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Article information:

To cite this document:

Ming-Ka Chan Diane de Camps Meschino Deepak Dath Jamiu Busari Jordan David Bohnen Lindy Michelle Samson Anne Matlow Melchor Sánchez-Mendiola, (2016), "Collaborating internationally on physician leadership development: why now?", Leadership in Health Services, Vol. 29 Iss 3 pp. 231 - 239

Permanent link to this document: http://dx.doi.org/10.1108/LHS-12-2015-0050

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Collaborating internationally on physician leadership development: why now?

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

231

Received 16 December 2015 Revised 26 March 2016 Accepted 25 April 2016

Abstract

Purpose – This paper aims to highlight the importance of leadership development for all physicians within a competency-based medical education (CBME) framework. It describes the importance of timely international collaboration as a key strategy in promoting physician leadership development.

Design/methodology/approach – The paper explores published and Grey literature around physician leadership development and proposes that international collaboration will meet the expanding call for development of leadership competencies in postgraduate medical learners. Two grounding frameworks were used: complexity science supports adding physician leadership training to the current momentum of CBME adoption, and relational cultural theory supports the engagement of diverse stakeholders in multiple jurisdictions around the world to ensure inclusivity in leadership education development.

 $\label{eq:Findings-An} {\bf Findings-An} \ {\bf international} \ {\bf collaborative} \ {\bf identified} \ {\bf key} \ {\bf insights} \ {\bf regarding} \ {\bf the} \ {\bf need} \ {\bf to} \ {\bf frame} \ {\bf physician} \ {\bf leadership} \ {\bf education} \ {\bf within a \ competency-based model}.$

 $\label{eq:practical implications-International collaboration can be a vehicle for developing a globally relevant, generalizable physician leadership curriculum. This model can be expanded to encourage innovation, scholarship and program evaluation.$

Originality/value – A competency-based leadership development curriculum is being designed by an international collaborative. The curriculum is based on established leadership and education frameworks. The international collaboration model provides opportunities for ongoing sharing, networking and diversification.

Keywords Health leadership competencies, Health education, Doctors, International, Competency-based

Paper type Conceptual paper

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 Toronto.



Leadership in Health Services Vol. 29 No. 3, 2016 pp. 231-239 © Emerald Group Publishing Limited 1751-1879 DOI 10.1108/LHS-12-2015-0050

LHS Introduction

29.3

232

Society charges physicians and other healthcare professionals with the responsibility for developing, maintaining and improving both the delivery of healthcare to individual citizens and the integrity of the healthcare system as a whole. As healthcare delivery to individual patients and the systems in which they are delivered continuously evolve over time, so also must the relevant leadership competencies required of physicians. To remain relevant, medical educators must include leadership development as a standard - component of medical education curricula. This paper presents the argument that an international effort to develop a leadership curriculum for every physician is timely and imperative. It begins by describing the concept of an everyday physician leader and comparing this with leaders who hold titled positions. The paper looks at some existing leadership training programs and argues for explicit leadership training for all physicians. Finally, the paper calls for an international effort to develop a locally adaptable curriculum of leadership training for all physicians, which can be deployed in conjunction with the change to competency-based medical education (CBME).

Choosing a definition of physician leadership

Jurisdictions around the world are realizing that physician leadership is crucial to the operation of better healthcare systems. They call for more physician leaders to enhance high quality, efficient, responsive systems; to improve physician engagement and responsibility; and to develop broad-based health and healthcare equity (Stoller, 2009; Frenk *et al.*, 2010; Dickson, 2016). However, controversy exists regarding the definition of physician leadership, and the appropriate strategies for cultivating it (Van Aerde, 2013; Frich *et al.*, 2015). Additionally, leadership and management are often either conceptually separated or seen to overlap (Mintzberg, 2013). CanMEDS (2015) recently accentuated "Leader" as a domain of competencies that all physicians must learn and demonstrate. This medical education framework defines leaders as able to:

[...] engage with others to contribute to a vision of a high-quality healthcare system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars or teachers (Frank *et al.* 2015 page 20, line 1).

