

# Sanokundu

## The birth of a multinational network for the development of healthcare leadership education

Jamiu Busari

*Department of Pediatrics, Zuyderland Medical Center, Heerlen, The Netherlands  
and Department of Educational Development and Research, Maastricht University,  
Maastricht, The Netherlands*

Ming-Ka Chan

*Department of Pediatrics and Child Health, University of Manitoba,  
Winnipeg, Canada*

Deepak Dath

*Department of Surgery, McMaster University, Hamilton, Canada*

Anne Matlow

*Faculty of Medicine, University of Toronto, Toronto, Canada, and*

Diane de Camps Meschino

*Department of Psychiatry, University of Toronto, Toronto, Canada*

### Abstract

**Purpose** – This paper aims to describe the evolution of *Sanokundu*, highlighting the rationale, achievements and lessons learnt from this initiative. *Sanokundu* is a multinational community of practice dedicated to fostering health-care leadership education worldwide. This platform for health-care leadership education was conceived in 2014 at the first Toronto International Summit on Leadership Education for Physicians (TISLEP) and evolved into a formal network of collaborators in 2016.

**Design/methodology/approach** – This paper is a case study of a multinational collaboration of health-care leaders, educators, learners and other stakeholders. It describes *Sanokundu*'s development and contribution to global health-care leadership education. One of the major strategies has been establishing partnerships with other educational organizations involved in clinical leadership and health systems improvement.

**Findings** – A major flagship of *Sanokundu* has been its annual TISLEP meetings, which brings various health-care leaders, educators, learners and patients together. The meetings provide opportunities for dialog and knowledge exchange on leadership education. The work of *Sanokundu* has resulted in an open access knowledge bank for health-care leadership education, which in addition to the individual expertise of its members, is readily available for consultation. *Sanokundu* continues to contribute to scholarship in health-care leadership through ongoing research, education and dissemination in the scholarly literature.



**Originality/value** – *Sanokundu* embodies the achievements of a multinational collaboration of health-care stakeholders invested in leadership education. The interactions culminating from this platform have resulted in new insights, innovative ideas and best practices on health-care leadership education.

**Keywords** Knowledge transfer, Health care, Leadership, Management, Networks

**Paper type** Case study

## Background

Medicine has enjoyed much attention to its knowledge base and content, allowing us to treat our patients better every day. Technology has been harnessed to improve health-care and medical education systems have been designed with an infrastructure that favors teaching this knowledge-based approach. However, along with the knowledge of the latest molecule, investigation and technique, is the need to treat patients as human beings with needs beyond the strictly medical. As health care becomes more complex, the need for health-care providers to monitor and enhance the quality of service they deliver arises. Educational frameworks (Swing, 2007; General Medical Council, 2013; Frank *et al.*, 2015) have developed definitions of concepts and competencies such as professionalism, communication, collaboration, leadership, advocacy and scholarship to make medical education more holistic. Re-organizing educational systems and programs to incorporate these competencies well has been difficult, and training physicians as leaders specifically remains a big void in medical education.

Leadership is needed at every level of health care – from the point-of-care, remotely through telemedicine, to the complex health systems that must be responsive to an ever-changing landscape of needs and resource constraints. The education of health-care providers should, therefore, include a leadership curriculum that facilitates the translation of acquired leadership expertise, experience and commitment to meaningful health care improvement contributions. In Canada, The Netherlands and Australia, medical education has defined all physicians as leaders who:

Engage with others to contribute to a vision of a high-quality healthcare system and take responsibility for the provision of excellent patient care through their activities as clinicians, administrators, scholars or teachers (Frank *et al.*, 2015).

