



Quality Matters

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A BIMONTHLY REPORT ON INNOVATIONS IN HEALTH CARE QUALITY IMPROVEMENT

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Welcome to *Quality Matters*, a bimonthly roundup of news and opinion on quality and efficiency, information technology, performance improvement initiatives, and policy innovations.

Strengthening the Primary Care Workforce to Meet Population Needs

By Sarah Klein

Summary: Finding viable strategies to ensure timely access to care for the newly insured is critical to achieving the goals of the Affordable Care Act, including those designed to improve the quality and coordination of care in the U.S. *Quality Matters* asked workforce experts to suggest ways to enhance access to care. Their answers ran the gamut from increasing the supply of providers to encouraging team-based care and leveraging the skills of nurse practitioners and other providers.

An estimated 16 million Americans are expected to join the Medicaid program in less than three years as a result of the health reform law, which reduces the number of uninsured Americans in part by adding them to the rolls of the safety net program.

The influx of newly insured patients will expand the Medicaid program by more than 25 percent, propelling it past Medicare in terms of total enrollment. Recognizing that this expansion—when coupled with the addition of 16 million other uninsured Americans to state-based insurance exchanges—will strain the capacity of the nation's primary care system, lawmakers added several provisions to the law that are designed to increase the number of primary care providers nationwide.

The provisions also take aim at the uneven distribution of primary care providers in the U.S., which creates barriers to accessing care for patients in both rural and inner-city communities. The provisions include: temporarily increasing payments to Medicaid providers to attract them to the program; providing additional support to federally qualified health centers, which often serve as a catch-all for patients without ready access to primary and specialty care physicians; and increasing educational funding for providers who pursue careers in primary care. The Affordable Care Act also established the National Health Care Workforce Commission to explore the complex economic

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and social forces that control both the supply and distribution of primary and specialty care providers in U.S.

While beneficial, some of these initiatives are long-term ones that are unlikely to address the looming access problems that Medicaid enrollees are expected to experience starting in 2014. Others may have little impact now or in the future. For instance, the Medicaid provider rate increase is not expected to change the size of the provider networks serving Medicaid enrollees, according to an analysis by the Washington, D.C.-based Center for Studying Health System Change. The center's [report](#) found states with workforce shortages are already paying providers rates equivalent to Medicare, as the health reform law dictates. Yet even with Medicare-level rates, those states are unable to attract sufficient numbers of providers because of workforce shortages. The report found the converse is also true: states that now pay Medicaid providers less than Medicare rates tend to have an adequate supply of primary care providers to meet patient demand. The authors of an [article](#) in the *New England Journal of Medicine* also found that states with the largest anticipated Medicaid expansions are also the ones that have less primary care capacity.

Expanding access through federally qualified health centers is problematic, too. The community health centers are likely to use the funding to fill existing staff shortages, not anticipated ones. "They can't even fathom in a year or two what they will do if there are millions added to the ranks of the insured," said Kavita Patel, M.D., M.P.H., managing director for clinical transformation and delivery at the Washington, D.C.-based Engelberg Center for Health Care Reform at the Brookings Institution and director of policy for the White House's Office of Intergovernmental Affairs and Public Engagement during passage of the health reform law.

Making the search for a solution more challenging, the experts appointed to the workforce commission to identify potential solutions to capacity issues are unable to meet because the law failed to provide funding to do so.

Seeking Solutions

Finding viable strategies to ensure timely access to care for the newly insured is critical to achieving the goals of the Affordable Care Act, including those designed to improve the quality and coordination of care in the U.S.

Quality Matters asked workforce experts—including Candace Chen, M.D., co-principal investigator of the [Medical Education Futures Study](#) at George Washington University School of Public Health and Health Services, and Catherine Dower, J.D., associate director for research at the University of California San Francisco's Center for the Health Professions—to suggest other ways to enhance access to care. Their answers ran the gamut from increasing the supply of providers to making primary care more attractive to physicians. The priorities they identified include:

- **Medical Education:** Changing the structure and/or funding of the graduate medical education system to ensure there is an adequate supply of primary care physicians to meet expanded need.
- **Appeal of Primary Care:** Enabling health plans and providers to pursue innovations that would make the experience of practicing primary care more satisfying and financially rewarding for providers. This may require permanently increasing both fee-for-service and capitated payments for providers.
- **Team-Based Care:** Encouraging through different means the practice of team-based care to free up time in provider schedules to see additional patients (see [Case Study](#)).
- **Leveraging the Skills of Nurse Practitioners and Other Providers:** Finding a mechanism that encourages health professionals to work at the top of their license. This could include changing scope-of-practice laws to enable nurse practitioners to work independently of physicians and thereby increase the supply of providers in states that now restrict the services advanced practice nurses can provide.

The last two options may provide the most rapid remedy to the crisis as changing graduate medical education funding to expand the pipeline of primary care trainees will take years if not decades to produce results. Similarly, innovations designed to improve the quality and efficiency of health care systems by increasing coordination between providers, such as accountable care organizations, are very promising but will take years to implement.

Team-Based Care

In contrast, initiatives to redesign medical practices so that delivering primary care becomes more attractive

to physicians—both professionally and financially—may produce faster results. [Capitol District Physicians' Health Plan](#), a physician-led health plan in upstate New York, did both through a practice redesign and quality improvement program that enabled it to pay primary care providers as much as \$65,000 more per year. The primary care practices in the pilot were paid a stipend of \$35,000 to create patient-centered medical homes and were eligible for additional bonuses of up to \$50,000 based on their performance on Healthcare Effectiveness Data and Information Set and utilization measures, including rates of hospitalization, emergency department visits, and imaging use.

