

HEALTH POLICY REPORT

Care Redesign — A Path Forward for Providers

Thomas H. Lee, M.D.

Health care costs are the pounding headache to which all of us in medicine will awaken each day for the rest of our lives. Whereas some problems can be solved, others must be perpetually managed — and costs are among the latter. As long as medical progress continues, paying for it will be a struggle.

For clinicians, however, cost reduction alone is not an effective rallying cry: health care is intended to help people, not just provide a commodity as inexpensively as possible. Nevertheless, health care costs threaten social and economic progress in many societies, which are therefore implementing or considering myriad cost-containment interventions — some quite blunt. Only a redesign of care itself offers a real alternative to reducing provider payments or restricting patients' access. For providers, ignoring the cost problem is more than setting a bad example; it is bad strategy, too.

What, then, constitutes a path forward for providers? Optimistic arguments purporting that better quality lowers costs arouse skepticism among clinicians who can readily list counterexamples.¹ How do we resolve the tension between the imperative to do all we can to help patients and the needs of societies with constrained resources?

Here I describe an approach that my colleagues and I are using to redesign care in our integrated academic care-delivery system — an approach that seems to be both consistent with clinicians' values and responsive to the needs of patients and the marketplace.² The three elements of this approach — strategy, tactics, and operation — draw on the work of Porter, Gawande, and Bohmer.³⁻⁸ The application of this approach does not require, and need not await, the implementation of new payment models; these themes are potentially useful wherever clinicians seek to improve care in the context of constrained resources.

STRATEGY

Organizations under duress must first ask themselves, “What is our overarching goal?” We at Partners HealthCare System now agree that our goal must be to improve the value of care as defined according to the patients' perspective.² To make progress toward that goal, we must understand the outcomes that matter to patients and families and what it costs to achieve them, and we need teams that own the work of defining, measuring, and improving value.

The importance of defining a goal and starting to measure outcomes and costs cannot be overstated.^{3,4} Without consensus on a specific goal and without data indicating room for improvement, clinicians tend to advocate for their own portfolio of work. Under our traditional payment system, the “winners” have been organizations, disciplines, or clinicians whose services are most profitable. However, when resources are constrained, organizational viability demands a more strategic approach.

The goal of improving value for patients attracts universal support. Though critics may consider primitive our attempt to capture outcomes that are important to patients and may also believe that providers' efforts to improve value probably cannot resolve health care's vast economic challenges, no one disputes the idea that improving such outcomes is the right thing to do or that doing so as efficiently as possible will mitigate the need for more blunt cost-containment measures.

But redesigning care to improve its value is hard. Powerful forces besides the payment system reinforce the status quo. Insightful persons can articulate the potential problems that go along with any proposed change. Since our culture tends to be conflict-averse, we often fall back on a plan to work hard as individuals yet collectively we freeze and do little differently.

To overcome these prevailing forces, we need consensus on performance frameworks, within which the status quo is unacceptable, and performance report cards, which define what we're trying to improve. We then need to populate these report cards with real data on outcomes and costs. Without such data, talk about redesigning care continues to be just talk. Even after some data become available, responsiveness is not guaranteed. When good people in good organizations look at actual data, they often go through an initial phase of questioning the validity of any data indicating that their performance is below average; however, the organization's leadership must make sure that this period of doubt does not last indefinitely.

MEASUREMENT AS A STRATEGY

The commitment to begin measuring outcomes and costs as an ongoing process of care — even with imperfect measures — is a fundamental strategy that can help differentiate an organization from care providers who are focused on simple transactions, such as performing tests and procedures and arranging visits and hospitalizations. Available measures may never adequately capture “what matters to patients,” but measures improve fastest when they are being used. So the care-redesign process should not grind to a halt until ideal measure sets are found. Measurement and reporting with currently available data should begin immediately, with the explicit understanding that reports are going to keep on coming indefinitely. The implied message is this: since the data will be impossible to ignore, we might as well make them better.

These performance report cards cannot rely on evidence-based process measures (e.g., the use of beta-blockers after acute myocardial infarction), which are insufficient as organizational goals. Such measures feel comfortable to clinicians because they seem to be largely within our control, but for that very reason these data cannot distinguish excellent care from merely competent care. Although these measures focus on providers' reliability, providers are not the true focus of health care. Patients, providers, and third-party payers alike are interested in improving patient outcomes and in reaching this goal as efficiently as possible.