For this reason, in 2010, a group of health professional and academic leaders from diverse countries developed a shared vision and a common strategy for health professions education that transcended the confines of national borders and the silos of individual professions. A global, multi-professional and systems-based approach to health-care leadership was proposed that embraced the connections between education and the health systems. The approach was centered around people as co-producers and drivers of the educational and health-care delivery systems. However, to achieve the positive effect on health outcomes, they argued that professional education subsystems must design new instructional and institutional strategies to prepare future health-care leaders well. The authors describe a new generation of system-based medical education and institution reform that is needed to replace outdated curricula. They suggest a foundation of transformative learning which has as its goal the acquisition of leadership attributes by all health professionals to generate “enlightened change agents” (Frank *et al.*, 2010). As an exemplar, we describe our initiative to bring together health professions educators and other stakeholders to develop curricula and resources that can be used to incorporate leadership education into educational systems globally, to begin the process of realizing transformative learning.

### Leadership education: the scope, the need

Leadership skills are needed throughout all levels of health-care delivery. Leadership at point-of-care includes not only compassion but also mentalizing (understanding the mental state and behavior of the other) and responding to the experience of each patient. Everyday leaders engage patients and families as partners in the health-care process to improve outcomes at the dyadic patient-provider level (Brown, 2016). Informed by context and experience, they develop their emotional intelligence including their knowledge of self and others to communicate clearly, understand and be understood. Everyday leaders take responsibility for delivering health care so that patients, family and colleagues feel heard; feel that their needs are considered; and experience their lives as meaningful. Everyday leaders contribute as health-care change agents by engaging as participants of larger systems and populations (Dath *et al.*, 2015).

Similar to compassion, emotional intelligence and communication, leaders must demonstrate competence in quality and safety improvement. Safety in this context applies to the general (system level) and individual levels of service delivery. A foundation for ensuring the delivery of safe health care requires that leaders at all levels of service contribute to creating a safe psychological environment for health-care providers. Such safe environments permit care providers to learn from mistakes and uncover the root cause to ensure both they and others benefit. In medical education, psychological safety is foundational for learners to acquire expertise in care delivery in the contexts of uncertainty, limited resources and inter-professional teams (Bynum, 2016; Wisdom and Wei, 2017). Organizational cultures that embody psychological safety also contribute to provider resilience and wellness (Lee *et al.*, 2013). The attainment and mastery of these capabilities is an imperative of leadership at all levels.

It is clear that there is a growing need for leadership in health care as well as wide-scale systems change in the delivery of services. However, leading complex systems change, i.e. from dyadic interactions to system-level transformation, requires more than individual desire, will and knowing the outcome one needs (Begun *et al.*, 2003). Indeed, the engagement and contributions of diverse stakeholders, as well as the authentic understanding of human motivation and behavior by health-care leaders, becomes a prerequisite for collaboration and commitment of human resources. Consequently, intentional enhancement of complex systems can be conducted via quality improvement science involving trials as well as by “leading change” techniques where efforts to understand why initiatives do or do not achieve desired results are systematically appraised (Hollnagel *et al.*, 2015). Such system change will entail innovation and the ability to scale, and learners and providers can contribute significantly to this process by being enabled in their leadership capabilities.

While the technological wave that advances health-care delivery continues to rise, organizational and system leaders must remain aware that relationships are foundational to excellent health care at every level. Relationships are translated into patient experience, patient outcomes, provider resilience, capable teams, goodwill and innovation (Pololi *et al.*, 2009; Frisina, 2011; Lee *et al.*, 2013; Hall *et al.*, 2016). Not only do positional leaders carry a significant responsibility for ensuring a culture of safety and excellent care, but they also require visioning skills, strategic thinking, the capacity to anticipate the future, the ability to transform systems and partner to scale innovations. Coordination and collaboration at multiple system levels from departments, community, academic facilities to hospitals, public health, policymakers, funding agents and international governments require relationship-based leadership skills. The complexity of global relations from travel and infectious disease to economics and environmental change requires international leadership collaboration and vision (Frenk *et al.*, 2010). Pursuing equity in health care demands that such capacities are

developed and deployed to improve health care globally. A focus on leadership education for all providers creates the potential for contribution and collaboration in health care improvement initiatives at all levels.

