Wellness-Centered Leadership: Equipping Health Care Leaders to Cultivate Physician Well-Being and Professional Fulfillment

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Abstract

These are challenging times for physicians. Extensive changes in the practice environment have altered the nature of physicians' interactions with patients and their role in the health care delivery system. Many physicians feel as if they are "cogs in the wheel" of austere corporations that care more about productivity and finances than compassion or quality. They often do not see how the strategy and plan of their organization align with the values of the profession. Despite their expertise, they frequently do not feel they have a voice or input in the operational plan of their work unit, department, or organization. At their core, the authors believe all of these

factors represent leadership issues. Many models of leadership have been proposed, and there are a number of effective philosophies and approaches. Here, the authors propose a new integrative model of Wellness-Centered Leadership (WCL). WCL includes core skills and qualities from the foremost leadership philosophies along with evidence on the relationship between leadership and physician well-being and distills them into a single framework designed to cultivate leadership behaviors that promote engagement and professional fulfillment. The 3 elements of WCL are: care about people always, cultivate individual and team relationships, and inspire change.

A summary of the mindset, behaviors, and outcomes of the elements of the WCL model is presented, and the application of the elements for physician leaders is discussed. The authors believe that learning and developing the skills that advance these elements should be the aspiration of all health care leaders and a foundational focus of leadership development programs. If cultivated, the authors believe that WCL will empower individual and team performance to address the current problems faced by health care organizations as well as the iterative innovation needed to address challenges that may arise in the decades to come.

These are challenging times for physicians. Numerous, complex factors have contributed to extensive changes in the practice environment that have altered the nature of physicians' interactions with patients and their role in the health care delivery system.[1,2] Physicians are increasingly employed by large health care organizations, a fundamental shift from the solo or small-group practice model of the past.[3] The structure of these organizations is also more complex than in years past, often

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involving large integrated systems with a matrix structure.

This evolution has attenuated physicians' sense of autonomy and control over their work.[4–6] While most physicians derive great meaning and purpose from their work, many also feel as if they are "cogs in the wheel" of austere corporations that care more about productivity and finances than compassion or quality.[1,2,7–9] Physician performance is now assessed by an array of metrics (e.g., measures of cost, patient satisfaction scores, how quickly they sign notes or answer electronic health record inbox messages) that can overshadow the appreciation and respect of patients and colleagues that has traditionally served as physicians' main source of feedback.[1,2,10] Disturbingly, some organizations attempt to motivate change by relying on tactics that may shame physicians (e.g., posting a public hierarchical "leader" board of these metrics). Such tactics can leave physicians feeling disrespected and micromanaged by a bureaucracy that fails to recognize the nature of their work.[11]

The problem is compounded by extensive regulatory oversight, administrative

burden,[9,12,13] the implementation of suboptimal electronic health records used to enforce oversight mandates,[14,15] and other factors that can erode meaning and purpose in work.[16–18] Physicians have readily identified these and other problems in the clinical practice environment but often feel disempowered to improve the system.[9,19,20] Their suggestions often fall on deaf ears with operational leaders focusing on rigid standardization for predictable homogeneity rather than improving quality or service.[1,21–23] All of these factors contribute to high levels of burnout and a decline in professional fulfillment among physicians.[24–26]

At their core, we believe all of these factors represent leadership issues.[27–32] Physician leaders who ignore these challenges perpetuate misalignment between organizational strategy and physicians' deeply held professional values, even though these professional values are ones that these leaders themselves typically hold.[1,6,9,11] Despite their expertise, physicians often do not feel that they have a voice or input in the operational plan of their work unit,

department, or organization.[9,23] They are not often afforded the flexibility or control commensurate with their expertise and professional status.[31] In many instances, physicians are also not being optimally developed or deployed and their expertise, which is needed to address and improve the health care system, is not being appropriately harnessed.[1,11,33] Fundamentally, many leaders are mismanaging some of the most talented professionals in their health care delivery systems and organizations.[31]

How Did Health Care Organizations Get Here?

In many respects, this void of physician leadership in medicine should not be surprising. First, developing physician leaders was a low priority in the era of solo and small-group practice or in large academic practice models of the past where physicians were managed with benign neglect that allowed unfettered independence.[34,35] Over the last 1–2 decades, although some health care organizations have invested in the development of senior physician leaders,[36–39] they rarely invest in developing the leaders that have the greatest impact on physicians' well-being and professional fulfillment—that is, the leaders most proximal to care delivery (or those closest to the physicians caring for patients).[27] These first-line leaders are typically appointed based on their clinical excellence, expertise, seniority, research and academic achievements, or willingness to lead.[34] They often have not been prepared for this role and may have had limited past leadership experience.

Second, physicians' natural tendencies and professional training can be an Achilles' heel to being an effective leader.[34,40] For example, physicians tend to be attentive to detail, and, in leadership positions, this tendency can lead some to be micromanagers.[41,42] Their reliance on evidence for clinical decision making can often lead them down "evidence rabbit holes" when considering leadership decisions and can cause them to be overreliant on data, as opposed to consensus building, in leadership decision making. Additionally, because of their problem-solving role in clinical contexts, physician leaders often assume it is their responsibility to come up with the answers and to drive change through authority rather than influence. This can lead to

the mindset that the leader is a great individual surrounded by a supporting cast.[40] When combined with a lack of leadership development and an absence of feedback on their leadership behaviors, it is no wonder that first-line physician leaders often struggle in this role.

Finally, leading physicians can be quite challenging. Leaders of physicians must help oversee and direct a group of experts who are trained to think critically, be problem solvers, have opinions, and demand evidence for decision making. Effective leadership of such a group requires skills that are counter to many of the natural tendencies and training experiences of physicians.

Where Do Health Care Organizations Go From Here?

Many models of leadership have been proposed, and there is a reason why there is no single model of effective leadership or leadership development.[43] There are a number of effective philosophies and approaches. The major schools of leadership philosophy over the last 70 years are summarized in Table 1. We have attempted to harness the key components and contributions of each of these schools along with evidence on the relationship between leadership and physician well-being to construct a new integrative model of Wellness-Centered Leadership (WCL).

