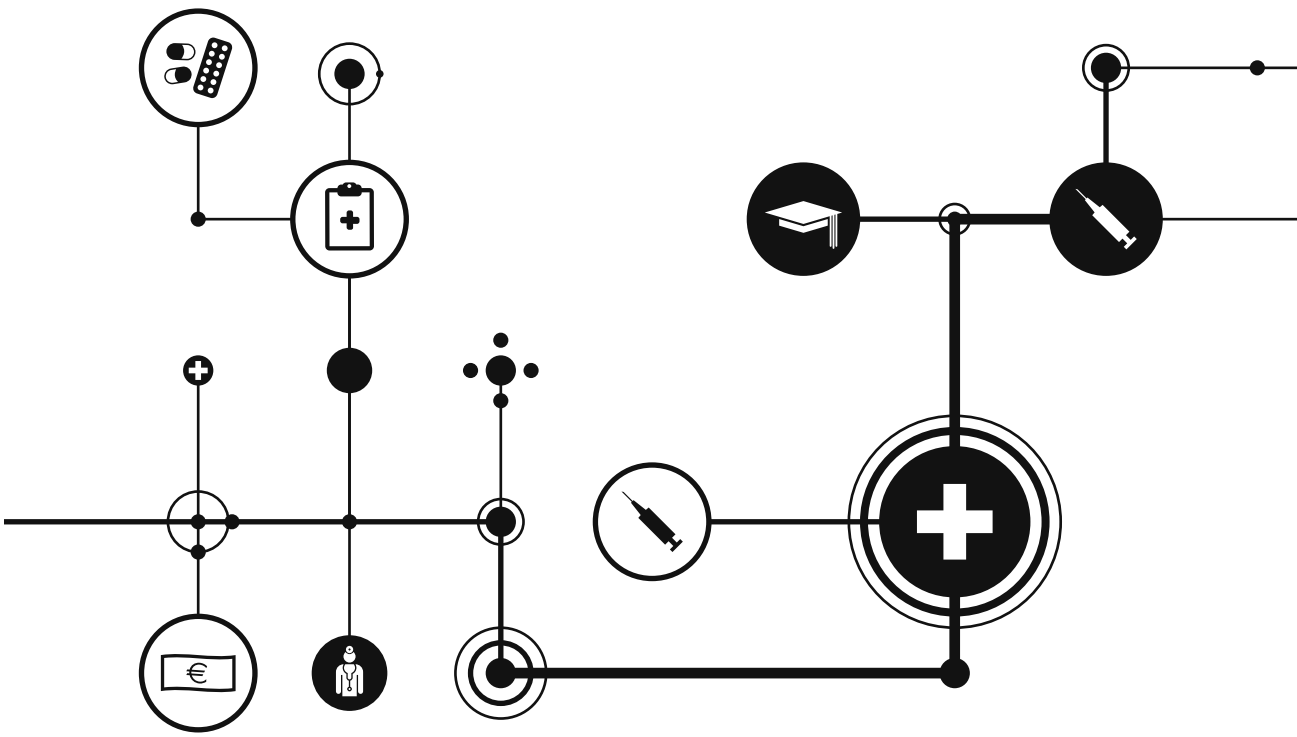
Management and leadership education for medical residents : evaluating needs and developing an educational intervention

Chapter 8

Summary and General discussion
Samenvatting (Summary in Dutch)
Dankwoord (Acknowledgements)
Curriculum Vitae



BACKGROUND

The process of health care delivery and professional training of medical doctors has recently been the subject of much debate. The different stakeholders in the healthcare system are demanding more of physicians than just being medical experts. Patients want doctors who also know how to communicate, hospitals want doctors who can collaborate in multidisciplinary teams, universities want great teachers for their medical students and insurance companies want doctors who allocate scarce resources with care. Among other medical institutions, the Royal College of Physicians and Surgeons of Canada (RCPSC) concluded that physicians need to be trained in a more elaborate set of competencies. They decided on seven key competencies which all modern physicians should possess and described these in the CanMEDS framework. These competencies are: medical expert, communicator, collaborator, manager, health advocate, scholar and professional (1). The Netherlands adopted this framework as the foundation of their postgraduate medical curricula when they too realized the need for a different kind of doctor (2).

The role as manager is one of the seven key competencies described by the CanMEDS framework. As managers, physicians have to organize their practices, decide on allocating resources, contribute to the effectiveness of the healthcare system and serve in leadership roles as appropriate. In the modern, complex and demanding healthcare environment, those responsibilities are becoming increasingly difficult. However, we felt that this important competency did not receive as much attention in the postgraduate curricula as some of the other competencies. A tentative literature search showed no published attention in the Netherlands on this subject. Those findings formed the base for our two main research aims:

- To find out what is known about the managers role in the international literature and to investigate if these findings also apply to the Dutch situation.
- To design and develop a medical management training intervention based on the findings resulting from the research that will be necessary to complete aim 1.

In this chapter the main findings of the studies are summarized and discussed. We discuss the limitations of the studies and propose recommendations for future research. Finally, practical implications with respect to management education in the postgraduate medical curriculum are considered.