### The emergence of *Sanokundu*

Why has *Sanokundu* emerged now? Historically, medical education did not include leadership training, and programs that formally incorporate leadership training for all learners are still sparse. From a practical standpoint, the call for leadership education in health care has evolved over the years from lone authors to groups, institutions, organizations and medical education in general. The aim of leadership education has also changed from training a few physicians who hold or plan to take on titled roles within the medical administration to educating all physicians to become everyday leaders, i.e. the right person exercising the right leadership competency at the right time (Busari *et al.*, 2011; Chan *et al.*, 2016; Matlow *et al.*, 2016; Faculty of Medical Leadership and Management, 2018). This change in focus has shifted the bulk of the work of leadership education to institutions involved with the training of undergraduate- and graduate-level physicians. It has resulted in innovative initiatives to broaden leadership education for all physicians and include embedded and experiential training. Examples of such initiatives include the following: the Faculty of Medical Leadership and Management in the United Kingdom that works to promote excellence in leadership on behalf of all doctors in public health, primary and secondary care; mandatory leadership training for doctors in postgraduate medical training in Denmark; and collaborations between the Harvard Business School and local hospitals in Boston offering electives in management development as well as designing a management skills training program for residents during their training (Stephenson, 2009). None of these initiatives is yet broad enough to satisfy the need to train all learners and faculty, requiring a more coordinated, central effort to help all institutions educate all physicians and physicians-in-training. Furthermore, some of the well-intended efforts made to deliver leadership education to health-care professionals have not succeeded in realizing beneficial results, as demonstrated by the varying degrees of readiness and motivation for leadership among learners (Keating *et al.*, 2014; Beer *et al.*, 2016).

The recent surge of multinational interest in designing and delivering medical education in more coordinated, organized and validated ways (a PubMed search of “medical education” shows a steady increase for two decades followed by an exponential rise in articles beginning in 2013) should catalyze the wholesale adoption of leadership training. However, as medical training programs have been designed and delivered differently across the world, incorporating a single standardized leadership education into current curricula will not be easy. To do so in a somewhat coordinated manner and also ensure some degree of homogeneity in the general principles of leadership education, it is necessary for medical educators and other stakeholders to work together.

The complexity of medical education around the world ensures that no one process of change will suffice to allow the coordinated inclusion of leadership training into programs internationally. The enormous task of retooling medical education to include leadership training will require some efficiency to avoid duplicating work and creating diverging processes. Hence, the following question:

- Q1. How can leadership education be successfully integrated into various programs and institutions?

Jurisdictions, organizations and programs would benefit from access to materials to develop their own solutions for incorporating leadership education into their local contexts. Creating

a central repository for such content would serve this need. Importantly, international coordination in such an effort would be required that respects diverse ideas, concepts and needs while creating a shared, global curriculum for leadership education within medicine and health care in general.

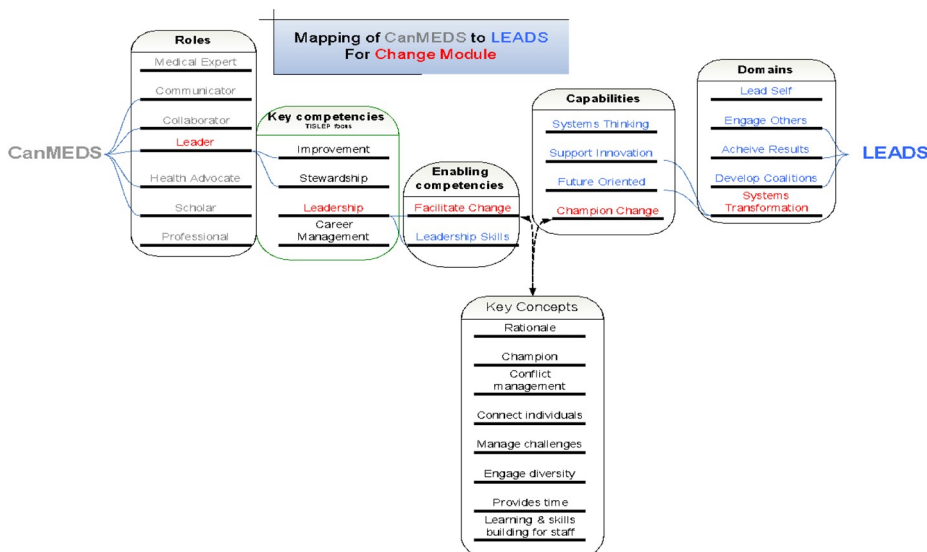
In 2014, the impending launch of the CanMEDS 2015 Physician Competency Framework (Frank *et al.*, 2015) prompted the creation of the Toronto International Summit on Leadership education for Physicians (TISLEP) with the goal of identifying the key principles for leadership education for physicians (Matlow *et al.*, 2016). The summit, by virtue of the wide representation of attendees, including patient representatives, learners, medical educators and health-care leaders from different jurisdictions, generated a robust needs assessment, respectful of the voices of the stakeholders involved. This work has continued toward the creation of an open-source, modular curriculum for medical education that could be adopted and adapted internationally by any group or institution ([www.Sanokondu.com](http://www.Sanokondu.com)). In 2016, contributors to TISLEP created a community of practice they called *Sanokondu*, based on a liberal application of the words “health” and “leadership” in the universal language of Esperanto. The objective was to disseminate their work in a stepwise fashion first to a wider global medical community and later extend it to collaborations, with other health-care professionals. Committed to fostering health professional leadership education worldwide, a key goal of *Sanokondu* is “to develop a generic competency-based leadership curriculum, aligned with the LEADS framework (Dickson and Tholl, 2014), that can be adapted to local and regional contexts.”

