

Improving Health and Healthcare with Technology

Stimulus funding will speed adoption of new digital technologies for more proactive, patient-focused care and improvements in healthcare quality, cost, and accessibility.



Achieving Better Outcomes with Technology

Containing costs while improving health and delivery of services is critical to patients, administrators, and healthcare providers at every level. Healthcare costs consume more than one of every six dollars we earn.¹ Healthcare costs will continue to increase unless we find better methods for reducing administrative costs and delivering care. By 2015, it's estimated that healthcare costs will reach USD 4 trillion per year and account for nearly 20 percent of the U.S. economy.²

In addition to unsustainably high costs, the healthcare system faces challenges that include an aging population, epidemics in chronic conditions like diabetes, inferior patient outcomes in comparison to many countries, limited access due to lack of insurance, and inefficiencies throughout the system.

Paradoxically, the U.S. healthcare industry, one of the world's most technologically advanced in medical equipment, has been slow to adopt IT solutions that could improve both overall

efficiency and quality of patient care. About 25 percent of all healthcare costs are spent on preparing, submitting, calculating, paying, and collecting medical bills.³ One medical transaction can cost USD 25, while one banking transaction costs less than a penny.⁴

AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) HEALTHCARE FUNDING PROGRAMS

USD 48.8 Billion

Seeks to help physicians purchase and implement Medicare and Medicaid health IT systems.

USD 1.2 billion

Supports the deployment of broadband infrastructure in rural areas.

Up to USD 44,000 or USD 64,000

Incentive payments over a five-year period to physicians who demonstrate meaningful use of electronic health records (EHRs). Starts in 2011.

For more information, see:
<http://healthit.hhs.gov>



INTEL HEALTH GUIDE

A remote patient monitoring (RPM) solution combines an in-home patient device and the Intel Health Guide PHS6000 with the Intel® Health Care Management Suite—an online interface that allows clinicians to monitor patients and remotely manage care. See: www.intel.com/healthcare/ps/healthguide/index.htm

Effective reform requires a new healthcare IT infrastructure that enables efficiency, collaboration, and improved care. It requires standards-based interoperable systems designed to provide timely, accurate information delivery and electronic record keeping across the continuum of care. It requires IT systems that improve quality of patient care by enabling improved healthcare delivery, workflow, patient safety, clinical decision making, and cost performance.

Intel innovation will play a major role in enabling IT systems for improving the future of healthcare. Through our leadership and unique market position, Intel offers the foundational IT architecture, a standards-based approach, and corporate leadership to transform healthcare to an affordable model focused on efficient collaboration across all points of the system with more effective patient care and improved outcomes.

Healthcare and Stimulus Funding

Enacted in February 2009, the American Recovery and Reinvestment Act (ARRA) provides a unique opportunity to apply IT technology more effectively to improve healthcare systems. ARRA specifically allocates USD 19 billion in Medicare and Medicaid incentives over five years to help physicians purchase and implement health IT systems. A key element in the program is the widespread adoption and use of uniform electronic standards that will enable various health IT systems to communicate with each other. ARRA required the Department of Health and Human Services (HHS) to develop such standards by December 31, 2009. Beginning in 2011, Medicare physicians who implement

and report meaningful use of electronic health records (EHRs) will be eligible for an initial incentive payment of up to USD 18,000.