Leadership requires a broad set of skills, and some leadership styles may work better in some situations than others. Thankfully, the skills that physician leaders must master to effectively promote the engagement and professional fulfillment of physicians and other highly trained professionals are a limited set that are not predicated on charisma or a certain personality. Some of the key skills and qualities of WCL include inclusion, keeping people informed, humble inquiry, developing individuals, empowering individuals and teams, and focusing on intrinsic motivators rather than extrinsic rewards or punishment.[27] These skills can be learned, strengthened, and developed. The most essential element is empowering, relational leadership that produces outcomes consistent with the altruistic values of the profession. This involves identifying and enabling implementation of improvements that advance the ability

of physicians to provide high-quality compassionate care to patients in an equitable and just practice environment.

Foundations of WCL

Our model for WCL is inclusive of the core skills and qualities ascertained from the foremost leadership philosophies (see Table 1) along with evidence on the relationship between leadership and physician well-being and distills them into a single framework designed to cultivate leadership behaviors that promote engagement and professional fulfillment. The 3 elements of WCL are: care about people always, cultivate individual and team relationships, and inspire change (Figure 1). A more detailed summary of the 3 elements of the WCL model is presented in Table 2. Each element is broken down into mindset, behaviors, and outcomes. Mindset focuses on the attitude and intention of the leader, and as Carol Dweck noted, "how they perceive their abilities."[44] Leaders who show up with curiosity and humility, open to opinions and opportunities, are far more effective at promoting wellness than "experts who think they know best."[44,45] Behaviors focus on the leadership actions that bring about desired outcomes. Outcomes are interim measures of effectiveness that, when taken together, can lead to cultures of wellness for individuals, teams, and organizations. Specific examples of what the 3 elements of the WCL model may look like in practice are presented in Table 3.

Element 1: Care about people always

At its foundation, and underpinning the success of the subsequent elements, WCL requires that leaders *care about people always*. This starts with leaders recognizing the pivotal role their behaviors play in the professional fulfillment, vitality, and wellness of their team members.[27,46] Caring about people always is the only reliable foundation on which to build relational leadership skills that inspire individual and team performance.

Leaders must emphasize integrity, servanthood, and seeking the best for people. Caring leaders demonstrate respect, empathy, and curiosity, and they continually seek to understand and validate the complex needs and contributions of individuals and teams.[30,39,47–51]

Table 1

Major Scholarly Approaches to Leadership Over the Last 70 Years and Their Implications for the Wellness-Centered Leadership Model

Scholarly leadership approach	Implications for Wellness-Centered Leadership
Interpersonal power in leadership[43,68] There are several sources of power that leaders can tap into, including: - Expert power: Based on followers' perceived competence or skill - Legitimate power: Associated with having status or formal job authority - Reward power: Capacity to provide rewards in exchange for employee action - Coercive power: Capacity to penalize or punish	- Physicians are trained to act in an expert power role in clinical settings - Physician leaders should be thoughtful in how they use reward power, taking great care to determine what actions should be rewarded and the types of rewards that should be used (avoid reliance on rewards that appeal to extrinsic rather than intrinsic motivators) - Physician leaders should avoid coercive power or nonrational uses of legitimate power
Skills approach for leadership[43,69,70] Knowledge and abilities derived from 3 areas are required for effective leadership: - Technical: Work-related proficiency - Human: Relationships proficiency - Conceptual: Ability to work with ideas and concepts	- Physicians are trained to master technical skills in clinical settings - Physician leaders should focus on human and conceptual skills - Physicians should be empowered to lead using conceptual skills, such as values and organizational vision - Physician leaders should learn to translate some of their technical skills and expertise to others, rather than stepping in when others lack these skills or expertise
Style approach for leadership[43,71] The leader should blend 2 types of behaviors: - Task behaviors: What the leader does to pursue goals - Relationship behaviors: What the leader does in pursuit of individual and group comfort	- Physician leaders are most effective when working with teams - Physician leaders should blend task and relationship behaviors to achieve optimal outcomes[43]
Situational leadership[43,72] The leader must modify their behavior based on the competence and commitment of the follower: - Directing is called for when a follower is an enthusiastic beginner - Coaching is required when a follower is a disillusioned learner - Supporting is called for when the follower is a capable and cautious contributor - Delegating is required for a self-reliant achiever	- Physician leaders should diagnose and then prescribe their style based on the competence and commitment of followers - Physician leaders should avoid misdiagnosing a situation (e.g., mistaking low competence/low commitment for high competence/low commitment)[43]
Transformational leadership[43,73] Identify, build, and leverage the inspired commitment of followers: - Identify a needed change - Create a vision to guide the change through inspiration - Enact the change, working with committed teammates	- Physician leaders should build inspired coalitions of support rather than direct efforts as experts - Physician leaders should lead, and be led by, the change that others want to see happen
Norms and values approach for leadership[43,74] Effective leadership focuses on: - Identifying the core values of the community and the institution - Aligning norms of behaviors with core values - Creating cultures that embed aligned norms into behaviors, so that groups self-regulate in pursuing core values	- Physician leaders should identify the core values of the people they work with and of their institutions - Physician leaders should model the core values - Physician leaders should empower all team members to identify and correct values–norms misalignments[1]
Phase models of leadership[43,75] Leaders, groups, and organizations mature through predictable phases, much as an infant becomes an adult. While each phase model is different, they are consistent in that: - A phase of relative stability is interrupted by a period of change - The period of change yields to another period of relative stability - A phase needs to be completed before moving onto the next or else "derailment" occurs	- Physician leaders should "meet people where they are" (whether in a stable or change period of time, within a group or organization) - Physician leaders should be aware of various phase development models to, with respect and humility, lead the organization and its members to higher levels of engagement, culture, and performance

Care about people always begins with caring for self. Leaders who wish to cultivate well-being, professional fulfillment, and vitality in their team and team members must also recognize the importance of nurturing these qualities for themselves. This begins with the fundamental premise that caring for self is integral to performance.[52] Indeed, recent research from Stanford University demonstrates that a leader's personal level of burnout, professional fulfillment, and self-valuation predicts their independently rated leadership behavior scores, as assessed by the members of their team.[53] In turn, those leadership behavior scores have been shown to be one of the largest drivers of professional fulfillment among members of the work unit.[27] Thus, leaders' personal wellness impacts their performance as leaders.

