Developing medical leadership in various countries

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PREFACE

It was September 4, 2015… The beginning of a long journey called ‘medical leadership’. Now, little over a year later, that journey has come to an end. It has been a true rollercoaster ride. With the occasional ups and downs. It was a year of hard work, but in the end, it paid off. It is with great pride (and a slight sense of relief) that I present you with my master thesis. But before I go any further, I would like to take this opportunity to express my sincere gratitude and appreciation to all people who have helped and inspired me during this study. This thesis would undoubtedly not have been possible without their support.

First, I would like to thank Wouter Keijser for his seemingly endless patience, guidance and advice. I have been extremely lucky to have a supervisor who cared so much about my work. This project would not have been possible without his everyday help and support. I would also like to thank Prof.dr. Celeste Wilderom. Her door was, and still is, always open. Her expertise, and valuable comments and suggestions immensely contributed to this project when it was most needed. I also owe a large debt of gratitude to Prof. Graham Dickson and Dr. Peter Lees for sharing their wisdom and experience on the subject, which have led to significant improvements in the quality of this paper. Many thanks is also due to Judith Tweedie, for her assistance with the systematic literature review for this project. I am also very grateful to the fifteen interviewees, for taking the time to answer my questions and sharing their thoughts. I must also express my appreciation to Lisanne Penterman and Jacco Smits, for occasionally hearing me out and pointing me in the right direction. My sincere thanks also goes to Max Braamhaar, Rémi Meeringa and Marion Carol for their friendship and all the fun during the lectures leading up to this study. Despite all these valuable contributions, any flaws and inaccuracies that remain, are mine and mine alone.

A special word of thanks to my beloved parents, who have always unconditionally supported me throughout my life. They have done more for me than I can ever repay. My

final, and most special, word of thanks goes to my girlfriend Cherelle, for her love, encouragement and unending support. Thank you for being my rock, but most of all, thank you for being my best friend. I owe you everything.

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ABSTRACT

Background – Increasingly, physicians are engaging in medical leadership roles and eager to learn about the opportunities it provides for them, patients and society at large. Yet, only in six of the 195 countries explicit frameworks are delivered of skills that physicians must have, and little is known about effective strategies and tactics for developing medical leadership on a national level. Led by an international group of experts, this study identifies developmental approaches of six countries to the making of national medical leadership.

Methods - This study uses a mixed method approach. First, a literature review of relevant scientific articles was conducted. Articles were identified through a search in five electronic databases from 2011 to 2016. Second, archival research of non-scientific literature was undertaken. Documents published in and relevant to the six included countries were included for analysis. Finally, fifteen (15) semi-structured interviews were executed with a pre-determined interview guide. Thematic analysis was conducted to extract relevant information to the research questions from the multiple data sources.

Results - First, this study reveals medical leadership is defined in many different ways, and several distinction are being made. Second, the findings of this study suggest that medical leadership development goes through four distinct phases, and that none of the studied countries seem to have made more progress than the United Kingdom. Third, five (5) categories including fourteen (14) factors were identified having an influence – facilitating or impeding – on the national development of medical leadership. Finally, nine (9) 'interventions' for accelerating national development are described.

Discussion - This study is the first to highlight factors that can facilitate (and/or impede) the national development of medical leadership and therefore provides insights in what can be done when developing medical leadership in various nations. Explorative in nature, this study was never intended to enumerate frequencies. Future research should therefore focus on quantifying the findings from this study in terms of degree of influence.

Conclusion - There is no 'best recipe' for developing national medical leadership. The next generation of physicians seems ready to take on leadership responsibilities, but, for the future of medical leadership, it is necessary to train more physicians with effective leadership skills.

Keywords - medical leadership, development, professionalism, medical education, healthcare governance

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"If you really want to make changes you really need to empower the physicians to be part of it."

- *Interviewee #003*

INTRODUCTION

Globally, health care systems are undergoing major changes at a tremendous speed, increasing the system's complexity. Hugely increasing demand, rising costs and changing demographics – ageing populations and growing burden of chronic diseases – make it harder and harder to ensure the delivery of high-quality care (Sebastian et al., 2014). In western societies operating costs of small regional hospitals are high, and therefore often closed, resulting in long waiting times in larger hospitals. Amongst other things, this development inevitably jeopardizes easy and timely access to care. Adding to the complexity is the continuous development of new medical technologies (Stoller, 2009). The paradox of our time is that these new 'gadgets' are often beneficial for the patient, but health professionals often bump into difficulties in using the health care innovations, which were designed to make their work easier in the first place. Whether all these changes will be advantageous for the patient depends on those who lead the change (Cochran, Kaplan, & Nesse, 2014; Keijser, Smits, Penterman, & Wilderom, 2016).

History shows us that hard times call for hard measures and therefore for powerful and effective leaders. Leaders like Sir Winston Churchill whose extraordinary leadership in World War II definitely made him one of the greatest leaders of all time. The challenges of transformation in complex health systems are no different, and physicians are often seen as the natural choice to lead this change (Chan et al., 2016; Clark, 2012; Cochran et al., 2014; Parker, 2013). It is even shown that "significant change in clinical domains cannot be achieved without cooperation and support of clinicians" (Bowns & McNulty, 1999). In

Denmark it is therefore required for doctors to be represented at the management board level (O'Sullivan & McKimm, 2011). Besides, the current physicians' daily activities already require them to be leaders in clinical processes. Based on their medical expertise, they often have an informal leadership role in multidisciplinary teams and therefore they require essential leadership skills (Chadi, 2009). But in spite of a well-documented urgency for physicians to engage in leadership roles, doctors have been reluctant to do so (Bohmer, 2012; Ham, 2008). Terms like 'going over to the dark side' are often used by their colleagues to describe doctors who are engaging in managerial leadership roles (Kyratsis, Armit, Zyada, & Lees, 2016). This is underlined by the fact that current post- and undergraduate medical education seems to be largely focusing on clinical skills, how to perform a specific difficult operation, for example, also referred to as 'medico-technical skills'. Skills not directly patient-related, or 'soft-skills', like leadership skills however, are still largely undervalued in the current medical curricula (Warren & Carnall, 2011).

It is not only changing health care systems that are increasingly requiring leadership competencies among the medical workforce. The medical profession itself is also undergoing change. The traditional view of medical paternalism with an emphasis on independence and autonomy is a thing of the past (Parker, 2013; Tallis, 2006). Although physicians historically have enjoyed great measure of autonomy, this new paradigm shift away from medical paternalism implies a loss of medical status and power (Ham & Dickinson, 2008). We are now living in a world of increasing patient empowerment and the patient-doctor relationship is moving towards one that revolves around the patient; partnership is the new trend. With the arrival of the World Wide Web, patients are now able to quickly find information about diseases and treatment in a way that was not previously possible. Patients are able to do their own research, and these well-informed, 'empowered', patients are therefore able to take a more active role in decision-making relating their own care. Patient expectations are

inevitably higher than ever before, as quality of care becomes increasingly important to them, and one of the cornerstones of high quality care is considered to be patient safety (Mitchell, 2008). Patient safety has been a worldwide concern for some time now, and a recent report by Berwick (Berwick, 2013), emphasized that all leaders in health care "should place quality of care in general, and patient safety in particular, at the top of their priorities."

Addressing the challenges for health care in the twenty-first is however often left to medical managers and policymakers, and doctors want a 'seat at the table'. Parker (2013) describes this as "*the erosion of the medical roles and status*," and he argues that doctors are looking for new ways to influence the health system.

Because of all the above-described changes in health care, physicians are increasingly engaging in medical leadership roles and eager to learn about the opportunities it provides in order for them to deal with current and future challenges facing health care.

Over the last years, doctors were increasingly engaging in leadership roles, and medical leadership is more and more being recognized as vital to the success of health system change and to ensure timely access, safeguard quality and contain costs of health care. This trend can also be observed when searching the electronic database Scopus: a search with the term 'medical leadership' now yields a lot more results than a few years ago (see **Figure 1**). It is therefore fair to say that engaging physicians in leadership and management actually has become a significant part of the health system transformation of the 21st century. The importance of physician leaders in medicine today is also emphasized by the recent name change of the role 'manager' to 'leader' in the 2015 version of the Canadian CanMEDS Physician Competency Framework (Dath, Chan, & Abbott, 2015). So, there is quite an 'appetite' for medical leadership, but doctors are struggling with the term and are looking for ways how to develop it. For example, there still seems to be a lack of a universal

understanding of the concepts and definition of medical leadership (Bohmer, 2012; Sebastian et al., 2014).

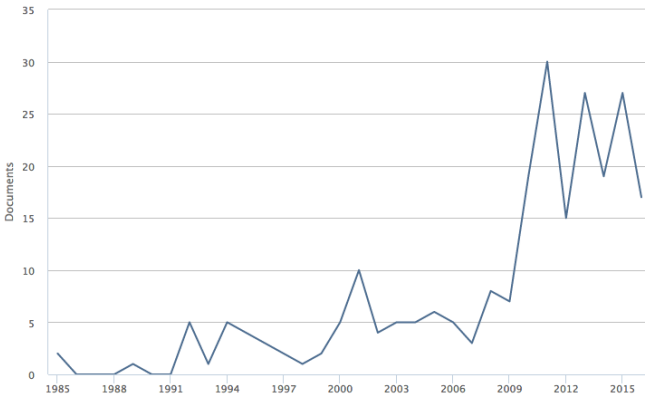

Figure 1: Search results in the Scopus electronic database with search term 'medical leadership' from 1985 to November 1, 2016

Over the last couple of decades multiple countries around the world are showing efforts to develop medical leadership of some sort. However, little is known about effective strategies and tactics for developing medical leadership on a national level. It is, for example, unknown how medical leadership is being developed, disseminated and implemented, but also if there are factors that influence these processes and if so, what these factors are. The aim of this paper is therefore to report what we have learned from recent international experiences in medical leadership in different countries and to provide insights in approaches and influencing factors in particular in the following six countries: Australia, Canada, Denmark, the Netherlands, New Zealand and the United Kingdom[1]. Specific objectives of this study are:

1. To give an overview of definitions of medical leadership used in the examined countries;
2. To unravel developmental processes in countries engaged in medical leadership development programs;

[1] For argumentation why these countries were included, see Method section.

3. To describe what factors – facilitating or impeding – are to be considered when developing medical leadership on a national scale;
4. To describe 'interventions' that could be deployed to accelerate the national development of medical leadership.

In order to achieve the above mentioned objectives, the following main research question was formulated: *How is the construct of medical leadership developed recently in various nations, and what were facilitators and barriers in each country's developmental process?*

To meet the needs of the specific research objectives, the main research question stated in the above was split up into the following sub-questions:

1. *How is medical leadership defined nationally?*
2. *How does the national development of medical leadership evolve over time in the various countries?*
3. *What are influencing – facilitating and impeding – factors?*
4. *What can be done to accelerate the development of medical leadership inside the studied countries and beyond?*

METHODS

The purpose of this study is to unravel various national experiences with the development of medical leadership. First, a scoping study was conducted to identify gaps in the current evidence base and to develop an adequate methodology to research the aforementioned questions. According to Levac, Colquhoun and O'Brien (2010) , a scoping study can be used to clarify a complex concept and refine subsequent research inquiries. Therefore, the goals of the scoping literature study were (1) to familiarize with the subject, (2) to define the scope of our study and (3) to further formulate research questions. Materials for

the scoping study were obtained from private libraries of researchers in the working group and their colleagues in the wider national and international research community and from Google Scholar (using the search term 'medical leadership'). R1 and R1 also actively attended national medical leadership activities, such as the launch of the Dutch Medical Leadership Framework (Raamwerk Medisch Leiderschap; RML) in Utrecht on September 7, 2015. The scope and extent of this study, including the formulation of the research questions, was based on identified gaps in the existing literature.

To approach data saturation, this study employed a mixed method approach, in which a systematic review of scientific literature and document analysis were complemented with semi-structured interviews. Saturation occurs when no new concepts arise from the data (Glaser & Strauss, 1967). This study exploited the following research methods: (1) a systematic literature review; (2) document analysis of case-specific documents; and (3) semi-structured interview, with at least two interviewees from each included case (see **Figure 2**). The use of these three research methods together was chosen to ensure the findings of this study are rich, comprehensive and well-developed (triangulation). The systematic literature review was conducted to unravel the national development of medical leadership in a more general sense, while the document analysis and semi-structured interviews were executed to generate more specific data pertaining to the development of medical leadership in six particular countries. Data coming from the three methods was then brought together and synthesized to provide a comprehensive overview of what was done, when it was done, why it was done, and what was seen as important during the process. The four research questions of this study were always the guideline for reporting results.

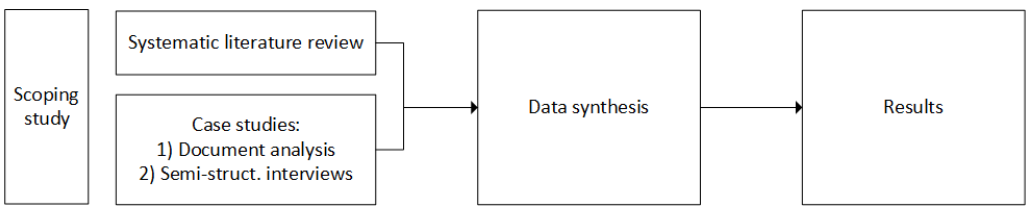

Figure 2: Schematic outline of research methods utilized

Systematic literature review

To uncover the existing knowledge about developing medical leadership, especially in reference to the research questions of this study, a systematic review of indexed scientific literature was conducted. For this part of the study, the research group consisted of Max Poorthuis from the University of Twente (R1); Wouter Keijser MD, associated researcher at the University of Twente (R2); and Judith Tweedie MD, fellow at the Faculty of Medical Leadership in the United Kingdom (R3). Guiding advises during this project came from Prof. Celeste Wilderom (R4), full professor in change management and organizational behavior at the University of Twente; Peter Lees, MD (R5), Chief Executive and Medical Director of the intercollegiate UK Faculty of Medical Leadership and Management; and Prof. Graham Dickson (R6), Professor Emeritus at Royal Roads University. An overview of the research team can be found in **Appendix A**. Relevant, English-language, articles were identified through a search in the PubMed, Scopus, Web of Science, Ovid MEDLINE and Science Direct electronic databases. First, the main research question was framed according to the SPICE-principle into four search constructs (see **Table 1**), which enabled R1 to search more effectively. The identified search constructs were then reframed into related synonyms, and narrower and broader search terms respectively (see **Table 2**).

