Health IT Impact on Quality

Stories from the Field

Regional Extension Centers Program ℠

The Office of the National Coordinator for
Health Information Technology

Health IT Impact on Quality

Stories from the Field

Across the country, in ways large and small, physicians and other providers are increasingly using health information technology (health IT, HIT) to deliver better care to patients. Care that is more proactive. Care that is safer, with more coordination and less waste. Care that engages patients as participants in managing their own health.

Working side by side with providers in this transformation are the 62 Regional Extension Centers (RECs) established by The Office of the National Coordinator for Health Information Technology (ONC) through the American Recovery and Reinvestment Act. The RECs, located in every region of the country, provide support to primary care providers as they navigate the adoption and meaningful use of electronic health records (EHRs) to improve quality, efficiency and safety.

This report is a dispatch from the front lines of change, told through the stories of providers and patients who are delivering and experiencing improved quality of care through the use of EHRs and other forms of health IT.

In just a few years, the REC program has helped build an HIT infrastructure that creates clear routes to a variety of new care delivery and reimbursement models for providers at all points of the care continuum.

Together these stories paint a picture of the significant progress made to date, and offer a glimpse of what is possible in the future to harness the full potential of health IT to create a healthier America. ■
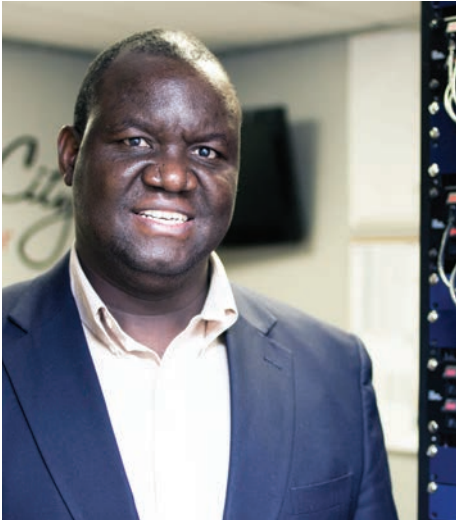
RECs at a Glance

As of September 2013, 139,215 total primary care providers (PCPs) were enrolled with an REC.[1] In an effort to strengthen health IT in primary care, RECs have focused their support in the most resource-challenged sectors. The primary care providers enrolled with RECs for health IT support fall into the following general categories:[2]

► **37%** (51,562) are small primary care practice providers

► **26%** (36,128) are public hospital outpatient department or other underserved providers

► **16%** (22,027) are practice consortium providers

► **13%** (18,650) are FQHC providers

► **8%** (10,848) are small rural hospital, rural health clinic or critical access hospital providers
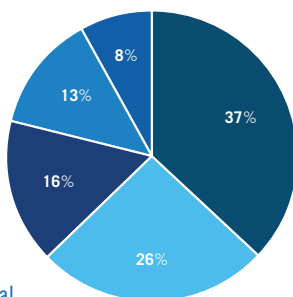
RECs have provided significant value to providers implementing HIT:

95% of those providers engaged with an REC are now live on an EHR

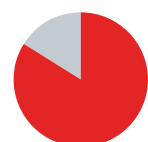**63%** have demonstrated meaningful use

According to the U.S. Government Accountability Office (GAO), providers working with an REC were almost twice as likely to receive an incentive payment from the Centers for Medicare & Medicaid EHR Incentive Program as non-REC-enrolled providers.[4]
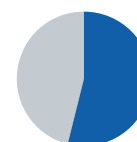
Creating a Health IT Infrastructure Within Primary Care

Here's a snapshot of REC-supported provider accomplishments by practice type:[3]

Small Primary Care Practices:
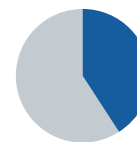
84% of providers live on EHR system

54% of providers demonstrating meaningful use

Federally Qualified Health Center:

93% of providers live on EHR system

41% of providers demonstrating meaningful use

Public Hospital Outpatient Department or Other Underserved:
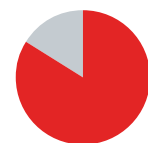
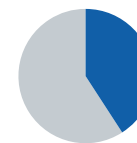**87%** of providers live on EHR system

49% of providers demonstrating meaningful use

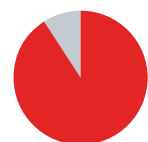### Small Rural Hospital, Rural Health Clinic or Critical Access Hospital:

84% of providers live on EHR system

41% of providers demonstrating meaningful use

Practice Consortium:

91% of providers live on EHR system
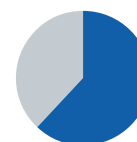
62% of providers demonstrating meaningful use

Health IT is the Common Denominator

In supporting the optimization of health IT, RECs have helped primary care providers nationwide prepare for a myriad of practice transformation and quality initiatives, such as Million Hearts, as well as payment delivery reform programs, such as Accountable Care Organizations, Comprehensive Primary Care Initiative, State Innovation Models and others.

The RECs are currently working on over 300 different programs to help providers transform their practices and meet Three-Part Aim goals.[5]

