NEJM Catalyst | Innovations in Care Delivery

IN DEPTH

# Professionalism Revealed: Rethinking Quality Improvement in the Wake of a Pandemic

J. Michael McWilliams, MD, PhD

Vol. No. | July 22, 2020
DOI: 10.1056/CAT.20.0226

The pace of health care quality improvement in the United States has been slow. After 2 decades of efforts relying largely on quality measurement and performance-linked payment incentives, we need new ideas and new conversations. As revealed by health care workers' response to the Covid-19 pandemic, professionalism in health care may be an underused resource. Reframing quality improvement around the linchpin of care delivery — physician agency — could provide much-needed direction by elucidating strategies that address problems of information or motivation when professionals act as agents on their patients' behalf. These strategies need not rely on measures. Physicians' collective ability to observe and learn can be better tapped and their intrinsic motivation better supported. This article discusses the inherent limitations of measure-focused approaches, provides a framework for conceiving a next generation of initiatives that aim to improve care by more productively leveraging professionalism, and offers specific directions for policy and practice.

---

*Editors' note: This In Depth article is an early release from issue 5 of* NEJM Catalyst Innovations in Care Delivery. *It will appear alongside other issue 5 articles in September – October 2020.*

*"To hold my teacher in this art equal to my own parents . . . and to teach this art . . . without fee or indenture." —Hippocratic Oath*

---

The Covid-19 pandemic has exposed many weaknesses in the U.S. health care system but has also revealed its core strength: the professionalism of its workforce. As the global crisis unfolded, nations of worried people confined at home watched their physicians and nurses report to work. These professionals not only exhausted and imperiled themselves, but they also rapidly absorbed ever-changing information about an emerging disease, mastered new skills, and implemented new practices. They embraced new responsibilities, with new physicians joining the ranks early and others coming out of retirement. They did not retreat from compassion. They remained inquisitive and instructive, teaching colleagues how to address new problems and generating protocols on the fly. They expressed composed outrage when systems failed their patients; they mobilized to fix what they could. And, with somber resolve, they prepared to ration critical care according to ethical and economic principles.

No financial incentives or performance measures were required to prompt their efforts; in fact, many pitched in against their financial self-interest. While some less-than-admirable behavior may be exposed when the fog of war lifts, the overall display of professionalism is nothing short of astonishing and should serve as a reminder that clinicians' unique training and intrinsic concern for their patients is our greatest resource, our best hope, for improving health care.

The vastness of that resource, revealed but not created by the Covid-19 response, should also make us recognize that it may be underused — whether mismanaged, malnourished, or undermined — in normal times. The heroes on the front lines were not born overnight. Although the same might be observed of workers outside of health care who have also risen to the occasion, the implications for medicine are distinctive. First, health care workers choose their jobs at least in part to help others, and many spend years learning their craft; the concentration of human capital and goodwill in the medical profession is unique. Second, after the Covid-19 crisis passes, suffering will continue in medicine. Much of what physicians and nurses have confronted on the front lines is not new, just different and intense. In its steady state, the system constantly encounters patients in crisis and often fails to meet the challenge. If our medical professionals have more to offer, the consequences of squandering it are perpetually great. Thus, when we return to the task of improving the quality of health care delivery, we should ask how the professionalism of our clinicians can be more effectively tapped and supported.

## Physician Agency and Quality Measurement

A central concept in health economics is that the physician acts as an agent for the patient, determining what the patient's problem is and what should be done about it.[1] While patients desire high-quality care, they may not be sufficiently informed to demand it. Physicians are more informed than patients by virtue of their training and experience, and are expected to be motivated by their intrinsic concern to use that knowledge in their patients' interest.[2] Professionalism can be thought of as determining the outcome of physician agency (how patient welfare is served by physicians' knowledge and concern). Conceptually, with informed and motivated professionals as their agents, patients effectively become discerning consumers capable of driving healthy competition in health care markets where extrinsic pressure may be needed to encourage high-quality care (e.g., primary care physicians [PCPs] directing patients to the safest hospitals or surgeons selecting the best devices). (This article focuses largely on physician agency as an

instructive case, but other health care professionals act as agents, too, presenting analogous issues that are no less important.)

> *Potential refinements notwithstanding, the dissatisfying pace of quality improvement over the last 2 decades should tell us that measure-reliant approaches are unlikely to deliver on their promise."*

Early data indicating that physicians are not perfect agents with perfect information spurred the growth of quality measurement, which has uncovered more such evidence.[3,4] Empirical observations that physicians can be misinformed, unaware of evidence, subject to biases, and influenced by financial incentives upended physicians' long-standing position as unquestioned and self-regulated authorities. With these shortcomings exposed, consensus emerged that physicians could no longer be solely entrusted to know and do what is best for their patients.

For more than 2 decades, we have deployed quality measures hoping to overcome physicians' limitations. In general, quality improvement strategies can be categorized based on their reliance on performance measures and involvement of the payment system (Figure 1).

