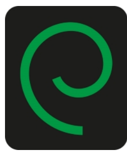
Emerald Insight

Leadership in Health Services

Collaborating internationally on physician leadership education: first steps

Anne Matlow Ming-Ka Chan Jordan David Bohnen Daniel Mark Blumenthal Melchor Sánchez-Mendiola Diane de Camps Meschino Lindy Michelle Samson Jamiu Busari

Article information:

To cite this document:
Anne Matlow Ming-Ka Chan Jordan David Bohnen Daniel Mark Blumenthal Melchor Sánchez-Mendiola Diane de Camps Meschino Lindy Michelle Samson Jamiu Busari , (2016),"Collaborating internationally on physician leadership education: first steps", Leadership in Health Services, Vol. 29 Iss 3 pp. 220 - 230
Permanent link to this document:
http://dx.doi.org/10.1108/LHS-12-2015-0049

Downloaded on: 11 November 2016, At: 02:39 (PT)
References: this document contains references to 31 other documents.
To copy this document: permissions@emeraldinsight.com
The fulltext of this document has been downloaded 61 times since 2016*

Users who downloaded this article also downloaded:

(2016),"Collaborating internationally on physician leadership development: why now?", Leadership in Health Services, Vol. 29 Iss 3 pp. 231-239 http://dx.doi.org/10.1108/LHS-12-2015-0050

(2016),"Can complexity science inform physician leadership development?", Leadership in Health Services, Vol. 29 Iss 3 pp. 251-263 http://dx.doi.org/10.1108/LHS-12-2015-0042

Access to this document was granted through an Emerald subscription provided by emerald-srm:563821 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

The current issue and full text archive of this journal is available on Emerald Insight at:
www.emeraldinsight.com/1751-1879.htm

Collaborating internationally on physician leadership education: first steps

Anne Matlow, Ming-Ka Chan, Jordan David Bohnen,
Daniel Mark Blumenthal, Melchor Sánchez-Mendiola,
Diane de Camps Meschino,
Lindy Michelle Samson and Jamiu Busari
(Author affiliations can be found at the end of the article)

Received 16 December 2015
Revised 11 March 2016
Accepted 25 April 2016

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

Abstract

Purpose – Physicians are often ill-equipped for the leadership activities their work demands. In part, this is due to a gap in traditional medical education. An emergent international network is developing a globally relevant leadership curriculum for postgraduate medical education. The purpose of this article is to share key learnings from this process to date.

Design/methodology/approach – The Toronto International Summit on Leadership Education for Physicians (TISLEP) was hosted by the Royal College of Physicians and Surgeons of Canada, and the University of Toronto's Faculty of Medicine and Institute of Health Policy, Management and Evaluation. Of 64 attendees from eight countries, 34 joined working groups to develop leadership competencies. The CanMEDS Competency Framework, stage of learner development and venue of learning formed the scaffold for the work. Emotional intelligence was selected as the topic to test the feasibility of fruitful international collaboration; results were presented at TISLEP 2015.

Findings – Dedicated international stakeholders engaged actively and constructively through defined working groups to develop a globally relevant, competency-based curriculum for physician leadership education. Eleven principles are recommended for consideration in physician leadership curriculum development. Defining common language and taxonomy is essential for a harmonized product. The importance of establishing an international network to support implementation, evaluation, sustainability and dissemination of the work was underscored.

Originality/value – International stakeholders are collaborating successfully on a graduated, competency-based leadership curriculum for postgraduate medical learners. The final product will be available for adaptation to local needs. An international physician leadership education network is being developed to support and expand the work underway.