Caring for self must encompass attention to exercise, nutrition, health, and rest (e.g., breaks, time off, vacation). Mounting evidence also demonstrates the critical role sleep plays in leadership effectiveness.[54–56] Studies indicate that sleep deprivation in leaders damages their relationships with their subordinates and also increases the likelihood that subordinates will engage in unethical practices.[54] Leaders' devaluation of sleep (e.g., bragging about how little they sleep) also appears to adversely impact their team members' sleep behaviors.[56]

It should be emphasized that caring for self is foundationally necessary but, on

Figure 1 Diagram showing the 3 elements of the Wellness-Centered Leadership model.

its own, grossly insufficient to achieve the first element of WCL. Leaders must also nurture the leadership behaviors that demonstrate they are committed to the professional development and well-being of individuals and have empathy for team members. Empathy for others promotes leadership effectiveness more than cognitive task proficiency—the historical yardstick for entry into medical school.[57] Empathetic concern and capacity for perspective taking drive relational leadership behaviors that inspire change and achievements that go beyond expectations.[58]

Element 2: Cultivate individual and team relationships

WCL also requires that leaders engage in behaviors that *cultivate individual and team relationships* (i.e., that they nurture relationships with the individuals they lead as well as the interrelationships of the team as a whole). Health care is emotionally demanding work, and health care professionals are dependent on the support of their leaders and colleagues. Physicians work most effectively when they are part of a team that supports respectful relationships and provides meaning and purpose.

WCL demands a deep respect for individuals, recognizing that people are both good and capable now (rather than broken and in need of being fixed) and immensely able to grow and improve. Leaders must embrace that the primary function of a leader is to unleash the talent of those they lead and harness that talent to accomplish the mission of the group.[46] To achieve this, they must recognize people as individuals, gain insight into their values, and nurture professional development.[27,30]

WCL requires that leaders treat each team member as an individual with unique needs, interests, challenges, and ambitions.[30] Leaders should view their charge as investing in and developing that person, nurturing their talents, and directing that talent and passion to serve the needs of the team. Doing so requires an understanding of what motivates each individual, the aspects of their work that bring them the greatest meaning, and their professional ambitions.

Physician leaders have at least one distinct advantage: physicians typically derive tremendous meaning from their work.[17,59–61] They approach their work with a sense of calling, which leads to

high levels of dedication, commitment, and discretionary effort.[59,61] This allows leaders the opportunity to harness the inspirational power of why people became physicians in the first place. Indeed, studies indicate that physicians who approach their work with a sense of calling may be at less risk for professional burnout.[62]

Evidence also indicates that individuals who spend at least 20% of their professional effort dedicated to the activity they find the most meaningful are at markedly lower risk for burnout.[17] Thus, a critical leadership opportunity is helping harness each individual's passion and talents in ways that serve the needs of the team. There are specific organizational needs that must be met and tasks that must be completed. Leaders do, however, have the ability to deploy their team, identify new opportunities, help people develop new skills, and look for ways to optimize fit over time. Even small increases in the amount of time an individual dedicates to activities they find meaningful build alignment and strengthen intrinsic motivation.[59] Such efforts by leaders to optimize career fit also typically make individuals more willing to take on other

Table 2
Summary of the 3 Wellness-Centered Leadership Elements[a]

Element	Mindset	Behaviors	Outcomes
Care about people always	• Recognition of the role leaders play in the well-being, professional fulfillment, and vitality of team members and the team as a whole • Curious and respectful • Empathetic and understanding	• Recognize and appreciate individual contributions and talents • Give credit • Discover individual needs and gifts through dialogue • Demonstrate gratitude • Discuss and model self-care and self-valuation • Lead conversations about work–life integration • Adapt communication based on need (including people in distress) • Provide resources, support, and education on well-being • Recognize signs of distress • Role model concern for sleep, rest, vacations, and personal relationships through vulnerable and authentic self-disclosure • Listen for what is important to others and ask open-ended questions • Demonstrate humble inquiry • Practice "agenda-less" listening	• Team members feel valued and appreciated as individuals • Psychological safety for individuals • Improved health for individuals and the community • Team members believe self-care is valued and is demonstrated through support of reasonable working hours, scheduling, vacation, and time off • People proactively discuss their well-being needs without being prompted • Team members help cross cover each other and support one another's wellness
Cultivate individual and team relationships	• Deep respect for the individual, recognizing people are both (1) good and capable now (rather than broken and in need of being fixed) and (2) immensely able to grow and improve • Each person has a unique career, personal and professional goals, and a path of development that may be different from their leader's or their peers' • Humble • Health care is emotionally demanding work, and health care professionals are dependent on the support of their colleagues • People work more effectively in respectful and supportive relationships with coworkers • Being part of a supportive team provides meaning and purpose • A leader plays an important role in the cultivation, success, and failures of a team • A leader plays an important role in keeping the community informed of organizational goals and needs	• Demonstrate respect for the choices others have made • Focus colleagues on what they are passionate about (the 20% principle[17,66]) • Help people manage their reputation through respectfully giving feedback and advice • Help others develop in the way they want (by asking): enrichment (in current role), moving into leadership, making lateral moves, or (when appropriate) transitioning to another profession • Help others derive meaning from their work (reconnecting them to purpose) • Listen for a sense of calling and aspects of work that bring the greatest meaning • Give options rather than directions • Guide others to coach rather than direct • Allow others to contribute to the leader's own development • Identify people's values (and other sources of intrinsic motivation) by asking open-ended questions • Help team members recognize their interdependence and the importance of providing support to colleagues • Develop a collective vision and shared sense of purpose using alignment methodology • Lead by consensus and empowerment • Tell stories to create shared meaning • Ensure everyone has a voice and is respected • Build alignment between people who disagree • Align values and norms • Advocate for the needs of the community • Connect individuals to each other on the basis of shared core values and interests • Keep community informed of organizational goals at appropriate intervals and shape communications to align with professional values • Promote formal and informal events that allow the community to connect, recognize shared experiences, and support one another	• Greater retention and engagement • Recruitment is more effective • Each team member's goals are understood, and the leader is invested in supporting them and supports professional development opportunities • Leader has formal and informal conversations with team members regularly to listen and provide support and guidance • Values are aligned between team members • There is a culture of teamwork • Psychological safety within the team • Sense of community at work • Higher levels of engagement from team members • People feel empowered to engage in collective problem solving without being prompted • Improved collaboration across the care continuum • Strong working relationships and collegiality throughout the community