LITERATURE REVIEW

As mentioned above, before starting this PhD project we performed a literature search to investigate how much attention is given to the manager role in Dutch medical education. We found little information on the subject in the Netherlands, which made us wonder how much importance was given to the subject, not only in the Netherlands but also worldwide. We therefore started by performing an international literature review, described in **Chapter 2** (3). The review revealed mostly information from the USA and Canada. Of the 40 articles we found, 37 originated from the USA or Canada. It appeared that there was much more (published) attention in North-America concerning this competency than in the rest of the world. Another notable finding were the specialties that published these articles. The majority of the articles came from family medicine (n=8), pathology (n=8) and another eight originated in university settings. The possible explanations for this finding were that many primary care physicians have to set up and run their own clinics and thus have a greater need to be well equipped with managerial skills and knowledge. Pathologists may also have a greater interest in managerial competencies since they run laboratories and are therefore involved in managerial issues like laboratory design, analysis of work flow, choice of instrumentation, quality control, indicators of productivity and sometimes even budgeting and staff planning (4-7). The relatively large amount of articles from university settings suggests that the manager role is considered to be an important competency, worth spending educational time on (8-12).

Eleven of the reviewed articles concerned needs-assessments (10,13-22). The assessments were taken from program directors, fellows, residents and medical students. There was no consensus on the managerial topics that should be taught or on the educational method that should be used. All of the articles however concluded that management education was essential and needed.

Of the 26 articles that described curriculum designs to teach managerial skills, only five were based on a needs assessment (13-16,23). So the method of choice, the addressed topics and the length of the training courses were mostly based on the expert opinion of the curriculum designer. Most of the curricula were given in the residency period and the most commonly taught topics were financial concepts (13 programs), management concepts (13 programs), quality management (13 programs), legal affairs (12 programs), personnel issues (12 programs), and organizational skills and time management (12 programs). Ten articles evaluated the effects of their training intervention (8,14,15,24-30). All articles reported improvement in the participants' managerial knowledge. However, five articles used subjective pre- and post-self-assessments tests and most study populations were small (max n = 60). Moreover, only one of the questionnaires used was evaluated for

internal consistency. Despite the differences in the educational methods used, all curricula which were assessed received positive evaluations (6,8-10,14,15,18,23-27,29,31-36).

Overall, the literature review produced little definite conclusions since there were only few needs assessments, most of the curricula were designed on expert opinion and showed no internal consistency and there were only five objective knowledge assessments after completion of the training (14,15,24,26,28). However, the needs-assessments that were performed and the subjective evaluations of the management curricula all showed that management education was deemed important.

PERCEIVED MANAGERIAL COMPETENCIES AND EDUCATIONAL NEEDS

We developed a questionnaire to gain insight in the experienced managerial competencies of Dutch medical residents and if they perceived a need for management education. We designed the questionnaire based on our results from our literature review and on the definition of the implemented CanMEDS framework for the manager's role (3,37). The combination of these two sources gave us the tools to develop a questionnaire in which we intended to address all the important items of the manager's role.

The results described in **Chapter 3** concerned the medical residents perceived competencies (38). The respondents assessed themselves by ranking their perceived competency, using a number of managerial examples, on a five point Likert scale. An example of such a statement was: "I know how to manage my ward effectively". The following characteristics were recorded: age, gender, years of work experience, specialty, hospital (university vs. district teaching hospitals), previous management experience and previous management education, to assess if any of them had a significant influence on their perceived management competency.
We approached 506 medical residents to participate and one hundred and seventy-seven questionnaires were returned (response rate 35%). The participants rated their overall perceived managerial competency as moderate (mean 2.59; SD 0.37). The abilities in which they felt most competent were "updating their medical knowledge", "handling received feedback", "using information technology", "protecting patients' interests" and "allocating resources based on evidence-based medicine". In the Dutch basic medical curriculum much attention is given to evidence-based medicine and how to use the associated search strategies. There is also a lot of emphasis on providing and receiving feedback, so these results were in line with what we expected. The abilities they felt least competent in were

"negotiating on working conditions" and "coding and billing", together with their knowledge of the "organization and financing of the healthcare system", "organization and financing of the specialist department", and "requirements as a specialist".
General knowledge of the organization and financing of the healthcare system at micro and macro level is not being addressed in the basic medical curriculum. It therefore came as no surprise that these knowledge items had the lowest scores. Nevertheless they are important topics as a good understanding of these issues is required if you would like to engage in renewing and cost-saving healthcare practices. The residents scored their coding and billing abilities and their contract negotiating skills also as low. A large number of patients are seen and therefore coded and billed by residents in the Netherlands. This should therefore be done well as this may otherwise have adverse effects on the clinical departments' financial situation. Effective negotiating skills are also necessary in many different clinical settings and not only when negotiating over a contract. They are also important in patient contacts, nurse-physician interactions and in deliberations with peers.

Previous management experience was the only characteristic that had an influence on their overall perceived competency. Residents with such experience rated themselves on average higher than their peers without such experience. This could suggest that extracurricular managerial activities improved their managerial competencies, but since we only measured perceived competencies, this remains uncertain. A previous management course or more work experience had no significant influence. This suggests that those alone are not sufficient enough to increase the residents' perceived management competencies.