The *Sanokondu* members espouse an egalitarian process that welcomes the collaboration and contribution of leaders, stakeholders and educators in health care who can provide high-quality resources for distribution. It is believed that a free, online resource, designed with a widely available and respected framework has a good chance of being readily adopted ([www.Sanokondu.com](http://www.Sanokondu.com)). We believe that the call for health-care leadership training in physicians and other health-care providers must be answered now, and that co-created content on an open access platform is how it should be realized. *Sanokondu* is a timely answer to that request, incorporating multinational voices, accessibility, transparency, open-source architecture and a scaffold of valid and acceptable frameworks that encourages participation by health-care educators and other stakeholders.

### **Achievements of *Sanokondu***

*Sanokondu*'s key achievements have been in the areas of curriculum development and in continued vitalization of the network through social media outreach and face-to-face meetings such as TISLEP. So far, the TISLEP meetings have witnessed representation from 13 countries from 4 continents including Australia, New Zealand, Ireland, Finland Lithuania, The Netherlands, Sweden, UK, USA, Canada, Chile, Mexico and Saudi Arabia.

With respect to curriculum development, the first nine case-based modules for a leadership training program were launched in 2016 and others are under development. Our curriculum design utilized Delphi methodology to generate a list of top 10 subject areas within each of the five LEADS pillars (lead self; engage others; achieve results; develop coalitions; and systems transformation; Dickson and Tholl, 2014). As the first step, one to two modules per LEADS pillar were then designed with a standard template including teaching tips, potential assessment strategies, suggested resource materials and a teacher's guide. The modules integrate the CanMEDS competency-based framework with the LEADS leadership framework (Figure 1) and reside on the



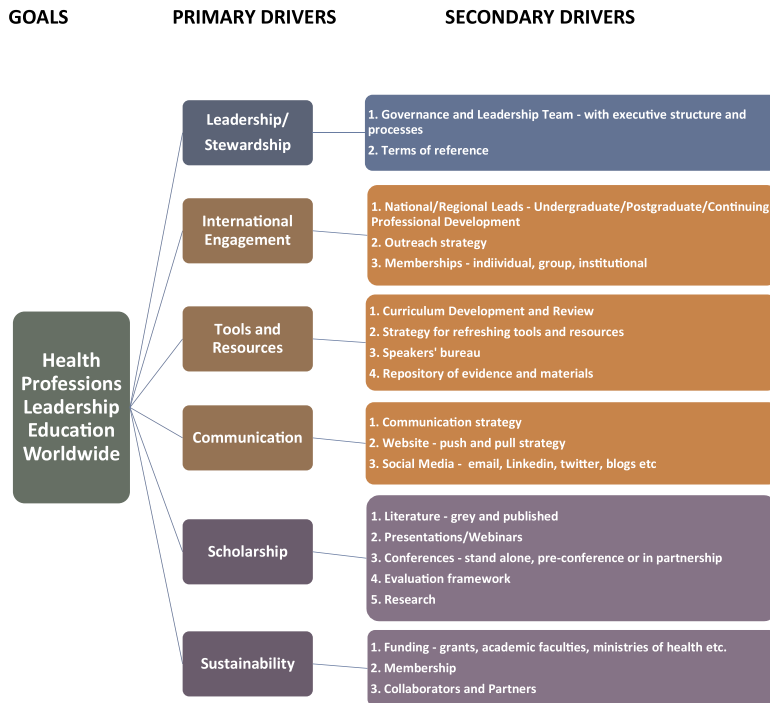
**Figure 1.**  
Example of mapping CanMEDS to LEADS