The effective pursuit of this goal demands that providers organize around patients' needs^{3,4} — first identifying segments of the patient population who have similar needs (often defined on the basis of diagnoses or arrays of medical and socioeconomic conditions) and then figuring out how to meet those needs systematically. If we become better at meeting patients' needs, the outcomes that matter to them should improve, as should our efficiency in achieving them. Accordingly, for each population segment, “value” is defined in terms of outcome and cost measurements during meaningful episodes of care. Reimbursement and profitability are not part of value measurement — care-redesign teams should focus on the true overall costs of delivering episodes of care.⁹ Others (e.g., contracting teams consisting of providers and payers) should address reimbursement approaches that support hard work and higher-value care.

OUTCOMES THAT MATTER

It's essential to recognize that no single outcome tells the whole story. For any population segment, there are multiple outcomes that matter.³ “Hard outcomes” (e.g., mortality) are, of course, most important, and doing significantly worse than expected in terms of such outcomes represents a major crisis. But since many such outcomes are largely determined by disease severity, it may be difficult or impossible for organizations to improve beyond the expected range.

Thus, to meet patients' needs more effectively, organizations must measure and manage other outcomes that matter to patients — including many that are not currently captured. For example, our Stroke Care Redesign Team has completed two cycles of reports based on its “Version 1.0” measures, which relied on available data for patients with ischemic stroke. Outcome measures include 7-day and 30-day readmission rates, emergency department visits within 30 days after discharge, and the percentage of patients discharged directly home. Resource-use measures include risk-adjusted ratios for observed-to-expected lengths of stay and estimated direct costs. The March 2012 report was based on 698 cases of ischemic stroke at five institutions between October 2010 and March 2011; the overall 30-day readmission rate was 8.5% —

Table 1. Outcomes from Value Report Card for Acute Myocardial Infarction in 259 Patients at Three Partners Health-Care Hospitals, October 2010 to March 2011.*

Outcome	Hospital A	Hospital B	Hospital C	Total for Partners HealthCare
All-cause mortality (ratio of observed to expected)	1.1	0.3	1.5	1.1
Observed mortality 30 days after discharge (%)	0.9	3.2	1.6	1.7
30-Day unplanned readmission rate (%)	15.0	7.9	8.1	11.5
Visits to emergency department within 30 days after discharge (%)	1.9	7.9	0.0	3.0

* Data are excerpted from the value report card for acute myocardial infarction for three hospitals within Partners HealthCare System, all of which have the capability of performing percutaneous coronary interventions and coronary-artery bypass grafting.

nearly identical to external benchmarks. Among our institutions, however, the variation in readmission rates and other outcomes was several-fold, although measures of complexity (e.g., the average level of nursing care required) varied much less. Additional cycles of reporting will be needed to determine whether differences in outcomes are sustained or are just noise.

These first rounds of reports underscored the need for other types of data to guide the redesign of care. From interviews with patients, we learned that many of them are interested less in readmission rates than in the number of days spent at home during the first 90 days after a stroke. Although these two measures are related, they are not identical and are sometimes in conflict. We know how to measure readmission rates but not yet how to measure what matters more to our patients. The Stroke Team also realized that we don't reliably capture information regarding other outcomes, such as continence and mobility, that are important to patients who have had a stroke, so we may not notice when these outcomes are worsening.

NEW METHODS

This team is therefore piloting a program to collect functional outcome data with a tool used in research (the modified Rankin scale)¹⁰ as part of routine follow-up care after a stroke. The collection of such data ("patient-reported outcomes") is logistically challenging and potentially expensive. We cannot ask physicians to obtain and record these data at the time of patient visits, nor can we ask patients to come to us solely for the purpose of providing data. Implementing

any outcomes-measurement program across our entire delivery system would be reckless; hence, we are in a research-and-development phase regarding what data to collect and how to collect them. Our early efforts are therefore pilot projects, such as obtaining follow-up data for patients with stroke through phone interviews at one institution and testing new data-collection technologies in focused populations at a few sites.