Practice Transformation Consulting: **79%**

Medical Home: **64%**

Health Information Exchange: **62%**

Clinical Quality Improvement: **45%**

Million Hearts: **26%**

Part. for Patients / Care Transitions: **21%**

ACO (Pioneer & SSP): **19%**

Patient Engagement: **17%**

Comprehensive Primary Care: **9%**

Payment Reform: **9%**

Other Three-Part Aim or Innovation: **38%**
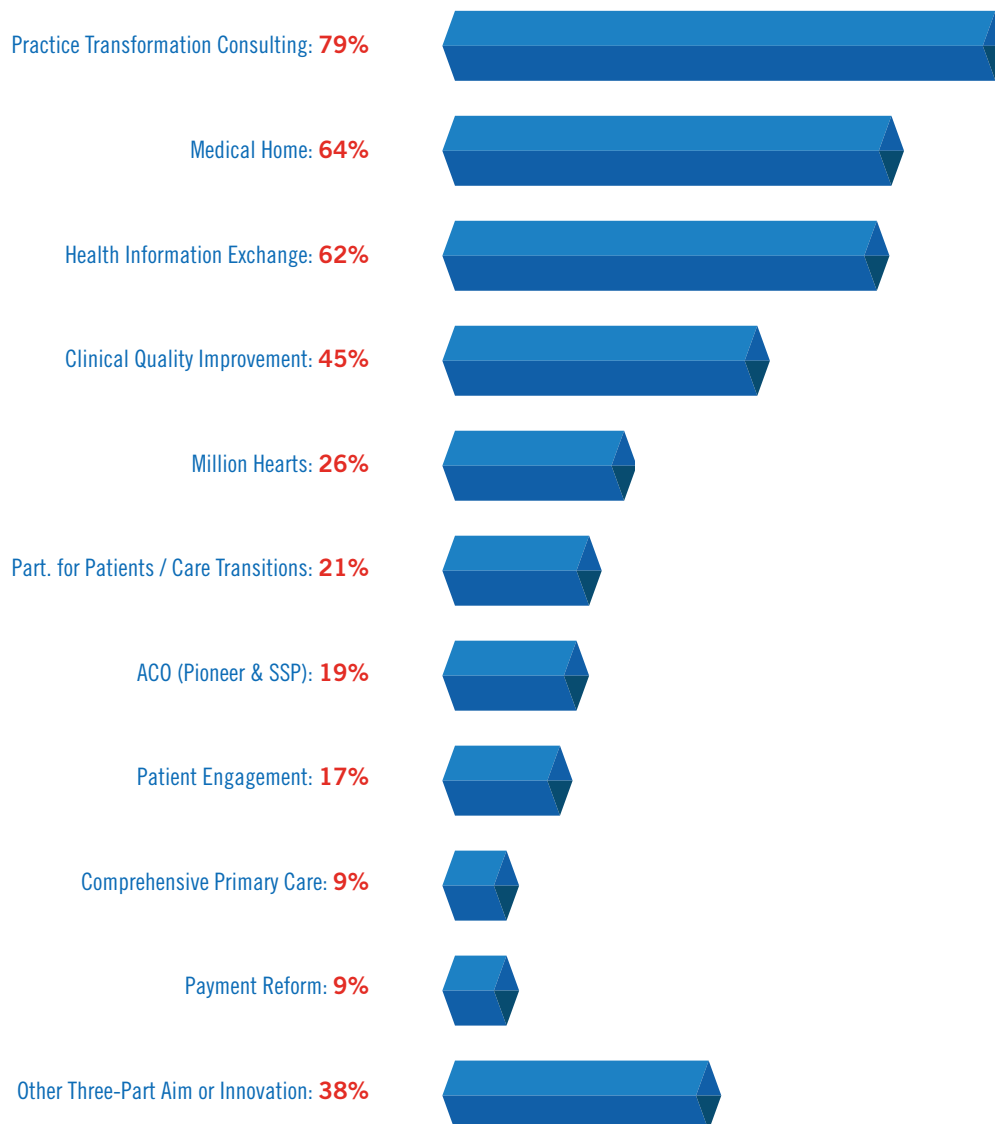
Better Sharing of Health Information

Across the country, providers now have more information at their fingertips to help make the best treatment decisions for patients. Electronic health information exchange (HIE) allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically.

The demand for HIE is growing along with nationwide efforts to improve the quality, safety and efficiency of health care delivery. Meaningful use requirements, new payment approaches that stress care coordination, and federal financial incentives are all driving the interest in HIE.

Appropriate, timely sharing of vital patient information through an HIE can better inform decision-making at the point of care and allow providers to avoid readmissions, prevent medication errors, improve diagnoses and decrease duplicate testing.

Molly Stevens
Photo provided courtesy of Chris Olmstead

Health IT Strengthens Patient Connection in Maine

For Molly Stevens, R.N.,B.S.N., the use of health IT has transformed her life as a nurse at the busy Martin's Point Health Care practice in Maine — and the changes are helping provide better care to her patients.

"It has made a huge difference in my workflow," said Stevens. She starts her day by opening up the practice's electronic health record (EHR) as well as the health information exchange (HIE) operated by HealthInfoNet, which is also Maine's REC. She consults those electronic tools throughout the day to gather fast, accurate information about her patients' changing health needs and circumstances.

"One example is a patient who didn't show up for her appointment one day," Stevens said. "I looked at the HIE and saw that she was in the hospital. The system also sent us an email when she was discharged. As a result, the next time she came in, I had information that I could talk to her about, asking her about her visit to the hospital."

Martin's Point cares for more than 70,000 patients in nine health centers across Maine and New Hampshire, providing both health care services and health insurance plans. With that much activity, Stevens said the practice's EHR as well as access to the HIE are helping the staff catch potential medication problems, track down missing reports from other providers, eliminate unnecessary tests and reduce hospital readmissions.

Stevens cited the example of an anticoagulation therapy patient who experienced a second pulmonary embolism. Her daughter, who was a nurse, asked if a blood work-up had been done when her mother had the first embolism. "I went to the HIE and found it in a minute," Stevens said. "She'd had a full panel done and it was all normal. As a result, we were able to relieve the daughter, avoid an unnecessary test for the patient, and save money."

Martin's Point, which was the first practice in Maine to adopt electronic records, converted last year to a new EHR system to better meet the organization's needs to serve patients. "We really appreciated the support of the REC in helping us through that conversion," Stevens said. "It was challenging for us to re-work our processes under the new system. It was great to have the assistance of the REC as we worked through that."

Stevens said she hopes to see continued progress toward integrating all of a patient's information through the HIE so that all providers caring for the patient are seeing the same data. "Something I feel very passionate about is that it's important for people to have a medical home and pull it all together. It really takes a village to coordinate the care of our patients."

For more information on the Maine REC, visit hinfonet.org. ■

Provider: *Martin's Point Healthcare, nine health centers across Maine and New Hampshire*
REC: *HealthInfoNet*

"It really takes a village to coordinate the care of our patients."

Clinical Quality Measures

In the words of an oft-quoted expression, "what gets measured gets done." Over the last 10 years, Clinical Quality Measures (CQMs) have become an integral component in the national movement to improve the quality of patient care.

CQMs assess the degree to which a provider competently and safely delivers clinical services that are appropriate for the patient in an optimal timeframe. By facilitating the capture and monitoring of this data at points of care nationwide, electronic health records (EHRs) are playing a critical role in advancing quality.

One example of how health IT is supporting the measurement and improvement of health can be found in the Million Hearts® initiative, which is aimed at improving cardiovascular health nationwide. By building the Million Hearts criteria into their EHR, providers can monitor tobacco usage, hypertension, diabetes and other factors in a way that heightens prevention and management of cardiovascular disease.

Dr. Smith (AHEC)
Photo provided courtesy of Donn Young

Solo Practitioner Furthers Heart Health in North Carolina

Karen Smith, M.D. is the only physician in her family medicine practice in rural Raeford, North Carolina. But by making the most of her electronic health record (EHR), she's produced significant improvements in heart health measures across a broad swath of her patient population.

As a participant in the national Million Hearts® initiative, a campaign launched by the U.S. Department of Health and Human Services in 2011 to prevent one million heart attacks and strokes by 2017, Dr. Smith has seen an overall trend of improving heart-related outcomes for her patients compared to an initial baseline assessment in 2011:

- September 2013 data shows that Dr. Smith's practice achieved a tobacco cessation rate of 92.65 percent, far exceeding the Million Hearts goal of 70 percent.

- Another measure headed in a positive direction is the LDL cholesterol control rate, which is trending up from below 30 percent in April 2013 to 57.81 percent in September 2013.

- Preliminary January 2014 data for blood pressure control rate show Dr. Smith's practice inching past the Million Hearts goal at 70.59 percent.

Dr. Smith said it is "rewarding to see our progression," and that her EHR, patient portal and other health IT tools have helped her to implement the Million Hearts strategies and work toward improving these outcome measures.