FIGURE 1

## Quality Improvement Strategies Categorized by Reliance on Performance Measures and Use of Payment Policy

Quality improvement strategies are categorized by their reliance on performance measures and involvement of the payment system. Although strategies in the right two boxes may involve measures (e.g., competition on measured performance), the distinction is whether performance measures are required. The listed strategies are neither exhaustive nor necessarily mutually exclusive. The purpose of the schematic is to illustrate how an overemphasis on performance measures may miss other strategies that may prove effective but have received less attention, particularly those conceived by considering the role of physicians as agents (lower right box).

**Reliance on Performance Measures**

| Involvement of Payment System | Yes | No |
|---|---|---|
| Yes | **Pay-for-performance**<br>**Value-based purchasing** | **Competition**<br>• Site-neutral payments<br>**Provider agency**<br>• Flexibility under budgets<br>**Risk adjustment** |
| No | **Private use of measures**<br>**Public reporting**<br>**Surveillance**<br>**Measure-guided nudges** | **Continuing education**<br>**Standardization**<br>• Guidelines, checklists<br>• Systems<br>**Competition**<br>• For patients<br>• For physicians<br>**Provider agency**<br>• Use what physicians can see and learn<br>• Tap intrinsic motivation |

Source: The Author

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Performance measures, defined by specifications for processing information to score provider quality, should be distinguished from information more generally (without which no strategy can be successful) and from tools that standardize practices (checklists, guidelines, order entry systems, etc.) but do not assess provider performance. Without linked payment incentives, measures may be used privately for quality improvement initiatives or publicly to inform consumers and providers in a market. In recent years, we have focused almost exclusively on the box of strategies that combine measurement with payment to make up for weak competition or deficient provider agency by tying

financial incentives directly to performance on specific measures. At best, the gains have been spotty and perhaps not surprisingly so. Measure-reliant strategies such as public reporting, pay for performance, or value-based purchasing are constrained by the multidimensional nature of quality and the challenges inherent in measuring and rewarding it.

First, focusing on measurable markers of quality can divert resources from harder-to-measure but equally or more important aspects of care, resulting in unchanged or even worse quality overall. As cases of Covid-19 mounted, the U.S. Centers for Medicare & Medicaid Services directly acknowledged this trade-off when it relieved providers of reporting requirements and penalties in its quality performance programs "so the healthcare delivery system can direct its time and resources toward caring for patients."[5] If resources could be more productively allocated during an acute crisis, they could probably also be better spent during a chronic one in which the health care system regularly fails patients in extremis.

Second, performance measures detect the symptoms of dysfunction, not necessarily the cause. Thus, performance-linked incentives often elicit low-cost responses that improve measured performance (e.g., teaching to the test or gaming) but do not address the underlying disorder. In contrast, when measures are used for evaluation, they may serve to detect valid signals of systemic improvement. That is, a measure may successfully reflect a change in a deeper construct (e.g., patient safety); its psychometric properties may be sound. But a change in performance on that measure may mean little when the measure, not the construct, is the target of change.

> “ *Because of their training, experience, and exposure, physicians are uniquely positioned to understand what constitutes high-quality care, identify it, and learn how to deliver it."*

Third, risk adjustment presents a thorny challenge with no satisfying solution, particularly for outcome measures such as functional status or mortality. When adjustment is incomplete (as it will always be to some extent), budget-neutral pay-for-performance programs transfer resources between providers partly based on the patients they serve rather than the care they deliver. Attempts at more exhaustive adjustment can backfire by interfering with incentives to improve modifiable factors. For example, adjusting functional status for a history of stroke weakens incentives to prevent strokes (e.g., the net costs of population health management programs increase when improvement via stroke prevention is not fully rewarded).

Fourth, whereas payers can set strong incentives for providers to minimize costs without having to measure provider costs (e.g., via capitation contracts), financial incentives to improve quality as a whole are inherently weaker because quality must first be measured to serve as a basis for payment. As an enormously complex construct, quality cannot be measured in its entirety. The bulk of reimbursement will always be unrelated to quality. Paying on numerous measures further weakens incentives to improve on any one dimension, whereas paying on fewer may support stronger incentives for meaningful change but only for a narrow slice of quality.

Turning to experience to date, gains from performance-linked payments have generally ranged from absent to modest and have come at great expense[6-12] — including substantial reporting costs,[13] the deadweight loss from wasteful score-promoting behaviors,[14] and an inequitable and potentially harmful redistribution of resources.[6,15,16] Harder to quantify, but no less real, are the insidious effects that performance-based pay have on professionalism. As the concept of quality is reduced to that which is measured, improvement redefined as higher scores, extrinsic judgments elevated above unseen efforts, and time for patients and colleagues hijacked by box-checking, demoralization sets in.[17,18] Purpose is undermined as demands on physicians diverge from their values, professional identity is lost, and intrinsic motivation gives way to a self-fulfilling prophecy that physicians care only about financial incentives.

