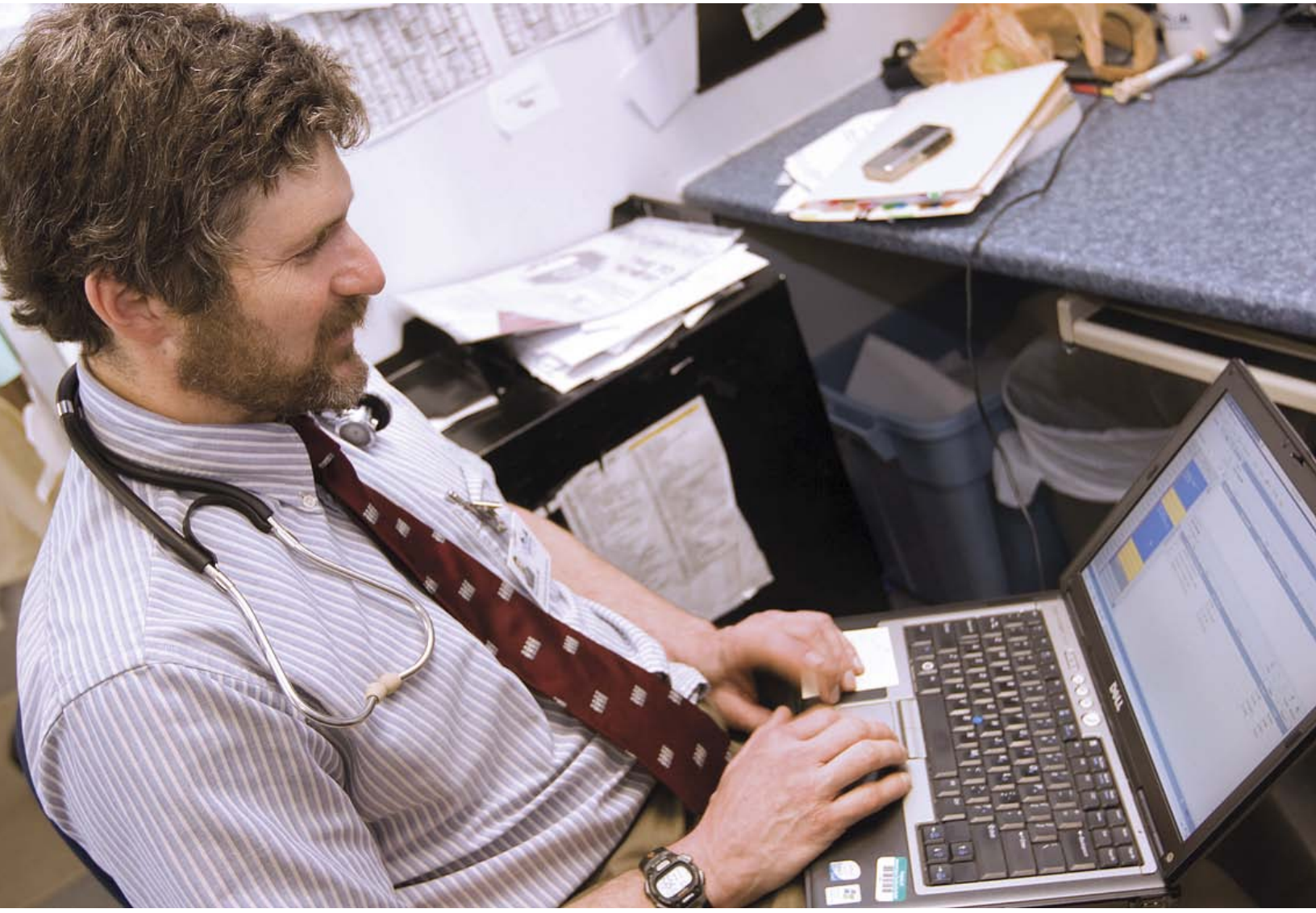
GE Healthcare

Data-driven care

For Ammonoosuc Community Health Services, an Electronic Medical Record proves essential in delivering award-winning care and achieving Level 3 recognition as a patient-centered medical home



Summary

Ammonoosuc Community Health Services significantly enhanced patient outcomes and reduced costs with data-driven care empowered by the Electronic Medical Record (EMR) system in Centricity Practice Solution from GE Healthcare. A Care Model Team used collaboration tools to help deliver integrated care to complex patients, powerful data reporting to help teams improve the care model, and customizable forms to incorporate care model improvements into daily practice. Notable achievements:

- Rated among the nation's 26 highest-performing community health centers for patient outcomes in 2009 among more than 1,000 Federally Qualified Health Centers.
- Achieved Level 3 recognition, the highest awarded, as a Patient-Centered Medical Home (PCMH) in 2010.
- Achieved reductions of 32 percent in avoidable emergency department visits and 22 percent in avoidable hospitalizations in an award-winning pharmacy services project with diabetic patients.