A team-based approach to care was a key feature of the program. Participating practices increased the responsibilities of receptionists and nurses, enabling providers to focus on more complex cases. The system streamlined the process of delivering care so much that a physician who had once felt she couldn't recommend a career in primary care began precepting medical students again. Team-based care also enabled physicians to practice the way they would like and spend more time with patients when needed. "They don't think, 'I have to treat and street this person,'" said Bruce Nash, M.D., the health plan's chief medical officer. And at the end of the day, the doctor "isn't feeling like he got put through a meat grinder."

The program has been good for the bottom line as well. Quality and cost data from the trial are still being analyzed, but preliminary results suggest the program has reduced the rate of increase in medical costs by nine percentage points, or \$32 per member per month, compared with cost trends in the remainder of the plan's physician network.

A similar program was used by [North Shore Physicians Group](#), a multispecialty group practice with 76 employed community-based physicians who practice in the suburbs north of Boston, to make the practice of primary care more sustainable. The program stemmed from the recognition that "a primary care doctor in 2011 cannot possibly do everything we think they are supposed to do. We have to build a system that will help them accomplish all the routine screening, chronic disease management, and health coaching [that is required by the job]," said Beverly Loudin, M.D., M.P.H., North Shore's director of patient safety and quality.

As at the practices affiliated with Capitol District Physicians' Health Plan, North Shore Physicians Group restructured the primary care practices so that medical assistants, nurses, and nurse practitioners began working at the highest level of their training. As part of the redesign, medical assistants now spend 10 minutes with patients updating problem lists, entering vital signs, and teeing up screening tests, so the physicians can concentrate on tasks that require their expertise. Still in the testing stages, the program appears to be dramatically reducing the workload of primary care physicians. Loudin said one doctor went from taking two to three hours of work home every night to taking none. More important, physicians have greater security that patients' needs are being addressed. "They don't feel like they are missing things," she says.

While such programs have the potential to increase interest in primary care, as well as access to care, to the extent they free up time in provider schedules to see additional patients, they are not without challenges. Capitol District Physicians' Health Plan had to find a way to adjust its capitation payments for individual patients, a complex process that required significant investment. And extending the model has also proved challenging because the health plan must first obtain approvals of the new capitation model from state insurance regulators and government payers, a process that is slow going.

Leveraging Skills of Nurse Practitioners and Physician Assistants

Changing scope-of-practice laws is likely to have a more immediate effect on expanding the nation's supply of primary care providers than practice redesign. And states may be under increasing pressure to do so, as was Massachusetts when it mandated that residents obtain health insurance in 2006. With increased demand for services, patients soon had difficulty finding a doctor. The state changed its scope-of-practice law in 2008 to address the problem.

Efforts to change state laws to allow nurse practitioners to work separately from physicians and without direct physician supervision have met with resistance from the American Medical Association and other physician groups, which caution against such changes, citing concerns about patient safety. But Catherine Dower, J.D., associate director for research at the University

of California San Francisco's Center for the Health Professions and a member of the Institute of Medicine committee that authored the 2010 report, *The Future of Nursing: Leading Change, Advancing Health*, said states that have expanded scope of practice have not seen any significant patient problems or increases in malpractice claims. "Adopting those practice acts that are a little more expansive would not be detrimental to patient safety and would expand access," Dower said. "There is no real downside."

The Association of Community Affiliated Plans, whose members represent roughly 30 percent of Medicaid enrollees in managed care plans, reports that one-third of its members believe the restrictive nature of scope-of-practice laws is a problem, one that inhibits their ability to build provider networks.

In addition to modifying scope-of-practice laws, enhancing the role of physician assistants—many of whom provide primary care services under delegated authority from physicians—may be another means of raising the efficiency of primary care practices and thereby increasing access.

Ensuring Adequate Funding

Financing is its own constraint. The association of health plans is particularly concerned about states that are using budget constraints to limit Medicaid payments, payments the plans say are necessary to attract an adequate supply of providers. Margaret Murray, the association's executive director, says some states are applying very conservative actuarial standards to reduce capitation payments. The association is urging the Centers for Medicare and Medicaid Services to enforce existing actuarial soundness standards, which are intended to ensure payments to health plans are adjusted to changes in drug coverage and utilization patterns.

Ensuring adequate reimbursement to health plans to meet the needs of the Medicaid population is important not only to ensure network adequacy, but also to ensure health plans continue to serve underserved markets. "Because of payment in Medicaid we have not been able to expand [a program that requires providers to treat the Medicaid population] throughout the state," said Steven ErkenBrack, president and CEO of Rocky Mountain Health Plans, headquartered in Grand Junction, Colo.

ErkenBrack believes using global payment systems to encourage collaboration among providers will help, as will other efforts to bring together providers to figure out how to best meet the needs of the local population.

In the long run, accountable care organizations, which encourage collaboration between hospitals, physicians, and other providers, may also help. "Creating more integrated forms of care is certainly going to be a key part of the strategy to address the capacity issues and make things more efficient," said Peter Cunningham, director of quantitative research for the Center for Studying Health System Change.

The Pipeline: Graduate Medical Education

Many experts say the U.S. would benefit from revising the way it apportions medical residency slots to produce more primary care providers. Candice Chen, M.D., who in addition to her work on the Medical Education Futures Study is still a practicing pediatrician, said the U.S. might be better served by linking residency funding to community clinics and other outpatient settings that stress prevention, rather than inpatient facilities that promote acute care, as it now does. The Accountable Care Act sets aside \$230 million each year for five years to start and expand teaching health centers, the community-based ambulatory care centers that operate residency training programs, but the appropriation of that money—like other forms of mandatory spending in the law—is being challenged in Congress.

Another strategy for encouraging physicians to work in underserved areas would be to change the admission criteria for medical students. "I would change the whole process [of admissions]," said David Nash, M.D., M.B.A., dean of the Jefferson School of Population Health at Thomas Jefferson University. At present, many medical schools rely heavily on Medical College Admission Test Scores and undergraduate records to select their students. The result is the administrators "reproduce in their own image," Nash said. While test scores and grades are still important, schools would benefit from considering non-science majors and those with training in analytical thinking for admission, he said.