Table 1: Research question framed according to SPICE-method

Table 2: Search construct, narrower terms, synonyms and broader terms

The first search, intended to extract articles about medical leadership development for doctors and allied health care professionals resulted in 20,984 citations. The second search, 'for doctors only', resulted in 5,932 results. To narrow down the search, only articles categorized as reviews (using a build-in filter for peer-reviewed articles) and those published in the last five years were included. It was decided to delete some generic (leadership) terms (e.g. improve*, program, engagement), because those citations did not specifically relate to the subject of this study, hence resulting in citations not relevant to this study. It was also noted that it is also important to look for quality assessment of medical leadership roles, thus the term 'assess*' was added to the search string. The final search string can be found in **Appendix B**. The database-specific search strings for each electronic database can be found in **Appendix C**. The decision to only include reviews was based on the fact that R1, R2 and R3 did not have the time and resources to go through over 20,000 citation and also because it was safe to say non-reviews often describe regional or local initiatives, and reviews often portrayed national initiatives, which after all is the focus of this study, as was also concluded by R1, R2 and R3 based on the scoping review. The decision to only look for papers published in the recent five years was based on the fact that medical leadership is a fairly new subject, and therefore it is believed it was sufficient to only look for papers published in 2011-2016. As shown in **Figure 1**, publications about medical leadership rapidly increased in 2009. It was therefore decided to begin searching for relevant reviews just after this rapid increase, thus in 2011. To prevent wasting time on screening the same article multiple times, duplicate records were manually removed. This resulted in a sample of 1,106 citations. The titles and abstract of all these 1,106 articles were independently checked by three researcher (R1, R2

and R3) against pre-determined in- and exclusion criteria (see **Appendix D**) to determine eligibility for study inclusion. First, a test sample of 50 citations was completed in order to check the correctness of the in- and exclusion criteria. Iterative data clinics between the three involved researchers were held based on this test sample, and because it was determined that three of the pre-determined inclusion criteria were unclear, those were fine-tuned, and it was decided:

1. Not to include papers about medical professionalism because the subject is too vast, but only to include papers about the development of medical leadership;
2. To include papers reporting on local or regional initiatives, provided that the initiatives were related to a national program or development;
3. To include papers discussing medical leadership development for a specific medical specialty.

After refining the in- and exclusion criteria, another, though larger, test sample of 200 citations was completed to check if the revised list of criteria was sufficient. After another iterative data clinic between R1, R2 and R3 it was concluded this was the case. The remaining citations – 906 – were checked for eligibility with the new, final set of in- and exclusion criteria in two separate batches. First, 400 citations were checked, followed by an iterative data clinic between R1, R2 and R3. Then, the remaining 456 titles and abstracts were screened for eligibility, followed by another, final data clinic. R1 and R2 also frequently convened and discussed the progress of inclusion process in between.

It was concluded that 1,069 citations did not meet the pre-determined inclusion criteria and were therefore excluded. 11 articles did meet the in- and exclusion criteria, and were therefore included directly. Papers of which the titles and abstract did not provide the reviewers (R1, R2 and R3) with sufficient information to decide whether or not the paper was eligible for inclusion, were read in full-text. Three of those 26 papers did, after a thorough

examination, meet the inclusion criteria, and were therefore included, resulting in a sample of 14 articles.

Because medical leadership is a fairly new topic and new research is being published almost on a weekly basis, an additional search for scientific literature was seen as necessary and therefore conducted with the same search strings as used in the main data search. Only papers published from 1 January 2016 – 15 June 2016 were included. This search resulted in an additional 53 citations. Again, all three researchers checked these citations against the pre-determined in- and exclusion criteria. Although the titles and abstracts of three papers were unclear and therefore examined in more detail, none were included for analysis.

To ensure no relevant articles were missed, forward and backward snowball techniques were also exploited. The backward snowball resulted in 19 citations, and forward snowballing yielded 22 citations. Same as with the regular search, the titles and abstracts of all 41 citations were independently reviewed by the three researchers. Three articles were included; the others were inevitably excluded, resulting in a final sample of 17 articles. To assure no relevant articles were being missed, the forward- and backward snowball techniques were also used to find possible new citations in the articles found in the previously mentioned snowball process. This search resulted in a sample of 30 articles, eight of which already came up in previous conducted searches. Of the 22 remaining citations, none was eligible for inclusion. In total, 63 citations found with snowball techniques were reviewed for inclusion, three articles were eligible for inclusion and therefore analyzed. For a complete overview of the systematic literature review inclusion process, see **Figure 3**.

Figure 3: Flowchart of the systematic literature search process for selecting published review articles

Data analysis of systematic literature review

After the in- and exclusion process, full text versions of all 17 included articles were retrieved by R1 and R2, and then analyzed by R1, R2 and R3 individually, to screen full-text for eligibility for inclusion and to compile an initial coding scheme based on open coding principles (Wolfswinkel, Furtmueller, & Wilderom, 2013). The analysis was conducted in an iterative manner, so first, four articles were read full-text, and each researcher highlighted relevant quotes and put those in a table, including a short description and suggestion for a theme or code. After the three researchers analyzed the first four articles, data clinics were undertaken to discuss findings and agree on topics and coding strategies. Differences in opinion among members of the review team were solved through negotiated consensus, which resulted in a so-called 'consensus table' and an initial list of nine (9) themes. Then, the next five articles were analyzed in the same fashion. Another data clinic was organized to update the 'consensus table' and list of themes. After the second data clinic, the five final papers of the initial were analyzed, and a data clinic was undertaken to discuss the findings. The second and third data clinics added seventeen (17) themes to the list. At the end of the coding process, ten of the seventeen articles happened to not meet the pre-determined inclusion criteria and were therefore excluded during the process of analysis.

After completing coding the fourteen (14) articles that came out of the initial and additional '2016' searches, the three (3) included snowball articles were coded by the researchers in the same fashion. No new themes arose, but existing themes were enriched with contextual information coming from these articles. The final 'consensus' and 'themes' tables, including findings from all seven included articles, can be found in **Appendices F** and **G** respectively.

In summary, the systematic literature review resulted in the following working documents:

1. A comprehensive list of used 'medical leadership' definitions (see **Appendix E**);

2. A ‘consensus table’ (based on consensus between R1, R2 and R3) with quotes from each article identified by one of the researchers (that was recognized to be relevant for this study during consensus data clinics), including definition of the theme the quote(s) reflected and short description (see **Appendix F**);
3. A table with themes and ‘interventions’ arising from the literature (see **Appendix G**).

In the articles included in this systematic literature review, no direct references to developmental processes were found, so no results for this research question are reported.

From now on, the results of this study will be reported using the terms in the above enumeration (i.e. definition, developmental process of medical leadership, relevant influencing factors and ‘interventions’).

The final versions of above-mentioned lists were send to all three researchers (R1, R2 and R3) in order for them to textually comment on it. Comments were received by R1 through email with which a revised versions of the lists were compiled, which was then sent to the two other researchers (R1 and R2) in preparation for a final discussion. This discussion was organized in particular to get consensus on the list of relevant influencing factors. After discussion, the lists of relevant factors and ‘interventions’ was again revised and divided into categories by R1, and then sent to R2 for review. R2 condensed the list of all identified themes and descriptions of those themes into a comprehensive set of categories and subcategories. After final consensus meetings, all researchers agreed upon final versions of the lists.

Archival research

To enhance understanding of recent international experiences with the development of medical leadership in countries already engaging doctors in leadership roles, document analysis, or archival research, was conducted (Bowen, 2009). Archival research was carried

out with the same goal as the systematic literature review: to discover insights relevant to the research questions (see **Introduction**), from large amounts of data. The literature review was however intended to yield more general data, while archival analysis was focused on extracting relevant case-specific data from documents published in the included countries.

First an extensive review was conducted on Google using the search terms “medical leadership”, “medical leadership development”, and “medical leadership framework”, to determine which countries have already developed some sort of medical leadership, and were therefore eligible for inclusion as a case. Although slightly outdated, a report by Chris Ham and Helen Dickinson (2008) on international experience and research evidence pertaining to engaging physicians in leadership was of great help in compiling an initial list of possible countries to include. The inclusion process identified the following countries as being active on the subject of medical leadership: United Kingdom, Canada, The Netherlands, Australia, New Zealand, Denmark, Finland, Sweden, Norway, Germany and the United States. In conversations with subject experts R5 and R6, Italy, Singapore and South Korea were also identified as countries developing medical leadership of some sort. The predominant inclusion criteria for a case was that a country had conducted medical leadership development on a national level. It was noted that this was most likely accomplished through the development of a medical leadership framework, thus taking this fact into consideration for inclusion. Therefore, the following countries were included directly: Canada, the Netherlands and the United Kingdom. Australia, Denmark and New Zealand were also included because those countries have a rich history of medical leadership development, possibly using a framework developed in the previously mentioned three countries, changing it slightly to meet the local needs. The United States was excluded because there was no nationwide initiative and Finland, Sweden, Norway, Germany, Italy, Singapore and South Korea were excluded because of a lack of substantial research done on the subject, suggesting medical leadership

still is in an embryonic state in these countries. Thus, the following countries were included: Australia, Canada, Denmark, the Netherlands, New Zealand and the United Kingdom.

According to Bowen (2009), document analysis involves organizing interesting samples of text into categories related to the main research question(s). Themes were defined prior to the analysis (*a priori*), based on the findings from the literature review and superficial examination, or 'skimming', of the included documents (Bowen, 2009). Potential relevant texts were identified through (1) an extensive Google search of the subject using the terms "medical leadership", "medical leadership development", "physician leadership", and "physician leadership development"; (2) from personal libraries of R2; (3) from local university archives (University of Twente and Rijksuniversiteit Groningen); (4) by using snowball techniques on the articles found in the first three previously mentioned methods; and (5) from advice and forwarded literature from R5 and R6. Document types found include brochures, journals, reports, letters, email messages, memos, press releases, websites, etc. The usefulness of the texts was assessed prior to actual inclusion of the documents, using the same in- and exclusion criteria as used in the literature review.

Data analysis of archival research

After inclusion, the full texts were carefully read and examined by R1. Meaningful events, as well as important organizations or people, were highlighted in order to create time-ordered lists of events in a chronological order to uncover exactly what happened, when it happened, and who was involved. These time-ordered lists were the main focus of this research method. Definitions of medical leadership and influencing factors – facilitating or hampering – including 'interventions', were also highlighted. Learning from history and how the past can affect the future can also be referred to as historical research, and it provided R1 and R2 with a useful overview of events, specifically when they occurred, and which events came before others). The process of archival analysis resulted in six case reports, reporting the

findings per country related to the research questions of this study. Although some case reports were more extended than others (because of richer data sources), all case reports at least reported on relevant events pertaining medical leadership development in that particular country. Other case reports were more comprehensive[2], and contain the following elements:

1. Case summary;
2. Relevant events per phase;
3. List of main actors;
4. Interesting facts, not related to a specific event;
5. Knowledge gaps;
6. References.

The case reports can be found in **Appendix H**. As previously mentioned, the case reports were also focused on uncovering definitions of medical leadership that are being used in the various countries, and to find relevant influencing factors, including 'interventions', which resulted into the following working documents per country:

1. List of definitions used for 'medical leadership' (see **Appendix I**);
2. Table with relevant influencing factors, including 'interventions' to accelerate the development, plus short description of each factor or 'intervention' (see **Appendix J**).

The highlighted passages or quotes had to be mutually exclusive, which means that the information can only be assigned to one theme. If the text could not be assigned to one of the existing themes, a new theme was formed. This process is also referred to as directed qualitative content analysis using a hybrid approach of inductive and deductive coding (Hsieh & Shannon, 2005; Van Staa & De Vries, 2014). During this process, critical thinking from R1

[2] The Dutch case report only reports on relevant event and/or phases. The Australian and New Zealand case reports do not contain knowledge gaps. It is believed by R1 and R2 these missing items do not affect the findings of this study.

and R2 was of utmost importance to identify knowledge gaps in the data. To fill these data gaps, an additional search for related documents was conducted. New insights from these documents were also assigned to the previously formed themes or categories. As said before, archival analysis could be used to generate additional questions for the subsequent interviews, thus data gaps still existing at this stage of the process were incorporated in the interview guide for the semi-structured interviews, which will be discussed later.

The results of the archival analysis were then sent to R2 for review. A revised version of the 'themes table' was sent back to R1 and the themes arising from the document analysis were added to the previously discovered themes from the systematic literature review. Themes that were already found in the systematic literature review, and descriptions of these themes, were revised according to new insights gained from the archival analysis. A new version of the themes table, now including the results from both the document analysis and the systematic literature review, was again sent to R2 for review. The 'themes table' was sent back and forth a few times until consensus amongst R1 and R2 arose (see **Appendix K**). This version of the 'themes table' was then used to compile the interview guide. The 'themes table' was also used as analysis tool for the transcripts of the semi-structured interviews, which were conducted in a later stage of this study.

