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PERSPECTIVES

The Untapped Potential of the Quadruple Aim of Primary Care to Foster a Culture of Health

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Abstract: In 2015, the Robert Wood Johnson Foundation introduced the Culture of Health (CoH) action model to inform its grantmaking decisions in the United States. The essential principles of this model fall into four action dimensions: 1) making health a shared value, 2) fostering cross-sector collaboration, 3) creating more equitable communities, and 4) transforming healthcare systems. Although considerable success has been achieved since introduction of the CoH model, the pace of progress has been slower on the fourth dimension, since work in this area involves shifting mindsets from the acute care paradigm to one that focuses on prevention, by addressing the "upstream factors", including social and behavioral determinants impacting health. Moreover, despite its academic prominence, the CoH model remains restricted to the research realm, with limited translation to practice. By comparison, the Quadruple Aim (QA) is a four-dimensional framework that has been successfully translated into primary healthcare practice. Introduced in 2008, the QA entails the adoption of four principles in delivering healthcare: 1) improved patient experience, 2) population health, 3) lower costs, and 4) care team well-being, to achieve value in healthcare. The four principles of the QA could be viewed as analogous to the four principles of the CoH, given the inherent synergies in the underlying philosophy of the two frameworks. It is also noteworthy that both healthcare leadership (physician champions) and legislative reform had significant roles to play in the successful translation of the QA into mainstream practice. This in turn suggests that the primary healthcare system has potential to play an instrumental role in accelerating the pace of progress towards a culture of health by extending the scope of influence of the QA. This paper explores the inherent synergies between the QA and CoH models, and the untapped potential of the QA to foster a culture of health in the United States.

Keywords: culture of health, quadruple AIM, primary care, lifestyle health, health behaviors, social determinants of health, health equity, population health

Introduction

For nearly two decades, the Commonwealth Fund has ranked the United States (US) last overall among 11 industrialized nations, including Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the UK,[1] on measures of healthy lives, access to care, and health equity, despite spending far more of its Gross Domestic Product (GDP) on health.[1–3] As a share of the economy, the US spends nearly twice as much on healthcare as the average peer nation, and yet has the lowest life expectancy, highest infant and maternal mortality rates, highest suicide rates, and highest deaths by assault, among the 11 nations. The US also has the highest chronic disease burden and an obesity rate that is twice the peer-nation average. Large racial and ethnic disparities in health, driven by factors both within and outside the healthcare delivery system, have also been the norm in the US[1–5] Compared to peer nations, the US also has among the highest number of preventable hospitalizations and avoidable deaths.[4,5]

However, health and healthcare have reached a pivotal point in the US today. Legislative reform, technological advancement, shifting consumer expectations, and pressures to contain costs have undeniably set the stage for accelerating the pace of change in healthcare systems.[6–8] In recognition of these changing times, in 2015, the Robert Wood Foundation (RWJF) introduced an action model for advancing a culture of health in the United States as part of its annual

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message on *Building a Culture of Health*. This action model in turn was intended to inform the foundation's decisions in awarding grants and developing strategic collaborations.[8]

The Culture of Health action model articulates a vision for population-level health that can achieve the long-term desired outcomes for health and health systems. The essential principles of this model fall into four action dimensions: 1) making health a shared value; 2) fostering cross-sector collaboration to improve well-being; 3) creating healthier and more equitable communities; and 4) transforming health and healthcare systems.[8–10]

The Four Dimensions of the Culture of Health Action Model

The first area of work under the Culture of Health action model on "making health a shared value", focuses on identifying approaches and processes for creating a shared value for health. Individual value for health is important because individuals must view health as a priority. Value for health in turn translates to incorporating healthy habits into the lifestyle, eg, eating nutritious food, engaging in regular physical activity, and prioritizing mental and social health. However, in addition to valuing health, individuals must also feel a shared value or a sense of community such that they believe they can be engaged members of the community to improve population health. RWJF's leaders have argued that without a shared sense that everyone is in this together, it may not be easy to convince people that good health for all is as important as healthcare for the ill.[8–10] In other words, the cliche "a healthy lifestyle is the best form of health insurance" needs to become a shared value within communities and populations.