The practice achieved a tobacco cessation rate of 92.65%, far exceeding the Million Hearts goal of 70%.

"We used the EHR to identify patients who weren't meeting the parameters that we wanted them to meet for healthy hearts," Dr. Smith explained. "Because we had already attested for Stage 1 Meaningful Use, it was easy to get going. We had a number of the important parameters already set up, such as age, gender, LDL and so on."

The local Regional Extension Center, the North Carolina Area Health Education Center (AHEC), played a major role in helping Dr. Smith's practice launch her work under the ambitious Million Hearts® campaign.

"They've been wonderful," Dr. Smith said. "AHEC helped us a lot with structure. They know our office policies and procedures really well, so they helped us develop a structure for Million Hearts®. And we rely so heavily on the REC to help us get the quality reports done. Not only do they advise us on the 'how to,' they help us work with vendors when we want customization to meet our needs."

Once patients were identified, the EHR was used to categorize and communicate with them to offer three options for helping improve their heart health:

- One-on-one meetings with a nurse or affiliated clinician to talk about the barriers standing in their way and preventing them from achieving the good health they want.

- Group visits with other patients, often using the "motivational interviewing" style of counseling that helps individuals identify and resolve ambivalent feelings in order to achieve a change in behavior.

- Use of external resources already available in the community to support patients in their journey toward better health.

One of the many patients who benefited from this effort was Donald Jones, an Army veteran and retired teacher who had a history of heart issues and was then diagnosed with Type 2 diabetes.

"During office visits, Dr. Smith and I sit in front of her computer to review my lab results together," said Jones. "Dr. Smith worked one-on-one with me to maintain my blood pressure and blood sugar levels, and together we found the right medications to minimize side effects."

Dr. Smith noted that by controlling Jones' diabetes, they were able to greatly reduce his risk for cardiovascular disease. She credits the EHR with giving her the capability to have this kind of impact, not just with patients on an individual level but also in managing the health of all of her patients at risk for cardiovascular problems.

"The beauty of a well-functioning EHR is that it gives you access to aggregate data and individual patient data," she said. "And you really need both."

For more information on the North Carolina REC, visit med.unc.edu/ahec. ∎

Provider: *Solo practitioner in family medicine practice*

REC: *Area Health Education Center of North Carolina (AHEC)*

Enhanced Primary Care Delivery

A transformation is underway in primary care thanks to the broad-based effort across the U.S. to embrace the medical home model of organizing care. A medical home is a team-based model of care that begins with the primary care provider and coordinates care across multiple specialties to improve and maximize health outcomes. Health IT facilitates not only the coordination of care, but also aids in one of the hallmarks of the medical home model: enhanced communication with the patient.

A variety of medical home models are currently being implemented and tested by both public and private insurers. Whether a primary care provider implements a formal medical home model or simply adopts a more proactive approach to managing patient care, the meaningful use of health IT is integral to success. With health IT, these front-line physicians increase their capacity to efficiently integrate all aspects of a patient's care, and to manage the volume of data and patient outreach activities so critical to success in producing better outcomes.

Dr. John Berneike

Utah Family Practice Improves Diabetes Measures

A group of 15 high-risk diabetic patients in Salt Lake City, Utah, experienced significantly improved A1C blood sugar levels as a result of a comprehensive care coordination program implemented by their primary care provider, John Berneike, M.D. and his team at St. Mark's Family Medicine. As a group, the 15 patients saw their mean A1C of 9 drop below 7 over a four-month period.

The pilot program was enabled at every step by health IT tools and support provided by the local REC, *HealthInsight*, in conjunction with staff assigned to the Beacon Community Program. The Beacon Community Program demonstrates how health IT investments and Meaningful Use advance the vision of patient-centered care.

"I don't think we could have done it without their help," said Dr. Berneike.

The Beacon Diabetes Self-Management Care Coordination Program at St. Mark's utilized the practice's electronic health record (EHR) to generate a report of all of their patients with diabetes to assess whether they were

up-to-date on required lab, eye, and foot exams, and whether their measures were in control. Patients needing testing were identified and called in for appointments to see their providers.

Using EHR reports, staff identified 15 patients who were at high risk for significant medical problems; these patients were formally entered into the Medical-Assistant led Care Coordination Program. Using "motivational interviewing" techniques designed to facilitate behavior change, patients' barriers to successful diabetes management were assessed. Shared care plans with action goals were developed; patients were closely monitored with more frequent telephone contact and office visits. All medical assistants were trained to provide this care coordination under the supervision of their lead registered nurse and Dr. Berneike.

Dr. Berneike and his team developed care coordination templates, "We have a form in our EHR that our care coordinators use to track the patient's progress, document their outcomes and alert us when follow-up is needed," said Dr. Berneike. Having all of that data captured in the EHR means that the entire care team is able to know each patient's exact status at any time. Patients' goals are communicated amongst all team members to ensure comprehensive support and encouragement.

HealthInsight's Care Coordination training also involves assessing patients' readiness to change health behaviors, as well as their confidence to do so. Staff role play to improve their understanding of how to elicit patients' fears, problems, and challenges. Health literacy is also assessed to ensure patients' understand diagnosis and treatment instructions. All this information is documented in the EHR to provide care continuity.

One of the many success stories was a patient named Sydney, whose ability to manage her diabetes was complicated by depression — a condition that the team uncovered by asking specific questions in the motivational interviewing protocol. With the close coordination and

The high-risk patients experienced a drop in mean A1C from 9 to below 7 over a four-month period.

support of the St. Mark's team, Sydney successful lowered her A1C level from 16 to 7, lost 75 pounds and four pants sizes.

Building on the success of the pilot, the St. Mark's team has expanded the care coordination approach to patients with other chronic diseases.

"The use of HIT has enabled us to provide higher quality care more efficiently," commented Dr. Berneike. "We're getting away from a clinical approach of individual visits — that's reactive care. We're moving toward more proactive care at the patient level and at the patient population level."

For more information on the UtahREC, visit healthinsight.org ■

Provider: *St. Mark's Family Medicine, independent private practice*
REC: *HealthInsight*

Enhanced Primary Care Delivery

Dr. Paul Giboney

Health Department Accelerates Specialist Care in L.A.

In Los Angeles County, patients who receive care through the county's Department of Health Services (DHS) had been waiting as long as nine months for an appointment with a specialist after being referred by their primary care physician (PCP).

Today, thanks to a health information exchange platform called eConsult, it takes an average of 2.5 days for a specialist to respond to a PCP's request to review a DHS patient's case. As a result, patients are getting faster access to the specialty expertise, diagnostic tests and treatments they need.

> ## "eConsult has helped us transform from a long-wait system to a highly responsive system."

"eConsult has helped us transform from a long-wait system to a highly responsive system," said Paul Giboney, M.D., director of specialty care for DHS. The secure web-based platform enables a PCP to consult electronically with a specialist reviewer about a patient's case before making the referral to a specialist.