open access Google site [www.Sanokondu.com](http://www.Sanokondu.com). Each module is intended to be used on its own or in conjunction with other available modules and is meant to be adapted by users for their local context. Given the importance of emotional intelligence, communication, patient voice, quality improvement and change science, these areas were highlighted in the first offerings. Feedback from a broad audience accessed through various techniques including snowball emails, social media including blogs (Canadian Association for Medical Education and ICENET), LinkedIn and Twitter (@TISLEP\_MD and @Sanokondu), and sharing through academic venues has generated additional content and updates which will be incorporated. A measure of this impact can be seen in the rising number of downloads of the various modules as well as the requests for speakers and workshop facilitators. As an example of the interest in this work and local adaptation, our collaborators in Mexico helped to translate the nine available modules into Spanish in 2017. New modules on power and civility are examples of those under development this year.

TISLEP has become a forum for continuing the dialog on health-care leadership, allowing exploration of controversies and new ideas while allowing for opportunities to build the network and engage with potential partners. TISLEP has continued to grow annually with its fourth iteration in October 2017 in Quebec City. Each year the planning committee engages with long-term partners and connects with new colleagues in the field. The diversity of jurisdictions that have engaged to varying levels continues to expand. The TISLEP 2018 meeting in Halifax will focus on leadership and culture. The founding members of *Sanokondu* have engaged with groups around the world including The Netherlands at the Invitational Symposium on Medical Leadership in postgraduate medical education in Utrecht ([www.uu.nl/en/research/professional-performance/invitational-symposium-on-medical-leadership-in-postgraduate-medical-education](http://www.uu.nl/en/research/professional-performance/invitational-symposium-on-medical-leadership-in-postgraduate-medical-education)), Royal Australian College of Medical Administrators' Winter Forum and World Federation of Medical Managers meeting in Melbourne, Australia, as well as with different Canadian universities. More recently, TISLEP has formed a partnership

with NASKHO (Netherlands-Caribbean Foundation for Clinical Higher Education) and will be offering a joint conference for the first time on May 11-12, 2018, in Curaçao ([www.naskho.org/index.php/en/conferences/overview-of-conferences/event/41-the-1st-naskho-tislep-joint-conference-global-perspectives-on-leadership-in-health-care-delivery](http://www.naskho.org/index.php/en/conferences/overview-of-conferences/event/41-the-1st-naskho-tislep-joint-conference-global-perspectives-on-leadership-in-health-care-delivery)). This forum will allow us to engage with new jurisdictions, facilitating knowledge exchange with a broader group of individuals. Using the theme of global perspectives on leadership in health-care delivery, we will engage with this new audience to research the impact of diversity on health care. We plan to continue reaching out to partners worldwide and are currently in dialog with partners in Africa on a psychiatry project that involves co-designing and co-developing a leadership training program for learners at Addis Ababa University (Ethiopia).

