

# Uniting the Tribes of Health System Improvement

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In his 1940 book about the Nuer people in southern Sudan, British anthropologist E. E. Evans-Pritchard coined the term “segmentary lineage” to describe how members of a society live in a web of nested identities or tribes.<sup>1</sup> At any given time, individuals are members of several groups in a hierarchy, from the local or proximal (eg, my street, my neighborhood) to larger groups (eg, my region, my country). The most meaningful group affiliation at any given time depends on the scale and nature of external threats or conflicts. For example, wars or other national crises encourage individuals to consider themselves as part of a nation; absent common threats, individuals may more strongly identify with groups or tribes lower in the hierarchy (eg, political parties).

In recent decades in healthcare, there has been growing national consensus around the idea that improvements in affordability, quality, and value are needed. Yet nested within this growing consensus are largely distinct “tribes” of experts with varying interpretations of what would constitute improvement. Specifically, different groups of experts, advocates, and entrepreneurs argue for steps to redesign processes and measure performance, implement provider payment changes, engage patients in their health, or implement health information technology (HIT).

The quality improvement, payment reform, consumer engagement, and health IT tribes share a common view of the need for greater quality and efficiency in healthcare. And within each tribe, much progress is being made to advance new tools for health system improvement. Yet these discrete tools typically address only a fraction of the overall challenge inherent in preventing or treating illness for a particular population of patients. These tribes do not always see that the contributions of other tribes can be important to actually achieving large-scale health system improvements.

We suggest the need for building new evidence regarding ways to combine tools from multiple reform tribes implemented in service of specific cost and quality improvement goals on behalf of specific types of patients. Greater returns may be possible—compared to pilots or demonstrations of single interventions—when providers, communities, or regions are accountable for achieving specific health goals and are empowered and equipped to implement integrated combinations of reforms that can address the many complex barriers standing in the way of patients receiving sustainably higher quality and more efficient care.

Nested within a growing national consensus that the performance of the US healthcare system needs to be improved are largely distinct “tribes” of experts with varying interpretations of what would constitute improvement: the quality improvement tribe, the payment reform tribe, the consumer engagement tribe, and the HIT tribe.  
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## The Tribes of Health System Improvement

In our observation, there are at least 4 tribes of health system im-

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### Take-Away Points

Largely distinct “tribes” of experts have varying interpretations of what would constitute improvement in the US healthcare system: quality improvement, payment reform, consumer engagement, and health IT tribes.

- The common practice of testing new ideas in single-intervention demonstrations offers limited insight into how multiple reforms might interact.
- The shared external threat of rising costs and gaps in quality and health can serve as the critical means by which the health system reform tribes can come together and recognize their interdependence.
- Health information technology, though not sufficient in itself, will increasingly provide the essential underlying communication infrastructure to support health and healthcare improvement.

provement. Each offers distinctive explanations for the core problems of health system performance and different tools or strategies for addressing them.

First, analysts and practitioners in the quality improvement tribe note the inadequate application of change management, process improvement, and performance measurement strategies and techniques in healthcare, despite the fact that these approaches have yielded substantial quality and efficiency improvements in other industries. Indeed, there are promising results from those healthcare organizations in both the private<sup>2,3</sup> and public<sup>4,5</sup> sectors that have adopted lean manufacturing and other continuous quality improvement strategies to realize improvements in patient safety, care quality, and cost containment.<sup>6</sup>

Second, experts in the payment reform tribe underscore how provider payments tend to promote volume and intensity of services. Volume-based payments reinforce health system fragmentation, discourage care coordination, and contribute to systematic underinvestment in value-increasing quality improvement innovations such as effective care coordination systems fostering greater communication and collaboration between primary care and specialist providers. Indeed, a range of innovative payment reform demonstrations in the public and private sectors over many years indicate that payment methods can greatly influence provider practices. For a recent review, see the article by McKethan et al.<sup>7</sup>