The second area of work "fostering cross-sector collaboration to improve well-being", seeks to strengthen connections between traditional healthcare delivery and community settings that influence health, including schools, businesses (places of employment), residential neighborhoods, and other community organizations (eg, places of worship) so that the combined organizational assets, policies, and practices are better positioned to promote the health and health care of groups of people or populations.[8–10] The third area of work "creating healthier and more equitable communities" focuses specifically on well-being for all, and on eliminating health disparities such that health outcomes are not determined by the zip code one lives in. Correspondingly, this work addresses policies and practices that advance healthy environments within and across populations.[8–10]

The fourth area of work on 'transforming health and healthcare systems' focuses on integrating health care and public health services to promote equitable access to quality and affordable healthcare. This includes addressing the continuing challenge of access and coverage through collaboration and integration. Examples include: 1) linking preventive services, including lifestyle health and wellness promotion more systematically with traditional healthcare care to reduce chronic illness; 2) linking healthcare services to social and community resources to improve transitions in care to prevent hospital readmissions and better manage chronic illness; and 3) making care more patient-centered to empower the patient to participate in healthcare decision making and effectively manage their chronic illness.[8–10]

The Uneven Pace of Progress Across the Four Dimensions of the Culture of Health Action Model

According to RWJF progress reports, since its introduction, the Culture of Health action model has played a catalyzing role in propelling the United States toward greater health, wellbeing, and equity through action grants to communities and organizations. For example, significant inroads have been reported in the second and third action dimensions of fostering cross-sector collaborations and creating healthier and more equitable communities.[8–10] An example of a highly impactful RWJF-supported initiative at the intersection of these two dimensions is the creation of the publicly available County Health Rankings & Roadmaps (CHR&R) database and associated online search engine, which helps to understand and compare the health of communities and track health disparities by counties and zip codes across the nation.[11] By making this type of information publicly available and easily accessible, this initiative has helped to bring the complex challenge of health inequity into the forefront of public consciousness. These resources in turn have been leveraged by other grant recipients to develop holistic community-based approaches to addressing health disparities to deliver promising results. For example, the foundation's review of award winners' applications from 2015 to 2017 revealed hundreds of cross-sector collaborations and discrete community strategies, of which, over half targeted social and economic determinants of health and equity.[9,10]

By comparison, however, the pace of progress has been slower on the first and fourth dimensions, ie, "making health a shared value" and "transforming health and healthcare systems". Not surprisingly, the biggest challenges reported have occurred in the context of shifting mindsets in the traditional healthcare fields. The vision for a culture of health requires a mindset shift from acute care intervention to one that focuses on prevention by addressing the upstream factors that impact health (eg, health behaviors and social determinants of health). This view in turn represents a paradigm shift from how the current systems are set up and in turn involves challenging deep-rooted beliefs about health and healthcare delivery.[9,10]

Despite Its Academic Prominence, the Culture of Health Action Model Remains a Theoretical Concept with Limited Translation to Practice

It is noteworthy moreover that despite its growing prominence in the public health and health services literatures, the RWJF Culture of Health action model is still an academic concept that is mostly limited to the research realm, and more specifically, to the grantmaking context.[8] Therefore, knowledge and application of this action model is still largely restricted to the research community, and correspondingly, the model itself is many steps removed from the mainstream practice of public health and health services delivery.

The Quadruple Aim Action Model by Comparison, is an Example of a Theoretical Concept That Has Been Successfully Translated to Practice

At this juncture, it would be relevant to recall another four-dimensional action model—the Quadruple Aim—that is widely recognized in both the academic and practice realms, albeit within a relatively smaller healthcare delivery community (in comparison to the broader public health and health services target community of the Culture of Health model).[12,13] The Quadruple Aim, which was introduced as the Triple Aim of healthcare delivery in 2008 by the Institute for Healthcare Improvement (IHI), was later expanded to a four-dimensional model to become the Quadruple Aim.[14–17] Simply put, the Quadruple Aim action model entails the adoption of four principles for delivering health care: 1) improved patient experience, 2) population health, 3) lower costs, and 4) care team well-being to achieve improved population health outcomes at lower costs, or value in healthcare delivery.[12,13]

Inherent Synergies Exist Between the Quadruple Aim and the Culture of Health Action Models

The four principles of the Quadruple Aim could be viewed as analogous to the four principles of the Culture of Health action model given the inherent synergies in the underlying philosophy of the two frameworks. For example, the principle of better patient experience in the Quadruple Aim synergizes directly with the principle of "making heath a shared value" in the Culture of Health action model, since improved patient experience can be best accomplished by creating a shared value for health between provider and patient, whereby patients feel empowered to manage disease and maintain wellness through healthy behaviors and lifestyles.[18] However, providers' scope of influence in advancing a shared value for health could very well be extended from patients to families and communities thereby enabling primary care providers to accelerate progress towards making health a shared a value and attaining a Culture of Health action model.

