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Leadership education **and rural leadership**

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This winter 2025 issue of the *Canadian Journal of Physician Leadership (CJPL)* is an opportunity to celebrate both established and emerging approaches and perspectives. *CJPL* continues to publish articles that address a variety of aspects of physician leadership and related parts of health services administration, management, and more.

In an era of increasingly complex and dynamic health care systems, effective leadership is essential for driving change and improving outcomes at all levels of care — yet there is a clear gap in traditional medical education when it comes to equipping the physicians of tomorrow with the knowledge, skills, and attitudes required to embrace the CanMEDS leadership role. Hence, later this year, *CJPL* will introduce a new section on physician leadership education, including training.

The aim of this new section is to help physicians become effective leaders by collating evidence-based resources, valuable insights from experts in the field, and practical tools, with the section serving as a platform for sharing knowledge, experiences, and best practices in physician leadership education. By fostering a culture of continuous learning and professional development, we hope to inspire more physicians to take on leadership roles and drive innovation within their organizations and beyond.

This section will be at least partly grounded in the LEADS framework and will feature articles covering innovative educational methods, technology

in leadership education, integration of leadership training into medical curricula, organizational case studies, challenges and barriers as well as strengths and successes, and future directions. Although the initial focus will be on physician leadership education specifically, we envision this evolving to encompass leadership education for health care professionals more broadly.

Another new addition to *CJPL* is a section on rural leadership, led by Dr. Giuseppe Guaiana. Dr. Guaiana is the chief of psychiatry at St. Thomas Elgin General Hospital and an associate professor in the department of psychiatry at Western University, as well as the physician leader of its Extended Campus and North of Superior programs. He has also published on mental health epidemiology and has authored systematic reviews. Dr. Guaiana will facilitate publications on rural health care and related physician and other leadership in this area, where knowledge development and exchange are much needed, especially in Canada and other countries with vast landmasses. The first article in this section appears in this issue and addresses his experience as a psychiatry leader in rural and remote Ontario.

This issue also includes learning from first-person experience in physician leadership, such as Dr. Margaret Steele's article on clinical academic leadership; an engagement evaluation study report; another article in the health economics series led by Professor Jeffrey Hoch; and other articles, such as a commentary on governance education and training for physicians.

We encourage our readership to submit articles and provide input on *CJPL's* content, process, style, and format. Feel free to share your comments and ideas with us or any of the *CJPL* team members. Your input is valuable.

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Leadership in rural health: from challenges to change

Giuseppe Guaiana, MD, PhD

Health disparities in rural Canada, marked by limited access to care, workforce shortages, and poorer health outcomes, are exacerbated by geographic isolation, socioeconomic disadvantages, and systemic underfunding. With only 8% of physicians serving 19% of the population, these inequities demand innovative solutions driven by bold and empathetic leadership. This article explores the pivotal role of leadership in addressing rural health challenges through strategies, such as mentorship, the use of mobile devices, and policy advocacy. Drawing from examples, like Northern Saskatchewan's telehealth initiatives and Marathon, ON's community-centred model, the analysis highlights traits essential for rural health care leaders, including adaptability, cultural humility, and clinical courage. Effective leaders prioritize equity, collaboration, and innovation, fostering interprofessional teamwork, enhancing rural training, and advocating systemic change. Recommendations include tailored service delivery, community engagement, and international knowledge exchange to develop sustainable, inclusive solutions. By empowering local leaders and integrating diverse perspectives, rural health care can transform into a model of resilience, ensuring equitable access to quality care for all.

Effective leaders **prioritize equity, collaboration, and innovation**, fostering interprofessional team work, enhancing rural training, and advocating systemic change.

KEYWORDS: rural health disparities, leadership in health care, m-health innovations, health care equity

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Health inequities in rural Canada remain a pressing issue, shaped by disparities in access to care, workforce shortages, and suboptimal health outcomes. Geographic isolation (particularly for remote communities, such as many in the far north), socioeconomic disadvantages, and systemic underfunding exacerbate these disparities.[1] Only 8% of Canada's physicians work in rural areas, where about 19% of the population lives.[2] Rural populations tend to be older, sicker, and less affluent, further compounding these inequities.[3] In addition, perceived stigma from the health care system among people living in rural areas, may negatively influence access to care, leading them to avoid seeking help.[4] Lack of time and resources in rural health care may lead to fragmented communication and hinder effective health care delivery.[4]

Addressing these challenges requires bold, adaptive, and empathic leadership that combines vision with action. Leaders must inspire trust, motivate teams, and adapt to rapidly changing circumstances while addressing the unique struggles of rural communities. Solutions must be culturally sensitive, inclusive, and designed to foster collaboration, innovation, and equity. This article explores the critical role of leadership in addressing these inequities through strategies like mentorship, the use of mobile devices (m-health), and collaborative action.

Leadership as a catalyst for change

Leadership is a pivotal force in transforming rural health care, providing the vision and drive needed to overcome systemic barriers. Effective leaders not only navigate resource constraints but also inspire teams to innovate and adapt. The Rural Road Map for action[5] exemplifies how leadership translates vision into measurable outcomes, guiding efforts through its four key directions:[5]

- **Building the rural health care workforce:** Leaders facilitate innovative recruitment and retention strategies, such as mentorship programs and financial incentives.
- **Enhancing rural training opportunities:** Leaders promote rural-focused medical education, including clerkships and residencies, to prepare future health care providers.

- **Fostering interprofessional collaboration:** Effective leadership encourages teamwork, optimizing resource use and improving patient outcomes.
- **Advocating systemic policy change:** Leaders champion equitable funding and infrastructure development to sustain rural health care delivery.

These priorities demonstrate that leadership is central to addressing the challenges of rural health care, requiring a commitment to equity, collaboration, and innovation.

Traits and characteristics of effective rural leaders

Leadership in rural health care demands distinct traits and skills. Rural leaders operate under intense scrutiny in close-knit communities. Key traits include adaptability, conscientiousness, emotional intelligence, and resilience.[6] The notion of clinical courage further characterizes effective leadership, encompassing a willingness to step beyond formal training to address unmet needs in resource-constrained settings.[7]

Essential features of clinical courage include:[7]

- **Standing up to serve:** Taking responsibility in uncertain or high-stakes situations.
- **Navigating uncertainty:** Adapting to limited resources and ambiguous circumstances.
- **Providing collegial support:** Building networks of guidance and encouragement to foster resilience.

Leaders must also manage complex responsibilities, including resource allocation, financial sustainability, and stakeholder engagement. Cultural humility enhances their effectiveness, particularly in serving Indigenous communities, by fostering trust and ensuring culturally competent care.[8]

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Leaders must also manage complex responsibilities, including **resource allocation, financial sustainability, and stakeholder engagement.**

Examples of leadership and innovations in rural health

Case studies illustrate the practical application of innovative solutions. For example, m-health in Northern Saskatchewan has improved access to specialists and streamlined care delivery for remote populations, particularly Indigenous communities.[8] By adapting m-health systems to local needs, leaders address challenges like broadband limitations and privacy concerns while ensuring culturally sensitive care.

Similarly, the jurisdiction of Marathon, ON, demonstrates the value of community-centred leadership. Faced with a health care crisis in the mid-1990s, newly graduated family physicians implemented a team-based care model, reducing burnout and fostering continuity of care.[9] These examples highlight the transformative potential of leadership grounded in collaboration and cultural understanding.

Mentorship also emerges as a critical strategy. Programs like the Rural Outreach & Mentorship Initiative support early-career providers in navigating the unique challenges of rural practice, enhancing both recruitment and retention.[10] By modeling effective communication and advocacy, mentorship fosters leadership skills while mitigating professional isolation.

Broader strategies for rural health leadership

The lessons from m-health, mentorship programs, and leadership studies underscore several key strategies for addressing rural health inequities. Collaborative recruitment is vital, emphasizing team-based approaches that foster a supportive work environment and reduce burnout. Targeted incentives, such as financial support and professional development opportunities, further enhance recruitment and retention efforts.

Innovation in service delivery is equally critical. M-health technologies bridge gaps in care, expanding access to specialists in remote areas. Leaders who champion these advancements ensure that solutions are sustainable and tailored to community needs. Community engagement remains a cornerstone of effective leadership. By integrating diverse perspectives and fostering cultural humility, leaders build trust and address health disparities while trying to ensure that health care services reflect local preferences.

Advocacy and policy change are essential to rural health leadership. Leaders should advocate equitable funding and infrastructure development, collaborating with local, regional, provincial, and federal agencies to address systemic barriers and try to ensure that rural communities are not left behind.

Moving forward: a call to action

Transforming rural health care requires visionary leadership. Leaders should champion equitable resources, foster collaboration, and inspire innovation to address the distinct challenges of rural communities. Empowering local leaders, integrating diverse perspectives, and prioritizing sustainable solutions will allow the health care system to evolve to serve all populations effectively. Exchanging knowledge with other jurisdictions including other countries that have done this relatively well, such as Australia, is imperative.

With determination and collective effort, rural health care can become a model of resilience and inclusivity, ensuring equitable access to quality care for all.

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Reflections on life as a clinical academic: experience and learning of a Canadian physician leader

Margaret Steele, MD

When I began my medical career over 40 years ago, the last thing I imagined was becoming a clinical academic. I was delighted to have gotten into medical school, and I was eager to learn as much as I could to be a competent and compassionate physician. While in medical school, I developed an interest in mentoring and, with a classmate, organized a mentoring program — my first foray into academic leadership. Two clinical academic mentors were assigned to me, and I learned a lot about the effect their careers had on their professional and personal lives, both positive and negative. In addition, several faculty members served as exceptional role models; one is a dear friend and colleague and the reason I became a child and adolescent psychiatrist.