The framework highlights leadership competencies but does not negate the managerial competencies that support good leadership. The Leader Role attempts to re-situate the physician as a leadership partner in the healthcare system while dispelling the notion that the term "leader" means the "boss" of an organization or team (Dath *et al.*, 2015). The inclusion of leadership competencies into a major medical educational framework highlights the importance of leadership development for physicians. It provides a call to action to our international community of medical educators to better understand what physician leadership is, as well as how to teach and assess it.

Physicians must practice as everyday leaders

All physicians need to demonstrate leadership in the course of their everyday duties. These "everyday" leaders do not use formal titles when they act at the point of patient care or carry out their other professional activities (Dath *et al.*, 2015; Voogt *et al.*, 2015). Everyday physician leaders should develop functional relationships, optimize quality, enhance safety and improve efficiency in local clinical environments by exercising both leadership and managerial competencies (Baker and Black, 2015; Plsek and Wilson, 2001). They need to align with others for the common purpose of patient care and to

monitor individual and system performance to improve outcomes (Bohmer, 2013, 2010). Faculty who teach learners may not themselves have had training in leadership and therefore do not explicitly teach the leadership they practice. Learners often pick up their leadership competencies opportunistically instead of comprehensively. This current state of leadership training is no longer considered good enough to develop the everyday physician leader.

Titled leadership uses everyday leadership competencies

Titled physician leaders use many of the same leadership competencies that they do in their everyday roles. The differences however are in the application. For instance, everyday leaders may cultivate relationships between individuals to improve care for a single patient while titled leaders may need to develop relationships between institutions and governing bodies to align shared goals (Dickson and Tholl, 2014). Titled leaders also make themselves responsible to the organization bestowing the title. They thereby gain positional authority to effect their mandates in their organizations, just as physicians have authority to act on behalf of their patients in the course of their daily work. Clearly, the requisite competencies of everyday physician leaders generally overlap those used in titled roles.

Traditional leadership training should become leadership education for all physicians

The long tradition of providing formal leadership training for only some titled physician leaders continues to prevail, and there is no shortage of healthcare leadership programs and courses that still target this need (Frich *et al.*, 2015; Dickson, 2016). Some specialty-specific organizations have also developed leadership training programs for their learners and faculty who hold leadership titles (ACGME and ABIM, 2015; ACGME and ABS, 2015; Swensen *et al.*, 2013). However, the complex systems that comprise healthcare require leaders at all levels who can innovate in the context of uncertainty, collaborate and engage their peers and lead themselves, their relationships and the system in which they work (Begun *et al.*, 2003; Hamui-Sutton *et al.*, 2015). Physicians who aim for or are called upon to assume titled leadership roles will be better prepared for these positions if they have already developed leadership competencies in their training. Therefore, it is important for all clinicians to become competent leaders early in their training and to continue to improve and adapt their leadership competencies throughout their careers (FMEC, 2010, 2012).

Everyday physician leaders comprise the largest leadership force in our healthcare systems. Yet, they do not receive the same educational attention that organizational and systems leaders do. Medical educators are now recognizing that leadership education today should prepare *all* physicians to be everyday leaders in their daily clinical practices and academic work (Dath *et al.*, 2015; Voogt *et al.*, 2015; Bohmer, 2013). From an educational perspective, leadership development is considered one of the critical steps needed to guide medical education and healthcare forward (Baker and Black, 2015; Berkenbosch *et al.*, 2013; Blumenthal *et al.*, 2012; FMEC, 2010, 2012; Dickson, 2016).