(Table continues)

Table 2
(Continued)

Element	Mindset	Behaviors	Outcomes
Inspire change	• A critical job of leadership is to motivate teams to achieve meaningful results • Team members have the best insights on how to improve the work environment • The leader's role is to build consensus regarding priorities for improvement • Providing team members with the ability to shape and help lead change builds a sense of community, meaning, and purpose • Recognize the complexity and interdependence of health care • Diversity (in all respects) and healthy debate lead to better decisions and outcomes • Recognition that leaders are change agents, embracing and leading teams through change • Recognition of others' capacity for inspiring growth and performance • "Show me" (i.e., modeling the desired change) is more convincing than "tell me"	• Consistently model desired change • Guide team to identify priorities for change • Empower team to lead change in prioritized domains • Establish mutual respect • Influence others and build consensus • Delegate tasks that others are capable of performing and interested in doing • Follow up in a way that is empowering • Believe and respond to feedback from others • Evaluate performance from a growth mindset • Align goals with intrinsic motivation and extrinsic rewards • Build alignment on priorities • Communicate the value leaders place on personal relationships and work–life integration • Deliver quick wins that demonstrate commitment to values and vision and recognize/celebrate the wins of individuals, the community, and the organization • Seek advice and input	• Sense of co-ownership of the work unit among team members (we/us not they/them) • Belief that change is possible • Increased satisfaction with work–life integration • People know leaders see in them the capacity for growth and performance • Improved results (e.g., quality, safety, productivity) and patient confidence in physicians • Acceptance of (or ideally buy-in on) decisions • Inspiring performance that goes beyond expectations

[a]See main text for more information on mindset, behaviors, and outcomes.

tasks for the good of the team since their personal needs have been overtly recognized and respected.

WCL, however, goes far beyond individual development. Leaders must help develop and articulate the vision and mission for the team and guide the process of achieving it.[39,63] Even if the goals have been prescribed from above, it is important for leaders to seek input from their team in developing the plan for how to accomplish those goals.[31] Further, leaders play an important role in keeping the team informed of organizational goals and needs. This requires judgment to discern what information should be transparently shared with the team and what to shield them from or share only intermittently to avoid undermining their sense of purpose and shared values (e.g., avoiding monthly updates on productivity [e.g., number of visits, relative value units, payor mix] relative to the financial plan).

At the team level, leadership that cultivates well-being and professional fulfillment requires attending to the interrelationships among team members to create a shared sense of alignment toward the team's mission and goals.[23,46,64]

This includes both relationships between physicians as well as between physicians and other members of the interdisciplinary team. Teams develop their own subcultures. The current culture of many health care teams is characterized by cynicism, commitment to the work but not the organization, and low levels of trust in the organization.[1,2,7–9] The role of the leader is to diagnose the relational health of the team as well as the degree of alignment of the team toward a common mission and goals. Once relational health and degree of alignment are determined, specific tactics can be deployed to cultivate relationships, teamwork, alignment, and a shared sense of purpose.[65]

At the system level, organizations committed to WCL must integrate attention to productivity with concern for people, resulting in efficiency-focused cultures that encourage strong working relationships and make it easy for physicians to provide the care their patients need. Such organizations believe part of their purpose is to provide meaningful work and professional development for their people.[31] The organization's core values must align with the values of health care professionals,

and their actions and behaviors must be congruent with those values.[46] Consistent with these principles, senior leaders must consistently communicate—with their words and actions—the message that the primary purpose of leadership is to develop the talent of their team members, build alignment, and empower the team so the organization can achieve its mission.[31] Although many organizations claim (with words) to have this view, their methods for evaluating leader performance often reveal (with actions) that they actually view leaders' primary responsibility as enforcing top-down edicts, increasing standardization, and ensuring physicians deliver on productivity targets.

Element 3: Inspire change

The final component of WCL requires that leaders *inspire change* by encouraging teams to think beyond the status quo, empowering them to drive change, and helping them achieve meaningful results. Teams and individual team members should be provided the greatest possible flexibility and control over how they accomplish group and organizational aims.[1,33,66,67] This does not mean that these individuals have unfettered autonomy to deliver care however they want, practice

Table 3

Examples of What the 3 Wellness-Centered Leadership Elements May Look Like in Practice[a]

