Essential information, available immediately, in the right dose: MedAllies Direct delivers on the promise of quality patient care

IssueBrief

Physicians want to provide the best possible care to their patients. To accomplish that goal, they must have current, pertinent clinical information about the patient. When they lack such data, consequences include higher costs, less efficient care (e.g., duplicate testing) and errors that may result in serious adverse events—even death.

"As physicians, our main focus is on providing high-quality, efficient care for our patients. It is difficult at best, and sometimes dangerous when a patient comes to our office and we don't have the information we need to care for the patient," explained Holly Miller, MD, MBA, FHIMSS, chief medical officer, MedAllies, Inc.

Patients are particularly vulnerable when they are transitioning across care environments, such as being discharged from a hospital and returning to see their primary care provider, or being referred from their primary care provider to a specialist for a consultation. In these situations, it is essential that the physician have timely and accurate information if he or she is to provide appropriate care.

Many physicians are used to having crucial patient data at their fingertips—especially in areas such as the Hudson Valley of New York, where electronic medical record (EHR) use is higher than the national average. Growing numbers of physicians are using EHRs, due in part to the

Office of the National Coordinator for Health Information Technology Meaningful Use EHR incentive program.

But when the patient arrives from *outside* the practice, his or her information is frequently unavailable. That's because, despite increased EHR adoption, the patient information stays in the EHR. It doesn't follow the patient across the care transition. "Patient data that is relevant to the care being provided must flow electronically, in a patient-centric fashion, across systems to support the highest quality, most efficient and safest care," she said.

A solution has emerged, thanks to MedAllies, a health information service provider in the Hudson

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About the Direct Project

Launched in March, 2010 as a part of the federal government's Nationwide Health Information Network, the Direct Project is a public/private collaboration initiated by the federal Office of the National Coordinator for Health Information Technology. The goal: Make HIPAA-compliant, one-to-one, Internet-based communication easy for providers of any size.

Approximately 200 volunteer participants from more than 60 companies and organizations worked together to develop consensus standards that support secure exchange of basic clinical information and public health data. Pilot testing of information exchange based on Direct Project specifications is being carried out in 2011, with formal adoption and dissemination of those standards slated for 2012. MedAllies believes its approach and architecture can be expanded to a national scale within one year.

Valley, and the Direct Project, an effort spearheaded by the ONC at the U.S. Department of Health and Human Services. Earlier this year, MedAllies was selected to conduct one of only seven pilot projects launched nationwide, to demonstrate a prototype for the delivery of critical clinical information across care settings. Each pilot took the technology in its own direction. MedAllies focused on care coordination and health system transformation. It wanted to achieve the direct exchange of accurate, timely and relevant patient information that was pertinent, such as the patient problem list and current medications and allergies, in order to optimize patient care and safety as well as operational efficiency.

The goal: Ensure clinically relevant data could be exchanged seamlessly and completely consistent with existing EHR workflows.

"Direct gives clinicians the opportunity to have pertinent clinical information pushed to them in their own EHR system that will enable the highest quality and most efficient care. With Direct, they don't have to dig through information not relevant to the care they are providing or 'pull' that information to them. Clinicians don't have time to do this," Miller said. The information exchanged between clinicians under the MedAllies Direct pilot is a subset of all information available about the patient in the EHR; it is specific to the referral or discharge.

MedAllies Direct provides a tool to enhance patient care, and that supports the mission that physicians throughout the Hudson Valley share.

Part of a larger mission

The Hudson Valley provides the ideal incubator for MedAllies Direct: It has already achieved exceptional adoption of EHRs with a 40 percent EHR adoption rate—48 percent among primary care providers. Meaningful use of health IT can drive practice transformation, improve care coordination and quality, and reduce costs.[1]

Efforts to improve care coordination in primary care have demonstrated improved patient experience, improved staff experience, improved quality and reduced emergency department and hospital utilization.[2] The evidence demonstrates that advanced primary care, enabled by technology and grounded in a patient-centered medical home model, can improve outcomes, enhance patient, clinician and staff satisfaction, and control costs.[3]

The Hudson Valley experience (more than 300 Hudson Valley primary care providers have been recognized by NCQA as Level 3 medical homes) shows how health IT can be foundational to the new patient-centered, coordinated and accessible models of care.