"When you get a primary care physician and a specialist talking and they have in front of them the patient's records, photos and test results, that means we are able to begin specialty care right there in the medical home," said Giboney. He estimates that in approximately two-thirds of the cases, it is determined that the patient needs a face-to-face visit with a specialist. For the remaining cases, the physicians are able to address the patient's need through the exchange of information on eConsult.

The speed of eConsult is helping to fast-track patients who need prompt attention. That was the case for 57-year-old Albert Williams, whose PCP at South Valley Health Center used eConsult to discuss his case with a gastroenterologist. Williams was referred for a colonoscopy, diagnosed with colon cancer and within two months had surgery and is now cancer free.

"It's a great success story of how eConsult allowed us to get a very prompt specialist response," said the PCP, David Campa, M.D. "He got the colonoscopy he needed, was put into the surgical system very quickly and had the curative procedure done."

eConsult, a program of L.A. Care Health Plan, the nation's largest publicly operated health plan, is currently used by DHS as well as Health Care L.A. Independent Physicians Association.

The platform has logged more than 66,000 electronic consultations as of the end of 2013. It is used by over 2,000 PCPs in 195 clinics that serve 500,000 low-income individuals and families.

L.A. Care led the development of the eConsult portal and training of PCPs and specialists on the platform. L.A. Care is eager to build on the gains in quality that eConsult has brought.

L.A. Care also formed HITEC-LA, the REC that is supporting the county's solo/small practices and clinics in the adoption and meaningful use of electronic health records (EHRs). The increasing use of EHRs by these providers also complements their use of eConsult, because the primary care physician can more easily transmit the patient's pertinent medical records and test results to the specialist when requesting a consult.

"We're pleased to see that the volume of electronic consultations is growing so fast, which shows that PCPs and specialists are embracing the platform and using it routinely to work together to get patients the care they need," said Mary Franz, Executive Director of HITEC-LA and Health information Technology for L.A. Care. "We're looking forward to expanding the program to additional Independent Physician Associations (IPAs) and practices to help even more patients get better access to specialty care."

For more information on the Los Angeles REC, visit hitecla.org ■

Provider: LA Department Health Services, County Health Department

REC: HITEC-LA

Patient and Family Engagement

When providers and their patients share access to electronic health information, it opens the door for greater collaboration, more informed decision-making and the involvement of family members to support care when needed. This kind of active patient and family engagement is especially important in managing and treating chronic conditions such as asthma, diabetes and obesity.

Electronic health records (EHRs) make it fast and efficient for providers to offer follow-up information after an office visit or hospital stay, such as self-care instructions and links to web resources. Health IT also enables providers to manage appointments and exchange email with patients quickly and easily, which may help providers identify symptoms earlier. Along with additional requirements for health information exchange, Stage 2 of Meaningful Use encourages increased patient and family engagement.

Looking to the future, the trend is toward enabling patients to exercise even greater control of their health as well as their personal health information. The growing Blue Button movement is making it possible for millions of American to get easy, secure online access to their health records so they can be an active partner with their providers in managing their health.

Dr. Christopher Reif

Minnesota FQHC Engages Patients with Summaries

Each time patients visit the Community University Health Care Clinic in Minneapolis, MN, they receive something to take home: a printed After Visit Summary (AVS) that provides details about their health status, prescribed medications and the treatment plan their physician has ordered for them.

The AVS, which is one of the core objectives of Meaningful Use (MU) Stage 1, is generated by the clinic's electronic health record (EHR) and prints out at a specially designated printer as each visit is concluding.

"Part of our success is that the minute a staff member sees an AVS printing, they take it to the exam room so that the physician can discuss it with the patient right then and there," explained Christopher Reif, M.D., Director of Clinical Services.

The clinic, a federally qualified health center (FQHC) logging 65,000 patient visits a year, serves a diverse population and has translators on staff in eight languages. By having the AVS available immediately, the physician can go over it with the patient while the translator is there in the room. Patients can also bring the AVS to their pharmacist to make sure they are picking up the correct medications.

According to Dr. Reif, the AVS has become a highly effective tool for the clinic to educate and engage patients. He noted that patients like the fact that the AVS includes their vital signs, including blood pressure, height, weight and other measures. Along with the AVS, the clinic also provides health education hand-outs relevant to the patient's condition, such as healthy lifestyle recommendations for diabetes, obesity, high cholesterol and other health issues.

"The AVS and handouts provide more opportunity for discussion between doctor and patient," Dr. Reif said.

The clinic worked closely with the local REC, the Regional Extension Assistance Center for HIT (REACH) for Minnesota and North Dakota, to implement the EHR system and launch the AVS tool. The REC advised the clinic through changes to its EHR system, workflow adjustments to support MU, and training for the providers. In all, the clinic has 25 providers live on the EHR.

Dr. Reif emphasized the importance of involving the clinic's providers and clinical staff in EHR implementation, and especially in the development of the AVS tool.

"You can't have patient engagement without provider engagement," he observed. "Our IT person worked with the REC to make sure that providers were engaged. They were both very available and willing to go back and forth to make sure we had it right. There can be some innate tension between IT and clinical people because we use different measures for outcomes. By working together, we hit on something that worked really well for patients."

For more information on the Minnesota and North Dakota REC, visit khareach.org. ∎

Provider: *Community University Health Care Center, a Federally Qualified Health Center*

**REC:** *Regional Extension Assistance Center for HIT (REACH)*

"The AVS and handouts provide more opportunity for discussion between doctor and patient."

Patient Privacy and Security

Ensuring the privacy and security of health information, including patient data in electronic health records (EHRs), is essential to building the trust of both patients and providers. And without that trust, the full potential of health IT to improve quality cannot be realized. If trust is lacking in the electronic exchange of information, it may make patients or providers less willing to disclose vital health information necessary to make appropriate treatment decisions.