*Sanokundu* also uses social media (Twitter, LinkedIn and blogs) as well as local, national and international conferences to engage with members and those interested in health-care leadership. Work has been presented at a broad range of medical education meetings (First World Competency-based Medical Education Summit, International Conference on Resident Education [ICRE], Association for Medical Education for Europe Meeting [AMEE], Canadian Conference on Medical Education [CCME] and institutional education meetings, e.g. University of Manitoba) as well in specialty-specific meetings (Association of Academic Psychiatry) in poster, paper and/or workshop format. Many authors of the modules have taken the content and developed new teaching materials or adapted them for a different specialty or level of learner. Session attendees have included medical students, residents and medical faculty.



**Figure 2.**  
*Sanokundu* DRIVER  
DIAGRAM

Dissemination through peer-reviewed publication has started and is continuing to be broadened. Furthermore, after an initial focus on physician education, the long-term vision of *Sanokundu* will include serving a growing multinational community of health-care leaders and stakeholders as well as the broader health-care leadership education agenda. The attached driver diagram (Figure 2) articulates the defined areas of focus in the coming years. Cultivating a vision of equitable global health-care system development within a broad-based developing coalition of contributing stakeholders will be key to the continued expansion and implementation of *Sanokundu's* curricular materials.

### Future goals

The driver diagram represented in this document continues to provide the framework for the activities of *Sanokundu*. The overview in Table I delineates the content of the one- and five-year goals established for *Sanokundu* and also shows how these goals align with the primary drivers (see Figure 2). So far, we have succeeded in developing footing in each area of our one-year goals and the next few years will be dedicated to deepening and broadening our presence and productivity in other areas. For example,

GOALS	OBJECTIVES: YEAR 1	OBJECTIVES: YEAR 3-5
Governance (Leadership/ Stewardship)	Finalize terms of reference Begin guideline development for membership and contributions	Establish a formal governance board Finalize guidelines for membership and contributions
International Engagement	Communicate with all previous TISLEP participants Solidify national partners, including universities, educational associations or organizations, etc.	Faculty development outreach Broaden participation in development of new and enhanced curriculum modules Develop community of practice Recruit local and regional ambassadors from around the world
Tools and Resources	Supplement modules with slide sets Active social network presence Find support for and develop basis for website	Teach the teachers: coaching and mentorship Expand menu of modules Establish leadership blog for networking and knowledge sharing
Communication	Expand website Develop communication strategy	Expand presence on social media Use leadership blog to advance activities of international community of practice
Scholarship	Presentations, publications Continue to hold TISLEP annually affiliated with international fora	Evaluate impact of <i>Sanokundu</i> outputs and contribute to academic fora Develop research platform on issues salient to health-care leadership
Sustainability	Explore grant and support possibilities Define structure for short- and long-term funding	Secure long-term financial and human resource support

**Table I.**  
*Sanokundu* one- and five-year goals and objectives



we shall be exploring domains such as advocacy in leadership, cultural dimensions of leadership, social accountability as well as how to generate discourse and empower minority groups (e.g. gender, race, religion and disability) in leadership roles. As an annual constant, TISLEP continues to enrich the multinational presence of *Sanokondu* through the perspectives the diverse members of the planning committee, the voices of the attendees, as well as the new and future partnerships with other organizations and groups.

Despite the successes to date, some challenges remain, most notably in the area of financial support and sustainability. Supporters of our leadership development initiative remark that the success of the activities related to TISLEP and *Sanokondu* is due primarily to the altruistic endeavors of a small group of individuals. While the altruism remains, these individuals will continue to be pressed by professional and personal demands and, therefore, continue to seek new collaborators and partnerships. A stable source of funding for infrastructure support will further ensure long-term sustainability. As we expand, our scholarship endeavors to increase the potential for academic grants, we are simultaneously investigating how to consolidate our status as a non-profit organization to pursue non-academic funding opportunities.

### Conclusion

Since the inception of TISLEP in 2014 and the subsequent creation of *Sanokondu* in 2016, the multinational collaboration of health-care educators and other stakeholders have covered substantial ground in developing health-care leadership education. New relationships have been established with other educational organizations involved in clinical leadership and health systems improvement. Despite its limited resources and the challenges facing the network, *Sanokondu* aspires to expand the scope of the discourse to the role and importance of culture, diversity and power dynamics on health-care leadership development. We shall invest in empowering leadership in less privileged groups (advocacy) and also develop processes that will allow those in the early stages of incorporation of leadership education to access *Sanokondu's* resources. More attention will be given to increasing awareness of emotional intelligence and its importance in optimal leadership development. Finally, *Sanokondu* will contribute to scholarship in health-care leadership through program evaluation, periodic research, curriculum design and review, teaching and dissemination in the scholarly literature.