The questionnaire described above contained another element, namely a needs-assessment. In **Chapter 4** we explored if Dutch medical residents had a need for management education and if so, what such training should look like (39). The results showed that 85% of the responding residents reported a need for management training. Half of the residents agreed that there was not enough attention for managerial tasks during their postgraduate training.
The preferred topics for management training were negotiation skills, knowledge of specialist partnerships and of the organization and financing of the health care system and career opportunities. A workshop was the preferred training method and the residents' preferred medical specialists and external experts such as lawyers as training instructors. There was a wide spread in the preferred length of the program. It ranged from 1 to 400 hours, with a mean of 17 hours. The residency period was deemed the most suitable timing for management training. Gender, number of years of clinical experience, specialty, training location and prior experience with management training and/or tasks were not of

influence on the need for management training. These results were consistent with our findings in the existing literature. They also confirmed our hypothesis that many Dutch residents perceive a lack in managerial knowledge and would like to receive management training.

Since our goal was to ultimately develop a management training that would meet the needs of today's doctors, we wanted to examine the problem from different perspectives. As described in **Chapter 5**, we investigated if medical specialists felt that their residents lacked specific management skills or knowledge. We also investigated what medical specialists thought a management course for residents should entail (40).
A different survey was defined for the medical specialists based on the previous questionnaire for residents. We approached 298 medical specialists to participate in the survey, 129 questionnaires were returned (response rate 43%). The specialists gave the lowest rating to their residents' knowledge of the organization and financing of a specialist department, organization and financing of the healthcare system, coding and billing, requirements as a specialist and to the skill "negotiating working conditions". The highest ratings were given to their competency to update their medical knowledge, handling received feedback and allocating resources based on evidence-based medicine. Of the participating specialists, 94% reported a need for management training for their residents. Most specialists chose knowledge of the healthcare system, time management, leadership, and legal aspects of medical errors as the topics residents should be trained in. A workshop was the preferred educational method. External experts or medical specialists were their instructors of choice. The respondents regarded the residency period as the most appropriate timing for such training. No significant influence was found between the characteristics of the specialists and their perceived need for management training.

When we compared these results to the results of our research on how residents perceived their own management competencies, there were many similarities. The residents and the specialists exactly agreed on the items they perceived the residents to be least and most competent at. They also had the same preferences for the timing, method and instructors for a possible management training. The specialists and residents only differed on the topics that such training should deal with. Although they agreed on knowledge of the health care system, the residents mentioned that they would like to develop their negotiation skills and learn more about their career options, while the specialists considered time management, leadership and the legal aspects of medical errors to be more important. This difference can possibly be explained by the fact that residents are still planning their future and feel that they would be better prepared if they had more negotiation skills and knowledge on

career options. Meanwhile specialists are already in that position and consider skills that would help them in daily practice to be more important.
So far our research findings indicated that there was a need for management and leadership training among Dutch medical residents. The results of our literature review suggested that this need was also felt abroad, although the review was mostly based on literature from the United States of America (3). In **Chapter 6** we explored the perceived deficiencies and needs of medical residents in other countries a little further (41). We were also interested in finding out whether the length of incorporation of the CanMEDS framework and the availability or not of mandatory management training programs, influenced the perceived management competencies and needs of the medical residents. The questionnaire that was designed to previously survey the Dutch medical residents was translated into English. It was sent by email to junior doctors in Denmark, Australia and Canada. The CanMEDS framework was developed in Canada and implemented nationally in 1996 (1). Residency program directors got assistance from the RCPSC in the design and implementation of programs to help residents learn the manager's role. It was up to the individual universities however how much time and effort was spent on this role and there were no mandatory elements that had to be taught (42). In Australia, the framework was incorporated in 2006, however there were no defined learning strategies or established methods for the assessment of the managers' competency (43). The CanMEDS framework was adopted in 2003 in Denmark and in 2005 a national mandatory training program which covered areas of leadership, collaboration and health care administration was introduced (44). The program consists of three courses. The first course covers topics and problems from physicians' daily practice to illustrate and apply knowledge about the organization and management at local and regional level. The second course involves issues of health policy, health economics and organizational issues at national, European and international level. The third course covers leadership, co-operation and organization at local, regional and national level with the doctor as central actor (45). With these three countries and their different focuses on the manager's role we felt that an interesting comparison could be made.

Eventually, 719 questionnaires from the 2105 residents who were approached in Denmark were returned (34.2%). The response rate in Canada was 36.8% (183/500). In Australia 197 of 1213 sent surveys were returned (16.2%). As mentioned in **Chapter 2 and 3,** in the Netherlands 177 of 506 residents (35.0%) responded to the survey (38,39). In general, residents from Denmark gave their own management competencies the highest mean score (3.54, SD 0.40), followed by the Australian residents (3.45, SD 0.42), the Dutch residents (3.39, SD 0.37) and the Canadian residents (3.35, SD 0.51). The items the residents

Table 1. Highest and lowest rated items per country

Countries	Highest rated items	Lowest rated items
Denmark	"using information technology" "handling received feedback" "managing a ward"	"negotiating working conditions" "negotiating personal ambitions" "improving quality processes"
Canada	"using information technology" "advocating for patients" "managing a ward"	"negotiating working conditions" "negotiating personal ambitions" "organization specialist department
Australia	"using information technology" "handling received feedback" "managing a ward"	"organization of a specialist department" "negotiating working conditions" "organization of the healthcare system
The Netherlands	"advocating for patients" "using information technology" "handling received feedback"	"organization of the healthcare system" "negotiating working conditions" "requirements as a specialist".

from the four countries rated on average the highest and the lowest are shown in table 1. It is noticeable that all residents rated their skill "negotiation working conditions" as one of their weakest perceived competencies. Also negotiating personal ambitions, knowledge of the organization and financing of the health care system and of specialist departments are named more than once.