Literature review on phases of development

In order to give an answer to the second research question of this study (*How does the national development of medical leadership evolve over time?*), an extensive, though not systematic, review on the literature about developmental phases was conducted. It was thought hypothesized that an existing phasing model could also be applicable to the development of medical leadership. This resulted in a new research question: *How is phasing described in existing development models or theories applicable to national ML development?* To provide an answer to this question, relevant articles were identified through a search on

Google and Google Scholar using text keyword search with the following keywords: “phases of development”, “stages of development”, “change process models”, “innovation models”, “adoption models”, “dissemination models”, “implementation models” and “innovation models”. A model was included if it contained easily identifiable and distinctive phases of a developmental process or if the model contained characteristics or factors influencing a process of development; in all cases a model or theory should be applicable to (leadership) development of professionals similar to physicians. The search resulted in 15 models (see **Appendix L**). Then, a conceptual model was created using the data of the previously mentioned 15 models, comprising of seven (7) distinct phases. The meaningful events identified through the previously mentioned archival research were then divided over these seven (7) phases in this conceptual model. However, soon it appeared some of the phases did not contain a single event, thus was concluded the developed conceptual model was not appropriate to explain the phases of development of medical leadership. After a discussion between R1, R2 and R4 it was therefore decided to drop the conceptual model, and to bring the number of phases back to four (4): the last three (3) of the seven (7) initial phases were combined into one overarching phase. The same was decided for the first two (2) out of seven (7) initial phases. A precondition was that every significant event pertaining to medical leadership development could be ‘assigned’ to one of these four (4) phases.

Semi-structured interviews

Both the literature review and the documents analysis were carried out to produce empirical knowledge and develop understanding of the subject, specifically in regards to the formulated research questions of this study. The interviews, on the other hand, were conducted to (1) uncover definitions of medical leadership used in the respective countries; (2) validate findings and fill data gaps which emerged from the previously mentioned

employed methods (case study); (3) explore the current status and future prospects of medical leadership; and (4) get new insights in the subject, and will be discussed below.

At least two interviews were conducted per country. Contacts for conducting the interviews were collected via R5 and R6. Interviewees were chosen based on a pre-determined set of interviewee characteristics. R1 and R2 searched for interviewees based on the layered model categorizing interviewees in strategic, tactical or operational level. 'Strategic level' functioning interviewees work in top-level positions in governance and policy (e.g. ministry of health, inspection). Those working on 'tactical level' are, for example, managers on mid-level (executing policy set by the 'strategic level') leading and coordinating developmental processes for tools and procedures (e.g. within doctors association, hospital boards, insurance companies). 'Operational level' functioning interviewees are individuals actively involved in the operations relating e.g. training, education and other daily operations in medical leadership development (e.g. coaches, consultants, program and project coordinators). Because, in most studied countries, medical leadership is still before the operational phases, it is believed unnecessary to have an interviewee in the 'operational' level, thus also in the interest of time, no such individual from Australia, Denmark and the United Kingdom was interviewed. However, individuals in both the strategic and tactical levels from all the reviewed countries were interviewed.

Emails with a short overview of the study were sent to the each of the proposed interviewees. Some accepted the invitation, others believed they were not the right person to talk to due to a perceived lack of subject knowledge, and forwarded the email to someone they believe could give better answers to the questions relating to this study. One potential interviewee did not answer our invitation, three forwarded the invitation to someone else believed to have more subject knowledge, and one potential interviewee did not have any time available within the time period of the data collection stage of this study. Eventually, the

following numbers of persons were interviewed in Australia, Canada, Denmark, the Netherlands, New Zealand and the United Kingdom, respectively: 2, 3, 2, 3, 3 and 2. A comprehensive overview of interviewees and their position/role can be found in **Appendix M**.

At least 48 hours prior to each interview, an interview preparation guide that included a summary of the preliminary results from the literature review and archival research, was sent to the interviewee. The interviewee was asked to review the document, and confirm receiving the file. Interviews were conducted via Skype or landline telephone.

The interviews were based on an interview guide (see **Appendix N**), pre-compiled by R1 and R2 to reflect the research questions of this study. This tool was developed to limit bias and increase the method's reliability. A conceptual version of the interview guide was sent by R1 to R2 for review. It was proposed to noticeably split up the questions into to the three distinct parts relating to the research questions. It was also suggested to start the interview with asking open questions for each part, before asking the interviewees for more detailed information per subgroup and to validate the preliminary findings of our study. It is also necessary to note that the questions inventoried the experiences, opinions and preferences of the interviewee, thus not necessarily the general opinion in the subjected country. To prevent any form of biased information resulting from the interviews, the following precautions and instructions were given in the manner of questioning:

1. The interviews were conducted in a semi-structured fashion;
2. Disturbances during the interviews were kept to a minimum;
3. The topics that were going to be addressed were known in advance by each of the interviewees, by sending the previously mentioned interview guide.

In accordance with the objectives of this study, the interview guide, and therefore the interviews, were split up in the following distinct parts:

1. Introduction by the interviewer;
2. Discussion on definition used in the country;
3. Phases of development the medical leadership initiative went through;
4. Current status and future prospects of medical leadership;
5. Closure of the interview.

Prior to each interview the interviewee was asked for permission to record the interview. All interviewees agreed. Skype interviews were recorded using MP3 Skype Recorder version 4.23 and telephone interviews were recorded with the mobile app TapeACall version 3.4.4.

Interviews took between 25 and 85 minutes. Because all interviews were tape-recorded, making it possible to transcribe the interview in full. Notes were taken by the interviewer during the interview. Immediately after each interview R1 transcribed the interviews verbatim, as this protects against bias and it captures exactly how things were said. Due to the desired level of detail, transcribing each interview took approximately four hours to complete. All interviews were anonymized during the transcription phase.

Data analysis of semi-structured interviews

Prior to analysis of the transcripts, a data extraction form was created (see **Appendix O**). This form was based on the preliminary results of the systematic literature review and archival research subdivided into four categories: (1) 'definition of medical leadership'; (2) phases of development; (3) influencing factors for development; and (4) interventions to accelerate medical leadership development. A fifth category 'other' was created to capture relevant quotes or topics not specifically related to the four previously mentioned categories.

Analysis of the transcript was conducted using a deductive approach of thematic analysis in an iterative fashion. Deductive coding is a type of coding of qualitative data in

which you start your analysis with codes already in mind, in this case based on previous research being the systematic literature review and archival research discussed before (Meta Connects, 2016). Thematic analysis of the interview transcripts was thus aimed at uncovering new or additional data relating the research questions. Thus, analysis was not meant to quantify or verify data from previously conducted research, rather to expose new information to enrich the existing data. Analysis of the transcripts was also intended to find relevant quotes of the interviewees relating to the research questions of this study. When a new theme or topic arose from the data it was labeled as such using the label 'NEW' highlighted in green to make is easily identifiable. If the theme or topic was not entirely new, but only differed in nuance to an existing theme, it was labeled as 'SEMI-NEW' and also highlighted in green. Relevant quotes about existing themes or topics were labeled as 'QUOTE'.

By means of a pilot, three transcripts were randomly chosen from different countries and analyzed and discussed in a data clinic (R1 and R2) to test the data extraction form and to make sure both researchers were 'on the same page'. As R1 preceded in data extraction and to prevent form of bias and to make sure no relevant information from the interviews was left unnoticed, R2 analyzed all transcripts building on data extraction forms as completed by R1. The built-in 'track changes' function in Microsoft Word was used to show which comment comes from who. Afterwards R1 continued analyzing the next couple of interviews, which after completion were sent to R2 for review, and so forth. A second data clinic was undertaken to discuss the findings of eight more interview transcripts. After all fifteen interview transcripts had been analyzed by both R1 and R2, the results were discussed in one final data clinic between both researchers. The results are shown in 15 separate data extraction forms containing the analysis of R1 and R2 per interview (see **Appendix P**).

Mixed method: data synthesis

As previously noted, this study utilized three different research methods, and data synthesis with the combined results of all three methods was undertaken. First, R1 combined the results of the three utilized methods in three different files, reflecting the four research questions of this study, being:

1. A file containing all the mentioned definitions of medical leadership labeled per country;
2. A file containing the developmental process per country;
3. A file containing a table with all the influencing factors, including 'interventions' that could be undertaken to accelerate the development.

These documents were then sent to R2 for written review. The documents were sent back and forth between R1 and R2 for minor adjustments. Also, all themes were divided into five broader categories. Themes that referred to something that can be done to positively influence the development of medical leadership, were extracted from the 'themes table' and put aside in a separate 'intervention table'. When consensus was reached amongst R1 and R2, the documents were sent to R3 for review. Minor adjustments were made according to comments of R3, resulting in final versions of the three documents containing the results of the utilized research methods. It was believed that characteristics of identified themes during data analysis of the three data sources/methods did not show specific differences between de data sources, thus making it justifiable to combine the results of the three data sources into one overarching, final 'themes table' (see **Table 6, p. 57**).

RESULTS

This chapter reports on the empirical results of this study. In correspondence with the research questions, this chapter will be subdivided into four subsections. The presented

findings resulted from the three utilized methods. Also, quotes from the semi-structured interviews will be provided to clarify or give meaning to a particular topic.

The first subsection will elaborate on the findings related to the definition of 'medical leadership'. Because it appeared from the data no universal definition yet exists, and four distinctions in definition can be made, these five topics will be addressed in separate paragraphs.

Then, this chapter will describe the results pertaining to the phases of medical leadership development. This subsection will start the results of the review of literature on existing developmental models, and provide a conceptual phasing-model for medical leadership development. Also, an overview of the developmental process per country will be provided. The systematic literature review did not yield any results pertaining to developmental processes, so this subsection only includes results from the archival analysis and interview.

The third section of this chapter will discuss the relevant influencing factors – facilitating or impeding – on the development of medical leadership that were found with the three research methods. The factors were subdivided into five overarching categories, and a textual explanation of each factor will be provided. A summarizing table, which includes all categories and factors, will also be presented.

The final section of this chapter will include the results related to so-called 'interventions' that could be utilized to accelerate the development of medical leadership. In total, nine (9) 'interventions' were found, and textual explanations of all nine (9) will be provided. It will also be described how the 'interventions' could accelerate the development of medical leadership.

Lack of a unified definition

If you want to develop something like medical leadership, but you do not know what it actually means, chances are it will never happen. According to Voogt, Van Rensen, Noordegraaf and Schneider (2015) it becomes even more confusing in a professional group, like physicians, for which a term usually has only one correct meaning. Yet, a universal definition of medical leadership remains elusive; confusion of definition and meaning still exists and that needs to be dealt with (Gillam, 2011; Spurgeon, Long, Clark, & Daly, 2015). This assumption is supported by the following quotes from interviews conducted as part of this study:

> *"I guess it is fair to say that there is no one standard definition of leadership that people around Australia use."*
>
> - *Interviewee #012*
>
> *"There is not a real national definition of medical leadership."*
>
> - *Interviewee #009*
>
> *"There is no standard definition that is used. There are many different definitions out there, and it would depend on who you talk to really."*
>
> - *Interviewee #015*

Leadership vs. management

The term 'leadership' is strongly connected to 'management' (Dickson & Tholl, 2014). The terms seem to be used interchangeably, but is there an actual difference between the two? And if so, what is considered 'management' and what is considered 'leadership'?

The recent name change from 'manager' to 'leader' as one of the seven roles in the 2015 version of the CanMEDS Physician Competency Framework, not only suggests there is

a difference between the two, but also suggest the term ‘manager’ is outdated and therefore recently being replaced by that of ‘leadership’. This is supported by the fact that the Griffith’s Report, published in 1983 in the United Kingdom, uses the term ‘management’ rather than ‘leadership’ (Griffiths, 1983). On the other hand, more recent publications discussing, for example, the British Medical Leadership Competency Framework and Dutch Medical Leadership Framework, often use the term ‘leadership’. The term ‘management’ seems to be disappearing. However, the Faculty of Medical Leadership and Management in the United Kingdom, which was founded in 2011, still uses both terms, suggesting a difference after all. Therefore, it appears necessary to dig deeper into the underlying concepts of the two terms.

Spurgeon et al. (2015) define ‘management’ as operating the current system as efficiently and effectively as possible, while ‘leadership’ can be defined as changing the existing system in order to better deal with (future) challenges. Interviewees #007 and #011 also believe there is a difference:

> *“There is a difference between being a manager and a leader. That is the difference between doing things right and doing the right things.”*
>
> - *Interviewee #007*
>
> *“Leadership, for me, is about vision and change and influence, whereas management is more orientated to implementation and routines to translate […] and vision into practice. So there are quite different.”*
>
> - *Interviewee #011*

Although used interchangeably, it can be concluded from the above that ‘management’ and ‘leadership’ are two different terms with two different meanings, and there are as many definitions as there are people attempting to define it. Therefore, Spurgeon et al (2015)

suggest "*it might be more useful to think of management and leadership as processes which interact and support each other, and are both necessary for effective organizations*."

Definition of 'medical leadership'

Different definitions of the term 'medical leadership' add to the confusion. But before trying to define 'medical leadership' it is necessary to define 'leadership' first. Although there still is no consensus with respect to a universal agreed definition, leadership guru Gary Yukl (2006) defines leadership as "*the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives*". This definition is very universal, and can therefore easily be applied to every organization, including health care organizations. Over the last few decades, several people tried to define 'medical leadership' as distinct to general 'leadership'. Below table provides an overview of most prevalent definitions that were found in our study, reflecting one definition from each country included in this study.