Imagine an analogous system in the production of research. Suppose an expert is commissioned to write a guideline or review article about a controversial topic. Under one approach, she is paid a fixed sum to use her professional judgment in selecting and synthesizing studies that should serve as the scientific basis for conclusions and recommendations. Under another approach, she is paid $100 per summarized study with a bonus if the total Altmetric Attention Score for the cited references exceeds a target and a penalty for each letter to the editor critiquing the conclusions. Which approach would produce the better paper? Which the better scientist?

Recognizing the costs, experts agree that the deployment of quality measures needs to be rethought.[19,20] Yet in the scramble for new directions, the conversation is still dominated by a measure-reliant orientation. Measure enthusiasts offer only incremental suggestions — such as introducing more "skin in the game," limiting the number of measures, and improving risk adjustment — or inviable aspirations to link strong incentives with fanciful measures that somehow capture all that we care about and are immune to the problems above.

> “*Organizations, technology, and regulatory policy should feature prominently in attempts to better leverage professionalism in health care. Strategies to do so can be conceived as targeting problems of information ormotivation when providers act as agents."*

Undoubtedly, quality measurement has driven some improvements by exposing deficits and generating pressure for change. Provider organizations, like most complex organizations, routinely use measures for internal efforts that have also likely achieved progress. There have been some wins. And smarter uses of measures could yield further gains. For example, an adaptive measurement approach could support low-cost surveillance for poor quality, conserving resources for audit-like investigations of signal-trippers and serving as a system-wide deterrent.[21] If not bound by budget neutrality, pay-for-improvement programs could target providers with poor outcomes (whether because of low quality or high-risk patients) without the usual unintended consequences of budget-neutral programs, which necessitate potentially unfair and deleterious penalties on low performers who do not improve. Potential refinements notwithstanding, the dissatisfying pace of quality improvement over the last 2 decades should tell us that measure-reliant

approaches are unlikely to deliver on their promise.[22,23] Measurement is important; it has been a revelation. But new, or at least different, strategies are needed.

A more optimistic interpretation of performance data might focus on the successes rather than the deficits revealed by measures and recognize that physicians produce much valuable care without value-based payment. If their special knowledge and intrinsic motivation are responsible for buoying quality to its current level, perhaps those resources can be more effectively tapped to elevate quality further. Measure-driven improvement initiatives often implicitly assume that clinicians' limits have been reached and accordingly intervene with corrective steps to close specific gaps in care. Yet, as the response to the Covid-19 pandemic has reminded us, professionalism in health care has much more to offer. To explore how this vital resource might be better used to foster broader improvement, it is instructive to consider how quality might be improved without relying so heavily on measures (Figure 1).

This should not seem so out-of-the-box. Although often misquoted to the contrary, W. Edwards Deming — a leader in the field of quality improvement — incisively noted: "It is wrong to suppose that if you can't measure it, you can't manage it—a costly myth."[24,25] Moreover, reliance on scorecards and pay for performance is at odds with the basic economics of market functioning. Economic theory points out that quality improvement does not require quality to be converted into a contractible or manageable quantity. Quality just has to be observable to whoever is motivated to benefit from it.

The pandemic has also reminded us that individual clinicians, no matter how well trained and well intended, can accomplish only so much when not optimally equipped and positioned. Progress will not be served by returning to an era in which physicians practiced as autonomous, self-regulated, and unmanaged stewards.[19] Organizations, technology, and regulatory policy should feature prominently in attempts to better leverage professionalism in health care. Strategies to do so can be conceived as targeting problems of*information* or*motivation* when providers act as agents. To be clear, the directions explored below are largely unstudied and need not replace proven strategies or halt the refinement of unsuccessful ones. Rather, they are intended to encourage thinking, conversations, and research that may be more productive than an agenda singularly focused on making quality measures work.

## Making Better Use of What Physicians Can See and Learn

Because of their training, experience, and exposure, physicians are uniquely positioned to understand what constitutes high-quality care, identify it, and learn how to deliver it. For example, PCPs routinely observe the expertise and decision-making of peers and judge the quality of specialists from consultation notes, communications, inside observers (e.g., operating room nurses), and patient feedback. When asked for recommendations by patients or family members, physicians often express strong opinions about the quality of care provided by other physicians — prima facie evidence that they observe something they find compelling.

> “*Despite its potential, the physician hive mind is not routinely queried or applied in health care organizations or markets to drive quality improvement and foster learning. There are many opportunities to harness this resource more effectively."*

Physicians do err in their judgment. Their beliefs vary and may deviate from evidence.[26] Surprisingly little is known about the accuracy of the private information possessed by physicians or how it relates to measurable aspects of quality of care — a long-standing question in urgent need of more research. But it is abundantly clear that they learn rapidly, refine their skills, and revise their practices. Witness the outcome of residency training: Senior residents are better doctors than they were as 4th-year medical students. Within days of the Covid-19 outbreak confining patients to their homes, PCPs learned how to practice telemedicine. Thus, while physicians’ knowledge may not be perfect, it is extensive and elastic.