In Denmark there were three variables, which had a significant influence on the overall perceived management competency. Males rated themselves on average higher, residents with more management experience rated themselves higher and residents with more management training rated themselves also increasingly higher. In Canada there were two factors of significant positive influence namely previous management experience and the number of years since graduation. In Australia and in the Netherlands only the characteristic "previous management experience" was of significant influence. Residents which such experience rated themselves on average higher.

More than 75% of the residents from all four countries felt a need for management training (Denmark 84.7%, Canada 83.5%, Australia 76.8% and the Netherlands 85.3%). The topic "negotiation skills" was in the top three of preferred subjects for a potential management training of all four countries. Also personal financial planning, career options and cost-effectiveness were named more than once. A workshop was in three out of four countries the preferred method of training. The majority of the residents chose the postgraduate period as being the most suitable period for management training. There was little consensus about the length of the training or how often the training would have to take place. The residents from Canada had the lowest mean score on how they perceived their management competency. A longer implementation of the CanMEDS framework

did therefor not seem to positively influence the perceived competency. It also did not seem to influence their need for management training. The residents from Denmark gave themselves on average the highest scores on perceived competency, which may be the result of the mandatory management training, as we found that the more training they had received the higher their average score was. It also seemed to influence their need for management training, since the percentage of residents which felt a need for training was 84.6% among the residents who had not received any training yet, after one training the percentage went up to 87.0%, but then progressively decreased after two (81.2%) and three (78.9%) training sessions. An explanation for the increase in the perceived need after one training session could be that their interest is sparked and knowledge gaps exposed.

The results of this research project suggested that there were similarities between the perceptions and needs of the participating residents from these four different countries in the field of medical management. There was some consistency in the topics they felt they lacked knowledge or skills in. There was also agreement on some of the aspects of a possible management training. The differences suggest however that there is no single training that would suit the needs of all residents worldwide. Every country would need to take into account for example, that which is already being taught in the basic medical curriculum. Despite the differences though, the most important conclusion for us was that the majority of residents from all four countries felt a need for (more) management training.

MANAGEMENT TRAINING COURSE

In **Chapter 7** we describe the development, implementation and evaluation of a module of a management-training course that we designed (46). Our goals with this project included setting up a well-founded training course that was based on the results of previous research, to evaluate the subjective and objective impact of the course on medical residents management competencies and to compare the knowledge of the healthcare system between residents and specialists.

Since medical management is a broad subject however, we realized that is was impossible to cover all areas identified from our research in a single training session. We therefore chose two topics from the list of suggested themes in our studies and which seemed to recur in the preferences of both the Dutch residents and specialists (3,39,40). We chose knowledge of the healthcare system and time management not only because they

were named important in the literature review as well as in the needs assessments, but also because we wanted to combine a theoretical topic with a skill to create a balanced training course. Also based on the preferences of the questioned residents and specialists, we chose an interactive learning approach in the form of lectures with group-based discussions and case-based assignments. We selected the preferred choice of content experts who were also physicians as instructors for the course. The format of the training comprised of two training sessions and was based on the requirements of the inter-disciplinary educational standards that apply in the south-east region of the Netherlands. The first meeting consisted of a two hours lecture on the concepts of the organization and financing of the healthcare system on national level and 1.5 hours on the general concepts of time-management. The second meeting was divided into two sessions. The first session comprised of a first half where residents presented their homework-assignments and a second half where the micro-concepts of the healthcare system, namely the organization and financing of hospitals were taught. The second session was concluded with a workshop on how to organize and lead (staff) meetings.

The module was evaluated using subjective evaluation forms, in depth-interviews and through a pre- and post-knowledge test on the organization and financing of the healthcare system. We also gave this test to a (control) group of residents who did not participate in the training and to a number of specialists to see whether knowledge of the healthcare system was gained over time and/or through work experience. The results showed more improvement based on the delta percentages of correctly answered questions on the pre- and post-test of the participating residents (6.56%) in comparison to the control group (3.28%). However, the difference was not significant. This could be explained by a number of possible causes. First of all our study population was possibly too small to detect a significant difference. Due to a shortage in time and resources, we weren't able to provide larger numbers. Secondly, the knowledge test covered more material than we were able to address during the training sessions. The lively discussions took up more time than we expected and there was also a greater lack in basic knowledge among the residents on these topics than we anticipated. Finally, it is also possible of course that the training was not as effective as we hoped for.
The medical specialists did not have significantly higher scores on the knowledge test than the residents. This could suggest that work experience alone, is not sufficient to gain the desired amount of knowledge on the organization and financing of the healthcare system.