Incentives under the Medicaid program are available for physicians, hospitals, federally qualified health centers, rural health clinics, and other providers. Physicians cannot take advantage of the incentive payment programs under both Medicare and Medicaid programs; they must choose one. Eligible pediatricians (non-hospital based), with at least 20 percent Medicaid patient volume, could receive up to USD 44,000, and other physicians (non-hospital based), with at least 30 percent Medicaid patient volume, could receive up to USD 64,000 over a five-year period.⁵

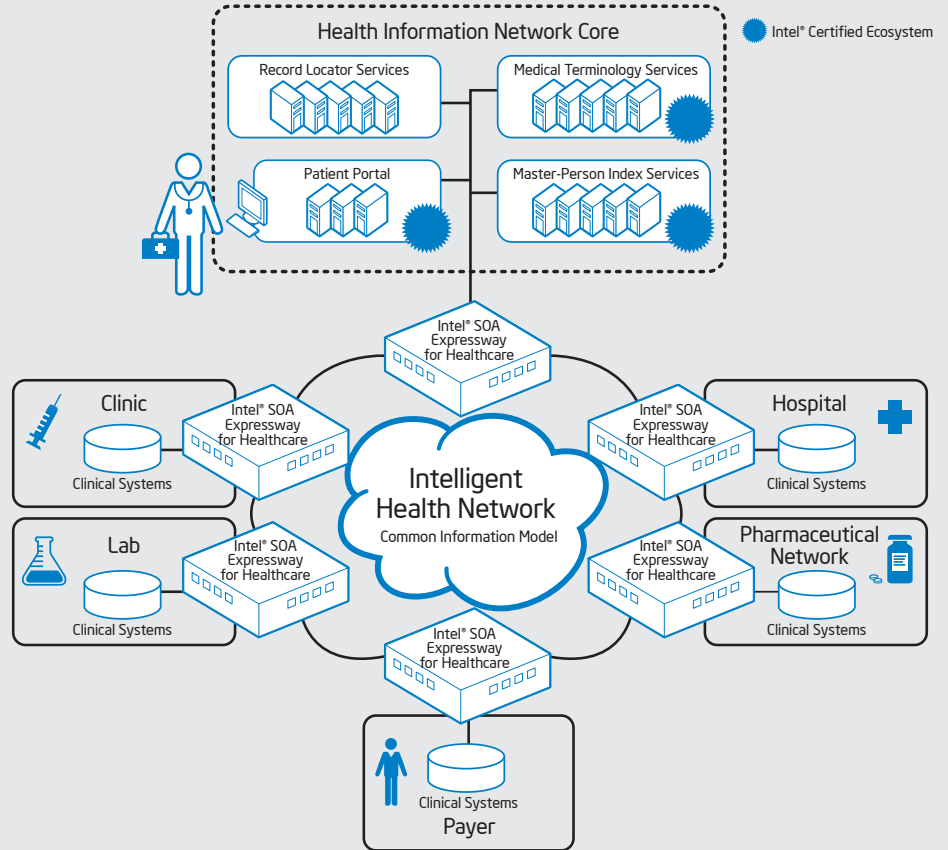
According to *Radiology Business Journal*, the Medicare and Medicaid health IT incentives could add up significantly for hospitals. Using a tool on the Healthcare Information and Management Systems Society (HIMSS) Web site, one hospital CIO calculated potential awards over a four-year period. He found that a 75-bed hospital could get up to USD 3.5 million, a 250-bed hospital would have the potential to earn almost USD 6 million, and a 750-bed hospital could qualify for nearly USD 12 million.⁶

Stimulus funding presents a tremendous opportunity to transform healthcare and ignite innovation. The window of opportunity, however, is brief: five years. Consequently, providers should move fast to take advantage of this once-in-a-lifetime funding. Remember, too, that this is not just a matter of installing new technology. Accountability is key, and the task will require a great deal of process re-engineering. Providers will be responsible for demonstrating outcomes that meet ARRA

BUILDING THE INTELLIGENT HEALTH NETWORK

A major reason for the slow adoption of patient information sharing is the high cost of proprietary data and integration services. To address this, Intel worked with hundreds of healthcare leaders around the world on ways to significantly improve and streamline information flow, while enhancing the quality, cost, and efficiency of patient care. The result is the Intel® Service-Oriented Architecture Expressway for Healthcare (Intel® SOAE-H).

