go.

Please explain the stages of the EMR Adoption Model.

HIMSS Analytics' EMRAM identifies the levels of EMR capabilities of the 5,071 non-federal medical/surgical US hospitals. EMRAM levels range from Stage 0 – Stage 7.

Stage 0: Some clinical automation may be present, but all three of the major ancillary department systems for laboratory, pharmacy, and radiology are not implemented.

Stage 1: All three of the **major ancillary clinical systems** (pharmacy, laboratory, radiology) are **installed**.

Stage 2: Major ancillary clinical systems feed data to a clinical data repository (CDR) that provides physician and other clinician access for retrieving and reviewing results. The CDR

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contains a controlled medical vocabulary (CMV), and the clinical decision support/rules engine (CDSS) for rudimentary conflict checking. Information from document imaging systems may be linked to the CDR at this stage.

Stage 3: Clinical documentation (e.g., vital signs, flow sheets) is required; nursing notes, care plan charting, and/or the electronic medication administration record (eMAR) system are scored with extra points, and are implemented and integrated with the CDR for at least one service or one unit in the hospital. The first level of clinical decision support is implemented to conduct error checking with order entry (i.e., drug/drug, drug/food, drug/lab conflict checking normally found in the pharmacy). Some level of medical image access from picture archive and communication systems (PACS) is available for access by physicians via the organization's intranet or other secure networks outside of the confines of the radiology department.

Stage 4: Computerized practitioner order entry (CPOE) for use by any clinician is added to the nursing and CDR environment along with the second level of clinical decision support capabilities related to evidence-based medicine protocols. If one patient service area (not counting the Emergency Department) has implemented CPOE and completed the previous stages, then this stage has been achieved.

Stage 5: The **closed loop medication administration environment is fully implemented in at least one patient care service area**. The eMAR and bar coding or other auto identification technology, such as radio frequency identification (RFID), are implemented and integrated with CPOE and pharmacy to support the five rights of medication administration, thereby maximizing point of care patient safety processes.

Stage 6: Full physician documentation/charting (using structured templates) is implemented for at least one patient care service area. Level three of clinical decision support provides guidance for all clinician activities related to protocols and outcomes in the form of variance and compliance alerts. A full complement of radiology PACS systems provides medical images to physicians via an intranet and displaces all film-based images. If a hospital has cardiology PACS, extra points are given.

Stage 7: The hospital has a paperless EMR environment. Clinical information can be readily shared via continuity of care (CCD) electronic transactions with all entities within health information exchange networks (i.e., other hospitals, ambulatory clinics, sub-acute environments, employers, payors and patients). This stage allows the healthcare organization to support the true sharing and use of health and wellness information by consumers and providers alike. Also at this stage, healthcare organizations use data warehousing and mining technologies to capture and analyze care data, and improve care protocols via decision support.

What are the benefits of achieving Stage 4?

The benefits of Stage 4 are as follows:

- Improves patient safety by eliminating medication errors associated with handwriting errors.
- Improves patient safety by adding a higher level of clinical decision support at order creation.

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- Improves billing functions by ensuring all orders for patient services have been captured.
- Improves outcomes by eliminating order rework that may delay medication and treatment administration.
- Improves formulary compliance for medication orders.

For more information, read HIMSS Analytics' EMR Adoption Description and Outcomes, which is available online at www.himss.org/2009CalltoAction

PRIVACY AND SECURITY

What does HIMSS recommend to address privacy and security issues?

Today, the current legal and regulatory landscape surrounding the use and disclosure of PHI poses many challenges to achieving the benefits of the use of electronic health data to achieve cost, quality and safety benefits.

In an effort to address many of the challenges pertaining to the privacy and security of PHI, the federal government has supported initiatives to examine state and federal laws and regulations that pertain to the privacy and security of personal health information. Examples of these initiatives include:

- The Health Information Security and Privacy Collaboration (HISPC),
- The State Alliance for e-Health, and
- The State-level HIE Consensus Project.

