Dear Colleague,

The mission of NEJM Catalyst is to bring clinical leaders, clinicians, and health care executives together to share innovative ideas and practical applications for improving health care delivery. Guided by a network of experts and advisors, our daily digital publication, quarterly events, and qualified Insights Council help individuals and organizations address the urgent challenges of health care today.

This collection of original content from NEJM Catalyst highlights our research insights on patient engagement and the training requirements of physician leaders; authoritative, approachable commentaries on electronic interoperability and digital health products; a graphical summary of the impact of health insurance; a case study of how the largest public health care system in the United States integrates mental health into primary care; lessons on using Patient-Reported Outcome Measures (PROMs) from a leading practitioner; a new model of physician compensation tailored to today’s fast-changing health care environment; and a first-person account of how a large Florida health system dealt with a powerful hurricane.

We invite you to enjoy this collection, read new content every weekday at Catalyst.NEJM.org, and sign up to receive our free newsletters and events.

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Redefining Health Care Delivery —
Insights, Ideas, and
Practical Applications

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Patient Engagement Survey: How to Hardwire Engagement into Care Delivery Processes

Insights Report · July 10, 2017
Kevin G. Volpp, MD, PhD, and Namita Seth Mohta, MD
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Analysis of the fourth NEJM Catalyst Insights Council Survey on Patient Engagement. Qualified executives, clinical leaders, and clinicians may join the Insights Council and share their perspectives on health care delivery transformation.

Advisor Analysis

For patient engagement to be truly effective, it must be integrated into the core of health care delivery processes. While newer options for patient engagement solutions are emerging, including tapping into a patient’s social network and gathering data from remote and wearable devices, our latest NEJM Catalyst Insights Council survey finds that most organizations still expect health care teams to do the heavy lifting.

Nearly two-thirds (63%) of Council members list “care teams devoted to complex patients” as their top approach to embedding patient engagement strategies into care delivery. Health care teams outpace patient engagement technology tools (e.g., remote devices) and social networks (e.g., with other patients), which 44% and 24% of respondents say their organizations use, respectively. Our respondents also say care teams are the most effective method of engaging patients, with a combined 91% calling them extremely effective, very effective, or effective. Patient engagement technology rates second, with a total of 72%.

More than half of respondents (59%) believe that effective patient engagement strategies have a major impact on quality of care, and 40% believe they have a major impact on cost of care.
As health care delivery organizations continue their efforts to positively influence patient engagement, they would ideally have care teams bear less of the load while technology tools and social networks provide more support. In support of this shift, survey respondents say “time investment by health care team” is the biggest challenge (indicated by 63%) in incorporating patient engagement into care delivery.

Patients are the most important participant in design efforts, Insights Council members say by a large margin (chosen by 91%). However, more than half (54%) cite patient adoption as the biggest design challenge.

So how do you get patients to take part in care design while also alleviating some of the time pressure on health care providers? (Nurses and care teams are considered the second most important participant in patient engagement design, at 63% of respondents, followed by physicians at 58%).

Organizations must learn to better leverage patient engagement technology and social networks. The health care team approach is personnel-heavy, making it costly to sustain.
By using technology tools and social networks, that cost can be reduced while improving quality of care. And, when care delivery is designed well, patients are positioned to advocate effectively for their own care.

As one of us (KV) wrote in the *New England Journal of Medicine* in 2012, “Wireless technologies that can provide a kind of ‘automated hovering’ offer considerable promise in this area, in part because they may be less expensive and allow for easier daily monitoring and feedback than approaches involving clinical personnel.”

Two studies co-authored by KV, using financial incentives to promote patient adherence, show the value of a more patient-centered approach. One study involved peer mentoring for African American veterans with diabetes; the other studied home health monitoring for patients with poorly controlled diabetes through wireless devices to measure glucose, blood pressure, and weight. In both instances, patient adherence increased and health outcomes improved — with minimal extra work from clinicians.

Insights Council members, in their verbatim responses to the survey, acknowledge their desire for technology tools and social networks to play a greater role in patient engagement. “I would incorporate the patient/family into all education processes related to care,” one respondent says. Another says organizations should “enable patients to contribute directly to their record and help curate their charts.”

The relatively low adoption of technology tools (indicated by 44% of respondents) and social networks (24%) within health care organizations constitutes a tremendous opportunity for improvement, which we expect to see in the near term. Most organizations have yet to use these approaches to a high degree. We expect that as they embrace these approaches, the task of fostering patient engagement will be better shared among health care teams, family and friends, and technology.
VERBATIM COMMENTS FROM SURVEY RESPONDENTS

If you as an individual could do one thing to improve patient engagement in your organization’s processes, what would it be?

“Be direct. Don’t assume. Ask the patients how to improve patient engagement. Do this in person, not by a survey.”
— Clinician at a mid-sized teaching hospital in the South

“The only thing that may be more [important] than the physician-patient relationship and TIME to develop that relationship may be financially incentivizing patients by insurance companies to develop more healthful lifestyles and habits, and improving mental health resources.”
— Clinician at a small for-profit clinic in the mid-Atlantic region

“Change the incentives from mostly medical to behavioral, environmental incentives.”
— Director of a small for-profit provider in New England

Charts and Commentary

We surveyed members of the NEJM Catalyst Insights Council, comprising health care executives, clinical leaders, and clinicians, about current trends in hardwiring patient engagement into care delivery processes. The survey covers various approaches to embed patient engagement solutions into care delivery, and rates their effectiveness; the most important participants and the biggest challenges in efforts to design patient engagement into care delivery; the most valuable means of capturing patient input; the most effective patient engagement tools, programs, and technologies; and the impact of good patient engagement on different aspects of health care. In total, 555 completed surveys are included in the analysis.
Health care teams devoted to complex patients are the top approach to embedding patient engagement solutions into care delivery, selected by 63% of respondents. More executives and clinical leaders than clinicians say their organizations use this approach. The same is true for use of patient representatives. Patient engagement technology tools, which include remote devices, come out well down the list at 44%. And social networks — an approach that many in health care believe could increase adherence among patients with chronic conditions — are used by only 24% of organizations, with the South (16%) far behind the Northeast (29%), Midwest (28%), and West (25%) in use of social networks. One respondent adds that “physicians focused on innovative practices engaging patients directly” should be considered an important approach.

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Infographic: The Effects of Health Insurance on Health and Survival

Infographic · June 27, 2017
Benjamin D. Sommers, MD, PhD, Atul A. Gawande, MD, MPH, and Katherine Baicker, PhD
Harvard T.H. Chan School of Public Health

There is strong evidence that expansions in health coverage have increased people’s use of health care across multiple domains of well-being and reduced deaths overall.

- People are more likely to have a usual source of medical care and to be able to afford the medical care they need.
- Fewer medical bills are sent to collections. Catastrophic out-of-pocket expenses are virtually eliminated.
- People have greater access to primary and preventive care, chronic illness treatment, and medications.
- 15% - 30% more people get screened for high cholesterol and cancer.
- Nearly twice as many patients take diabetes medication.
- Depression (a leading cause of disability in the United States) is reduced by 30%, and more people are diagnosed successfully.
- More low-income patients get necessary surgery for colon cancer before it’s too late.
- 25% more people report being in good or excellent overall health.
- Gaining Medicaid cuts mortality by 6% over Syrana, with the biggest gains coming from treatable conditions like heart disease, cancer, and infection.
- The longer people have coverage, the greater the mortality reduction.
- Overall, for every 300 to 800 adults who get coverage, one life is saved per year.
- Increasing coverage through Medicaid has been just as effective as doing so through private insurance.


catalyst.nejm.org
This infographic is based on data cited in a Sounding Board article from the New England Journal of Medicine.