A data-driven practice

Since 1996, Ammonoosuc Community Health Services (ACHS) has leveraged EMR technology and applied data to improve its care processes and deliver award-winning results for its more than 10,000 patients in rural New Hampshire.

Empowered by technology and guided by its unwavering commitment to continuous improvement, ACHS led the way in data-driven, team-based, patient-centered healthcare. In 2009, based largely on its results with diabetic patients, the organization ranked among the top 26 of more than 1,000 Federally Qualified Health Centers (FQHCs) in the nation in the Health Disparities Collaborative, which tracks health outcomes and improvements for patients with chronic conditions including diabetes and heart disease.

ACHS tracks patient outcomes using Centricity Practice Solution, an integrated EMR and Practice Management (PM) system from GE Healthcare. A Care Model Team meets monthly to discuss how best to care for patients with chronic conditions. Providers then share ideas and solutions and develop a consensus on how best to care for each patient. Patients are at the center of the care model and are expected to take responsibility for their part in managing conditions.

The practice has taken this team approach for 13 years. The prevailing culture and reliance on data from the EMR were instrumental in ACHS achieving Level 3 recognition, the highest awarded, as a Patient-Centered Medical Home (PCMH) in 2010.

Medical home: A natural step

ACHS has been an FQHC since 1994, and the transition to PCMH recognition was a natural one, observes Shawn Tester, COO/CIO. "The kind of practice the PCMH promotes really is how we behave as a practice anyway," he says. "There were a lot of pieces in place. We have the patient at the center of care. We have a Care Model Team driving best practices in care delivery. Each of our patients is assigned a doctor or nurse practitioner."

In 2008, the New Hampshire Citizens Health Initiative developed a multi-stakeholder medical home pilot program in which payers compensated primary care practices for participation on a per-patient basis. Most major payers in the state took part. "It looked like a great opportunity, and since our style of practice already closely mirrored the medical home model, we decided to join the pilot program," Tester says.

Centricity Practice Solution: A fit for the PCMH model

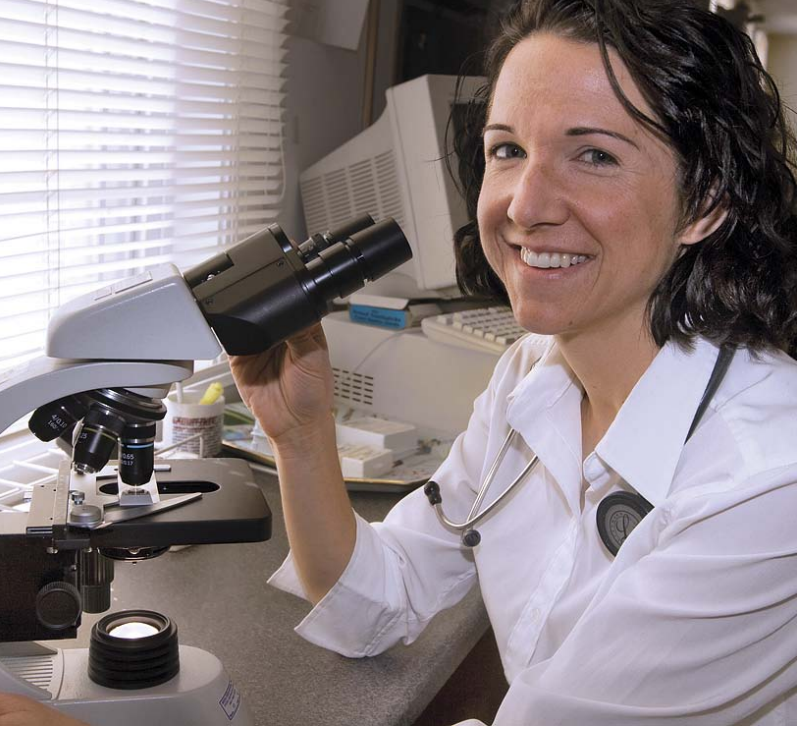
The rigorous PCMH recognition process through the National Committee for Quality Assurance (NCQA) included developing reports to show evidence of care quality, documenting workflow processes, reviewing and updating all policies and procedures, and developing new forms as necessary. Director of Patient Services Teresa Brooks led the effort, working with the Care Model Team, EMR Manager Linda Noyes, and EMR Analyst Melissa Norris. "Teresa put tremendous effort into this project, and it couldn't have been successful without her leadership and vision," Tester says.

Tester notes that the design of Centricity Practice Solution fit the data-driven, evidence-based PCMH model and played a major role in enabling ACHS to attain Level 3. Key attributes included the ability to support collaboration with other providers, query quickly and easily, report on patient population data, and modify workflow and templates to facilitate implementation of care model improvements.

