

# Exchange

CARLSON  
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## A path to harnessing health information in real time

### Background

Health information technology (IT) plays an essential role in the health care industry. It can alert a physician to a patient's medical history, provide up-to-the-minute information that may save someone's life, and present new opportunities for improving medical care financing. These significant components illustrate how advances in health care IT are important to a wide audience of medical industry organizations. To create an effective infrastructure, the industry needs to break down the "silo mentality" and work together to create an interoperable system.

As we look to the future of health care IT, we need to go back several decades and study the financial services (credit card) industry. In order to prevent billions of dollars in credit card fraud, this industry decided to cooperate and engage in data exchange for the collective purpose of taking a proactive rather than reactive stance on fraud. Now this industry provides us the best example of how to create a successful interoperable system. Health care should build on their experience to create its own robust health IT program. The innovative program can employ new technologies to prevent fraud, create opportunities for comparative effectiveness research, and lead to less costly and more productive medical care.

Expanding on the financial services system's core asset of a transaction-based, fee-for-service model, could potentially transform the U.S. health care delivery system. For example, providers using the financial services transaction-based model could add patient clinical health-outcomes data and create comprehensive electronic medical records. Enabling the patient to add information would provide more statistics on health care outcomes and expenditure, creating the data needed for pay-for-performance as well as value-based insurance design.

### Looking Back to Move Forward

Financial service firms used to employ a "pay and chase," rules-based, judgmental method of discovering fraud schemes. Organizations saw only the data from their own portfolio of customers and did not have "real-time transaction" information available to them, thus making

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them unable to stop fraud effectively or efficiently. The financial industry realized it needed a more advanced system with new fraud prevention strategies. To move forward required employing new technology that crossed data silos with highly controlled and proprietary data systems. After the first credit card issuer piloted the system and saw tremendous money-saving results, others followed. As a result, the industry realized it could now identify fraudulent transactions that previously went undetected. Companies had the technology to implement real-time prevention processes, moving them from a fraud detection approach to a more proactive prevention strategy.

Health care fraud is enormous and growing continuously. The current approach for detection of health care fraud is much like that of the financial services industry in the 1980s. The Integrated Health Card (IHC) has the potential to engage the consumer in real-time health IT. IHC infrastructure is built on one of the most common forms of technology available today—the magnetic strip bank card. By building upon this technology, IHCs could be the solution to the problem of combining the electronic health record with personal health information.

To be effective, the IHC has to provide value to patients and providers. For patients it will promptly administer benefits, facilitate health transactions and payments, and thus simplify their process. For providers, the IHC's benefits include prompt payment of claims, access to patient pharmacy history, and patient laboratory results. Another potential benefit of IHC is that it may persuade physicians to input additional data of clinical value to the electronic claims-

### From the Director



*Exchange*, a publication from the Medical Industry Leadership Institute, features dialogue on medical industry research and application. The content is a summary of research from both academia and the medical industry, followed by commentary on the importance of the research and its application. Topics highlighted in *Exchange* will span all sectors of the medical industry and include commentary from leaders in the field as well as researchers from the University of Minnesota and other academic institutions.

This issue highlights my article from the 2010 American Enterprise Institute project, "Beyond Repeal and Replace: Ideas for Real Health Reform." My paper, "Harnessing Health Information in Real Time: Back to the Future for a More Practical and Effective Infrastructure," shows how utilizing health information in real time can deliver long overdue dividends in medical fraud control, insurance coverage administration and underwriting, and improved health care quality.

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payment system. Accelerating payment for many routine physician services could be a significant financial incentive for physician adoption of the technology. Organizations could make prompt payment to physicians dependent upon their agreement to fill in non-required, clinically significant data. By creating a more complete record, IHC technology can combine both health care and financial data to support more informed health care consumption.

If the transaction-based system contained clinically relevant and health-outcomes data it could become an electronic medical record. This record would be completed with date and time stamp information which is critical to patient diagnosis and treatment. If the system also allowed patients to add information, (for example notes about a lab test, prescription order, or physician visit) the result would be a very powerful tool.

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### Commentary

by John S. Pensborn, Senior Vice President, UnitedHealth Group



With the current growth in health spending relative to gross domestic product, coupled with the demographics of our society, health care has become an issue in our global competitiveness. In the end, health reform or health modernization will be about actions, not debates. Stephen Parente raises key issues that inform the “how” in a world

where many are still stuck on “if.” The attention must move to “how” because the system’s overall performance needs to advance on all dimensions, and at a broader level than specified within the reform law.

To do so requires the system to become much more connected, so that critical information currently locked in patient record systems is shared amongst medical providers in disparate organizations who are making care decisions;

to become more informed, so that analytics and decision-support tools that can guide effective decision-making are available at the point of care; and, to be aligned, bringing the incentives of treating physicians, facilities, payers, and employers together around effective, affordable care and happy, healthy patients.

Parente’s approach to leveraging existing structures to create an inexpensive banking-like utility system that transports key medical management data is provocative. Other approaches, such as the use of health information exchanges that transport a richer (and more complicated) clinical data set in a secure fashion are rapidly expanding today, in part due to government advocacy and sponsorship. It will be interesting to monitor how the market solves this connectivity question. Of this one can be sure— without connectivity, the “informed” and “aligned” pieces of the modernization process will never succeed.

#### *Harnessing health information, continued*

#### Strategies for Implementation

My study shows that creating a market-based system which aligns incentives with expanded IT functionality for industry and consumers should become the new goal for health IT. I have outlined a four step plan:

1. Create at least three data repositories for electronic health-claims data using all federal and Medicaid data to start. Make it part of health care fraud prevention.
2. Apply existing predictive-modeling technologies for risk assessment in health care to the data stored in the repositories to get a FICO score for all, in as close to real-time as possible by also adding real-time retail pharmacy detail.

3. Set a goal to pay medical providers at the point of care for all ambulatory services and Medicare-allowed reimbursement less than \$3,000 and no more than three days later for all other services. Doing so will turn claims data into electronic medical records within a couple of years.
4. Take the American Recovery and Reinvestment Act (ARRA) funds and repatriate them to pay for high-risk pools as appropriate to expand coverage for those most in need, as indicated above.

With motivation, all of the above could be accomplished in one year because it expands on existing best practices that are already being paid for, have the potential

to be self-financing, or possibly generate cost savings. This solution depends upon widespread acceptance and knowledgeable use of the information by consumers, providers, and financial intermediaries. The idea outlined in my study is based on proven, unsubsidized success in the financial services industry. It could be implemented as part of the routine cost of doing business in the health care industry. My proposed plan will create a health IT platform that will offer transparency in outcomes and performance, as well as provide information for patients, providers, and insurers. It has the potential to change completely the health care IT landscape in the U.S. ■