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Moving Past the EHR Interoperability Blame Game

Article · July 18, 2017
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As a researcher who studies electronic health records (EHRs), I’ve lost count of the times I’ve been asked “Why can’t the systems talk to each other?” or, in more technical terms, “Why don’t we have interoperability?” The substantial increase in electronic health record adoption across the nation has not led to health data that can easily follow a patient across care settings. Still today, essential pieces of information are often missing or cumbersome to access. Patients are frustrated, and clinicians can’t make informed decisions. When our banks talk to each other seamlessly and online ads show us things we’ve already been shopping for, it is hard to understand why hospitals and doctors’ offices still depend on their fax machines.

A big part of the reason is that interoperability of health information is hard. If it were easy, we would have it, or at least have more of it, by now. Though it’s a technological issue, it’s not just a technological issue. As we have seen in other industries, interoperability requires all parties to adopt certain governance and trust principles, and to create business agreements and highly detailed guides for implementing standards. The unique confidentiality issues surrounding health data also require the involvement of lawmakers and regulators. Tackling these issues requires multi-stakeholder coordinated action, and that action will only occur if strong incentives promote it.

Though billions in monetary incentives fueled EHR adoption itself, they only weakly targeted interoperability. I have come to believe that we would be substantially farther along if several key stakeholders had publicly acknowledged
this reality and had made a few critical decisions differently. While it’s too late for “do-overs,” understanding initial missteps can guide us to a better path. Here is how those key stakeholders, intentionally or not, have slowed interoperability.

**Policymakers**

The 2009 Health Information Technology for Economic and Clinical Health (HITECH) legislation contained two basic components: a certification program to make sure that EHRs had certain common capabilities, and the “Meaningful Use” program, divided into three progressively more complex stages, that gave providers incentive payments for using EHRs. The legislation specified “health information exchange” (HIE) as one of the required capabilities of certified EHR systems. However, the Centers for Medicare and Medicaid Services (CMS) and the Office of the National Coordinator for Health IT (ONC) had substantial latitude to decide how to define health information exchange as well as how to include it in the Meaningful Use program and the accompanying EHR certification criteria.

CMS and ONC decided to defer the initial HIE criterion — electronically transmitting a summary-of-care record following a patient transition — to Stage 2 of the Meaningful Use program. While many of the capabilities required for providers to meet this criterion would have been challenging to develop on the Stage 1 Meaningful Use timeline, deferring HIE to Stage 2 allowed EHR systems to be designed and adopted in ways that did not take HIE into account, and there were no market forces to fill the void. When providers and vendors started working toward Stage 2, which included the HIE criterion, they had to change established systems and workflows, creating a heavier lift than if HIE had been included from the start.

While the stimulus program needed to get money out the door quickly, it might have been worth prioritizing HIE over other capabilities in Stage 1 or even delaying Stage 1 Meaningful Use to include HIE from the start. At a minimum, this strategy would have revealed interoperability challenges earlier and given us more time to address them.

A larger problem is that HITECH’s overall design pushed interoperability in a fairly limited way, rather than creating market demand for robust interoperability. If interoperability were a “stay-in-business” issue for either vendors or their customers, we would already have it, but overall, the opposite is true. Vendors can keep clients they might otherwise lose if they make it difficult to move data to another vendor’s system. Providers can keep patients they might otherwise lose if they make it cumbersome and expensive to transfer a medical record to a new provider.

"Without strong incentives that would have created market demand for robust interoperability from the start, we now must retrofit interoperability, rather than having it be a core attribute of our health IT ecosystem."
As a result, the weak regulatory incentives pushing interoperability (in the form of a single, fairly limited HIE Meaningful Use criterion), even in combination with additional federal and state policy efforts supporting HIE progress, could not offset market incentives slowing it. Without strong incentives that would have created market demand for robust interoperability from the start, we now must retrofit interoperability, rather than having it be a core attribute of our health IT ecosystem. And, if there had been stronger incentives from the start, we would not now need to address information blocking: the knowing and intentional interference with interoperability by vendors or providers.

Another criticism levied at policymakers is that they should have selected or certified only a small number of certain EHR systems, because narrowing the field of certified systems would have at least limited the scope of interoperability problems. A few even advocated that Congress mandate a single system such as the VA’s VISTA. While such a mandate would have helped solve the interoperability issue, it would have violated the traditional U.S. commitment to market-based approaches. Moreover, the United Kingdom failed very visibly with a heavily centralized approach, and in a health care system the size of the United States, an attempt to legislate IT choices in a similar manner could backfire catastrophically.

**EHR Vendors**

Most observers assign EHR vendors the majority of blame for the lack of interoperability, but I believe this share is overstated. As noted above, by avoiding or simply not prioritizing interoperability, they are acting exactly in line with their incentives and maximizing profit. Normally, the United States glorifies companies that behave this way. When neither policymakers nor providers were demanding interoperability, vendors risked harming their bottom lines by prioritizing it, and they cannot be blamed for acting in their economic best interest in wholly legal ways.

Nevertheles, senior leaders at EHR vendors should have been more willing to come forward and explain why their economic best interest was at odds with existing regulations. Instead, they often claim to have robust interoperability solutions when they do not, and similarly claim that interoperability is a top priority when it is not. This gap between rhetoric and reality makes it harder for providers and policymakers to demand greater interoperability.

"Of the stakeholders, only policymakers have a clear, strong interest in promoting interoperability. Therefore, it is up to them to ensure that robust, cross-vendor interoperability is a stay-in-business issue for EHR vendors and providers.”
Providers

As noted above, providers may not have a strong business case to prioritize interoperability. However, providers have professional norms and mission statements that should motivate them to pursue interoperability (or at least not actively interfere with it) to benefit their patients. As a result of these conflicting motivations, some provider organizations let competitive pressures drive interoperability decisions (including not demanding robust interoperability from their vendors), while others have chosen to pursue interoperability because it is best for their patients, even if this decision incurs competitive disadvantage. More providers may tip toward the former simply because today’s interoperability solutions are complex and costly. It is hard to justify investing in a complicated, expensive capability that also poses a strategic risk — a double whammy.

The emergence and rapid growth of Epic’s Care Everywhere platform (which connects providers using Epic) suggests that even in highly competitive markets, providers may easily tip the other way when the cost and complexity of interoperability are reduced. Therefore, any efforts that successfully reduce cost and complexity are highly valuable, though not a substitute for stronger incentives for providers (and vendors) to engage in interoperability.

As with vendors, we cannot fault providers for behaving in ways that are aligned with their incentives, but we can argue that their patient care mission requires, at a minimum, more public disclosure about the business rationales behind their interoperability decisions.

The point of the blame game is not to punish the players. It is to understand the dynamics at play and plot a path forward. Of the stakeholders, only policymakers have a clear, strong interest in promoting interoperability. Therefore, it is up to them to ensure that robust, cross-vendor interoperability is a stay-in-business issue for EHR vendors and providers. Once the business case for interoperability unambiguously outweighs the business case against it, both vendors and providers can pursue it without undermining their best interests.

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Collaborative Care for Depression in a Safety-Net Health System

Case Study · August 28, 2017
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Using a collaborative care model, we are integrating mental health into primary care at the country’s largest public health care system, New York City Health + Hospitals. Our program provides screening and treatment in the primary care setting and has demonstrated improved depression symptoms in more than half of enrolled patients.