Table 3: Most prevalent definitions of medical leadership in literature, documents and interviews from the various studied countries

Medical vs. clinical leadership

Adding to the confusion around 'medical leadership' is that some are attributing 'medical leadership' to physicians; others use a more inclusive model, argue that 'medical leadership' is in fact for all health care practitioners and therefore refer to it as 'clinical leadership'. Same as with the 'leadership' and 'management' debate, both 'medical' and 'clinical' leadership are being used, sometimes even interchangeably, and it depends on

whom you ask. In New Zealand, for example, the term ‘clinical’ leadership seems to be predominantly used, with ‘clinical’ referring to all health professionals, including but not exclusively doctors (Brown et al., 2009; Lyn Wright, Pauline Barnett, & Chris Hendry, 2001). Interviewees #014 and #015 also emphasize the difference between ‘medical’ and ‘clinical leadership:

> *“Clinical leadership, I think we would extend the definition [of medical leadership] to any […] person who works in the health care system who is a health care professional.”*
>
> - *Interviewee #014*

> *“Now, when it comes to medical leadership, the way it is often discussed in New Zealand is that it is health professional leadership, so with a focus on all professions working together. We probably tend to talk more in terms of clinical governance, clinical leadership as opposed to medical leadership.”*
>
> - *Interviewee #015*

As in New Zealand, leadership in healthcare is also very generally defined in Canada, because it is believed “*leadership sits in every chair*” (#004, 2016). Also the Canadian LEADS framework “*is becoming the common leadership language <u>across all levels and roles</u> within organizations contributing to health system transformation*” (Canadian College of Health Leaders, 2016). However, when using the term ‘medical leadership’, the focus certainly seems to be on physicians:

> *“In Canada, when we use the term medical leadership, we are definitely using that in reference to physicians.”*
>
> - *Interviewee #003*

"I suppose, in a very simple way, I think when I use the term medical leadership I mean leadership done by doctors."

- *Interviewee #001*

"I suppose, in a very simple way, I think when I use the term medical leadership I mean leadership done by doctors."

- *Interviewee #011*

It can be concluded from the above that both 'medical leadership' and 'clinical leadership' are being used to describe a similar concept, though with a slight difference: 'medical leadership' often refers to the role of physicians as leaders and 'clinical leadership' is used in reference to a more inclusive and generic leadership model in health care.

Formal vs. informal medical leadership

As stated above, 'medical leadership' is defined as leadership 'done' by doctors, but with this, another distinction needs to be addressed. From the literature and interviews it is apparent that 'medical leadership' can refer to doctors leading in day-to-day practice, or doctors leading in formal managerial roles. When the term medical leadership first came into play it was often associated with "*grooming individuals for executive roles*." (Coltart et al., 2012) Medical leadership was attributed to an elite minority within formal roles such as medical or clinical director no longer performing clinical duties. This form of medical leadership is being referred to as formal medical leadership, also referred to as leadership at strategic level (Coltart et al., 2012; Sebastian et al., 2014). Over the last decade however, there has been an increasing recognition that 'medical leadership' is a core competency for all physicians, also known as informal or voluntary medical leadership or leadership at the operational level (Sebastian et al., 2014; Snell, Dickson, Wirtzfeld, Van Aerde, & Dickson, 2016). Interviewee #002 said the following about this:

"When I started working in this area, which is about ten years ago, I think a lot of the conversations were around medical leadership as doctors actually in formal leadership roles. […] I think there is an increasing recognition though, now, that actually medical leadership is what every doctor does. There is no escape from it. […] So I think things have changed."

- *Interviewee #002*

This trend can be seen in all the six countries included as a case in this study. Interviewees #003 and #013, for example, said the following:

"We used to kind of attribute leadership to certain levels of positions, and I think now we kind of moved to a model of saying, everybody in their role has to be a leader to a certain extend. […] So for a while, it was targeted to physicians that have executive and managerial responsibilities, increasingly we are trying to diffuse this to all physicians in the system, in fact all health care practitioners."

- *Interviewee #003*

"There are two parallel definitions. One is actually understanding the role of leadership in day-to-day clinical practice, and, you know, that is evolving from the traditional view that the doctor is the captain of the ship. […] And then, for me, there is also what I would call formal leadership, which is leadership within a structure, and that usually involves doctors in roles which have a title in place, with a little bit more than straight clinical practice."

- *Interviewee #013*

It can be concluded that both ‘formal’ and ‘informal’ medical leadership roles still exist today. However, the focus is shifting from an ‘administrative elite’ to one “*that identifies leadership skills as core competencies of all clinicians.*” (Coltart et al., 2012)

Table 4: Definitions, and its distinctions, of ‘medical’ leadership

Process of development of medical leadership

The second part of this study focuses on the developmental processes of development, or in other words the phases through which the developmental of medical leadership goes. The three methods used in our study were utilized to uncover the developmental processes in the cases. The systematic literature review looked at the scientific literature, while the archival analysis and semi-structured interviews looked at case-specific data from the included cases. The included articles in the literature review however did not include any reference to developmental processes, at least not in a structured, systematic fashion; therefore no results from the literature review are included in this section.

As previously mentioned, a brief literature review was conducted to see whether there are existing models on phases of development that could also be applicable to the development of medical leadership. This will be discussed in the next section of this chapter. Then, a short summary of the development of medical leadership in each country will be provided.

Phases of development

Before archival analysis took place, an extensive review of literature was conducted to reveal generic developmental models that would aid studying the developmental processes in cases under study. This search resulted in 15 models related to organizational change, project management and innovation adoption in health services (see **Appendix L**).

After a data clinic between R1, 2 and 4, these 24 models were combined into one conceptual model consisting of seven distinct phases (see **Figure 4**). These seven phases were then used to split up the events that occurred in each country. However, it soon appeared that these seven phases were insufficient.

Figure 4: Seven conceptual phases of development

When using the above seven phases for breaking down the events of medical leadership development in the six included countries/cases, there was not one case where each phase was filled with an event. Often a phase did not include one single event. It was therefore concluded that this proposed seven-phased model was insufficient, and that the number of phases had to be reduced. In a data clinic, R1 and 2 concluded that the development of medical leadership has gone through a similar process in all included cases. First, a lot of discussions were going on about medical leadership, then in the second phase, the concepts and ideas of medical leadership started to take shape, the third phase is all about operationalizing these concept and ideas into tangible product, and the final phase is about professionalizing the results of phase three. The phases were initially called ‘context’, ‘contours become visible’, ‘operationalization’, and ‘professionalization’, respectively.

Figure 5: Conceptual phasing-model of medical leadership development

Interviewee #001 compared the four conceptual phases of development with the four stages of competence, or the "conscious competence" learning model (Internationl, 2016), used in psychology to map the process of progressing from incompetence to competence in a particular skill:

> *"I think the transitions that you described earlier is hardly about bringing medical leadership from a kind of unconscious, and unconsciously inactive behavior through to something that is kind of conscious, competent. […] We are moving to leaders who now are really clear they are leading, they understand what is expected from them, they understand how they will be judged and they understand how they are get better in doing it. And that is very different from people who had the power, wanted the power, and at a kind of street-fighting level you had to keep it, weren't especially interested in sharing it with anybody else, or telling anybody else how to have it."*
>
> - *Interviewee #001*

However, during the interviews it became clear that the naming of phases 1 and 2 was unclear to the majority of the interviewees. But, after explaining what was meant with each phase, all interviewees (n = 15) concurred. Based on this validation, it was concluded that the four proposed phases do encompass the development process of medical leadership in all included cases, but, especially the first two phases, needed another 'label'. The names and meaning of phases 3 and 4 were clear to the interviewees, so no name change was believed necessary. Because phase 1 is all about the emergence of the term 'medical leadership' and recognizing the need for more leadership, but without any clear direction, phase 1 was re-named 'emerging awareness'. In phase 1, the concept of medical leadership is still vague, but this phase normally ends with optimal awareness. The events that occurred in phase 2 are all

about framing the ideas into a mature concept for the development of medical leadership, and was therefore re-named ‘framing’. In phase 2, medical leadership slips onto the agenda. Phase 3 includes operationalization of the ideas and concepts into tangible, structured or established products, such as a competency framework. In phase 4 these products are improved, or professionalized to better meet the needs of the people involved. Quality control also is an important issue in this phase of development. In phase 4, medical leadership is a fully mature and embedded concept; medical leadership becomes institutionalized. See **Figure 6** for a graphical illustration of the developmental phases.

Figure 6: Illustration of developmental phases of medical leadership

It appeared that the phases had no clear distinct border between them as all four phases often overlap. Moreover no single event could be identified as a transition point in time going from one phase to another. This is illustrated by a quote from interviewee #003: *“So that is kind of the operationalization phase, […] kind of overlaps into the professionalization phase.”* One of the interviewees also stated that the phases do not necessarily have to succeed one another (#006, 2016). According to the interviewee, discussions about definition and focus, which you would normally expect in phases 1 and 2, can still be active in phase 4.

Thus, although the development of medical leadership is in an advanced state, discussions about meaning and focus of medical leadership are still being held at that later moments in time.

> *“We are moving in the right direction, but I think the men and women in practice are still asking the question “what is medical leadership, how does it look like?””*
>
> - *Interviewee #007*

Australia

Responsibility for health care in Australia sits with its three tiers of government: the federal Commonwealth government, six states, and two territories. The six states are responsible for administrating the system, while the Commonwealth government is the national legislator and provides much of the funding. Typically physicians hold positions such as medical or clinical director of a hospital. Doctors also occupy other senior management positions in health care departments. The Australian Medical Council sets standards for education, training and assessment of the medical profession, while the medical colleges are responsible for training the medical workforce. One of the largest, founded in 1968, the Royal Australian College of Medical Administrators has been an advocate of medical leadership for more than 50 years.

Australian interest in a national health leadership framework was piqued by the introduction of the MLCF in the UK in 2002 (Sebastian et al., 2014). Promoting leadership in health care was then nominated by the Australian Health Ministers as one of the five objectives for the newly-formed Health Workforce Australia (Shannon, 2015). Health Workforce Australia, or HWA, was funded through the Commonwealth government and was to undertake a project to explore leadership development programs in Australia. One of the things HWA developed was LEADS Australia. The framework was based on LEADS Canada, but modified to fit the needs of the Australian health system. A first version of the framework was made public in early 2013, and the Australian Health Ministers' Advisory Council approved LEADS as a nationally agreed framework a few months later.

Health Workforce Australia then seized to exist around 2013 because the Commonwealth government decided to no longer fund what was required to continue to develop the framework and to manage its implementation on a national scheme.

"Since Health Workforce Australia seized to exist, the framework that was developed for the country has not been carried forward. So, what happened is that we have gone back to a fragmented system. The Health LEADS Australia framework was franchised to some areas throughout Australia, but again it is not being endorsed as being a national framework for Australia. In fact, you would be hard-pressed to find a copy of it on a national government website. […] We now have a lot of leadership training programs run out of the universities, run out of state government departments, and we have RACMA, and that's the way it works."

- *Interviewee #011*

Canada

The Canadian Health System as we know it today started to take shape in the late 1940s. Insurance for universal hospital services were first introduced in the Saskatchewan region in 1947. Fifteen years later, coverage for physician services were included, and by 1971 all Canadian provinces had full hospital and physician coverage (Marchildon, 2013). Health care in Canada is funded at both the provincial and territorial level, within guidelines set by the federal government (Commonwealth Health Fund, 2016). So, basically the system consists of fourteen subsystems: ten provinces, three territories and the federal government itself. All those fourteen 'health systems within a health system' were tight together with some common principles from the Canadian Health Act, which was adopted in 1984 (#003, 2016). But when it comes to administrating those subsystems, there are fourteen 'isolated' systems, and in the early days it was believed doctors were the predestined leaders of this system. By the 1970s and 1980s however, there was a backing away from that thought. People started to realize doctors have perfectly good clinical skills, but they should not be put in a position where they have to run things and be leaders. In fact, Canada moved so far away from the notion of physicians in a management or leadership position, that even ten years ago

it was very unusual to have a doctors as, for example, chief executive officer of a hospital (#003, 2016).

In the early to mid-1990s, Canada *was one of* the higher costs systems among the countries that have universal health insurance and struggled with an enormous budget deficit. Canada's performance on a lot of health care indicators, e.g. waiting times and access to primary care, was not very good either (#003, 2016). The Canadian government therefore initiated major efforts to reform the system, and in the first iterations of that, physicians had very little involvement. But in the introduction of this paper it was already stated that "significant change in clinical domains cannot be achieved without cooperation and support of clinicians," and that is exactly what Canada came to realize (Bowns & McNulty, 1999):

> *"[We started] to realize that, if you really want to make changes you really need to empower the physicians to be part of it. […] Doctors just have too much control, they are too influential, they have so much content knowledge, so you cannot really change that system without doctors being, really much in the center of the activities."*
>
> - *Interviewee #003*

Also, doctors themselves started to realize that if they want to have a say in how the reforms go, they have to get themselves 'in the tent'. And it was the Royal Canadian Commission on the Future of Health Care that emphasized the need for medical leadership in 2002 if Canada were to sustain its universal coverage system (Dickson & Tholl, 2014).

So, modest beginnings of improving health leadership and management started in the winter of 2004 at the Royal Road University with "a symposium on strategic leadership for health care reform in Canada" (Dickson, 2008). Funded by the government of British Columbia, the Health Care Leaders' Association of British Columbia, or HCLABC, created the Leaders for Life Program. As part of this program, the development of the LEADS

framework started in early 2006, and the first version of the framework was published and distributed in late 2006. The Canadian College of Health Leaders endorsed the LEADS framework in 2012, and has since then mapped their training programs to LEADS (Marchildon & Fletcher, 2016).

