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Treating the "Not-Invented-Here Syndrome" in Medical Leadership: Learning From the Insights of Outside Disciplines

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Abstract

Physicians are being increasingly called upon to engage in leadership at all levels of modern health organizations, leading many to call for greater research and training interventions regarding physician leadership development. Yet, within these calls to action, the authors note a troubling trend toward siloed, medicine-specific approaches to leadership development, and a broad failure to learn from the evidence and insight of other relevant disciplines, such as the organizational sciences. The authors describe how this trend reflects what has been called the "Not-Invented-Here Syndrome" (NIHS)—a commonly observed reluctance to adopt and integrate insights from outside disciplines—and highlight the pitfalls of NIHS for effective physician leadership development. Failing to learn from research and interventions in the organizational sciences inhibits physician leadership development efforts, leading to redundant rediscoveries of known insights and reinventions of existing best practices. The authors call for physician leaders to embrace ideas that are "proudly developed elsewhere" and work with colleagues in outside disciplines to conduct collaborative research and develop integrated training interventions to best develop physician leaders who are prepared for the complex, dynamic challenges of modern health care.

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In the face of changing technology, shifting policies, evolving structures, and the ever-present complexities of clinical practice, physicians are being asked to step into leadership roles in a variety of ways in modern health care organizations. They are being asked to coordinate patient care teams composed of a dynamic assortment of diverse clinicians; to make critical decisions on questions of operations, policy, and financial management; to do more with less.

The scope and pace of change in health care has been well documented, and these challenges of physician leadership have not gone unnoticed. The pages of medical journals are increasingly filled with observations, admonitions, and advice for physicians to rise and meet the leadership challenges of today's health care organizations.[1-4]

Yet, embedded within calls to action to address these challenges, we see a troubling tendency toward "going it alone." That is, a tendency to focus on research and interventions developed and conducted solely within the medical profession (or even within one particular subspecialty), at the expense of interdisciplinary collaboration and learning from outside fields. Consider, for example, a recent perspective published in a leading medical journal that implored physicians to learn from foundational work on decision-making biases by psychologists Daniel Kahneman and Amos Tversky (among others), noting that "although we physicians sometimes resist the syllogism, if all humans are prone to irrational decision making, and all clinicians are human, then these insights must have important implications for patient care and health policy."[5]

Although this article actually encourages physicians to learn from other disciplines (behavioral economics and psychology), it is in many ways the exception that proves the rule. Indeed, the "insights" this perspective refers to stem from foundational research by Tversky and Kahneman—research that appeared in *Science* in the 1970s and early 1980s[6,7]—that subsequently received widespread media attention, and for which Kahneman received the Nobel

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Memorial Prize in Economic Sciences in 2002. Thus, the existence of an article in a major journal extoling the virtue of learning from this exceptionally high-profile insight, more than 45 years after the findings were published, highlights the strikingly pervasive barriers to learning from outside disciplines in medicine. Moreover, the need for such an article begs the question: what other important outside insights are not being incorporated into the medical profession?

The "Not-Invented-Here Syndrome"

Professional fields—medicine, engineering, law, etc.—often suffer from this kind of siloed approach to problem solving and a lack of awareness of the lessons available from other disciplines or perspectives. This inability or reluctance to learn from the lessons of outside disciplines has been called the "not-invented-here syndrome" (NIHS), a term used in studies of organizational innovation to describe when useful ideas are devalued or dismissed simply because they come from external sources, either as an intentional or unintentional defensive strategy or because a track record of success creates a belief that superior ideas can only be created internally.[8,9]

Within medicine, excluding the handful of specialty interdisciplinary journals exploring social issues in health care, research and practice tend to be highly discipline-specific and insular. Even as science broadly has become more interdisciplinary, recognizing that insight often lies at the intersection of multiple fields, a recent investigation found that clinical medicine journals have remained among the least interdisciplinary (as measured by the breadth of their references and citations).[10] Although this insularity may be suitable for clinical studies of specialty-specific illness, it is far less suitable for addressing the interdependent organizational challenges (e.g., systemic routines and practices, interpersonal coordination, or non-clinical determinants of care) that are increasingly the focus of patient care and quality interventions.[11]

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This lack of interdisciplinarity is troubling, because the history of medicine includes a number of transformative ideas that have come from outside disciplines. For instance, in anesthesiology, the foundational study utilizing the critical incident technique was led by a PhD-trained engineer, Jeffrey Cooper. Building on his experience working at DuPont, he had an outside perspective on the study of errors and brought a social science technique (critical incident study) to medicine, fundamentally impacting patient safety research and improvement.[12] Not pursuing or publishing this kind of interdisciplinary work impedes opportunities to learn from outside disciplines, such as organization theory and management, that have decades of established research and recommendations to help inform how physicians lead organizations to deliver high quality, safe care.