Moreover, the collective wisdom possessed by physicians may be more discerning than individual opinions. Indeed, physicians often solicit input from colleagues when unsure about referral or management decisions. Good physicians know when they don’t know, but closing knowledge gaps on their own is taxing. Codified in the Hippocratic oath is the professional ethic of teaching one another.

Despite its potential, the physician hive mind is not routinely queried or applied in health care organizations or markets to drive quality improvement and foster learning. There are many opportunities to harness this resource more effectively.

First, physicians’ perceptions of one another could be used to identify sources of best practices. Peer-elected master clinicians could be redirected to disseminate their expertise via coaching, availability for informal consultations, and case discussions.

Second, PCP judgments of specialist quality could be used more effectively to steer referrals. Practices could elicit consensus preferences and set these as defaults in order-entry systems or allow clinicians to search at the point of referral for specialists selected by their peers. Preferred status also could be shared with specialty group leaders to identify exemplars. Selective referral could, in turn, stimulate quality-improving competition among specialists. These strategies can be refined to support specific normative goals; for example, a focus on clinically and socially high-risk groups might elevate skills such as coordination, shared decision-making, and cultural competency.

Third, we should make it as easy as possible for clinicians to teach themselves and learn from others. Clinical decision support is a promising strategy but has generally been limited to narrow, measure-centric interventions that attempt to intercept errors by alerting clinicians to potential departures from the evidence as they interact with electronic health records (EHRs). Although a positive development that can be refined, decision alerts have provoked resentment and fatigue and miss great expanses of clinical reasoning. Moreover, algorithmic predictions leverage only a small amount of EHR data that can be accessed to inform clinicians in real time. In addition to guiding clinicians with unsolicited prompts, decision support could be expanded to allow them to

flexibly tap the expertise of others and guide themselves. That is, put physicians in command of gathering and processing data; they are accustomed to this role.

“

*Traditional norms will have to change to better position clinicians as collective learners, but their rapid response to the Covid-19 pandemic suggests they are up to the task."*

For example, clinicians presented with a clinical scenario should be able to query the ordering decisions and case notes of respected peers and specialists under the same scenario. High-yield notes and evidence-based resources could be curated based on clinicians’ favorites using learning algorithms. Links to these resources could be auto-populated in a check-your-thinking space in EHRs (e.g., “colleagues working up this problem liked these resources” or “links to similar cases from your favorite clinicians’ records”). Clinicians should be able to crowdsource specific questions to peer groups or master clinicians and receive prompt answers using social media–like platforms; questions could be anonymized to eliminate professional embarrassment as a barrier to information flow. Traditional mechanisms for inpatient and outpatient consultations have served as unnecessary bottlenecks. “E-consults” should be the new norm. The primary goal of these enhancements should not be to tell physicians what to do, but to make the most of their ability to find and synthesize information. While there is enormous interest in using data-driven prediction algorithms and artificial intelligence to inform physicians, there is also enormous potential for physicians to inform themselves and each other.

Finally, clinician exposure to other professionals and practices could be broadened. After studying in groups and training in teams, physicians typically practice alone — many in the same organization for their entire careers. Greater interaction within and between organizations breeds teaching, learning, and dissemination of innovation. To broaden exposure, for example, professional societies and certification boards could provide generous continuing medical education credits for practicing in team-based care models and conducting site visits to other practices, with emphasis on aspects of care deemed important by the profession (e.g., approaches to telehealth or care for vulnerable groups).

“A foolish consistency is the hobgoblin of little minds,” as Ralph Waldo Emerson described in his 1841 essay “Self-Reliance,” and the practice of medicine has been slow to evolve. But we should not assume clinicians have little minds; they may be more nimble than sluggish systems make them appear. Traditional norms will have to change to better position clinicians as collective learners, but their rapid response to the Covid-19 pandemic suggests they are up to the task.

## Tapping Intrinsic Motivation

### *Alignment of Organizational and Professional Goals*

As agents, physicians must be not only well informed, but they must also motivated to act upon their knowledge in their patients’ interest. Organizations play key roles in the expression of

physician motivation. Group practice can facilitate physician action through economies of scale that lower the costs for physicians to follow their motivation to meet patient needs. The fixed costs of organizing care processes or adopting information technology, for example, may be prohibitive for individual physicians. In addition, organized management of physicians may be necessary to fan motivation.

Moreover, no matter how well clinicians are motivated and positioned to act, their collective actions are likely to fall short without complementary systems for population-based care that require the operational support of an organization (e.g., care management programs for high-needs patients). That is, even if optimal care delivery is an aspiration of unbridled professionalism, it may be beyond clinicians' reach — individually and collectively — unless it is also a priority of the organizations in which they work. For these reasons, the outcome of physicians acting as agents depends in no small part on the actions of organizational leaders.