The residents gave high ratings to the training through the evaluation forms as well as during the in-depth interviews. Some said that it had filled a gap in their specialist

training and many would have liked even more educational time spent on these topics. The residents were satisfied with the topics chosen for this management training. The most common suggestion for an additional topic was "knowledge of the organization and financing of specialist departments". This evaluation suggests that the need for management training isn't fulfilled with just one training session. Besides the suggested topic "specialist partnerships", the needs-assessments and literature review showed that topics as negotiation skills, career opportunities, legal issues and leadership skills were also considered essential. These topics can be subdivided into subjects suitable for junior medical residents and for residents who are more advanced in their specialist training. We feel that an educational structure like the one being used in Denmark, namely several courses divided over the years of specialist training would be an appropriate way to teach these different subjects to residents.

GENERAL CONCLUSIONS

Overall the findings from the six studies support the need for additional training in medical management in postgraduate medical education. **Chapters 2 and 6** provided evidence that not only Dutch medical residents feel this need, but that it is a perception shared by other trainees in other countries too (3,41). **Chapters 2 and 5** show that among others medical specialists support this view (3,40). We also investigated specific information required for developing well-founded management training programs. Surprisingly Dutch medical residents and specialists had matching perspectives on the format and content of the training, while in our international study the residents agreed on the timing and format for such training but had different views on the preferred topics (39-41). We think that the differing contents of the basic medical curricula within the different countries may have been responsible for this. The management training we implemented was received with enthusiasm and inspires to move forward with this concept.

LIMITATIONS

In our questionnaire-based studies the biggest limitations were that the questionnaires were only administered to a part of the total resident population in the Netherlands but also abroad, the low response rates and the fact that we were measuring perceived needs and competencies instead of objective data. As argued in **Chapters 3 to 6** it is possible that by measuring subjective data we are not getting an accurate view of the management capabilities of the medical residents. We were aware of this limitation and we tried to

overcome this problem by making use of the concept of triangulation. By approaching Dutch medical residents, medical specialists and foreign medical residents we tried to find, and found, a consistency in our results (39-41).
The low response rates formed another limitation. We speculated that the low rates could be due to the increasing amount of emails and questionnaires that residents receive, which may have resulted in a lack of time and interest to respond. Due to the low response rates and the fact that we only administered the questionnaires to a part of the total resident population, it is hard to extrapolate the results to all residents of the Netherlands, Canada, Denmark or Australia. However, we do feel that it is fair to say that the results consistently suggest a need for management training. The main limitation of our study described in **Chapter 7** were the small groups of participants. Because of the small number of participants, it was hard to formulate definite conclusions. Unfortunately, due to time and resource limitations, we weren't able to provide bigger participants groups (46).

VALORIZATION

The manager's role is named a key competency for modern physicians by many different medical institutions around the world. Some even argue that truly innovative, cost-saving and care-improving changes are only possible when doctors take up their role as managers and leaders and initiate or enable such initiatives (47,48). Our research underlines that a need is felt among residents and specialists that modern doctors should be trained in this competency. So although we acknowledge that the postgraduate curricula of medical residents are already quite full, we still feel that every doctor should receive some education regarding this role.

By developing a management course based on a literature review and several needs-assessments we tried to create a well-founded training. Although participants were enthusiastic some questions still remained. We have no definitive answer to the question if our training improved the participants' knowledge on the subjects that were addressed. To find this answer the training and knowledge test would have to be re-executed to create a larger study population. As we already argued in **Chapter 7**, we feel that a single training course isn't enough to teach every aspect of the manager's role. At least two other courses would be necessary to teach subjects as "knowledge of specialist departments", "negotiation skills", "career opportunities", "legal issues" and "leadership skills". Our suggestion would be to divide these topics into subjects which should be taught to junior medical residents, and subjects that should be taught to residents who are more advanced. Future research

projects could investigate if these subjects would raise the same amount of enthusiasm as the topics that were taught in our training. One could also examine again if there would be knowledge retention on the subjects after the training. A pre- and post-knowledge test is possible for topics as legal issues and knowledge of specialist departments but an improvement in skills would be harder to test.

Three training sessions would provide residents with some basic knowledge of medical management and leadership. This introduction to the manager's role may spark the interest of some residents who would want to learn more about this competency. A possibility, which some hospitals already offer, would be to create "internships" for residents who have such an interest (49,50). Through these internships residents will gain practical experience and they will have an opportunity to examine if management and leadership is a subject in which they want to further develop themselves. This would not only be an advantage for the resident himself/herself but also for medical departments who will gain physicians who are also motivated and well educated leaders and managers.

Finally, this PhD project focused primarily on the residency period. It may therefor be interesting in future studies to investigate if medical students also already feel a need for management education and how this should be implemented in the basic medical curriculum.