Some educators believe market forces will also help. "Students are pretty good at reading the tea leaves. They have heard a signal that health care reimbursement and

how we do health care is going to change,” said Richard D. Krugman, M.D., dean of the University of Colorado School of Medicine and a member of the National Health Care Workforce Commission. “I am generally optimistic. I think people fill vacuums when they exist.”

The 2011 National Resident Matching Program provided a promising sign in March. A report on the match program showed an 8 percent increase from last year in the number of medical students enrolling in an internal

residency program, the second consecutive year that internal medicine enrollment has increased. While welcoming the news, the American College of Physicians cautioned that the percentage of graduates choosing to specialize in internal medicine in 2011 is the same as it was in 2007, and the total number of such students is down significantly from 1985 levels. This suggests it may take a combination of market forces, policy changes, and private sector innovation to solve the problem.

Case Study: Legacy Clinic Emanuel—Increasing Access and Efficiency Through Team-Based Primary Care

Summary: *The implementation of a patient-centered medical home model at Legacy Clinic Emanuel, a safety net primary care clinic in Portland, Oregon, illustrates some of the benefits of a team-based care. The clinic assigns patients to primary care teams, including physicians, nurses, and medical assistants, which rely on a separate support team to help handle administrative duties, referrals, and outreach tasks. Team members use chart reviews, daily huddles, care protocols, and performance feedback to ensure the delivery of appropriate care. The new model has resulted in increased access, greater productivity, and improved care.*

By Martha Hostetter

Issue

Building interdisciplinary care teams—with greater roles for nurse practitioners, nurses, medical assistants, social workers, receptionists, and other support staff—is often viewed as a means of expanding the capacity of the primary care workforce.¹ Such care teams may help ensure that the millions of Americans who are extended coverage under the Affordable Care Act have access to high-quality care. The federal health reform law promotes team care through its support for medical homes, primary care extension centers, accountable care organizations,

and other types of collaboration. Still, there are few practical models to follow.

Organization and Leadership

Legacy Clinic Emanuel is one of the safety net primary care clinics involved in the [Safety Net Medical Home Initiative](#), a demonstration program supported in part by The Commonwealth Fund. The program provides technical assistance, training, and support to 65 community health centers that are transforming themselves into patient-centered medical homes.

Legacy Clinic Emanuel, located in Portland, Ore., is part of [Legacy Health](#), a system that includes six hospitals, 17 primary care clinics, and a number of specialty practices in the Portland and Vancouver, Wash., area. Legacy Emanuel provides primary care to more than 14,000 patients a year, 30 percent of whom are covered by the Medicaid program. The remaining patients are covered by private insurance (35%), Medicare (25%), or are uninsured (10%). Patients are drawn from culturally diverse neighborhoods in northeast Portland, which include many low-income and homeless individuals. The clinic also serves as a teaching facility, drawing medical residents from area schools.

Jackie Ross is the project manager for Legacy Health's medical home initiative. Melinda Muller, M.D., is the health system's clinical vice president for primary care. Maryna Thompson, R.N., is Legacy Emanuel's clinic

manager and Prasanna Krishnasamy, M.D., is one of its faculty physicians.

Process of Change

In 2007, Legacy Health launched a program to transform its 17 primary care clinics into medical homes that use a team-based model of care (an effort that predated Legacy Emanuel's involvement in the Safety Net Medical Home Initiative). Legacy Emanuel was the original pilot site for this project. Four other Legacy sites representing diverse practice types launched medical homes later that year: Legacy Good Samaritan, like Legacy Emanuel, is a safety net clinic; Legacy Northeast and Legacy Northwest both serve mostly privately insured patients; and Legacy St. Helens is a rural health care facility. As of April 2011, 10 of Legacy Health's clinics had adopted the medical home model. The remaining seven will implement it by September 2011.

Initial funding for the pilot program came from CareOregon, the local Medicaid managed care organization, which encouraged Portland-area health care professionals to adopt a model of care instituted by Alaska's Southcentral Foundation that emphasizes team-based care, proactive panel management, patient-centered care, advanced access, and behavioral health integration.²

During the second year of the pilots (2008), the local Blue Cross Blue Shield plan provided additional funding to support the transition to medical homes. By December 2010, CareOregon and Blue Cross Blue Shield funding had been discontinued, but the workforce changes at the clinics had become partially self-supporting due to additional revenue from increased productivity and pay-for-performance incentives (see Results).

The initial funding enabled Legacy Emanuel to hire a social worker and a team assistant to perform clerical duties such as faxing, filing, and chart review. The clinic then formed three primary care teams. One team includes three medical assistants, two registered nurses, and five physicians—all of whom are faculty members. The other two primary care teams each include 13 medical residents and a registered nurse. Those two teams share four medical assistants among them.

All of the primary care providers are assisted by a support team, which includes a clinical pharmacist, referral

coordinator, social worker, community outreach specialist, and team assistant. By offloading many administrative and care coordination duties to the support team, clinicians have more time to focus on patient care. They also have help with common challenges such as making timely referrals to specialists and tracking down unresponsive patients. All care team members provide mutual support and redundancies to ensure that appropriate steps are taken. "By spreading out the work, fewer things fall through the cracks because there are more eyes paying attention," says Muller. "The patients then get the care they need, which should help avoid complications in the future."

Legacy Emanuel's patients are assigned to one of the three primary care teams, enabling clinicians to build relationships with patients and provide more continuous care. The social workers from the support teams tend to have frequent contact with patients and encourage them to seek out help when needed. Medical assistants and nurses who anchor the core primary care teams help compensate for the fact that medical residents spend a limited amount of time at the clinic.