MedAllies, in collaboration with Taconic IPA (TIPA) and Taconic Health Information Network and Community (THINC), has been working toward this goal for more than a decade. These three organizations are behind the Hudson Valley Initiative, an effort to transform the health care

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[1] Gilfillan RJ, et al. Value and the medical home: effects of transformed primary care. Am J Manag Care. 2010 Aug;16(8):607-14.

[2] Reid, RJ, et al. The Group Health Medical Home at Year Two: Cost Savings, Higher Patient Satisfaction, and Less Burnout for Providers. Health Affairs, 2010; (29(5):835-843.

[3] Grumbach, K. and Grundy, P. Outcomes of Implementing Patient Centered Medical Home Interventions: A Review of the Evidence from Prospective Evaluation Studies in the United States. Patient-Centered Primary Care Collaborative 2010. (http://www.pcpcc.net/content/pcmh-outcome-evidence-quality)

system, first in New York and eventually nationwide. They seek to revolutionize health care delivery through a shared vision to improve the quality, safety and efficiency of health care in the community.

How it works

Direct Project is an effort is to find a simple, secure, scalable, standards-based way for participants to send authenticated, encrypted health information directly to known, trusted recipients via the Internet. That capability supports Stage 1 Meaningful Use requirements and is compliant with HIPAA safeguards around privacy and security.

The MedAllies Direct Project, focusing on EHRs, bridges the gap in care coordination by providing connectivity between providers on disparate EHR systems. This leverages the government's investment in EHR adoption and Meaningful Use while creating the health IT infrastructure needed to connect those systems.

MedAllies functions as a health information service provider, or HISP. "MedAllies is the wire that connects the EHRs so the information can readily cross securely, safely and inexpensively and be available to the recipient clinician's EHR in real time," Miller explained.

As part of the multiple efforts involved in integrating EHR systems into the Direct network, MedAllies has developed its own implementation process. MedAllies' process includes two tracks: a technical track focused on harmonizing the implementation of Direct messages and a common digital payload, and a clinical track focused on incorporating Direct transactions into existing inpatient and ambulatory EHR workflows. The tracks work side-by-side and coordinate information to deploy a solution that is not only technically viable, but also includes clinical participation and insight to enhance provider adoption and utilization.

Virtualizing the EHR

The MedAllies Direct Project allows for vital clinical information to be received by the patient's care providers on disparate EHR systems as soon as it is recorded in the EHR of the provider seeing the patient.

"What Direct does is virtualize an electronic health record," Miller explained. The revolutionary aspect of Direct is that

it doesn't matter if the providers have different systems. Direct allows information to flow across EHR systems, in a manner consistent with patient-centered care.

Moving forward, this information will flow as "discrete data," meaning the receiving physician can upload it into his or her own EHR. The data will be date-, time-, and source-stamped, giving the clinician history and trends data from across the patient's providers. For a complex patient who may need to see several specialists, and who transitions through various care settings, the record becomes more robust and the care plan can be modified to include the input from the specialty clinicians.

This can dramatically improve patient experience, Miller noted. No longer will a patient appear at a specialist's office and be asked, "What are you here for?" Not only does the information arrive in the clinician's own EHR system, but the recipient clinician doesn't need to plow through a lot of information that is not relevant to the care that the specialist is providing.

If a primary care provider is sending the patient to a cardiologist, the core data sent would include patient demographics, active medication list, active problem list and allergies/intolerances; the primary care provider can select additional data that is pertinent to cardiologist care, such as the cardiac echo results, the most recent EKG, some specific recent lab tests, vital signs and relevant histories.

If the primary care provider is referring the patient to a dermatologist, she would include the same core data, but would select different additional information specific to what a dermatologist would need to care for the patient.

In the next phase of Direct, the plan is to include making this information available to patients through their personal health records. This, Miller believes, will help drive patient engagement and improve clinical outcomes.

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Direct allows the physician to provide better care, *and* it empowers the patient to be fully involved in that care. "This is why the concept of Direct is so incredibly exciting," she said.

Transforming patient care

Miller offered the following scenario: During hospitalization, many of a patient's medications are changed. He returns home, where he has all of his medicines—from before hospitalization and those he received at discharge. He may be a little confused about which ones he should be taking. Even if he were counseled before discharge, he may have forgotten some of what he's been told. Recall about medical information is often poor and inaccurate, especially when the patient is old or anxious.[4] Research suggests patients retain about half of the information given by health care providers.[5]

With Direct, those medication changes are recorded and a new, reconciled medication list has already arrived at his primary care practice before the patient has even left the hospital. The care manager can call the patient once he returns home, review his medications, tell him which drugs to discard and reinforce which ones he should be taking.