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After entering residency, I developed a better appreciation of what it meant to be a clinical academic by working with and learning from many supervisors and teachers. Becoming the representative for our residency program at the national level increased my interest in medical education and provided me with an invaluable opportunity to contribute to the national discussion on various aspects of psychiatric education. I learned the importance of networking with peers and academics outside my institution.

In the last year of residency, I was offered a faculty appointment as a clinical lecturer. Although I knew I loved teaching, I wasn't aware of what it truly meant to be a clinical academic, but I was eager to contribute to the education of others. As a result, my views about the role of clinical academics have evolved.

Evolution of the role of a clinical academic

When I started as a clinical lecturer, I was expected to be promoted based on education, research, and service. This is typical of PhD academic faculty members at the university and was referred to as the "triple threat." I was comfortable in the clinical and education realms, but I had to learn about research as this was not an integral part of my undergraduate and postgraduate education. In contrast today, undergraduate medical programs integrate research education into the curriculum with many programs requiring undergraduate students to do research projects.

With the establishment of the Royal College of Physicians and Surgeons of Canada's CanMEDs framework,[1] where Scholar is a core competency, residents are expected to do a quality improvement and/or research project. In addition, there is increasing expectation that full-time clinical academics have advanced degrees, such as a master's or PhD. To develop my research skills, my mentor and supervisor engaged me in a variety of research projects, including clinical and educational research. To further enhance my educational competencies, I enrolled in a master of higher education program, which provided formal training in pedagogy, curriculum development, assessment, evaluation, and scholarly work. The service component needed for promotion was easy to develop by sitting on numerous university committees and eventually expanding my reach to provincial, national, and international committees and leadership positions.

Balancing clinical and academic roles

Over time, medical school leaders have recognized that given their heavy clinical workload, it is incredibly difficult for clinical academics to engage in all three parts of the triple threat. As a result, many universities have developed academic categories, such as clinician teacher, clinician educator, clinician researcher, clinician scientist, and clinician administrator, which better match the realities of clinical academics and allow them to excel in one or two key academic activities. This is much more achievable for busy clinicians.

In most medical schools, the majority of the faculty tend to fall into the category of clinician teacher/educator. Academic clinician educators assume primary responsibility for the organization, delivery, assessment, and evaluation of education.[2] Many medical schools have adopted Boyer's classification of scholarship, which includes teaching, integration (e.g., review articles, book chapters), application (e.g., clinical practice), and discovery (e.g., traditional research).[2] Often clinical academics interested in education will start their careers as clinical teachers providing didactic lectures, small-group teaching, and clinical supervision. Studies have noted that clinician teachers are motivated by their duty to the medical profession, giving something back to the profession, and having a deep personal interest in teaching.[3] With more experience, mentorship, and engagement in education scholarship, many clinical academics evolve into clinical educators. As such, they can be promoted on their educational scholarship. Those involved in clinical research generally require more protected time given the increasing complexity of research and the time necessary for research completion while simultaneously writing research grants and publications to disseminate their work.

With more **experience, mentorship, and engagement in education scholarship**, many clinical academics evolve into clinical educators.

Academic administration

A newer role for clinical academics is that of academic administrator, not only developing and leading the implementation of programs and initiatives but also engaging in scholarly work about academic administration.

The exciting aspect of being a clinical academic is that your career evolves over time. I started as a clinician teacher and, after completing a master's degree in higher education, I evolved into a clinician educator. Toward the later part of my career, I became a clinical administrator. Changes in roles

and the promotion process allow clinical academics to pursue areas of interest and passion while developing expertise in particular aspects rather than having to excel in the three main traditional areas of promotion.

Those roles and promotion criteria will now have to evolve to incorporate such emerging issues as artificial intelligence in education.

Passion, goal setting, and challenges

To become an effective clinical academic, it is important to be passionate about your work, to have fun, and to make a difference in other people's lives, especially our patients. One experiences many personal and professional challenges during one's career. It is not always easy to keep your focus and move forward, but with support, mentorship, coaching, and sponsorship, you can do it.

One of the things I learned later in my career was the value of goal setting. I was in mid-career when my inspiring dean nominated me for what would turn out to be a career-changing leadership program. The application required that I set goals for five years and ten years, and this was incredibly helpful in steering me to the opportunities and education that would allow me to achieve my 10-year goal in eight years.

Sadowski and Schrager[4] recommend developing a plan with key action items that will assist you in obtaining your goals. Some goals include meeting with mentors to discuss what one needs to move forward. Establishing collaborations with others to complete projects or becoming involved in a departmental initiative that will align strategically with your career goals[4] can be very rewarding. Your career development plan should be reviewed annually with your supervisor to assess progress and determine whether other resources and support are required to fulfill your goals.

Personal development and life-long learning

Another important lesson is the value of engaging in educational courses to enhance and learn new skills, whether in research, education, or administration and leadership. As clinical academics, we need to be life-long learners and model this for other learners, faculty, and staff to create a vibrant academic culture.

Most universities have teaching certificate programs which are helpful for developing a baseline of teaching skills. To develop more skills in pedagogy and educational scholarship, obtaining a graduate degree in medical education is extremely beneficial.[5] Receipt of a graduate-level degree in medical education has been found to develop and enhance teaching skills and academic productivity among clinician educators, with many reporting higher levels of achievement in terms of educational leadership, publications, and teaching awards.[5] In addition, this education signals to the faculty that you are a committed clinical educator who wants to contribute to high-class education for learners, which, in turn, will allow you to become involved in educational committees and/or take on significant educational leadership roles. Involvement in a master's degree or fellowship in medical education provides you with a network of passionate, committed educators with whom you can collaborate over time.

When I became more interested in leadership and administration, I participated in several Canadian Medical Association Physician Leadership Institute courses, the Executive Leadership in Academic Medicine for women at Drexel University in Philadelphia, and the Association of American Medical Colleges Council of Dean Fellowship Program to learn more about being a dean, and I received the Certified Canadian Physician Executive credential. These various experiences contributed to my knowledge of leadership in health care, and academic medicine in particular. These programs incorporate stretch exercises where you lead an initiative or committee to learn, develop, enhance, and practice various leadership competencies.

Mentors provide you with **honest feedback, support, and guidance**; they open doors for you and prepare you for long-term career success.

Role modeling, coaching, mentoring, and sponsorship

The other important aspect of becoming an effective clinical academic is exposure to inspiring role models and effective mentors. Role models play a critical part in influencing your motivation and choices to engage in academics; demonstrating professionalism, beliefs, and values of the discipline; and inspiring you to move forward in your career and be successful.[3] Mentorship is also a critical component for success. Over your career you will have multiple mentors, and they will change depending on your goals. I have been fortunate to have a variety of mentors related to my clinical work, education, and leadership. Mentors provide you with honest feedback, support, and guidance; they open doors for you and prepare you

for long-term career success. Those who have been mentored feel greater satisfaction,[6,7] are promoted more quickly,[6,7] have a more positive view of their work environment,[8] and are more likely to stay at their institution.[7,9]

Coaching and sponsorship, which are used extensively in the business environment, have become much more prevalent in academic medicine and bring value to individuals as they continue to evolve as clinical academics. Coaching has been defined as: "a facilitative process for the purpose of coachee's learning and development and a greater working life (e.g., psychological well-being) through interpersonal interactions between the coach and coachee."[10] Coaching has been shown to: increase employees' sense of competence,[11] increase employees' learning and development,[11] improve learning at work,[12] improve cognitive and affective learning outcomes (goal attainment and self-efficacy),[12] improve psychological well-being,[12] improve self-regulation and self-awareness, increase work satisfaction, promote more desirable work attitudes and greater organizational commitment, and lower intention to leave.[12]

In the business context, sponsorship is defined as "active support by someone appropriately placed in the organization who has significant influence on decision-making processes or structures and who is advocating for, protecting, and fighting for the career advancement of an individual."[13] Sponsorship is becoming more prevalent and is incredibly important to showcasing one's talents and exposing you to more influential people. Sponsors encourage their protégé to be ready to accept new challenges while also persuading other institutional decision-makers to see the protégé's capabilities.[14] If you are being sponsored, it is important to participate in the activity you are being sponsored for; however, if you have other competing priorities, inform your sponsor and ask that they consider you for other opportunities. Kathy Hopinkah Hanna, a national managing partner at KPMG LLP US in 2011, clearly indicated the differences between a coach, mentor and sponsor in the following statement: "A coach tells you what to do, a mentor will listen to you and speak with you, but a sponsor will talk about you."[15]

Final reflections

I feel extremely privileged and honoured to have had an amazing career in which I believe I have made a difference in the lives of learners, staff, and faculty members and improved health care for people. As a clinical academic, I accomplished things I never dreamed possible. I was able to contribute to the education of our future physicians, engage in research to improve the way we teach our students as well as care for our patients, develop and lead programs to improve patient care, enhance the education of our learners, and provide opportunities for health care researchers.

To have a successful rewarding career that makes a difference in the lives of others, I have outlined what I think are instrumental: engage in work you are passionate about, whether it is education, research, or leadership; set personal and professional goals and review them annually; engage in education and experiential learning to enhance your knowledge and skills; be inspired by role models; seek out effective mentors; engage in coaching; and take advantage of opportunities that high-placed sponsors offer you. I have also learned that the balance between personal interests and professional life is critical. I believe the newer generation of physicians is much wiser when it comes to maintaining health and well-being. The future is bright for academic medicine. However, we need to be cognizant that we have a crisis of person power, and we need to take into account the critical role clinical academics play in developing a more effective and responsive health care system.

