Effective physician leaders: an appreciative inquiry into their qualities, capabilities and learning approaches

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ABSTRACT

Purpose The aim of this study was to explore the qualities and capabilities effective physician leaders attribute to their success in leading change and how they developed these.

Method The authors interviewed 20 emerging and senior leaders using a semistructured interview guide informed by appreciative inquiry. Data were subjected to an inductive qualitative content analysis to identify themes related to qualities, capabilities and learning approaches.

Results The qualities identified were clarity of purpose to improve care, endurance, a positive outlook and authenticity. They were considered innate or developed during participants’ upbringing. Capabilities were to ground management in medicine, engage others, catalyse systems by acting on interdependencies and employ a scientific approach to understand problems and measure progress. Capabilities were developed through cross-pollination from a diversity of work experiences, reflection, when education was integrated with practice and when their organisational environment nurtured ambition and learning.

Conclusions This study reframes current leadership thinking by empirically identifying qualities, capabilities, and learning approaches that can contribute to effective physician leadership. Instead of merely adapting leadership development programmes from other domains, this study suggests there are capabilities unique to effective physician leadership: ground management in medicine and employ a scientific approach to problem identification and solution development. The authors outline practical implications for individuals and organisations to support leader development as a cohesive organisational strategy for learning and change.

INTRODUCTION

Physician leadership and management practices impact clinical and organisational outcomes, for example, effectiveness, efficiency, productivity, quality and work environment.¹⁰ They are essential to the development of new approaches to care delivery, organisational structures and governance, and often seen as a requisite for successful change efforts.⁶ Consequently, physician competency models recognise leadership as a core component.⁵,⁶,⁷

Despite these competency models and numerous leadership development efforts in healthcare, there is little evidence that either contribute to leader effectiveness.⁶,⁷ The existing evidence on effective leader and leadership development in and outside of healthcare is not being applied.³,⁸ The frequent use of brief programmes that focus on conceptual knowledge and individual skills training fail to address personal development and collaborative capacity—both cornerstones for effective leadership.³ The design and delivery commonly employ ineffective teaching approaches, lack relevant theoretical underpinnings and have limited adaptation to the healthcare context.¹⁹

In a complex context rife with adaptive challenges, physician leaders need more than a ‘check-list’ of competencies.¹¹ While competencies are the application of knowledge, skills and attitudes to known problems with proven solutions, capabilities involve learning how to use and adapt these competencies in unfamiliar environments to address unfamiliar challenges.¹² Given this difference, we need to understand how effective physician leaders have learnt to adapt their competencies to guide their organisations towards better performance.³ This identification of capabilities requires linking competencies to the effectuation of change.

Leader effectiveness and capability development are influenced by one’s qualities (eg, open-mindedness, responsibility, courage).¹³⁻¹⁴ In contrast to general leadership research, physician leaders’ qualities have received little attention. Previous studies also have a methodological limitation: they identified qualities and/or competencies physicians perceived to be important, not those anchored in actual successful leadership experiences.¹⁵

Given the above, the aim of this study is to empirically explore the qualities and capabilities effective physician leaders attribute to their success in leading change, and how they think they developed these. We defined leadership as working towards continual organisational development, independent of formal authority or roles, that is, change (and its management) lies at the core of leadership.¹⁶⁻¹⁷

METHOD

Study design
We chose a qualitative interview study design to explore participants’ experience in depth and address the lack of qualitative studies on effective teaching and learning approaches.⁹ The design was informed by appreciative inquiry (AI), a systematic approach to identify and analyse successful experiences and practices.¹⁰ AI suggests that by analysing successes instead of problems (the focus of traditional research), one is better able to identify and understand what actually works. It originated as a research methodology in studies conducted at the
Cleveland Clinic and has been applied in healthcare (eg, hospital and primary care settings, nursing and obstetrics).^{19,20}

Study setting and participants
This study was conducted in Sweden, which addresses the call for leadership research outside of North America.\(^6\)\(^9\) Swedish healthcare is at the forefront of developing new models for care delivery, structure and governance, through quality improvement, lean, value-based healthcare and other initiatives.\(^21\)\(^22\)

Our purposive sample included aspiring and senior physician leaders instrumental in these developments and with established records of accomplishment.\(^25\) An initial group of senior leaders was identified in consultation with professors at the Medical Management Centre, Karolinska Institutet, who possess a thorough understanding of the Swedish healthcare system based on decades of research. An initial group of emerging physician leaders was identified from the MedUniverse national physician network nomination list for their annual ‘Future Physician Leader’ prize. Nominees were physicians 45 years of age or younger who had demonstrated that they were ‘visionary, role models, innovative, influential, and a positive force for leadership in Swedish healthcare.’\(^24\) Thereafter, both groups were expanded and verified through cross-referencing and snowballing, where each respondent was asked to recommend other outstanding physician leaders.