### References

- Beer, M., Finnstrom, M. and Schrader, D. (2016), "Why leadership training fails- and what to do about it", *Harvard Business Review*, pp. 50-57, available at: <https://hbr.org/2016/10/why-leadership-training-fails-and-what-to-do-about-it> (accessed 5 March 2018).
- Begun, J.W., Zimmerman, B. and Dooley, K. (2003), "Health care organizations as complex adaptive systems", in Mick, S.M. and Wyttenbach, M. (Eds), *Advances in Health Care Organization Theory*, Jossey-Bass, San Francisco, CA, pp. 253-328.
- Brown, B.J. (2016), "Mutuality in health care: review, concept analysis and ways forward", *Journal of Clinical Nursing*, Vol. 25 Nos 9/10, pp. 1464-1475, doi: [10.1111/jocn.13180](https://doi.org/10.1111/jocn.13180).
- Busari, J.O., Berkenbosch, L. and Brouns, J.W. (2011), "Physicians as managers of health care delivery and the implications for postgraduate medical training: a literature review", *Teaching and Learning in Medicine*, Vol. 23 No. 2, pp. 186-196, doi: [10.1080/10401334.2011.561760](https://doi.org/10.1080/10401334.2011.561760).

- Bynum, W.T. (2016), "Risky business: psychological safety and the risks of learning medicine", *Journal of Graduate Medical Education*, Vol. 8 No. 5, pp. 780-782, doi: [10.4300/JGME-D-16-00549.1](https://doi.org/10.4300/JGME-D-16-00549.1).
- Chan, M.-K., de Camps Meschino, D., Dath, D., Busari, J., Bohnen, J.D., Samson, L., Matlow, A. and Sánchez-Mendiola, M. (2016), "Collaborating internationally on physician leadership development: why now?", *Leadership in Health Services*, Vol. 29 No. 3, pp. 231-239.
- Dath, D., Chan, M.K. and Abbott, C. (2015), "CanMEDS 2015: from manager to leader", The Royal College of Physicians and Surgeons of Canada, Ottawa, available at: [www.royalcollege.ca/portal/page/portal/rc/common/documents/canmeds/framework/canmeds2015\\_manager\\_to\\_leader\\_e.pdf](http://www.royalcollege.ca/portal/page/portal/rc/common/documents/canmeds/framework/canmeds2015_manager_to_leader_e.pdf) (accessed 5 March 2018).
- Dickson, G. and Tholl, B. (2014), *Bringing Leadership to Life in Health: LEADS in a Caring Environment: A New Perspective*, Springer, Verlag, London.
- Faculty of Medical Leadership and Management (2018), available at: [www.fmlm.ac.uk/about-us](http://www.fmlm.ac.uk/about-us) (accessed 1 January 2018).
- Frank, J.R., Snell, L.S. and Sherbino, J. (Eds) (2015), "CanMEDS 2015 physician competency framework", Royal College of Physicians and Surgeons of Canada, Ottawa, available at: [www.royalcollege.ca/portal/page/portal/rc/common/documents/canmeds/framework/canmeds\\_reduced\\_framework\\_e.pdf](http://www.royalcollege.ca/portal/page/portal/rc/common/documents/canmeds/framework/canmeds_reduced_framework_e.pdf) (accessed 12 December 2017).
- Frenk, J., Chen, L., Bhutta, Z.A., Cohen, J., Crisp, N., Evans, T., Fineberg, H.V., Garcia, P., Ke, Y., Kelley, P., Meleis, A., Naylor, D., Reddy, S., Scrimshaw, S., Sepulveda, J., Serwadda, D. and Zurayk, H. (2010), "Health professionals for a new century: transforming education to strengthen health systems in an interdependent world", *Lancet*, Vol. 8 No. 5, pp. 1923-1958.
- Frisina, M. (2011), *Influential Leadership: Change Your Behavior, Change Your Organization, Change Health Care*, American College of Healthcare Executives, Health Administration Press, Chicago, IL.