Thus, incentives at an organizational level that promote — or at least do not interfere with — physicians' intrinsic motivation are important.[27] The goodwill and professionalism of physicians need not be "bought with tips," as health economist Uwe Reinhardt once noted,[28] but it can be exploited by organizations to serve financial interests not shared by physicians or patients.[29] Beyond changes in payment systems, there are mechanisms by which informed and motivated physicians might influence organizational agendas (as discussed below). If professionalism can be directed to shape organizational objectives and capabilities, the benefits may not be as limited as they may seem.

The goals of organizations and clinicians became strongly aligned in the response to Covid-19 at a time of unusual pressure and common purpose. The chance to focus almost exclusively on patient care likely fueled the professional response, as organizations became more responsive to the needs of their professionals and patients (though often without success because of broader system failures). Several policy directions could help sustain such alignment of goals without heavy reliance on measures (Figure 1).

> *"In a competitive market with reasonably informed consumers, scorecards and performance-based pay are unnecessary to drive improvement if actors who can discern high-quality care are in a position to reward it with their choices."*

First, population-based payments give organizations flexibility in selecting the inputs used to produce health by decoupling revenue from the services provided. Removing counterproductive fee-for-service (and pay-for-performance) incentives may be important for disinhibiting the motivation of organizational leaders and physicians. For example, if physicians do not have to complete as many office visits and as much documentation to generate revenue, they can devote more effort to high-needs patients and to activities that benefit patients most (including teaching and learning). Indeed, specialists are often eager to provide free "curbside" consultative advice when freed of the requirements of rendering reimbursable care.

Second, competition shapes organizational incentives by giving patients and physicians more of a say. In a competitive market with reasonably informed consumers, scorecards and performance-based pay are unnecessary to drive improvement if actors who can discern high-quality care are in a position to reward it with their choices. Consumers should not be thought of as patients expected to choose intelligently alone, but rather as patients informed by medical guidance. Ideal conditions for healthy competition in provider markets have been elusive, but steps can be taken to strengthen quality-based competition and thus align organizational incentives with the professional goals of clinicians. Foremost are measures to expand choice by limiting large-scale provider consolidation that has increased prices without measurable gains for patients.[30-34] These include leveling payments between hospital outpatient and independent practice settings and prohibiting contracts that require insurers to include "all or none" of a health system's providers in their networks.

The evidence that competition is good for patients is stronger than the analogous evidence for pay for performance,[31-34] and competition for patients can be strengthened, but it may never be strong enough. Often, patients must choose without professional guidance (e.g., selecting a PCP) or have no choice (e.g., for emergent care). However, organizations compete not just for patients, but for clinicians, too. Indeed, the physician labor market could become an engine of long-awaited gains. Financial and lifestyle considerations aside, physicians should prefer employment where they can best serve patients. There is reason to believe that physicians recognize organizational quality and exhibit quality-related preferences in choosing a workplace. For example, physician perceptions of greater clinic capacity to address patient needs have been associated with lower rates of burnout.[35] Likewise, opportunities to spend more time with patients and shed reporting and documentation requirements have been cited as primary motivations for PCPs leaving practices in favor of direct primary care models.[36]

Yet physicians have limited options in consolidated markets and are constrained by high switching costs. Steps to improve physician mobility might include: limiting noncompete clauses that restrict where physicians can work and limit their ability to take patients with them after leaving an organization; greater EHR interoperability so patients can follow their physicians; team-based models that minimize the costs of rebuilding patient panels and learning new systems; and simplified licensing and credentialing processes. There are also opportunities for better informing choices. Physicians cannot readily access anonymous testimonies about their job options from current or former practice members; the market for physician recruitment services seems ripe for disruption. With such pieces in place, physicians might be more likely to leave organizations if they detect poor quality, and organizations might be more likely to recruit and retain physicians by demonstrating capacity to deliver high-quality care.

As flexibility from population-based payments and invigorated competition may be insufficient to align the extrinsic incentives of organizations with the intrinsic motivation of clinicians,[37] additional mechanisms for making organizations accountable to professionals may be necessary to make the most of professionalism. Ideally, professionals' concern for patients could be directed to influence how organizational resources are used, though this is challenging. Some countries cede greater authority over quality standards and monitoring to professional associations, for example in long-term care.[37] Self-regulation and lobbying by professional organizations in the United States, however, has historically not served patients' interest; professional control over

financing, licensure, and entry has generally resulted in anticompetitive behavior.[38] As physicians are increasingly employed by large organizations accountable principally to shareholders or boards, patients may nevertheless benefit from physicians having a say. For example, clinician interviews conducted by the Joint Commission could focus specifically on under-supported areas of patient care and professional development and could require corrective action by organizations for accreditation.