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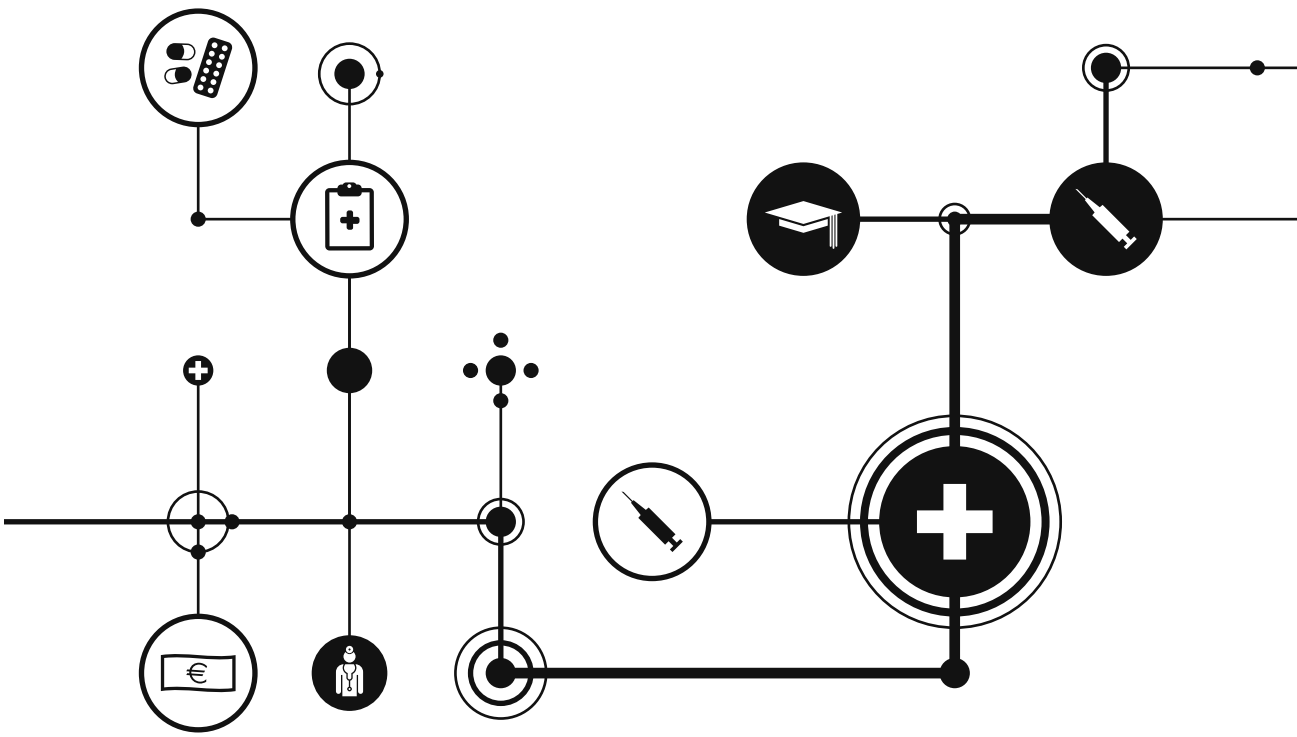
Chapter 8

Summary and General discussion
Samenvatting (Summary in Dutch)
Dankwoord (Acknowledgements)
Curriculum Vitae



ACHTERGROND

De verwachtingen ten aanzien van de gezondheidszorg en van de praktiserende arts zijn de laatste decennia veranderd. De maatschappij wil meer dan alleen een bekwaam medisch specialist. Een moderne arts moet bijvoorbeeld ook communicatief vaardig zijn. Hij moet niet alleen goed met zijn patiënten kunnen communiceren maar ook met collegae van andere disciplines aangezien zorg steeds meer geleverd wordt in een multidisciplinaire setting. Doordat de kosten van de gezondheidzorg exponentieel zijn toegenomen, wordt er tevens steeds meer van artsen gevraagd om kostenbewust te zijn. Ze moeten de baten tegen de kosten op laten wegen wanneer zij bijvoorbeeld beslissingen moeten nemen over het te verrichten aanvullend onderzoek.

Aan het einde van de vorige eeuw waren er een aantal medische instellingen die erkenden dat hun opleidingen niet meer voldeden aan de eisen van de maatschappij. In Amerika was het de ACGME (de raad die verantwoordelijk is voor de accreditatie van de medische postdoctorale opleidingen in Amerika) die vijf competenties vastlegde, buiten die van medisch expert, die alle moderne artsen zouden moeten bezitten en waar dus aandacht aan besteed zou moeten worden gedurende de opleiding. In Canada werd het CanMEDs raamwerk geïntroduceerd als pijler van de medische (vervolg) opleidingen. Dit raamwerk beschrijft zeven kerncompetenties die artsen zouden moeten beheersen. Deze competenties overlappen met de competenties die beschreven zijn door de ACGME. Deze zeven competenties zijn: medisch handelen, communicatie, samenwerking, kennis en wetenschap, maatschappelijk handelen, organisatie en professionaliteit. In Nederland ontstond hetzelfde besef en in 2005 werd het CanMEDS raamwerk geïmplementeerd als basis voor de medische (vervolg)opleidingen.