Nevertheless, we see the development of our ability to capture and respond to such data as an important organizational strategy. An emerging insight is that our overall organization has to function more like our most beloved clinicians — showing patients that we care by asking them how they are doing and by responding accordingly, even when we're not face-to-face with them.

The science of data collection is advancing rapidly. For example, many people are intimidated by traditional computers but find tablet devices intuitive and easy to use. The newer generation of telephone voice-response systems might become more user-friendly and not cause patients to hang up the phone immediately, especially when the call is an anticipated step in their care. When it comes to collecting data, we realize we have much to learn from work carried out in other disciplines.

Even with the limitations of available data, the effect of juxtaposing multiple outcomes and costs on the same page can be interesting and unanticipated. For example, Table 1 shows outcome data excerpted from Partners' value report card for acute myocardial infarction at three of our hospitals that have the capability to perform percutaneous coronary interventions (PCIs) and

Name: _____

MRN: _____

OR USE HOSPITAL ID STAMP

Stroke Team Discharge Readiness Tool

General Information			
Estimated Date of Discharge ___/___/___			
DX: TIA <input type="checkbox"/> Ischemic Stroke <input type="checkbox"/> (If any other diagnosis, do not complete this form.)			
Medical Work-Up			
	<u>Completed</u>	<u>N/A</u>	<u>Comments</u>
Labs	<input type="checkbox"/>	<input type="checkbox"/>	_____
Imaging	<input type="checkbox"/>	<input type="checkbox"/>	_____
TTE	<input type="checkbox"/>	<input type="checkbox"/>	_____
Holter	<input type="checkbox"/>	<input type="checkbox"/>	_____
DVT Prophylaxis	<input type="checkbox"/>	<input type="checkbox"/>	_____
Swallow Screen	Fail <input type="checkbox"/> Pass <input type="checkbox"/>		If fail → NPO, and consult SLP _____
Medical issues requiring continued hospitalization after workup for etiology completed? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Function			
	<u>Impaired</u> Yes		<u>Comments re: Implication(s) for D/C</u>
Cognition/Behavior	<input type="checkbox"/>		_____
Communication	<input type="checkbox"/>		_____
Swallowing	<input type="checkbox"/>		_____
Mobility	<input type="checkbox"/>		_____
ADLs/ IADLs	<input type="checkbox"/>		_____
Consults Placed: <input type="checkbox"/> PT <input type="checkbox"/> OT <input type="checkbox"/> SLP <input type="checkbox"/> Nutrition _____			
Other			
Did patient have restraints or a one-to-one observer in the 48 hours prior to planned discharge? <input type="checkbox"/> Yes <input type="checkbox"/> No → If yes, does this prevent discharge or require modification of destination? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Does patient need to execute a healthcare proxy or need a Guardian? <input type="checkbox"/> Yes <input type="checkbox"/> No → If yes, does this prevent discharge or require modification of destination? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Discharge Information			
Discharge Destination Recommended (per CM): <input type="checkbox"/> Home <input type="checkbox"/> Home w/ services <input type="checkbox"/> IRF <input type="checkbox"/> LTAC <input type="checkbox"/> SNF In.pt. Rehab			
Sign and date if you are the owner of this tool. DATE: ___/___/___ TIME: _____am/pm SIGNATURE: _____			
NOTE: THIS DOCUMENT IS NOT PART OF THE MEDICAL RECORD			

coronary-artery bypass grafting (CABG). Because there are several different types of outcomes data, no hospital can be considered the best or the worst on every metric for any population segment. The number of myocardial in-

farctions at any hospital is small, and the differences are not statistically significant, but our clinical leaders still scrutinize the data. After all, the goal of the reports is improvement, not publication.