Legacy Emanuel used Plan-Do-Study-Act (PDSA) cycles and Lean methodology to launch the care teams and study and improve workflow. For example, it followed a PDSA cycle to increase screening rates for diabetes and depression, common conditions among their patients. The PDSA approach was used to develop care protocols for diabetes, pain management, and other conditions—enabling nurses and medical assistants to order tests, draw lab work, and follow other prescribed steps without having to check with physicians each time. Front office staff, medical assistants, and nurses also administer diabetes and depression screening instruments before visits and notify clinical staff and resource specialists if the results indicate problems.

Before each visit, primary care teams use a screening tool that summarizes preventive care and chronic care treatments that have been completed and acts as a "tickler" to prompt orders for needed follow-up care (Exhibit 1). The goal of team care is to treat the "whole person," says Ross, and to "do as much as you possibly can during the visit. Some of these patients don't have working phones, so we can't contact them, and some don't have homes where we can send reminders." The primary care teams

Exhibit 1: Legacy Emanuel: Pre-Visit Screening Tool

Add Sticker Here		POLST/DNR, advanced directive:	
Patient:			
DOB:		Pharmacy:	
Provider:		Living Situation:	
		PHQ9 Date:	
Tests/Labs General	Date:	PHQ9 Score:	
Colonoscopy- over 50, then q 10 yrs			
DEXA scan women >65 or postmeno			
Mammogram/breast exam (40-75)			
Pap Smear (up to age 65)			
PSA/rectal exam			
TSH- annual (women > 60)			
Vitamin D level			
Tests/Labs- Diabetic patients			
ASA			
Eye Exam			
Foot Check- monofilament/ annual			
HgbA1c- within 6 months			
Lipid Panel- annual			
Urine Microalbumin			
Vaccinations			
Flu Shot- annual			
Hepatitis A/B			
Pneumovax			
Tetanus Shot Tdap or TD if >63			
Zostavax >60			
Pain Medication Management			
Is Patient on controlled substance?			
Documented Med agreement within last 12 months?			
Date of last UDS			
Other			
Has patient fallen or had near miss since last visit?			
Gait observation: Steady or unsteady			
Medication list reviewed?			
Source: Legacy Health, 2011			

also have daily “huddles,” or short meetings at the beginning or end of each day to review procedures and prepare for the next group of patients.

Legacy Emanuel collects a large amount of data on care processes, access to care, emergency department visits and hospitalizations among their patients, and outcomes (see Results). These reports are regularly discussed by the care teams and presented at monthly clinic managers’ meetings.

Results

Increased Productivity, Reduced Costs to Payers

Team care has enabled Legacy Emanuel to increase productivity and earn enough additional revenue to offset the costs of the two additional staff members. In 2008 and 2009, it had 10 percent more patient visits—including new patients as well as increased numbers of visits from existing patients—than before adopting team care. It has also earned additional revenue by increasing the provision of recommended laboratory tests and immunizations.

In addition, the team care model has saved money for Medicaid and other payers by reducing the number of emergency department visits and hospitalizations. During 2008 and 2009 across Legacy Health’s five

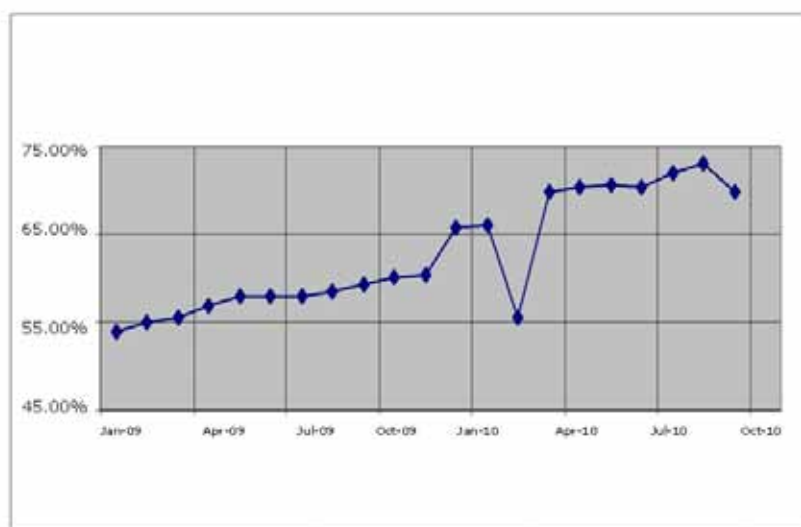
original medical home pilot sites, including Legacy Emanuel, there were 2,273 fewer emergency department visits, \$2.1 million less in emergency department charges, 125 fewer inpatient stays, and \$3.1 million less in hospital charges. These decreases compare with system-wide increases of 8 percent in emergency department charges and 2 percent in hospital charges during the same time period. (Data are not available on the decreased acute care charges among Legacy Emanuel patients only.)

For Legacy Health’s uninsured and Medicaid patients, the reduction in acute and emergency care means that the health system has reduced its burden of unreimbursed care. For other patients, fewer hospitalizations and complications do mean lost revenue, however. “The senior leadership of Legacy believes in the concept [of medical homes] and the way health care reform is moving so much that they are willing to tolerate this to position us for the future,” Muller says.