RECs have played a critical role in helping providers actively manage their privacy and security policies to build this essential trust. Tools such as a security risk assessment and staff training in privacy best practices are helping providers across the country ensure they are keeping patients' electronic information safe and secure.
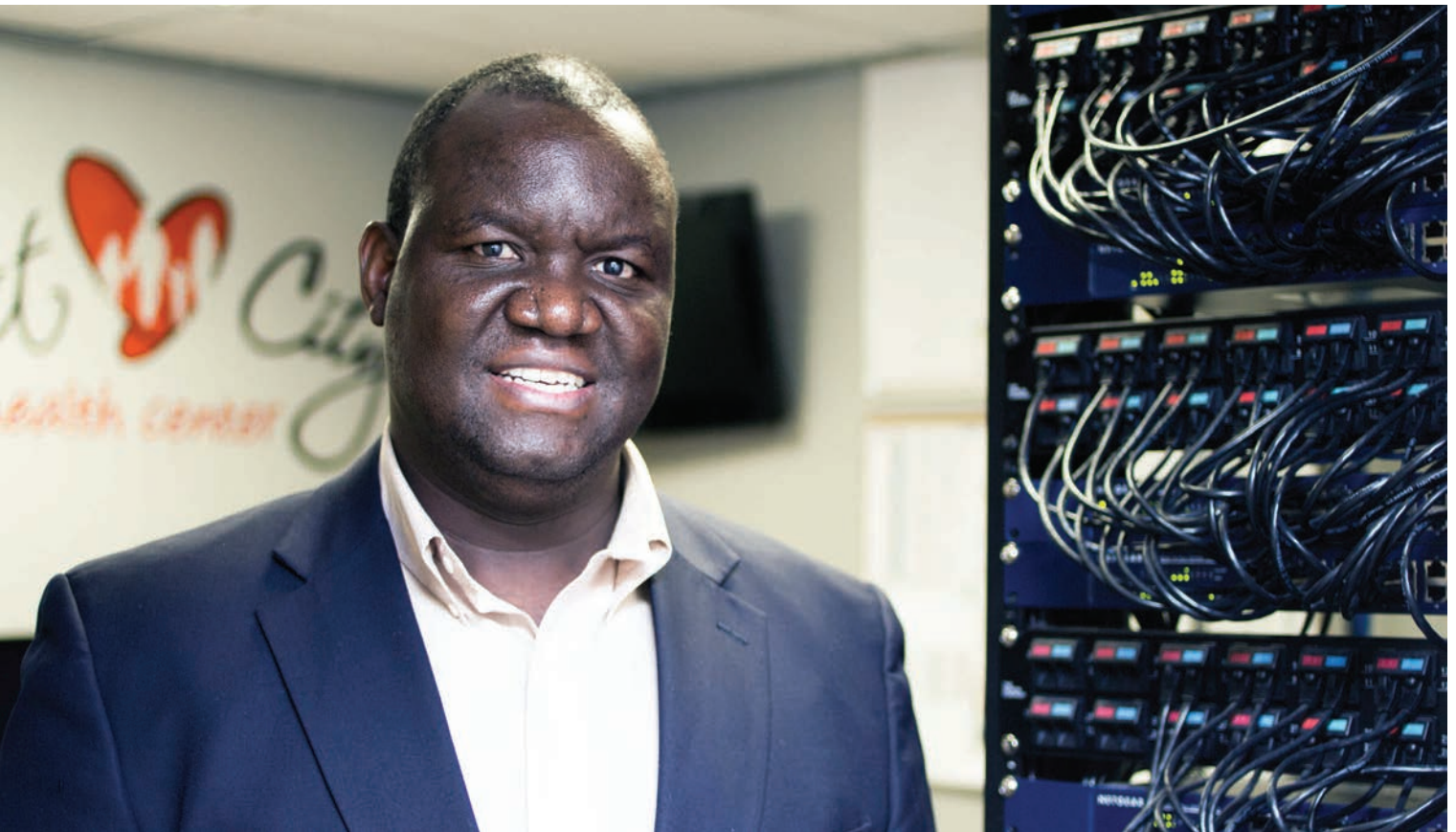
Fundisani Magena
Photo provided courtesy of Purdue University

Indiana Health Center Gets a "Check-up" on Security Risks

At Heart City Health Center in Elkhart, Indiana, many kinds of evaluations are conducted for the more than 10,000 patients treated by this federally qualified health center (FQHC). But for the last two years, a different sort of annual check-up has been happening: a risk assessment to evaluate how well the center's electronic health record (EHR) system is keeping patient information safe and secure.

The security risk assessment has been provided as a service by the Purdue Regional Extension Center (PurdueREC), and according to the center's operations manager, Fundisani Mangena, MBA, "it's given us a new way of looking at our security policies."

Mangena noted that as a health center with a limited IT staff, Heart City has welcomed the support of the PurdueREC in guiding them on the Meaningful Use path, and particularly in helping them keep up with new rules and regulations governing privacy and security.

The assessment is a full-day exercise, explained the PurdueREC's Senior Advisor for Security George Bailey, who conducted the evaluation at Heart City. Meeting with the center's IT Manager, corporate compliance officer and Mangena, Bailey leads them through a battery of questions to determine exactly how they are implementing their privacy and security policies. A review of all written policies also is conducted.

The next step is a walk-through of the center, evaluating the risks of disclosure of patient information at each step of the patient flow process from triage to patient reception, and so on. Risks also are evaluated from a workflow perspective: how are staff members accessing the EHR, how are passwords being protected, are monitors on desktops visible to passersby?

A final step is to assess the IT system itself. "We look

"We want patients to know that we take privacy and security very seriously."

at how well the operating system is configured from a security perspective," Bailey explained. "We can always secure a computer — one with multiple log-ins, for example. But once you take it to that level, people will find ways around it to get their work done. Providers have good intentions. They want the information to be secure, but they also have to see 30 patients that day."

The balance that must be struck, noted Mangena, is to make the patient information as secure as possible while at the same time making the data readily available to clinicians to provide the best possible care.

"It's not just about privacy and security," he said. "It's also about the availability and integrity of the information to the provider at the point of care. So security must not become a barrier to treatment. That's the way we're looking at it now, as we're building our systems and policies for the future."

Ensuring that information is kept private and secure is essential to building patient trust, Mangena added.

"We want patients to know that we take privacy and security very seriously — to build confidence in them to disclose the information that we need to make treatment decisions," Mangena noted. Utilizing the security risk assessment from the PurdueREC has helped Heart City lay a strong foundation to earn this patient trust.

"We now are more proactive to make sure our information is secure," he said, "and that the privacy of our patients is upheld." For more information on the Indiana REC, visit pha.purdue.edu. ■

Provider: *Heart City Health Center, a Federally Qualified Health Center*

REC: *Purdue Regional Extension Center*

Patient Privacy and Security

South Dakota Behavioral Health Clinic Protects Patient Information

At Lewis and Clark Behavioral Health Services (LCBH) in Yankton, South Dakota, clinical staff provide services each year to more than 3,300 clients who are grappling with mental health and chemical dependency issues. With such sensitive patient information entrusted to their care, the team at LCBH approached conversion to an electronic health record (EHR) with an especially keen focus on patient privacy and security.

"Patient privacy and security is always an important issue for us," said Brenda Hoxeng, administrative assistant and EHR Project Manager at the not-for-profit agency. Hoxeng and the staff at LCBH have worked closely with their local REC, Dakota State University/HealthPOINT, to ensure that the protection of patient information was always addressed as they worked through the launch of their EHR and Meaningful Use Stage 1. The agency's EHR went live on October 1, 2013.

One of the drawbacks of LCBH's former medical records system was that patient charts were not allowed to leave the facility, due to confidentiality concerns. That created major challenges for the clinical staff, who see the majority of their clients outside the walls of the agency — at clients' houses, schools, nursing homes and other sites.

"It was important to us in choosing the right EHR that it be clinician-friendly," Hoxeng said. "Our staff needed to be able to access patient records remotely."

