10 IT Innovators

Key players use teamwork and creativity to make their visions into accomplishments.

written by Corrine Charais, Charlene Marietti, Stacy May, Lisa Schnirring and Lisa Stammer

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This issue of Healthcare Informatics features something new--our recognition of individuals in provider and payer organizations who have exemplified special leadership, business, and creative acumen. These 10 innovators have been singled out not only for their healthcare IT projects but also for their strategic thinking and communication, management and teamwork skills.

Earlier this year, we invited 60 representatives of the healthcare IT community nationwide to nominate someone whose creative idea, method or approach they consider worthy of acknowledgment. Nominators included members of the Healthcare Informatics editorial board, HIMSS chapter presidents and chairs of national professional organizations.

The culmination of the difficult selection process is the group of dedicated professionals profiled here. They represent a cross-section of the industry, of the IT initiatives being conceived and implemented in healthcare today, and of the best that human potential has to offer.

--The editors

Donald Berwick, M.D.
President and CEO, Institute for Healthcare Improvement (IHI), Boston

Frustration with the status quo in healthcare led Donald Berwick to co-create IHI in 1991. But bringing about change is a challenge. "We're not going to get the healthcare we need by stressing the current system," Berwick says. "We have to invent new ways to give care, and it's very hard."

IHI's goal--to improve the quality and value of healthcare--is moving closer to reality with recent IT advances. In particular, Berwick is putting technology to use in three key areas: within the IHI offices, in the projects the organization sponsors, and as a means for worldwide communication.

One of the projects Berwick helped create for IHI is the Idealized Office, which aids in redesign of clinical offices to be more efficient. Some of the IT underpinnings of the project include email communication with patients, computer-based patient monitoring and clinical data repositories. In another project, Berwick and his staff are collaborating with the British Medical Journal on a new Web site. Billed as a way to help
facilitate global healthcare improvement collaborations, QualityHealthCare.org will be launched in December.

Paul D. Clayton, Ph.D.
Chief Medical Informatics Officer, Intermountain Health Care (IHC), Salt Lake City

Paul Clayton started at IHC in 1972. After a move to New York's Columbia University from 1987 to 1998, he returned with definite aspirations: "to change the way medicine is practiced and to improve the quality and reduce the cost of medical care."

To achieve these goals, Clayton and a team of 30 are working with IDX Systems Corp., Burlington, Vt., to develop a Patient Care Management System (PCMS), scheduled to go live January 2004. Part of the PCMS is a knowledge base--guidelines to best practices for patient care. Clayton describes the PCMS as a CD player and the knowledge base as the CD. Physicians input the problem, and the system outputs the best practices to use in the patient's treatment.

Clayton says that the biggest challenge is "building a knowledge base that tells you what to do for every problem under the sun and have that knowledge base be accepted by practitioners."

And the No. 1 factor enabling success, he says, has been support from the IHC staff. "Their highest goal is good, quality care, and they realize you can't truly do [that] without having information system support."

Michael R. Cohen, R.Ph., D.Sc.
President, Institute for Safe Medication Practices (ISMP), Huntingdon Valley, Pa.

Michael Cohen was working as a pharmacist in the mid-1980s when he first saw the potential of computerized prescribing and, using an Apple IIe, developed a system for computerizing medication reports, billing and labeling in long-term care pharmacies. Now at the ISMP, a nonprofit organization dedicated to the safe use of medications, Cohen labels himself as the "contacts and dreaming-up-new-ideas man."

Online prescribing is still one way to reduce errors. But now Cohen and his colleagues at ISMP back electronic prescribing software standards, plus medication error reporting, site visits and newsletters. A next phase will include educating consumers on preventing medication errors. But convincing individuals and organizations to take action before errors occur is a big roadblock. "That's very frustrating, because we know how to prevent them," he says. "And we see conditions that we know have led to serious consequences."

When a serious error occurs, Cohen's staff (which includes his wife, a nurse) takes an intensely personal approach with the reporting medical group. "They're on the phone with them for hours," he says of his staff. "They care so much, and it's a wonderful feeling to see that our work is having an effect."

Bruce Goodman
Senior Vice President and CIO, Humana Inc., Louisville, Ky.

With the help of the Internet and a comprehensive data warehouse, Bruce Goodman has helped make Humana a cutting-edge health benefits company for the approximately 6.4 million medical members in 18 U.S. states and Puerto Rico.

Humana continues to offer traditional health plans, but now it also provides choices to consumers through SmartSuite. The office suite, now being test marketed in Memphis, Tenn., allows employees to custom design their health coverage on the basis of their individual needs and desires.
Goodman has also set up other systems that encourage user self-service, such as secure emailing for queries to benefits managers and debit cards for use with online healthcare accounts.

After reporting a major decline in earnings in 1999, Humana began looking for ways to repair and rejuvenate the injured company. Goodman was one of those called on to come up with a remedy. The approach turned out to be an e-business solution that completely changed the way Humana provides health insurance.

The overriding principal, Goodman says, was to "partner before buy and buy before build, because if we tried to build this all from scratch, we'd still be at it."

Gail L. Graham, R.H.I.A.
Director of Information Assurance, Department of Veterans Affairs, Washington, D.C.

Health information managers at the Department of Veterans Affairs have a seat at the table when new advances are evolving, says Gail L. Graham. She developed satellite-delivered coding education for the entire VA system and has helped implement one of the industry's most sophisticated electronic medical record systems. That spirit has kept the VA ahead of the technology curve despite its being the nation's largest centrally directed healthcare system.

Recently, the VA connected Department of Defense information on veterans being treated at VA facilities. "There are so many possibilities for sharing with other federal agencies—this is an exciting time," Graham says. Finding the best information to guide development of new projects can be a challenge, but Graham says working in Washington, D.C., is like being at an information "dessert tray" because so many national organizations work or meet there.