This supplier-neutral platform provides a high-performance solution for translating, processing, and connecting multiple data formats across a healthcare environment. It can be used to construct large multi-site health networks using its unique healthcare environment developer kit (HDK), or it can be a base platform to augment healthcare supplier product offerings. In either case, it helps accelerate computable healthcare information across disparate health environments such as hospitals, integrated delivery networks, clinics, payer networks, labs, and pharmaceutical networks.



objectives. A good first step is to contact your nearest Health Information Technology Extension Program Regional Center for guidance, once they are in place sometime in 2010.

Taking a Collaborative Approach to Health

The healthcare industry now has the financial incentive to invest in an interoperable healthcare

infrastructure that enables electronic medical records, electronic prescriptions and information exchanges, as well as mobile point-of-care solutions that deliver patient histories, diagnostic information, and decision support in real time. What the healthcare industry needs now are partners.

As a global technology innovator, Intel is in a unique position to help. We have a long record of bringing technologies, systems, and solutions

to market across a breadth of industries. Our status as a foundational technology supplier results in a neutral approach that enables us to collaborate with manufacturers, software developers, and healthcare providers to create mutually beneficial standards and solutions.

For healthcare IT, Intel is collaborating with healthcare leaders to accelerate the shift to a more cost-efficient, proactive wellness model

LEADING THE WAY TO A STANDARDS-BASED INFORMATION EXCHANGE

Intel has established and held membership in numerous industry organizations that are developing standards critical to technological progress in healthcare. In alliances such as HL7, Continua, Dossia, Healthcare Information Technology Standards Panel (HITSP), AIG, Certification Commission for Health Information (CCHIT), and American Health Information Community (AHIC), Intel is working to bring together leaders across the healthcare industry to accelerate the adoption of open and interoperable systems for the benefit of all.

of care as well as healthcare IT systems to improve quality, cost, and accessibility. We're developing new technology platforms that allow healthcare facilities to combine technology with medical expertise to achieve major clinical and business goals. We're supplying the foundational technology components for many healthcare IT solutions, providing common building blocks that help ensure interoperability and efficiencies throughout the system.

Intel's broad technology portfolio includes a network of relationships with key technology suppliers. We work with more than 1,000 hardware, software, and service providers to create robust, interoperable solutions. We also support rigorous standards and policies, working with more than 250 standards and industry groups worldwide to pioneer technological advances that both establish and maintain the highest level of standards-based innovation. These relationships enable Intel to help healthcare organizations remove technology roadblocks, accelerate change, mitigate risks, and realize the full value of their technology investments.

Conclusion

Intel innovation enabled the shift from mainframe to open-platform computing. A similar shift needs to occur today in healthcare. As the healthcare industry adopts new IT innovations, it will see the proven cost benefits IT has shown for industries such as finance, banking, retail, and others, and it will also see improved care and patient outcomes.

For a complex initiative such as healthcare reform to succeed, the industry needs imagination, system-wide collaboration, and transformative changes in the market incentives that currently exist. ARRA provides the needed push to drive such collaboration and change. Intel is providing the foundational architecture for healthcare innovation with processors, platform definition, system architecture, and reference designs, which will enable the industry to realize lower costs and a higher quality of care for patients.

For more information, visit <http://ipip.intel.com/go> and complete the Contact Us form, or e-mail us directly at admin@ipip.intel.com.

For more about the Intel's role in healthcare IT solutions, visit www.intel.com/healthcare.

¹"The Cost Conundrum." The New Yorker, June 1, 2009.

²"Trends: U.S. Health Care Expenditures Projections for 2004-2014" Health Affairs; February 23, 2005.

³"What Kerry Health-care Plan Means to You." Philadelphia Daily News; September 21, 2004.

⁴Ibid.

⁵For a more complete description of how this program will work, see: www.allscripts.com/resources/docs/stimulus/Stimulus%20101.pdf.

⁶"ARRA Opportunities and Risks." Radiology Business Journal; May 2009.

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