KEY TAKEAWAYS

1. It is possible to screen for and treat depression in the primary care setting.
2. Collaborative care for depression can succeed in diverse settings with a range of staffing combinations, patient demographics, and physical layouts.
3. Centralized data support is essential to drive operational workflows and quality improvement across multiple sites.

The Challenge

Depression is pervasive (13% of Americans and nearly 20% of Medicaid recipients) and more common in people with chronic disease, affecting 17% of people with cardiovascular disease and 27% of those with diabetes. It is also costly — 65% more per month if a patient has a chronic disease that co-occurs with depression when compared to chronic disease alone.
In January 2016, the United States Preventive Services Task Force recommended that universal depression screening occur in primary care settings that have adequate systems for diagnosis, treatment, and follow up. This represents an opportunity to redesign care to better meet patients where they are — that is, where they already access health care, at their level of engagement. Indeed, only 10% of patients follow up with a referral to a mental health specialist if they are not co-located in primary care. Primary care physicians and their colleagues are well-positioned to treat their patients for mental health issues: they generally have an established and trusting relationship with the patient, and are aware of what their patients’ usual behavior is, which enables them to identify mental health problems; they are also accustomed to coordinating complex care plans.

Multiple studies have demonstrated the efficacy of the collaborative care model for depression. While mental health and primary care historically have been siloed, recent policy changes and evolving payment models are spurring more integrated models of care. This wave of innovation is particularly important in safety-net health systems, which serve a high proportion of uninsured and Medicaid patients — and where poverty, language barriers, and other social determinants of health may contribute to the complex physical and behavioral health needs of patients.

Our challenge at NYC Health + Hospitals was to redesign care to screen and treat patients for depression across our large, diverse system while allowing patients to remain within their primary care medical home.

**The Goal**

Our goal was to deploy a population-based, stepped-care approach in the primary care setting to treat depression or depression co-occurring with a chronic illness. We sought to screen all primary care patients for symptoms of depression and demonstrate meaningful improvement in symptoms for patients enrolled in collaborative care.

**The Execution**

In 2014, under the New York State Hospital-Medical Home Demonstration Program, NYC Health + Hospitals began universal depression screening for adults in primary care. Initially, adults were screened at least once per year using the Patient Health Questionnaire (PHQ). Challenges with standardizing this practice and ensuring that patients received at minimum an annual screen led to screening for depression at every patient visit as part of a vital signs assessment, just like taking a patient’s blood pressure. Universal screening has allowed us
to identify patients with depression who otherwise may not have sought out mental health care due to stigma, financial constraints, lack of access, or challenges with child care or work leave.

Simultaneously, NYC Health + Hospitals implemented collaborative care for depression at 11 hospitals and 6 community health centers. The program is based on the IMPACT model, developed at the University of Washington. The model calls for a team-based approach (with the patient at its center) that includes a depression clinician, consulting psychiatrist, and primary care provider (PCP). The approach begins with an evidence-based, low intensity treatment in primary care, while monitoring progress and systematically adjusting treatment (stepping up) to a more intense level of care if the patient does not improve.

A patient who screens positive on the PHQ-9 and meets eligibility requirements can be referred to collaborative care. (Patients with active substance use, serious mental illness such as schizophrenia, or who already are being seen in behavioral health are excluded.) After an initial encounter with a depression clinician, the patient is enrolled in the program and entered into a system-wide collaborative care registry.

The registry is a key component of this program, generating data to support patient outreach and treatment workflows as well as actionable patient lists delivered to the point of care (for example, lists of patients with whom there has been no recent contact, prioritized by time elapsed since their last visit).

The majority of patient outreach and counseling is performed by the depression clinician, typically a Registered Nurse or Licensed Master Social Worker with behavioral health experience. He or she coordinates the patient’s overall treatment, including weekly case reviews with the consulting psychiatrist. The primary care provider retains point responsibility for a given patient — e.g., making the clinical diagnosis and prescribing antidepressants when indicated — but works closely with the depression clinician.

The patient is the most critical team member. The depression clinician is armed with a toolbox of interventions to actively engage patients in their own care, including motivational interviewing, behavioral activation, and problem-solving treatment.

Intensity of engagement depends on the acuity of the patient’s symptoms. Encounters can be face-to-face or telephonic, which allows for more flexibility and decreases the patient’s travel burden. Early in treatment, patients may have 2–3 encounters per month, with decreasing frequency to once per month as the PHQ-9 improves. Encounters are typically 15–30 minutes.
and involve a PHQ-9 screen, symptom monitoring, medication management, goal setting, and brief counseling.

Specific workflows address diabetes and hypertension. Patients with depression and diabetes, for example, may have diminished self-care, such as lower levels of physical activity, unhealthy eating patterns, and poor blood glucose monitoring. Counseling interventions with the patient target both the depression and self-management of diabetes or hypertension.

**Key Practices for Care Teams**

A cohesive team is essential to the success of collaborative care. Over the past year, we tailored team workflows to better identify and prioritize patients who need outreach, case review by the consulting psychiatrist, or a potential change in treatment plan. Based on feedback from our teams, we increased the frequency of delivering triaged, actionable patient lists to the point of care, as often as weekly. Through these efforts, we have discovered a few core practices that drive patient outcomes:

- Targeted skill improvement, such as identifying staff who may benefit from coaching on accurate use of the PHQ depression screeners.

- A “warm hand-off” from the PCP to the depression clinician, which ensures early patient engagement in treatment. The warm hand-off provides an opportunity to introduce the program to the patient in person, to set a behavioral activation goal, and to demonstrate the collaboration between PCP and collaborative care team members.

- Using the depression registry to manage the stepped-care approach, such as psychiatric consultation or a change in clinical intervention for enrolled patients who are not improving.

**Implementation Challenges**

Although the spirit and structure of the program is the same throughout NYC Health + Hospitals, differences in staffing, team structure, space, and patient populations result in variation across sites. In some cases, this variation helps drive innovation, as with one site that wished to expand collaborative care to address perinatal depression. In other cases, the variation is unwarranted, such as reluctance of some primary care physicians to coordinate with depression clinicians or even to prescribe antidepressants.
To address variation across sites, we have taken steps to create a community around collaborative care. We have added clinical coaches who rove from one site to another to facilitate standardization as well as cross-fertilization. A newsletter shares best practices among the collaborative care teams and conference calls with consulting psychiatrists also help stimulate dialogue across practices.

Another challenge has been coordination of clinical workflows with billing practices. Because the program is payor-agnostic — that is, we treat all patients regardless of ability to pay — we must develop clinical workflows for all patients but separate financial workflows depending on how the patient’s care is funded.

**The Metrics**

In 2015, NYC Health + Hospitals screened approximately 225,000 adult primary care patients (screening rate > 90%) and identified nearly 15,000 patients (6.7%) with a positive screen, defined as a score of 10 or greater on the PHQ-9.

For patients enrolled in collaborative care we have maintained a laser focus on our “bottom-line” outcome metric, the clinical improvement rate, which defines meaningful amelioration of depression symptoms. In Q2 of 2015, our clinical improvement rate across NYC Health + Hospitals was 17.7%, which rose to 44.7% for Q4 2015 and to 57.6% for Q1 of 2016. We attribute this steady rise to the key practices and dedicated quality improvement initiatives described above.

**Next Steps**

In April 2015, funding for collaborative care for depression services was made available through New York’s Medicaid program. The statewide initiative offers payment for care management based on a set of services provided and performance on key metrics. NYC Health + Hospitals is transitioning from grant-based funding for Collaborative Care to sustainable funding via this Medicaid reimbursement program.