Data collection
Data were collected through semistructured interviews. The interview guide consisted of three sections informed by AI (online supplementary appendix 1): (1) reflect on successful aspects of one’s work and competence; (2) understand how past experiences enabled the development of qualities and capabilities relevant for leading change; and (3) ideas and suggestions to develop similar qualities and capabilities in future physician leaders. Qualities and capabilities were elicited in three ways: through direct questions; reflections about how others view the respondent’s leadership; and a personal experience of leading what they defined as a successful change. The guide was pilot-tested thrice with individuals who shared the same profile as the participants. As the questions remained unchanged after the first pilot test, we included the two subsequent pilot tests.

Interviews were conducted together by the first and the last authors, both with considerable experience in qualitative research. Interviews lasted 60–80 min, were digitally recorded and held at a convenient location for the participant, free from interruption. Three were conducted over the phone. Interviews were conducted in English with the option to answer in their native tongue (Swedish). Two chose to do so. Interviews were continued past the point of saturation for each group.\(^25\) Informed consent was received prior to the interview. Data were handled confidentially; all efforts were made to preserve anonymity.

Data analysis
Interviews were transcribed verbatim. Transcripts were read repeatedly to develop familiarity. Inductive content analysis\(^26\) was performed using NVivo qualitative data analysis software; QSR International, V10, 2012. Meaning units relevant to the research question were identified and coded by the first author. The analysis for the senior and emerging leaders was separated after observing different patterns in the codes. Codes were independently categorised by the first and the last authors and differences resolved through consensus. Each category was reviewed to develop subcategories and themes where applicable. To strengthen credibility, categorisation was repeated independently and corroborated by two other groups of six researchers each, and the transcripts were reread to ensure the themes accurately reflected what was said. Trustworthiness was strengthened through discussions with key informants and presentations. Given the growing interest among physicians for MBA programmes,\(^27\) we conducted an additional analysis to look at the potential impact of MBA training on leadership perspectives.

RESULTS
Study participants were 20 senior and emerging leaders (table 1). The emerging leader group was gender balanced; senior leaders consisted of more men than women. Specialties included internal medicine, family medicine, paediatrics, obstetrics/gynaecology, anaesthesiology, emergency medicine, psychiatry, cardiology and surgery. Sixteen had academic degrees in addition to their medical degree. All had worked in academic medical centres and the public sector.

We identified four themes among the qualities, four among the capabilities and five related to learning approaches. For illustrative quotations, consult tables 2–4.

| Characteristics | Senior leaders (n=10) | Emerging leaders (n=10) |
|-----------------|-----------------------|-------------------------|
| Sex             |                       |                         |
| Male            | 8                     | 5                       |
| Female          | 2                     | 5                       |
| Degree          |                       |                         |
| MD              | 0                     | 4                       |
| MD/PhD          | 7                     | 3                       |
| MD/MBA*         | 1                     | 2                       |
| MD/PhD/MBA*     | 2                     | 1                       |
| Work setting at the time of the interview | | |
| Management consulting | 3 | 2 |
| Pharmaceutical company | 1 | 0 |
| Private healthcare provider | 2 | 2 |
| Academic medical centre | 4 | 6 |
| Clinically active | 2 | 7 |
| International management experience | 6 | 2 |

\(^*\)MBA: Master of Business Administration or other formal degree education equivalent in business or economics.
related to authenticity, such as humility, openness, trustworthiness, professionalism and curiosity.

**Capabilities**

The capabilities were to ground management in medicine, engage others, catalyse systems by acting on interdependencies and employ a scientific approach to understand problems and measure progress (table 3).

**Ground management in medicine**

Participants integrated their knowledge of medicine with that of economics, quality improvement and organisational development to help others see the rationale for change. Their in-depth medical knowledge and understanding of care processes granted them credibility among staff, and it helped them understand and address the medical consequences of change initiatives.