Keywords International, Health leadership competencies, Doctors, Education, Leadership curriculum

Paper type Case study

The authors would like to acknowledge the following group for their support of the TISLEP endeavors: Dr Adalsteinn Brown, Director, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health, University of Toronto, Dr Salvatore Spadafora, Vice-Dean, Post MD Education, Faculty of Medicine, University of Toronto, Dr Jay Rosenfield, Vice-Dean, Undergraduate Medical Education, Faculty of Medicine, University of Toronto, Dr Jason Frank, Director, Specialty Education, Royal College of Physicians and Surgeons of Canada, Ms Lisa Bevacqua, Event and Project Planner. Post MD Education – Postgraduate Medical Education, Faculty of Medicine, University of Toronto.

Leadership in Health Services
Vol. 29 No. 3, 2016
pp. 220-230
© Emerald Group Publishing Limited
1751-1879
DOI 10.1108/LHS-12-2015-0049

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

Introduction

The increasing complexity of health care calls for a relatively synchronous evolution in our understanding of the competencies and capabilities that health care professionals need to deliver care effectively in modern health care systems (Porter and Teisberg, 2007; Stoller, 2014 p. 235; Arroliga *et al.*, 2014). Physician leadership is one such competency, and medical educators around the world are at various stages of responding to this need (Schwartz and Pogge, 2000; Blumenthal *et al.*, 2012; Dhaliwal and Sehgal, 2014; Frich *et al.*, 2015). The recent change in terminology from "Manager Role" to "Leader Role" in the CanMEDS Physician Competency Framework is one example of a specific, responsive change in a national medical education policy designed to promote the systematic development of core physician leadership competencies (Frank *et al.*, 2015). An opportunity to engage international medical education leaders and other stakeholders at the 2014 International Conference on Residency Education (ICRE) in Toronto, Canada, generated collaboration between the University of Toronto's (UofT) Faculty of Medicine and Institute of Health Policy, Management and Evaluation (IHPME) and the Royal College of Physicians and Surgeons of Canada (RCPSC) in hosting an international pre-conference physician leadership education summit (the Toronto International Summit on Leadership Education for Physicians, TISLEP). The aim of the summit was to explore how the expertise and experience of international educators, learners and other stakeholders in physician leadership could work together to create a common leadership curriculum amenable to contextual adaptation. Following TISLEP, an international community of practice emerged which is committed to developing, implementing and evaluating such a leadership curriculum on an international scale. The purpose of this article is to share key learnings from the collaborative efforts to date and their impact on the leadership curriculum under development.

Background

Effective physician leadership and teamwork are considered key to transforming the health care system at both the micro- and macro-systems levels. This imperative is underscored by a burgeoning literature on the topic, and more importantly by a global move to embed leadership development within medical education curricula. (Jardine 2015; AMFEM, 2008; Busari, 2015; FMEC, 2010, 2012; General Medical Council, 2012; Health Workforce Australia, 2013; NHS, 2012). Despite international recognition of the value of leadership development for health-care professionals, educators have not yet defined an "optimal" leadership-training curriculum. A systematic review of reports on physician leadership programs noted considerable variability in the conceptual frameworks, content, teaching strategies and evaluation frameworks used, and identified important outstanding gaps in existing curricula (i.e. enhancing self-awareness, systems level outcomes and interprofessional leadership education) (Frich *et al.*, 2015; Busari *et al.*, 2011). The current challenge has recently been eloquently articulated by Bekas (2015); "How to best develop leadership throughout medical education remains an open debate. Experiential learning, reflective practice, action learning, and mentoring could provide the foundations of leadership development".

The international move toward competency-based medical education provides an opportunity to embed leadership training within formal medical curricula as part of the renewal process. The RCPSC's CanMEDS Competency Framework has formed the

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

backbone of medical education across Canada and several other countries and represents an example of how this could be facilitated. In the Leader role, as defined in the new CanMEDS 2015 Competency Framework:

> […] physicians engage with others to contribute to a vision of a high-quality health- care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers (Frank *et al.*, 2015).