- General Medical Council (2013), "Good medical practice", available at: [www.gmc-uk.org/guidance/good\\_medical\\_practice.asp](http://www.gmc-uk.org/guidance/good_medical_practice.asp) (accessed 1 January 2018).
- Hall, L.H., Johnson, J., Watt, I., Tsipa, A. and O'Connor, D.B. (2016), "Healthcare staff wellbeing, burnout, and patient safety: a systematic review", *PLoS One*, Vol. 11 No. 7, p. e0159015, eCollection 2016, doi: [10.1371/journal.pone.0159015](https://doi.org/10.1371/journal.pone.0159015).
- Hollnagel, E., Wears, R.L. and Braithwaite, J. (2015), "From safety-I to safety-II: a white paper", The Resilient Health Care Net: Published simultaneously by the University of Southern Denmark, University of Florida and Macquarie University, available at: <http://resilienthealthcare.net/onewebmedia/WhitePaperFinal.pdf> (accessed 26 December 2017).
- Keating, K., Rosch, D. and Burgoon, L. (2014), "Developmental readiness for leadership: the differential effects of leadership courses on creating ready, willing, and able learners", *JOLE*, Vol. 13 No. 3, pp. 1-16.
- Lee, R.T., Seo, B., Hladkyj, S., Lovell, B.L. and Schwartzmann, L. (2013), "Correlates of physician burnout across regions and specialties: a meta-analysis", *Human Resources for Health*, Vol. 11 No. 48, doi: [10.1186/1478-4491-11-48](https://doi.org/10.1186/1478-4491-11-48).
- Matlow, A., Chan, M.-K., Bohnen, J.D., Blumenthal, D.M., Sánchez-Mendiola, M., de Camps Meschino, D., Samson, L. and Busari, J. (2016), "Collaborating internationally on physician leadership education: first steps", *Leadership in Health Services*, Vol. 29 No. 3, pp. 220-230.
- Pololi, L., Conrad, P., Knight, S. and Carr, P. (2009), "A study of the relational aspects of the culture of academic medicine", *Academic Medicine: Journal of the Association of American Medical Colleges*, Vol. 84 No. 1, pp. 106-114, doi: [10.1097/ACM.0b013e3181900efc](https://doi.org/10.1097/ACM.0b013e3181900efc).
- Stephenson, J. (2009), "Doctors in management", *British Medical Journal*, Vol. 339, pp. 45-95.

Swing, S.R. (2007), "The ACGME outcome project: retrospective and prospective", *Medical Teacher*, Vol. 29 No. 7, pp. 648-654.

Wisdom, J. and Wei, H. (2017), "Cultivating great teams: what health care can learn from Google", Catalyst NEJM; Blog post, February 21, available at: <https://catalyst.nejm.org/psychological-safety-great-teams> (accessed 26 December 2017).

**Further reading**

Baker, G.R. (2014), "Evidence boost: a review of research highlighting how patient engagement contributes to improved care", Institute of Health Policy, Management and Evaluation, University of Toronto, The Canadian Foundation for Healthcare Improvement, available at: [www.cfhi-fcass.ca/](http://www.cfhi-fcass.ca/) (accessed 30 December 2017).

**Corresponding author**

Jamiu Busari can be contacted at: [jamiu.busari@maastrichtuniversity.nl](mailto:jamiu.busari@maastrichtuniversity.nl)

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgrouppublishing.com/licensing/reprints.htm](http://www.emeraldgrouppublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

© Jamiu Busari, Ming-Ka Chan, Deepak Dath, Anne Matlow and Diane de Camps Meschino. This work is published under (the “License”). Notwithstanding the ProQuest Terms and Conditions, you may use this content in accordance with the terms of the License. <https://creativecommons.org/licenses/by-nc/3.0/legalcode>