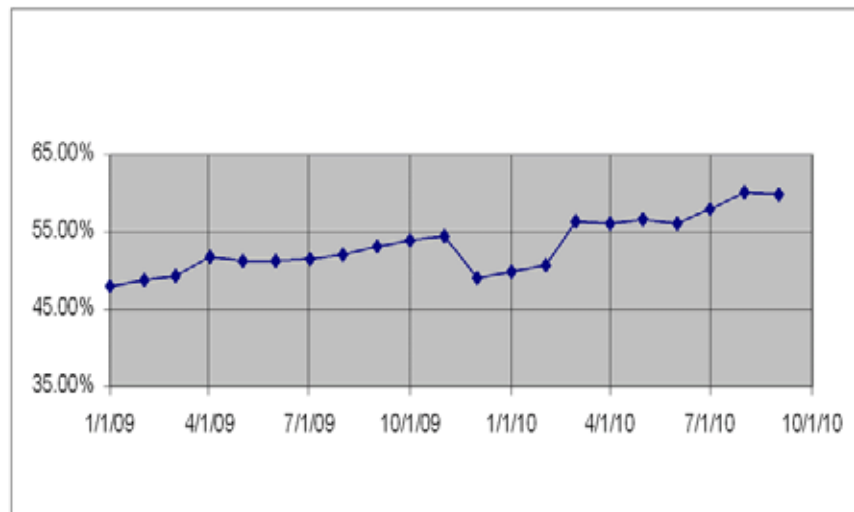
Improved Care

Legacy Emanuel is participating in a pay-for-performance program with CareOregon. Clinics receive additional funds for meeting or exceeding benchmark levels, or for increasing their performance by three percentage points or more, on process-of-care measures (e.g.,

Exhibit 2: Pap Tests Delivered at Legacy Emanuel, 2009–10



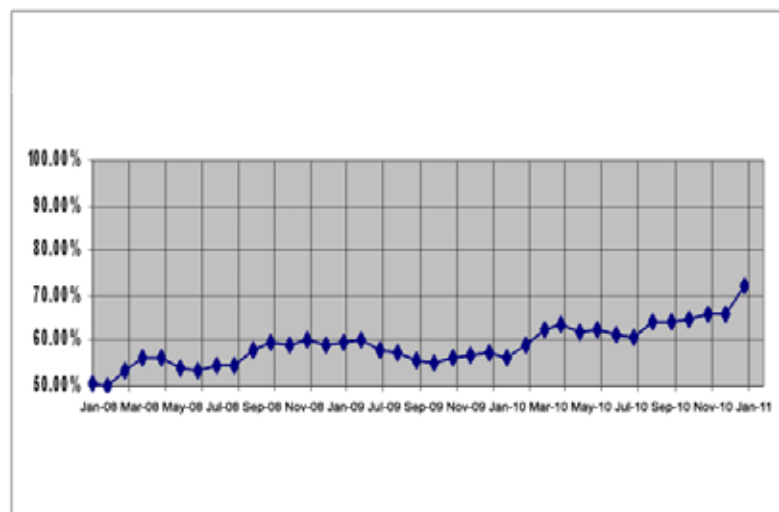
Source: Legacy Health, 2011. Notes: Patient pool includes female patients ages 21 to 64 who received Pap test within past three years. A “December dip” for receipt of recommended care procedures has been observed across Legacy clinics, perhaps due to holiday schedules and/or illnesses.

Exhibit 3: Mammogram Tests Delivered at Legacy Emanuel, 2009–10

Source: Legacy Health, 2011. Notes: Patient pool includes female patients ages 50 or older who have received mammography within past two years. A "December dip" for receipt of recommended care procedures has been observed across Legacy clinics, perhaps due to holiday schedules and/or illnesses.

mammography testing, depression screening, tobacco screening), outcomes (e.g., diabetes and hypertension control), and indicators of access to and continuity of care (e.g., number of days until next-available appointment, the percent of appointments that take place with members of patients' designated care teams). As a result of improved performance on such measures, Legacy Emanuel began earning additional Medicaid payments in 2010 and has thus far received \$77,000.

For example, Legacy Emanuel has provided more patients with timely recommended care such as Pap tests and mammograms (Exhibits 2 and 3). Team care also seems to have enabled Legacy clinicians to keep better track of their patients and follow up with those whose chronic conditions are not under control. Thus far, the clinic has documented improvements in outcomes for diabetes patients, for whom care protocols were adopted in 2010 (Exhibit 4).

**Exhibit 4: HbA1c Levels Among Legacy Emanuel Diabetes Patients, 2009–11
Proportion with Levels Below 8 Percent**

Source: Legacy Health, 2011.

In addition, clinical staff now use a more rigorous process for following up with patients after hospitalizations or emergency department visits. Calls to such patients among all five of the pilot sites had increased by 30 percent by the end of 2010.

Patient, Staff, and Provider Satisfaction

Based on a survey fielded from October through December 2010, patients appear to be satisfied with the care they receive at Legacy Emanuel. They report having relatively good access to care, though there is room for improvement. Seventy-five percent of patients said they were able to be seen for immediate care when needed, 64 percent said they were able to make timely appointments for routine care, and 58 percent said they had been seen within 15 minutes of their scheduled visit time. Most respondents said that their doctors listen to them carefully (90%), give understandable instructions (88%), have knowledge of their medical history (88%), show respect for them (94%), and spend enough time with them during visits (82%). And fully 94 percent of patients said they would recommend the practice to others. (Comparable data prior to the implementation of team care are not available.)

Legacy Emanuel's clinicians and support staff have noted several improvements associated with team care and the broader medical home model. At a January 2011 focus group that included the clinic manager, medical assistants, administrative staff, a behavioral health provider, a pharmacist, and a registered nurse, participants pointed to the following benefits: being able to proactively identify patients that need chronic care management; using the screening tool to anticipate patients' needs; having regular communication among team members; using a workflow team; and enabling patients to build relationships with their providers.

Lessons and Implications

The patient-centered medical home model, with team-based care at its heart, can increase productivity at primary care practices and expand access to care.

Legacy Emanuel has been able to expand access to high-quality care by relying on multidisciplinary teams and support staff to treat greater numbers of patients and deliver more recommended care. It has also benefited from

having its reporting requirements to a major payer—Medicaid—aligned with incentives to improve through a pay-for-performance program. This model of collaboration shows that Medicaid can play an important role in promoting team care models that improve the quality and efficiency of care.