Similarly, the principle of population health in the Quadruple Aim, ie, improving the health outcomes of groups to promote community health is inherently synergistic with the second and third principles of the Culture of Health action model of fostering cross-sector collaborations and creating healthier and more equitable communities.[19] For example, preventing unscheduled healthcare use (emergency visits and inpatient admissions) for childhood asthma requires reducing no-shows or missed well-visits for childhood asthma care. Missed well-visits in turn have been linked to adverse social determinants of health such as lack of transportation or lack of caregiver support. Providers that have made efforts to screen for such unmet social needs in turn have been able to design interventions (eg, successfully implementing telehealth in place of clinic visits for childhood asthma outpatient care) to both address unmet social needs and improve health outcomes (eg, reduce the rate of no-shows for well visits, and by extension emergency visits for childhood asthma).[20] Providers have the potential to expand their efforts to address adverse social determinants of health through cross-sector collaborations, eg, through training of asthma providers based in schools and through collaboration

with public health housing authorities to improve indoor air quality in patients' homes.[20] Likewise, they could play a significant role in promoting health equity and access to care in their communities by linking individuals and families at risk of losing Medicaid insurance with enrollment assistance support offered by state departments of social services or health insurance exchanges.

The principle of lowering costs in the Quadruple Aim in turn synergizes with all four dimensions of the Culture of Health action model and especially the fourth dimension of transforming health and healthcare systems since it calls upon providers to shift their mindset from providing more care with more resources, to providing a better patient-centered care experience with fewer resources, which in turn requires a thoughtful redesign (transformation) of the care delivery model through use of teams and technology.[21] The final Quadruple Aim principle of care-team wellbeing in turn is tangential to the lowering costs principle in the Quadruple Aim and the fourth dimension of transforming health and healthcare systems in the Culture of Health model, since shifting mindsets from volume-based to value-based care can be stressful and cannot be effectively accomplished without the active and sustained engagement of care providers or the care team as a whole, which could also serve to explain why the pace of progress has been slower on this action dimension of the Culture of Health model.[22] In summary, each principle of the Quadruple Aim action model could be expanded in scope to synergize with the Culture of Health action model, thereby enabling the healthcare provider community to contribute towards accelerating the pace of progress towards attaining a culture of health.

Both Healthcare Leadership and Legislative Reform Played a Significant Role in Translating the Quadruple Aim to Mainstream Practice

A key distinction between the Quadruple Aim and the Culture of Health action models however, is the success with which the Quadruple Aim has been translated into practice within the healthcare industry, both in scope and in depth, compared to the Culture of Health action model. In just a decade-and-A-half since its introduction in the health services literature in 2008, the Quadruple Aim has gone from simply being an academic concept to serving as the bedrock for primary healthcare delivery reform. Notably, the Quadruple Aim has provided the basis for rapid proliferation of innovative new models of care delivery, including Accountable Care Organizations (ACOs) and the Patient-Centered Medical Home (PCMH).

This widespread translation of theory to practice of the Quadruple Aim in turn, could be attributed to two reasons: (1) The active involvement of physician champions and thought leaders in spreading the message within the healthcare provider community, eg, the Institute for Healthcare Improvement's "5 Million Lives campaign" which began in the early 2000s, and (2) Legislative (healthcare) reform spearheaded by the Affordable Care Act (ACA) of 2010.[23,24] Even prior to the passage of the ACA, champions and physician leaders within the healthcare community had been successful in influencing many segments of the provider community to use the Quadruple Aim to inform action towards 1) helping people lead healthy lives and 2) eliminating health care that is not centered on what patients want or need or that is not delivered in a high-quality, patient-centered manner.

With the passage of the ACA in 2010, the Centers for Medicare and Medicaid Services (CMS) adopted the Quadruple Aim to begin experimenting with value-based payment for healthcare services.[25] The CMS Center for Healthcare Innovation established in 2010 supports the development and testing of innovative healthcare payment and service delivery models to improve healthcare quality, reduce costs, and promote population health. As mentioned earlier, two innovative models that are being widely adopted in the US today are ACOs and PCMHs.

The ACO is a value-based payment model that incorporates voluntary collaboration among providers, while the PCMH is a care delivery model involving significant interdisciplinary collaboration to promote population health. ACOs and PCMHs have proliferated in the health care arena. For example, the number of covered lives under ACOs increased from 2.6 million in 2011 to 23.5 million in 2015. This number is expected to rise to 150 million lives by 2025. Studies have also found that ACO and PCMH models are associated with significant reductions in total health care costs compared with standard care.[26] In other words, the ACA has had the effect of consolidating prior efforts of physician leaders and champions, to accelerate the pace of adoption of the Quadruple Aim in healthcare delivery.