In the fall of 2009, the Leaders for Life Program seized to exist. However, the Canadian Health Leadership Network, or CHLNet, was formed, and in collaboration with the Canadian College of Health Leaders, bought the intellectual property right of LEADS (#004, 2016). Working with LEADS principals that came from BC, CHLNet immediately initiated a LEADS refresh, which resulted in the LEADS framework as we know it today.

> *"I personally think that we are very close to a tipping point. Let me rephrase that in health care reform terms. So that doesn't mean next week. But I see this decade still, we will hit a tipping point, because things are aligning."*
>
> - *Interviewee #005*

Denmark

The Danish health care system is primarily publicly funded and based on free access to care for all citizens. At the central level, State government and the National Board of Health are responsible for legislation and defining health policy (Ham, 2008). Hospital services are provided by the five regions. Administration of the system also is a responsibility of the five regions. In 1984, Denmark introduced the so-called 'troika' model, which entails that a hospital is managed by a Chief Executive Director (CEO), a Medical Director and a Nursing Director (Ham, 2008). A physician occupies the role of medical director.

In 2000, Denmark started using the in Canada developed CanMEDS framework for defining the seven roles of a physician, and since 2003 the framework is being used as basis for postgraduate medical education. Postgraduate training now consist of a contemporary 10-

day leadership course, and physicians are offered additional training options once they are appointed specialist (O'Sullivan & McKimm, 2011). However, leadership training for undergraduate medical students "is not quite there yet" (#009, 2016).

> *"It is still growing. It is not an old forest, it is still growing with lots of young trees, and we still have a lot of weed in there. We still haven't really found a way to actually grow a very good medical leader. We know how to educate a good surgeon, but we do not know yet how to really educate a medical leader."*
>
> - *Interviewee #009*

The Netherlands

Since 2006, all Dutch citizens are mandated to purchase basic health insurance coverage (Ministerie van Volksgezondheid, Welzijn en Sport, 2006). Historically, doctors were not involved in the administration of hospitals in the Netherlands. But the position of doctors in hospitals went through subtle changes in the early twentieth century. Doctors became increasingly important in administrating healthcare organizations. The 'doctor-director' was born, referring to a physician with some managerial responsibilities (Ham, 2008). Soon thereafter, the term 'director-doctor' was also introduced, referring to a full-time manager physician, no longer performing clinical duties (Ham, 2008).

Although doctors became increasingly involved in management and leadership, the majority of decisions was still made by managers and policymakers. Also, like in other countries, the 'gap' between management and physicians was significant in the Netherlands (Klopper-Kes, 2011). Furthermore, in particular young doctors entering the profession noticed the difficulty of getting into the 'establishment' (#006, 2016). According to interviewee #006, this helped spark the interest of a few young doctors "to get back in control". Around 2011, the first work on embedding leadership competencies in medical education was undertaken

(Busari, Berkenbosch, & Brouns, 2011). These initiatives often had a managerial focus however and were not on a national level. In 2011, Dutch translations of the British Medical Leadership Framework were introduced in isolated initiatives and experimentally used in practical programs focusing on medical leadership or related topics (Keijser, 2011). Because it was believed that medical leadership would become more and more important to managing the health system, a group of young physicians from various disciplines united themselves in what was called 'Plaform Medisch Leiderschap', which was officially founded in 2012. This group of professionals initiated a shift in focus from managerial competencies and executive roles of physicians to a broader perspective of medical leadership (Broersen, 2011). It was that same year when the University of Twente started doing research on medical leadership, including the development of a Dutch framework, which was launched in late 2015 in a collaboration between the Platform and University of Twente. The Dutch Framework Medical Leadership, or FML, is currently increasingly being embedded in under- and postgraduate medical education.

"I think we are now trying to embed medical leadership in the medical curricula."

- *Interviewee #006*

Though fragmented, there has been a significant increase in initiatives related to medical leadership since the publication of the framework. People are also starting to realize that it is time to bring those initiatives together:

"People now realize that is does not help when we all proceed on our own."

- *Interviewee #006*

Recently, several academic institutions pronounced their interest in medical leadership, also by establishing an academic, though partly privately funded, Chair of Medical Management and Leadership at the Erasmus University in Rotterdam. However, it still seems

that when it comes to medical leadership one is still in a phase of stuck with defining the concept.

"I think we are still indecisive about a definition and focus."

- *Interviewee #006*

"Everybody has a different idea about leadership. […] And that discussion is still going on in the Netherlands. That was the case from the start, and I do not believe the framework changed that."

- *Interviewee #007*

"I think people in the field are still trying to answer the question what medical leadership means and what it actually look like. There, we have to gain more ground."

- *Interviewee #008*

New Zealand

Thirty years ago there was a general sense in New Zealand that the medical profession had too much power, and in order to take away some of that power the government changed the way the health care system was run (#013, 2016). It was believed general management was all that was needed, so in the 1970s and 1980s, basically, every hospital in New Zealand was run by a manager, a medical superintendent, and a chief nurse. But in 1988, the so-called 'Gibbs Report' induced a pivotal change in moving away from that very traditional leadership structure. The report concluded that "*the main problem in New Zealand hospitals is poor management.*" (Gibbs, 1988) The report had a major influence on how the public health system was structured, and how it was managed. For example, the New Zealand Public Health and Disability Act 2000 introduced the so-called District Health Boards. Since then, twenty District Health Boards (DHBs) are responsible for planning and funding a wide range of

health services in their districts. Each DHB is chaired by a chief medical officer who was pulled off the floor into the leadership structure of a Board (#014, 2016).

Also around 1984, New Zealand went from having a right wing party that managed the economy based on communist principles, to a left wing party that embraced free market.

Still, there have not been a lot of reports emphasizing the need for medical or clinical leadership in New Zealand. The first report that talked about clinical leadership and the move towards trying to accomplish that came out in 2009 (Brown et al., 2009). It offered a standard definition of 'clinical leadership', and became government policy. But besides this document there is no national document emphasizing the importance of medical leadership and also there is no national competency framework developed yet.

> *"I think that medical leadership is still in an embryonic state. […] The tree has been planted, but in terms of promoting a framework of capabilities or doing it on a national basis has not been happening"*
>
> - *Interviewee #015*

> *"It is a fairly new concept to New Zealand. […] I think we are still very much in the forming phase and debating and trying to figure out what it is that might work for us. […]At some point someone has to make a discussion, and right now we are in a sort of position of a stalemate."*
>
> - *Interviewee #014*

The United Kingdom

In the United Kingdom, healthcare services are delivered by the National Health Service (NHS). Founded in 1946, it is now one of the largest, and oldest, publicly funded health care systems in the world. The topic of medical leadership was first brought to

attention in the UK by the release of the Griffiths Report in 1983. The report looked at the how the NHS was organized at the time, especially at what was working, what was not, and what needed to change. The main conclusion of the report was that there was an increasing need for greater management in the NHS (Griffiths, 1983). So after publication of the report, the NHS started appointing senior doctors as clinical directors of hospital (Ham, 2008). They were, together with a nurse manager and a business manager, as a team, responsible for leading the different services within a hospital. But in spite of taking on more and more leadership responsibilities, physicians walked away from it (#002, 2016). However, a few did stay around, and organized themselves as the British Association of Medical Managers, or BAMM, in the 1980s (Kyratsis, Armit, Zyada, & Lees, 2016). BAMM was established to support doctors in taking on leadership roles and to develop training programs, but it ceased to exist in 2010.

> *"It ran into difficulties and disappeared. And part of that problem, I think, it fell into the trap of being too cosy and, there were people involved who were in a sense supporting each other through it, more than worrying about all the new leaders and how to keep them engaged and interested. So I think in the end BAMM was a slightly exclusive organization, not deliberately, I am sure, but sort of just because it was set up by a small community of people, they tended to run it, and I don't think it felt open enough to aboard a group."*
>
> - *Interviewee #001*

However, the collapsing of BAMM was not the end of medical leadership in the United Kingdom. In 2005, a report called 'Doctors in Society: medical professionalism in a changing world,' again highlighted the importance of medical leadership and also pressed for more doctors to take on leadership roles (Royal College of Physicians, 2005). It was shortly thereafter, in August 2006, that the NHS Institute for Innovation and Improvement together

with the Academy of Medical Royal Colleges, started developing the Medical Leadership Competency Framework, or MLCF. The framework was intended to describe "the leadership competences that doctors need to become more actively involved in the planning, delivery and transformation of health services." (Black, Spurgeon, Douglas, & Clark, 2010) After a review of literature and key publications, and a couple of years of engagement exercises and consultations, the first edition was published in May 2008. A month after the publication of the MLCF, once again, another report emphasized the need for physicians to take a greater role in management and leadership (Darzi, 2008). In the aftermath of its publication, medical leadership was given more and more attention and feedback on the MLCF started to come in from many different angles. Many of the suggested improvement were incorporated in a second edition of the framework being released in 2009 and a third version in 2010. The appetite for medical leadership started to grow and it is now part of most medical curricula in the UK (Black et al., 2010).

> *"So I think [after the publication of the MLCF] we started to see leadership become part of the curricula and that it started to become part of the day-to-day jargon. And then the professionalization phase for me, well that is the establishment of the faculty, as the professional home for medical leaders, and that happened in 2011."*
>
> - *Interviewee #002*

Founded in 2011, the Faculty of Medical Leadership and Management, or FMLM, was established by all 21 medical royal colleges in the UK and endorsed by the Academy of Medical Royal College, as the professional home for medical leadership (Kyratsis, Armit, Zyada, & Lees, 2016). According to their website, the FMLM "provides tools, guidance and systems to recognize and develop medical leaders from all career stages and specialties."

In 2014, the FMLM started developing standards for medical leadership and mapped those standards to the MLCF. The "Leadership and Management Standards for Medical Professionals" was then published a year later. Most recently, in October 2016, the FMLM established a process by which people can be measured against those standards. The current status of medical leadership in the UK can be best explained by the following quote:

> *"I think that it really starts to become a profession now. It is a bit like different specialties in medicine, whether you might be a cardiologist, or a neurosurgeon, this is a specialty now."*
>
> - *Interviewee #002*

Conclusion

From the archival analysis and conducted semi-structured interviews, it can be concluded that none of the studied countries have made more progress with medical leadership development than the United Kingdom. The UK nationally recognizes the need for medical leadership (phases 1 and 2), developed a competency framework (phase 3), and that framework is currently being embedded into the medical curricula (phase 4). But researchers in the UK (at FMLM) took it one step further and also developed standards and are about to publish a process by which medical leaders can be assessed against those standards. Other countries, like Australia, Canada and the Netherlands, are also on the verge of embedding medical leadership in the (undergraduate) medical curricula. In Denmark and New Zealand, discussion about the meaning and focus of medical leadership are still order of the day. **Table 5** (see below) illustrates each phase of development with a quote from the respective country.

Table 5: Overview of developmental phases per country/case

Relevant factors – facilitating or impeding – for medical leadership development

The third part on this study focused on finding relevant influencing factors – facilitating or impeding – for the development of medical leadership on a national level. All three research methods in this study were utilized; all three yielded results in relation to this topic. In total, 14 themes were extracted from the dataset, which were divided over 5 categories:

1. Medical leadership definition, taxonomy and focus;
2. Health care system;
3. Cultural aspects;
4. Governance and politics;
5. Education, training and sustainment.

A summary of the results per category can be found below (textually) and in **Table 6**. A textual explanation of each category with factors will be provided below.

Table 6: Relevant influencing – facilitating or impeding – factors of medical leadership development (work in progress)

Medical leadership definition, taxonomy and focus

The first category is focused on the phenomenon of creating meaning and focus of medical leadership on a national level. 'Meaning' herein is defined as the development of a comprehensive definition and taxonomy of medical leadership to aid common understanding of the concept of medical leadership on a national level. It is argued that, when developing medical leadership on a national level, "*it is very important that everybody has got an idea of what it is"* (#009, 2016). Sebastian et al. (2014) emphasizes that not having a universal understanding of leadership is one of the three reasons that "*has been problematic for those seeking to change practice*". From the below quote, it seems particularly important for physicians to know what they are getting into:

> *"Doctors want to know exactly what something means. So if they get involved in leadership, they want to know exactly what it means, and exactly what they should do."*
>
> - *Interviewee #015*

Clearly, it is important for leadership development on a national level to have a common understanding of the concept, and it is even suggested that a lack of a universal understanding can in fact impede the process of development and dissemination:

> *"Probably part of putting it down is not understanding what it is all about."*
>
> - *Interviewee #002*

'Focus' can then be referred to as the 'scope and bandwidth of medical leadership', for example a focus on all physicians in day-to-day clinical practice or on a group of physicians in specific managerial roles, often no longer performing clinical duties. It was previously discussed in the section called "Formal vs. informal medical leadership" of this paper that this is a distinction to be made, therefore also a relevant influencing factor to recon with.

"We try to have development of leadership and health leadership to be a joint development between different professionals."

- *Interviewee #010*

"So when we talk about medical leadership, well, most of our attention certainly is with physicians who take on executive and managerial responsibilities, increasingly we want all physicians to have some basic leadership skills."

- *Interviewee #003*

The second theme in this category has a close link to the first theme and refers to (1) the dissemination depth of and (2) synchronicity in the understanding of medical leadership. In other words, this theme is about the intensity of shared understanding in different perspectives. This shared understanding can occur on different levels, including:

1. National level;
2. Local / organizational level;
3. Medical specialty level;
4. Individual level.

McKimm et al. (2009) argue that the MLCF has reinforced the development of leadership being slowly embedded in all medical specialty training curricula. Also, some government reports can play a crucial role in disseminating the 'meaning' of medical leadership to a wide range of different people (#002, 2016; #015, 2016). But, is it after all necessary that we all have to agree on one universal definition and understanding of medical leadership? Some argue it is not.