Consultations around the world regarding medical education renewal show that leadership development must start early in the educational continuum and that learners must continue to build on these capacities, as they progress through training (Coltart *et al.*, 2012; Frenk *et al.*, 2010; Frich *et al.*, 2015; FMEC, 2010, 2012; Cooke *et al.*, 2010). This

Physician leadership development need to develop physician leadership training has spurred medical and educational organizations around the world (Frank *et al.*, 2015; Busari, 2015; RACMA, 2011; Sánchez-Mendiola, 2015; GMC, 2012) to define physician leadership in their frameworks. These organizations have embraced leadership development during training as one of the critical steps needed to move medical and health professions education forward, and foster the changes needed to improve patient care. The various bodies have approached leadership training differently and are in different stages of their deployment. Many more jurisdictions are without the capacity to develop and institute leadership training. What is lacking is an international effort to develop a common platform for leadership development curriculum in medical education.

Seizing the opportunity to develop an international medical education leadership curriculum

As jurisdictions around the world adopt CBME frameworks that espouse leadership training, they will all need to incorporate competency-based leadership development curricula. The prospect of each jurisdiction having to separately develop its own leadership curriculum led the University of Toronto and the Royal College of Physicians and Surgeons of Canada to convene an international summit (Toronto International Summit for Leadership Education for Physicians – TISLEP) in 2014 where participants could discuss and define the guiding principles of physician leadership training. The goal of TISLEP was:

[...] to articulate key principles for leadership development in postgraduate medical education and exchange ideas around core curriculum and milestone stages, implementation issues, program evaluation strategy and scholarship agenda (TISLEP, 2014, page 2, para 3).

TISLEP's process involved broad consultation with learners, patients, faculty (health professional, medical and business), educators and healthcare leaders from around the world. By the end of the summit, the organizers had a small, multi-national group of participants committed to co-create an internationally relevant leadership curriculum (Batalden *et al.*, 2015). It was agreed that an international group of medical educators and other stakeholders should tackle the challenge of developing a curriculum for medical education leadership that could be disseminated and adapted to local contexts around the world. The agreement will be realized by the presentation of initial working modules at the upcoming 2016 TISLEP event and ongoing production thereafter. The discussion presented in this paper evolved from the 2014 TISLEP and subsequent work.

TISLEP participants acknowledged the need to align with previously developed CBME and leadership frameworks as a way to improve the relevance of the curriculum being developed. Originality and breadth was secured by tapping into the international background of the participants and leveraged a more global approach to curricular development. The education and leadership frameworks share enough similarities that choosing one as a template would allow adopters to translate the curriculum to the others. Participants chose to align with the CanMEDS (2015) Framework and the LEADS Framework, as both have already been used globally. CanMEDS emphasizes the need for everyday leadership (Dath *et al.*, 2015), while LEADS stresses developing leadership for all healthcare professionals as a strategic enabler for health system transformation (Dickson and Tholl, 2014). The two frameworks together will facilitate the folding of a comprehensive set of leadership concepts into a sound and

future-oriented educational design. A leadership curriculum aligned with the two frameworks would fit nicely into many CBME programs around the world, especially if it were designed from the beginning with international input.

A physician leadership curriculum should be developed with international collaboration

In their landmark paper on the future education of health professionals, Frenk and colleagues made a compelling case for leadership development in healthcare professionals *worldwide* (Frenk *et al.*, 2010). They argued that leadership via healthcare education curricula is essential for addressing the demands and leading the changes needed to improve patient care. From a practical viewpoint, international collaboration would be necessary at the beginning of a curriculum's development to inject a diversity of ideas and cultures. This collaboration makes the project outcome more useable across borders.

