Sundhedsstyrelsen

THE SEVEN ROLES OF PHYSICIANS

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The seven roles of physicians

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Axel Heides Gade 1
2300 Copenhagen S
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Contents

1 Introduction

In 2000, the Danish Commission on Medical Specialists described in its report "Denmark's future medical specialist" (*Danish: Fremtidens speciallæge*) a model, which the Commission assessed would cover the future requirements for medical specialists in Denmark. The model included the seven roles of physicians: medical expert, communicator, collaborator, manager, health advocate, scholar and professional. These roles were subsequently implemented in the Danish postgraduate medical training programme, e.g. by describing competencies and learning objectives for each role in the curriculum for the specialties[1,2,3,4,5].

However, Danish and international experience suggest that the roles are interpreted differently by various stakeholders, and that all roles are not perceived as equally relevant in all specialities or activities. Moreover, there is a need to consider the roles as being more integrated in the daily medical practice.

One of the conclusions in a 2012 report by the Danish Health and Medicines Authority (DHMA) "Postgraduate medical training in Denmark – status and future perspectives" therefore recognises a need to revise and adjust the descriptions of the seven physician roles, including making the descriptions more nuanced to match the individual medical specialties and bringing the descriptions up-to-date[6]. In addition, the report suggests that the roles concept should integrate ethical aspects and detail requirements for development of systems thinking, and that the interconnections and hierarchical order of the roles should be illustrated more clearly.

This report presents revised descriptions of the seven physician roles, suitable for integration in the description and definition of the competencies which a medical specialist must demonstrate mastery of after the completion of specialist training.

1.1 Purpose

The purpose of revising the seven physician roles is to bring the description up-to-date to support the description of the medical competencies in postgraduate medical training and to meet the needs of the future Danish healthcare system.

The revised physician roles can be integrated in the curriculum of medical specialist training prepared by the DHMA or could be appended thereto.

1.2 Framework

The revised physician roles presented in this report build on the conclusions by a Working Group established by the DHMA in September 2012. The terms of reference of the Working Group are set out in Appendix A.

The Working Group has outlined the physician roles concept based on the DHMA report: "Postgraduate medical training in Denmark – status and future perspectives" [6], Chapter 10, and other relevant material.

It appears from the terms of reference that:

- The roles concept is to be preserved, and there should still be seven physician roles: medical expert, collaborator, communicator, manager, health advocate, scholar and professional.

- All physician roles are to be represented in all specialties, which means that all role descriptions must make sense to all specialties.
- The interconnections and hierarchical order of the roles must be described.
- Ethical aspects must be integrated in the roles.

1.3 Time frame

The work was completed at end-December 2012, and the results are presented in this report.

1.4 Reporting

The report has been submitted to the Danish Council on Post-graduate Medical Training via the DHMA.

1.5 Composition of the Working Group

The DHMA has appointed a Chairman and working group members upon nomination by relevant stakeholders. The Working Group is composed of representatives from the Danish Regional Councils on Postgraduate Medical Training, the Universities, the Danish Association of Junior Hospital Doctors (YL), the Organization of Danish Medical Societies (LVS), Danish Regions, and the Danish Health and Medicines Authority (DHMA).

Bente Malling, Director of Postgraduate Medical Education, MD, PhD, MHPE, Associate Professor of Postgraduate Medical Education, Aarhus University and Aarhus University Hospital. Appointed by Aarhus University and the Northern Regional Council for Postgraduate Medical Training (Chairman of the Working Group).

Britta Ørnfelt Lund, Resident, Department of Clinical Genetics, Aarhus University Hospital. Appointed by the Danish Association of Junior Hospital Doctors (YL).

Charlotte Ringsted, Professor, PhD, MHPE, Centre for Clinical Education, University of Copenhagen and the Capital Region of Denmark, Copenhagen University Hospital. Appointed by the University of Copenhagen.

Gunver Lillevang, Medical Specialist, MHPE, Associate Professor of Postgraduate Medical Education, General Practitioner, Roskilde. Appointed by the Eastern Regional Council for Postgraduate Medical Training and the Organization of General Practitioners.

Lars Juhl Petersen, Deputy Chief Executive, PhD, Gentofte Hospital. Appointed by Danish Regions.

Ole Nørregaard, Senior Physician, Respiratory Centre, West Aarhus University Hospital. Appointed by the Organization of Danish Medical Societies (LVS).