DSU/HealthPOINT helped LCBH evaluate 20 EHR vendor programs, using a variety of questions to help LCBH focus in on their "must-have" features. Ultimately the system chosen included a mobile solution with encrypted laptops that clinicians will be able to use to access patient information while they are seeing patients outside the facility. That mobile component of the EHR system is in the process of being launched by mid-2014.

> **"The balance that must be struck is to make the patient information as secure as possible while...making the data readily available to clinicians"**
> — *George Bailey*

Patients will benefit from this new system, Hoxeng said, because "physicians will have more knowledge of what the patient they are meeting with is going through." The system will also make it easier for the entire clinical team involved in each patient's case to share information easily.

DSU/HealthPOINT has extensive experience in their privacy and security service line so they were a natural fit to support LCBH by conducting their security risk assessment, out of which came a recommendation that the agency conduct more training with staff to highlight good privacy and security practices.

"We're going to start having a more formal training program, with refreshers and reminders about the steps we should all be taking," Hoxeng said. In addition, clinical staff who will have access to the encrypted laptops will be receiving special training from a security perspective.

"The staff needs to understand that when they have that laptop in their possession, what they're carrying with them is huge."

For more information on the South Dakota REC, visit healthpoint.dsu.edu. ∎

**Provider:** *Lewis and Clark Behavioral Health, behavioral health center*

REC: *Dakota State University/HealthPOINT*

Optimization of current EHR systems

The growing adoption of electronic health records (EHRs) is the critical first step toward unlocking the full promise of health IT to make Americans healthier.

Across the country, providers are optimizing the use of their EHR to improve care and the health of patient populations. EHRs make it easier for providers to capture and report data for both quality improvement and public health surveillance purposes. EHRs enable providers to look more meaningfully at the health needs of their patients and to reach out with reminders for immunizations or follow-up care. Optimal use of health IT, in the broad sense, includes the meaningful use of EHRs for medical homes, accountable care organizations and other enhanced patient care initiatives.

Ultimately, health IT equips providers with needed data to offer higher quality and more coordinated care, creating a significant opportunity to bend the cost curve in health care delivery.
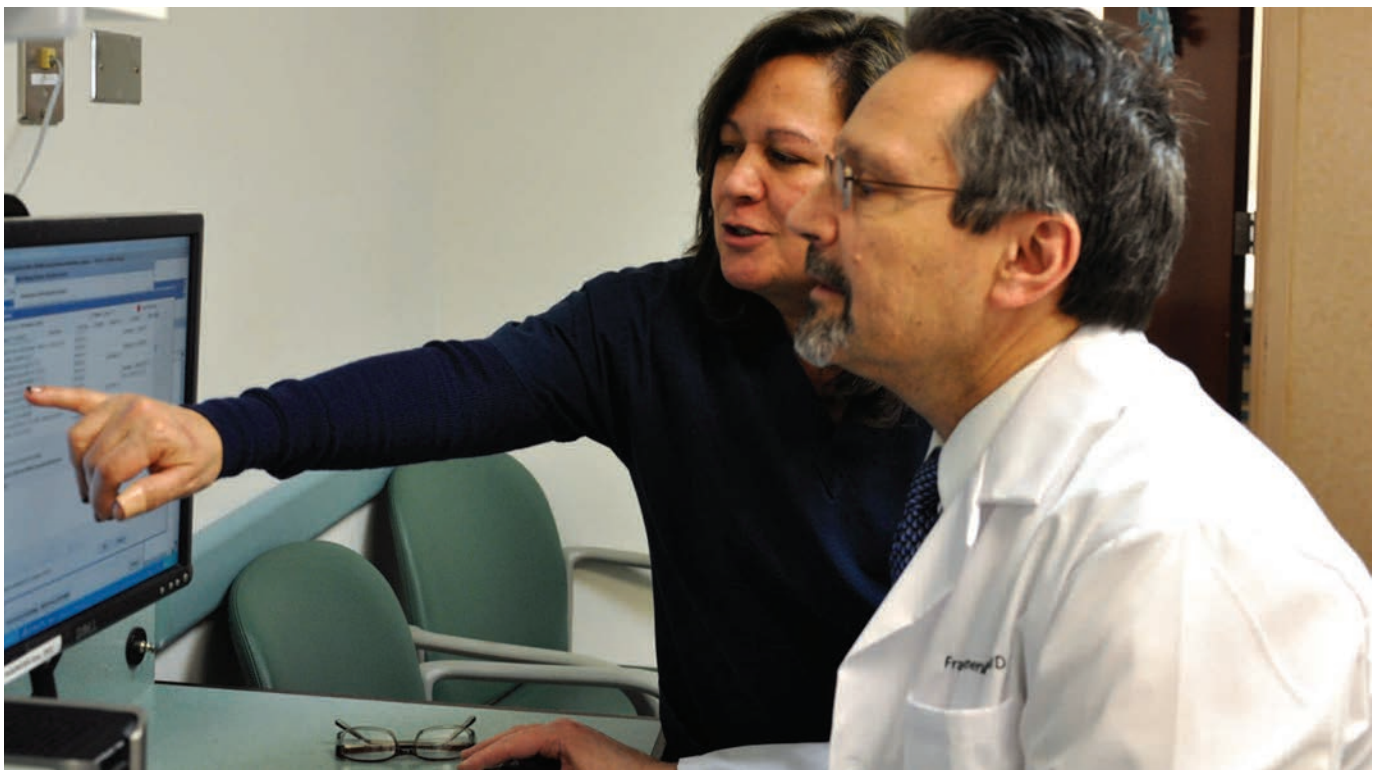
Dr. Frank Sonnenberg, FACP, FACMI
Photo provided courtesy of NJ-HITEC

Optimization of Current EHR systems

New Jersey Physicians Set Up Registry for Quality Reporting

Physicians in the Robert Wood Johnson University Medical Group (RWJUMG) in New Jersey are spending less time on paperwork and more on patient care thanks to a collaboration with the New Jersey Health Information Technology Extension Center (NJ-HITEC). The medical group and NJ-HITEC partnered to create a data registry to help physicians in the region report quality measurement more efficiently.

"NJ-HITEC has been extraordinarily valuable to us as a partner," said Frank Sonnenberg, MD, FACP, FACMI, Medical Director of Clinical Information Systems for the medical group, which is the faculty practice of the Robert Wood Johnson Medical School. "We suggested they create their own data submission registry in order to better support the needs of providers in our region."

The data registry set up by NJ-HITEC allows physicians to submit Physician Quality Reporting System (PQRS) and E-Prescribing (eRx) data to the Centers for Medicare and Medicaid Services (CMS) in order to receive federal incentive funding and avoid penalties. Reporting data is a critical component to utilizing health IT to monitor quality outcomes and improve care

Prior to establishment of the registry, Dr. Sonnenberg noted, the only way physicians in the practice could report quality data was by including certain codes on the patient's bill that is submitted to CMS.