**Engage others: 'Working with the system' versus 'working the system'**

When engaging others, participants empathised with staff, maintained motivation and developed resonant relationships. However, there was a distinction in how they related to their context. Senior leaders ‘worked with the system.’ They mediated conflicting interests by focusing on a shared purpose and brought together strategic allies. They engaged and empowered staff by creating space and challenging them to take the lead in problem identification and solution development by being present and visible in the organisation. They did not rush to solve problems for others, but through delegation and sharing their decision-making powers, got others to identify problems and develop solutions themselves. Senior leaders listened first to truly understand and empathise with what matters to people.

Emerging leaders, on the other hand, ‘worked the system.’ Without a formal position of authority, they built support by negotiating terms and teamed with people whose competencies compensated for their own shortcomings. They engaged others in change initiatives by asking questions that tested their own hypotheses about the situation. They too listened to people, but it was in order to understand how to tailor their communication and demonstrate good social skills.

Catalyse systems by acting on interdependencies

Participants recognised patterns and led by example; using themselves as learning tools. They connected ideas (senior) and acted on the interdependencies in the system through goal setting and providing structure (emerging).

They saw themselves as part of everything that was going on in the system. Senior leaders reflected on the importance of improving self-awareness through testing ideas on themselves. Emerging leaders ‘walked the talk’ as a strategy to illustrate the validity of their ideas.

Employ a scientific approach to understand problems and measure progress

Participants used a scientific approach to analyse problems, develop hypotheses and measure progress. Senior leaders described this as being curious, asking questions and listening carefully to be able to understand problems before jumping into solutions. Emerging leaders talked about maintaining a healthy scepticism and the importance of critical thinking, in particular to check and analyse the data used to inform decisions.

**Learning approaches**

The most influential learning approaches were cross-pollination from a diversity of work experiences, reflection, the rare occasions when education was integrated with practice, being part of an environment that nurtured ambition and learning and ‘luck of the draw’ (table 4).

Both groups valued ‘learning by doing’. Emerging leaders described taking responsibility for increasingly larger projects over time. Both groups credited experiences from medical practice as important in developing emotional intelligence, skills in communication and quick decision-making. While medical practice was a central work experience for both groups, participants also found it important to seek out roles in other contexts and leave their ‘medical comfort zone’. This was primarily tied to rethinking how medicine works based on a diversity of work experiences in management and health economics consulting, pharma, medical entrepreneurship or at the WHO. Teaching and mentoring—helping others develop new behaviours—as well as being a mentee, were also seen as a practice of leadership.
Table 3  Capabilities of senior and emerging leaders

| Themes and categories | Senior leaders | Emerging leaders |
|-----------------------|----------------|------------------|
| I. Ground management in medicine. | Combine in-depth medical knowledge with organisational development, economics and quality improvement to understand the medical consequences of management decisions. | Continually expand knowledge in medicine and management. |
| II. Engage others. | 'Work with the system.' | 'Work the system.' |
| III. Catalyse systems by acting on interdependencies. | Seek to understand what matters to people—empathise, motivate and inspire. | Be curious and interested in others, develop good social skills. |

Reflection was facilitated through feedback and evaluation, observations and the use of theories. Emerging leaders appreciated the regular feedback and evaluation systems they experienced in management consulting companies and were consequently more aware of their own strengths and weaknesses compared with senior leaders. Observations allowed both groups to recognise good and bad leadership practices. Theory allowed them to make sense of their experiences (senior), and if successfully applied, generated enthusiasm for their leadership practice (emerging). Formal education was deemed useful only if integrated with practice. An organisational environment that nurtured ambition and learning helped create opportunities to practise and improve one’s leadership capabilities.

Qualities such as openness, honesty, commitment, competence, passion, enthusiasm, humility, curiosity, ambition and persistence were attributed to ‘luck of the draw’ in terms of both, ‘just the way I am’ (nature) or to one’s upbringing (nurture). This was irrespective of growing up in a supportive family or one full of hardships.

Of the six participants with an MBA or equivalent degree, none described being open minded, curious or humble. As for those with consulting backgrounds, there was a clear emphasis on project management as well as on strategic thinking in terms of structure, prioritisation, process and analysis. In terms of their learning approach, they were more externally orientated as opposed to engaging regularly in self-reflection. Two of the six described that they found their MBA education useful, either for learning about communication or making sense of past management experiences. They valued working on real-life projects or their own cases.