Companion Checklist to Discharge Readiness Tool

Clinician resource: Questions to consider in preparation for discharge

Medical Work-up	Communication	Mobility
<p>Labs: CBC, Chem 7, Lipid panel, Coags, Cardiac enzymes, ESR, HbA1c, glucose, TSH, homocysteine</p> <p>Imaging: CT, MRI, MRA/ MRV</p> <p>Cardiac: TTE, ECG, Holter</p> <ul style="list-style-type: none"> Continuous telemetry required? Swallow screen completed? Any active medical issues requiring ongoing inpatient care? (e.g., hemodynamics, respiratory status) 	<ul style="list-style-type: none"> No communication limitations in daily setting? Functional communication for basic needs and wants? Significant communication deficits; may benefit from support from listener? Significant communication limitations, with impact on safety? No functional communication? 	<ul style="list-style-type: none"> Walks independently? Walks with assistance of person(s)? Wheelchair, independent? Wheelchair, dependent? Dependent for all mobility? Change in baseline function? Functional status adequate for safe discharge to next setting?
Cognition/Behavior	Swallow	ADLs/IADLs
<ul style="list-style-type: none"> Cognitive impairments impact ability to function safely alone? Impaired awareness of deficits or limitations? Cognition/Behavior impacts learning? Behavior requiring restraints? No restraints X 24hrs? 	<ul style="list-style-type: none"> No dysphagia/swallowing impairments Dysphagia present but stable and efficient means of nutrition is established Patient requires supervision or strategies for safe swallowing Dysphagia present, unstable, and significantly impacts safety and efficiency of nutrition Unable to safely eat or drink at this time 	<ul style="list-style-type: none"> ADLs completed independently? ADLs needs assistance of person(s)? Change in baseline function? Functional status adequate for safe discharge to next setting? ADLs: Bathing, dressing, grooming, mouth care, toileting, eating IADLs: Shopping, meal preparation, managing meds, using the phone, doing housework, laundry, driving/using public transportation, managing finances, health management, care of others
Patient ED/Communication	Living Situation/Social Support	Discharges to Home
<ul style="list-style-type: none"> Diagnosis/prognosis Signs/symptoms of stroke EMS use encouraged Risk factor modification Medications reviewed Patient/caregivers aware of pending procedures/tests/consults? Estimated date of discharge communicated? Patient/caregivers aware of pending procedures/tests/consults? Clear, agreed-upon d/c plan? Family meeting for complex situations? Discharge & follow-up plan reviewed? 	<ul style="list-style-type: none"> Living location prior to admission: <ul style="list-style-type: none"> Home? Long-term care facility/ Nursing Home? Outside hospital? Social Support (Caregiver): <ul style="list-style-type: none"> Available full-time? Intermittently available? Not available? 	<ul style="list-style-type: none"> Patient able to care for him/herself? Adequate social/caregiver support? Home or community services needed? Access (e.g. keys) to home? Home prepared for patient's arrival? (medical equip, home services, food) Ability to obtain medication confirmed? Follow up appointments arranged? Transportation to follow-up possible?

Figure 1. Discharge Readiness Tool, and Companion Checklist.

If the Stroke Team form (facing page) is not used, the companion checklist indicates the essential elements that should be considered regarding discharge planning and should be incorporated into existing documentation at Partners' hospitals. For example, when filling out the discharge information box on the Stroke Team form, the clinician should consider the points listed on the companion form. Reproduced with permission of Partners Stroke Team (Schwamm L: personal communication).

The picture painted by the array of data reflects real life: it's complicated, and every group can potentially learn something from someone else. This dynamic accords with our goal of using these report cards not as a basis for competition but as a framework for learning and improvement.

TACTICS

Having established the kinds of improvements we are aiming for, our care-redesign teams must determine how to accomplish them. These teams have been mapping out processes of care for their population segments, identifying “pause points,” and describing the interventions that should be reliably delivered at those points. For example, Figure 1 shows our Stroke Team's discharge readiness tool, a set of issues and questions that clinicians should always review before discharging a patient after a stroke, as well as a companion checklist indicating elements that should be documented in the hospital record. The benefits of this approach have been shown through use of the World Health Organization surgical checklist, among many examples.^{5,6}