Randi Beier Holgersen, Senior Hospital Physician and Consultant responsible for Medical Education, MHPE, Associate Professor of Postgraduate Medical Education,

Department of Surgery, Hillerød Hospital. Appointed by the University of Copenhagen and the Eastern Regional Council for Postgraduate Medical Training.

Susanne Nøhr, Senior Hospital Physician and Director of Postgraduate Medical Training, PhD, MLP, Associate Professor of Postgraduate Medical Education, Aalborg University Hospital. Appointed by the Northern Regional Council for Postgraduate Medical Training.

Troels Kodal, Senior Hospital Physician, Associate Professor of Postgraduate Medical Education, Department of Medicine, Sydvestjysk Hospital. Appointed by the Southern Regional Council for Postgraduate Medical Training.

Secretariat: Karen Geismar, Danish Health and Medicines Authority

1.6 Working process

The Working Group has held three meetings. Prior to the first meeting, in-depth knowledge about the seven roles of physicians in Danish and international settings was obtained (see the list of references and Appendix B for additional literature). At the first meeting, the working method was adopted, and the various tasks of gathering/reading relevant literature and interviewing relevant key persons/groups were shared between the members of the Working Group. The second meeting was a three-day seminar at which the first version of definitions and descriptions of the seven physician roles were prepared using the Double Diamond Design Process[7].

The seminar was joined by Charlotte Søjnæs, MSc in Sociology, and Birgitte Dahl Petersen, MSc in Psychology, both from the Centre for Clinical Education, University of Copenhagen, who shared their inspiration from the recently held International Conference on Residency Education where the Canadian roles and the competence concept were discussed.

The Chairman then prepared a draft report, which was discussed and revised at the closing meeting. Final approval from the Working Group members was obtained by email. Time frame:

1. Appointment of Working Group members, September-October 2012

2. Kick-off meeting at the Danish Health and Medicines Authority, 23 October 2012 from 10:15-13:00

3. Seminar, 12-14 November 2012

4. Closing meeting at the Danish Health and Medicines Authority, 4 December 2012 from 10:15-13:00

5. Email session with final approval of the report, closed on 23 December 2012

6. Report submitted to the Danish Health and Medicines Authority, 30 December 2012.

2 International perspective

Originally developed in Canada[8], the seven roles of physicians set the framework for the specialties to describe the competencies required of medical specialists. The Canadian role descriptions and related competencies, known as the CanMEDS framework, were revised in 2005[9]. While ethical aspects became more widely integrated in the role descriptions, the revision also recognised that the roles are interdependent and that there are overlaps between them. In the CanMEDS framework, the role of medical expert is central and superior. Without it, the other roles would make no sense. Thus, there is a hierarchy in the CanMEDS framework, which is not found in the Danish interpretation of the physician roles applied today.

Even though the seven roles of physicians in Denmark are based on the CanMEDS framework, the Working Group wants to incorporate other international models such as the British "Modernising Medical Careers"[10,11] and the US description of key competencies from the Accreditation Council for Graduate Medical Education[12]. Table 1 shows the elements of the three models[13].

Table 1. Content of the curriculum developed in the US, the UK and Canada.

Content of the curriculum developed in United States of America (US), United Kingdom (UK) and Canada (CAN). The table describes the authorities behind the curriculum and the core competencies that the curriculum is built upon[13]

USA	UK	CAN and DK
ACGME ABMS	MMC PMETB	RCPSC
Six core competencies • Patient care • Medical knowledge • Practice-based learning and improvement • Interpersonal and communication skills • Professionalism • Systems-based practice	Good medical practice Technical skills • Medical expert Non-technical skills • Professionalism • Communication • Leadership and management and teamwork • Patient safety • Research • Education and teaching • Integration of a balance of technical and non-technical skills	CanMEDS 7 roles • Medical expert • Communicator • Collaborator • Manager • Health Advocator • Scholar • Professional CanMEDS roles revised in 2005 to increase integration between roles and to accentuate the ethical perspective

ACGME: Accreditation Council for Graduate Medical Education; ABMS: American Board of Medical Specialties; MMC: Modernising Medical Careers; PMETB: Postgraduate Medical Education and Training Board; RCPSC: Royal College of

Physicians and Surgeons of Canada; CanMEDS: Canadian Medical Education Directions for Specialists.