DISCUSSION

The senior and emerging leaders in our study attributed their success in leading positive change to their qualities of a clarity...
of purpose to improve care, endurance, a positive outlook and authenticity, as well as their capability to ground management in medicine, engage others, catalyse systems by acting on interdependencies and employ a scientific approach to understand problems and measure progress. Qualities were seen as either innate or nurtured during their upbringing. Capabilities were developed through cross-pollination from a diversity of work experiences, (self-)reflection, those rare occasions when education provided insight into concurrent work challenges and when they were part of or created an organisational environment that encouraged learning and placed high expectations on them. At first glance, the findings may seem similar to general leadership theories, which raises the question of the uniqueness of physician leadership. However, those theories have proven

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Table 4  Effective learning approaches used by senior and emerging leaders

| Themes and categories                        | Senior leader                                                                 | Emerging leader                                                              |
|---------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| I. Cross-pollination from a diversity of work experiences. |                                                                              |                                                                              |
| Learning by doing.                          |                                                                              |                                                                              |
| When you actually get to try something and it works it’s fantastic. When you try something and it doesn’t work it’s not fantastic, but you learn more (laughs) probably, from your mistakes than you learn from your successes. (PS11)* | Learn from experiences.                                                      | Take responsibility for increasingly larger projects.                        |
| Learn from medical practice.               |                                                                              |                                                                              |
| You work in teams, you work in different situations where you have to learn how to see people and tell what they’re feeling. And you are used to taking in a lot of information in a short time and you need to make a decision in a short time. (PE08)* | Communication skills, experience from different levels of the organisation allowed them to adapt argumentation approach and manage expectations. | Fast decision-making, emotional intelligence, open-mindedness developed through the experience of clinical rotations. |
| Leave your medical comfort zone.           |                                                                              |                                                                              |
| If you are a young doctor and you want to go into [leadership], you need to leave your comfort zone. (PS15) | Formulate questions, client focus, adaptability, relationship building, adapt management ideas into medicine. | Challenge one’s professional status, apply similar strategies across projects, problem solving, structure, work with data, presentation skills. |
| Be a teacher and/or mentor.                |                                                                              |                                                                              |
| I see a lot of overlap between facilitation and improvement and pedagogical activities where you also facilitate learning. In one sense, it’s learning what you need to do to teach the subject and in another way it’s learning about the situation or about a shared problem. (PE04) | Teaching and mentoring was an integral part of senior roles and seen as acts of leadership to help others develop new behaviours. | Facilitating learning for others was experienced as a trigger to learn, particularly about group dynamics. |
| II. Reflection.                            |                                                                              |                                                                              |
| Feedback and evaluation.                   |                                                                              |                                                                              |
| […] during projects and between projects, on a yearly basis, structured evaluations and feedback, which are very good because we go over my good and bad traits and efforts and how to improve. (PE13) | Coaching and mentoring by more senior people.                                | Make systematic approaches to feedback and evaluation as well as senior colleagues a part of daily work. |
| Observation.                               |                                                                              |                                                                              |
| […] being able to learn from negative mentoring has been very useful (laughs). […] You see the consequences of different kinds of behaviours—the disruption and discomfort. (PS10) | Negative examples of leadership.                                             | Collected observations of people and groups.                                |
| Use theory to reflect on practice.         |                                                                              |                                                                              |
| [An MBA] made me understand the systematics of what I intuitively felt before and I understood the frameworks and theories. (PS18) | Theory helps make sense of and frame one’s experiences.                     | Situations where theory was experienced as applicable to practice contributed to enthusiasm about work. |
| III. Education integrated with practice.   |                                                                              |                                                                              |
| I really learn much more when I can work as a manager and then go to courses at the same time and I can think about what I do in my role as a manager from different perspectives. (PE19) | MBA programmes that gave space to work on one’s own cases. A systems science course improved understanding of quality improvement and ability to see interdependencies. | Formal education was a tool to establish credibility, become professional and develop networks, communication skills and personal leadership. It triggered further interest in management. |
| IV. Organisational environment that nurtures ambition and learning. |                                                                              |                                                                              |
| I’m quite a confident person, both as a person and in my professional role [but] it’s still really important to have people around you who believe in you. It’s not enough to believe in yourself and I think that makes the difference. (PE21) | Both groups attributed learning to their organisational contexts, particularly being surrounded by people who had faith in their capabilities, were interested in their input, supportive and encouraged openness, courage, ambition, commitment, creativity and honesty. |                                                                              |
| V. Luck of the draw.                       |                                                                              |                                                                              |
| Nature.                                    |                                                                              |                                                                              |
| You can’t educate these things. You can modify a good person to be better. It is basically in the personality and then, of course, your social background. (PS18) | Born this way/genetics: openness, honesty, commitment, competence, clarity, passion, persistence | Born this way/genetics: humility, openness, ambition, curious, enthusiastic, positive, ability to learn |
| Nurture.                                   |                                                                              |                                                                              |
| It’s definitely lots of genetics, but it’s also my upbringing that’s shaped me more than anything. (PE21) | Upraising encouraged openness, honesty, commitment, competence, clarity, passion, persistence. | During upbringing learnt to take responsibility, observe, prioritise academic achievement, connect with people. |