Third, the consumer or patient engagement tribe emphasizes that health outcomes are largely a function of consumers’ lifestyle and healthcare decisions. Consumers and patients need information for more informed decision making and to equip them to prevent and manage illness. Members of this tribe point to promising results from a range of interventions designed to influence consumer decision making. These include demonstrations of value-based insurance design,<sup>8</sup> informed patient decision-making models,<sup>9</sup> and

patient engagement and activation techniques.<sup>10,11</sup>

Finally, those in the HIT tribe emphasize the need for significant changes in the way that providers and patients capture, analyze, and share healthcare information. Indeed, the recent literature is full of promising examples of how HIT tools and resources have been used to improve patient outcomes, streamline administrative processes, and reduce waste and redundancy.<sup>12</sup>

Experts, entrepreneurs, advocates, and policy leaders within these different tribes share a common motivation

for achieving greater quality and value in the healthcare system. Yet the distinctive contributions of their specific tools and strategies are typically not combined, inhibiting both the potential achievement of large-scale performance improvement and the ability to generate more evidence regarding the interactions among multiple types of reforms implemented together.

### Need to Unite the Tribes of Health System Improvement

In practice, the contributions of each of these and possibly other tribes depend upon one another. For example, although there are many validated quality improvement initiatives in the literature and in the marketplace, many of these strategies are limited by the absence of other changes that could amplify and sustain the gains from these initiatives. Within a predominantly fee-for-service payment system, providers who invest in new quality improvement programs and achieve tangible performance improvements (eg, reductions in avoidable hospital readmissions) can experience both initial cost increases (ie, from investing in the inputs needed to achieve better outcomes) and ongoing revenue reductions (ie, from fewer hospital payments). This situation contributes to underinvestment in such programs and makes any positive results difficult to sustain.

Similarly, new payment models (eg, bundled payments that combine payments for acute and postacute care) need to be accompanied by implementation of new care coordination and other process improvements to ensure that payment reforms translate into better care and slower spending growth. Hence, alternatives to volume-based payment systems are needed to reinforce quality improvement programs, and vice versa. For example, testing primary care medical homes or other care coordination programs alongside and within accountable care organizations (ACOs) may yield new insights

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about the effects of quality improvement and care coordination programs with a payment framework promoting overall accountability for costs and quality.

In like manner, adoption of electronic health records and related HIT tools is necessary but not sufficient to realize major gains in quality and efficiency. Without the coordinated implementation of specific steps to encourage changes in provider practices and consumers' engagement in their own health, HIT investments alone could add to overall costs without clinical benefits for consumers or productivity benefits for providers. For this reason, the new rule promulgated by the Department of Health and Human Services outlining the elements of "meaningful use" strongly links incentive payments for the adoption of electronic health records to specific quality improvement, performance measurement, and consumer engagement functions that the technology can enable.<sup>13,14</sup> Hence, the meaningful use rule unites the tribes by identifying HIT as a critical foundation for quality improvement, patient engagement, and payment reforms.

Likewise, efforts to motivate consumers to be better stewards of their health and make optimal healthcare choices may not yield their full potential if implemented in isolation of other changes in healthcare delivery. For example, gains from efforts to motivate or educate consumers and patients may be limited if patients must still continue to navigate an uncoordinated healthcare system.

### Evidence of Efforts to Combine Multiple Reforms

Unfortunately, little is known about the interactions of HIT, quality improvement, consumer engagement, and payment reforms when they are implemented together. Suggestive evidence is available from systems like Kaiser Permanente, Group Health (Seattle, WA), Geisinger, and other integrated delivery systems in which structural alignment of these types of reforms is a core organizational strategy. The obvious challenge is to replicate observed quality and efficiency outcomes that have been achieved in such settings in other, more fragmented systems.

A recent review summarizes the few recent studies of interventions that have explicitly integrated more than 1 type of reform together at the same time in different market contexts.<sup>7</sup> Most of the studies under review have positive results, even though they represent a diversity of models and settings. For example, some of the most extensive evidence comes from efforts to implement the chronic care model, which specifies a number of integrated steps to improve care for chronic illnesses that span most (but not all) of the tribes outlined in this article. The chronic care model includes redesigning delivery systems around coordinated primary care teams; working with patients to improve self-management; using HIT to aid record

keeping, progress tracking, and decision support; and reorienting the organizational culture toward quality improvement (often using payment incentives, though not in all of the studies summarized here). Several studies of the chronic care model that combined multiple independent reforms identified improvements in clinical outcomes and critical process measures for conditions like diabetes,<sup>15</sup> and others that examined cost impacts identified net cost savings.<sup>16</sup>