"So I don't think you ever going to have everybody to agree. I do think that the most important thing is that there is a structure that is comprehensive and effective and more than anything that it meets the needs of people in the room."

- *Interviewee #012*

"I do not think it is important that everybody has the same understanding of what it means, but I do think it is useful to address the differences. Something like, "it can mean this, or it can mean this," depending on the situation, target group or phase of development."

- *Interviewee #006*

Health care system

The second category is related to the influence of the national and/or local health care system on the development of medical leadership. The first theme in this category focuses on the characteristics of the system's structure. Health care systems in general are centralized or decentralized and this is often closely related to the geographical characteristics of the country, e.g. regions or provinces. Another distinction can be made between private or public funding of national health care systems. In a centralized health system, a national, systematic approach to medical leadership development is often favored (#015, 2016; Dickson & Tholl, 2014; McKimm, Rankin, Poole, Swanwick, & Barrow, 2009; Sebastian et al., 2014). However, this is different in a decentralized health system. 'Decentralized' often means that different regions or provinces are responsible for health care services within that region or province. The task of providing health services in Canada for example sits with the ten provinces and three territories. In New Zealand the twenty District Health Boards run the health care system. Decentralization most likely also implies that the regions or provinces are responsible for developing and implementing medical leadership. According to interviewee

#001 the success of leadership development "w*ill be in part determined by the external environment*", emphasizing the influence of how the health system is structured on the development of medical leadership. Also, interviewees #004 and #005 point out the influence of system structure on medical leadership development:

> *"So everybody is doing everything a little bit differently, depending in what province you are in."*
>
> - *Interviewee #005*
>
> *"We realized that health reform and system transformation is different in every province and territory across Canada, and as a result we believe that whatever you are doing to build leadership capacity is depending on that context."*
>
> - *Interviewee #004*

But even in a centralized system like the NHS in the UK, it is argued that local variation of a national approach is not necessarily a bad thing:

> *"What actually works in the Northwest of England, does not automatically work in the Southwest of England, so you should allow some sort of local variation."*
>
> - *Interviewee #002*
>
> *"It would be good if we have a federal initiative, a national initiative and then implemented locally. Now it may be that one province does it a little bit different, that the operationalization is a little bit different from other provinces, and that is okay, as long as we have a common purpose and a common goal and common objectives."*
>
> - *Interviewee #005*

Other system related, ‘macro’-level, characteristics of the health system could impact, for example, speed, diversity or quality of national medical leadership development.

“I think the collaborative model is probably more positive. We are all contributing to the development of medical practitioners, some are working on the national level, some are working at local hospital level, and some are working in the local government. But we are training towards the same thing.”

- *Interviewee #011*

“New Zealand is a small country, and on the one hand we are actually pretty agile here, so if somebody wants to implement something they actually have quite a bit of freedom and opportunity to do it locally. And nationally, if we get the right approach, we can do things rather quickly. […] With 4 million people however, we are never going to build a really good evidence base particularly quickly.”

- *Interviewee #013*

“There were big, large reforms in the Canadian health system between the early 90s, and I would say it is still ongoing, but they started in the early 90s, and a lot of those had to do with regionalization, where different provinces looked at amalgamating regions.”

- *Interviewee #005*

Cultural aspects

The third category of themes is called ‘cultural aspects’ and reflects on specific cultural characteristics and value systems within society and/or in professional groups influencing the national development of medical leadership.

Societal culture refers to general national cultural characteristics of a country, which can influence the development of medical leadership. The Netherlands is, for example, well known for its so-called '*polder model'* which is based on good dialogue and co-creation, providing voice to all sorts of possible contrary views and consensus decision-making (Hilders, 2015).

Professional culture focuses on the values, beliefs and attitudes within the medical community itself, for example the level of autonomy and independence of physicians and how that influences the awareness, recognition and motives regarding medical leadership. Sebastian et al. (2014) argue that promoting medical leadership can be difficult due to the "*deep culture of the profession […] which can limit the capacity for innovation and change."* Also Kyratsis, Armit, Zyada and Lees (2016) explain that in order for medical leadership to gain a foothold within the medical community, a cultural shift is needed "*towards embracing leadership and management qualities as an integral part of medical practice*". Hilders (2015) adds that medical leadership can only happen if physicians open themselves to its desired value, feel responsible for it and acknowledge the fact that doctors are the vital link in this.

Historically, doctors are highly autonomous and therefore often see themselves as self-reliant and independent. Today's health systems however place an increasing emphasis on cross-professional collaboration. Doctors need to collaborate with other health professionals, but "*they often have a difficulty in recognizing that."* (#003, 2016) Power and status differences and the level of respect and partnerships between certain groups or domains within the medical community all have an impact on the development of medical leadership. Most notably healthcare still seems to be very much compartmentalized between first-line physicians and medical specialists in regards to medical leadership (#006, 2016; #007, 2016). Also, there is the notion within the medical profession that knowledge of how to treat patients is the most important thing, and the "*rest does not really matter*" (#010, 2016).

"Doctors just say: "No. That is not for me; that is someone else's responsibility."

- *Interviewee #002*

This, however, should not come as a surprise. Doctors do what they do, because they want to treat patients, and according to some, they do not want to be involved so much in management or leadership.

"It is not in their DNA. They were in med school, and in med school they were taught to treat patients."

- *Interviewee #009*

But not only physicians struggle to see the added value of medical leadership. Whether the development of medical leadership will be successful also depends on the willingness of organizations to nurture the environment to enable doctors to engage in leadership.

"Sometimes it is the organization that doesn't actually values or struggles to see the value of somebody in a clinical leadership role."

- *Interviewee #013*

This attitude of physicians and health care organizations towards medical leadership is considered a huge hindrance to leadership development, at that sort of 'attitude' then becomes a massive barrier for physicians to being accepted as a group that could provide good leadership (#014, 2016).

It can be concluded from the above that physicians have little understanding and appreciation of management and leadership positions. Kyratsis, Armit, Zyada and Lees (2016) take it a step further and conclude: "*<u>resistance</u> to medical management existed and still exists.*" Some physicians however do see the value of medical leadership and engage in leadership roles, but they then "*become the middle in a very unpleasant sandwich*." (#013,

2016) If a doctor takes up a leadership or management role, their colleagues use terms like ‘going to the dark side,’ ‘becoming one of them’ and ‘alienation’ (#013, 2016).

> *“The first barrier to medical leadership development is, I think, distrust by ones fellow professionals. The distrust of somebody who wants to do something other than to look after patients.”*
>
> - *Interviewee #013*

> *“Well, sometimes barriers are actually the doctors themselves. […] They are our worst enemy in a way.”*
>
> - *Interviewee #002*

Despite many cultural barriers to medical leadership development, things are going in the right direction though. Although not consistent throughout the health care system, the need and importance of medical leadership is being given more and more attention and there are clear signs that more and more doctors are engaging in leadership and management (Bohmer, 2012; Clark, 2012; Snell et al., 2016; Spurgeon et al., 2015). The below quote can provide an explanation of this movement towards more physician leadership:

> *“There is no escape from it. This is part of the parcel of being a professional. […] Not that is has changed everywhere, but I think there is more acceptance.”*
>
> - *Interviewee #002*

Young doctors however seem to have a particular interest in medical leadership. Some argue this can be explained by the decaying status of physicians. Historically, doctors had a certain societal status, they could relatively easily make a lot of money, and they could easily enter a professional group. These advantages are no longer self-evident, and the new generation of doctors are therefore looking for ways to position and manifest themselves

(#006, 2016). A more simple explanation could be that it is just because they are exposed to a lot more conversation about it being important (#001, 2016).

> *"They [the younger generation of physicians] just get it."*
>
> - *Interviewee #001*

> *"I also believe that the new generations of physicians, these new guys and girls that are graduating, have a different mindset than us older generation have, because they grew up in a different era."*
>
> - *Interviewee #003*

Other cultural aspects influencing the development of medical leadership include the discourse of physicians versus managers (#013, 2016; Klopper-Kes, 2011). Tensions between doctors and managers is as old as health care and Ham and Dickinson (2008) argue that "*bridging the divide between doctors and managers*" is essential to developing medical leadership. In Denmark, for example, the Medical Association of Senior Doctors used to have a chairman who did not recognize the role of medical leadership, which had very negative influence on its development (#010, 2016). It is suggested though that the discourse is not just with managers:

> *"It is not just managers. It is doctors and other health professionals. So the increasing role of pharmacists, the increasing role of rehabilitation therapists, etc. The need for them to recognize what role other health professionals can play is very very important, and they are not really good at that at the time. So I think there is a divide there."*
>
> - *Interviewee #003*

To 'bridge this divide,' Ham and Dickinson (2008) suggest to "*support the creation of a system, which entails the appointment of a large number of doctors to leadership roles,*

enhance horizontal collegial processes of control and co-ordination and a culture in which doctors and managers accept the fact that they need to work in partnership." Collaboration across professional boundaries becomes increasingly important and may be the key to success development of medical leadership.

> *"A lot of the answers […] lie in better collaborations among different professional groups."*
>
> - *Interviewee #003*

Governance and politics

The fourth category is dedicated to the influence of national politics, health care governance, and the establishment and implementation of policies and regulations, on the national development of medical leadership. It is, for example, argued that a rigid, bureaucratic political culture can also influence the development of medical leadership (#014, 2016).

> *"We are so bureaucratic, it takes months for decisions to be made."*
>
> - *Interviewee #014*

The first theme in this category is simply called 'politics' and refers to the processes in the national political domain addressing expectations towards medical leadership or actively encouraging physicians to engage in leadership roles. There has been a lot of political debate over the last decades about the future role of physicians in leading change and innovation in health services (McKimm et al., 2009). It is even suggested that active government involvement can in fact facilitate medical leadership development, for example by funding the development of a framework (#002, 2016; #011, 2016; #013, 2016). On the contrary, this also means that government involvement, or a lack of it, can impede the development of medical

leadership. A governmental lack of willingness to actively promote medical leadership, or a lack of government funding, can bring its development to a halt.

> *"What is really required is a strong national government policy message about what is really required. That is lacking."*
>
> - *Interviewee #015*

> *"Part of the reason there hasn't been any more national work is because there is no further national funding."*
>
> - *Interviewee #012*

The simplest explanation for a lack of government involvement in medical leadership development is that it has never been a top priority, essentially because "*they have other things to worry about*" (#009, 2016; #015, 2016). Politicians typically look at making quick, short-term changes that please the voter, and engaging physicians to lead health care system change, simply does not sit in the short election cycle of a democratic system (#005, 2016). Another 'conspiracy theory' based explanation might be that the government tries to avoid that engaging physicians in leadership and management actually makes doctors too powerful.

> *"I think politicians want doctors to engage in medical leadership if it makes things better and easier for them. They probably do not want doctors to do it of it makes them doctors more powerful."*
>
> - *Interviewee #001*

Formal statements from the government such as laws, policies and regulations, however, can actually facilitate the development of medical leadership. Official reports often influence government thinking. Lord Darzi's *NHS Next Stage Review*, for example, highlighted developing leadership capacity for all clinicians as a key priority, which

influenced government policy in the UK (McKimm et al., 2009). Another report called *In Good Hands*, which outlined "*changes to clinical leadership that must occur, […] and identified the challenge of nurturing clinical leadership*," became government policy in New Zealand (#015, 2016; Brown et al., 2009).

But it also often depends on the level of alignment between government authorities. In a devolved health system regions or provinces are very much independent, so they can decide to do things as they wish to do them (#011, 2016). A discourse between provinces that run the health system and how the federal government looks at it can impede the national development of medical leadership (#003, 2016). It is then up to the national government to develop a enhance consensus between the different tiers of government (#004, 2016).

Education, training and sustainment

The fifth and final category of themes represent perspectives on delivery of education and training in all phases of the medical career pathway, and how these perspectives could influence the development of medical leadership. When it comes to teaching leadership capabilities, there still is an ongoing debate relating to certain beliefs and conceptions whether leadership capabilities can be taught and learned. It only makes sense to assume this debate also applies to the concept of medical leadership. Dickson and Tholl (2014) even suggest that the belief that anyone who chooses to take on a leadership role can grow the ability to lead "*has unquestionably driven its wide-spread acceptance and use."* So acknowledging the fact that medical leadership can be taught and learned is actually a really important first step in re-designing under- and postgraduate medical curricula to include leadership.

Although the scientific literature describes clear advantages of teaching leadership in medicine (Frich, Brewster, Cherlin, & Bradley, 2015; Warren & Carnall, 2011), there seems to be a lack of attention given to management and leadership in the current medical curricula and many consider that a major issue (#004, 2016; #005, 2016; #007, 2016; #015, 2016).

Coltart (2012) argues that teaching early career doctors about medical leadership and management not only benefits those involved, but also benefits the wider health care system. Sebastian et al. (2014) add that embedding leadership capabilities into the under- and postgraduate medical curricula enhances leadership effectiveness.

> *"Right now we are asking physicians to make change without giving them the right skills to do so."*
>
> - *Interviewee #004*

Only recently there are signs that under- and postgraduate medical curricula are being reformed to include management and leadership capabilities or competencies. In the UK, there have been activities to integrate leadership competencies in education and training curricula, with the MLCF driving much of that development since 2009 (McKimm et al., 2009). And the *Medical Leadership Curriculum*, also developed in the UK, has been incorporated in the 58 specialty curricula of the Medical Royal Colleges (Black & Spurgeon, 2010). Other countries follow this trend. In 2012 the Canadian College of Health Leaders has aligned its training and coaching programs with the LEADS framework (Marchildon & Fletcher, 2016). And in Australia incorporating leadership in the curricula for Australian medical students actually is a new requirement (Jorm & Parker, 2014). However, integrating medical leadership in the medical curricula is one thing, ensuring its quality and continuous improvement is another.