*PS: senior leaders. PE: emerging leaders.
difficult to translate into healthcare.\(^1\) We suggest that there are nuanced and important differences which we explore below.

While previous studies have highlighted the necessity of clinical knowledge,\(^2\)\(^-\)\(^8\)\(^,\) participants articulated and took action based on the medical consequences of management decisions. This allowed both the emerging and senior leaders to achieve their organisation’s (often economic) goals without compromising their integrity of purpose to improve care. This is in contrast to a previous study where such purpose-driven behaviour, described as organisational altruism, was observed only among established leaders.\(^23\) The integration of tasks in conflicting domains, such as economics and patient care, may have been further facilitated by their ability to authentically engage others.\(^29\) This in turn helps retain motivation and well-being among staff,\(^36\) even in the face of considerable downsizing requirements.\(^33\) Thus, leadership which facilitates medical engagement, that is, the strategic involvement of physician leaders in improving care, is worth further study.\(^31\]\(^,\)\(^33\)

Integral and unique to the physicians’ leadership was their scientific mindset. Similar to findings by Hopkins et al,\(^28\) participants looked for the most pertinent questions to pose and data that could help to answer these questions and measure progress. This went beyond the ‘management by analysis’ training of the MBAs\(^38\) and is rare even in quality improvement efforts (15%).\(^35\) We could not find any study that linked educational level with healthcare leadership effectiveness and can therefore only speculate that since 13 of the 20 participants had doctoral degrees, the research skills they had developed may have influenced their leadership practice. Such an evidence-informed ‘scientific’ approach may resonate better with the professional ethos of healthcare staff who commonly understand change as a ‘scientific’ approach may resonate better with the professional ethos of healthcare staff who commonly understand change as a ‘scientific’ approach may resonate better with the professional ethos of healthcare staff who commonly understand change as a result of new research findings,\(^39\) and may exemplify the kind of evidence-based management needed in healthcare.\(^36\)

**Focus on learning**

Leadership studies and competency models frequently stress the importance of goals and performance. Participants were indeed accomplished high achievers. However, from the data it emerged they were first and foremost avid learners—they treated each situation as an opportunity to learn about others, themselves, and their context. Their qualities and capabilities combined to engender a continual focus on learning.

Participants differed from colleagues who, prone to overconfidence, avoid challenges that question their competence, that is, a ‘fixed mind-set’ that impedes learning.\(^27\) Instead, they demonstrated qualities that contributed to a habit to critically reflect,\(^14\) actively seek out challenging situations and expand their role and mandate, that is, they demonstrated a ‘growth mind-set’.\(^37\) Their positive outlook can be linked to improved cognitive functioning, including an openness to ideas, emotions and people.\(^38\) Hopkins et al describe similar distinguishing leadership behaviours in terms of creating opportunities for learning and being open to new perspectives.\(^24\)

Despite growing evidence for the role of teamwork to achieve better clinical outcomes,\(^19\)\(^-\)\(^20\) participants seldom described such teamwork in their leadership efforts. Instead, they consistently developed resonant relationships and collaborated with a broad range of stakeholders.\(^30\)\(^-\)\(^36\) The findings suggest that physician leaders may benefit from moving beyond popular team-training initiatives designed for stable membership and well-defined tasks.\(^34\) Participants’ approaches could be characterised rather as ‘teaming’ or relational coordination, which involves creating meaningful multidisciplinary relationships ‘on the fly’ in a shifting mix of work-partners.\(^31\)\(^-\)\(^43\) The combination of such dynamics and participants’ approach to relationships attests to their emotional and social intelligence—both increasingly acknowledged attributes for effective physician leaders.\(^22\)\(^-\)\(^44\)\(^-\)\(^45\)