The competencies outlined therein offer a preliminary roadmap to achieving competence. This change in training requirements, combined with the fact that robust medical-leadership training is already occurring in various places worldwide, suggested that collective expertise could be harnessed to create a leadership curriculum for widespread use. Taking to heart the words of caution offered by Bekas:

> […] application of the aforementioned (i.e. experiential learning, reflective practice, action learning, and mentoring) should be cautious due to limitations of the concept of leadership as currently promoted and lack of robust evaluation strategies (Bekas, 2015).

A commitment to a robust and well-documented process of curriculum development, implementation and evaluation was made.

Process

Physician and/or health-systems leadership education has long been a focus at the UofT's IHPME and for the past five years in the undergraduate medical curriculum as well. Arising out of the CanMEDS 2015 Leader Role consultation process, a partnership was established between IHPME, UofT's Faculty of Medicine, and the RCPSC to highlight physician leadership education through an international summit. Clinical educators from the RCPSC and representatives from UofT's two institutions formed a committee to organize the event. Given the readiness in the postgraduate arena and the opportunity to synergize with ICRE, the committee decided to focus on physician leadership education in postgraduate medical education, from "requirements for residency" through to "transition to practice" (Frank *et al.*, 2015). The committee agreed unanimously prior to the summit that, in principle, all physicians require basic leadership competencies, and training should start as early as in the undergraduate years. This view was based on the premise that all physicians are leaders by virtue of the social contract assumed with their position as health care providers, and that front line practitioners take on leadership in the course of their normal daily work. While physicians interested in titular roles and system level change should be able to access more advanced leadership training over time, a primary focus on leadership competencies for all learners, from undergraduate through to practice emerged as the starting point.

TISLEP 2014, Toronto proceedings and follow-up activities

TISLEP 2014 was held as a one-day, by-invitation-only pre-conference summit and included a plenary session and panel discussion, two series of breakout groups and a final wrap-up session. The purpose statement for the Summit, as described in the invitation was the following:

> An international audience of thought leaders and educators will meet to advance the conversation on the many physician leadership types and their requisite competencies, and discuss how stakeholders can collaborate to build the physician leaders of tomorrow. The goal

> will be to create guiding principles for developing a physician leadership curriculum that will complement implementation of CanMEDS 2015 thereby driving improvement of the health care system.

An annotated bibliography linking to three key references (Frenk *et al.*, 2010; FMEC, 2010, 2012) was pre-circulated to all attendees, as was a draft document (unpublished) by Adalsteinn Brown and colleagues outlining five draft guiding principles on leadership development for consideration. The latter, reiterated in the Proceedings of the Summit (TISLEP, 2014), are outlined below:

(1) All physicians are expected to be leaders within their clinical practice environment.

(2) Leadership (in health care) is a people business so it must be taught and learned around the people with whom leaders will need to work.

(3) Leadership training tailored to the clinical or system level should be guided by a framework that pays attention to competency, character and managerial skills.

(4) Because of the importance of the character traits needed by leaders, training should be grounded in situations and experiences that reflect the challenges that physicians will face.

(5) Leadership training goals should ultimately focus on better health-system performance.

Of 104 invitees, 64 individuals from eight countries attended the Summit, including; patient representatives, physicians and other health care professionals; professionals and educators from fields outside of health care; and administrators and learners. An array of expertise was desired and represented, ranging from local, organizational and systems level leadership to experts in patient safety, quality improvement, resource stewardship, business, leadership and education. This wide representation also provided broad-based and complementary inputs. The summit attendees agreed that the guiding principles were on the right track and were also a good starting point. The summit served to create a sense of urgency for the issues at hand and actually catalyzed the curriculum development process, including a commitment to the presentation of preliminary curricular content two years later at TISLEP 2016.