> *"...with the registry in place, close to 100 percent of the medical group's Medicare-eligible physicians are reporting their data."*

"That method was cumbersome for the clinicians," he said. As a result, only about 15 percent of the practice's providers were successfully reporting PQRS data. That low rate of participation represented a missed opportunity to share data that could aid with quality improvement as well as a significant loss of federal incentive funding for the practice. Now, with the registry in place, close to 100 percent of the medical group's Medicare-eligible physicians are reporting their data.

NJ-HITEC Executive Director Bill O'Byrne said the process of setting up the CMS-qualified registry took over two years, and that Dr. Sonnenberg's participation in development, testing and implementation was essential to its success.

The registry reached an important milestone in the spring of 2013 when more than 200 doctors from RWJUMG as well as 70 providers from throughout the state and two practices in neighboring Delaware successfully submitted their data through NJ-HITEC's member portal.

O'Byrne said this is one of only about 40 registries in the country available to community-based physicians, and offers an affordable option for practices. "It is critical that doctors plan how they will report their quality data because Meaningful Use Stage 2 requires providers to submit clinical quality measures electronically via their EHR or a Data Submission Vendor," he noted.

According to Dr. Sonnenberg, use of the registry has helped RWJUMG "markedly improve our capture of key quality measures," an important piece of the medical group's wide-ranging efforts to optimize use of its EHR to improve patient care.

For more information on the New Jersey REC, visit njhitec.org. ∎

Provider: Robert Wood Johnson University Medical Group, faculty practice of the Robert Wood Johnson Medical School

REC: NJ-HITEC

Dr. Christopher Tashjian

A Wisconsin Clinic Gets Results in Population Health

The team at River Falls Medical Clinic in Ellsworth, Wisconsin is using their electronic health record (EHR) to systematically manage the health of their entire population of patients with chronic diseases.

That methodical, technology-enabled approach has resulted in this small, rural family practice clinic becoming one of the top-10 performing practices in Wisconsin for management of heart disease and diabetes.

According to Christopher Tashijian, M.D., family practice physician at the clinic, the team used the EHR to generate a database of patients across a variety of conditions,

capturing data on where each patient stood against the measures for specific diseases. A medical assistant on the staff was trained to be a Care Coordinator to conduct outreach to patients and manage the data.

"One day a month we meet for an hour and go over every patient with diabetes, " Dr. Tashijian explained. If a patient is overdue for having lab work or an office visit, the coordinator calls them to come in. Throughout the month, similar staff meetings are held to assess the status of patients with heart disease, high blood pressure and other conditions.

The result is better patient outcomes and fewer hospital readmissions. For example: the clinic's readmission rate for heart attack patients dropped from 40 percent in

Optimization of Current EHR systems

The readmission rate for heart attack patients dropped from 40% in 2011 to zero in 2012 after program implementation

2011 to zero in 2012 after implementation of this initiative. Readmissions for patients with heart failure dropped over the same period from 12.5 percent to 8 percent.

Dr. Tashijian sees the evidence of that improvement first-hand.

"My inpatient population has declined dramatically," he said. "I used to have three or four of my patients in the hospital per day. Now I have one or two a week."

One of the many patients benefitting from the new approach is Dr. Tashijian's former partner at the clinic, Dr. Eugene R. Jonas. Dr. Jonas, now retired, dropped 21 pounds and his A1C level went from 10 to 7 thanks to the clinic's proactive care.

Getting his entire clinic staff involved in this effort has been a key to its success, Dr. Tashijian said. "When doctors do it by themselves, people fall through the cracks. But when you engage the whole clinic, care improves. Everybody is rowing in the right direction."

Dr. Tashijian credits WHITEC, the Regional Extension Center for Wisconsin, with giving the clinic the support needed to implement and optimize their EHR so it could be used for this kind of sophisticated population health management. "The data has to be set up in such a way that enables us to pull out the information that we want," he said. "WHITEC has a wealth of knowledge that we could tap. They helped us map our processes to determine what we wanted to be able to do, and from that determine who would be the best vendor."

Looking to the future, Dr. Tashijian said he believes the clinic's measurable success in managing their chronic disease patient populations will prepare them well for future payment models based on accountability and shared savings.

Ultimately, for Dr. Tashijian and his team, the benefits of population health management can be measured by the impact on patients' lives.

"We're not doing this because we like numbers," he said. "We're doing it because our patients are more likely to be able to stay in their home, enjoy their grandchildren, keep their eyesight, keep their independence. It's about making patients better."

For more information on the Wisconsin REC, visit whitec.org. ∎

Provider: River Falls Medical Clinic, family practice clinic

REC: Wisconsin Health Information Technology Extension Center

Improved Care Across the Continuum

Increasingly, providers are looking to health IT systems to help them communicate and coordinate with one another more effectively when a patient transitions from one care setting to another.

This increased focus on improving care transitions has been driven in the near-term by Meaningful Use Stage 2 as well as by the Affordable Care Act (ACA), which provides incentives and penalties aimed at reducing hospital readmission rates. Working together through accountable care organizations and other kinds of alliances, providers are implementing strategies to reduce unnecessary readmissions through better coordination across the entire continuum of professionals caring for each patient, including primary, acute and post-acute care.

Electronic health records (EHRs) and other forms of health IT have the ability to integrate and organize patient health information and facilitate its instant distribution among all authorized providers involved in a patient's care. One example is an automatic notification or alert that can be sent from hospitals to primary care practices and/or care managers when a patient has a hospital admission, discharge or transfer. With the entire care team on the same "page" electronically, quality of care is being enhanced and patient outcomes are improving.

Dr. Catherine Payne

Improved Care Across the Continuum

Chattanooga Coalition Reduces Hospital Readmissions

An innovative program in Chattanooga, Tennessee is significantly reducing hospital readmissions using a strategy that leverages health IT combined with the power of human interaction.

The Community-based Care Transition program, involving a coalition of nearly 40 hospitals and other provider agencies, deploys health coaches to visit discharged patients as they transition to their home or other care settings. Since the effort began in March 2013, the program has tracked outcomes for approximately 275 patients with four diagnoses. The baseline readmission rate for those diagnoses is 16.3%. The readmission rate for patients in the program is 4.8%.

> **The program has a readmission rate of 4.8% compared to a benchmark of 16.3% across four diagnoses.**

The providers and coaches use Tennessee's "Direct" health information exchange to securely share updates, identify concerns and expedite decisions vital to keeping patients well.

"Once we began using Direct, the transitions improved dramatically," said Catherine Payne, M.D., chief medical informatics officer and chief of internal medicine at Erlanger Health System. "Now the coach can email on Direct and copy everyone on the team who needs to be in the loop to address what the patient needs," said Dr. Payne, who was one of the physician champions of this effort.

Lead agency for the program is the Southeast Tennessee Area Agency on Aging and Disability. The agency relied on extensive support from Tennessee's REC, Qsource, to make the program a reality.

"The REC has been very helpful to us," said Thomas E. Preston, the agency's assistant director. "They introduced us to the idea of doing this pilot on care transitions." Qsource also assisted with the application for funding from the Centers for Medicare & Medicaid Services for the pilot.