In our experience, collaborative care is an essential model for reaching and treating patients with mental illness. We are exploring opportunities to expand the collaborative care model to address pressing patient needs in adolescent and maternal depression, anxiety, and substance use disorders.
We are grateful to Dr. Ross Wilson, Chief Medical Officer at NYC Health + Hospitals, for his leadership in developing and growing the collaborative care program.

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Implementing Patient-Reported Outcome Measures

Article · October 12, 2017
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In addition to saving lives, our primary mission in health care is to improve the lives of patients. This means reducing symptoms like chest pain or incontinence, or helping people walk better or open a jar by themselves. But how do you measure symptoms or function besides just asking a patient how she feels? Patient-Reported Outcome Measures (PROMs) are powerful because they use validated questionnaires to turn a symptom into a numerical score. With PROMs, for the first time we can use numbers to describe how much a knee replacement helps someone walk or to quantify the average difference in outcome between a biologic treatment versus conventional pharmacotherapy.

As we seek to provide better value in health care, we will succeed only if we can define what constitutes a good outcome. Despite the dizzying proliferation of clinical performance measures, these often miss the goal:

- Most capture the process of care, including drawing labs or starting a medication, but fail to capture the very reason that most patients seek care, which is to improve their symptoms.

- Current outcome measures, including mortality and hospital readmission, are important but are often multifactorial and not significantly under providers’ control.

- Many exhibit little meaningful variation across providers and, therefore, fail to differentiate between good and exceptional care.

- Many focus on particular diagnoses, leaving substantial gaps in our ability to measure quality across the full spectrum of care.
PROMs are precisely the missing link in defining a good outcome. They capture quality-of-life issues that are the very reasons that most patients seek care: to address a bothersome symptom, limited function, or ailing mental health. PROMs results vary tremendously among treatment choices, institutions, and providers. And PROMs are the outcome of relevance in nearly every diagnosis, including many in specialties that currently lack good quality measures. By making PROMs an integral part of clinical care, providers can use them to improve an individual patient’s care as well as in aggregate to improve care of a population.

Nevertheless, adoption of PROMs by large health systems has been slow due to several common challenges:

► **Technology barriers:** To rapidly administer surveys, calculate scores, and trend results, the data need to be electronic. There is simply no time to manually collect and transcribe handwritten data. This requires an electronic platform that works with the patient portal via Wi-Fi–connected tablets. The platform must also be integrated into the electronic health record (EHR) system so that results flow into the point of care in real time in order to be actionable. And it must work nearly perfectly because neither patients nor providers have the patience for glitches.

► **Operational barriers:** Increasing demands on all participants in health care have squelched any appetite for tasks that aren’t required, especially if they take time. Even if the technology works perfectly, patients, clinic staff, and clinicians — busy people already — must work together to make PROMs a reality. Convincing them that the small effort is worthwhile is half the battle. The other half is strategically using PROMs to achieve net time savings by making other activities faster.

Though these barriers loom large, Partners HealthCare has concluded that PROMs are essential to real-time clinical care and to how we measure, compare, and improve care as a system. Our large health system now collects PROMs in 21 specialties and across 64 clinics in orthopedics, urology, psychiatry, and cardiac surgery. We have collected over 200,000 PROMs and are collecting at a rate accelerating quickly past 12,000 per month.

For example, after cardiac catheterization, we collect the Seattle Angina Questionnaire and the Rose Dyspnea Scale to quantify not just how much longer patients live after the procedure, but how much their chest pain has dissipated and how much better they feel in daily life. To determine which subset of patients are most likely to benefit from surgery on their lumbar spine, we collect the PROMIS® domains, measuring functional
status, pain intensity and interference, and depression and anxiety. For prostate cancer patients undergoing surgery or radiation, we collect the EPIC-CP to measure symptoms of incontinence and impotence in addition to survival.

These are just a few examples of PROMs in our organization. Less than five years into this journey, we’re beginning to see the promise of how this will help us guide and improve our clinical care.

We certainly have the battle scars you’d expect from such a complex endeavor — asking people to do yet one more thing, to incorporate yet one more piece of technology. Our efforts have taught us which design and operational choices provide the best chances for success. Even when you get everything right, it doesn’t always work, and perhaps the lesson we have learned more than any other is humility. Despite the challenges, PROMs clearly are an integral part of health care’s future. What follows are the lessons we have learned.

**How to Engage Patients**

Today’s processes ask more of our patients with intake forms, screening questionnaires, patient experience and satisfaction scores, research studies, and more. Increasingly patients begin to doubt the value of the time spent. Without further engagement and education, patients approach PROMs warily. We have found three design principles to be critical for success with patients:

*Make it easy: Reach patients where it’s convenient for them, and provide a simple user interface.*

Multimodal PROMs collection is essential. The patient portal is the most obvious way to collect PROMs, and it should be the cornerstone of collection. We recommend sending out PROMs before a visit or at the appropriate interval after surgery so the patient can complete it online in the comfort of home.

However, because collecting only via the portal leaves out those who aren’t booting up laptops every night, it is necessary to also collect in clinical settings, with patients using either using tablets or a clinician terminal. (I do this in my exam room daily.) Epic, which we use at Partners, has reasonably convenient functionality on both these fronts.

Interestingly, the notion that older patients can’t use tablets is a myth. “I don’t know how to use a computer,” my patient tells me. “Tablet computer? No way.” But hand him an iPad and he has no problem, and in fact, elderly patients often enjoy it. (Tip: Have a stylus on hand.) Want to reach millennials? Make sure you have text messaging and/or an app (coming soon to Partners).
Make it fast: Don’t ask too many questions and don’t ask too frequently.

There is a natural temptation to collect the wish list of every clinician and researcher involved. Don’t. We learned this when collecting PROMs data relating to pain and mobility of knees. We started out collecting the full KOOS (42 questions) plus the PROMIS-10 Global (10 questions) for knee replacement, and we simply failed. Few of us have patience for 52 questions. Beyond 30 or so questions, patients simply stop answering. Find the most actionable, relevant PROMs for a condition, and ask once per year, perhaps twice, if someone has surgery.
Make it relevant: Look at and use responses in real time to care for the patient.

Perhaps the biggest determinant of whether a patient answers a PROM is whether her doctor looked at her answers the last time. Many of our radiation oncologists use PROMs that ask about side effects and promptly use the information when considering a dose adjustment. Collection rates approach 100% for those providers using the data, not surprisingly. A patient might give you the benefit of the doubt the first time, but ignore the effort she put in at your peril.

This begs the question, how do you get a busy clinician to look at the responses?

How to Engage Clinicians

Early in our program, providers had little interest in PROMs, often dismissing them as a research study. But these days, the response is different. Providers know that PROMs are coming and soon will be required. The question for them now seems to be whether to get some experience now or hold out and be the last iceberg. We have found three ways to convert a clinician from resigned acceptance to an enthusiastic user and champion of PROMs:

Make care easier: Use the PROMs collection platform to reduce administrative burden or meet regulations.

To my dismay, perhaps the most compelling opening argument to providers (including front desk staff and medical assistants) is the opportunity to use the PROMs platform to simultaneously reduce administrative burden. Because a PROMs platform captures data directly from patients, it can be used for pre-visit information entry and mandatory screenings (e.g., smoking status, fall risk, depression, health risk assessments). And it satisfies two-way electronic communication requirements for meaningful use. The clinician can also reference this information in clinical notes, reducing documentation burden.

Make care faster/better: Incorporate PROMs responses in real-time into the EHR to save time and/or provide better clinical care.