A post-summit electronic survey identified 34 individuals from five countries interested in developing a postgraduate leadership curriculum. These individuals were assigned a working group (WG) according to their stated area of interest: Four WGs examined physician leadership competencies by venue of delivery (classroom versus workplace) and by the level of learner background and/or future aspiration (core versus advanced) respectively. A fifth WG focused on program evaluation and scholarship. Regular virtual and phone WG meetings were convened by WG co-chairs, who conducted their WG activities similarly with calls spanning up to four time zones. The WG chairs themselves formed a multi-perspective advisory group tasked with making recommendations for a leadership curriculum that could be implemented and contextually adapted to meet the needs of different training programs in varied environments, including internationally. The CanMEDS Competency Framework was selected by consensus as the medical education scaffold for the work, and preliminary work was targeted for presentation at TISLEP 2015 in Vancouver, British Columbia, Canada. To facilitate the process described above, it was decided that approvals and

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

decisions would be made through alignment rather than by consensus. More specifically, if WG members disagreed with a decision, they were asked to present an alternative proposal for consideration. If dissent persisted after the alternative proposal was presented, the original decision would stand.

The TISLEP, 2014 agenda was designed to probe existing assumptions about physician leadership, identify current controversies and begin to address opportunities for an international agenda on curriculum development and scholarship. Summit participants were first invited to confront the prevailing model of leadership, which is anchored in theories and leadership skills, and instead consider an approach where insights gained from participants' personal leadership experiences iteratively inform their actions and perspectives (Souba, 2011). What leadership is, and how it can be learned, was a focal point of WG discussions. A recent systematic review noted:

> […] the leadership programs described in the medical literature focus more on the "*know*" and "*do*" elements of leadership than the "*be*" component, which some argue is fundamental in attaining the capacity to lead. (Frich *et al.*, 2015)

Subsequent WG deliberations affirmed the need to emphasize understanding what it means to "*be a leader*," as well as the centrality of this concept to any leadership curriculum.

Before the WGs committed to a particular leadership framework, they encountered fundamental challenges stemming from the different lenses through which they viewed the task of building a physician leadership curriculum. Firstly, while dividing the groups by *locus* of teaching and learning had initially seemed to be a logical way of distributing the workload, many WG members noted that the terms used to define specific WG objectives were ambiguous. For example, would morbidity and mortality rounds be classified as a "workplace activity" or a "classroom activity"? One group considered "classroom" to include traditional settings (lectures, workshops, and seminars) as well as other ways of learning (e.g. through supervision and coaching). In an effort to make sense of terminology, another WG relabeled the activities as either "work activities" (one's professional practice) or "non-work activities" (only education for the participants). Yet another attempt at classification differentiated between learning that focused merely on the acquisition of general knowledge and/or skills (e.g. "*learner-centric*") and learning which was related to provider-patient interactions at the point of care ("learner/patient-centric"). This description was ultimately questioned given that all learning is ultimately focused on the patient. The complexity of classifying educational activities is apparent in Table I, which describes the different categories and demonstrates the overlap among them. The deliberation did however lead us to the essential realization that opportunities to learn leadership were vast and varied, and must include both didactic and interactive learning.

WG members also debated about the difference between "core" and "advanced" milestones. For example, were core milestones landmarks for *all* learners or those required in the "core" years of training? Were the advanced milestones for those further along in their training or for those who already had basic leadership competencies at the time of entry into a post-graduate medical training program (e.g. by virtue of already having a Masters in Business Administration)? This conundrum was partially addressed by replacing the terms "core" and "advanced" with "essential" and "enriched", terms that had been previously applied in the development of a

competency-based family medicine curriculum (Iglar *et al.*, 2013). Essential competencies were those expected of all physicians at the end of their residency, usually learned and evaluated at each training site. In contrast, enriched competencies were more advanced; not all residents were expected to achieve this level of competency by the end of their clinical training, and the specific training necessary (for some) to attain this degree of leadership skill likely would not be available at all training sites. However, the WGs continued to debate how to assign particular competencies to the basic and/or enriched stratum, and which competencies should be placed in which category.