In addition, the Federal Government has facilitated privacy and security implementation challenges thorough programs like CCHIT and HITSP.

To fully achieve the widespread exchange of health information throughout the US that provides for the privacy and security of PHI, **it is that the policy makers not only continue to support these initiatives but also to ensure that legislative, regulatory and industry best practices solutions are all leveraged in the most effective way possible to address the complex challenges concerning the privacy and security of PHI.**

With regard to determining the need for legislative action on privacy, HIMSS' report recommends the following:

Conduct a Study and Develop a Roadmap for the Appropriate Uses of Personal Health Information:

- The US Congress should direct the Secretary of HHS to **complete a study within one year on the current legal and regulatory environment affecting the uses and disclosures of electronic personal health information**.
- This **study should include HIPAA, state privacy laws, and other applicable federal and state laws and regulations (e.g., financial, fair information practices, consumer protection, etc.)**. The study should **review the work of the Office of the National Coordinator for Health Information Technology (ONC), the Health Information Security and Privacy Collaboration (HISPC), HITSP, and relevant work from other organizations**.

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- The study should result in the timely **development of a pragmatic roadmap or framework** concerning the appropriate uses and disclosures of **personal health information** and any policy recommendations necessary to support the exchange of health information between public and private sectors.
- The study should be facilitated by the senior health IT leader within the Administration and carried out by a balanced representation of healthcare, patient and information technology stakeholders.

What are the challenges to HIPAA and privacy and security?

The **Health Insurance Portability and Accountability Act (HIPAA)** addresses security and privacy regulations pertaining to the **uses and disclosures of personal health information by Covered Entities (healthcare providers, health plans, or healthcare clearing houses**) for Treatment, Payment and Operations (commonly known as "TPO").

There are several well recognized concerns relating to the applicability of HIPAA regulations, which regulate organizations, to the current environment of data exchange.

State privacy laws and regulations often impose stricter regulations. Also, HIEs as entities are not covered by HIPAA. These may be among the reasons that the possibility of interstate electronic HIE thus far has been difficult to achieve. In addition, providers' lack of knowledge and awareness concerning the appropriate use and disclosure of PHI could result in a reluctance to use the health IT that would result in the overall improved efficiency of healthcare.

Additional challenges concerning the privacy and security of PHI arise as new entities engaged in HIE and the storage of and access personal health information that are not covered by HIPAA and also do not have contractual relationships with CEs but **offer a health IT solution direct to consumers**, **such as personal health records (PHRs)**. **Such offerings facilitate a migration of PHI outside of the traditional healthcare system and such a scenario is considered by some to pose great risk to consumers in ensuring the privacy and security of their health information. Yet the issue of how to govern/regulate such entities is still to be considered.**

HEALTH IT CERTIFICATION AND STANDARDS

What is HITSP?

Since its inception in 2005, through an ONC contract with the American National Standards Institute (ANSI), **the Healthcare Information Technology Standards Panel (HITSP)** has been leading the national effort to **harmonize interoperability standards to facilitate the exchange of patient data**.

The **mission of HITSP is to serve as a cooperative partnership between the public and private sectors to achieve a widely accepted and useful set of standards** to enable the widespread interoperability among healthcare software applications, as they will interact in a local, regional and nationwide HIE.

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HITSP's harmonization work has **addressed such areas as EHRs, biosurveillance, consumer empowerment, medication management, quality and population health**.

HITSP is **comprised of 558 member organizations, including Standards Development Organizations (SDOs), non-SDOs, government bodies, consumer groups, and is administered by a Board of Directors**.

Once **HITSP Interoperability Specifications** are recognized by the HHS Secretary, they are **used to inform the Certification Commission for Healthcare Information Technology (CCHIT) product certification criteria**. Additionally, **Federal Agencies must adopt them according to an August 22, 2006 Executive Order**. Specifically, each agency that implements, acquires, or upgrades health information technology systems used for the direct exchange of health information between agencies and with non-federal entities shall utilize, where available, health information technology systems and products that meet recognized interoperability standards (e.g., HITSP Interoperability Specifications).