For example, to enhance collaboration, ACHS shared the same charting module for all care types between behavioral health and clinical services, used flags for communication, and tracked discrete data in the flow sheet. The center even gave the local emergency rooms access to its patients' electronic medical records through a Virtual Private Network (VPN). Since ACHS uses templates in Centricity Practice Solution to drive providers' workflow, these templates helped the organization document its processes for recognition.

"You need to demonstrate that you're capturing the right data and that you're actually seeing improvement in the quality of care you're delivering," says Tester. "It would be almost impossible to reach Level 3 without an EMR. I don't know how you could be successful without it unless you spent a lot of man-hours manually processing data.

"Take for example smoking status – one item we had to capture for PCMH recognition. In a paper world, you could have providers check it off on a form, but half the time it's not going to get checked, or it gets checked incorrectly. How do you collect and aggregate that data? Are you collecting it for 60 percent of your patients? 80 percent? 100 percent? With the EMR, we build that data collection point into the standard form our providers use, and we make it a required field. Then we can really process that data and analyze it and use it."



Collaboration tools helped deliver integrated care to complex patients

One of the primary goals of the PCMH is improved outcomes. Tester notes that sharing data within the EMR has helped contribute to a higher quality of care, particularly for patients with complex conditions. "Often, patients will have multiple issues – they're diabetic, they have an eating disorder, and by the way, they're depressed," he says.

These patients require collaborative care from multiple providers. Tester cites care for patients with depression to illustrate how technology facilitates integrated care. "We have behavioral health specialists who work in our clinic," he says. "They manage their patients using the same EMR and the same chart our healthcare providers use.

"When a patient exhibits symptoms of depression, our doctors can give a PHQ-9 depression screening test to gauge the severity. If it's deemed appropriate, they can refer the person to a behavioral health specialist, who can then engage the patient on treatment for depression, while collaborating and sharing data with the primary care physician using the EMR."

Centricity Practice Solution's intuitive user interface makes it easy for providers to share documents and engage in an informal dialog about a patient's condition before making any permanent notes in the patient's chart. For ACHS, collaboration is critical.

"Through integrated care, they can get treatment for the depression, which makes it easier for them to receive care for the diabetes," says Tester. "If they're feeling better about themselves, they're going to eat better. The integrated model means the quality of that person's life goes up dramatically. That's one way we leverage the EMR to enhance outcomes."

Powerful data reporting helped teams identify care model improvements

Centricity Practice Solution has the ability to store and report out on structured data, and that has been invaluable in helping ACHS identify necessary improvements to the care model. This benefit is well illustrated by a project under the Patient Safety and Clinical Pharmacy Services Collaborative, a national initiative among community health centers to integrate evidence-based pharmacy services into the care of high-risk, high-cost, complex patients. Conducted under the PCMH umbrella, the project aimed to develop best practices to minimize what Tester calls "pharmaceutical misadventures."

The ACHS pharmacy team first decided to focus on the practice's roughly 600 diabetic patients. While at an off-site workshop sponsored by the Collaborative, the team was advised to sharpen the focus. The team called back to the ACHS office and asked EMR manager Noyes to narrow the list to diabetics taking more than 12 medications. In about 15 minutes, she queried the EMR database and generated a report of 62 such patients, then e-mailed it to the team at the conference. "That's the magic of the EMR," says Tester.

With the patient cohort selected and the relevant data in hand, the pharmacy team sought to identify opportunities for improvements to the care model. The team asked a pharmacist at a hospital in ACHS's area to review the patients' medication lists for potential adverse drug interactions, for duplicate, expired or unnecessary prescriptions, and for information to help educate the patients about the medications they were taking. While reviewing the reports, the pharmacist noticed trends in providers' prescribing behavior that were detrimental to patients.

The pharmacy team then recommended three simple changes to the care model. First, write clear instructions to the patient – without using abbreviations. "Even though the instruction sheets were printed rather than handwritten, we'd still get arcane and obtuse abbreviations that could differ from doctor to doctor," says Tester. "So we said, 'No abbreviations.'" Second, make sure each prescription was directly linked to a diagnosis. And third, make sure patients received a complete medication list at the end of each visit.

Customizable forms helped providers implement new best practices

However, simply identifying new best practices is not sufficient for improving care – providers have to implement them: Noyes knew that old habits can be hard to break. To facilitate adoption of the third recommendation, for example, Noyes leveraged the ability to customize workflows with Centricity Practice Solution. She modified the assessment and plan form by adding a button labeled Print Medication List – just to make it easy for doctors to print the list while still in the room with the patient.