In another example of reforms combining HIT, patient engagement, and quality improvement along with reinforcing changes in payment practices, Geisinger Health System instituted its ProvenCare quality improvement program for heart bypass surgery in the early 2000s. This program involved developing a risk-adjusted bundled payment for all related care within 90 days of the surgery.<sup>17</sup> Although much of the press attention concerning this reform recognized Geisinger's work as an innovation in provider reimbursement,<sup>18</sup> the program is structured around HIT-enabled process improvement, patient engagement, and other steps implemented in an integrated fashion. Surgical compliance with the program's 40 evidence-informed treatment standards jumped from 69% (better than the national benchmark) to 100% by the end of the year-long trial. The result was associated with improvements in clinical outcomes, including hospital readmission and infection rates.

Although the few studies combining multiple types of interventions are encouraging, much more evidence is needed in a variety of market contexts to understand whether and how greater returns may be possible from implementing multiple reforms together in the healthcare community beyond integrated delivery networks.

### New Opportunities to Unite the Tribes

Fortunately, several new initiatives explicitly seek to combine the perspectives and tools of multiple health system improvement tribes and develop a better evidence base for integrated reforms. These developments can serve as the platform for additional work in this area.

The Center for Medicare and Medicaid Innovation within the Centers for Medicare & Medicaid Services (CMS), which was established and funded by the Patient Protection and Affordable Care Act (ACA) of 2010, will have unprecedented authority and funding to test new reforms in different market environments. Although this center still is under development, it presumably could test new types of reforms to augment CMS's existing demonstration and piloting portfolio, which has historically been focused largely on single-intervention studies in highly controlled environments.

Similarly, the new ACO program, also established by the ACA, will establish "shared savings" payments for providers

when their efforts to improve quality and lower costs are successful. Although knowledge concerning critical successful factors for ACOs is limited, the most successful ACOs will likely be those that explicitly combine tools and strategies from all the tribes outlined in this article. These might include establishing or strengthening HIT systems to foster integration, coordination, and communication; robust quality improvement strategies (eg, programs to facilitate care transitions and reduce avoidable hospital readmissions); provider performance measurement, feedback, and reporting systems; and patient engagement strategies (eg, steps to specifically support patients and their caregivers in managing disease). By contrast, ACO providers that implement payment reforms but change little else about their practices are not likely to be effective.

The new ACO program therefore represents an important opportunity to evaluate changes in payments (ie, the availability of shared-savings bonuses when quality and cost growth reduction targets are met) with different configurations of HIT, quality improvement, and consumer/patient engagement initiatives. Given the expected proliferation of different kinds of ACO models in different market environments, researchers will have new opportunities to assess the conditions under which reforms combining the contributions of multiple tribes can fit together and contribute to better quality outcomes and slower cost growth.

Finally, the Beacon Community program, created by the Office of the National Coordinator for Health Information Technology, represents an additional opportunity to test HIT as an enabler of delivery system changes to support a range of other quality improvement strategies in currently fragmented communities.<sup>19</sup> The program includes funding and technical and evaluation support for 17 community collaborations in diverse parts of the country with above-average HIT adoption rates. This program seeks to demonstrate how the integration of locally designed, HIT-based innovations can foster a more coordinated, efficient, and high-quality system in communities whose leaders have set specific cost, quality, and population health goals.

The Beacon communities are implementing multiple reforms simultaneously, all of which build on a foundation of advanced HIT. For example, the Keystone Beacon program, whose lead organization is the Geisinger Clinic, is using its Beacon Community award to extend its successful quality improvement, care management, and performance feedback processes in central Pennsylvania beyond the walls of Geisinger's own integrated delivery network to other community hospitals, physician groups, long-term care facilities, and the public. Specifically, the Keystone Beacon Community will adapt and test a successful care coordination model that uses

embedded case managers and the Keystone Health Information Exchange to improve patient outcomes and decrease costs for patients with chronic obstructive pulmonary disease and heart failure, as well as for patients after surgery.