There also appears to be a business case for health care purchasers to encourage team care. Since Legacy Health clinics have adopted care teams that seek to proactively manage patients' care and avoid complications, CareOregon and other payers have avoided significant acute care costs.

Team-based care has the potential to improve care processes and outcomes.

Now in its fourth year of working as a team, Legacy Emanuel's primary care staff have systems for monitoring patient care, proactively managing chronic conditions, and keeping each other informed—resulting in increased delivery of recommended care and some improvement in health outcomes.

Legacy Emanuel has been able to cultivate strong care teams in spite of its challenges as a safety net provider—with many hard-to-reach and complex patients—and its status as a teaching facility with frequent turnover among medical residents who are themselves still learning how to provide basic care.

“You need to get everyone in the same room together regularly to understand the issues and work on problems from many vantage points,” says Muller. “Each team member has a slightly different perspective on what's going on and how to solve it. Unless you have each of those voices represented at the table, you won't create a solution that works for everyone.”

Muller also notes the importance of capturing data on the effects of changes in real time to demonstrate the effectiveness of team care and facilitate targeted improvement efforts. “It doesn't have to be perfect but has to be good enough to be trusted,” she says. Legacy Health is in the process of implementing the Epic electronic medical record system across its 17 clinics. Once this system is in place, it will be easier for staff to track different patient populations and identify gaps in care.

Team members should be given opportunities to work to their full potential.

Legacy Emanuel has succeeded in part by encouraging its core clinical staff—medical assistants and nurses—to stretch their skills and pursue new opportunities. For example, medical assistants now do much more than greet patients and take their blood pressure; they have been involved in spreading the team model to other clinics and are being trained to act as health coaches. Nurses, too, have embraced new roles as care managers. The hope is that giving staff challenging roles and opportunities for growth will improve their work life and thus increase retention.

“Moving to team care is not a top-down approach,” says Ross. “We definitely need front office and medical assistant staff to buy in. If they make changes, it makes it easier for providers and makes the benefits more visible to patients.”

For team care to succeed, patients need to be educated about the model and consulted on how well it is working for them.

Legacy Emanuel fields quarterly patient satisfaction surveys and plans to hold a focus group to elicit further feedback from patients. It is also creating informational materials to educate patients about the team care model.

“Our staff are really good at explaining who they are, what role they play on the team, and giving out their cards so that patients know who to contact in various situations,” says Ross. Team care has resulted in reduced call volume at Legacy Emanuel (and at all of the other medical home sites), indicating that patients know which providers to call for their particular needs and are more often able to reach them on the first attempt.

There is a need for practical guidance about how to form care teams and training to develop the competencies needed to work on them.

Legacy Health will roll out the medical home model to its seven remaining primary care clinics later this year. Based on the lessons learned, the health system’s leaders plan to provide more detailed explanations of team members’ roles at the outset and standardize the change process. Specifically, within one month clinics will be required to have biweekly team meetings to discuss the changes and a workflow team to focus on implementing team care. Clinicians will also have to use the screening tool and hold team huddles.

Legacy Emanuel team members also suggest that teamwork could be promoted through the creation of internships to partner new employees with senior staff, and through communication among different health clinic teams to discuss best practices.

For Further Information

Jackie Ross, project manager, medical home, Legacy Health, at jaross@lhs.org.

Notes

- ¹ See for example: K. G. Shojania, S. R. Ranji, K. M. McDonald et al., [Effects of Quality Improvement Strategies for Type 2 Diabetes on Glycemic Control: A Meta-Regression Analysis](#), *Journal of the American Medical Association*, December 13, 2006 296:427–40.
- ² S. Klein and D. McCarthy, [CareOregon: Transforming the Role of a Medicaid Health Plan from Payer to Partner](#), The Commonwealth Fund, July 2010.

News Briefs

New Initiative Targets Hospital Errors, Readmissions

On April 12, Health and Human Services Secretary Kathleen Sebelius announced the creation of a national public-private initiative aimed at reducing the number of preventable injuries and complications in patient care over the next three years—potentially saving some 60,000 lives and up to \$35 billion in health care costs. Two of the goals of [Partnership for Patients](#) are to decrease preventable hospital-acquired conditions by 40 percent over three years ending in 2013 and to reduce all hospital readmissions by 20 percent over the same period.

The partnership, which has already attracted support from 500 organizations, seeks to focus hospitals, medical professional associations, employers, and consumer groups on preventing adverse drug reactions, pressure ulcers, childbirth complications, surgical site infections, and other safety problems for which there are evidence-based prevention strategies. The federal government will make \$1 billion available to promote such innovations, funds that were allocated through the Affordable Care Act.

This announcement comes on the heels of a new [study](#), published in the April 11 issue of *Health Affairs*, that found one of three patients will encounter some type of medical error during a hospital stay—a much higher number than previously estimated. Most efforts to detect medical errors rely on voluntary reporting and the use of the Agency for Healthcare Research and Quality's Patient Safety Indicators. The new study compared these two methods against the Institute for Healthcare Improvement's Global Trigger Tool, which relies on careful review of patient charts to identify "triggers," such as medication stop orders or abnormal lab results, that may point to an adverse event. When used to examine the same set of medical records from three different hospitals, the three methods produced dramatically different results: voluntary reporting detected four problems, the Patient Safety Indicators found 35 problems, and the global trigger tool detected 354 events.

Hospital Compare Adds Data on Hospital-Acquired Conditions

Early this month, the Centers for Medicare and Medicaid Services (CMS) added data on the number of hospital-acquired conditions occurring at hospitals across the country to its Web site, [Hospital Compare](#). The eight conditions being tracked are:

- foreign object retained after surgery;
- air embolism;
- blood incompatibility;
- pressure ulcer stages III and IV;
- falls and trauma;
- vascular catheter-associated infection;
- catheter-associated urinary tract infection; and
- manifestations of poor glycemic control.