Callie Bland

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Mantra:

Callie believes physician leadership, wellness, engagement and fulfillment are essential for our health care system to thrive. Her coaching programs and courses help physicians to explore, learn and develop leadership skills and competencies so they can excel in leading themselves, others, and the system more effectively.

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Evaluation of a provincial physician engagement initiative using **established health care quality optimization** frameworks

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Introduction: ***Across Canada, much effort has been put into increasing physician engagement to improve communication and collaboration between physicians and administrative leadership. One measure was the Facility Engagement Initiative (FEI) created in 2016 by Doctors of BC and the BC Ministry of Health. However, although many projects have been supported, no systematic approach or established tool has been used to describe and evaluate these initiatives. This study presents a method of characterizing and evaluating physician engagement initiatives using projects funded by FEI through BC Cancer's Medical Staff Engagement Society (MSES).***

Methods: We reviewed funded MSES engagement initiatives from 2017–2019, collecting data from project proposals and reports. Projects were mapped against the society's strategic priorities and three engagement frameworks: the International Association for Public Participation's spectrum of public participation, the Institute for Healthcare Improvement's quadruple aim, and the BC Patient Safety and Quality Council's dimensions of quality. Descriptive analyses were conducted.

Results: We analyzed 39 completed projects, which received total funding of $420 299. Projects were carried out in regional cancer centres across the province and spanned multiple oncology and related disciplines. They collectively mapped to all MSES strategic priorities and chosen engagement frameworks. We describe temporal shifts in trends and gaps in priorities.

Discussion and conclusion: FEI presented a unique opportunity for physicians to engage with leadership and positively impact the health care system. Mapping projects against frameworks allows for project themes, temporal changes, and collective limitations to be identified. Longitudinal evaluation will be needed to understand the long-term impact of physician engagement initiatives.

KEYWORDS: physician engagement, facility engagement initiative, engagement frameworks, evaluation, burnout, medical staff society

Keyes S, Ingledew PA, Pollock A, Le D, Gill S, Shenkier T, Jadis L. Evaluation of a provincial physician engagement initiative using established health care quality optimization frameworks. *Can J Physician Leadersh* 2025; 11(1): 18-30. https://doi.org/10.37964/cr24788

Introduction

Meaningful physician engagement and leadership is necessary for high-quality, cost-effective, patient-centred care and overall health care system transformation.[1] Physician engagement is the active and willing participation of physicians in making decisions and improving health care at the patient, organization, and systems levels.[1,2] Working as leaders and on the frontlines, physicians have a unique privilege and responsibility to act as advocates and implement change.[1,3]

Engagement has been characterized as vigour, dedication, and absorption in work — the antithesis to burnout.[4] Physician engagement has been shown to improve career satisfaction, physician retention, quality and cost of care, and patient safety.[5,6] Engagement protects against physician burnout, which is characterized by exhaustion, cynicism, and a sense of ineffectiveness.[4,7] Nationally, over 50% of Canadian physicians have symptoms of burnout.[8] This may in part be the result of a breakdown in trust, communication, and collaboration between physicians and their health care authorities

Engagement protects against **physician burnout**, which is characterized by **exhaustion, cynicism**, and a **sense of ineffectiveness.**

and leadership.[9,10] Although it is important to address factors contributing to burnout, some suggest it may be more important to identify means of increasing physician engagement, through both physician engagement initiatives and projects that directly improve physician well-being.[4,6] Recent emphasis has been on identifying strategies at both individual and systems levels to enhance physician engagement.[4,11]

In 2016, Doctors of BC and the British Columbia (BC) Ministry of Health launched the Facility Engagement Initiative (FEI) to enhance relations and collaboration between facility-based physicians and health authorities in the province.[12,13] This included a memorandum of understanding to health authorities for physician engagement and funds directed to support engagement initiatives. Backed with the FEI vision, the BC Cancer Medical Staff Engagement Society (MSES) formed a steering committee to represent over 400 medical staff and liaise on engagement-related projects between BC Cancer and the Provincial Health Services Authority. Together, physicians and administrative leaders promote matters deemed important to physicians through involvement in decision-making and funding.[14] Although many projects have been carried out by MSES and over 70 related engagement societies with support from FEI,[13] no systematic approach or established evaluation tool has been used to describe these projects collectively.

This study aimed to address this gap. Using BC Cancer MSES as an example, we present an evaluation of how MSES-funded initiatives fulfilled organizational strategic priorities. We also compare them with frameworks created for health care quality optimization and engagement. Describing the initiatives that were developed to enhance physician wellness and overall health care system quality and performance will facilitate an understanding of how resources are invested to enhance physician engagement. In turn, this approach can be used by other engagement societies to describe and evaluate their initiatives and guide future directions.

Methods

We conducted a retrospective evaluation of all engagement initiatives funded by MSES that were carried out and completed between 2017 and 2019. Later projects were not included as significant adjustments were made in 2020 as a result of the COVID-19 pandemic. Pauses in government

funding delayed start dates, and other projects were granted extensions. In addition, post-pandemic, MSES transitioned to funding smaller initiatives to support a greater total number of projects. Projects also have lengthened timelines; therefore, many are still underway. Together, these changes would have affected interpretation of the results.

In the approval process, project proposals are evaluated against predefined criteria. Five steering committee members assess domains of physician engagement (whether the project reflects MSES's strategic priorities), patient care quality (positive impact to patient care), implementation (feasibility and likelihood of success), and impact (breadth of impact across domains). All projects require an identified executive sponsor to ensure a priori project collaboration with leadership. Most projects have received funding; projects focusing on objectives other than physician engagement, such as clinical research, are not funded.

We collected data from proposals, progress reports, and final reports. Financial data were extracted from a program-specific financial platform used to monitor facility engagement work. Data collected included background information about the initiative, participants, medical discipline, and budget.

Data collected included background information about **the initiative, participants, medical discipline, and budget.**

As there was no established evaluation tool, we reviewed the literature and identified three frameworks for physician engagement and health care quality optimization: the International Association for Public Participation's (IAP2) spectrum of public participation,[15] the Institute for Healthcare Improvement's (IHI) quadruple aim,[16] and the BC Patient Safety and Quality Council's (BCPSQC) dimensions of quality, which has since been revised as the BC Health Quality Matrix[17] (Table 1). These validated frameworks were chosen as they are among the most used and recognized in this field. The IAP2 spectrum of public participation outlines five levels of public stakeholder engagement in initiatives, with increasing involvement resulting in an increased impact on decision-making. The IHI quadruple aim represents four overarching social needs that inform and guide health care improvement. The BCPSQC dimensions of quality describe health care quality from both an individual and systemic level.

Table 1. Descriptions of the Medical Staff Engagement Society's (MSES) strategic priorities and the chosen evaluation frameworks.

Evaluation framework	Domains
MSES strategic priorities Priorities guiding the BC Cancer Medical Staff Engagement Society	**Priority 1** — To provide opportunities for communication among BC Cancer medical staff (across disciplines and across regions) **Priority 2** — To foster enhanced communication and collaboration between BC Cancer and PHSA leadership **Priority 3** — To lead collaboration across "silos" to address inefficiencies and improve clinical workflow and indirect patient care **Priority 4** — To promote medical staff wellness
IAP2 levels of engagement Levels of public engagement in decision-making processes	**Inform** — Provide the public with objective information to understand the problem/opportunity **Consult** — Obtain public input on decisions/analysis **Involve** — Work directly with the public throughout the process **Collaborate** — Partner with the public in development plans and implementation **Empower** — Place final decisions in public hands
IHI quadruple aim Overarching social needs that inform and guide health care improvement	**Improving population health** — Improving the patient experience to lessen disease burden and improve overall care **Reducing cost of care** — Improving patient experience and health while decreasing health care costs, without compromising quality **Enhancing patient experience** — Improving patient subjective and objective experience, health literacy, and self-management **Improving provider satisfaction** — Improving health care provider satisfaction and quality of care while mitigating burnout and negative outcomes
BCPSQC dimensions of quality A shared definition of health care quality at individual and systemic levels	**Respect** — Honouring a person's choices, needs, and values **Safety** — Avoiding harm and fostering security **Accessibility** — Ease with which health and wellness services are reached **Appropriateness** — Care is specific to a person's or community's context **Effectiveness** — Care is known to achieve intended outcomes **Equity** — Fair distribution of services and benefits according to population need **Efficiency** — Optimal and sustainable use of resources to yield maximum value

Note: BCPSQC = BC Patient Safety and Quality Council, IAP2 = International Association for Public Participation, IHI = Institute for Healthcare Improvement, PHSA = Provincial Health Services Authority.

Projects were analyzed to determine which of the MSES strategic priorities and the three frameworks' domains were addressed. With iterative discussion, the principal investigator and a research assistant coded the projects using the frameworks and the MSES strategic priorities. A third coder helped resolve discrepancies and maintain coding consistency. All analyses were performed using Excel v. 16.57 (Microsoft, Redmond, Washington, USA).

Results

Between 2017 and 2019, MSES supported 39 projects to completion: 10 in 2017, 20 in 2018, and nine in 2019. Involved medical disciplines included radiation, medical, surgical, gynecological, and oral oncology, as well as radiation therapy, psychiatry, pathology, functional and diagnostic imaging, medical genetics, palliative care, and hereditary cancer. Projects were based in one or more cancer centres across BC. They varied widely in focus: 19 initiatives focused on both physicians and patients, 13 focused solely on physicians, and seven focused primarily on physicians although they affected patients indirectly. Overall, $420 299 in funding was allocated for the 39 initiatives across the three years. Funding available each year varied: $149 363 in 2017, $166 967 in 2018, and $103 969 in 2019. The average project cost was $10 776.91.