De competentie “organisatie”, beschrijft de arts als een leider in het zorgproces die er op toeziet dat de patiëntenzorg zo goed mogelijk verloopt. Daarnaast moet hij ook het voortouw nemen in nieuwe initiatieven die zowel verbeteringen in de kwaliteit van de gezondheidszorg moeten bewerkstelligen als ook kostenbesparingen. Deze competentie lijkt in de huidige complexe gezondheidzorg belangrijker dan ooit. Voor ons gevoel was er echter minder aandacht in de vervolgopleiding voor deze competentie dan voor enkele andere beschreven kerncompetenties. We besloten daarom om hier meer onderzoek naar te verrichten. De twee belangrijkste doelen van dit proefschrift waren:

- Om te onderzoeken wat er over dit onderwerp bekend is in de internationale literatuur en hoe deze bevindingen in verhouding staan met de situatie in Nederland.

- Om een managementtraining te ontwerpen en te implementeren gebaseerd op de resultaten die verkregen zouden worden door het benodigde onderzoek voor doel 1.

In dit gedeelte van het proefschrift zal er een Nederlandse samenvatting gegeven worden van het onderzoek dat beschreven wordt in de hoofdstukken 2 tot en met 7.

SAMENVATTING

In **hoofdstuk 2** geven we een samenvatting van de actuele literatuur aangaande medisch management en leiderschap. Er werden 40 relevante artikelen gevonden. Een van de meest opvallende bevindingen was het feit dat 37 van de 40 artikelen uit Noord-Amerika kwamen. Er leek dus veel meer (gepubliceerde) aandacht te zijn voor dit onderwerp in Noord-Amerika dan in de rest van de wereld. Daarnaast viel het ook op dat er een beperkt aantal specialismen waren die voor het gros van de publicaties hadden gezorgd. Dit waren de huisartsgeneeskunde, het specialisme pathologie en verschillende onderwijsinstellingen. Een verklaring hiervoor kan zijn dat de betreffende specialismen in de dagelijkse praktijk meer te maken krijgen met management gerelateerde zaken dan andere specialismen. Dat onderwijsinstellingen over dit onderwerp publiceren kan betekenen dat het onderwerp binnen deze instituten steeds belangrijker wordt bevonden.
De artikelen die wij vonden beschreven onder andere de percepties van de eigen ervaren managementcompetentie onder artsen, needs-assessments en trainingen die deze competentie onderwezen. Een belangrijke conclusie die uit de literatuurstudie getrokken kon worden was dat artsen zich over bepaalde aspecten van deze competentie niet vaardig voelden en dat het merendeel hier graag in onderwezen zou willen worden. De managementtrainingen die beschreven werden vertoonden vaak onderlinge overlap, maar verschilden te veel van elkaar om een conclusie te kunnen trekken over hoe een managementtraining er uit zou moeten zien. Echter, ondanks de bestaande verschillen tussen de trainingen werd in al deze artikelen geconcludeerd dat de deelnemers enthousiast waren en een training op dit gebied nuttig vonden.

In **hoofdstuk 3 en 4** beschrijven we hoe we onderzochten of Nederlandse arts-assistenten behoefte hebben aan management training en hoe zij oordelen over hun eigen management competenties. Wij maakten daarvoor gebruik van een vragenlijst die wij opstuurden naar 506 arts-assistenten. Honderdzevenenzeventig arts-assistenten vulden de vragenlijst in. De arts-assistenten hadden onvoldoende vertrouwen in hun (contract) onderhandelingsvaardigheden, en in hun kennis over de organisatie en financiering van

de Nederlandse gezondheidszorg. De assistenten hadden het meeste vertrouwen in hun vermogen om met feedback om te gaan, hun vermogen om met informatietechnologie om te gaan en hun vaardigheid in het toewijzen van schaarse middelen (diagnostiek, medicatie etc.) op basis van evidence-based medicine (EBM).

In het tweede deel van de vragenlijst werd een needs-assessment afgenomen. Vijfentachtig procent van de arts-assistenten gaf daarin aan dat zij behoefte hadden aan management training. De onderwerpen die zij daarin graag aan bod zouden zien komen waren onderhandelingsvaardigheden, kennis over de financiering en organisatie van maatschappen, kennis van de financiering en organisatie van de gezondheidszorg en loopbaanplanning. De onderwijsmethode die hun voorkeur had was een workshop en deze zou gegeven moeten worden door medisch specialisten of externe inhoudsdeskundigen zoals juristen of economen. Het beste moment voor een management training volgens deze groep arts-assistenten zou gedurende de opleiding tot specialist zijn.

In **hoofdstuk 5** hebben we hetzelfde onderzoek herhaald onder medisch specialisten om een zo compleet mogelijk beeld te krijgen van de mening van artsen ten aanzien van deze competentie bij arts-assistenten. Wij vroegen hen naar hun mening over de competenties van hun arts-assistenten op het gebied van medisch management en of zij dachten dat arts-assistenten hierin onderwezen zouden moeten worden. Tweehonderd achtennegentig specialisten werden via een e-mail uitgenodigd om deel te nemen. Honderd negenentwintig specialisten (43,3%) vulden de vragenlijst in. Ze beoordeelden de competentie van hun arts-assistenten op het gebied van contractonderhandelingen, kennis van de organisatie en financiering van de gezondheidszorg en van maatschappen als onvoldoende. Ze gaven arts-assistenten de hoogste cijfers in hun vaardigheid om hun kennis up-to-date te houden, in het toewijzen van schaarse gezondheidsgoederen op basis van EBM en in het omgaan met feedback.
Vierennegentig procent van de specialisten gaf aan dat zij vonden dat assistenten onderwezen zouden moeten worden op het gebied van medisch management. De onderwerpen die aan bod zouden moeten komen waren timemanagement en de organisatie en financiering van de gezondheidszorg. De aanbevolen trainingsmethode was een workshop gegeven tijdens de opleiding tot specialist door een externe expert .