Ultimately, what truly engages clinicians is direct care improvement. Incorporating PROMs data into the EHR in real-time can save time and empower clinicians to engage patients in better, more personalized care. For example, every day in my primary care clinic, I see men with symptoms of benign prostatic hypertrophy (BPH). Asking about the seven cardinal symptoms of BPH and their resulting quality of life can absorb precious time. When a patient comes in with his International Prostate Symptom Score already answered, I vault to step 9 of the conversation, the valuable part where we talk about how to help. Instead of spending our time gathering information, we use it to marry my clinical knowledge with the patient's
unique goals and preferences to produce a better outcome. The same is true for patients with Crohn’s disease and COPD.

**Make PROMs relevant:** Put responses in context with graphical information, decision support, or shared decision-making tools.

PROMs can help patients make informed medical decisions, by clarifying the risks and benefits from the abstract to the numerical or visual.

For example, while some patients with prostate cancer require a life-saving radical prostatectomy, others face a decision of whether to pursue surgery or active surveillance. Some patients think, “Better safe than sorry,” and opt for surgery even when informed of the risks of incontinence and sexual dysfunction. Using the Expanded Prostate Cancer Index Composite for Clinical Practice (EPIC-CP) mentioned earlier, with its detail about incontinence and sexual function after surgery, a patient and his urologist can make a better informed shared decision by viewing these data alongside data about longevity for his specific diagnosis. In another example, the graph shows how we present Partners’ aggregate results for knee replacement to patients considering surgery, to help them understand how much better they might get, how quickly, and how sustainably.

**What’s Next for PROMs?**

When we began this journey almost five years ago, it was hard to see how a health system that couldn’t invest as much as Partners could succeed with PROMs. Now, more turnkey solutions are being made available within EHRs, and we hope that sharing our experience will help others avoid our early mistakes.

Despite progress, challenges remain for widespread implementation of PROMs collection platforms:

- Although there is a lack of consensus on which PROM is best for many conditions, there is hope. Groups such as PROMIS plan to provide free, concise, valid PROMs, and the International Consortium for Health Outcomes Measurement (ICHOM) and others are encouraging coalescence around a single set of measures for a particular diagnosis.

- If PROMs are to be used eventually as a quality measure for reimbursement programs, we must determine how to risk-adjust for clinical and sociodemographic patient characteristics. Data interoperability will also be essential.
Finally, as PROMs collection becomes more widespread, we’ll need strategies to avoid overwhelming patients with constant surveys and to reach them conveniently without jeopardizing privacy.

Health care is currently grappling with how to make PROMs an integral part of our care. At Partners, we’ve shown that it is possible when done thoughtfully and relentlessly. Moving forward, the challenge is to use PROMs first to understand, and then to meaningfully transform, what we do to provide the highest value care to our patients.

Acknowledgments: This work is made possible because of the vision, support, and guidance of the leadership of Partners Clinical Affairs, the Center for Population Health, and the Department of Quality, Safety, and Value: Sreekanth Chaguturu, MD, Timothy Ferris, MD, MPH, Gregg Meyer, MD, MPH, and Thomas Sequist, MD, MPH.

We would not have a program without the innovative and tireless work of the Partners PROMs team from whose work these lessons come. Great thanks especially to Director Peter Meyers and to the entire team: Ronnen Cretu, Bernard Joseph, MD, Shawn Martin, Negui Rojas, David St. Amand, Ana Ulchak, Patrick Wright, and Randi Zegman, as well as our past and current partners at our institutions, Adam Licurse, MD, Rachel Clark, MD, Ishani Ganguli, MD, and Josie Elias.

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Why Real-World Results Are So Challenging for Digital Health

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Companies should look for lessons in other industries, create products that are tailored to population subsets, develop synergistic partnerships, and understand the performance characteristics of products in the real world.

Despite years of hype in the field of digital health products — a term that we use here to describe technologies that are designed to have clinical impact on disease — fewer products than expected are being deployed in real-world clinical settings. Many digital health products that demonstrate impressive results in clinical trials often fail to do so in real-world settings.

Why? Much of the success of digital health products is predicated on patient engagement, and clinical trials are among the most engaging environments in health care. Clinical trials involve the use of a variety of tools (e.g., training, close monitoring, payments) to ensure that patients use the technologies appropriately, but few of these tools are used in the real world. In order to cross the chasm from success in clinical trials to success in practice, digital health companies need to focus on patient engagement.

Digital Health Hinges on Engagement

Engagement is so important because many digital health products are designed to achieve behavioral changes for the purpose of preventing or treating chronic diseases. For patients who are at risk for, or are living with, a chronic disease, successful prevention or management requires minute-to-minute, day-to-day changes in decision-making. Patients need to be highly motivated to make behavioral changes, they need to be praised when they follow through, and they need guidance when they slip up. The process needs to be sticky and self-reinforcing in order to maintain patient interest. In a nutshell, patients need to be engaged.
Engagement is important not only for clinical results, but also for the business models of many digital health companies, which frequently incorporate pay-for-performance contracts. Digital health companies need to track data continuously in order to demonstrate their value to the purchaser or user. Products that do not engage patients drag down performance metrics and reduce the viability of the company.

Contrast this with pharmaceuticals: payors pay for drugs before patients take them, and pay-for-performance contracts are the exception; this is part of the reason why nearly 50% of medications for chronic disease are not taken as prescribed.

**The Gap Between Clinical Trials and Real-World Results**

Successful clinical trials of both digital health products and pharmaceuticals are engaging by definition. In order for a trial to demonstrate significant results — and in order for the results of the trial to be published — the attrition rate for participants needs to be very low. The entire endeavor is designed around ensuring that patients use the product or service appropriately and follow up regularly.

A clinical trial is designed as follows: an artificial scenario is crafted, willing participants volunteer, participants are carefully selected on the basis of optimal criteria, staffers are thoroughly trained, measurements are taken like clockwork, and participants are induced (by means of monetary payments or a barrage of phone calls, emails, and texts) to use the product or service as directed. As a result, the experience of individuals who are involved in a clinical trial typically is much more engaging than that of patients who use the technology in real-world scenarios.

**Tools to Drive Engagement**

Extending the engagement-boosting practices from a clinical trial to a much larger population of patients in the real world is not feasible because of cost and logistical complexity. As a result, different approaches are needed to facilitate engagement.

- **Maintain engagement-first thinking.** Digital health products need to be designed to drive engagement from the ground up. Focusing on an exciting technology or a massive need is not enough. Companies should consider employing principles from behavioral economics, which have been shown to increase engagement and product stickiness by using sophisticated implementations of financial incentives, loyalty points, social structures, and other techniques.
Social media also have been shown to be a powerful force in patient engagement, with applications ranging from open patient support resources such as PatientsLikeMe to the patient-only social media networks used by Omada Health to drive weight loss. Companies also should think about employing strategies from video games and sports. While “gamification,” as this approach is known, has been mostly met with a tepid response from the physician community, don’t forget that Pokémon GO has performed better than many digital health tools at increasing the physical activity levels of its users.

- **Embrace real-world data to drive real-world evidence.** Real-world data (RWD) and real-world evidence (RWE) are topics of increasing interest in the medical community and have even garnered the attention of the FDA. While RWD and RWE typically are used to supplement clinical trials, these information sources are increasingly important for digital health companies because they provide critical evidence of user engagement. Digital health companies can design studies to capture RWD and build RWE by crafting scenarios that mirror how products will be used by real patients.

  Companies can look to Omada Health’s diabetes prevention study for an example of how to design a study to collect RWD and RWE. Omada recruited participants on Craigslist, participants relayed weight measurements to the company with use of a digital scale equipped with cellular data-transmitting capabilities, and HbA1c measurements were obtained with use of home kits that were mailed to participants. The study was performed in a similar way to how Omada interacts with real patients and thus provided the company with a good understanding of the real-world performance characteristics of its product.