As systems catalysts, participants demonstrated more than the basic understanding of how health systems function and system-based patient care described in physician competency models.\(^35\)\(^-\)\(^46\) Not only could they see interdependencies,\(^28\) these leaders were aware of their own role in them. In contrast to several studies of physician leadership which see change as a result of the deliberate communication of leaders’ own visions,\(^1\)\(^-\)\(^2\)\(^,\)\(^3\) our participants took action based on the full acknowledgement of their organisations’ complexity, that is, visions were created in concert with others.\(^47\)

**Insights on learning from effective physician leaders**

A comparison of leadership development in healthcare\(^8\)\(^-\)\(^9\) with leadership development research\(^50\) reveals two insights empirically supported in this study: daily work as a platform for deliberate leadership practice and a symbiosis between organisational learning culture and effective leadership development.

**Transform learning from experience into deliberate practice**

Participants’ descriptions of learning from a diversity of work experiences support the proposition that leadership development should be about ‘helping people learn from their work rather than taking them away from their work to learn’.\(^11\) However, learning from experience can be problematic.\(^31\) For technical problems, such as perfecting a surgical technique, repetition might be enough. But for more complex challenges, learning from experience is only effective when coupled with reflection and high-quality feedback.\(^39\)

Feedback and evaluations were valued for improving self-awareness, which, in healthcare, has often been missed.\(^33\) Systematic feedback, however, does not guarantee behaviour change—it was participants’ focus on learning, which helped them benefit from these practices.\(^10\) Their reflective practice helped them transform implicit (performance-oriented) work experiences into explicit learning opportunities,\(^14\) that is, transform learning from experience into deliberate practice.\(^48\)

**A symbiosis between organisational learning culture and leadership development**

Healthcare, with its noticeable status differences and promotion of individual accomplishments, seldom exhibits a learning culture supportive of leadership development.\(^11\)\(^-\)\(^23\)\(^-\)\(^49\)\(^-\)\(^50\) Still, as participants engaged others, they fostered a coherent organisational learning environment based on reciprocal relationships centred around shared meaning that provides assessment, challenge and support at all levels.\(^10\) This is in line with effective leader and leadership development\(^10\) and why current teaching methods (lectures, seminars and group work) focused on individual leaders are not enough.\(^3\)

Our study has limitations. Despite the critique of AI’s penchant for the positive, interviews also elicited challenges and negative experiences, but the emphasis was on what lessons have been learnt for future success.\(^50\) The first and last authors’ considerable experience with applying AI in the contexts of primary care, psychiatry, medical and leadership education, public health and global NGO development may have enabled this. We acknowledge the imbalance among the sexes of the senior leaders; however, no gender differences were identified among emerging leaders, which may suggest that the same holds true for senior
leaders. As with qualitative studies in general, transferability is determined by how the description of the context, characteristics of the participants and the findings resonate with readers. Further studies could be conducted in the context of a leadership development effort to explore the mechanisms that foster learning and change.\(^8\) A further analysis of the change strategies described by participants could contribute to a theory of physician leadership.

**Implications for practice**

Organisations could take a proactive and long-term approach to cultivate the qualities of clarity of purpose, endurance, positive outlook and authenticity that foster learning from experience. Recruiting and developing managers with these qualities may generate a virtuous cycle where staff become aware of and challenge their fixed mindsets. Further suggestions for individuals and organisations are summarised in [table 5](#).

A first step would be to move from haphazard self-reflection to facilitate the deliberate practice of leadership in daily (clinical) work. This could help organisations integrate leader and leadership development at all levels in a cohesive organisational strategy and learning environment that challenges aspiring leaders to grow their best selves at work.

**CONCLUSIONS**

This study reframes current leadership thinking by empirically identifying the qualities, capabilities and learning approaches that can contribute to effective physician leadership. Our findings resonate with cutting-edge leadership research that builds on empirical evidence base.

**CONFLICTS OF INTEREST**

None declared.

**PATIENT CONSENT**

Not required.

**ETHICS APPROVAL**

The study was approved by the Stockholm Regional Ethical Vetting Board (2015/197-31/5).

**PROVENANCE AND PEER REVIEW**

Not commissioned; externally peer reviewed.

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