TISLEP 2015 and subsequent activities

In preparation for TISLEP 2015, WGs decided to focus on a single competency to test the cohesiveness of the process and products of international collaboration. Emotional intelligence (EI) was chosen for this purpose for three reasons: First, it resonated with all WG chairs, given the incontrovertible centrality of self-awareness to being an effective leader. Second, EI had been a central topic of discussion during TISLEP 2014 – including conversations about how the lived experience of being a leader is key to one's growth in this role. Third, the logic of focusing on EI was further substantiated by evidence that residents' degree of EI could predict their success during residency (Ishak *et al.*, 2009). The group defined EI as:

> […] the ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth. (Mayer and Salovey, 1997, p. 5)

To develop a framework for their work, most WGs mapped the stages of the CanMEDS professional life cycle against EI attributes including self-awareness, self-regulation/

Terms	Educational description	Examples of learning
"Classroom activities" i.e. related to traditional educational settings	Lecture halls, workshops, and seminars	Virtual classroom, journal clubs, peer to peer interactions, supervision, coaching, mentorship, homework projects, clinical rounds, research, grants, and external leadership courses
"Work activities" i.e. related to the physician's professional practice	Patient care at the bedside, health administration, research activities, teaching activities	Participating in meetings, writing grant proposals, organizing patient discharge
"Non-work activities" i.e. related to the learning that is not directly related to patient contact	Non patient care/administration/research/teaching outcome from actions	Leading a mock resuscitation in the simulation lab or attending a large group session
"Learner centric" activities	Learning that is focused merely on the acquisition of general knowledge and/or skills	Grand rounds, seminars, surgical skills course
"Learner/patient centric" activities	Competencies acquired at the interface of direct patient care respectively	Bedside rounds, morbidity and mortality rounds, observed learner-patient interaction

Table I. Alternate methods for classifying learning activities by venue of learning

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

self-management, motivation, social awareness/empathy and social skill (Goleman, 1998); these attributes were felt to support the concepts of being a reflective learner and reflective practitioner. It was recognized that not every postgraduate resident would become competent in every component of EI and that they could be stronger in some areas than others. A combination of milestones, teaching and assessment strategies, or tools and resources applicable to each EI attribute were also included in the mapping exercise. The availability of existing tools to measure EI might abrogate the need to develop measurement tools *de novo*.

The following list outlines 11 key concepts exacted from the outputs of the WGs that were proposed for integration into an international physician leadership curriculum:

(1) All physicians are leaders and must be competent leaders.

(2) Leadership is relationship-centered; all stakeholder relationships influence health care delivery (e.g. relationships between patients, physicians, other healthcare providers, institutional management and government).

(3) Physician leadership education will enhance excellence in relationship-centred integrated health care.

(4) Leadership competencies can be mapped against the stages of the professional life cycle, providing a scaffold for graded milestone development.

(5) The leadership curriculum should be spiraled, with competencies being revisited along the professional life cycle.

(6) While clinically-based learning remains the mainstay for acquisition of clinical competencies, more formal classroom-type learning still plays an important role. Foundational knowledge and/ or learning an organized approach to material can be taught in a traditional or flipped classroom and / or using simulation.

(7) A wide variety of traditional medical education teaching and assessment strategies can be used both in the classroom and in the workplace.

(8) Both existing general leadership and health care professional leadership tools and resources are available; the former can be adapted for use in physician leadership training rather than starting to create resources de novo.

(9) At an enriched level, physician leadership education will enhance system level integrated health care and enable learners to be active contributors and architects of the system.

(10) A common language and taxonomy is important for international leadership curriculum development.

(11) A leadership curriculum developed for international use should be kept high level to allow for contextual adaptation.

The first three focus on physicians as leaders and the importance of physician leadership education, and five are general statements regarding an educational framework and teaching and assessment strategies for physician leadership education. One acknowledges the importance of offering an enriched curriculum for those interested in pursuing system level change. The last two statements address the underpinnings of an international curriculum, which requires a common language and

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

should be maintained as a high-level competency framework to enable contextual and cultural adaptation as required.