A wider engagement in the development of healthcare leadership education is supported by relational cultural theory. In the past, resources were developed locally or regionally and disseminated. However, in a continually shrinking global village, relationship cultural theory supports the inclusion of as many diverse contributors as possible in the co-creation of resources that are common to all (Baker Miller, 2016). Diversity increases with the intentional integration of leadership training across the continuum of medicine from undergraduate medical education into practice. It also would be enriched when it reaches out to other health professions. Such a broad integration will take some time to accomplish, but should not delay the initiation of an effort to start with a postgraduate curriculum. Relational cultural theory examines the intended and unintended impact of culture, power differentials, social, political, sex and gender stratification, privilege and marginalization. The theory makes it clear that the consequence of including only the voices of dominant powers is the exclusion of less dominant individuals and societies (Baker Miller, 2016). An international process gives all developers of a resource the opportunity to lend their thoughts and experiences, create relationships, become parts of networks and contribute mutually on an equal footing as early as possible during resource development.

So how can an international collaboration facilitate meeting the needs of healthcare globally? It could leverage diversity, resources and shared experiences and increase the number of participants engaged in finding new solutions to recurrent problems. International collaboration can foster leadership, education, assessment, program evaluation and the capacity of coalitions to influence systems.

A physician leadership curriculum should be deployed with competencybased medical education

Complexity science provides scaffolding to understand how to change complex systems. It suggests that deliberate changes can best succeed by piggybacking upon significant system disruptions (Zimmerman *et al.*, 2008). The development of a physician leadership curriculum is happening during such a major disruption in postgraduate medical education. The movement to CBME began slowly but has gained significant momentum in the international community. Around the world, jurisdictions are adopting CBME into postgraduate medical education and looking for ways to adapt it to their local contexts (Frank *et al.*, 2010; Iglar *et al.*, 2013). To be successfully deployed

Physician leadership development in tomorrow's medical schools, a leadership curriculum must marry a well-accepted leadership framework with an established CBME framework. This integration is precisely the strategy that the TISLEP participants chose. A competency-based physician leadership curriculum would capitalize on the CBME movement to embed new leadership thinking and cultures into practices for the improvement of health systems worldwide.

Conclusions

CBME is being adopted to take physician education into the next century. At the same time, society is calling for greater physician engagement and leadership. This paper presents the benefits of developing a leadership curriculum that can be shared internationally and eventually integrated with wider healthcare leadership training and across the continuum of medical education and practice. It describes the synergy of timing and the benefits of international collaboration. The incorporation of physician leadership education into the process of CBME change is efficient, synergistic and likely to succeed. A co-created curriculum developed to be comprehensive in scope can have greatest impact when it incorporates the input of a diverse group of collaborators. The initial TISLEP summit began with the intention of gathering an international audience and ended with the reality of an expanding, international collaborative. The individuals have since committed to work together, to draw in a greater diversity of collaborators and to design their products so that they can be adapted into any competency-based program. The group will continue to call for wider participation and to remain engaged in the dissemination of their work.

Physician leadership is ubiquitous. All physicians must lead as they care for their patients, manage the healthcare system and carry out their other professional duties. Major reviews of the medical education systems around the world (Frenk *et al.*, 2010; Cooke *et al.*, 2010; FMEC, 2010, 2012) have identified leadership as a force for positive change and a crucial ingredient of healthcare improvement globally in the coming decades. Change and improvement can only be realized when all physicians enhance their everyday leadership competencies and when those assuming titled roles have a firm foundation in leadership competencies. A collaboratively developed physician leadership curriculum could provide such a foundation.

References

- Accreditation Council for Graduate Medical Education and American Board of Internal Medicine (2015), *The Internal Medicine Milestone Project*, available at: www.acgme.org/acgmeweb/portals/0/pdfs/milestones/internalmedicinemilestones.pdf (accessed 12 December 2015).
- Accreditation Council for Graduate Medical Education and American Board of Surgery (2015), *The General Surgery Milestone Project*, available at: www.acgme.org/acgmeweb/portals/ 0/pdfs/milestones/surgerymilestones.pdf (accessed 12 December 2015).
- Baker Miller, J. (2016), "Relational cultural theory", available at: www.jbmti.org/Our-Work/ relational-cultural-theory (accessed 25 February 2016).
- Baker, R. and Black, G. (2015), Beyond the Quick Fix: Strategies for Improving Patient Safety, Institute of Health Policy, Management and Evaluation, University of Toronto, available at: http://ihpme.utoronto.ca/2015/11/beyond-the-quick-fix/ (accessed 12 December 2015).