The results were compelling: "The 62 patients went from an average of more than 12 medications on their lists to eight," says Tester. "Over a 12-month period that we monitored that population, we observed a 32 percent decrease in avoidable emergency department use and a 22 percent decrease in avoidable hospitalizations. We did this simply by cleaning up their medication lists and doing a few simple things to make it easier for patients to understand what they were taking and when they were taking it.

"The EMR gave us access to data so we could identify a patient population and brainstorm ways to change how we deliver care. It gave us the data to measure outcomes, which was huge. And it enabled us to adapt the workflow – by adding that Print button – to support our effort. That's the flexibility Centricity Practice Solution provides."

For the project, the ACHS team received a Clinical Pharmacy Services Improvement Award and a Health Outcome Management Award, both from the federal government's Health Resources and Services Administration. "Since we completed that project and saw the amazing results, we are looking to deploy those best practices across the remainder of our diabetic patient population and then ultimately across all patients," says Tester. "In addition, we have added an in-house pharmacy with two pharmacists to our network – integrating pharmacy within our suite of care."

GE Healthcare provides strong base of support

Tester observes that GE Healthcare has supported ACHS since the center first became a customer a decade ago and through the 2006 upgrade to Centricity Practice Solution, which includes a practice management program on the same database. "By going to the single solution, we were able to collapse two databases down to one, have a single authority for demographics, and streamline administrative tasks," Tester says.

"We've had a great working relationship with GE Healthcare, and we consider them in many ways a partner in our efforts. One challenge they have shared with us and the rest of the industry is adapting to changes driven by regulation. GE Healthcare has worked hard to help keep us up to date and make the changes as streamlined as possible."

Advice to others

For primary care practices seeking PCMH recognition, Tester advises, "It comes down to having the teams and systems in place to support it. We had our Care Model Team. There needs to be some kind of analogous structure to help support the PCMH model. You need a structure in place that makes quality of care and best practices a priority. You need to build teams and have supportive networks in order to achieve success."

Meanwhile, Tester says ACHS will continue to leverage the EMR for ways to reduce cost and enhance care quality. The focus is widening to include exploration of the Accountable Care Organization (ACO) concept – becoming part of an entire family of providers caring for a specific patient population.

"That's the next level for the EMR," says Tester. "We'll be looking for ways, for example, to share medication lists with hospitals, to share allergy lists and all the basic data, and then to facilitate the updating of our patients' chart by the hospital, when those patients present at the emergency department, in real time."

His advice for others looking to adopt EMRs: "The key to being successful is making sure your culture is prepared to support the change. The healthcare providers must be 100 percent on board with it, because they will define its success or failure. In today's world, we see an EMR as critical. I don't see how anyone could be in business without one."

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What is the patient-centered medical home?

Patient-Centered Medical Home (PCMH) is a concept designed to deliver more holistic and better-coordinated primary healthcare. In contrast with the traditional fee-for-service model, provider teams receive financial incentives for delivering higher-quality care at lower cost. The primary care physician leads the healthcare team and refers patients, when needed, to specialists who share the same goals. The concept removes artificial barriers to holistic care, such as a fee-for-service reimbursement system that, for example, does not compensate physicians for taking phone calls with patients.

PCMH establishes shared responsibility and accountability between providers and patients. The "home" denotes not a physical location but a close relationship between the patient and the healthcare team. The concept's core tenets are:[1]

- **Ongoing partnership between the primary care physician and patient** that encourages patient engagement and emphasizes the patient's shared responsibility for care.
- **Physician-directed medical practice** in which the provider leads the healthcare team in coordinating proactive and holistic care centered around patient needs.
- **Whole-person orientation** of care in which the provider communicates with all referral sources throughout the patient's life cycle.
- **Coordination of care** in which the provider embraces all elements of the complex healthcare system and uses information technology, health information exchange, and patient registries.
- **Quality and safety focus** that includes continuous quality improvement, adherence to evidence-based guidelines, and active performance reporting driving behavior change.
- **Enhanced access to care** to anticipate open scheduling, expanded hours, and communication among the care team.
- **Restructured payment system that recognizes provider performance and added value** by rewarding providers for performance and for systematizing the necessary coordination and communication activities, such as enhanced patient communication and remote patient monitoring.

[1] McDaniel, Donald R. and Dishman, Eric. Patient Centered Medical Home: A Foundation for Delivering Better Care, Better Health, and Better Value, July 2012.

About Ammonoosuc Community Health Services (ACHS)

From its main office in Littleton, ACHS provides award-winning primary preventive healthcare to all in 26 rural New Hampshire communities, regardless of patients' social or economic status. The practice serves more than 10,000 patients from five locations with 80 employees and 18 healthcare providers, including physicians, nurse practitioners, and physician assistants. ACHS provide evidence-based, outcome-specific, systematic care that is patient-centered, prevention-focused, accessible and affordable for all.

About GE Healthcare

GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.

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