Notwithstanding alignment across all WGs around these concepts, fundamental questions still remained. At a basic level, which leadership competencies should be considered essential for all physicians? Which are the enriched competencies? Should faculty select individuals for enriched training, should learners self-select, or can both approaches be considered routes to the enriched experience? All of these questions may be best answered by consideration of the local training and/or cultural context.

More substantive leadership competency training issues became apparent while working through the exemplar EI. For example, what is the approach to the learner who is not achieving the appropriate milestones and/or does not acquire the basic EI competencies by the end of their training? What EI competencies are requisite for the faculty involved in leadership training? How is the time of clinicians protected to assist learners who are deficient in their EI abilities? Many of these questions highlight the common challenges in assessing competencies. Assessment by observation is a hallmark of competency-based medical education (Holmboe, 2015); however, the transformation to competency-based medical education will require a full program of assessment to capture the many facets and nuances of the competencies (Holmboe and Batalden, 2015, Whitehead *et al.*, 2015).

Finally, issues related to the ultimate challenge of developing a globally relevant and generalizable physician leadership curriculum remain. What local infrastructure(s) are required for contextual and cultural adaptation? And how can an international curriculum be transferable to countries/medical schools that do not use a competency-based program? The importance of establishing and growing a community of practice to support implementation, evaluation, sustainability and spread of the program was underscored, and a commitment to inviting further input, particularly from our international partners who join the community was made.

Participants to date and others who have joined since TISLEP 2015 are committed to further development, implementation and evaluation of this postgraduate physician leadership curriculum. The first curriculum modules are expected to be launched in September 2016 at TISLEP 2016. By consensus of the WG chairs, the LEADS leadership framework (LEADS Collaborative, 2015) will be integrated with CanMEDS going forward. Key topics are being selected by the WGs through a modified Delphi process. The goal is to have two case-based–competency-based modules for each of the five pillars of LEADS ready for presentation at TISLEP 2016. An international network is being formalized under whose auspices this curriculum will fall; members have a vested interest in following the course of design, implementation and evaluation of the curriculum, and plan to contribute meaningful related scholarship to the literature.

Discussion

The international and intercontinental collaboration of a dedicated consortium of educators, learners, patients and others has resulted in the development of a scaffold on which to build a globally relevant, competency-based physician leadership curriculum. For the first time, relevant expertise within and outside health care has been harnessed for co-producing such a leadership curriculum. Although there have been challenges finding the terminology that captures the intended concepts in

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

graduated competency and learning strategies, the deliberations have proven valuable in highlighting the necessity for a common language and functional taxonomy for international collaboration. The principles proposed for developing a competency-based leadership curriculum will ideally be generalizable to others undertaking a similar task. Content development is underway through regular virtual and phone communication, and a target date has been set for completing the curriculum.

A review of the literature suggests that the approach used to conceptualize and develop the competency-based medical curriculum described herein is unique. The unique aspects of this competency-based curriculum include its reflection of global differences in existing educational frameworks and teaching and learning strategies, resulting in international co-development and opportunities for contextual adaptation. It is hoped that the geographic diversity of participants in this curriculum development effort will help to facilitate widespread acceptance in a variety of training contexts and locations, enable additional curriculum modifications and development, and ultimately mitigate barriers to successful course implementation. It is also hoped that curriculum dissemination, implementation, program evaluation and sustainability, will be enabled through consolidation of a dedicated community of practice that will share learnings and facilitate adaptations as required. It will also allow for an unprecedented opportunity to look at outcomes through large-scale program evaluation and collection of outcomes data. Formalization of the group with terms of reference is underway, and international support through grant funding and other means is being sought. Inclusivity and cultural awareness are core values of the community and affiliation is open to all who are interested in this subject. While scholarship activities will be key to disseminating the results of these efforts, this academic work will also serve to enhance the immeasurable value of the networking and relations derived from them.