LHS

29.3

236

- Batalden, M., Batalden, P., Margolis, P., Seid, M., Armstrong, G., Opipari-Arrigan, L. and Hartung, H. (2015), "Coproduction of healthcare service", *BMJ Quality and Safety* (accessed 16 September 2015). doi:10.1136/bmjqs-2015-004315.
- 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.
- Berkenbosch, L., Schoenmaker, S.G., Ahern, S., Søjnæs, C., Snell, L., Scherpbier, A.J. and Busari, J.O. (2013), "Medical residents' perceptions of their competencies and training needs in health care management: an international comparison", *BMC Medical Education*, Vol. 13, p. 25, available at: www.biomedcentral.com/1472-6920/13/25
- Blumenthal, D.M., Bernard, K., Bohnen, J. 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.
- Bohmer, R. (2010), "Leadership with a small 'l", *BMJ*, Vol. 340, p. c483, available at: www.bmj. com/content/340/bmj.c483/rapid-responses (accessed 23 March 2016).
- Bohmer, R. (2013), "Leading clinicians and clinicians leading", New England Journal of Medicine, Vol. 368 No. 16, pp. 1468-1470.
- 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-andleadership-a-synopsis-of-a-new-dutch-framework/ (accessed 1 December 2015).
- Cavanaugh, J. (2001), "International collaboration provides convincing linkage replication in complex disease through analysis of a large pooled data set: Crohn disease and chromosome 16", American Journal of Human Genetics, Vol. 68 No. 5, pp. 1165-1171.
- Chervenak, F.A., McCullough, L.B. and Brent, R.L. (2013), "The professional responsibility model of physician leadership", *American Journal of Obstetrics and Gynecology*, Vol. 208 No. 2, pp. 97-101.
- Coltart, C.E., Cheung, R., Ardolino, A., Bray, B., Rocos, B., Bailey, A., Bethune, R., Butler, J., Docherty, M., Drysdale, K., Fayaz, A., Greaves, F., Hafferty, J., Malik, A.N., Moolla, A., Morganstein, L., Pathiraja, F., Shah, A., Sleat, G., Tang, V., Yardley, I. and Donaldson, L. (2012), "Leadership development for early career doctors", *Lancet*, Vol. 379 No. 9828, pp. 1847-1849.
- Cooke, M., Irby, D. and O'Brien, B. (2010), Educating Physicians: A Call for Reform of Medical School and Residency, Jossey-Bass, San Francisco, CA.
- 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/canmeds 2015_manager_to_leader_e.pdf (accessed 1 December 2015).
- Dickson, G. (2016), "Health reform in Canada: enabling perspectives for health leadership", *Healthcare Management Forum*, Vol. 29 No. 2, pp. 53-58.
- Dickson, G. and Tholl, B. (2014), Bringing Leadership to Life in Health: LEADS in a Caring Environment, Springer-Verlag, London.
- FMEC (2010), Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education, FMEC, available at: www.afmc.ca/pdf/fmec/FMEC-MD-2010.pdf (accessed 14 March 2016).
- FMEC (2012), Future of Medical Education in Canada Postgraduate Project, FMEC, available at: www.afmc.ca/future-of-medical-education-in-canada/postgraduate-project/pdf/FMEC_ PG_Final-Report_EN.pdf