Taken further, the existence of NIHS in medicine rests in part on an assumption that physicians are somehow not susceptible to the psychological, interpersonal, or organizational pressures that exist in other settings. Though there are certainly unique aspects of medicine, the day-to-day leadership of health organizations is likely more similar than different when compared to other complex settings, providing a valuable opportunity to learn from the accumulated evidence (including meta-analyses of leadership development implementation[13]) in outside disciplines. Failing to learn from studies of leadership, decision-making, and organizing in these other settings puts physician leaders at a disadvantage, forcing them to relearn known lessons and reinvent established practices.

Many recent efforts to advance physician leadership and decision-making reveal potentially missed opportunities to learn from evidence in the organizational sciences. As just one example, a recent multicenter trial of physician cross-checking (i.e., discussing intended patient care decisions with a colleague) in emergency departments observed that engaging in cross-checking

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reduced the rate of adverse events, and speculated that this result was due to physicians re-evaluating treatment as a result of receiving feedback and a "fresh eye" from another physician in this more collective decision-making process.[14] However, the benefits of this cross-checking behavior have been explored in psychology and organizational science (e.g., in studies of high reliability organizations[15]) for decades, and longstanding research has examined the superiority of collective decision-making over individual decision-making, as well as identifying specific circumstances, strategies, and practices whereby this superiority can arise.[16]

Though it is not our intention to single out this particular study, it is emblematic of the broader challenges of overlooking findings from outside disciplines. In particular, it demonstrates how NIHS can inhibit medical research from making a more expansive contribution to physician practice. Rather than reproving long-established findings from organizational research, the resources of this trial could be used to build on the known superiority of cross-checking to explore more specific actions and structures that better enable these peer feedback interactions to occur in the emergency department setting. Though there are certainly conditions under which it would be important to assess the validity of outside findings within the health care context (e.g., when the implications of these findings are counter-normative or likely to face significant resistance), these types of well established, validated findings seem better suited for adoption and extension, rather than replication, in the pursuit of physician development.

Treating the Syndrome

To keep pace with the leadership demands of modern health care, the medical field would no doubt benefit from actively seeking out ideas from research and evidence in domains outside of medicine.[4,17] Encouragingly, the field has shown an increasing recognition that the organizational sciences have an important role to play in physician leadership,[18] and

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interdisciplinary research is continuing to grow in prominence, particularly regarding key organizational dynamics such as front-line management, quality improvement, communication, and teamwork.[19,20] For example, work by scholars at the Joint Commission has very successfully integrated knowledge from other disciplines' studies of high reliability organizations, identifying a conceptual and practical framework for adopting the evidence and insights from this field of research into health care organizations.[21] Specifically, this work identified areas where physician leaders could directly incorporate principles of high reliability organizations, but also extended this work by highlighting areas where direct adoption may not be feasible (due to current constraints or challenges of the health care context) and articulating a set of changes that leaders would need to undertake to adapt these concepts into their daily practice.[21]

At the same time, significant progress has been made to adopt more interdisciplinary approaches to physician leadership during medical training, which is evident in the growing number of joint MD/MBA degree programs[18,22] (although these programs still account for only a very small fraction of overall medical school graduates[23]). Hospitals and health care organizations worldwide are also incorporating more overt efforts to train physicians in core organizational and managerial skills, identifying best practices from outside arenas[17] and sharing successful strategies and case examples of formal and informal physician leadership.[24,25] However, though this progress is encouraging, the majority of these physician leadership development interventions are still siloed within one particular organization or specialty (and taught by clinicians, rather than outside experts) and are typically not based on theory, research evidence, or a consistent conceptual framework,[2,4] resulting in an assortment of haphazard, inconsistent programs that are ill-suited to prepare physician leaders for the challenges of leading in dynamic, complex settings.[23]

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These examples of interdisciplinary research and training suggest that the medical profession is beginning to place more value on incorporating these outside perspectives. They also highlight two critical paths forward for incorporating knowledge from the organizational sciences: (1) through more collaborative research between medicine and outside fields, and (2) through the increased involvement of organizational researchers and other outside experts in undergraduate, postgraduate, and continuing medical education. As the clinical and organizational demands on physician leaders increase in scope and complexity, following these paths—drawing on the extensive research and well-honed interventions in other disciplines and adapting them to the particular dynamics of a health organization—will only become more essential for effective physician leadership.

Embracing this interdisciplinary approach provides a first step in treating the NIHS in medicine and moving toward a culture of recognizing and adopting ideas that are "proudly developed elsewhere" (an idea we proudly adopt from other studies of organizational innovation).[8] In doing so, physician leaders can learn vicariously from these outside disciplines and avoid "reinventing the wheel" in ways that are costly not only to health organizations, but also to the leaders themselves. Indeed, leaders who wait for redundant insights to emerge within their own domain can fall short, and may find their leadership short-lived. As organizational scholars, we value collaborating with our physician colleagues in leadership development efforts and stand ready to bring our canon to their aid.

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