In relation to the four MSES strategic priorities, 35 of 39 projects involved providing communication opportunities (90%), 33 enhancing workflow (85%), 25 promoting wellness (64%), and 24 enhancing collaboration (62%) (Figure 1). Almost all (97%) addressed two or more of the strategic priorities, and 12 (31%) addressed all four. There was intersection between communication opportunities and enhancing workflow; 74% of the projects aimed to address both priorities. Over half of the projects aimed to address both communication opportunities and enhancing collaboration or promoting wellness (56% each).

In terms of the IAP2 levels of engagement framework, 16 of 39 (41%) projects achieved the inform level, seven consult (18%), eight involve (21%), 25 collaborate (64%), and 11 empower (28%) (Figure 2). Many projects incorporated one or two means for public participation (41% and 46%, respectively). Of the combinations, the most common was collaborate and inform (21% of projects) and collaborate and empower (21%).

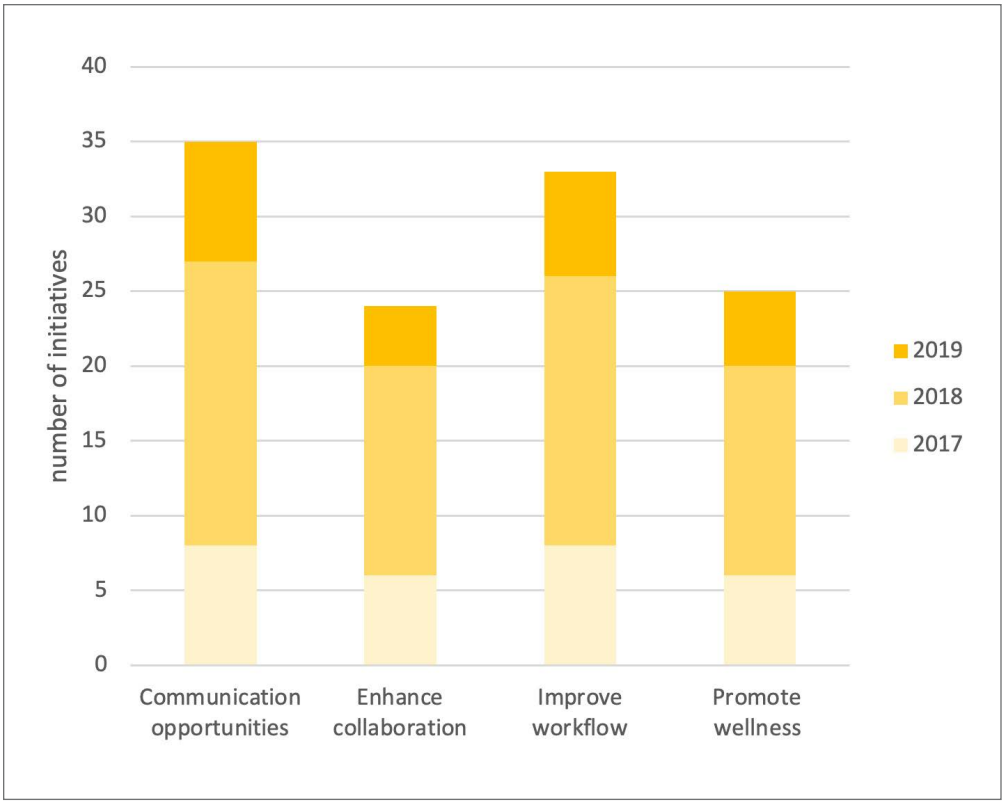

Figure 1. Medical Staff Engagement Society (MSES) projects, mapped to its four strategic priorities.

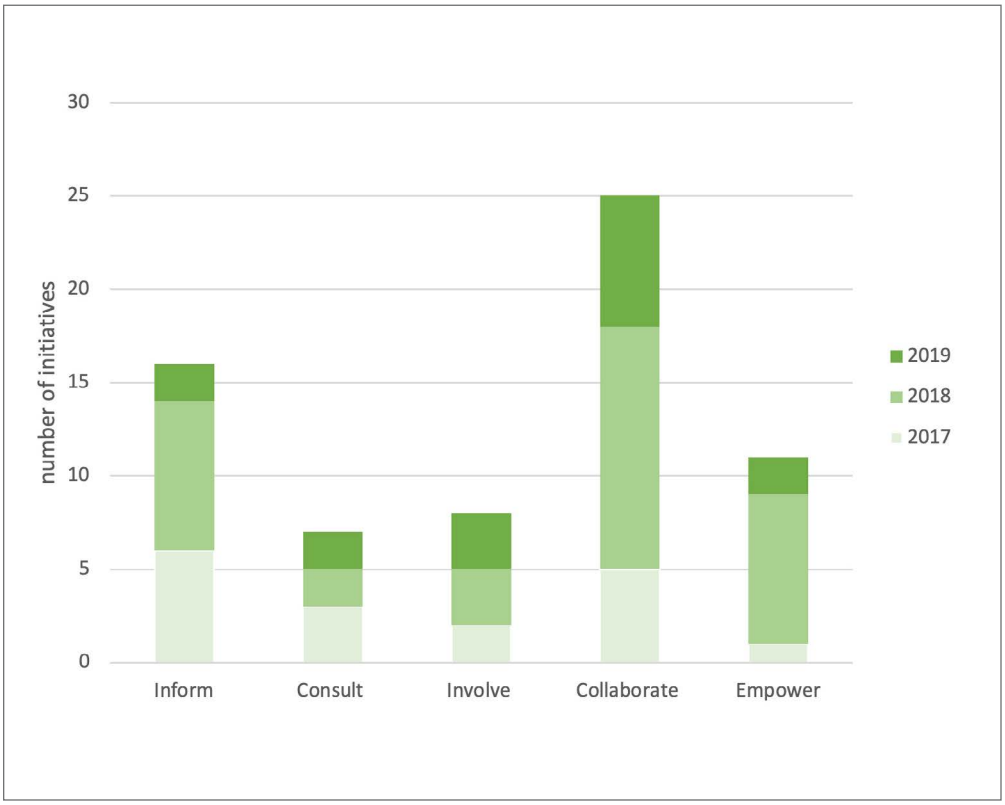

Figure 2. Medical Staff Engagement Society (MSES) projects, mapped to the five domains the of International Association for Public Participation's levels of engagement.

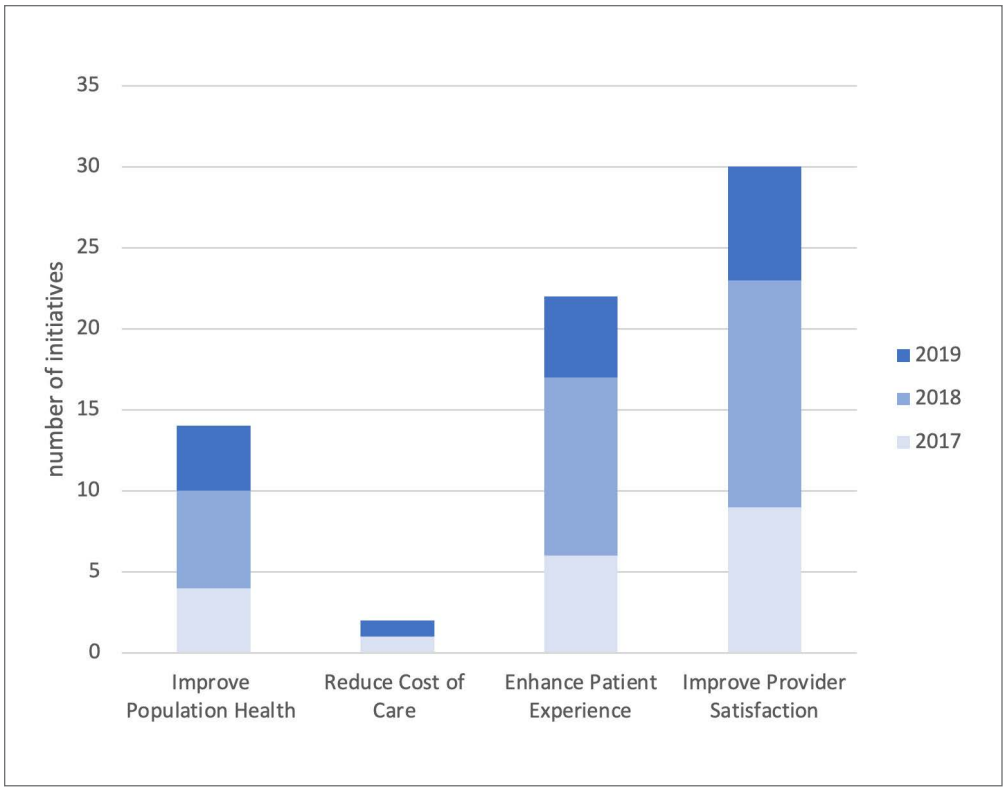

Figure 3. Medical Staff Engagement Society (MSES) projects, mapped to the four domains of the Institute for Healthcare Improvement's quadruple aim.

When assessed using the IHI quadruple aim framework, 30 of 39 initiatives related to improving provider satisfaction (77%), 22 enhancing patient experience (56%), 14 improving population health (36%), and two reducing cost of care (5%) (Figure 3). Almost half (46%) of the projects addressed two aims; 41% addressed one aim. A few (10%) addressed three aims and only one project (3%) addressed all four aims. The greatest intersection was both improving provider satisfaction and enhancing patient experience (44% of projects).