Physician leadership development

- Frank, J.R., Snell, L.S., Cate, O.T., Holmboe, E.S., Carraccio, C., Swing, S.R., Harris, P., Glasgow, N.J., Campbell, C., Dath, D., Harden, R.M., Iobst, W., Long, D.M., Mungroo, R., Richardson, D.L., Sherbino, J., Silver, I., Taber, S., Talbot, M. and Harris, K.A. (2010), "Competency-based medical education: theory to practice", *Medical Teacher*, Vol. 32 No. 8, pp. 638-645.
 - 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 (accessed 12 December 2015).
 - Frenk, J., Chen, L., Bhutta, Z., Cohen, J., Crisp, N., Evans, T., Fineberg, H., Garcia, P., Ke, Y., Kelley, P., Kistnasamy, B., Kistnasamy, A., Naylor, D., Pablos-Mendez, A., 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", *The 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", *Journal of General Internal Medicine*, Vol. 30 No. 5, pp. 656-674.
 - General Medical Council (2012), *Leadership and Management for All Doctors*, available at: www. gmc-uk.org/Leadership_and_management_for_all_doctors___English_1015.pdf_ 48903400.pdf (accessed 24 March 2015).
 - Hamui-Sutton, A., Vives-Varela, T., Gutiérrez-Barreto, S., Leenen, I. and Sánchez-Mendiola, M. (2015), "A typology of uncertainty derived from an analysis of critical incidents in medical residents: a mixed methods study", *BMC Medical Education*, Vol. 15 No. 1, p. 198, available at: www.biomedcentral.com/1472-6920/15/198
 - Iglar, K., Whitehead, C. and Takahashi, S.G. (2013), "Competency-based education in family medicine", *Medical Teacher*, Vol. 35 No. 2, pp. 115-119.
 - Mintzberg, H. (2013), Simply Managing: What Managers Do and Can Do Better, Berrett-Koehler Publishers, San Francisco, CA.
 - Plsek, P.E. and Wilson, T. (2001), "Complexity science: complexity, leadership, and management in healthcare organizations", *BMJ*, Vol. 323 No. 29, pp. 726-749.
 - Royal Australasian College of Medical Administrators (2011), *Medical Leadership and Management: Curriculum Document*, RACMA, Melbourne, available at: www.racma.edu. au/index.php?option=com_docman&task=doc_view&gid=1077 (accessed 14 December, 2015).
 - Sánchez-Mendiola, M. (2015), "Liderazgo en medicina: ¿debemos enseñarlo y evaluarlo?", Investigación en Educación Médica, Vol. 4 No. 14, pp. 99-107.
 - Stoller, J. (2009), "Developing physician-leaders: a call to action", Journal of General Internal Medicine, Vol. 24 No. 7, pp. 876-878, doi: 10.1007/s11606-009-1007-8.
 - Swensen, S., Pugh, M., McMullan, C. and Kabcenell, A. (2013), "High-impact leadership: improve care, improve the health of populations, and reduce costs", IHI White Paper, Institute for Healthcare Improvement, Cambridge, MA, available at: ihi.org (accessed 1 December 2015).
 - Toronto International Summit on Leadership Education for Physicians (2014), *Report of Proceedings, Toronto, 22 October*, available at: http://tislep.pgme.utoronto.ca/wpcontent/uploads/2014/05/TISLEP2014_Report_of_Proceedings.pdf (accessed 5 March 2016).
 - Van Aerde, J. (2013), Physician Leadership Development, Alberta Health Services, available at: www.albertahealthservices.ca/assets/info/hp/phys/if-hp-phys-physician-leadershipdevelopment-report.pdf (accessed 25 March 2016).

238

 Voogt, J.J., van Rensen, E.L.J., Noordegraaf, M. and Schneider, M.M.E. (2015), "Medisch Leiderschap Ontrafeld", <i>Ned Tijdschr Geneeskd</i>, Vol. 159, p. A9123. Zimmerman, B., Lindberg, C. and Plsek, P. (2008), <i>Lessons from Complexity Science for Healthcare Leaders</i>, Edgeware, USA. 	Physician leadership development
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