Context	Care about people always	Cultivate individual and team relationships	Inspire change
Academic context	Dr. Mary Garcia had been the chair of a busy academic division of internal medicine for 3 years. During a time of increasing financial pressure coupled with shrinking federal grant funding, she noticed several of her faculty were putting in increasingly long hours to write more grants, hoping to keep their labs intact. One of her associate professors, Dr. Glen Whitman, was still at his desk when Mary was leaving at 6:30 PM. She remembered that Glen had been at his desk when she arrived at 6:00 AM.	The next morning, Mary met with Glen to strategize further. She asked Glen which of the remaining 2 grants he felt most passionate about and then asked what he felt the cost would be of deferring the other grant to the future, rather than continuing his current work pace. Glen looked surprised and mildly relieved at this line of questioning from his leader.	Based on consistent feedback from her faculty regarding the growing pressure due to greater clinical productivity expectations and simultaneously shrinking federal research budgets, Mary convened several listening sessions. The sessions allowed faculty to share their experiences in these domains as well as their personal and professional impact.
	Curious, she stopped and knocked at Glen's open door. Glen looked exhausted, with an open bag of chips and an energy drink on his desk. She asked what he was working on. He explained that he had 3 large grant proposals on his list for submission and was aiming to meet a federal deadline for all 3 in 15 days. He had one grant completed after working extremely long hours on 4 hours of sleep per night for the last week.	He shared that his concern was having to lay off members of his research team if he did not get at least one grant funded this cycle and that he wanted to maximize his chances. Mary expressed gratitude for his commitment to the welfare of his teammates. She then shared that, in her experience, focusing on submitting 2 finely polished grants may provide a better chance of achieving his goal than submitting 3 grants that had not been optimally refined.	Based on a prioritization of needs by her faculty, Mary launched 2 taskforces. The first focused on strengthening institutional support of the grant writing process and improving the efficiency of submission. The second focused on the evaluation of milestones and timelines for academic promotion in light of increased clinical productivity expectations, which had shifted dramatically over the last decade.
	Mary acknowledged Glen's incredible dedication to his work. She briefly shared her own experience with burning the candle at both ends and the increased creativity and well-being she experienced after prioritizing sleep. She asked whether he felt working on all 3 grants simultaneously was impacting the creativity and quality of each grant?	After further discussion, she said that his comments from the evening before suggested that he felt the next 2 weeks were also an important time of family transition with his daughter heading off to college. "When you reflect back on this window of time 5 years from now, what do you think will stick out to you as the most important things for you to have focused on?," she asked. Glen replied that, when considered from that perspective, he wanted to make sure he maximized the time he had with his daughter and to ensure her successful transition to college. He also indicated that one of the grant concepts was a bit premature but that he had been rushing it to try and keep the lab funded. After some further discussion, he mapped out a plan to focus on submitting 2 finely tuned grants and be home in time to spend quality time with his daughter.	The first taskforce, composed of members of the division, developed a best practice guide for grant submission for junior faculty. The guide provided specific milestones for 9, 6, 3, and 1 month(s) before submission. It also involved the assignment of senior faculty not involved in the grant to review and provide input at each of those time points to help strengthen the quality of the grant. The taskforce further recommended divisional support to fund review by a professional grant writer for faculty who had not previously received a federal award.
	Glen seemed interested and said that what she had described resonated with him, so Mary continued the conversation, asking how his family was doing. He commented that his daughter would leave for college in 2 weeks, as his face expressed the weight of the trade-off he was making.	During her scheduled weekly reflection time that week, Mary noted that a number of her faculty were spread thin (like Glen) and that the members of the division seemed less connected to each other. She recalled the mounting evidence on the importance of community and the evidence that regular relationship building habits—even if seemingly stilted at first—can help people cultivate friendships at work.	To launch the second taskforce, Mary helped build a coalition of leaders across multiple departments who shared concerns about how increased clinical expectations had made some academic milestones unrealistic without profound harm to work–life integration and personal relationships. The coalition helped draw attention to the fact that these changes had a disproportionate effect on women and junior faculty—an issue that resonated with the dean and other senior school leaders. The taskforce successfully framed the issues and proposed some modifications to the timelines and milestones so that they both recognized scholarly aspects of clinical contributions (i.e., quality improvement, development of best practice treatment protocols, and leadership) and adjusted some parameters (i.e., number of publications and presentations) to account for the 50% increase in time devoted to clinical duties over the last decade.
	Mary asked Glen if he might benefit from heading home for the day and offered a 30-minute appointment the next day to further think through things together and talk about contingent professional development planning.	Over the next month, she directed the clinic coordinators to keep the Friday noon hour clear (no patient appointments) and invited all of her team members to attend lunch together, with food provided. Each week the team would either share their perspectives on a reflective question related to their professional experience or identify something they were grateful for that a colleague at work had done that week.	The faculty were energized by the outcomes of these taskforces. They felt that their concerns had been heard and their greatest needs prioritized for action. More importantly, they felt they had been empowered to identify and develop practical solutions under the division's sphere of control. In addition, they were amazed by Mary's efforts to convene a broad coalition of senior leaders from multiple departments to advance an issue of importance to them. They felt inspired to be part of an organization that adapted to the times and grateful to have a leader who recognized and took their needs seriously.

(Table continues)

Table 3
(Continued)

Context	Care about people always	Cultivate individual and team relationships	Inspire change
Nonacademic context	Dr. Jamal Hanson is the chief executive officer (CEO) of a small Federally Qualified Health Center (FQHC). Before becoming CEO a year ago, he had served as chief medical officer for almost 10 years. In his new role, he spent one morning a month in the waiting room of 1 of the 10 clinic locations, observing the patients, interactions with front office staff, and patient flow. He also spent time in the clinicians' work areas. Although he was doing his own clinical work, he was also listening. He noticed many comments about the intensity of the workload and how patients' needs far outstripped the teams' ability to deliver complete care. Jamal's attention was specifically drawn to Dr. Laura Lambert, the medical director of one of the clinic locations. Laura spent a lot of time in her office, calling local food banks and other community services to help the FQHC deal with patients' food insecurity and other social determinants of health. In a private conversation with Laura, she told Jamal, "I can't let our patients down, but my family gets shortchanged, and I don't know what to do." Jamal indicated that those comments resonated with him and stated he had faced a similar dilemma. He shared how he takes vacations and has learned to say "no." Jamal then asked who supported Laura and the answer was, "Just me, sometimes a medical assistant." In a meeting with the medical directors from the other 9 locations, Jamal asked how the team could support Laura. Four directors volunteered to help. When she learned that she had help, Laura sent an email to Jamal requesting time off to take her family away for a week. Within a month, 6 of the other 9 medical directors had also requested time off.	When Jamal was interviewed for the CEO job, he emphasized the need to build a strong sense of community and shared purpose around the center's mission. An organizational Gallup survey assessing indicators of supportive collegial relationships showed that the organization was still above the national average but had had been declining for 3 years in a row. When the board of directors offered Jamal the CEO job, it highlighted his commitment to strengthening the sense of community for the team as a major reason for his selection. One of his first actions in his new role was to organize an offsite session for all of the clinicians across all 10 locations. To prepare for the offsite session, he asked each participant to come with answers to 3 items: (1) why they chose to practice at the FQHC, (2) what was the state of team community and connection in the clinic location where they worked, and (3) an idea on how the team could work together differently to better support each other. In the offsite session, 55 clinicians participated. Jamal began by introducing the idea of psychological safety. Using small groups and online polling, participants identified shared values and a sense of purpose. They subsequently identified new ways they could work together to both build connection and better serve their community. One of the specific ideas that came from Dr. Laura Lambert's group involved a rotating, monthly process in which 3 members from each clinic would visit the local food banks and other community services to improve coordination and explore how to bring some of these services on-site to the clinic locations. Multiple other groups commented that this idea would help address a challenge that currently clinicians had to deal with individually. Over the next 2 months, the group fleshed out the idea and reached out to some of their community partners to gauge their interest. They received an overwhelmingly positive response. Within 3 months, they began pilot testing the monthly collaborative sessions. These sessions were energizing for both the FQHC and their community partners and helped them explore new ways to collaborate to better serve the community. Several medical directors, including Laura, shared with Jamal that the initiative enabled her to more efficiently address social determinants of health for her patients.	Since becoming CEO, Jamal had led onboarding sessions for new employees and observed that many new employees did not have insight into the organization's values. He was also struck by the extent to which discussing values at the offsite session had energized people. To get some data, he asked the organizational effectiveness team to send all employees (not just clinicians) a survey about people's relationships to the FQHC's values. The results revealed that only half the employees felt a strong sense of alignment between personal and organizational values and only 31% of all employees (and 29% of physicians) reported that they considered values in making decisions. To address the gap between values and decision making, Jamal asked the organizational development team to set (or reset) their core values and introduce the values into day-to-day practice. With the help of a hired consulting firm specializing in FQHCs, the team led a process to identify shared core values of the FQHC. They subsequently led an initiative that involved identifying people's best days at work, what made those moments so satisfying, and how they aligned with organizational values. Also, people were asked about the low points at work and what values were missing or threatened in those moments. The process was widely regarded as successful with 72% of all employees (and 68% of physicians) reporting that values played a role in how they made decisions after the process was complete. Three months after this process was initiated, Jamal ran a manager meeting. The facilities manager reported an incident that most agreed was typical. The FQHC was trying to decide whether to open a new clinic location or to upgrade facilities in 3 of its established locations. Someone asked, "What do the values say we should do?" Another responded, "meet people where they are," quoting a poster on the wall. Facilities recommended, and Jamal and the board agreed, to focus on opening the new location, as many migrant workers and homeless people were within a mile of the proposed new facility. That facility opened a year later. When Jamal visited the individual clinic locations each month, employees frequently came up and thanked him for restoring the "heart of the organization" and shared how proud they were to work at the FQHC.