- **Develop product variations.** Engagement is not one-size-fits-all. Different tactics will work well for different populations, and digital products may be more successful if the manufacturer is able to develop variations to serve different segments of the market. For example, Propeller Health has developed sensors that can track inhaler use, that can track inhaler use, with the goal of improving outcomes and reducing costs for patients with asthma and chronic obstructive pulmonary disease (COPD). Although patients with both
conditions often use inhaled medications, the demographics, etiology, prognosis, and medication regimens for these conditions differ substantially. Product variations specific to the different patient populations using the inhaler will be critical to Propeller’s success in the treatment of these diseases. Companies must think through how to engage each subset of the population that the product is serving.

► **Seek partnerships to reap synergies.** Digital health companies are uniquely positioned to develop synergistic partnerships to drive patient engagement. Many digital health companies — particularly those operating outside of FDA or HIPAA jurisdiction — have unique data and insights about specific populations. This information can translate into powerfully engaging products. For example, Mango Health, a medication adherence app, partners with consumer products companies to offer real-world rewards like gift cards as incentives for patients to increase adherence. Similarly, Under Armour, an athletic apparel company, is investing significant resources to develop synergistic digital health products for fitness and weight loss, thereby combining products with technologies that help users to meet their health goals.

**Making the Leap from Novelty to Necessity**

Clinical trials are a critical process in the evolution of digital health products. Evidence is an important means for convincing health care executives to buy these products. However, simply learning that an intervention was successful in a clinical study is not enough. Real-world validation is also important as digital health companies own the validation process from product development to scale. Once clinical validation is achieved, real-world evidence must be gathered to justify success at scale. In order for digital health products to make the leap from novelty to necessity, manufacturers will need to focus on driving patient engagement in real-world settings. Engagement will require taking lessons from other industries, creating products that are tailored to population subsets, developing synergistic partnerships, and understanding the performance characteristics of products in the real world.

*Disclaimer: Omada Health CEO Sean Duffy, an NEJM Catalyst Patient Engagement Thought Leader, had no involvement in the creation of this article.*

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Building a Better Physician Compensation and Performance Model

Case Study · September 13, 2017
Seth Wolk, MD, MHSA, and Doug Apple, MD, FHM
Spectrum Health

KEY TAKEAWAYS

1. Engage physicians early and often. Physician leadership and engagement are essential to successful outcomes.

2. Create and adhere to guiding principles. These foundations provide a “true north” to assist with conflict resolution and to keep everyone moving forward.

3. Think beyond the dollars. Traditional financial incentives can only go so far in driving value-based performance. It is important to recognize physician performance in areas outside wRVU production.

4. Identify the decision-makers. All engagement should be accompanied by a defined process, with the decision-making authorities clearly outlined in advance. Decision-makers will need to align both qualitative and quantitative insights to select the best paths forward.

5. Fail fast. Embrace the nature of the process by creating clear and effective feedback loops — with sufficient breathing room — into all timelines.

6. Create a purposeful communication and change-management strategy. Show that the status quo is not an option, focus on the why, and support it with communication that is appropriately segmented by audience.
Spectrum Health Medical Group (SHMG), one of the largest multispecialty medical groups in the Midwest, recently redesigned its physician-compensation models to better reflect the fast-changing health care environment that we all face.

**Shortcomings of SHMG’s Previous Models**

Since its formation in 2008, SHMG has grown significantly through a combination of strategic acquisitions, integrations, and national recruitment efforts and now includes nearly 1,000 employed physicians and 500 advanced practice providers. Originally, the group recognized compensation models ranging from a fixed-salary approach to a purely volume-based approach. As in most other health care delivery organizations, physicians represent the highest-paid group of employees. We believe that it’s critical for the daily work of these individuals to be aligned with the goals of the organization.

SHMG’s previous models were in line with the approaches used in medical groups across the country. However, we found them to be insufficient for a variety of reasons, including the heavy emphasis on individual work relative value unit (wRVU) production, a lack of value-based performance measures, reliance on quarterly reconciliation payments and supplements, and the fact that staff physicians were ineligible to participate in a system-wide incentive compensation plan (ICP).

SHMG’s previous models also were tied to an outdated performance-review system that centered mainly on an annual evaluation in which physician leaders were asked to meet with their direct reports to discuss accomplishments and determine goals before assigning a qualitative performance rating (e.g., “meets expectations”). Despite best intentions, this approach was lacking in many respects; for example, conversations between physicians and their physician leaders were infrequent, the physician leaders had received minimal training on effective coaching and feedback approaches, and formal relationships were not always understood across the medical group.

**Designing a Comprehensive Model**

We were determined to overcome these challenges and create an innovative physician-compensation and performance model that would uphold the guiding principles of being patient-centered, simple, equitable, flexible, balanced, and sustainable. In addition, this new compensation model would need to support physicians in performing what became known as “Job 1 and Job 2.” Job 1 for every SHMG physician is to deliver high-quality health care
services to their patients. Job 2 is to continually improve upon Job 1. This simple, direct, and powerful message became a rallying point during the entire redesign and implementation process.

After understanding the significant challenge that was at hand, we knew that it was vital to involve the right stakeholders in the redesign process as early as possible. In all, >30 individuals from cross-functional groups were engaged during the 16-month, physician-led redesign process, which began in May 2015 and was completed in September 2016.

**Creation of the “All-In” Model**

The result was the creation of a comprehensive, system-wide compensation and performance model that addresses each of the guiding principles. Financial compensation and rewards within the newly designed “all-in” model involve 3 individual, although related, components: (1) base pay, (2) a department performance incentive, and (3) a physician performance incentive.

**Component 1: Base Pay**

A base component, or salary, is an integral part of any physician-compensation model. However, the physician-led committee driving the redesign wanted to ensure that all compensation components ultimately would be focused on performance. Therefore, the decision was made to embed a performance-driven element into the base component. Under the new model, each physician is paid a consistent biweekly base salary that is tiered to reflect his or her previous year’s performance. Currently, there are 8 standard tiers across the medical group, ranging from 70% to 140% of SHMG’s specialty-specific median benchmark for compensation. Departments in which physicians share a group culture and share responsibility for all activities can elect to receive the same base pay department-wide, without tiers.

Because of the varied work environments within individual specialties, departmental leaders were granted some flexibility to select the performance criteria that they believed would best support them in accomplishing their strategic goals. Defined guardrails and governing processes were put in place to help maintain consistency, internal equity, and regulatory compliance. An example of how our primary-care physicians chose to formulate their base pay is shown in the figure on the following page.
Calculating Specialty Specific Base Pay — Primary Health

When it came time to formulate their base pay, our primary-care physicians selected weighted performance criteria that they felt best aligned with the strategic goals of their service line, with an emphasis on wRVUs and panel size and with consideration of advance practice provider (APP) ratios and APP wRVUs. They scored their performance on a sliding scale and then adjusted it by weight to provide a maximum score of 80 points. The physician in this example scored 38 points, which fell within Tier 4 (indicating that this physician’s base salary would correspond with 100% of the specialty-specific median salary benchmark). FTE = full-time equivalent.