The data show the number of such conditions at each hospital per 1,000 discharges for Medicare fee-for-service patients between October 2008 and June 2010. They are not adjusted to account for the mix of patients being treated. The conditions were selected because they result in high costs to Medicare and/or occur frequently during hospital stays. Evidence suggests that such conditions can typically be prevented by following evidence-based care guidelines.

Large Medical Groups Launch Data-Sharing Project

On April 6, five large medical groups—Geisinger Health System, Kaiser Permanente, Mayo Clinic, Intermountain Healthcare, and Group Health Cooperative—launched the [Care Connectivity Consortium](#) to securely exchange electronic health information on their patients. While there are already several initiatives designed to share such information using local and regional electronic exchanges, this effort is much larger in scale and involves sharing data on millions of patients across several states.

The number of patients who will seek care from more than one of these providers—thus necessitating exchange of their medical records—is likely to be small, because there is little geographic overlap in their systems. Still, the privacy and security standards used for the data exchange and the solutions to creating an interoperable platform across each system's existing electronic health records will provide an important model for

others working to create health information exchanges. Eventually, the consortium hopes to attract other provider organizations to expand its reach and demonstrate the concrete improvements in health care quality that can result from the timely distribution of clinical information across providers.

Proposed Rules on ACOs Released

On March 31, CMS released much-anticipated proposed rules for creating accountable care organizations (ACOs), a new type of provider group (involving hospitals, physician groups, nursing homes, and others involved in patient care) authorized under the Affordable Care Act.

ACO participants, who are supposed to work together to manage care for a defined population of Medicare patients, stand to benefit from lowering overall health care costs while meeting performance standards. CMS is soliciting public comment on the proposed rules by June 6, after which a final rule will be promulgated. The ACO program will be launched on January 1, 2012.

The 492-page document provides guidelines on provider eligibility, legal requirements, governance requirements, leadership and management structure, applicants' plans to promote evidence-based care and engage patients, public reporting, and the shared savings payment methodology.

Publications of Note

Principles for a Pay-for-Outcomes System for Inpatient Care

To provide a foundation for developing a practical and effective payment system that rewards hospitals for achieving desired health outcomes rather than adhering to process-of-care guidelines, the authors of this article suggest eight guiding principles. Among others, they include: focusing on outcomes for which a quality failure results in an increase in payment; using financial incentives that are substantial enough to induce behavioral change; basing outcome standards on empirically derived performance levels that have been achieved by best-performing hospitals; and adjusting performance measures to account for a patient's severity of illness. R. F. Averill, J. S. Hughes, and N. I. Goldfield, "Paying for Outcomes, Not Performance: Lessons from the Medicare Inpatient Prospective Payment System," *Joint Commission Journal on Quality and Patient Safety*, April 2011 37(4):184–92.

Palliative Care Reduces Time and Costs of Intensive Care

Researchers studying the effect of palliative care team consultations on hospital costs for patients enrolled in Medicaid at four New York State hospitals found that on average patients who received palliative care incurred \$6,900 less in hospital costs during a given admission than a matched group of patients who received usual

care. These reductions included \$4,098 in hospital costs per admission for patients discharged alive, and \$7,563 for patients who died in the hospital. Palliative care recipients spent less time in intensive care, were less likely to die in intensive care units, and were more likely to receive hospice referrals than the matched usual care patients. R. S. Morrison, J. Dietrich, S. Ladwig et al., "The Care Span: Palliative Care Consultation Teams Cut Hospital Costs for Medicaid Beneficiaries," *Health Affairs*, March 2011 30(3):454–63.

Ability of Providers to Predict Readmissions Poor

A study designed to evaluate how well physicians, case managers, nurses, and a standardized risk tool predict whether their older patients would be readmitted to the hospital found that providers' ability to do so was poor, as was the accuracy of the risk tool. Physicians' mean readmission predictions were closest to the actual readmission rate, while case managers and nurses overestimated the number of likely readmissions. The study, which also found overall readmission rates were higher than previously reported, concluded that hospitals do not have accurate predictive tools to identify patients at the highest risk of readmission. N. Alladeen, J. L. Schnipper, E. J. Orav et al., "Inability of Providers to Predict Unplanned Readmissions," *Journal of General Internal Medicine*, Online article March 11, 2011.

Medical Home Demonstration Identifies Obstacles to Team-Based Care

A report on the nation's first national medical home demonstration found the process of transforming 36 mostly small independent practices into medical homes was lengthy and complex. Practices were successful in implementing discrete components of the model that could be adopted with minimal impact on individual roles and other practice processes, but encountered difficulty when implementing components that required fundamental changes in established routines and coordination across workgroups. P. A. Nutting, B. E. Crabtree, W. L. Miller et al., "Transforming Physician Practices to Patient-Centered Medical Homes: Lessons from the National Demonstration Project," *Health Affairs*, March 2011 30(3):439–45.

Low Nursing Levels Associated with Increased Mortality

A study that relied on data from a large tertiary academic medical center found there was a significant association between increased mortality rates and increased exposure to shifts during which staffing by registered nurses was eight hours or more below the target level. The association between increased mortality and high patient turnover was also significant. J. Needleman, P. Buerhaus, S. Pankratz et al., "Nurse Staffing and Inpatient Hospital Mortality," *New England Journal of Medicine*, March 2011 364(11):1037–45.