in a manner that is inconsistent with the needs of patients or other team members, or fail to do their share of the collective work required of the group. Best practices must be followed, adequate access to care provided, equity ensured, and collegiality valued. However, the concept that all variability is waste, that standardization should be pursued simply to facilitate easy scheduling and staffing, or that most aspects of clinical care can be homogeneous and reduced to algorithmic recipes must be rejected.[9] These beliefs are antithetical to the expertise and professionalism of physicians, the complexity of modern medicine, the coexistent health conditions and unique preferences of individual patients, and the different personal life demands and responsibilities of individual physicians.[1,31]

Organizations that cultivate WCL primarily rely on intrinsic motivators to drive results rather than primarily focusing on aligning incentives using a carrot-and-stick model (e.g., rewarding physicians for relative value unit generation and high patient throughput).[2,7,9,17,59–61] Intrinsic motivators include meaning, purpose, values, voice, input, control, and professional development. Extrinsic motivators include financial incentives, titles, and awards. Which approach an organization relies on can be determined by their compensation plan, incentives, communication, and what they recognize people for. Unfortunately, many health care organizations have overrelied on extrinsic rewards to increase productivity and enhance performance in spite of compelling evidence that this approach has limited effectiveness.[31] Over time, relying on extrinsic motivators lowers motivation and can transform self-motivated individuals who pursue their work with a sense of calling into disengaged workers who view their work through a transactional lens (e.g., they work to earn a paycheck).[31]

The format and structure of team discussions to identify opportunities for improvement are also critical. Leaders should begin by identifying a list of possible areas in which improvement may be pursued and allowing the group to determine which of those areas are the most important place to start. Once the team has identified an area for improvement, the primary focus should

be on improvement in that area at the work unit level.[33,66,67] Although it is often helpful to give the group a few moments to identify some of the factors that may contribute to this challenge that are outside of the work unit's control, dwelling on such factors often leads to a sense of victimization. Focusing on work unit opportunities to drive improvement in a specified time frame helps team members feel empowered and leads to identification of actionable improvement targets.[33,66] Focusing on factors that are under local control that can be altered to improve the work life of team members within the next 3 to 6 months can result in meaningful progress that builds momentum that can then help to tackle more challenging and longer-term objectives.

The Call to Action

Many of the skills and qualities essential for WCL have not traditionally been part of the selection criteria for physician leaders. In addition, evaluation of performance and opportunities for building skills and expertise in these domains has not been the focus of most leadership development programs for health care leaders. To advance WCL, organizations will need to consider the mindset and skills pertinent to WCL as part of the leader selection process. They will also need to consider how they will assess leader performance in these domains and determine which of the elements of WCL may need further development. Training programs and opportunities to build skills in the elements of WCL need to be incorporated into leadership development programs, and studies evaluating the most effective ways to develop these skills are needed. Further research evaluating the impact of WCL on individual, team, and organizational performance would be enlightening.

Conclusions

Here, we propose the new integrative model of WCL. Leadership is a complex set of skills that are required to motivate individuals and teams to help an organization accomplish its mission. We believe the elements of WCL have broad relevance for leaders in many fields but have applied the model here to physician leaders with the aim of addressing the epidemic of occupational distress in physicians.[24,25] We believe that

the elements of WCL must be central to how organizations select, develop, and assess health care leaders. Only by attending to these elements can the health care delivery system achieve optimal outcomes for patients, communities, physicians, and health care workers. Thus, learning and developing the skills that advance these elements should be the aspiration of all health care leaders and a foundational focus of leadership development programs. If cultivated, we believe that WCL will empower individual and team performance to address the current problems faced by health care organizations as well as the iterative innovation needed to address challenges that may arise in the decades to come.

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References

1 Shanafelt TD, Schein E, Minor LB, Trockel M, Schein P, Kirch D. Healing the professional culture of medicine. Mayo Clin Proc. 2019;94:1556–1566.

2 Schwenk TL. What does it mean to be a physician? JAMA. 2020;323:1037–1038.

3 Kane CK. Updated Data on Physician Practice Arrangements: For the First Time, Fewer Physicians Are Owners Than Employees. Chicago, IL: American Medical Association; 2019. https://www.ama-assn.org/system/files/2019-07/prp-fewer-owners-benchmark-survey-2018.pdf. Accessed December 10, 2020.