What differentiates the US model from the other two models are the core competencies ”practice-based learning and improvement” and ”systems-based practice”. Through the core competence ”practice-based learning and improvement”, the US model focuses on lifelong learning (Continuous Professional Development, CPD). This competence is contained in the other models under the roles of Professionalism or Scholar.

In the US model, the concept of ”systems-based practice” is defined as the physician's ability to see his or her role in a larger context (as part of the entire healthcare system) and act on this ability. The US definition also covers the physician's ability to use system resources effectively in caring for the individual patient. This role also embodies the physician's obligation to establish optimal healthcare flows and ensure patient safety.

Some would argue that patient safety is such an important topic for physicians that it deserves its own role[14], as in the UK model. In the Canadian model, patient safety falls under the role of Manager.

3 Considerations of the Working Group

There are different perceptions of the concepts associated with the definitions and the content of the physician roles. Furthermore, the revised descriptions of the roles presented in this report introduce concepts that were not addressed in the previous descriptions of the roles in the report "Denmark's future medical specialist"[1] published by the Danish Commission on Medical Specialists. In the following, we describe how the Working Group applied these concepts to its revision of the descriptions of the seven physician roles.

3.1 Conceptual clarification

3.1.1 Role

In this report, the term role has the following meaning: The physician complies with an adopted model for how a person in a specific function (the medical profession) with a specific ability or a special competence appears and behaves. A role also designates a set of behaviours expected from a person or a group with a special position in society – in this context, the behaviours expected of a physician[15].

With this meaning, we consider the definitions of the physician roles from a socio-scientific perspective in which the role concept is defined as: The sum of the norms related to a certain task or position. The role forms a circle of expectations around the individual person. While the expectations may be expressed in legislation, regulations, directions, instructions, administrative plans, etc., they may also be informal in the form of social pressure created by other people's expectations. The role's key is the task or the position (occupation). It is the norms associated with the task or position that make up a social role. By knowing a person's occupation, we are able to draw a number of conclusions about the expectations placed on that person - both in the form of duties and powers. Once we know a person's title, we immediately know quite a lot about the expectations which that person faces in various settings, and we also have a fair idea of how that person is likely to behave in response to these expectations[16].

3.1.2 Core task

Core task means the underlying service of the workplace. Depending on the specialty, the physician's core task is to contribute in different ways to clarification, diagnosis, treatment of disease and rehabilitation, including to perform special medical examinations (e.g. epidemiological examinations) and initiate preventive measures in the healthcare system.

3.1.3 Competence

Postgraduate medical training is built upon learning objectives describing the competencies required of a medical specialist. The term competence refers to the physician's ability to perform the tasks and fill the roles expected of the physician at a given time during his or her professional development[17]. In this report, the term competence means: knowledge, skills and attitude[17]. Competence thus covers

1. Knowledge and skills

2. The ability to apply knowledge and skills and exploit personal abilities in practice. This refers to what is actually done in a specific situation.

3. Personal abilities and attitudes

Thus, the competence concept does not only cover what a person knows and is capable of doing under ideal circumstances, but also what a physician does in everyday practice. Competence is therefore context-specific and builds upon the physician's experience.

Hence, a competence is not only an attained medical skill (medical expert) because it also integrates elements from the other roles. Likewise, it is not possible to consider the role of collaborator alone, because this role only has meaning when it is assessed together with the performance of the medical profession. So, the roles integrate in several ways. This understanding is applied when describing the general competencies of each of the seven physician roles.

3.1.4 Assessment

The reform of medical specialties in 2004 introduced a combination of outcome-based education and time-controlled postgraduate medical training[1]. Assessment is essential to outcome-based training, and the specialty societies have defined the competencies required of medical specialists in their learning objectives. Therefore, the approval of medical specialist training includes an assessment of the individual physician's competencies at different levels and by using different methods. The assessment of competencies should include all three elements described under competence 1) knowledge and skills, 2) ability to apply knowledge and skills and exploit personal abilities in practice, and 3) personal abilities and attitudes. In addition, assessment should specifically take into account the context in which the competence is being assessed. Both the achievement of competencies and the assessment take place in daily practice.