When assessed using the BCPSQC dimensions of quality framework, eight of 39 projects related to respect (21%), seven safety (18%), four accessibility (10%), 16 appropriateness (41%), 26 effectiveness (67%), one equity (3%), and 22 efficiency (56%) (Figure 4). Almost half of the projects (46%) addressed two dimensions of quality, and many (23%) addressed three dimensions. Only 8% addressed as many as four dimensions. The greatest intersections were between effectiveness and efficiency (36%), appropriateness and efficiency (28%), and appropriateness and effectiveness (26%).

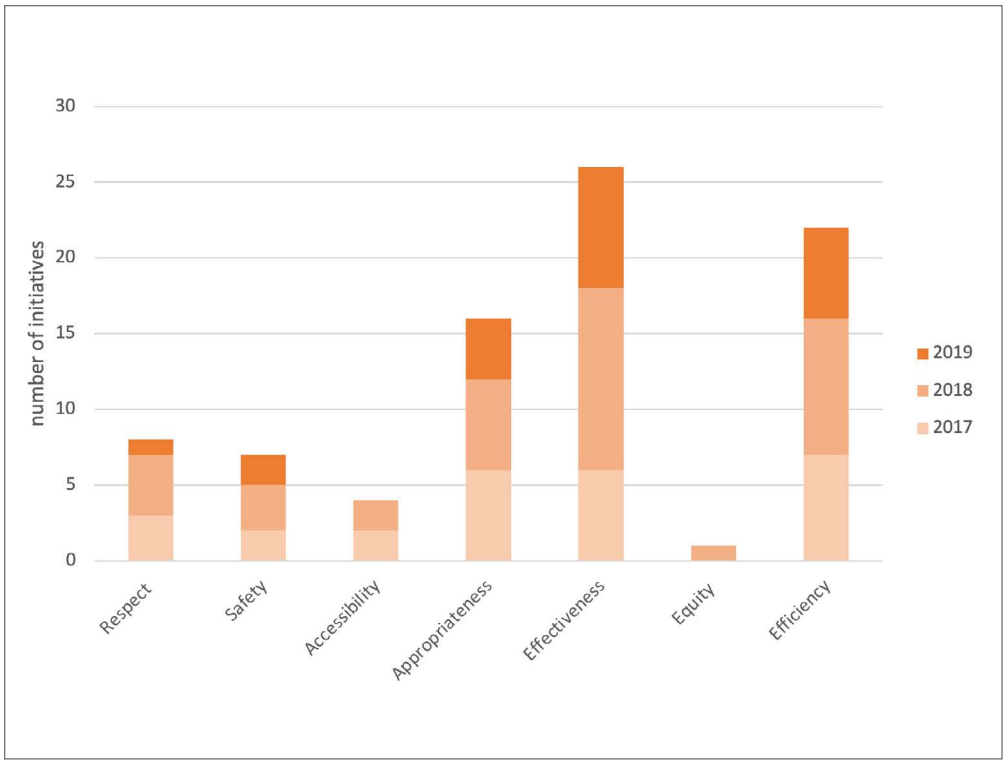

Figure 4. Medical Staff Engagement Society (MSES) projects, mapped to the seven domains the of BC Patient Safety and Quality Council's dimensions of quality.

Discussion

Significant efforts are being made to enhance physician engagement.[4,11,13] Many medical engagement societies have been developed in recent years to bridge communication and collaboration between physicians and administrative leadership.[13,18] However, despite considerable funding of such initiatives, little is present in the literature describing outcomes.[13,19] Moreover, no systematic approach or established tool exists to describe and evaluate these projects. Our study presents a method of assessing how a diverse array of physician-led engagement initiatives aligns with organizational strategic priorities as well as health care quality optimization and engagement frameworks. This is important, not only for physicians, but also administrators in leadership positions who can help direct funds to meet overlapping demands.

Between 2017 and 2019, BC Cancer's MSES supported 39 diverse initiatives across the province in a range of oncology and related medical disciplines. The aims of the projects varied widely, from improving oncology genomics literacy with online resources to addressing inefficiencies with new patient triage algorithms. Physicians created workshops for other physicians to learn about and combat burnout,

increase self-awareness and communication skills, and manage difficult situations. There were efforts to organize provincial palliative radiation oncology site groups, arrange needs-assessment discussions among general practitioners in oncology, and develop quality improvement working groups. A provincial adolescent and young adult cancer care program was developed and a cancer supportive care program providing psychosocial support for patients was launched.[20,21] Collectively, the 39 projects addressed the four MSES strategic priorities along with various aspects of the IAP2, IHI, and BCPSQC frameworks.

Comparing engagement projects against established frameworks allows insight into temporal changes. For example, when mapping projects to the IAP2 levels of engagement, projects more frequently informed and consulted stakeholders in 2017; however, a gradual shift toward more involvement, collaboration, and empowerment in shared decision making was seen in subsequent years. Transformation of health care systems requires stakeholder engagement. To improve health care quality, efforts should be made to move toward increasing levels of engagement and empowering shared decision-making.[22,23]

When assessing projects in terms of the IHI quadruple aim, we noted a general emphasis on improving provider satisfaction. This may represent a stride toward improved physician wellness in the face of widespread burnout.[8,24] Burnout has been shown to impact the health, well-being, and productivity of physicians as well as patient care, and remains an important concern in health care and quality improvement.[25–27] Understanding project themes may provide valuable insight into pressing health care issues and ensure resources are appropriately allocated to address needs.

Finally, frameworks can allow identification of gaps and limitations among collective projects. Comparing projects against BCPSQC's dimensions of quality revealed that while many projects mapped to the qualities of effectiveness, efficiency, and appropriateness, very few mapped to accessibility or equity. Depending on the needs of the population, this may represent an important gap that future projects can address.[28] Medical engagement societies should monitor how funded projects are improving various aspects of patient care to ensure the highest level of care is achieved.

Frameworks can allow **identification of gaps and limitations** among collective projects.

This study has limitations given its nature as a retrospective evaluation of a single MSES. Projects after 2019 were not included, as MSES initiatives had undergone restructuring given impacts of the COVID-19 pandemic. The program was reinitiated in 2022, but more recent projects were not included as they were still underway at the time of data collection. The analysis of projects is limited by the chosen frameworks and method, as no gold-standard approach or validated tools currently exist. Given that the projects were also evaluated against the MSES strategic priorities, future directions may not be generalizable to other medical engagement societies with different priorities. Indeed, current MSES strategic priorities have evolved from the ones used in this study. Therefore, with iterative use of this approach, frameworks may need to be adapted to ensure they reflect the engagement society's overarching objectives and needs in a design-based research approach.[29]

Future research should continue to track efforts to improve physician engagement. This includes continued support of physician leadership and engagement initiatives and ongoing purposeful evaluation. This study represents one approach to evaluating engagement initiatives that may be used by other societies. In addition, future work should aim to assess the lasting impact of engagement initiatives on levels of physician engagement and burnout, as well as secondary outcomes, such as patient care. Overall, a better understanding of the impact of these projects may allow for more coordinated efforts, appropriate resource allocation, and health care improvement.

Conclusion

Engagement initiatives present valuable opportunities for physicians to work with medical and administrative leadership to make a positive impact on the health care system. Understanding how physician engagement projects map to frameworks of engagement and health care optimization can lead to identification of areas of potential growth. Longitudinal evaluation will be required to understand the lasting effects of these initiatives on patient care. Ultimately, with the recent emphasis on improving physician engagement, there is hope that not only will rates of burnout decline, but also efforts will result in greater physician satisfaction, improved patient care, and overall health care quality improvement and transformation.

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Competing interests
Dr. Ingledew is president, Dr. Pollock is vice president, Dr Le is managing director, Dr Gill is former chair, and Dr. Shenkier is past president of BC Cancer Medical and Dental Staff Association/Medical Staff Engagement Society. Dr. Keyes and Ms Jadis declare that they have no potential conflicts of interest.

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Authors' contributions
LJ collected the data. LJ, SK, and AP analyzed the data. SK, LJ, PI wrote the manuscript. PI, LJ, AP, DL, SG, and TS conceived the project. All authors edited and approved the final manuscript.

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Cost-minimization analysis: showing something is cheaper does not necessarily mean it is better

Jeffrey S. Hoch, PhD
Carolyn S. Dewa, MPH, PhD

In this fourth article in a series on health economics, we focus on cost-minimization analysis to clarify how its results should be interpreted. Cost-minimization analysis is contraindicated if the options under consideration differ in terms of an important attribute besides cost. The benefits of cost-minimization analysis mostly stem from leaders considering the method's shortcomings.

KEY WORDS: leadership, cost-minimization analysis, health economics

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Effective leaders make decisions that take into consideration a complex array of objectives, perspectives, and values. Often, there are conflicting views on how to spend scarce resources. Sometimes, the divergence occurs because of differing opinions about the goal or objective. However, even when agreement about the objective is unanimous, there may be disagreement about the process by which it can be achieved. Given a fixed amount of resources (e.g., money, time, staff), wise decisions involve putting those resources to the use that optimally serves the organization's objectives, mission, and values.

Unfortunately, easy solutions rarely exist. Real world decisions are messy. For example, lower cost does not always translate into the best choice. Achieving more may require investing more. Leaders who want to inform their decisions about such trade-offs (e.g., if we spend $X more on a new project/plan/treatment what is the additional gain?) use economic evaluation. Previous articles in this series[1-3] introduce core concepts from health economics and economic evaluation. In this article, we briefly review cost-minimization analysis (CMA) and consider a case study that illustrates its strengths and limitations. We conclude with the observation that CMA may provide its greatest insights to leaders by challenging them to identify the method's shortcomings.