HITSP is also playing an **integral role in the development of a Nationwide Healthcare Information Network (NHIN)** for the US by **providing components of health information exchange for the NHIN specification process**. As these building blocks for health information exchange get implemented in healthcare IT systems, clinicians and consumers will be able to access health information wherever and whenever needed, thus improving the efficiency and quality of care and enhancing public health and reporting.

What is CCHIT?

The **Certification Commission for Healthcare Information Technology (CCHIT)** is a recognized certification body for electronic health records and their networks. CCHIT is a private, nonprofit initiative who mission is to accelerate the adoption of robust, interoperable healthcare information technology throughout the US by creating an efficient, credible, sustainable mechanism for the certification of healthcare products.

To date, **CCHIT has certified more than 150 EHR products, representing 50% of all vendors in the market and 75% of the overall EHR market to date**.[ii] The work of CCHIT has **helped streamline the EHR market by serving as a trusted source to guide providers** when adopting health IT products. CCHIT has also aided in **fostering interoperability among products through implementation of its standards-based criteria**.

STATE HEALTH IT INITIATIVES

What role will states play in the implementation of health IT?

In many ways, states are leading the way. States have taken significant steps during the past two years to address policy issues associated with health IT. **From January 2007 through August 2008, more than 370 bills with provisions relating to health IT were introduced in state legislatures**, according to the National Conference of State Legislatures (NCSL).

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A report released last week by the NCSL states **132 bills with health IT content were enacted in 44 states and the District of Columbia**. This represents a more than threefold increase compared to 2005 and 2006, during which 36 bills were enacted.

What states are leading the way?

Indiana
SB 511, 2007 (Enacted 5/2/2007)
Establishes the Indiana Health Informatics Corporation to ensure and improve the health of the citizens of Indiana by encouraging, facilitating and assisting in the development and operation of a statewide system for the electronic exchange of health care information. The **bill defines the corporation's membership and establishes the Indiana health informatics fund**.

The corporation shall, among other things **define a vision for statewide health information exchange system** to electronically exchange health care information between entities in a health care system; prepare a plan to create a statewide health information system; **encourage and facilitate the development and operation of a statewide health information exchange system**; review efforts in other states concerning health information exchange; and encourage and endorse interoperability standards. **Call for compliance with HIPAA**.

Minnesota
HB 1078, 2007 (Enacted 5/25/2007)
Requires all hospitals and healthcare providers to have interoperable electronic health systems by Jan. 1, 2015. Updates the state's health privacy laws to allow for record locator services and for providers to electronically represent patient consent. Patients can choose not to participate in the record locater system in total or can have specific provider contacts excluded from the system. **Requires a health information exchange that operates a record locater system to establish an audit log of providers who access information in the system**.

Establishes **penalties for providers and health information exchanges that release a patient's record without proper authorization**. Creates a revolving account and loan program for the purchase of interoperable electronic health record systems. Requires all group purchases and health care providers to electronically exchange, in standard form, the following: eligibility, claims, payment and remittance advice.

Texas
HB 1066, 2007 (Enacted 6/15/2007)
Establishes the Texas Health Services Authority as a public-private collaborative to promote development of a seamless electronic health information infrastructure. The corporation shall promote, implement and facilitate the voluntary and secure electronic exchange of health information and create incentives. Unless continued, the corporation will be abolished on Sept. 1, 2011. The corporation will be governed by a board of 11 directors appointed by the governor. The corporation may: establish a statewide health information exchange; seek funding; support regional health information organizations initiatives; and identify standards. Also lists acts in which the corporation may NOT engage, including comparing or rating physicians and providing protected de-identified data for research.

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[i] "Overhauling the US Health Care Payment System". McKinsey & Company. Available at: http://www.mckinseyquarterly.com/Overhauling_the_US_health_care_payment_system_2012
[ii] "A Tipping Point for Healthcare IT, Says HHS". ChannelWeb. Available at: http://www.crn.com/healthcare/212100341

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