Healthcare Providers' Success with Translating the Quadruple Aim to Practice Could Be Expanded to Accelerate Progress Towards Attaining a Culture of Health

The widespread success in translating the Quadruple Aim model to practice in turn, suggests that that providers of care, and especially primary care providers, could play a prominent role in fostering a culture of health by expanding their scope of influence in promoting population health. In other words, by virtue of their position in the healthcare system, primary care providers have the potential to tap into the inherent synergies between the Quadruple Aim and the Culture of Health action models to accelerate the pace of progress towards realizing a culture of health.

As noted earlier, the two main reasons for success in integrating the Quadruple Aim to mainstream practice were the active efforts of physician leaders in spreading the concept within the healthcare industry and the synergistic role of legislative reform (ACA) in consolidating that progress. It would be relevant to note however, that despite its direct relevance to the Quadruple Aim, the ACA does not contain specific provisions for addressing health disparities and social determinants of health.[27] In other words, the healthcare delivery reform provisions of the ACA by themselves do not provide sufficient incentives for primary care providers to address adverse social determinants of health. Correspondingly, health policy by itself cannot facilitate the leap from Quadruple Aim to a Culture of Health, the key implication being that healthcare leaders will need to play an even more significant role in paving the way for the primary care system to foster a culture of health.

The Untapped Potential of the Quadruple Aim to Foster a Culture of Health

Some healthcare industry leaders have already begun spreading the message related to a culture of health. In 2021, the Institute for Healthcare Improvement (IHI) called upon hospitals and health systems to proactively and systematically address ten categories of adverse social determinants of health in their communities: 1) health coverage, 2) food insecurity, 3) housing insecurity, 4) unmet immigrant needs, 5) unmet correctional and prison health needs, 6) climate and decarbonization related challenges, 7) voting right violations, 8) lack of educational support, 9) lack of early childhood support, and 10) loneliness among the elderly.[28]

Some health systems have already risen to the challenge, for example, through their program Florida Covering Kids & Families (FL-CKF), the University of South Florida Health System is assuming local responsibility for ensuring health coverage in the state through education, training, and enrollment assistance to help individuals obtain health insurance.[29] Similarly, ProMedica, a healthcare organization based in Toledo, Ohio has taken the lead in addressing food insecurity by screening for social determinants of health, launching a grocery delivery program for Oncology patients, and providing healthy food and nutrition education in its food clinic to tens of thousands of patients facing hunger. A referral from a ProMedica primary care provider is required to receive assistance.[30]

Importantly, there are at other forces at play in today's rapidly changing healthcare environment that were not present in the early 2000s, that could synergize with the efforts of physician champions to prompt wider segments of the primary care workforce to foster a culture of health. These include the rapid rise of consumerism, new market entrants in primary care, rapidly advancing technology to prevent disease and promote wellness, and the proliferation of big data to promote value in healthcare delivery, ie, better population health at lower costs. The combined effect of these intersecting forces could go a long way in creating an impetus for the healthcare industry to undertake efforts to foster a culture of health.

However, a culture of health cannot be attained by providers operating alone. Legislative support will be necessary to consolidate providers' efforts to promote population health and create healthier and more equitable communities. To catch up with other industrialized peer nations, the US needs to expand access to health care, reduce health disparities by investing in social services, and work proactively to control costs and create a healthier population. Correspondingly, policymakers need to intervene to directly address disparities in healthcare access, while concurrently providing the support needed for providers, to expand the reach of the population health model and accomplish the goal of creating a culture of health. Active cooperation will also be needed from other stakeholders to attain a culture of health, including the adoption of a healthy lifestyle by consumers, and a buy-in to the Culture of Health philosophy by public and private payers, employers, and insurers alike, coupled with long-term multi-sector collaborations to address the social determinants of health (eg, building bike lanes and making healthy foods more accessible) to promote a culture of health in American society.

Conclusion

To quote the RWJF,

> the definition of health has been not needing to seek health care rather than a recognition that all aspects of people's lives—their work, families, and communities—should support active and healthy living.[8]

Although a Culture of Health is more an aspiration than a reality at this stage, the approach has most definitely taken root, and is expected to be a significant force in influencing the future course of the US healthcare system. Given that primary care's potential to promote population health through the Quadruple Aim has been unleashed, it would only be logical to harness its untapped potential to accelerate the pace of progress in realizing a Culture of Health in America in the years to come.

Disclosure

The author reports no conflict of interest in this work.

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