Preston noted that using Direct has greatly improved the transition process from his agency's perspective. Participating hospitals use Direct to alert the agency whenever a patient is discharged who is eligible for a home visit from a health coach. "Being able to receive that patient information in a timely manner allows us to schedule the home visit faster," Preston explained. "Hours make a difference."

The program made a dramatic difference for a 58-year-old, legally blind man with a history of congestive heart failure and diabetes who was discharged from Erlanger. During the home visit, the coach learned that the patient could not see well enough to read his glucose meter, had run out of several medications, and had not scheduled a follow-up visit. Using Direct, the coach contacted Erlanger's Care Transitions Liaison and through several exchanges of email was able to expedite prescription refills and begin the process of securing a talking glucose meter for the patient.

"Previously, once the patient left the walls of our hospital, we didn't have any information about what was happening to them," said Dr. Payne. "This has improved our communication and process back and forth to reduce readmissions."

For more information on the Tennessee REC, visit qsource.org. ■

Provider: *Erlanger Health System, an academic teaching center*

REC: *Tennessee Regional Extension Center (TnREC), a division of Qsource*

HIT Tools Keep Bronx ACO Participants Informed

Dr. Sindhu Gupta is a Board certified internist, operating her internal medicine practice in Bronx, New York, along with a physician assistant. Yet in one important way, she has many partners helping her care for her patients.

Dr. Gupta's practice is a community provider participant in the Montefiore Medical Center Pioneer Accountable Care Organization (ACO). Thanks to the use of health IT tools, she regularly receives data and alerts from the ACO that help her keep track of her patients' health status and identify opportunities for follow-up to improve quality of care.

"They notify me when patients are admitted to the hospital, and after discharge they follow up with the patients and send me the reports," Dr. Gupta noted. The ACO also sends her notifications about patients needing preventive care. "For example, I received a list of about 50 patients who had not received their pneumonia vaccine," she said, which enabled her practice to contact those patients for an appointment.

Montefiore was among 32 institutions nationwide selected in 2011 to participate in the innovative Pioneer ACO Model. The program was designed and sponsored by the Centers for Medicare and Medicaid Services (CMS) under the Affordable Care Act to provide Medicare beneficiaries with high-quality care while reducing expenditures through better care coordination.

More than 60 percent of the Medicare patients attributed to Montefiore's ACO are under the care of private practice physicians in community offices, such as Dr. Gupta, with the remaining patients cared for by Montefiore's employed physicians. In its first year of the three-year Pioneer ACO Model, Montefiore achieved a seven percent reduction in the cost of care through increased patient engagement, care coordination and preventive, patient-centered care.

> *"I received a list of about 50 patients who had not received their pneumonia vaccine."*

"Our first-year results indicate that actively engaging employed and community-based physicians in patients' continuum of care can lead to better, more cost-effective care for our patients," said Henry Chung, M.D., chief medical officer of Montefiore's care management program and of the ACO. "In this system, everyone involved is accountable for guiding each patient toward the best treatments possible, with a goal of creating a healthier community."

For Dr. Gupta, involvement in the ACO is one of the tangible ways she is using her electronic health record (EHR) to transform her practice and enhance patient care. On her journey to implement the EHR, she has had the guidance and support of another set of partners: the team at NYC REACH, the New York region's REC.

"NYC REACH is very helpful, guiding us in what to do and what not to do," she said. "For example, they taught me how to make order sets and templates that are very useful to me for things like the annual physical." NYC REACH has also guided her on how to use the EHR to pull lists of patients who need follow-up, such as identifying diabetic patients at specific blood pressure and A1C levels that warrant closer care management. ■

Provider: *Board certified internist in Montefiore Medical Center Pioneer Accountable Care Organization (ACO)*

REC: *NYC Regional Electronic Adoption Center for Health (NYCREACH)*

The Future of Health IT

Better Care, Greater Value

Providers across the country have made great strides in embracing health IT as a tool to improve America's health care system.

RECs have played a critical role in this transformation, working with over 136,000 (nearly half) of the nation's primary care providers, helping 90 percent (over 123,000) of those providers adopt an EHR system and 62 percent (over 85,000) demonstrate stage 1 meaningful use.

Yet, despite this clear and documented momentum, much more remains to be accomplished. What kind of advances will the future of health IT bring?

Providers profiled in this report talked with passion and anticipation about what they hope to see:

- **A fully interoperable health information system in which all caregivers along the continuum have access to the same patient data and collaborate to deliver quality care.**

- **Increasing use of mobile devices to engage patients in their health care and make doctor-patient communication easier.**

- **A new frontier of telehealth in which parents can capture a photo inside their sick child's ear and send it to their pediatrician to determine if an infection is present.**

Providers across the country have made great strides in embracing health IT as a tool to improve America's health care system.

Even as those longer-term possibilities beckon, there is still much to be accomplished in the near term to optimize the use of EHRs and other health IT tools. RECs will continue to work with providers of all kinds to help advance adoption of EHRs, achieve functionality of Stage 2 meaningful use and utilize those tools to improve patient care.

In addition to enhancing the quality of care, the future of health IT is also about new payment models that are aligned with the shift from volume to value-based care. Health IT is the common denominator of every care delivery and payment model being considered for the future. Meaningful use of health IT is integral to participation in such near- and long-term health care initiatives as medical homes, accountable care organizations and shared savings of any kind.

(For a video offering a deeper look at practice transformation models and how the RECs can support providers, click here.)

In a larger sense, meaningful use of health IT also contributes to:

- **Improving the health of the population**
- **Improving the patient experience**
- **Containing cost**

The federal investment in the RECs has helped build a health IT infrastructure that creates clear routes to this array of new care delivery and payment models for providers at all points of the continuum. For providers, the time is now to engage with RECs as partners on this journey to the future. RECs will continue to sustain their role as trusted advisors to providers in harnessing the power of health IT. ■

According to new data from the Centers for Disease Control and Prevention:

- ■ *Adoption of basic electronic health record (EHR) systems by office-based physicians increased 21% between 2012 and 2013.*

- ■ *In 2013, 78% of office-based physicians used any type of EHR system, up from 18% in 2001.*

- ■ *From 2010 through 2013, physician adoption of 7 of the 17 capabilities required for Stage 2 core objectives for meaningful use increased significantly. Computerized capabilities to send prescriptions to the pharmacy electronically and to provide warnings of drug interactions or contraindications had the largest increases.*

1. US Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Customer Relationship Management database. September 5, 2013.

2. US Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Customer Relationship Management database. September 5, 2013.

3. US Department of Health and Human Services, Office of the National Coordinator for Health Information Technology. Customer Relationship Management database. September 5, 2013.

4. US Government Accountability Office. Electronic Health Records: Number and Characteristics of Providers Awarded Medicare Incentive Payments for 2011-2012

5. As reported by 56 out of 62 RECs. Many RECs are working on several initiatives within each category.

Regional Extension Centers Program SM

The Office of the National Coordinator for Health Information Technology