This follow-up can be particularly important for the elderly. Miller used the example of her own parents. They are intelligent, well-educated and alert. But even they can get confused about their medication regimen following situations of transitions of care. The care manager reviewing the updated list with the complex patient can prevent re-hospitalization–or worse.

Medication management is just one example. Through Direct, the patient's clinicians also have access to an up-to-date allergies and intolerance list, enhancing patient safety. Thus, if a patient develops a new allergy during a hospital stay and the primary care provider receives a Direct message that includes the updated allergies list, the

[4] Kessels, R. P. C. (2003). Patients' memory for medical information. *Journal of the Royal Society of Medicine,* 96, 219-222. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC539473/

[5] Shapiro, D. E., Boggs, S. R., Melamed, B. G., & Graham-Pole, J. The effect of varied physician affect on recall, anxiety, and perceptions in women at risk for breast cancer: An analogue study. *Health Psychology,* 11, 61–66 (1992)

primary care provider will be able, in future versions of Direct, to upload that data to her EHR. If the physician tries to prescribe that medication from the EHR she will be alerted: The patient has an allergy to the medication—even though it was originally documented in the hospital EHR system.

Direct will protect patients and, by reducing readmissions and adverse events, and enhancing care efficiency, it can help control health care costs.

Miller offered a third scenario: "When I've got a patient in my office and have completed certain tests that bring me to the conclusion that he needs to see a specialist, I can send this information to the specialist before the patient has left my office."

> *"We're talking improved quality, decreased costs and increased efficiency of care. It will transform medicine as we know it."*
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Collaboration

Direct represents the way of the future for a variety of reasons; perhaps the most significant is the level of cooperation among stakeholders, both at the national level and in the Hudson Valley.

The Direct Project is, Miller said, a terrific example of a public/private effort. The project was conceived, initiated and facilitated by the public sector with the private sector's cooperation. The private sector, with the public sector's guidance, produced results at a record pace and is poised to take over the initiative with public sector oversight.

ONC served as the convener, providing guidance and logistics. It defined the vision and scope of the project and created the opportunity for everyone to come to the table, Miller said. "ONC really has aligned the stars. It has created an incentive program for the adoption of electronic health records, because Meaningful Use mandates that health information be shared across EHR systems—interoperability. For the first time we are seeing vendors

that normally compete recognizing they can work together for health care improvement. It's very exciting."

Because the EHR vendors involved in the project contributed actively to the process of defining Direct protocols, the adoption of those protocols was seamless—the vendors were clearly more inclined to accept, and could more easily adopt, them. Bringing providers on board turned out to be even easier; Hudson Valley clinicians saw the opportunity for the electronic flow of information across EHR systems and demanded it.

Making it *just right* for physicians

"We met the EHR vendors at their current systems' workflows, connected them with that capability, and allowed for refinement and advancement of those systems for care transitions for any doctor on any certified EHR system. This tracks very effectively with where things are headed along Meaningful Use," Miller said.

It also resolves the challenge of significant, secure electronic information flow to a patient's providers—hospitals, primary care physicians, specialists or any other provider with a certified EHR. The MedAllies Direct connectivity

model crosses all facility sizes, types and locations where care might be delivered.

MedAllies followed two important policies as it launched its Direct pilot, she said: Never interrupt clinical workflow, and make it easy for the doctors. That has had important implications. First, it influenced the technology deployed; MedAllies Direct uses protocols already in place with EHR vendors. Second, it required an approach that would not overwhelm physicians with data. The sending physician can tailor the message to the recipient clinician, who receives exactly the data needed to care for the patient—not too much, not too little. "It's a very important concept," Miller said.

She offered an example. A patient has had a long hospitalization: He's been in an ICU for a week, then two more weeks in the hospital as an inpatient. Lab work may have been done several times a day during the ICU stay, and daily on the floor. The primary care physician doesn't need *all* that data. Neither does she need a record of every vital sign that was taken.

With Direct, the hospital physician can select the pertinent data and transmit that—and *only* that—to the primary care provider.

That's critical because providing too much data can be as bad as providing too little; not only does it overload the physician and force her to waste time digging for the pearls, but it could carry some legal risk. The physician may be considered responsible for all that information in their record.