### *Management within Organizations*

Within organizations, administrators and managers can implement many strategies to fan the intrinsic motivation of physicians. Beyond replacing fee-for-service incentives with fixed or panel-based salaries, the role of physician-level financial incentives in these strategies is inherently limited. Transmitting penalties and rewards to clinicians based on their individual performance not only exacerbates many of the problems with measure-based performance assessments and incentives (summarized earlier), but it also defeats the purpose of group-level incentives: to pool risk and elicit changes in care delivery that individual clinicians cannot achieve alone. Alternatively, divvying up group rewards and penalties among physicians independent of their own performance dilutes the incentives because of a free-rider problem.[39] Thus, incentives at the physician level must be largely nonfinancial in nature.

> “ *The application of these principles, however, has generally been limited to performance measures targeting specific actions, such as appropriate medication prescribing. Broader nudges could cultivate broader improvement."*

The burgeoning field of behavioral economics has identified many strategies for nudging physician behavior in the right direction.[40] Because physicians hold themselves and others to high standards and value their reputation, peer comparisons and peer accountability have been advanced as particularly effective motivators.[41] The provision of information on comparative performance alone may strengthen intrinsic incentives to improve and might explain any gains derived from public reporting.[42,43] The application of these principles, however, has generally been limited to performance measures targeting specific actions, such as appropriate medication prescribing.[44-48] Broader nudges could cultivate broader improvement.

For example, clinicians’ case notes could be randomly sampled for weekly peer discussions moderated by peer-elected master clinicians, with preference for cases with high-risk patients, adverse outcomes (e.g., hospitalization following a visit), or complex decision-making (e.g., a high number of tests, studies, and referrals). Similarly, surgical procedures could be recorded and sampled for review among colleagues. The mere prospect of being observed can have a powerful influence on behavior — the Hawthorne effect. When observed by well-trained eyes, providers may be particularly inspired to elevate their game.[49] The incorporation of peer accountability and feedback additionally leverages the importance to physicians of local reputation and should encourage critical and evidence-based thinking that survives group scrutiny. Other strategies for

better positioning clinicians to learn from peers, including team-based models and searchable records, should similarly contribute to this dynamic. We can do much more than infrequent morbidity and mortality conferences or costly external coaching sessions. Peer-to-peer teaching and learning that is constructive and collegial can be integrated into practice routines. Such forums are not foreign to physicians; indeed, a supervisory version serves as the basis for residency training yet all but vanishes thereafter.

## Looking Ahead

It may seem self-evident that professionalism in medicine is to be harnessed and not squandered. Yet as we have swung from one extreme to another, from deifying physicians to distrusting them, we may have lost sight of the potential to refine a vital resource. The strategies outlined in this article will not cure all that ails our health care system and must be subjected to rigorous study. But refocusing the national conversation about quality on the linchpin of care delivery — physician agency — could provide much needed direction. A next generation of initiatives could be conceived by considering how professionalism can be supported and leveraged to improve patient welfare.

> *“It may seem self-evident that professionalism in medicine is to be harnessed and not squandered. Yet as we have swung from one extreme to another, from deifying physicians to distrusting them, we may have lost sight of the potential to refine a vital resource."*

Physicians will never be perfect agents. Regulatory safeguards, managerial accountability, and complementary strategies are needed. Data-driven remediation of human error and private use of measures for internal monitoring will continue to play roles. Leadership will matter. But as we learned from the Covid-19 response, immeasurable good can come from physicians’ motivation to learn and do what is best for their patients.

A lingering question is how the development and adoption of successful new strategies will be encouraged if not contractible through the payment system. Although unsatisfying to regulators, ultimately the spread of better care — once identified — will rely to a large extent on patients wanting to receive it and clinicians wanting to deliver it. Competition and other mechanisms can strengthen responsiveness to those demands. Removal of distracting incentives will be key. But improvement might require a change in emphasis from interventions conceived to score movement on a specific measure to those conceived to support the elements of high-quality care and evaluated using a broad range of measures, including clinician views: a paradigm shift from seeking successful measures to seeking measurable success. Conditions for adoption will remain imperfect but may be good enough for movement. The pure motivation and indefatigable drive behind the explosion of measurement activity should give us hope; imagine those efforts redeployed on more productive missions.

In health care policy there are only trade-offs, which under uncertainty are akin to gambles. If we continue to conflate improvement with measurement and double down on performance-based

pay, progress will be limited. It is time to place some chips elsewhere. As we have been recently reminded, our health care professionals are a good bet.

**J. Michael McWilliams, MD, PhD**
Warren Alpert Foundation Professor of Health Care Policy, Department of Health Care Policy, Harvard Medical School Professor of Medicine and General Internist, Division of General Internal Medicine and Primary Care, Brigham and Women's Hospital Visiting Scholar, Schaeffer Center for Health Policy and Economics, University of Southern California, Los Angeles

## Acknowledgments

The author thanks Thomas McGuire, Leemore Dafny, Mark Friedberg, Tim Layton, Michael Chernew, Adam Beckman, and three anonymous referees for helpful comments on an earlier draft.