Graham says she'd someday like to be a medical center director. "It would be very satisfying to see the delivery of healthcare improvements for veterans firsthand," she says. Her parents' influence may have something to do with her success and vision. "They taught me that there were no limits to what you could achieve. That's a good fit for informatics."

John L. Haughom, M.D.
Senior Vice President, Healthcare Improvement Division, PeaceHealth, Bellevue, Wash.

When John Haughom came to the PeaceHealth system in 1993, there was little automation. His assignment was to lead an IT initiative, so he set about helping PeaceHealth's five hospitals in Washington, Oregon and Alaska implement a fully integrated electronic medical record system, an advanced data warehouse, a practice management system and a physician order entry (POE) system.

Now nearly all 1,200 PeaceHealth physicians use information systems, and Haughom spends most of his time promoting and encouraging the cultural change. "The IT infrastructure we put in place is only there to improve the quality of care and to improve operational efficiency," he says. Last November, he headed a strategic planning meeting to identify further operational, clinical, and informational needs and the technology required to meet them. As a result of feedback from the 75 PeaceHealth attendees, future plans include more POE and decision support.

"I am enthralled with the idea of really using advanced information technology to improve the delivery of care across the continuum in a really comprehensive way," says Haughom. In April, PeaceHealth received a two-year $1.9 million grant from the Robert Wood Foundation to do just that.
John Loonsk, M.D.
Associate Director for Informatics, Centers for Disease Control and Prevention (CDC), Atlanta

John Loonsk is working on what he says could be the biggest accomplishment of his career. Since 1999, he has played a major role in developing standard specifications and a standardized architecture for the National Electronic Disease Surveillance System (NEDSS), a network being created by the CDC for real-time reporting of public health data by state and local health departments.

Loonsk has been instrumental in pushing the healthcare industry to adopt Health Level Seven (HL7); Logical Observation Identifiers, Names and Codes (LOINC); and Systemized Nomenclature of Medicine (SNOMED) standards. Today many state and large metropolitan areas are using funds provided by the CDC to redesign their systems to be NEDSS-compatible using these standards.

The project is important to the CDC's plans for bioterrorism response and a public health communication infrastructure. Loonsk believes both visions will be realized. "I think we're on the cusp of having a system that can serve the needs of bioterrorism preparedness and the needs of disease surveillance," he says. "Public health information communication is clearly the goal. We're not quite there yet, but we're very close."

Patti Mahaney
Executive Vice President/CFO, North Broward Hospital District (NBHD), Fort Lauderdale, Fla.

Patti Mahaney combined IT knowledge, diplomacy and out-of-the-box thinking to increase cash flow in a public health system where nearly one quarter of the patients were uninsured and uncompensated care had topped $300 million. Three years' work at the legislative level netted an increase in disproportionate share funding for Fort Lauderdale's NBHD, adding $42 million this year.

Recognition of similarities between mortgage loan and financial aid qualification processes prompted Mahaney's innovative approach to identifying, qualifying and enrolling eligible, but uninsured, patients. She helped adapt an automated decision system written for the mortgage industry by ADS Response Systems, Fort Lauderdale, to interface with credit reports and other financial information. Now operative in all 40 locations, the system enables NBHD employees to identify patients who are eligible for various financial aid programs and cull those who aren't.

"Though the percentage [of total funding] may be small," Mahaney says, "if you can convert real dollars--whether in actual collections, through a reduction in cost and certainly by improvements in efficiency--it goes right to your bottom line."

Jeff Skjerseth
Administrator, Oncology Care Center (OCC), Belleville, Ill.

In three years, Jeff Skjerseth moved the three-facility OCC from paper shuffling to paper free. Integrating clinical and financial systems into one database was especially tricky, because OCC has no dedicated IT staff. But today, everyone on staff uses e-charting, digital dictation, laptops, handhelds and other technologies to manage the several thousand chemotherapy and intensity modulated radiation therapy procedures done each month. Software also connects the x-ray machines, CT scanners and linear accelerators.

Skjerseth says he was just the catalyst. He gives the real credit for success to a combination of building and buying needed technology, plus support from consultants, upper management and on-staff IT cheerleaders. But Skjerseth's vision and leadership, including open communication and extensive training for everyone on staff, enabled the profound change in workflow.
Still, he wants to be sure technology enhances the one-on-one contact physicians have with patients. “We’ve tried really hard to present an environment where [the patients] don’t see more technology, they see more people,” he says. “I want to give [staff] less time shuffling around for documents and more time with patients.”

Justin Starren, M.D., Ph.D.
Assistant Professor of Medical Informatics and Radiology, College of Physicians and Surgeons, Columbia University, New York

Justin Starren started as a researcher in immunogenetics. But after writing some computer programs and getting involved in computer projects in the radiology department, one thing led to another and he ended up at Columbia, where he earned the first Ph.D. given by the medical informatics department. Now he’s part of Columbia’s team in charge of the Informatics for Diabetes Education and Telemedicine (IDEATel) project.

The technology architecture for the first-of-its-kind home telemedicine unit is Starren's design. Creating a unit for elderly, ill, diabetic patients--some of them illiterate and most of them technology-shy--was no small accomplishment. Nor was coordinating various vendor systems running over numerous connection modes to remote locations and multiple doctors. But 750 underserved residents of New York state are successfully using the "grandma-friendly" system to teleconference with nurse case managers, transmit glucose and blood pressure readings, and access the project's Web site for personalized instructions.

Starren's goal is to extend the successes of IDEATel into systems "that can be rolled out to any patient across the country," and not just for diabetes but for all of the chronic, or "eternal-vigilance," diseases.