Entrustable professional activities

Entrustable Professional Activities (EPA) is a way of looking at assessment in relation to the activities you would trust a physician in medical training to perform unsupervised. A physician who is being assessed must show that he or she can perform a given medical activity before being trusted to perform the activity independently[18,19]. The concept is not new. Already in 2000, the anaesthesiology specialty introduced assessment in the form of a "driver's licence" or "full-fledged competencies" for junior physicians[20]. Several specialties adopted this approach in their assessment programme[21,22,23,24].

Describing daily medical activities as a setting for assessment ties in well with the idea of looking at the seven physician roles in daily medical practice, which is what this report suggests. In recent years, this tendency has become noticeable, in fact, most specialty societies put this perspective on assessment in their newer curriculum and portfolios. This approach to assessment will enable the individual societies to introduce milestones in postgraduate medical training because assessment can be tailored to the individual steps in medical training.

3.1.5 Systems thinking

Physicians do not work alone, but are part of a larger healthcare system. Each of the physician roles and associated competencies support the expectations describing that physicians must demonstrate awareness of the healthcare system as a whole and must

carry out work as part of a larger system (systems thinking). Systems thinking focuses on

- how the elements of a system interact/relate,
- how the system works over time, and
- how the system acts in the context of a larger system.

Events that could otherwise be considered separated by time and place are thus tied together in the same pattern. For example, the treatment of an injured person at a hospital is an event separated from all other events. Nonetheless, it is connected through the way we organise emergency services, reporting systems, patient transport, hospital services, rehabilitation, etc.

In addition, systems thinking represents a holistic mindset to perform analyses in contrast to traditional analytical methods, which break down the system into sub-elements for analysis[25].

3.1.6 Patient empowerment

Collaboration with patients and relatives is an essential element of practicing the medical profession. The different roles and associated competence descriptions provide the foundation that enables physicians to involve patients and relatives as far as possible in diagnosis, treatment and rehabilitation and help patients manage their own disease and health.

The concept of patient empowerment describes the social process through which patients acknowledge and increase their possibilities of responding to their own needs and problems and mobilising the resources necessary to take control of their own life and health[26]. Thus, the process helps the individual patient and contributes by empowering him or her to take control of health-influencing factors[27], leading to lifestyle changes motivated, so to speak, by the "practice of freedom"[28].

3.2 The role description is based on medical practice

The Working Group has defined and described the physician roles based on medical issues and medical activities in daily practice. The report from 2000 "Denmark's future medical specialist" by the Danish Commission on Medical Specialists[1] was based on the physician roles, following which the task of the specialty societies became to link medical activities to these roles. This idea of using the roles as a basis to define medical specialist competencies has led to the belief that the division into roles was artificial and irrelevant to the medical work. It also spurred a debate about whether every specialty contained all roles.

It appears clearly from the newly revised objectives of postgraduate medical training that they are based on daily medical activities instead of roles. This shift does not mean that the roles have become obsolete. They have become an integral element of medical expertise whose construct validity is documented in a Danish context[3], and consequently, the roles help define objectives to describe the medical profession.

Looking at the seven physician roles and their competencies from the perspective of medical issues in daily practice, will make it relevant to apply a more holistic approach to assessment, e.g. by thinking of it as an authorisation to perform a medical activity independently (EPA cf. 4.1.4)[18, 20].

3.3 Nomenclature

There has been some discussion about the translation of the original CanMEDS roles into Danish. The roles were translated almost directly, yet with some slight variation in meaning. The Working Group has discussed whether to give the roles more embracing names, but purposely decided to keep the original names as they are well-embedded in Danish medical culture. Instead, some of the original Danish names have been added a suffix if considered necessary to create a broader understanding.

3.3.1 Role names

The table below shows the CanMEDS roles and the Danish translation from 2000 compared to the new role names as proposed by the Working Group .