*Disclosures: J. Michael McWilliams reports no relevant potential conflicts of interest to disclose.*

## References

1. McGuire TG. Physician Agency. In: Culyer AJ, Newhouse JP, eds. Handbook of Health Economics. Cambridge, MA: Elsevier, 2000:461-536. https://econpapers.repec.org/bookchap/eeeheachp/1-09.htm.

2. Arrow KJ. Uncertainty and the welfare economics of medical care. 1963. Bull World Health Organ. 2004;82(6):141-9

3. Institute of Medicine Committee on Quality of Health Care in America. Kohn LT, Corrigan JM, Donaldson MS, eds. To Err is Human: Building a Safer Health System. Washington: National Academies Press, 2000. https://www.nap.edu/catalog/9728/to-err-is-human-building-a-safer-health-system.

4. Institute of Medicine Committee on Quality of Health Care in America. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington: National Academies Press, 2001. https://www.nap.edu/catalog/10027/crossing-the-quality-chasm-a-new-health-system-for-the.

5. CMS Announces Relief for Clinicians, Providers, Hospitals and Facilities Participating in Quality Reporting Programs in Response to COVID-19. Baltimore: U.S. Centers for Medicare & Medicaid Services. March 22, 2020. Accessed April 16, 2020. https://www.cms.gov/newsroom/press-releases/cms-announces-relief-clinicians-providers-hospitals-and-facilities-participating-quality-reporting.

6. Roberts ET, Zaslavsky AM, McWilliams JM. The value-based payment modifier: program outcomes and implications for disparities. Ann Intern Med. 2018;168(6):255-65

7. Ody C, Msall L, Dafny LS, Grabowski DC, Cutler DM. Decreases in readmissions credited to Medicare's program to reduce hospital readmissions have been overstated. Health Aff (Millwood). 2019;38(6):36-43

8. McWilliams JM, Barnett ML, Roberts ET, Hamed P, Mehrotra A. Did hospital readmissions fall because per capita admission rates fell? Health Aff (Millwood). 2019;38(6):1840-4

9. Ryan AM, Krinsky S, Maurer KA, Dimick JB. Changes in hospital quality associated with hospital value-based purchasing. N Engl J Med. 2017;376(6):2358-66

10. Jha AK, Joynt KE, Orav EJ, Epstein AM. The long-term effect of premier pay for performance on patient outcomes. N Engl J Med. 2012;366(6):1606-15

11. Lee GM, Kleinman K, Soumerai SB. Effect of nonpayment for preventable infections in U.S. hospitals. N Engl J Med. 2012;367(6):1428-37

12. Frakt AB, Jha AK. Face the facts: we need to change the way we do pay for performance. Ann Intern Med. 2018;168(6):291-2

13. Casalino LP, Gans D, Weber R. US physician practices spend more than $15.4 billion annually to report quality measures. Health Aff (Millwood). 2016;35(6):401-6

14. Geruso M, Layton T. Upcoding: evidence from Medicare on squishy risk adjustment. J Polit Econ. 2020;128(6):984-1026

15. Roberts ET, Zaslavsky AM, Barnett ML, Landon BE, Ding L, McWilliams JM. Assessment of the effect of adjustment for patient characteristics on hospital readmission rates: implications for pay for performance. JAMA Intern Med. 2018;178(6):1498-507

16. Joynt KE, Jha AK. Characteristics of hospitals receiving penalties under the Hospital Readmissions Reduction Program. JAMA. 2013;309(6):342-3

17. Agarwal SD, Pabo E, Rozenblum R, Sherritt KM. Professional dissonance and burnout in primary care: a qualitative study. JAMA Intern Med. 2020;180(6):395-401

18. Sinsky C, Colligan L, Li L. Allocation of physician time in ambulatory practice: a time and motion study in 4 specialties. Ann Intern Med. 2016;165(6):753-60

19. Berwick DM. Era 3 for medicine and health care. JAMA. 2016;315(6):1329-30

20. Blumenthal D, McGinnis JM. Measuring Vital Signs: an IOM report on core metrics for health and health care progress. JAMA. 2015;313(6):1901-2

21. Chernew ME, Landrum MB. Targeted supplemental data collection — addressing the quality-measurement conundrum. N Engl J Med. 2018;378(6):979-81

22. Levine DM, Linder JA, Landon BE. The quality of outpatient care delivered to adults in the United States, 2002 to 2013. JAMA Intern Med. 2016;176(6):1778-90

23. Chassin MR. Improving the quality of health care: what's taking so long? Health Aff (Millwood). 2013;32(6):1761-5

24. Berenson RA. JAMA Forum: If You Can't Measure Performance, Can You Improve It? JAMA Forum. Accessed April 16, 2020. https://newsatjama.jama.com/2016/01/13/jama-forum-if-you-cant-measure-performance-can-you-improve-it/.