Example Family Medicine Physician (1.0 Clinical FTE)

<table>
<thead>
<tr>
<th>Metric</th>
<th>A Performance</th>
<th>B RawScore</th>
<th>C Weighting</th>
<th>D=B x C AdjustedScore</th>
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<tbody>
<tr>
<td>wRVUs</td>
<td>5.013 wRVUs</td>
<td>40 Points</td>
<td>66%</td>
<td>26.4 Points</td>
</tr>
<tr>
<td>Panel Size</td>
<td>2,356 Patients</td>
<td>40 Points</td>
<td>22%</td>
<td>8.8 Points</td>
</tr>
<tr>
<td>Physician/APP Ratio</td>
<td>2.56 Physicians/APP</td>
<td>20 Points</td>
<td>6%</td>
<td>1.2 Points</td>
</tr>
<tr>
<td>APP wRVUs</td>
<td>3.279 wRVUs</td>
<td>30 Points</td>
<td>6%</td>
<td>1.8 Points</td>
</tr>
</tbody>
</table>

Total Points Earned: 38.2 Points

Source: Authors
NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society
Component 2: Department Performance Incentive

Historically, many specialties within SHMG used scorecard-based compensation components to recognize physician performance in areas outside of wRVU production. The results were mixed. Practitioners in some areas, such as primary care, successfully identified high-impact metrics and targets that physicians trusted. Others struggled to identify meaningful non-productivity-related metrics that were reportable and trustworthy. Using lessons learned from previous scorecard iterations, the compensation steering committee created a redesigned scorecard, applicable to all specialties, that became known as the Department Performance Incentive (DPI). To reduce variability and complexity, bounding parameters and reportable metrics were identified to help to guide departments in their DPI scorecard designs. For example, 5 areas — service, access, citizenship/ARTS (administrative, research, teaching, and strategic), value, and clinical activities — must be recognized across all departments. The DPI component is paid out annually in March and is expected to be an average of 5% of specialty-specific median benchmark compensation. An example of how our primary-care physicians chose to calculate their DPI is shown in the table on the following page.
Component 3: Physician Performance Incentive

Traditionally, select executives and physician leaders throughout Spectrum Health have been eligible for an annual performance incentive based on the achievement of predetermined system-wide goals related to quality, patient experience, cost of care, and so on. This program, known as the Incentive Compensation Plan (ICP), was widely viewed as successful in rewarding system-wide success and performance. However, despite their critical role in helping to

<table>
<thead>
<tr>
<th>Area</th>
<th>Metric</th>
<th>Scoring Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>Clinician and Group Consumer Assessment of Healthcare Providers and Systems (CG CAHPS) survey</td>
<td>Likelihood to recommend:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• &gt;96% = 4 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• &gt;91% = 3 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• &gt;86% = 2 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• &gt;81% = 1 point</td>
</tr>
<tr>
<td>Access</td>
<td>Empanelment</td>
<td>• Exceed 110% specialty-specific panel size = 2 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 50 new patients/yr = 1 point</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 100 new patients/yr = 2 points</td>
</tr>
<tr>
<td>Citizenship/ARTS</td>
<td>Education, research, or committee involvement</td>
<td>• Minimum 32 hr/yr = 4 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minimum 24 hr/yr = 3 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minimum 18 hr/yr = 2 points</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minimum 12 hr/yr = 1 point</td>
</tr>
<tr>
<td>Value (pick 3)</td>
<td>Controlled hypertension</td>
<td>2 points for each measure attained (4 points max)</td>
</tr>
<tr>
<td></td>
<td>Diabetes with A1C &gt;9%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colorectal cancer screening</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Well-child visits</td>
<td></td>
</tr>
<tr>
<td>Clinical activities</td>
<td>Utilization metrics that fulfill CPC+</td>
<td>2 points for each process improvement achieved</td>
</tr>
<tr>
<td></td>
<td>• Choosing Wisely (site chooses 2); LBP, HTN referral (3-drug therapy required), upper endoscopy guidelines adherence</td>
<td>2 points for regularly scheduled weekend hours</td>
</tr>
<tr>
<td></td>
<td>• Saturday/Sunday regularly scheduled hours</td>
<td></td>
</tr>
</tbody>
</table>
achieve ICP success metrics, staff physicians were not eligible to participate in this bonus plan. SHMG leadership used the larger physician-compensation redesign effort to create a convergence of goals by allowing all physicians to participate in a modified version of the ICP known as the physician ICP (P-ICP). The P-ICP closely mirrors the broader ICP while excluding metrics that, for legal and compliance reasons, cannot be tied to physician pay. The P-ICP is paid out annually to eligible physicians in September and is worth up to 5% of specialty-specific median benchmark compensation.

**Expected Impact of New Model on Performance Metrics**

The new compensation model is being introduced in a phased plan with a 1-year transition period to allow physicians to see how the model works prior to its implementation. Primary care physicians and physicians in Women’s Health have been in the transition stage since January 2017. Although the new compensation model is still in its early stages and we do not yet have data to evaluate its impact, we are optimistic that it will positively affect several key performance metrics, including:

- Per-member, per-month cost of care (as measured by payor partners).
- Patient experience (as measured by patient-satisfaction surveys).
- Quality of care (as measured by response times, readmission rates, and registry data, for example).
- Provider satisfaction (as measured by engagement surveys and retention rates).

**Where to Start**

Medical groups and health care organizations wishing to pursue similar compensation model redesign and transformation processes should undertake several initial steps:

- Assemble a physician-led steering committee that includes leadership representation from all relevant specialty areas.
- Develop a comprehensive work plan that includes an overall timeline, meeting cadence, milestones, decision matrix, and anticipated deliverables.
- Establish clear and documented guiding principles and goals for the new compensation model.
- Assess the effectiveness and limitations of all current compensation models to gauge the magnitude of change that will be required to achieve the determined goals.
At that point, the organization will be ready to begin the redesign process within the established project work plan.

Seth Wolk, MD, MHSA
System Chief Medical Officer, Spectrum Health

Doug Apple, MD, FHM
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Survey Snapshot: Does an MBA Matter for Physician Leaders?

Insights Report · August 24, 2017
Sandra Gittlen
NEJM Catalyst

We talked to clinical leaders, health care executives, and clinician members of the NEJM Catalyst Insights Council for a closer look at the leadership training and approaches that work best for today’s health care organizations.

Early on in her career, Kathy Mahoney, MD, MBA, medical director for the Division of Health Care Quality at Baystate Health, a nonprofit integrated health care system serving over 800,000 people in western New England, had an interest in management and improvement processes. Her informal business skills had helped her rise to the top of her OB/GYN practice, but it took returning to school for an MBA to compete for health system leadership positions.

“I had credibility in my practice and amongst my peers, but I didn’t have it out in the broader world,” Mahoney says. “I did an MBA so folks knew I had some type of knowledge that set me apart.”

Mahoney isn’t alone. In our recent NEJM Catalyst Insights Council Leadership survey, 20% of respondents say the top leadership in their organization holds an MD-MBA or other combination of medical and non-medical degrees. The top choice in the survey — which was completed by clinical leaders, health care executives, and clinicians — was MD, MD-MPH, or other combination of medical degrees, at 28% of respondents.
Mahoney credits her MBA for enhancing her interpersonal skills — which survey respondents consider a top attribute to successfully lead a health care organization or physicians — as well as her ability to manage people and teams effectively, where non-clinical leaders are considered to have a slight advantage, she says. “I could manage my local peers but they were homogenous — much different than where I am now in a health system with 12,000 employees,” she says. “My MBA helped me understand how I communicate to others and to be more inclusive and understanding of other perspectives and to actively seek them out.”