Table 2. Revised names for the seven physician roles

Role names 2000* (CanMEDS roles)	Role names 2012 New names	Considerations behind the role names
Medical expert (Danish translation: Medicinsk ekspert)	Medical expert (Danish translation: Medicinsk ekspert/lægefaglig)	In Danish, the word ”medicinsk” can be misinterpreted as covering internal medicine specialties, or the knowledge of or use of pharmaceuticals. The English term "medical" should rather be translated into the Danish term "lægefaglig".
Communicator (Danish translation: Kommunikator)	Communicator (Danish translation: Kommunikator)	Unchanged: The physician's need to communicate in various situations is intuitively easy to understand and interpret. In the revised version, the communicator role will include both oral and written communication.
Collaborator (Danish: Samarbejder)	Collaborator (Danish: Samarbejder)	Unchanged: The work of the physician always takes place in partnership with other people at different levels (patient, relatives, care team, other physicians/departments etc.). Consequently, the role is intuitively easy to understand and interpret.
Manager (Danish translation: Leder/administrator)	Manager/administrator/organiser (Danish: leder/administrator/ organisator	The original interpretation of the *Manager* role put focus on both management and administration, both of which are essential elements of good management. Junior physicians find that the manager role refers to ”people management”[29]. In addition, the term administration has been interpreted quite literally by junior physicians, who find they are not trained in this activity specifically [5]. The term organiser probably makes more sense in a daily context in Denmark.

Health advocate (Danish translation: Sundhedsfremmer)	Health advocate (Danish translation: Sundhedsfremmer)	Unchanged. *Health Advocate* has been translated to *sundhedsfremmer* (health promoter) thus signifying someone who promotes or gives health advice. While the English term "advocate" may refer to a person who is an *advocate for* health aspects, it could also refer to a *spokesperson*, and thus in some contexts someone who speaks on behalf of patient groups. Some specialities have found it difficult to relate to the role of health promoter, and even though the role was described in relation to all three levels of individual, organisation and society, it has practically only been interpreted at individual level. However, since all physicians contribute with health-promotion measures at all levels, the role name remains unchanged.
Scholar (Danish translation: Akademiker)	Scholar/researcher/teacher (Danish translation: Akademiker /forsker og underviser)	*"Scholar"* refers to a "learned" person, but it can also mean a scientist, student, a person holding a scholarship, all depending on the context. In a figurative sense, it can also mean to follow evidence-based guidelines. The translation into "*akademiker*" (academic) has implied that the elements of lifelong learning and the obligation to ensure the teaching of future generations have fallen out of the role in practice. Consequently, it has only been interpreted as research or the application of research results, which is why we have chosen to explicate the element of teaching.
Professional (Danish translation: Professionel)	Professional (Danish translation: Professionel)	Unchanged. The professional role is perceived as distinct from the other roles[30]. Although there is no unambiguous definition of the professional role, we can easily define unprofessional behaviour. The role is difficult to separate from the other roles because it cannot exist on its own, but is performed through or supports the other roles.

*Denmark's future medical specialist (*Danish: Fremtidens speciallæge*). Danish Commission on Medical Specialists; 2000[1]. CanMEDS roles are the original Canadian role names[8]

3.3.2 Physician's core tasks

The original descriptions of the seven physician roles were highly patient-centred. However, certain specialties and physicians perform many activities that are indirectly related to patients (some interdisciplinary specialties whose primary task is related to e.g. blood sampling, medicinal products, gathered data, work environment, etc.). Moreover, not everyone who consults a physician is ill and therefore is not a patient in the common sense of the word (e.g. preventive examinations, screening, etc.).

To some, using the term patient has seemed restrictive and conservative. The Working Group has discussed the application of another term, e.g. user, citizen, client or the like, but has chosen to keep the term "patient", because it is the core of the medical profession to clear, diagnose, treat and rehabilitate. Thus, our core task is aimed at patients, also when we participate in preventive measures intended to reduce the number of patients and when we contribute to continuity of care with paraclinical examinations and diagnostics.

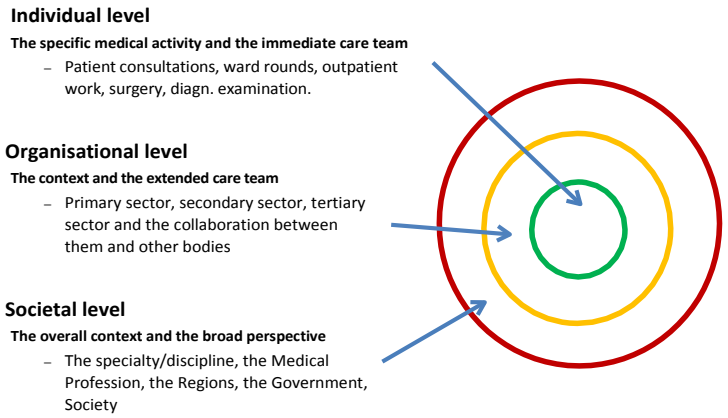
4 Model to describe the physician roles

The Working Group finds that the roles need to be described from the perspective of society and that the role descriptions must cover expectations for all medical specialists regardless of specialty.