25. Hunter J. Myth: If You Can't Measure It, You Can't Manage It. The W. Edwards Deming Institute. August 13, 2015. Accessed April 16, 2020. https://blog.deming.org/2015/08/myth-if-you-cant-measure-it-you-cant-manage-it/.

26. Cutler D, Skinner JS, Stern AD, Wennberg D. Physician beliefs and patient preferences: a new look at regional variation in health care spending. Am Econ J Econ Policy. 2019;11(6):192-221

27. Casalino LP, Khullar D. Value-based purchasing and physician professionalism. JAMA. 2019;322(6):1647-8

28. Hartcollis A. Pay for Performance Extends to Health Care in New York State Experiment. New York Times. The New York Times Company. March 3, 2015. Accessed April 16, 2020. https://www.nytimes.com/2015/03/31/nyregion/pay-for-performance-extends-to-health-care-in-experiment-in-new-york.html.

29. Ofri D. The Business of Health Care Depends on Exploiting Doctors and Nurses. New York Times. The New York Times Company. June 8, 2019. Accessed April 16, 2020. https://www.nytimes.com/2019/06/08/opinion/sunday/hospitals-doctors-nurses-burnout.html?auth=login-google.

30. Gaynor M, Mostashari F, Ginsburg PB. Making health care markets work: competition policy for health care. JAMA. 2017;317(6):1313-4

31. Neprash HT, McWilliams JM. Provider consolidation and potential efficiency gains: a review of theory and evidence. Antitrust Law J.

32. Gaynor M, Town RJ. Competition in Health Care Markets. Cambridge, MA: National Bureau of Economic Research. Working Paper Series 2011;No. 17208. Accessed April 16, 2020. https://www.nber.org/papers/w17208.pdf.

33. Beaulieu ND, Dafny LS, Landon BE, Dalton JB, Kuye I, McWilliams JM. Changes in quality of care after hospital mergers and acquisitions. N Engl J Med. 2020;382(6):51-9

34. Short MN, Ho V. Weighing the effects of vertical integration versus market concentration on hospital quality. Med Care Res Rev.

35. De Marchis E, Knox M, Hessler D. Physician burnout and higher clinic capacity to address patients' social needs. J Am Board Fam Med. 2019;32(6):69-78

36. Huff C. Direct primary care is about to take off — or maybe not. Manag Care. 2017;26(6):27-30

37. Mor V, Leone T, Maresso A. Regulating Long-Term Care Quality: An International Comparison. Cambridge: Cambridge University Press, 2014.

38. Starr P. The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry. New York: Basic Books, 1982.

39. Frandsen B, Rebitzer JB. Structuring Incentives Within Organizations: The Case of Accountable Care Organizations. Cambridge, MA: National Bureau of Economic Research. Working Paper Series 2014;No. 20034. Accessed April 16, 2020. https://www.nber.org/papers/w20034.

40. Emanuel EJ, Ubel PA, Kessler JB. Using behavioral economics to design physician incentives that deliver high-value care. Ann Intern Med. 2016;164(6):114-9

41. Navathe AS, Emanuel EJ. Physician peer comparisons as a nonfinancial strategy to improve the value of care. JAMA. 2016;316(6):1759-60

42. Kolstad JT. Information and quality when motivation is intrinsic: evidence from surgeon report cards. Am Econ Rev. 2013;103(6):2875-910

43. Navathe AS, Volpp KG, Bond AM. Assessing the effectiveness of peer comparisons as a way to improve health care quality. Health Aff (Millwood).

44. Patel MS, Kurtzman GW, Kannan S. Effect of an automated patient dashboard using active choice and peer comparison performance feedback to physicians on statin prescribing: the PRESCRIBE cluster randomized clinical trial. JAMA Netw Open.

45. Meeker D, Linder JA, Fox CR. Effect of behavioral interventions on inappropriate antibiotic prescribing among primary care practices: a randomized clinical trial. JAMA. 2016;315(6):562-70

46. Gerber JS, Prasad PA, Fiks AG. Effect of an outpatient antimicrobial stewardship intervention on broad-spectrum antibiotic prescribing by primary care pediatricians: a randomized trial. JAMA. 2013;309(6):2345-52

47. Hallsworth M, Chadborn T, Sallis A. Provision of social norm feedback to high prescribers of antibiotics in general practice: a pragmatic national randomised controlled trial. Lancet. 2016;387(6):1743-52

48. Sacarny A, Barnett ML, Le J, Tetkoski F, Yokum D, Agrawal S. Effect of peer comparison letters for high-volume primary care prescribers of quetiapine in older and disabled adults: a randomized clinical trial. JAMA Psychiatry. 2018;75(6):1003-11

49. Barnett ML, Olenski AR, Jena AB. Patient mortality during unannounced accreditation surveys at US hospitals. JAMA Intern Med. 2017;177(6):693-700