> *"The further development of credentials, accreditation, qualification and those sort of things is quite an important step."*
>
> - *Interviewee #001*

Although more and more physicians are being 'trained', recent research shows that one of the major issues with the current medical leadership training and development is that it

has been very much ad hoc and not consistent of time (Kyratsis, Armit, Zyada, & Lees, 2016). It is therefore suggested to "integrate leadership training into longitudinal curricula by taking advantage of areas in which such training overlaps with existing curricular content." (Webb et al., 2014) Hartley (2016) then suggest providing training before doctors become fully qualified, as according to her, this increases the likelihood of doctors being more effective leaders. However, she also acknowledges the fact that this increases the possibility that most of the trainees have forgotten what they have learned as soon as they would be appointed to a doctor position. Her arguments thus suggest to provide training in medical leadership "*throughout the duration of medical education*," including postgraduate training programs and extra curricula activities. But not only timing of training should be taken into consideration. McKimm et al. (2009) emphasize the challenge of identifying who will teach medical leadership. When leaving this to senior physicians, who often learned leadership by doing, concerns are that leadership will be taught without a theoretical basis, so development of skills of 'medical teachers' is needed in order for them to effectively train and evaluate medical students (Hartley, 2016).

"The two-day workshop is not going to turn you into a leader"

- *Interviewee #011*

Although medical curricula increasingly contain competencies in leadership and management, Frank and Danoff (Frank & Danoff, 2007) explain there is a lack of uniformity in teaching, and McKimm et al. (2009) argue that assessment methods are not yet well defined. Aligning leadership curricula with existing competency frameworks would however create opportunities to not only standardize learning activities and assessment methods, but also standardize evaluation outcomes of medical education (Webb et al., 2014). In 2015, the Faculty of Medical Leadership and Mangement in the UK therefore launched the *Leadership and Managament Standards for Medical Professionals*, and there will actually be a process by

which people can be measured/benchmarked against those standards (#002, 2016). Sharing those evaluation outcomes would in turn ensure continuous improvement of medical leadership development and over time would enable the defining of research-based best practices.

> *"I think we will start to see more change in training, where more people will be more heavily assessed as part of training than it has been before."*
>
> - *Interviewee #002*

Despite the fact that an increasing number of physicians is being trained in leadership and management, Jorm and Parker (2014) argue that much leadership training is perhaps wasted, because physicians often return to their role as clinician where they are not encouraged or enabled to employ their new set of skills. Integrating medical leadership in the human resources systems therefore becomes a particular challenge. Thus it is suggested to include medical leadership competencies as significant indicators in job descriptions for physicians. According to interviewee #013 there are actually two ways to accomplish that:

> *"If you have a core set of competencies, agreed, nationally agreed, then, in some ways, the role descriptions fall out of those competencies. That is one way. The other way is describe the role descriptions and then match the competencies."*
>
> - *Interviewee #013*

Because the majority of employment arrangements is not ideal for physicians to exploit their leadership capabilities (Jorm & Parker, 2014), conditions should not only be created for doctors to actively engage in formal and informal leadership or management roles, but also to sustain and improve their leadership skills during employment. What activities can be undertaken to nurture the development and deployment of medical leadership will be discussed in the next section of this chapter.

‘Interventions’ for medical leadership development

Below will be given an overview and explanation of so-called ‘interventions’ for medical leadership development on a national scale, as identified during this study. ‘Interventions’ are defined as activities that can be undertaking to accelerate the development and deployment of medical leadership on a national level. Although the previously mentioned factors also have an influence – facilitating or impeding – on the development of medical leadership, ‘interventions’ are specific activities in order to enhance medical leadership development. See **Table 7** for an enumeration of all ‘interventions’.

Table 7: ‘Interventions’ for medical leadership development

One such ‘intervention’ is that a national, comprehensive strategy for developing medical leadership (I1) is often favored over a more fragmented approach (Dickson & Tholl, 2014; O’Sullivan & McKimm, 2011; Shannon, 2015). However, not everybody concurs. Fact is, some of the health systems in the world are very much devolved, and it would therefore make more sense to develop medical leadership on a system level scale, as long as the development has a common purpose, and common goals and objectives (#005, 2016; #012, 2016).

> *“What actually works in the northwest of England, does not necessarily work in the southwest of England, so there should be allowed for some local variation.”*
>
> - *Interviewee #002*

Also mentioned in the dataset as having a positive impact on the development of medical leadership is the presence of a national competency or capabilities framework (I2). Sebastian et al. (2014), for example, explain that "*a national health leadership framework offers many benefits, such as raising awareness of the need for leadership and increasing the likelihood of physician engagement with change processes*," and O'Sullivan and McKimm (2011) conclude that a competency framework "*could help plan educational activities*." The same can be concluded from the conducted semi-structured interviews:

> *"I think a framework is very important, because there needs to be a structured way of thinking through curricula."*
>
> - *Sarah Dalton (Australia)*
>
> *"A framework is sort of a facilitator for change and medical leadership development."*
>
> - *Interviewee #003*
>
> *"A framework is guidance."*
>
> - *Interviewee #002*

Closely related to having a competency framework, is the existence of indicators and standards (I3). These indicators or standards define what is expected of doctors, and therefore also what is expected of doctors in regards to leadership skills. According to interviewee #002, "*a framework is something that you start on, and builds up towards standards*." It is argued that the term 'standards' implies there is a benchmark by which people will be measured against, and therefore a much stronger term than 'competency framework'.

But having a framework and related standards is not always considered as having a positive impact on the development of medical leadership. The data reveals a few conditions that have to be met in order for it to be successful. It is, for example, argued that every

medical leadership competency framework in existence basically includes the same concepts, and that having multiple frameworks is very much confusing, thus emphasizing the importance of forging one nationally agreed overarching framework.

> *"We get lots of conflicting information. So an example is the leadership framework we have that is closely aligned to the Canadian LEADS framework. We have another leadership framework that has been endorsed by the General Managers of Human Recourses for all the District Health Boards, and at the same time we have a leadership framework that has been endorsed and promoted by another group. […] So we have three! And we don't really know which one works."*
>
> - *Interviewee #014*

It is also suggested that for a leadership competency framework to be successful in health care, it has to be specifically customized to meet the needs of health care practitioners (#004, 2016; #011, 2016). In other words, a framework has to be customized for the medical context. "*Putting leadership into context will actually help people understand and recognize it is for them*," according to interviewee #002.

Sebastian et al. (2014) concluded that a framework "*would provide a common language about health leadership*", and having a common language for leadership in a health care setting (I4) is considered to be beneficial to medical leadership development (#002, 2016; #003, 2016). A recently published press release by CHLNet also explains that "*a common language creates shared meaning across a system; it unites rather than fragments; it creates opportunities for, and stimulates the collaboration that otherwise might not exist, and builds relationships.*" (CHLNet, 2016)

"It is not really too productive where you have one place where you are talking to doctors and another place talking to nurses, and another place talking to pharmacists. You have to get them in the same tent."

- *Interviewee #003*

Another crucial factor for successful development of medical leadership is empirical evidence for its value (I5) (#013, 2016; Sebastian et al., 2014). It is even argued that limited research-based evidence for its value could impede medical leadership development. Without this evidence, doctors may remain reluctant to engage in leadership roles (#008, 2016; #012, 2016).

"I think, in general, doctors need evidence that something works before they do it."

- *Interviewee #012*

Interviewee #012 then argues that having a sound evidence base for its added value could also be very important for getting funding for medical leadership development, and funding could very well be one of the most important factors for success (I6). Funding can, for example, be used to develop a framework. Although the Dutch Medical Leadership Framework was entirely developed by volunteers and relatively limited funding, it is also acknowledged that at a certain moment developing medical leadership without sufficient resources it is not feasible anymore and that funding is needed for further medical leadership development (#007, 2016).

"Without that [three millions dollars] we wouldn't have been where we are now."

- *Interviewee #003*

"Funding is the key to everything we achieve."

- *Interviewee #012*

"[Funding] was there on a recurrent basis for several years, and that made a big difference in making that project as successful as it was."

- *Interviewee #002*

The importance of funding is also emphasized by O'Sullivan and McKimm (2011), who argue that "*ensuring sustainable medical leadership requires investment in formal training and partnership with universities and other providers.*" Many of the leadership development programs are currently led by professional bodies (I7) such as medical colleges, and those are all increasingly important in promoting medical leadership and acknowledging the fact that medical leadership is becoming a 'specialty' in its own right (O'Sullivan & McKimm, 2011). Especially in Australia, where medical education is regulated at state level, the development of medical leadership "*is heavily dependent on the role professional bodies rather than government agencies*" (Ham & Dickinson, 2008). Also, professional associations like the Royal Dutch Medical Association or Danish Medical Society as strong advocates of medical leadership help push forward its development (#008, 2016; #009, 2016).

"The Danish Medical Society pushed [medical leadership] forward."

- *Interviewee #009*

"An important facilitator is the fact that the Royal Dutch Medical Association stood behind it. All of the sudden it was hot and happening. It appears to be a hype."

- *Interviewee #008*

Not only professional organizations are considered promoters of medical leadership. Certain individuals can also play an important role in advocating the development of medical leadership (I8). Interviewee #006 states that it is very important, in particular for young doctors, to have a role model, for them to see it is a very personal success story and that

engaging in leadership roles does not necessarily have to be a bad experience (‘going to the dark side’).

“It could be important to have someone providing support.”

- *Interviewee #015*

One more ‘intervention’ is explained by Sebastian et al. (2014). They explain the “*need to incentivize innovation for clinicians*.” Incentives could be financial, e.g. pay-for-performance, or non-financial, e.g. job satisfaction (I9) (Health Workforce Australia, 2012). But despite this statement Ham and Dickinson (2008) conclude that “*incentives for doctors to become involved in management have been weak*.” Another report also stated that in order to enhance physician engagement in medical leadership development, proper incentives and career progression possibilities for those taking on leadership roles should be in place (Hamilton, Spurgeon, Clark, Dent, & Armit, 2008).

DISCUSSION

In this section of this paper, first it will be explained how the findings of this study give answers to the questions set out in the introduction setting, and how these answers relate to each other. Second, practical implications of the findings will be laid out and suggestions will be made for future research. Third, the findings of this study will be linked to existing theories. Finally, at the end of this section, limitations of this study will also be discussed.

The first section of this chapter will, just as other chapters, be divided according to the research questions of this study. First, the findings pertaining to the definition of ‘medical leadership’ will be discussed. Second, the phases of ‘medical leadership’ development found in this study will be examined further. Third, relevant influencing factors – facilitating or impeding – will be discussed, including ‘interventions’ that could be undertaken to accelerate the national development of medical leadership.

The purpose of this study was to unravel the national development of medical leadership in various countries. It was stated from the beginning that the focus of this study was on national initiatives only. However, the notion of developing medical leadership on a national scale, might be overrated. It appeared from the interviews that medical leadership is often being developed on a health care system level basis. For example, in New Zealand, initiatives to develop medical leadership are the responsibility of the so-called District Health Boards and they all have their own approach. And although LEADS Canada is endorsed as a national framework, its implementation is left to the different regions and provinces. It is worth noting that a fragmented approach to developing medical leadership can favor from cross-regional collaboration. In the United Kingdom, however, the NHS is responsible for delivering health services across the entire country and therefore also for nationally developing medical leadership. In the Netherlands, however, after a national launch of a generic medical leadership framework and further medical leadership development activities are found in a more dispersed or fragmented manner. Here, medical specialist organizations, individual healthcare providing organizations, but also profit organizations provide a variety of medical leadership development activities and services to individual physicians as well as to organizations. It can therefore be concluded that medical leadership is often being developed on a scale similar to that of the health system structure. But if a country has a very centralized health system, medical leadership will probably be developed on a national level. But countries with fragmented health systems, tend to develop medical leadership in the same fashion as their health system is being administered.

When it comes to defining ‘medical leadership’, there are as many definitions as there are people to define it. Some will refer to it as leadership in healthcare; other will see ‘medical leadership’ as leadership exhibited by doctors. The results of this study do show that having a universal, or at least commonly agreed definition can be crucial to its development. Without

agreeing upon a definition prior to actually developing it, chances are the discussion about defining the concept will go on indefinitely, possibly impeding further developmental progress. Especially for doctors, not having a clear definition can be a huge pitfall.

It also appeared from the data that over time, there has been an important shift in using the term 'manager' to that of 'leader' in the context of medical competencies. A relevant example for this is the recent name change in the CanMEDS 2015 framework. A shift in focus can also be seen. A couple of decades ago, 'medical leadership' was often attributed to doctors in managerial positions. More recent data show an increase in acknowledgment that all doctors need some leadership skills. The importance of managerial leadership, however, should still not be underestimated, but the need for today's physicians to engage in leadership roles as part of their daily job is also emphasized. It could therefore be said that medical leadership becomes part of the 'new' medical professionalism of doctors. Medical leadership is not just an add-on, but an entirely new perspective that together with management, the patient and the healthcare payer is responsible for ensuring delivery of high quality care.