4 Linzer M, Konrad TR, Douglas J, et al. Managed care, time pressure, and physician job satisfaction: Results from the physician worklife study. J Gen Intern Med. 2000;15:441–450.

5 Linzer M, Manwell LB, Williams ES, et al; MEMO (Minimizing Error, Maximizing Outcome) Investigators. Working conditions in primary care: Physician reactions and care quality. Ann Intern Med. 2009;151:28–36.

6 Stoddard JJ, Hargraves JL, Reed M, Vratil A. Managed care, professional autonomy, and income: Effects on physician career satisfaction. J Gen Intern Med. 2001;16:675–684.

7 Nurok M, Gewertz B. Relative value units and the measurement of physician performance. JAMA. 2019;332:1139–1140.

8 Souba WW. Academic medicine and the search for meaning and purpose. Acad Med. 2002;77:139–144.

9 Agarwal SD, Pabo E, Rozenblum R, Sherritt KM. Professional dissonance and burnout in primary care: A qualitative study. JAMA Intern Med. 2020;180:395–401.

10 Khullar D, Wolfson D, Casalino LP. Professionalism, performance, and the future of physician incentives. JAMA. 2018;320:2419–2420.

11 Gunderman RB. Poor care is the root of physician disengagement. NEJM Catalyst. http://contentmanager.med.uvm.edu/docs/physician_burnout_the_root_of_the_problem_and_the_path_to_solutions/faculty-affairs-documents/physician_burnout_the_root_of_the_problem_and_the_path_to_solutions.pdf?sfvrsn=2. Published January 10, 2017. Accessed December 15, 2020.

12 Erickson SM, Rockwern B, Koltov M, McLean RM; Medical Practice and Quality Committee of the American College of Physicians. Putting patients first by reducing administrative tasks in health care: A position paper of the American College of Physicians. Ann Intern Med. 2017;166:659–661.

13 Shanafelt TD, Dyrbye LN, Sinsky C, et al. Relationship between clerical burden and characteristics of the electronic environment with physician burnout and professional satisfaction. Mayo Clin Proc. 2016;91:836–848.

14 Sinsky C, Colligan L, Li L, et al. Allocation of physician time in ambulatory practice: A time and motion study in 4 specialties. Ann Intern Med. 2016;165:753–760.

15 Melnick ER, Dyrbye LN, Sinsky CA, et al. The association between perceived electronic health record usability and professional burnout among US physicians. Mayo Clin Proc. 2020;95:476–487.

16 Shanafelt TD. Enhancing meaning in work: A prescription for preventing physician burnout and promoting patient-centered care. JAMA. 2009;302:1338–1340.

17 Shanafelt TD, West CP, Sloan JA, et al. Career fit and burnout among academic faculty. Arch Intern Med. 2009;169:990–995.

18 Konrad TR, Williams ES, Linzer M, et al. Measuring physician job satisfaction in a changing workplace and a challenging environment. SGIM Career Satisfaction Study Group. Society of General Internal Medicine. Med Care. 1999;37:1174–1182.

19 McMurray JE, Williams E, Schwartz MD, et al; SGIM Career Satisfaction Study Group. Physician job satisfaction: Developing a model using qualitative data. J Gen Intern Med. 1997;12:711–714.

20 Linzer M, Poplau S, Babbott S, et al. Worklife and wellness in academic general internal medicine: Results from a national survey. J Gen Intern Med. 2016;31:1004–1010.

21 Keller EJ, Giafaglione B, Chrisman HB, Collins JD, Vogelzang RL. The growing pains of physician-administration relationships in an academic medical center and the effects on physician engagement. PLoS One. 2019;14:e0212014.

22 Schwartz RW, Pogge C. Physician leadership: Essential skills in a changing environment. Am J Surg. 2000;180:187–192.

23 Arnetz BB. Physicians' view of their work environment and organisation. Psychother Psychosom. 1997;66:155–162.

24 Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. Arch Intern Med. 2012;172:1377–1385.

25 Shanafelt TD, West CP, Sinsky C, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2017. Mayo Clin Proc. 2019;94:1681–1694.

26 West CP, Dyrbye LN, Shanafelt TD. Physician burnout: Contributors, consequences and solutions. J Intern Med. 2018;283:516–529.

27 Shanafelt TD, Gorringe G, Menaker R, et al. Impact of organizational leadership on physician burnout and satisfaction. Mayo Clin Proc. 2015;90:432–440.

28 Seppala E. Good Bosses Create More Wellness Than Wellness Plans Do. Harvard Business Review. https://hbr.org/2016/04/good-bosses-create-more-wellness-than-wellness-plans-do. Published April 8, 2016. Accessed December 10, 2020.

29 Westerlund H, Nyberg A, Bernin P, et al. Managerial leadership is associated with employee stress, health, and sickness absence independently of the demand-control-support model. Work. 2010;37:71–79.

30 Demmy TL, Kivlahan C, Stone TT, Teague L, Sapienza P. Physicians' perceptions of institutional and leadership factors influencing their job satisfaction at one academic medical center. Acad Med. 2002;77:1235–1240.

31 Swensen SJ, Shanafelt TD. Mayo Clinic Strategies to Reduce Burnout: 12 Actions to Create the Ideal Workplace. New York, NY: Oxford University Press; 2020.

32 Dyrbye LN, Major-Elechi B, Hays JT, Fraser CH, Buskirk SJ, West CP. Relationship between organizational leadership and health care employee burnout and satisfaction. Mayo Clin Proc. 2020;95:698–708.

33 Swensen S, Kabcenell A, Shanafelt T. Physician-organization collaboration reduces physician burnout and promotes engagement: The Mayo Clinic experience. J Healthc Manag. 2016;61:105–127.

34 Stoller JK. Developing physician-leaders: A call to action. J Gen Intern Med. 2009;24:876–878.

35 Lee TH. Turning doctors into leaders. Harv Bus Rev. 2010;88:50–58.

36 Lucas R, Goldman EF, Scott AR, Dandar V. Leadership development programs at academic health centers: Results of a national survey. Acad Med. 2018;93:229–236.

37 Palmer M, Hoffmann-Longtin K, Walvoord E, Bogdewic SP, Dankoski ME. A competency-based approach to recruiting, developing, and giving feedback to department chairs. Acad Med. 2015;90:425–430.