In the roles defined by the Danish Commission on Medical Specialists, the health advocate role is described at individual, organisational and societal level. The Working Group finds that this three-level presentation could benefit the other roles by developing organisational awareness in future specialists and making it more natural to integrate perspectives as patient safety, continuity of care, systems thinking and quality of medical work[9,12,31,32,33]. This would underpin the physician's role in interdisciplinary contexts and in collaborative working across specialties and sectors. It would also support the request for introducing milestones in medical specialist training[33], which so far have described end user competencies, i.e. "what" a medical specialist should be able to do. The three levels will contribute towards sharpening the role of physicians in society and show the complexity of the medical profession. The levels will emphasise the need for building and preserving professional and loyal behaviour towards the many interests and stakeholders in the practicing the medical profession (e.g. the patient, department, hospital, society and the physician himself)[34,35,36,37,38,39,40].

The model used to describe the physician roles are based on situations from everyday medical practice. Each role of physician is described by a brief, general definition. The model breaks down medical activities on individual, organisational and societal levels. In addition to the brief, general definition, competencies have been defined for each physician role at each of the three levels. The competence descriptions are very general. Examples are given under the general competence descriptions to show what could be entailed in each of the roles at the different levels. These descriptions and examples could assist the specialties in preparing learning objectives, portfolios, medical profiles and assessment programmes. Figure 1 shows the model, which has been designed to describe the general competencies in relation to each role.

Figure 1. Model for medical activities by individual, organisational and societal level.



The three levels do not necessarily reflect the physician's experience or competence progression. The specific medical activities at the individual level may cover simple medical challenges that can be handled early in postgraduate medical training, but

they may also represent difficult and complicated problems calling for considerable expertise and experience.

On the other hand, physicians in their first years of education may often find it hard to see the medical profession in the bigger picture and thus at all three levels. A guiding principle for describing competence progression in some specialties could therefore be to follow the model in such a way that the physician first acquires competencies to handle simple problems, involving one single patient situation/activity and only a few collaboration partners. Subsequently, work could involve patient groups and/or more complex work situations with several collaborators in and outside the organisation and across sectors. Towards the end of specialist education, the physician must have acquired competencies showing the mastery of systems thinking and the ability to see his or her own role in society at large and internationally.

Thus, it is possible to move back and forth between the levels as required by the nature of the tasks.

4.1 The roles in context

The roles' connectivity has questioned whether the roles can be separated and whether a physician can act as medical expert without the presence of the other roles, and oppositely, whether it would make sense to act as communicator without assuming the role of medical expert. To most people, the role of medical expert is the central role – that is what makes us physicians – whereas the other roles describe how our medical expertise is applied in daily activities – including whether a physician is perceived as professional. By starting from the medical situations that physicians meet every day – thereby linking the roles to the settings where they unfold – the Working Group intends to bring the roles more in line with reality, thus making them more meaningful to the individual physician in everyday practice.

It has been pointed out that the ethical aspect of the roles is missing in the Danish description of the role elements[41]. In Canada, the revision of the seven roles in 2005 made further room for ethical aspects in the description of the physician roles[9]. The Working Group intends to reflect the ethical aspect in all physician roles, even though it may be considered as belonging to the professional role. The ethical rules regulating physicians in Denmark (*Danish: De lægeetiske regler*)[42], as defined by the medical profession, are very similar to the standards of ethical behaviour for physicians described in "The Physician Charter"[43], which several countries have endorsed, or the English description of "The Good Medical Doctor", prepared by the General Medical Council, UK[11]. The rules address how physicians ought to behave. However, ethics is much more than rules of behaviour, and likewise, the scope of the professional role is much wider than a set of behaviours[14].

All physicians in Denmark take the Hippocratic Oath and thus pledge to follow an ethical code that must define the physician's practices. By taking the Hippocratic Oath, physicians commit themselves: *Always and in every aspect to do all in my power, according to my best judgment, to apply my abilities with diligence and great care for the benefit of society and my fellow human beings*[34]. Even though, in Denmark, we do take the oath, the Working Group wants to give ethical aspects a more predominant position. Thereby, the roles may have an opinion-forming effect and could enhance the professional development of the individual physician.