Review of economic evaluation and CMA

Economic evaluation involves estimating the extra cost (ΔC) and the extra effect (ΔE) of a new option compared with standard practice or usual care. For example, Cipriano and colleagues[4] examined the cost effectiveness of expanding newborn screening for up to 21 inherited metabolic disorders using tandem mass spectrometry. For the category "Fatty acid ß-oxidation disorders," the test for glutaric acidemia type II (GA-2) had an extra cost of $19.09 and a gain of 0.000000134 life-years (or about 4.23 seconds). That means testing for GA-2 would cost over $142 million per additional year of life. There may be good reason to invest in testing for GA-2, but making a case for its economic efficiency as defined by additional life-years would be difficult.

Cost effectiveness calculations are based on the ratio of the extra cost to the extra gain (i.e., ΔC/ΔE). When two options being compared have identical outcomes (ΔE = 0), the cost-effectiveness ratio is not computed (dividing by zero equals infinity and hence is not useful in practice). In these unique situations, only the extra cost is estimated (i.e., ΔC). This type of analysis is CMA. Choosing to make decisions based on CMA requires leaders to assume that the outcome of interest will not change (i.e., ΔE = 0). It is important to note that identical is different from "not finding a statistically significant difference in outcomes." Also, even when one cannot reject that that two options are the same for a particular outcome, there may be other outcomes that although unmeasured, may be more important from a leader's broader perspective.

The case study: do nurses cost less than physicians?

The following is an example of a case in which lower cost may not be the only factor that affects the decision. Costa et al.[5] conducted a CMA comparing the cost of flexible sigmoidoscopy procedures performed by registered nurses (RNs) versus physicians in Ontario. In addition to the $18.09 cost per procedure performed by an RN — based on an hourly wage of $40 for a 20-minute procedure, plus fringe benefits and vacation time — the authors included a "reasonable" on-call remuneration fee for a physician, because a physician must be available in case intervention beyond the scope of practice for RNs is required (e.g., polyp removal or complications). The on-call fee was defined in proportion to the full Ontario Health Insurance Plan (OHIP) fee for a physician-performed flexible sigmoidoscopy procedure. In the absence of physician intervention, physicians would still be reimbursed for the on-call supervision of the RN who performed the procedure.

Figure 1 shows the cost difference between an RN and a physician in this case. The answer to "Is it cheaper to use RNs?" depends on how much one pays physicians to be on-call when using RNs. In the "usual care" scenario, the cost for physician-performed flexible sigmoidoscopy per 100 patients was reported as $15 293.75. If we assume an RN-performed procedure incurs a physician on-call fee of 25% of the OHIP billing code,

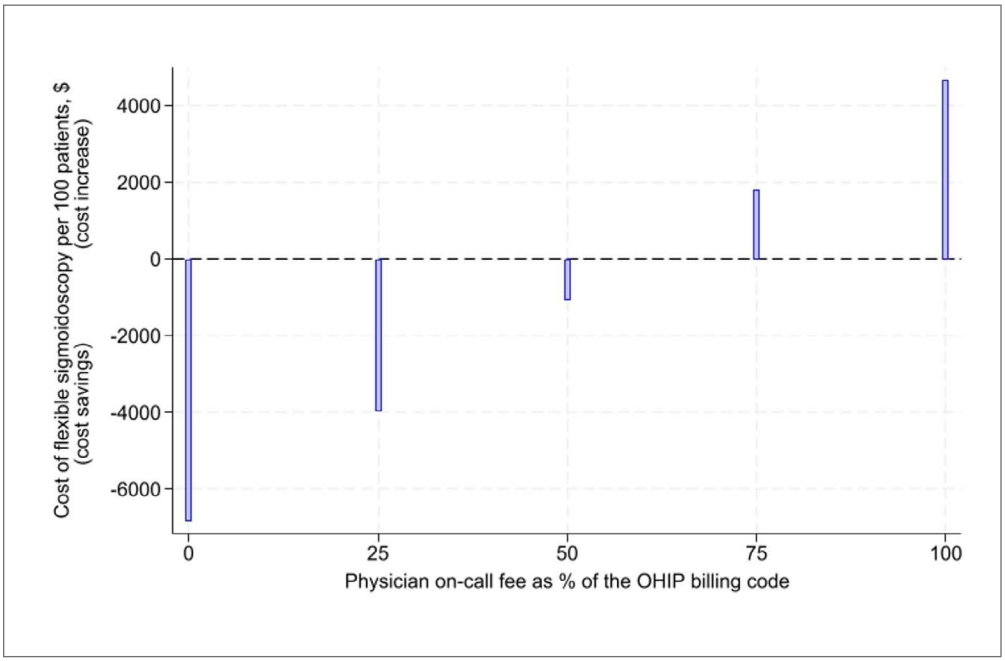

Figure 1. Cost of flexible sigmoidoscopy performed by an RN versus a physician for five possible on-call physician-remuneration scenarios (0%, 25%, 50%, 75%, or 100% of the OHIP fee schedule).

then the cost for RN-performed flexible sigmoidoscopy is about $4000 less per 100 patients (see second bar in Figure 1). With a physician on-call fee of 50%, the RN-performed procedure is approximately $1000 less (middle bar). This study shows that, "RN-performed flexible sigmoidoscopy minimizes costs when the physician on-call fee is less than 75%… RNs are less costly compared to physicians with… an on-call rate of 60%."[5] This leads to the conclusion that, "RN-performed flexible sigmoidoscopy is a cost-saving option to increase the screening capacity of the health system in Ontario."[5]

Discussion: how to think about CMA results

Step 1: Is it the "right" objective?

In a CMA, the only thing that matters is cost. It is assumed that both options are identical with respect to effectiveness. Because of differences in wage rates between RNs and MDs, RNs are cheaper than physicians. But other health care practitioners are cheaper than RNs, right? In an editorial, Fletcher and Farraye[6] opine that, "technical skill is not conferred by an MD degree, nor even by subspecialty certification, but rather earned by rigorous training and experience… in principle it [the results] might apply to other nonphysicians… with comparable training and experience."

Consider the observation, "Screening sigmoidoscopy programs are limited, in part because of the workforce necessary to perform the examinations. The current number of gastroenterologists… would have difficulty performing all the sigmoidoscopies that would be required for a national screening program."[6] This suggests that the problem lies with limited capacity, rather than with the need to find cheaper ways of doing things. In the face of rising Canadian rates of colorectal cancer, if the goal is to increase access to screening, then options should also consider extra effectiveness (ΔE). If the objective is to address the rising cancer rates, the outcome should be measured in terms of additional numbers screened, cases detected, or life-years gained. If one of these outcomes captures the actual challenge the decision-maker is facing, then comparing two options based solely on costs is not sufficient. The actual decision requires considering both the extra cost and extra gain. Furthermore, to what should we compare the option of using RNs? Is the relevant comparator: do nothing or increase the number of physicians?

A leader's objective will vary depending on the decision to be made. In turn, the optimal analysis to inform the decision will also vary. For example, if the goal is to provide more access to screening for a population living in flexible sigmoidoscopy deserts, and one option is to have RNs perform the procedure, cost-effective analysis rather than CMA is needed to inform the decision. In this scenario, standard practice is not allowing the organization to meet its objective of detecting colorectal cancer. The question it faces is whether investment in a new option yields additional gain at an additional cost that is acceptable to the organization. The extra cost per extra case of colorectal cancer detected is calculated with the cost-effectiveness ratio $\Delta C/\Delta E$. Extra effect (ΔE) could be measured as additional cases detected or life years gained (if detection leads to treatment that prolongs life). In the study by Cipriano and colleagues,[4] the cost-effectiveness of testing for GA-2 was over $142 million per additional year of life. For colorectal cancer, the cost-effectiveness of an RN-performed flexible sigmoidoscopy option is likely much more economically attractive. However, the cost-effectiveness would vary depending on whether the scenario studied was one where physician-performed flexible sigmoidoscopy is not being done at all, or one where head-to-head screening (RN vs. physician) was being considered.[7] That is, is the alternative to RN-performed flexible sigmoidoscopy no screening at all? Or, is the alternative that the RN substitutes for the MD?

The **optimal analysis** to inform the decision will also vary.

In contrast, if the goal was to answer the question, "Are RNs or physicians a cheaper way to screen 100 adults aged ≥ 50 years at average risk for the colorectal cancer, who are already in our waiting room?" then the objective is cost minimization and not better access, reduced waiting times, or increasing screening. In fact, if the physicians who no longer perform flexible sigmoidoscopy (since the RNs are doing it) see other patients for other things, adopting RN-performed flexible sigmoidoscopy does not affect access. Colorectal cancer screening rates will still be below those for other common cancers, but at least the under-achievement will be cheaper. A CMA answers which option is cheaper to accomplish the same thing. But do both options accomplish the same thing?

Step 2: Do you believe the assumptions?

All CMAs are predicated on the assumption that there is no difference between two ways of doing something (so $\Delta E = 0$). In our example, Costa et al.[5] refer to Schoenfeld et al.[8] to support their assertion that RN-performed flexible sigmoidoscopy is as effective as physician-performed flexible sigmoidoscopy. In their commentary on the Schoenfeld et al.[8] study, Fletcher and Farraye[6] observe:

> *It may be that there are greater differences in performance among individual endoscopists than there are between physician and nonphysician endoscopists. The variation in polyp miss rates among physicians (24–41%) and nurses (11–23%) in the Schoenfeld study was far greater than the difference in adenoma miss rates between the two kinds of endoscopists, 1%. Perhaps we should be more interested in who performs the endoscopy than in his or her training and credentials.*

Schoenfeld et al.[8] found that gastroenterologists and nurse endoscopists had very similar miss rates for adenomatous polyps (20% vs. 21%, respectively; $p = 0.91$). This is the source of the 1% figure that Fletcher and Farraye[6] reference.