The developmental process of medical leadership is hard to define. It is suggested that the four phases proposed in this paper encompass the entire process, up to the phase of sustaining a high level of medical leadership development quality in all steps of medical careers. These phases however, are not always sequential. Moreover, there are not always distinct boundaries between phases, making it hard to determine when the development process goes from one phase to the next. Perhaps, developing medical leadership on a national level, may be best compared to a series of phases including a variety of possible feedback loops and iterative steps. It is, for example, no exception that during the third professionalization phase discussions about defining the concept are still going on. Developing medical leadership is a learning process. With regards to the development process, it should also be noted that this study did not reveal one single event or (e.g. policy)

report as initial ‘trigger’ of national development of medical leadership. The same goes for identifying a single organization or individual as initiator of such a national process. Medical leadership development on a national level often seem to start when multiple streams and activities flow together, merging into a single stream. Suddenly there is momentum, or as interviewee #002 said it: “*it is a little bit like the stars started to align.*”

It is also worth noting that medical leadership can be developed in several ways though the health system. Some countries utilized a top-bottom approach, where initiatives to start developing medical leadership were undertaken in national, high-level, policymaking organizations (like the NHS in the United Kingdom). It is also possible to employ the same methods, but with help of doctors in advisory roles, in a hybrid bottom-up and top-down manner. A third option is that medical leadership is initially being developed bottom-up, with doctors and/or others (e.g. healthcare professionals, academics) taking lead in developing medical leadership (e.g. the Netherlands).

The relevant factors identified in this study all have some sort of influence – facilitating or impeding – on the national development of medical leadership. Some of these factors are ‘fixed’, meaning that the particular factor represent a given fact that cannot easily be adjusted (e.g. healthcare system), others are more ‘variable’, meaning that the particular factor can in fact be adjusted by deploying a so-called ‘intervention’. For example, enhancing the research based evidence base on medical leadership, especially how it affects quality of care, can increase awareness and recognition among doctors. Another example, having a competency framework can provide guidance in shaping standardized medical education. It also seems some factors and ‘interventions’ have a heavier impact on the national development of medical leadership than others. This study is purely explorative in nature, and therefore not designed to ‘rank’ the identified factors and ‘interventions’. A suggestion for future research might be to investigate which of the identified factors impacts the

development of medical leadership the most, but also to explore which of the described 'interventions' is most successful in accelerating the development of medical leadership.

Future research could also focus on ascribing the identified 'interventions' to corresponding factors. Based on the finding of this study, suggestions for linking 'interventions' to specific factors will be explained here. For example, utilizing a national approach to developing medical leadership enhances the national sense of purpose (A2), but also disseminates medical leadership on a national level (factor A2). A national approach also facilitates national government policy (D1/D2), and stimulates embedding medical leadership in education on a national level (factor E2). The presence of a competency framework not only strengthens clarifying the purpose, meaning and focus of medical leadership (factor A1), but also positively influences the collective understanding of medical leadership (factor A2). A framework also raises national awareness, thus positively influencing professional culture (C2). Moreover, a framework provides structure and guidance for implementing medical leadership in the medical curricula (factor E1), enhancing its quality, standardization and alignment (factor E3). Same as with a framework, indicators and standards (aligned with a framework) can also positively influence factors A1, A2, E2 and E3, especially standardizing training and education (E3), hence creating opportunities to standardize and evaluate training outcomes. Webb et al. (2014) also conclude that "*anchoring the skills and competencies that are taught to a framework allows for standardized evaluation of programs across schools*." Having a common leadership language then positively influences clarifying the purpose, meaning and focus (factor A1), but also helps creating a collective understanding of the constructs of medical leadership (factor A2), possibly also influencing awareness and recognition of medical leadership (C2). Enhancing the evidence base on medical leadership could also be most influential on clarifying purpose, meaning and focus (factor A1), and disseminating a collective understanding of medical leadership in various echelons (factor

A2). Investment can then boost the building of that evidence base (and therefore indirectly clarifying purpose, meaning and focus (A1), and disseminating the constructs of medical leadership on a national level (A2), but investment can also be helpful in embedding medical leadership in the medical curricula (factor E2). This statement is supported by McKimm et al. (2009) who argue that "*developing capacity to teach evidence-based leadership systematically needs significant investment.*" This study also shows that investment can play an important role in developing a leadership competency framework, which in turn positively influences other factors (see before). The role of professional bodies cannot be easily associated with an identified factor, but the findings of this study suggest professional bodies have most influence in clarifying purpose, meaning and focus (A1), disseminating the construct of medical leadership (A2), shifting the professional culture of doctors, especially increasing awareness (C2), setting laws, policies and regulations and aligning theirs to that of government (D2/D3), and embedding medical leadership in medical curricula (E2), including assessing the quality of medical education and training (E3). A role model, however, is especially helpful in clarifying the purpose, meaning ad focus (factor A1), and also in disseminating the constructs of medical leadership (factors A2). A role model can also play an important role in shifting the professional culture of physicians towards one that embraces medical leadership more as an integral part of practicing medicine in the twenty-first century (factor C2). Incentives then can positively affect the mindset, interest and attitude among physicians towards medical leadership, and change an innovation in general (factor C2). Incentives can also create opportunities for education and training in medical leadership to set up optimal conditions for trainees (e.g. dedicated time off) (factor E3). A summary on which 'intervention' could positively affect which factor is given in **Table 7**.

Table 7: Influence of 'interventions' on identified factors

The factors identified in this study could also be attributed to the phase in which that particular factors has most influence. Although future research could examine this in more detail, a suggestion, based on the findings of this study, will be provided here. Clarifying purpose, meaning and focus could (A1), for example, be most important in the first two phases of development. This can also be said for the synchronicity in the dissemination of medical leadership (A2). It should however be noted that factors related to definition, taxonomy and focus (A) are also important to consider in the operationalization and professionalization phases. Factors related to the healthcare system characteristics (B) cannot be easily attributed to one phase of development. Hence, it is suggested that the structure of the healthcare system influences the entire process of development. Factors pertaining to cultural aspects (C) also influence all phases in the proposed phasing model in this study. However, cultural aspects such as public opinion (C1) and awareness, recognition and motives of physicians (C2), are very important in the early stages of medical leadership development, nurturing the (optimal) cultural environment for development. Factors connected with governance and politics (D) have an influence in all four phases of development, but especially in actively encouraging medical leadership and shaping medical curricula to include education and training in medical leadership (professionalization phase). Factors in the category 'education, training and sustainment' probably influence the process most in the professionalization phase, because embedding medical leadership in education, standardizing and evaluating training outcomes, and integrating medical leadership within

human resources systems, are activities undertaken to professionalize the outcomes of the operationalization phase (e.g. competency framework). It could be concluded that the findings of this study effectively identified influencing factors on developing medical leadership, as well as 'interventions' that could positively influence these factors. Furthermore, an attempt is made to attribute these 'interventions' to factors, then ascribing the identified factors to the developmental phases of the proposed phasing model. The findings of this study, especially the attempt of linking factors and 'interventions' to developmental phases, provides opportunities for future research.

Link to existing theories

Twenty-first century healthcare is changing, and with it, the physician's future role and position in providing health services. The traditional, and by now, institutionalized set of skills, attitudes, values and behaviors (medical professionalism), is being challenged and disrupted, threating the physician's identity. A recent study by Kyratsis et al. (2016) , "*investigated how established professionals manage their identities in face of an identity threat from a contested shift in the professional logic that characterizes their field.*" Building on the findings of this study, we draw upon the concept of institutional logics to explain why and how the professional identity of physicians is changing and what the significance of medical leadership is in this process. Institutional logic is defined as "*the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality*" (Friedland & Alford, 1991; Thornton & Ocasio, 1999). It is thought that institutional logics and individual behavior are closely related to identity, and it is therefore also assumed that when logics change, identities change with it (Lok, 2010; Thornton, Ocasio, & Lounsbury, 2012). Drawing on these findings, at the professional level, professional logics "*provide the identities that professionals draw upon to*

make sense of who they are and what they do" (Kyratsis, et al., 2016). Recent health care reforms had significant implications for the professional logics of physicians (e.g. loss of power, authority and position), hence their professional identity. Historically, the professional identity of physicians rests on clinical independence and autonomy. Doctors have always seen themselves as medical monopolist and therefore resisted to work with non-clinical managers, because "*it reframed their identity from autonomous professional to managerial agent*" (Doolin, 2002; Skelcher & Smith, 2015).

Shamir (1991) already showed that individuals value their own identity, thus logically trying to maintain that identity in the face of what is called an identity 'threat'. Other studies show that 'identity threats' can in their turn lead to decreased desire to take on leadership positions and intentional attempts to block organizational change efforts (Davies, Spencer, & Steele, 2005; Nag, Corley, & Gioia, 2007). These findings can seemingly be translated to the changing identity of physicians. Our study, and others (Abbas, Quince, Wood, & Benson, 2011; Kyratsis, Armit, et al., 2016), show that resistance to medical leadership still exists within the medical profession, and another study by Health Workforce Australia (2012) shows that the "*deep culture of the professions and early enculturation and socialisation can limit the capacity for innovation and change.*"

In the early 1990s, physicians simply were not interested in medical leadership because it was not part of their identity: "*We basically weren't interested, we said "well, this is administration, leave us alone, we will take care of the patient in our office and you just make sure that whatever we need for our patient is available*" (#005, 2016) Interviewee #009 adds: "*It is not in their DNA. They were taught to treat patients.*" These statements suggest, physicians chose to protect their 'old' identity, and resisted to adopt a new one. Petriglieri (2011) calls this phenomenon an 'identify-protection response'.

But now, as the Institute for Healthcare Improvement (2007) emphasized the need for engaging physicians in quality improvement of health care, there is no walking away from it. The identity of physicians is inevitably changing and the four elements of what Toth (2015) describes as medical dominance – professional autonomy, superiority over other health care professions, influence on policy makers and authority over patients – are no longer valid. This process can also be referred to as 'deinstitutionalization', which is defined as "*the erosion or discontinuity of an institutionalized activity or practice*" (Oliver, 1992).

The ongoing healthcare reforms described earlier, potentially undermine the traditional autonomy of the physicians, changing the professional logics of their medical profession, and as described earlier, when logics change, identities also change. According to Petriglieri (2011), individuals can successfully manage the shift to new professional logic by constructing a new identity. This reaction is also referred to as an 'identity-restructuring response'. Physicians could react to the erosion of the medical profession by reshaping their professional identity towards a hybrid identity with medical leadership as an integral part of this 'new' identity. But reconstructing an identity that embraces medical leadership requires efforts by physicians themselves. This study contributes to current knowledge by, for the first time, highlighting factors that can facilitate (and/or impede) the development of medical leadership and therefore provides insights in what can be done, or should be avoided, to help physicians in their search of their 'new' identify; that of twenty-first century medical leader.

Limitations of study

Although it is believed this study makes an important contribution to research on medical leadership development, it also has some limitations. First, it is an explorative qualitative study, and therefore intended to explore, not to test an existing theory. Thus, future research could be focused on 'measuring' the weight of influencing factors. This research could be undertaken with the help of a large medical professional associations.

Second, the systematic literature review in this study only included articles published in the last five years, inevitably missing possible relevant publications before 2011. The review also made use of reviews only, because it was believed reviews often portrayed national initiatives to medical leadership development. It could, however, we useful to examine local or regional initiatives as well, thus extending the search for citations to all relevant articles from the used electronic databases. It should also be noted that book chapters, although those could contain relevant information, were not included in this study.

Third, only six countries were included as a case. Although it is believed that these six countries have made most progress on developing medical leadership, other countries around the world are also investigating their options for medical leadership development. The United Kingdom and Canada seem to have a special role in developing medical leadership. All the medical leadership initiatives in the studied countries seem to (partly) based on the development in these two countries. It could therefore well be that the medical leadership developments in the other countries are somewhat biased by the progress in Canada and the UK. It should also be noted that the six included countries are all developed countries. It would therefore be useful to test the generalizability of our models to less developed countries.

Fourth, although 15 interviews were conducted in six different countries, with interviewees from different levels of involvement, this study would benefit from additional interviews, especially in the operational level. Moreover, all interviewees were involved in developing medical leadership and considered to be experts on this field. This study could therefore benefit from additional interviews with doctors from different specialties, examining what their needs are in regards to medical leadership development.

Finally, all interviewees had some sort of self-interest, creating so-called self-serving bias. Although believed this sort of bias is inevitable, it could have influenced the findings.

CONCLUSION

Globally, calls for effective medical leadership have increased in response to the continuous healthcare reform. This study shows that development of medical leadership is strongly depending on many individual, organizational, cultural and contextual factors. Although this study is an important step forward in recognizing the basic 'ingredients' of medical leadership development, in the end, there simply is no 'best recipe' for national medical leadership development. Medical leadership development comes in many different 'flavors', depending on the chef's (or: the individual country's) unique blend of ingredients and cooking techniques, and the needs and demands of his 'diners'. Among the countries reviewed in this study, none seem to have made more progress on medical leadership and its development than the United Kingdom. This provides the UK with a unique opportunity to become the world's exemplar in medical leadership by taking the lead in international collaboration and exchange of best practices. As shown in this study, the next generation of doctors will be of vital importance in bringing leadership to life in health. Let it be our task, our duty, to equip them with the capabilities, which will enable them to lead future health care change effectively. But above all, let us acknowledge that leadership in health is no longer reserved for a chosen few; in today's society, all physicians are leaders.

APPENDICES

Appendix A: Research team

Appendix B: Search string ‘deconstructed’

Appendix C: Database-specific search strings

Appendix D: In- and exclusion criteria for systematic literature review

Appendix E: List of definitions of 'medical leadership' found in literature review

Appendix F: Consensus table for literature review

Appendix G: Themes table from literature review

Appendix H: Case reports per country

Appendix I: List of definitions of 'medical leadership' found in archival analysis

Appendix J: Themes arising from archival analysis

Appendix K: ‘Themes’ table literature review plus archival research

Appendix L: Findings related to models of development

Appendix M: Overview of interviewees per country

* = physician

Appendix N: Interview guide

Appendix O: Data extraction form – interview transcripts

Interviewee ID code:

Appendix P: Data extraction (analysis) tables per interview

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