In specialist education, it is equally important to address the challenge of committing physicians to take care of their own health in filling the roles. Thus, the

concept of altruism, which states that physicians must always attend to the welfare of patients first, has been softened. The revision recognises that society has become increasingly aware that separating work and personal life has a positive impact on health, and this is thus reflected in the roles.

There are significant overlaps between the seven roles, and there are therefore elements which may fit more than one role. It has been necessary to separate the roles from each other to make it easier for the specialty societies to prepare learning objectives, portfolios, assessment programmes and professional profiles. The Working Group has endeavoured to place the roles as intuitively and naturally as possible and to accommodate as many requests as possible while transferring the least elements possible from their original position. We have done so acknowledging that these roles are interdependent and interconnected and that it is debatable whether a specific competence belongs to this or that role.

Table 3 shows the different elements by role type:

Table 3. Distribution of elements broken down by the seven physician roles

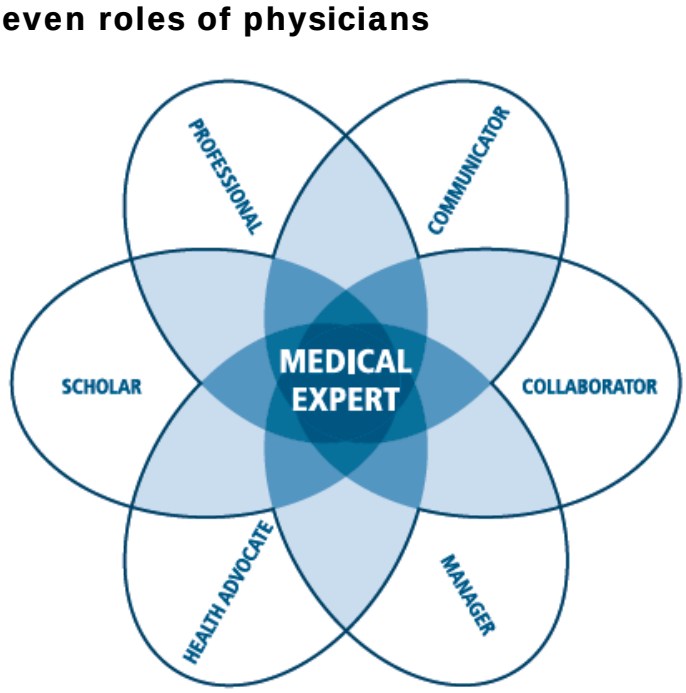
Role name 2012	Elements
Medical expert	• Medical knowledge, skills and attitudes (competence) • Clarification, diagnosis and treatment • Medical priority-setting • Identification of and solution to healthcare problems
Communicator	• Rapport with patient/relatives/colleagues and other collaboration partners • Communication of professional problems (method and media) • Mastery of various media (oral, written and visual)
Collaborator	• Patient-related/interdisciplinary collaboration • Patient empowerment • Teamwork (leader and team member)
Manager	• Planning (own time and the time of others) • Continuity of care across departments and sectors • Charing of meetings • Conflict resolution • Formal organisational positions • Patient safety • Quality awareness

Health advocate	• Guidance and advice about health-promotion initiatives • Responsiveness to repeated harmful/disease-promoting/pathogenic factors • Prevention • Health-promotion measures
Scholar	• Reflective approach to own practices and the practices of others • Evidence-based knowledge and translation of research into practice • Research and development projects • Responsibility for own learning (lifelong learning) • Teaching and educational environment
Professional	• Diligence and conscientiousness • Management of professionalism in compliance with the Hippocratic Oath and legislation • Decision-making on the basis of limited information • The patient's autonomy • Role model

4.2 The roles' hierarchical order

In the Canadian model, medical expert is the central role, which is considered as a *sine qua non*. The other roles are supporting roles that come into play when the physician uses his or her medical expertise. The Canadians have illustrated the roles graphically by a flower in which the role of medical expert is centrally placed, and the other roles are placed around it as equals.

Figure 2. Graphical presentation of the interaction of the seven CanMEDS roles.



The Working Group has discussed the hierarchical order of the roles, concluding that none of the roles are superior or inferior to each other. Likewise, none of the roles can stand alone, they are always a subset of all the other roles.