Although 20% and 21% seem very similar, from a statistical viewpoint, similar is not equivalent. It is as Frank Robinson once said, "Close only counts in horseshoes…" In this case, the statistics that are cited do not mean that RN and physician flexible sigmoidoscopy miss rates are the same. Rather, they indicate that the null hypothesis that they are the same cannot be rejected. Although seemingly esoteric, this conclusion is important. The implication from a health economics perspective is that, "because failure to reject the hypothesis about the equality of two therapies is not the same as finding that outcomes of two therapies are identical, cost-effectiveness analysis should still be performed if the clinical study fails to demonstrate a statistically significant difference in clinical end points."[9] When making a cost-effectiveness analysis model (as opposed to analyzing a cost-effectiveness dataset), this can lead to situations in which it is difficult to explain results especially when null

findings actually result in evidence of cost-effectiveness.[10] Nevertheless, cost-effectiveness analysis is often preferred by health economists as a way of providing a more fulsome picture of the trade-offs between two options, even if they appear similar. While CMA has been pronounced as "dead"[11] and "dead and buried"[12] in the scientific literature, there are practical examples of how it can be used to inform real-world funding recommendations (e.g., Tirrell et al.)[13].

Step 3: Are there other things that matter?

Even if the objective is saving money and even if the results of flexible sigmoidoscopy are equivalent if done by RNs or physicians, there may be other things that matter. Some health technology assessment processes classify these "other things" into two groups: contextual considerations and other benefits or disadvantages. Trenaman et al.[14] found that judgements about the value of interventions are influenced by contextual considerations as well as other benefits or disadvantages and are anchored by cost-effectiveness. In the case of flexible sigmoidoscopy, there may be political, cultural, ethical, social justice, and other issues surrounding an endorsement of RN-performed flexible sigmoidoscopy. If this is true, then it is important to recognize that studying costs may be a sound activity but will not supply a sufficient answer on which to base a decision. In this case, CMA is an incomplete evaluation, and the cost difference is simply another variable to inform a decision addressing various impacts (i.e., cheaper may not be better).

Conclusion

In the example we reviewed, the research question answered was, "Are nurses cheaper than physicians?" The first key point is that this simplistic question may not supply a useful answer. In some scenarios, knowing the cheaper way of doing the same thing is very useful. In other cases, the cheaper way may not produce the same outcome. In situations where there may be differences (or not) in costs and outcomes, studying both costs and outcomes is the right choice.

This brings up the second key point; CMA is only useful in situations when both options being considered result in equivalent outcomes. Given that providing health care is often not akin to a game of horseshoes, "close

is not good enough." Cost minimization only gives answers about costs whereas cost-effectiveness studies both costs and outcomes. Because of its strong assumption that there is no difference in outcomes, despite being technically well-done, a CMA may not provide enough insight to inform more complex decisions.

CMA can seem like the right thing to do when there is evidence of non-inferiority for two options.[15] Leaders must consider whether important facets of the decision are being overlooked when restricting one's field of focus to finances. In our discussion of the case, we focused on three areas for evaluating the usefulness of a CMA: objectives, assumptions, and other considerations. We conclude by suggesting that leaders carefully consider whether a study's objective correctly aligns with the organization's objectives, and whether there is more than one relevant objective. If so, then the assumption that the cheaper way is the better way may not hold. A CMA tells you what is cheaper. Leaders often account for more than one factor in making their decisions. In fact, addressing contextual considerations as well as other benefits or disadvantages is often crucial to making good decisions. CMA does not respect strategic ambiguity.[16] Results showing "cheaper" are not results showing "better," unless the only acceptable decision criterion is cost.

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Developing governance **knowledge and skills** of physicians: importance and recommended action

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The Canadian health care system faces profound challenges, from emergency department closures to growing patient wait times and significant physician shortages. These systemic vulnerabilities demand robust leadership and advocacy, roles in which physicians are uniquely positioned to excel. Yet, despite their pivotal role, physicians often lack formal training in governance — the policies, processes, and decision-making frameworks that shape health care delivery. This commentary underscores the urgent need for governance education as a core component of medical training. It explores how knowledge of governance enhances physicians' ability to navigate organizational complexities, advocate equitable policies, and contribute to system-level improvements.

Through real-world clinical examples, we highlight the relevance of governance in areas such as resource allocation, patient safety protocols, and the ethical integration of artificial intelligence into care. We propose a four-layer framework for governance education, spanning foundational knowledge, operational applications, system navigation, and mentorship. Teaching strategies are provided for each layer to bridge knowledge gaps at both individual and systemic levels.

Integrating governance into medical education and leadership development equips physicians to address the increasing complexity of health care delivery. By fostering these skills, we can empower physicians to lead, innovate, and advocate sustainable improvements in patient outcomes and health system efficiency.

KEY WORDS: governance, medical education, individual-level, systems-level

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It is well known that Canada's health care system is struggling. Health system vulnerabilities have been more clearly exposed as a result of the COVID-19 pandemic, and it has now unfortunately become commonplace to learn about emergency department closures and increasing wait times for care.[1] Millions of Canadians are without a family physician.[2] There is frequent debate regarding the "universal" nature of our system, the risks and benefits of potentially increasing private/corporate involvement, and how to address human resources needs.

In this rapidly evolving health care landscape, the role of physicians extends far beyond clinical practice. As the complexity of health systems increases, understanding governance becomes essential for physicians at all levels. Governance encompasses the policies, processes, and evaluations that guide decision-making and operational effectiveness in health care institutions.[3] This commentary explores the importance of governance training and skills development for physicians, highlighting how it enhances their roles and contributes to better patient outcomes and organizational efficiency.

Governance and the health care system

Governance is often perceived as a distant concept, associated primarily with board meetings and annual general meetings. However, the reality is that governance permeates every aspect of a physician's daily practice. From the protocols followed in clinical settings, to the ethical guidelines that dictate patient care, governance frameworks underpin the functioning of health care institutions. For example, understanding the governance surrounding medical staff bylaws can clarify decision-making pathways when addressing conflicts about resource allocation or clinical responsibilities. By understanding these frameworks, physicians can navigate the complexities of their environment more effectively.

Studies have shown positive associations between hospital board engagement in health care quality activities and health care outcomes.[4,5] One way that hospital and health care governance bodies can be more engaged is by having clinician expertise prominently represented. For example, a physician serving on a quality improvement committee can help ensure that clinical realities inform strategic decisions about patient flow reducing emergency department bottlenecks. Clinicians' roles in governance and high-level decision-making are prudent and important, yet physicians are not formally educated or trained in governance.

Despite the importance of governance in health care delivery, physicians often have very little experience with governance practices. Further, despite increasing recognition of the importance of physician leadership, studies have noted that physicians often feel unprepared for these leadership roles, sometimes noting that opportunities to further build their related skill sets are lacking.

Despite the importance of governance in health care delivery, physicians often have **very little experience with governance practices.**

Governance and the role of physicians

The Canadian Audit and Accountability Foundation notes that governance refers to the structures, systems, and practices an organization has in place to assign decision-making authorities and define how decisions are made.[6] These systems also oversee service delivery and performance reporting. The World Health Organization notes that effective strategic governance policy frameworks outlining the roles of the state, the health care providers, and citizens are critical to achieving health system goals.[7]

Tangibly, an understanding of governance means:

- Understanding the role of associations, regulatory bodies, and how they differ[8-10]
- Understanding fiduciary duty, as well as the roles and responsibilities of a board and executive and how they differ from the rights of members
- Understanding governance documents, bylaws, policies, and procedures
- Being able to chair an effective meeting and standardize its process, such as by using Robert's Rules of Order

Advocacy and policy

A strong grasp of governance enables physicians to advocate effectively for patient-enhancing care practices and policies. For example, when advocating new diagnostic technology in a resource-limited setting (most settings are thus limited), understanding governance frameworks can help a physician navigate institutional processes to secure funding and approval. By understanding how governance influences resource allocation, care protocols, and health policy, physicians can better represent the interests of their patients in an institutional framework. This advocacy is vital for ensuring that patients receive effective, safe, and equitable care.

Clinical examples abound in relation to this matter. A physician (co)leading a multidisciplinary team in a hospital must navigate governance structures to streamline care transitions for patients with complex issues. Similarly, understanding governance is crucial for implementing new infection control protocols that reduce hospital-acquired infections. Governance education provides physicians with tools to engage effectively in these scenarios, bridging clinical expertise with systemic decision-making.

Governance education also includes training that fosters essential leadership skills among physicians. As they gain insights into organizational structures and decision-making processes, they become better equipped to take on leadership roles. This transition is critical as health care increasingly requires physician leaders who can advocate for both their patients and the institution's strategic goals. By understanding governance, physicians can lead initiatives that improve care delivery while also advocating for their colleagues' needs and concerns.

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By understanding governance, physicians can lead initiatives that **improve care delivery while also advocating for their colleagues' needs and concerns.**

Knowledge of governance is also critical as we consider new opportunities in health care, such as the role and influence of artificial intelligence (AI). With the growing effectiveness of AI, it is clear that it will have a significant role in our health care system moving forward. Ethical and regulatory concerns are frequently brought up, and governance frameworks are required to address these concerns early on and ensure that we launch these innovations safely and effectively. Physicians have important roles in these processes, such as contributing to and otherwise informing the design of AI algorithms that respect patient privacy and ensuring transparent accountability mechanisms.

Next steps

To address these challenges and gaps, we recommend a number of actions.