This work inevitably gets into the nitty-gritty of patient care and identifying and questioning our assumptions about what constitutes good and efficient care. For example, the Acute Myocardial Infarction Team looked at data for the three hospitals in our organization that perform PCIs and discovered that they all had excellent and nearly identical door-to-balloon times, but their subsequent management approaches differed. At one of the three hospitals, patients whose condition was stable were directly triaged to intermediate care units, whereas at the other two hospitals patients were routinely transferred to the coronary care unit for 24 hours of observation. At one of these two hospitals, two thirds of the patients with uncomplicated ST-segment elevation infarctions spent just 1 day in the coronary care unit, suggesting that most, if not all, of these patients did not need the higher level of care. The initial triage of patients without complications to the coronary care unit is more costly (and potentially less safe) than triage to an intermediate care unit, primarily owing to personnel expenses related to transferring patients among services. After one intense discus-

sion about standards of care, team members sought information on practices elsewhere and found that several respected institutions directly transfer patients with uncomplicated conditions from the catheterization laboratory to intermediate care. So guidelines were introduced at the latter two hospitals to specify which of the patients should be admitted to the coronary care unit. Similarly, substantial differences were found in the use of blood and albumin products among our hospitals performing CABG, which led to work on utilization algorithms and more timely reporting systems. Data on the effects of these interventions are not yet available, but we expect variation to decrease over time.

We usually have little difficulty reaching agreement on appropriate processes; the challenge is in doing reliably what we believe we should do. For example, the potential benefit of scheduling outpatient appointments within a week after discharge for patients at high risk is not a controversial issue among our teams. The readmission rate in this patient population is greatest during the first 1 to 2 weeks, and rates are lower when patients are seen by any clinician in those early days. Nevertheless, getting early appointments scheduled before discharge can be challenging; in an era of short hospital stays, even identifying patients with specific conditions (e.g., heart failure) before they are discharged can be difficult.

We have learned that this work is hard, and there's no alternative but to wade into it. The temptation is powerful to pick one relatively easy process, cajole existing personnel into taking it on, and declare victory. But then, of course, neither outcomes nor costs would change much. And teams grow dispirited if their “output” is focused on a process that provides little value or is already reliably performed.

Our teams' recommendations fall into several major categories: implementation of scheduling and “navigation” functions (e.g., arranging definite, confirmed, timely appointments for patients and reliably connecting patients to programs that are likely to improve outcomes); use of data and guidelines to reduce unwarranted variation in resource use; reliable implementation of interventions that are likely to reduce adverse clinical events, readmissions, and emergency department visits (e.g., follow-up phone

calls and visits and postdischarge reconciliation of medications); and development of the capacity to monitor patients over time.

Simply adapting another institution's checklist would probably have limited value, since an important function of care-redesign teams is to develop a shared vision of high-value care. Consensus on process maps permits the identification of pause points, key steps to be performed, and rigorous measurement of costs. These checklists have to be tested and modified with clinician experience, and clinicians have to be willing to follow and perfect them — all of which requires teamwork.

OPERATIONS

Implicit in these steps is the need for effective teams — not just to define the performance framework or formulate checklists but to take responsibility for improving value for specific population segments. These teams should not be committees with a time-limited deliverable but rather permanent parts of an organization's structure.

Teams organized for the purpose of meeting a population's needs represent a departure from conventional organizational structures designed to optimize the use of resources (e.g., operating rooms, hospital beds, and ambulatory care facilities).^{7,8} But in redesigning care, providers need not make everything up as they go along. Each organization is unique, but the "habits" that characterize high-value providers are increasingly understood: detailed planning around patients' needs, a commitment to measuring outcomes, the relentless desire to improve, and teams charged with driving improvement.⁷ To be effective, teams must include leaders for whom the drive to improve is their professional reason for being. In addition, teams must have data that reflect their performance and have incentives (financial and nonfinancial) to reward them for progress. They must meet regularly to review these data and share in peer pressure, friendship, and pride and respect.

The vision that emerges is of organizations that explicitly aim to improve the value of care. That goal requires measurement of outcomes

that matter to patients, as well as rigorous assessments of costs over meaningful episodes of care⁹ so that efficiency can be assessed and enhanced. It requires a genuine commitment to improvement, which won't come through asking people to work harder but rather through learning, often from other organizations that collaborate and integrate their work effectively.

The approach to redesigning care requires the humility to concede that we are not as good as we can or should be, that we can learn from others, and that we need tools (e.g., checklists) to improve. It also requires the discipline to use those checklists and to measure and respond to outcomes that matter to patients. And that response will be strongest when it reflects true teamwork. My hope is that this framework will constitute a durable path forward. Cost pressures will never go away, nor will patients' needs, but the approach described here may prepare us for the long haul.

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From Partners HealthCare System and Harvard Medical School, Boston.

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