A different take comes from Michael R. Wasserman, MD, CMD, Chief Medical Officer at Los Angeles–based Rockport Healthcare Services, which provides administrative and consulting services to post-acute care facilities throughout California and Texas. He says the MBA is not a cure-all for what ails physician leadership. He sees many physicians get an MBA but then find they can’t translate what they’ve learned to their organization’s needs, he says. “I actually worry the MBA becomes a crutch. If our business schools are so good, why is our health care industry so screwed up?”
Wasserman thinks physician leaders would be better served learning how to integrate quality care into workflow. “As a clinician, I know what quality care looks like, so I then have to figure out, how do I make that happen in a way that’s cost-effective and productive,” he says.

For instance, he believes the CMO position is not properly used in most organizations. “They often are clinical figureheads, when they should be used operationally as a bridge between quality clinical care and operations and finance,” he says.

Nathan A. Merriman, MD, MSCE, Director of Endoscopy and Chair of the Physician Leadership Network at Christiana Care Health System, a nonprofit that includes two hospitals with more than 1,100 patient beds, a home health care service, and a network of primary care physicians headquartered in Newark, Del., says health care organizations must provide protected time for leadership — both individual and team-based leadership development.

Merriman, who also helped to establish the Delaware Center for Digestive Care private practice in Newark, says the fee-based model has made it difficult for physicians to train for and take on leadership roles. “Our delivery model is so entrenched in fee-for-service that this type of disruption is uncomfortable at the practice level,” he says.

Physicians historically have been measured individually by number of procedures and office visits, which leaves limited time for dedicated leadership development, according to Merriman. “As we move toward patient-centric, provider-sensitive, and system-aware health care redesign, we need a leadership dyad approach that gives physicians space to learn and improve their knowledge base and leadership experiences in HR/finance and operations, now more than ever,” he says.

Mahoney is another proponent of the dyad model, which pairs clinical and administrative leaders for better results. In all, 85% of Insights Council members find this model extremely effective, very effective, or effective. Mahoney thinks it would be difficult to provide quality medical care without the accompanying operational process and infrastructure to deliver that care. For instance, she says clinical and business skills would be required to determine appropriate use of an expensive medical device or high-cost pharmaceuticals. “It might be appropriate for a few cases, but not all cases,” she says, pointing out that a dyad model can lead to informed guidelines.
Wasserman likes the dyad model in theory, but he says poor communication between clinical and business leaders can handicap it. “The only way to get physicians to listen is to have that message delivered by other physicians, but a lot of visionary physicians are unable to translate their vision to the operational and finance side,” he says, adding, “It’s a bit of a catch-22.”

He believes the entire system of physician leadership development needs to be revamped. Physicians should be trained as team leaders because most tend toward using a top-down leadership model. He also believes the CEO should oversee the dyad model, making sure that the CMO and CFO (or other clinical/administrative combinations) work well together. Baystate Health’s Mahoney sees approaches to leadership development changing. For instance, her organization is making it a mission to support the next generation of physician leaders, identifying promising talent and sending them to an in-house leadership academy.

“Leadership used to be a black box, but now physicians must understand it and be trained for it,” she says. “Just because you’re an expert clinician doesn’t mean you have the skills to bring a whole team together. You have to be able to build relationships and foster them.”

Sandra Gittlen
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Lessons in Leadership: How the BayCare Health System Withstood Hurricane Irma

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BayCare Health System

NEJM Catalyst’s Lessons in Leadership series features how health care leaders creatively guide their teams and organizations to make health care better.

As a large health system with 14 hospitals located in west central Florida, BayCare Health System is no stranger to the threat of hurricanes. As such, we have extensive plans in place to face storms that have the potential to impact us. Once it was confirmed that Hurricane Irma was approaching our region, our chief operating officer assembled our disaster management team and began to operationalize the logistics of a plan that had been established long before, to prepare us for exactly what we were facing.

Nearly a week before Hurricane Irma made landfall, the team initiated the plan and started thrice daily, system-wide calls with nearly 100 cross-functional leaders across the system. Those calls covered a wide range of topics, including the latest weather updates, supplies, facilities, operations, information technology, communications, and ambulatory and physician services.

As transfers and evacuations continued, our remaining 12 hospitals became both locations of acute care delivery and shelters. We estimate that we sheltered more than 2,000 people and nearly 500 pets.”

Strategic work efforts included topping off the fuel tanks on the generators, testing communication links, such as ham radios, and securing additional satellite phones with...
activated minutes. Ultimately, due to being located in a mandatory evacuation zone for one and experiencing water intrusion in another, we closed two hospitals and transported the patients to other in-system hospitals. Payroll was advanced for all employees to provide cash for those individuals preparing to evacuate.

As non-essential operations, including billing, marketing, and insurance, were shut down, the hospitals each implemented local command centers in addition to the virtual system command center. Senior leadership was deployed to local hospitals and braced for the impending impact.

During the height of the storm, we had numerous challenges including power outages, generator needs, and even generator outages requiring onsite support. While we never lost land-based communication, we were prepared with ham operators and satellite phone redundancies.

While mandatorily evacuating the first low-lying hospital, EMS was unable to supply the necessary support to get it done safely before the storm was upon us. Our home care division rallied transport vehicles, and we moved the patients safely and effectively. We also made the decision to close several of our behavioral health inpatient facilities.

As transfers and evacuations continued, our remaining 12 hospitals became both locations of acute care delivery and shelters. We estimate that we sheltered more than 2,000 people and nearly 500 pets. We delivered 80 babies and continued surgeries, heart catheterizations, and other clinical operational needs throughout the storm. Constant, accurate communication to our employees, physicians, and board members was essential through it all. We provided multiple updates each day on the path of the storm and its expected impact for each of the counties in our service area (as the impact of the storm varied across our service area), facilities closing, and letting employees know what to expect at work.

In the aftermath of the storm, deconstructing the shelter location and transferring patients home or back to their places of origin were all challenges. Additionally, many of our physician practices and outpatient resources were without power or unfit for use, and we needed to help them find temporary work spaces. We suffered water intrusion that shut down one hospital, and had to replace and repair generators in two locations. We continue to do additional facility hardening for hurricanes, but Irma brought a few lessons learned:

> From employees retrieving platelets after the delivery service ceased operations, to volunteering to provide childcare for those on duty, our team rose to the occasion and did whatever it took to care for the boundless numbers of people we had in our facilities.
One was the role of the non-clinical senior leadership team during a crisis of this magnitude. We found that most chose to volunteer in our hospitals and provide support as they were able. No job was too large or too small. Having members of the system executive team attend local command center meetings was coupled with cleaning beds, transporting patients, and doing any other jobs that needed to be done. The esprit de corps was palpable as they pitched in to lend a hand.

Another was to the extent we were prepared to be a shelter. During Irma, we sheltered thousands of team members who were coming off shifts. We created quiet spaces where they could sleep so they would be fresh to come back for an extended crisis situation. This took priority in terms of shelter operations with families. Food, entertainment, safe accommodations, toileting for pets, and Wi-Fi traffic were all issues that we had to manage. Countless acts of human kindness, heroism, volunteerism, and charity occurred. From employees retrieving platelets after the delivery service ceased operations, to volunteering to provide childcare for those on duty, our team rose to the occasion and did whatever it took to care for the boundless numbers of people we had in our facilities. At one facility, a file cabinet was commandeered and board games were located and placed within as a lending library for families who were sheltering in the building.

While we do not wish any health system the ill fate of having to face such a disaster, we've learned that being prepared, having a plan, and remaining calm are essential. Communication within the leadership team and to clinicians and employees is paramount so they know what to expect, and are calmer and better prepared to care for patients. In the end, we sustained damages, but had no adverse patient occurrences and weathered the storm well. Our team demonstrated our culture of humanity at work and became united in the course of this crisis.

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