1. **Medical education partners:** Organizations, such as the Royal College of Physicians and Surgeons of Canada, the College of Family Physicians of Canada, and the Association of Faculties of Medicine of Canada, as well as accreditation entities, such as the Committee on Accreditation of Canadian Medical schools and the Committee on Accreditation of Continuing Medical Education, should devote resources and undertake research to establish frameworks for integrating governance into medical education. There is potential for governance to be integrated into the revisioning of the CanMEDS framework.
2. **Capacity building:** Develop governance capacity-building and training programs for physicians and physician trainees across the continuum of medical education and practice.
3. **Integration into education:** In the long term, it is important that governance considerations be integrated into the fabric of medical education so that learners develop them integrally and are able to use these skills in health systems change.

In Tables 1 and 2, we propose a framework for governance education, providing examples of specific skills and teaching activities to advance this work. Table 1 outlines four layers of governance knowledge, with examples at both the individual and system levels. For the purposes of this framework, individual level refers to governance knowledge or activities directly impacting a physician's personal practice or immediate team, whereas system level refers to governance knowledge or activities influencing larger organizational, institutional, or health system operations. Some of these examples could be considered at both an individual and system level.

Table 1. Framework for governance education.

Layer	Description	Individual examples	System examples
1	Foundational background information on governance	Understanding medical staff bylaws and their function in a particular organization	Familiarity with health care system governance models
2	Operational understanding of governance in practice	Learning to interpret and apply particular policies effectively	Recognizing the roles of regulatory and accrediting bodies
3	Interfacing with and navigating governance structures	Participating in departmental committees	Engaging with hospital boards on strategic initiatives
4	Teaching and mentorship to improve governance processes and frameworks	Mentoring peers on effective meeting leadership	Leading system-wide governance reform efforts

Table 2. Teaching governance at different levels.

Layer	Teaching at individual level	Teaching at system level
1	Workshops on medical staff bylaws and fiduciary duties	Seminars on governance principles within health care systems
2	Case studies on policy interpretation and application	Practical training in working with regulatory and accrediting bodies
3	Simulations of committee participation and decision-making	Leadership shadowing with hospital board members
4	Peer-led sessions on effective meeting facilitation	Advanced governance courses for systemic reform and mentorship roles

Limitations

This article has limitations that merit consideration. First, although it highlights the importance of governance education for physicians, we recognize that it currently encompasses a selective literature overview and that the area lacks comprehensive empirical data. Second, the examples provided are primarily illustrative and may not encompass the diverse governance challenges faced in various health care contexts or countries.

Finally, implementing governance training in medical education requires significant resources, collaboration, and cultural shifts that are beyond the scope of this article.

Conclusion

As part of the attempt to improve the health care system and patient outcomes, an understanding of governance is critical to physician leadership for addressing the systemic challenges that health systems face. Working alongside allied health colleagues, a deeper understanding of governance can help develop solutions to meet challenges of increasing clinical complexity, a misinformation epidemic, and climate and health crises. Physicians possess many important skill sets and an extensive knowledge base to contribute meaningfully to health care governance. They should be equipped with the governance knowledge and related skills to do this well.

The importance of governance awareness and education for physicians cannot be overstated. As health systems become more complex, the need for physicians to understand governance frameworks becomes increasingly vital. By recognizing that governance is not confined to boardrooms but is integral to daily practice, physicians can enhance their effectiveness, engage in meaningful collaboration, and advocate person-centred evidence-based/informed health care. Ultimately, equipping physicians with governance knowledge and related skills empowers them to lead and innovate within and beyond their institutions, driving positive change in the health care landscape.

We argue that training in health systems governance must be integrated into medical education curricula, and that both mentorship and leadership opportunities must be made available to physicians and physician trainees. This is particularly important as an understanding of governance and health systems organization empowers and supports physicians to be better patient advocates.

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A Theory of Everyone: The New Science of Who We Are, How We Got Here, and Where We're Going

Michael Muthukrishna
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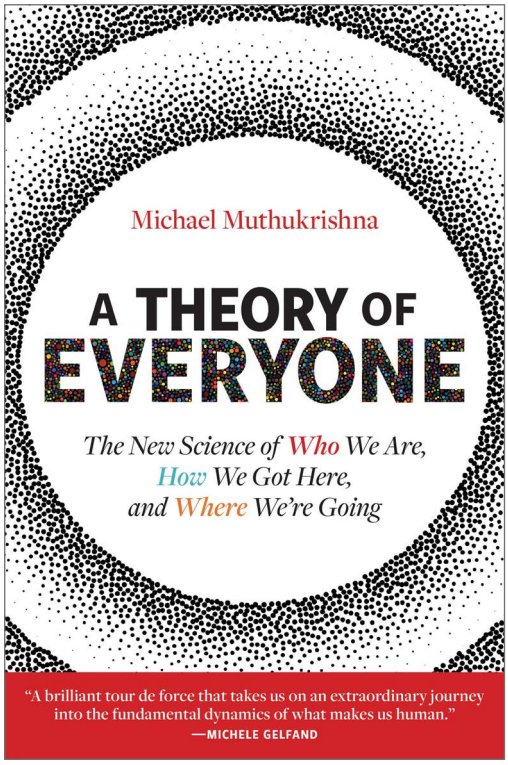

In *A Theory of Everyone*, Michael Muthukrishna presents an ambitious, interdisciplinary exploration of human evolution and societal development. By unifying insights from psychology, biology, economics, and anthropology, he provides a framework to explain how human societies progress. The book's core themes — energy, innovation, cooperation, and evolution — offer valuable lessons for medical leadership, providing a fresh perspective on managing health care systems and fostering collaboration.

Muthukrishna, a professor at the London School of Economics, specializes in economic psychology and cultural evolution. His research focuses on how human behaviour and culture shape institutions, drive innovation, and influence societal outcomes. These insights are especially relevant for health care leaders, where success relies on navigating human dynamics and fostering collaboration in complex organizations. His interdisciplinary approach offers a useful framework for understanding the systemic challenges faced by medical leaders today.

At the heart of Muthukrishna's argument are the "four laws of life" — energy, innovation, cooperation, and evolution — which, he argues, govern all forms of life and human societies. Energy, the foundation, enables movement and survival. Innovation allows societies to harness energy more

efficiently, while cooperation enables groups to thrive by working together. Finally, evolution ensures that societies and institutions adapt to new challenges over time. For medical leaders, understanding these principles can help foster a culture of collaboration, innovation, and adaptability, crucial elements for ongoing improvement in health care delivery.

One of Muthukrishna's key concepts is the "collective brain," a metaphor for how innovation arises from social cooperation and shared knowledge. According to Muthukrishna, progress is rarely the result of isolated individual effort. Instead, it emerges when people collaborate and build on each other's ideas. This view resonates with the structure of modern health care, where breakthroughs in treatment and operational efficiency often come from interdisciplinary collaboration. Leaders in health care must recognize the power of collective knowledge and foster environments that encourage teamwork across specialties and institutions.

Muthukrishna also emphasizes the importance of institutional evolution. He critiques rigid models of governance that fail to adapt to changing circumstances, advocating instead flexible, data-driven approaches. In health care, where innovations in telemedicine, artificial intelligence, and digital health are rapidly transforming the landscape, leaders must remain agile. The ability to adapt organizational strategies in response to emerging technologies, patient expectations, and new ethical considerations is crucial to maintaining quality of care. Muthukrishna's insights on institutional flexibility offer valuable guidance for medical leaders who must balance innovation with operational efficiency.

An important lesson Muthukrishna draws from history is how energy breakthroughs create periods of abundance, followed by new challenges. This analogy applies well to health care, where such technological advancements as genomics and personalized medicine offer tremendous potential, but also raise new questions about implementation, equity, and ethics. Muthukrishna encourages leaders to anticipate and manage these challenges proactively, rather than reacting to them as they arise. In doing so, leaders can better integrate new technologies in ways that benefit both patients and institutions.

Beyond energy and innovation, Muthukrishna's emphasis on cooperation and cultural evolution provides key insights for health care leadership. The

book highlights how societies evolve through collaboration, learning from others both within and across groups. In health care, this concept translates into the need for diverse teams to work together to tackle complex challenges. By fostering a culture of cooperation, leaders can create environments where innovation thrives and problems are addressed more effectively. The integration of diverse perspectives — from physicians and nurses to administrators and technologists — is critical to improving patient care and health care outcomes.

One of the central takeaways for medical leaders is the need to broaden their focus beyond the narrow confines of their discipline. Muthukrishna's interdisciplinary approach illustrates the benefits of integrating knowledge from multiple fields to better understand complex systems. In health care, this means looking beyond the immediate clinical challenges to consider how societal, economic, and technological factors interact with patient care. Leaders who can adopt this broader perspective will be better equipped to drive innovation, foster collaboration, and navigate the complexities of modern health care.

While *A Theory of Everyone* offers a sweeping view of societal development, some sections of the book may feel abstract to health care leaders seeking immediate, practical solutions. For instance, Muthukrishna's discussions on global governance and energy systems, while intellectually stimulating, may seem distant from the day-to-day concerns of medical leadership. However, the book's central message — that the success of human societies depends on understanding and applying the dynamics of cooperation, innovation, and evolution — is directly applicable to those leading health care organizations.

In sum, *A Theory of Everyone* is a thought-provoking and intellectually ambitious book that provides medical leaders with a new framework for thinking about leadership, innovation, and cooperation. Muthukrishna's interdisciplinary insights equip health care leaders with tools to better navigate the challenges of the 21st century, fostering environments that promote collaboration, innovation, and long-term success. For those willing to adopt a broader, systems-level approach to leadership, the book offers a valuable roadmap for achieving meaningful progress in health care.

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