References

AMFEM (2008), "Perfil por Competencias del Médico General Mexicano", available at: www.amfem.edu.mx (accessed 29 November 2015).

Arroliga, A.C., Huber, C., Myers, J.D., Dieckert, J.P. and Wesson, D. (2014), "Leadership in health care for the 21st century: challenges and opportunities", *American Journal of Medicine*, Vol. 127, pp. 246-249.

Bekas, S. (2015), "Leadership development in UK medical training: pedagogical theory and practice", *Teaching and Learning in Medicine*, Vol. 27 No. 1, pp. 4-11.

Blumenthal, D.M., Bernard, K., Bohnen, J.D. and Bohmer, R. (2012), "Addressing the leadership gap in medicine: residents' need for systematic leadership development training", *Academic Medicine*, Vol. 87 No. 4, pp. 513-522.

Busari, J.O. (2015), "#MedEd and #leadership: a synopsis of a new Dutch framework", ICENETblog, available at: http://icenetblog.royalcollege.ca/2015/12/04/meded-and-leadership-a-synopsis-of-a-new-dutch-framework/

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.

Dhaliwal, G. and Sehgal, N.L. (2014), "Demystify leadership in order to cultivate it", *Academic Medicine*, Vol. 89 No. 11, p. 1441.

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

Frank, J.R., Snell, L. and Sherbino, J. (Eds) (2015), *CanMEDS 2015 Physician Competency Framework*, Royal College of Physicians and Surgeons of Canada, Ottawa, available at: CanMEDS.royalcollege.ca (accessed 12 December 2015).

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. 376 No. 9756, pp. 1923-1958.

Frich, J.C., Brewster, A.L., Cherlin, E.J. and Bradley, E.H. (2015), "Leadership development programs for physicians: a systematic review", *The Journal of General Internal Medicine*, Vol. 30 No. 5, pp. 656-674.

Future of Medical Education in Canada (FMEC) (2010), "A collective vision for MD education", available at: www.afmc.ca/future-of-medical-education-in-canada/medical-doctor-project/pdf/collective_vision.pdf (accessed 14 December 2015).

Future of Medical Education in Canada (FMEC) (2012), "A collective vision for MD education", available at: www.afmc.ca/future-of-medical-education-in-canada/postgraduate-project/pdf/FMEC_PG_Final-Report_EN.pdf (accessed 14 December 2015).

General Medical Council (2012), "Leadership and management for all doctors", available at: www.gmc-uk.org/Leadership_and_management_for_all_doctors_FINAL.pdf_47234529.pdf (accessed 14 December 2015).

Goleman, D. (1998), "What makes a leader?", *Harvard Business Review*, Vol. 76 No. 6, pp. 93-102.

Health Workforce Australia (2013), "Health LEADS Australia: the Australian health leadership framework", available at: www.hwa.gov.au/sites/uploads/Health-LEADS-Australia-A4-FINAL.pdf (accessed 14 December 2015).

Holmboe, E.S. (2015), "Realizing the promise of competency-based medical education", *Academic Medicine*, Vol. 90 No. 4, pp. 411-413.

Holmboe, E.S. and Batalden, P. (2015), "Achieving the desired transformation: thoughts on next steps for outcomes-based medical education", *Academic Medicine*, Vol. 90 No. 9, pp. 1215-1223.

Iglar, K., Whitehead, C. and Takahashi, S.G. (2013), "Competency-based education in family medicine", *Medical Teacher*, Vol. 35 No. 2, pp. 115-119.

Ishak, W.W., Lederer, S., Mandili, C., Nikravesh, R., Seligman, L., Vasa, M., Ogunyemi, D. and Bernstein, C.A. (2009), "Burnout during residency training: a literature review", *The Journal of Graduate Medical Education*, Vol. 2, pp. 236-242.