This just-right solution has the potential to transform the practice of health care, Miller said. "MedAllies Direct provides the solution to a problem physicians have faced for years." ■

About the pilot

The Hudson Valley was selected as one of seven pilot sites. MedAllies engaged clinicians throughout the region—and their EHR vendor partners—to create a Direct Project that will push critical clinical information across EHR systems. The aim: to support care coordination and transitions of care in a manner completely consistent with established EHR workflows.

The MedAllies Direct demonstration pilot involved 16 providers at eight sites: Albany Medical Center, Asthma and Allergy Associates of Westchester, Community Care Physicians, Health Quest System (Vassar Brothers Hospital, Putnam Hospital Center, Northern Dutchess Hospital), the Institute for Family Health and Scarsdale Medical Group. Participating EHR vendors included Allscripts, eClinicalWorks, Epic, Greenway, NextGen and Siemens. The demonstration project is moving into full production over the second half of 2011, and additional EHR vendors are coming on board.

A. John Blair III, MD

Blair is president of Taconic IPA (TIPA), a nearly 4,000-member physician group at the forefront of transforming health care delivery in the Hudson Valley through meaningful use of health IT and pay-for-performance incentives. TIPA's mission is to optimize the value of medical services through patient-centered care while maximizing physician satisfaction. Blair also serves as CEO of MedAllies, which facilitates physician adoption of health IT for care coordination, patient-provider communication, public health and quality reporting. MedAllies built and operates the Hudson Valley Community Health Integration Platform (CHIP), which operates under the direction of Taconic Health Information Network and Community (THINC). On the national scene, Blair is a key thought leader for health IT and care transformation. He serves on the Privacy and Security Workgroup and the NHIN Workgroup of the Policy Committee of the Office of the National Coordinator. He is a member of the National Committee on Quality Assurance (NCQA) Committee on Performance Measurement, and serves on the Health Information Technology Advisory Committee (HITAC) for the National Quality Forum.

Holly Miller, MD, MBA, FHIMMS

As chief medical officer for MedAllies, Miller optimizes MedAllies' strategic implementations of certified EHR systems to improve patient quality and outcomes and enhance care coordination. The implementations are designed not only to meet the efficiency needs of time-pressed physicians, but also to fulfill government requirements for meaningful use of EHR systems. She is the MedAllies physician liaison for all implementation projects and works closely with the team to design a change management program ensuring optimal utilization of the EHR tools within different practice environments. Miller develops organizational structure and strategic vision, approves and oversees staffing to implement all aspects of MedAllies' consumer initiatives. Miller is a frequent presenter at national meetings on health IT and personal health records, and serves as vice chair on the HIMSS board of directors. She is the lead author on a book about PHRs, *Personal Health Records, The Essential Missing Element in 21st Century Health Care*, published in 2009.

Leroy "Lee" Jones

Jones is chief information officer for MedAllies. He also provides thought leadership to the New York eHealth Collaborative, the statewide initiative to enable widespread secure health information exchange. Jones is involved on the national level in a number of broader health information exchange industry initiatives. He serves as the program manager on behalf of the American National Standards Institute (ANSI) to manage the Health Information Technology Standards Panel (HITSP), a national initiative to harmonize health care technical standards to enable interoperability among disparate health IT systems across the entire health care industry. As a member of the RHIO Federation Taskforce formed by the Health Information and Management Systems Society (HIMSS), Jones is the co-editor of a guidebook for RHIOs to use as a source of practical advice and direction as they form and mature, the *Guide to Establishing a Regional Health Information Organization*. Jones has authored several other publications regarding effective deployment of technology for the betterment of health care.

About the Hudson Valley Initiative

Each of the organizations behind the Hudson Valley Initiative plays a fundamental role in transforming health care delivery and promoting advanced primary care.

TIPA's medical home transformation work has been an essential building block for care coordination. TIPA, a nearly 4,000-physician IPA, was part of the effort to help more than 300 Hudson Valley primary care providers become recognized by NCQA as Level 3 patient-centered medical homes—one of the highest concentrations in the nation.

MedAllies is the health information services provider that facilitates physician practice redesign to improve efficiency and effectiveness of health care through health information technology, and operates the technical backbone for health information exchange. Its expertise has been essential to creating the virtual integration necessary in a community that lacks a large integrated delivery network. Since 2007, more than 700 Hudson Valley physicians have implemented EHRs.

THINC fosters collaboration and encourages transparency. It brings together providers and payers in a neutral forum that leaves individual concerns at the door. Building on an accountable finance model, it has partnered with six health plans and a major employer (IBM) in a value-based purchasing program to reward physician practices for reaching quality and care coordination benchmarks.