38 Straus SE, Soobiah C, Levinson W. The impact of leadership training programs on physicians in academic medical centers: A systematic review. Acad Med. 2013;88:710–723.

39 Lobas JG. Leadership in academic medicine: Capabilities and conditions for organizational success. Am J Med. 2006;119:617–621.

40 Stoller JK. Developing physician leaders: A perspective on rationale, current experience, and needs. Chest. 2018;154:16–20.

41 Gabbard GO. The role of compulsiveness in the normal physician. JAMA. 1985;254:2926–2929.

42 Lemaire JB, Wallace JE. How physicians identify with predetermined personalities and links to perceived performance and wellness outcomes: A cross-sectional study. BMC Health Serv Res. 2014;14:616.

43 Northouse PJ. Leadership: Theory and Practice. 7th ed. Los Angeles, CA: SAGE Publications; 2016.

44 Dweck CS. Growth mindset, revisited. Educ Week. 2015;35:20–24.

45 Dweck CS. Growth. Br J Educ Psychol. 2015;85:242–245.

46 Souba WW. The new leader: New demands in a changing, turbulent environment. J Am Coll Surg. 2003;197:79–87.

47 Waldron AL, Ebbeck V. The relationship of mindfulness and self-compassion to desired wildland fire leadership. Int J Wildland Fire. 2015;24:201–211.

48 Heffernan M, Quinn Griffin MT, Sister Rita McNulty, Fitzpatrick JJ. Self-compassion and emotional intelligence in nurses. Int J Nurs Pract. 2010;16:366–373.

49 Singer T, Klimecki OM. Empathy and compassion. Curr Biol. 2014;24:R875–R878.

50 Coskun O, Ulutas I, Budakoglu II, Ugurlu M, Ustu Y. Emotional intelligence and leadership traits among family physicians. Postgrad Med. 2018;130:644–649.

51 Gregory PJ, Robbins B, Schwaitzberg SD, Harmon L. Leadership development in a professional medical society using 360-degree survey feedback to assess emotional intelligence. Surg Endosc. 2017;31:3565–3573.

52 Trockel MT, Hamidi MS, Menon NK, et al. Self-valuation: Attending to the most important instrument in the practice of medicine. Mayo Clin Proc. 2019;94:2022–2031.

53 Shanafelt TD, Makowski MS, Wang H, et al. Association of burnout, professional fulfillment, and self-care practices of physician leaders with their independently

rated leadership effectiveness. JAMA Netw Open. 2020;3:e207961.

54 Guarana CL, Barnes CM. Lack of sleep and the development of leader-follower relationships over time. Organ Behav Hum Decis Process. 2017;141:57–73.

55 van Dam N, van der Helm E. There's a Proven Link Between Effective Leadership and Getting Enough Sleep. Harvard Business Review. https://hbr.org/2016/02/theres-a-proven-link-between-effective-leadership-and-getting-enough-sleep. Published February 16, 2016. Accessed December 10, 2020.

56 Barnes C. Sleep well, lead better. Harv Bus Rev. 2018;September-October:140–143.

57 Kellett JB, Humphrey RH, Sleeth RG. Empathy and complex task performance: Two routes to leadership. Leadership Q. 2002;13:523–544.

58 Skinner C, Spurgeon P. Valuing empathy and emotional intelligence in health leadership: A study of empathy, leadership behaviour and outcome effectiveness. Health Serv Manage Res. 2005;18:1–12.

59 Tak HJ, Curlin FA, Yoon JD. Association of intrinsic motivating factors and markers of physician well-being: A national physician survey. J Gen Intern Med. 2017;32:739–746.

60 Horowitz CR, Suchman AL, Branch WT Jr, Frankel RM. What do doctors find meaningful about their work? Ann Intern Med. 2003;138:772–775.

61 Serwint JR, Stewart MT. Cultivating the joy of medicine: A focus on intrinsic factors and the meaning of our work. Curr Probl Pediatr Adolesc Health Care. 2019;49:100665.

62 Jager AJ, Tutty MA, Kao AC. Association between physician burnout and identification with medicine as a calling. Mayo Clin Proc. 2017;92:415–422.

63 Souba WW. New ways of understanding and accomplishing leadership in academic medicine. J Surg Res. 2004;117:177–186.

64 Rosenthal DI, Verghese A. Meaning and the nature of physicians' work. N Engl J Med. 2016;375:1813–1815.

65 Logan D, King J, Fischer-Wright H. Tribal Leadership: Leveraging Natural Groups to Build a Thriving Organization. New York, NY: Harper Business; 2008.

66 Shanafelt TD, Noseworthy JH. Executive leadership and physician well-being: Nine organizational strategies to promote engagement and reduce burnout. Mayo Clin Proc. 2017;92:129–146.

67 Sinsky CA, Willard-Grace R, Schutzbank AM, Sinsky TA, Margolius D, Bodenheimer T. In search of joy in practice: A report of 23 high-functioning primary care practices. Ann Fam Med. 2013;11:272–278.

References cited in Table 1 only

68 Sturm RE, Antonakis J. Interpersonal power: A review, critique, and research agenda. J Manage. 2015;41:136–163.

69 Peterson TO, Van Fleet DD. The ongoing legacy of R.L. Katz: An updated typology of management skills. Manage Decis. 2004;42:1297–1308.

70 Hackworth J, Steel S, Cooksey E, DePalma M, Kahn JA. Faculty members' self-awareness, leadership confidence, and leadership skills improve after an evidence-based leadership training program. J Pediatr. 2018;199:4–6.

71 Blake RR, McKee RK. The leadership of corporate change. J Leadership Organ Stud. 1993;1:71–89.

72 Blank W. A test of the situation of leadership theory. Personnel Psychol. 1990;43:579–597.

73 Bennis WG. The Essential Bennis. San Francisco, CA: Jossey-Bass; 2009.

74 Graham JR, Harvey CR, Popdak J, Rajgopal S. Corporate Culture: Evidence From the Field. NBER Working Paper 23255. Cambridge, MA: National Bureau of Economic Research; 2017. https://www.nber.org/papers/w23255. Accessed December 10, 2020.

75 Greiner LE. Evolution and revolution as organizations grow. 1972. Harv Bus Rev. 1998;76:55–60.