Jardine, D., Correa, R., Schultz, H., Nobis, A., Lanser, B.J. and Ahmad, A. *et al.* (2015), "The need for a leadership curriculum for residents", *The Journal of Graduate Medical Education*, Vol. 7, pp. 307-309.

LEADS Collaborative (2015), "LEADS in a caring environment framework", available at: www.leadersforlife.ca/site/framework (accessed 15 December 2015).

Mayer, J.D. and Salovey, P. (1997), "What is emotional intelligence?", in Salovey, P. and Sluyter, D. (Eds), *Emotional Development and Emotional Intelligence: Implications for Educators*, Basic Books, New York, NY, pp. 3-31.

NHS Institute for Innovation and Improvement Medical Leadership Competency Framework (2012), available at: www.leadershipacademy.nhs.uk/wp-content/uploads/2012/11/NHS Leadership-Leadership-Framework-Medical-Leadership-Competency-Framework-3rd-ed.pdf (accessed 14 December 2015).

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)

Porter, M.E. and Teisberg, E.O. (2007), "How physicians can change the future of health care", *JAMA*, Vol. 297 No. 10, pp. 1103-1111.

Schwartz, R.W. and Pogge, C. (2000), "Physician leadership: essential skills in a changing environment", *The American Journal of Surgery*, Vol. 180 No. 3, pp. 187-192.

Souba, W. (2011), "A new model of leadership performance in health care", *Academic Medicine*, Vol. 86 No. 10, pp. 1241-1252.

Stoller, J.K. (2014), "Help wanted: developing clinician leaders", *Perspectives on Medical Education*, Vol. 3, pp. 233-237.

Toronto International Summit on Leadership Education for Physicians Toronto, Canada, Report of Proceedings (TISLEP) (2014), available at: http://tislep.pgme.utoronto.ca/wp-content/uploads/2014/05/TISLEP2014_Report_of_Proceedings.pdf (accessed 5 March 2016).

Whitehead, C.R., Kuper, A., Hodges, B. and Ellaway, R. (2015), "Conceptual and practical challenges in the assessment of physician competencies", *Medical Teacher*, Vol. 37 No. 3, pp. 245-251.

Further reading

Lee, T.H. (2010), "Turning doctors into leaders", *Harvard Business Review*, Vol. 88 No. 4, pp. 50-58.

Scheele, F., Teunissen, P., Van Luijk, S., Heineman, E., Fluit, L., Mulder, H., Meininger, A., Wijnen-Meijer, M., Glas, G., Sluiter, H. and Hummel, T. (2008), "Introducing competency-based postgraduate medical education in the Netherlands", *Medical Teacher*, Vol. 30 No. 3, pp. 248-253.

Author affiliations

Anne Matlow, University of Toronto, Toronto, Canada

Ming-Ka Chan, Department of Paediatrics and Child Health, University of Manitoba, Winnipeg, Canada and Royal College of Physicians and Surgeons of Canada, Ottawa, Canada

Jordan David Bohnen, Department of Surgery, Massachusetts General Hospital, Boston, Massachusetts, USA and Harvard Medical School, Boston, Massachusetts, USA

Daniel Mark Blumenthal, Division of Cardiology, Massachusetts General Hospital, Boston, Massachusetts, USA

Melchor Sánchez-Mendiola, Department of Medical Education, UNAM Faculty of Medicine, Mexico City, Mexico

Diane de Camps Meschino, Department of Psychiatry, University of Toronto, Toronto, Canada

Lindy Michelle Samson, Department of Pediatrics, University of Ottawa, Ottawa, Canada, and

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

Corresponding author

Anne Matlow can be contacted at: anne.matlow@utoronto.ca

For instructions on how to order reprints of this article, please visit our website:
www.emeraldgrouppublishing.com/licensing/reprints.htm
Or contact us for further details: **permissions@emeraldinsight.com**

Downloaded by TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES At 02:39 11 November 2016 (PT)