De hierboven beschreven onderzoeken toonden aan dat Nederlandse arts-assistenten zich onvoldoende bekwaam voelen op bepaalde gebieden van medisch management en dat het overgrote merendeel behoefte heeft aan onderwijs op dit gebied. De

ondervraagden medisch specialisten onderschrijven dit beeld. We waren vervolgens benieuwd of we dezelfde resultaten zouden verkrijgen als we het onderzoek zouden uitvoeren onder arts-assistenten in het buitenland. Tevens waren we benieuwd naar de invloed van een langere implementatie tijd van het CanMEDS raamwerk in de opleiding en of een verplichte management training van invloed is op de ervaren competentie en behoefte aan (meer) management onderwijs. In **hoofdstuk 6** beschrijven we de resultaten van dit onderzoeksproject. Arts-assistenten uit Denemarken, Canada en Australië werden benaderd voor deelname. De vragenlijst die we in Nederland hadden gebruikt werd enigszins aangepast, in het Engels vertaald en per email verstuurd aan alle internationale deelnemers. De respons rates in de deelnemende landen waren in Denemarken 719/2105 (34%), in Canada 177/500 (35%) en in Australië 194/1213 (16%). De Deense evenals de Canadese arts-assistenten beoordeelden met name hun onderhandelingsvaardigheden als onvoldoende en in Australië vonden de assistenten hun kennis over hoe maatschappen werden georganiseerd en gefinancierd onvoldoende. In alle landen gaven meer dan 75% van de arts-assistenten aan dat zij behoefte hadden aan managementtraining.
Een langere implementatieduur van het CanMEDS raamwerk leek de ervaren managementcompetentie niet te verbeteren en zorgde ook niet voor een afname in de behoefte aan onderwijs op dit gebied. Verplicht management onderwijs, zoals in Denemarken het geval is, leek wel een positieve invloed te hebben op de ervaren managementcompetentie en zorgde op de langere termijn voor een afname in onderwijsbehoefte op dit gebied.

In **hoofdstuk 7** beschrijven we de managementtraining die we ontwierpen en organiseerden op basis van de onderzoeksresultaten uit de voorgaande hoofdstukken. Medisch management is een zeer breed onderwerp en naar ons idee daarom onmogelijk om in één training volledig te behandelen. We identificeerden daarom twee onderwerpen die belangrijk waren bevonden in de literatuurstudie en in de needs-assessments onder zowel de arts-assistenten als de medisch specialisten. De onderwerpen “kennis van het gezondheidszorgsysteem” (organisatorisch en financieel) en “timemanagement” werden uitgewerkt. Na een trial onder 11 arts-assistenten, werd de definitieve training aan 14 arts-assistenten gegeven. Het doel van de training was om te zien of hun kennis na de training ten aanzien van het gezondheidszorgsysteem significant was toegenomen. Om dit vast te kunnen stellen ontwierpen wij daarom een toets met kennisvragen over het gezondheidszorgsysteem die de arts-assistenten zowel voor als na de training moesten invullen. Een controle groep van 24 arts-assistenten vulden op dezelfde momenten dezelfde vragenlijst in om met zekerheid vast te kunnen stellen dat de eventuele

kennistoename werd veroorzaakt door de managementtraining. Een ander doel was om de training te laten beoordelen door de deelnemende arts-assistenten door middel van evaluatieformulieren en diepte-interviews.
De training bestond uit twee sessies van vier uur. Tussen de sessies zat een periode van drie weken, waarin de arts-assistenten konden werken aan een huiswerkopdracht. Alle veertien arts-assistenten voltooide de training. Zes arts-assistenten uit de controlegroep waren lost-to-follow-up. De pre- en postkennistest liet een grotere verbetering in kennis onder de deelnemende arts-assistenten zien in vergelijking met de arts-assistenten uit de controlegroep. Deze verbetering was echter niet significant. Alle deelnemende arts-assistenten evalueerden de training positief en gaven aan dat zij de training als een nuttige aanvulling hadden ervaren op hun opleiding tot medisch specialist.

CONCLUSIE

De studies die wij hebben uitgevoerd suggereren dat er een duidelijke behoefte aan medisch managementonderwijs bestaat onder (Nederlandse) arts-assistenten. Opvallend genoeg hadden arts-assistenten en medisch specialisten een vrijwel identieke mening over de opzet en inhoud van zo'n training. De managementtraining die wij ontwierpen en implementeerde werd met enthousiasme ontvangen en nodigt uit tot een verdere ontwikkeling hiervan.