The Keystone Beacon care model includes tools and information for physicians and care managers in multiple care settings as well as patients and their caregivers. Care managers will assist physicians and other clinicians to help these patients manage their care. When it has documented quality and cost improvements, the Keystone Beacon project will offer its care coordination services for purchase to payers, hospitals, clinics, long-term and postacute care providers, and patients and consumers, providing a new payment model for care coordination. To assess how the interaction of numerous reforms affects bottom-line results for cost, quality, and population health, the Keystone Beacon program will monitor improvements in care coordination, reductions in the number of hospital readmissions, increases in patient self-care activities, and patient and clinician satisfaction. These measures will reflect the joint contribution of multiple, simultaneous interventions that span several tribes.

### Uniting the Tribes: Implications for Health Services Research

Most healthcare demonstrations or pilot studies and evaluations sponsored by private payers, CMS, and other purchasers have been designed to isolate and study the effects of a single or limited number of interventions such as a new pay-for-performance program, a specific HIT intervention, or a specific care management model—implemented in the absence of other interventions. Quasi-experimental research methods that seek to isolate specific interventions of interest and hold other factors constant are, of course, designed to generate the highest quality of evidence possible, notwithstanding the correspondingly increased difficulty identifying relevant control regions and generalizing the results.

Yet implementing several integrated reforms at the same time on behalf of the same patient population shifts the fundamental evaluation approach from investigating the discrete effects of independent interventions in carefully controlled environments to assessing how a set of jointly implemented healthcare reforms interact with one another. In the context of the Beacon communities, key evaluation questions pertain to whether specific combinations of HIT-enabled health system reforms together lead to overall improvements in quality and cost at a population level. Give the multitude of drivers hypothesized to affect a specific community-level measure (eg, avoidable hospital readmissions in a 20-county area or on behalf of a defined panel of patients), isolating the relative contribution of any one particular intervention is clearly more problematic.

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In addition to tracking overall quality, efficiency, and population health, subanalyses informed by qualitative and quantitative methods can be used to determine the relative effects of particular components of the community wide reforms. These effects can be studied by measuring outcomes of interest consistently across a large catchment area over time and then introducing interventions within the initial populations of focus across the entire catchment area. This approach can help to establish a control against secular trends at the regional level for jointly implemented interventions.

Despite the important research challenges, we argue that health services research can and should be able to accommodate these kinds of complex, multilevel evaluation analyses. Beyond the Beacon Community program, the proliferation of ACOs and other types of complex, multidimensional health system reforms suggests that such research approaches will be increasingly necessary.

To achieve this vision, use of standard measures of performance within and across communities should be encouraged where possible. That would ensure a means of comparing different types of interventions in different community and delivery system contexts so that observed differences are not simply artifacts of measurement variance. Data (administrative and clinical) at the individual, provider, and population level also will be needed on a timely basis to evaluate how effectively these interventions are interacting and to inform course corrections in the interventions themselves.<sup>20</sup>

## CONCLUSIONS

Achieving transformation of the US healthcare system will require multiple interventions and tools implemented simultaneously to fully account for the comprehensive needs of actual patients living with or seeking to avoid illness. The common practice of testing new ideas in single-intervention demonstrations that tackle only one discrete problem at a time offers limited insight into how multiple reforms may interact and potentially produce greater benefits for particular patients.

Encouraging new pilot programs or community-level interventions that implement multiple reforms together will require more robust, complex research designs and tradeoffs about the quality of evidence from any single intervention. Evaluations must be able to reliably measure performance at the community level, but also account for unique implementation factors that contribute to overall results.

Although the specific interventions and strategies that can achieve cost, quality, and patient experience outcomes in different communities are likely to vary to some extent, a foundation of HIT will play a key role as an enabler of

health system reform in all types of communities. Health information technology is not sufficient in itself, but it will increasingly provide the essential underlying communication infrastructure to support health and healthcare improvement, as well as the evaluation infrastructure to generate better evidence about the combinations of reforms needed to achieve better results.

Large-scale healthcare improvement will only be achieved by uniting the tribes of health system reform and thereby producing multiple integrated improvements that fully address the complex and comprehensive challenges that actual patients face navigating the healthcare system. If the historical and anthropological concept of segmentary lineage can offer insights for healthcare, the shared external threat of rising costs and gaps in quality and health can serve as the critical means by which the health system reform tribes can come together and recognize their interdependence. Policy and implementation efforts, in turn, must increasingly reinforce this shared vision for integrating the many complementary changes in healthcare delivery needed to realize large-scale improvements in affordability, quality, and health.

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