Higher Spending Linked to Lower Inpatient Mortality

Researchers studying the association between hospital spending and risk-adjusted inpatient mortality in California hospitals found that for each of six diagnoses on admission—acute myocardial infarction, heart failure, acute stroke, gastrointestinal hemorrhage, hip fracture, and pneumonia—patient admission to higher-spending hospitals was associated with lower risk-adjusted inpatient mortality rates. The association between hospital spending and inpatient mortality did not vary by region or hospital size. J. A. Romley, A. B. Jena, D. P. Goldman et al., "Hospital Spending and Inpatient Mortality: Evidence from California: An Observational Study," *Annals of Internal Medicine*, Feb. 2011 154(3):160–67.

Racial Disparities Evident in Hospital Readmission Rates

A study designed to determine whether black patients have higher odds of readmission than white patients and whether these disparities are related to where black patients receive care found that, overall, black patients had higher readmission rates than white patients (24.8% vs. 22.6%) and that patients from hospitals serving disproportionate numbers of minority patients had higher readmission rates than those from hospitals that do not (25.5% vs. 22.0%). Among patients with acute myocardial infarction, black patients from hospitals serving disproportionate numbers of minority patients had the highest readmission rate (26.4%). Patterns were similar among those with heart failure and pneumonia. The results were unchanged after adjusting for hospital characteristics, including markers of caring for poor patients. K. E. Joynt, E. J. Orav, and A. K. Jha, "Thirty-Day Readmission Rates for Medicare Beneficiaries by Race and Site of Care," *Journal of the American Medical Association*, Feb. 2011 305(7):675–81.

Commentary Urges CMS to Use Caution in Holding Hospitals Accountable for Readmission Rates

A commentary published in the *Journal of the American Medical Association* outlined some of the challenges of using hospital readmissions as a proxy for poor-quality inpatient and outpatient care and poor care transitions. It also urged the Centers for Medicare and Medicaid Services (CMS) to use caution when adjusting payments to hospitals according to their rate of excess or expected Medicare readmissions for pneumonia, acute myocardial infarction, and heart failure, which CMS will begin doing in 2013. The authors also expressed concern about the validity of measures used to identify preventable readmissions and recommended that CMS develop process-of-care measures that document adherence to evidence-based practices such as high-quality medication reconciliation, telephone follow-up, or use of nurse-directed case management services. They also recommend making adjustments to ensure that hospitals caring for a high proportion of minority or economically disadvantaged patients are not unfairly punished by the proposed value-based payment program based

on readmission rates. R. N. Axon and M. V. Williams, “[Hospital Readmission as an Accountability Measure](#),” *Journal of the American Medical Association*, Feb. 2011 305(5):504–5.

Community-Based Program Reduces Hospital Admissions for Heart Disease

A community-based health promotion and prevention program in Canada that invited residents ages 65 or older to attend volunteer-run cardiovascular risk assessment and education sessions held in local pharmacies over a 10-week period resulted in 3.02 fewer annual hospital admissions for cardiovascular disease per 1,000 people. As part of the program, automated blood pressure readings and self-reported risk factor data were collected and shared with participants and their family physicians and pharmacists. Statistically significant reductions favoring the intervention communities were seen in hospital admissions for acute myocardial infarction and heart failure, but not for stroke. J. Kaczorowski, L. W. Chambers, L. Dolovich et al., “[Improving Cardiovascular Health at Population Level: 39 Community Cluster Randomised Trial of Cardiovascular Health Awareness Program \(CHAP\)](#),” *BMJ*, published online Feb. 7, 2011.

Authors Caution ACOs Pose a Monopoly Hazard

This commentary published in the *Journal of the American Medical Association* outlined the authors’ concerns that accountable care organizations (ACOs) that join competing health care organizations may have dangerous market power and deserve heightened—and not relaxed—antitrust attention. The authors argue that ACOs should be allowed to integrate organizations vertically, but horizontal combinations should not be allowed unless affected submarkets have an ample number of effective competitors. The commentary suggests that antitrust authorities or Medicare should impose a preapproval process to prevent the formation of ACOs that concentrate market power. Medicare should also require ACOs to meet national standards of efficiency in serving private and Medicare patients, they say. B. D. Richman and K. A. Schulman, “[A Cautious Path Forward on Accountable Care Organizations](#),” *Journal of the American Medical Association*, Feb. 2011 305(6):602–3.

Mortality Rates Reduced by Initiative to Cut Hospital-Acquired Infections

An evaluation of the Michigan Keystone ICU project, a comprehensive statewide quality improvement initiative focused on reduction of hospital-acquired infections, found the program was associated with a significant decrease in hospital mortality rates in Michigan, compared with the surrounding area. Reductions in mortality were significantly greater for the study group (95 hospitals) than for the comparison group (364 hospitals) up to 22 months after the implementation of the project. Length of stay did not differ significantly between the groups. A. Lipitz-Snyderman, D. Steinwachs, D. M. Needham et al., “[Impact of a Statewide Intensive Care Unit Quality Improvement Initiative on Hospital Mortality and Length of Stay: Retrospective Comparative Analysis](#),” *BMJ*, published online Jan. 31, 2011.

Education and Auditing Help to Reduce Hospital-Acquired Infections

To determine the effectiveness of a quality improvement program designed to increase delivery of evidence-based practices in intensive care units (ICUs), researchers introduced audit and feedback tools and expert-led education sessions. The greatest improvement was in the use of a practice to prevent ventilator-associated pneumonia—semi-recumbent positioning (90% of patient days in the last month of the intervention versus 50% in the first month)—and the use of precautions to prevent catheter-related bloodstream infections. Providers adhered to all seven components of the catheter insertion bundle for 70 percent of patients receiving central lines in the last month of the intervention versus 10 percent in the first month. Adoption of other practices changed little. D. C. Scales, K. Dainty, B. Hales et al., “[A Multifaceted Intervention for Quality Improvement in a Network of Intensive Care Units: A Cluster Randomized Trial](#),” *Journal of the American Medical Association*, Jan. 2011 305(4):363–72.

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