Medical expert is the central role – it is what makes us physicians. Thus, we follow the Canadian perception of this role. The other roles are necessary for the role of medical expert to unfold, which also complies with how the Canadians view the roles. However, the Working Group finds that presenting the Danish roles by a flower does not entirely cover the interdependence of the roles. The Working Group finds that the professional role is perceived as different from the other roles[30,44,] and that it should be positioned as a role enveloping and supporting the other roles. It could therefore be considered to create a Danish graphical presentation of the roles and interconnections.

4.3 Application of the roles by the specialties

The learning objectives of the individual specialties must lay down specific objectives for the competencies needed of a medical specialist within each of the seven physician roles of the specialty concerned. By basing role definitions and descriptions on medical problems and medical activities, it has been possible to include examples of various medical activities and situations in the description of competencies at individual, organisational and societal level, respectively. This may facilitate the specialities in their work with defining specific objectives and designing the assessment programme. A natural step would be to design assessment programmes that test the knowledge, skills and attitudes needed to demonstrate the mastery of a medical problem. This would make it clearer that physicians can be assessed for

competencies in respect of several roles at the same time. This could be achieved by using a model like the EPA (cf. 4.1.4) as the basis for assessment[18].

The revised description of the physician roles and their general competencies will also make it possible to include milestones in the curriculum of medical specialist training. This has been requested and perceived difficult to implement so far, because the learning objectives define end-objectives, detailing the competencies of a fully-qualified medical specialist. The visualisation of dynamic progression in the learning process is therefore lost. Milestones can be introduced by combining the levels-based competence description with the use of EPA in the assessment programme.

Furthermore, the revised description of the physician roles could help the individual specialities in describing the specialty's professional profile and in monitoring the applicant's progressive competence attainment and competence mastery – especially if milestones are used.

5 Definition of the seven physician roles

5.1 Medical expert

As medical experts, physicians perform diagnostic/therapeutic activities involving the management of situations where medical prioritisation and decisions are required. The distinctive features of healthcare services are that they are often complex and unpredictable. In some cases, priority-setting and decision-making take place based on inadequate information and uncertainty about evidence and best practice. The work requires the mastery of creative solutions based on health-scientific knowledge, skills and abilities.

5.2 Communicator

As communicators, physicians convey medical problems and solutions through respectful rapport with the parties involved such as patients/relatives, colleagues and other collaboration partners. They do so through oral, written and visual media. Physicians contribute to the dialogue based on information and understanding of the involved parties and the available experience-based knowledge combined with the medical research-based knowledge in the area. The physicians' communication is driven by their ability and will to see, listen to, understand and respect their fellow human beings.

5.3 Collaborator

As collaborators, physicians actively encourage initiatives to participate and implement disciplinary and interdisciplinary collaboration/teamwork to deliver the core task at individual, organisational and societal level. They must fulfil this in appreciation of and with respect for the diversity of everyone involved.

5.4 Manager / administrator / organiser

As managers/administrators/organisers, physicians attend to personal leadership and supervision of others, work planning and prioritisation of available resources (administrative management) as well as scientific and strategic management – through practice of their discipline as well as at organisational and societal level.

5.5 Health advocate

As health advocates, physicians motivate and exert their influence on the health behaviours of the individual and the system as a whole by offering guidance and advice as well as initiating and implementing preventive measures as required. In everyday practice, physicians must capture and respond to problems as they arise and encourage health-promotion measures. They must actively help create an environment that will enable individuals to take responsibility for their own health and the health of others.

5.6 Scholar / researcher / teacher

As scholars/researchers/teachers, physicians translate research into evidence-based clinical practice. They must critically evaluate and pose questions about their own and others' practice and must apply a scholarly approach in search for answers. They must

contribute actively to the development of their discipline through participation in research and development projects and must continually stay updated and disseminate their knowledge at all levels. They apply relevant training methods and commit themselves to creating a positive learning environment.

5.7 Professional

As professionals, physicians use their expertise in compliance with the Hippocratic Oath, legislation and their own personal integrity. The inherent challenge is to do so while acknowledging the ethical dilemmas and the complexity, unpredictability and uncertainty that arise in everyday practice. Physicians respect the integrity and autonomy of patients and act according to their best judgment for the benefit of the patient/collaboration partner, organisation and society. Physicians are conscious of being role models for others, recognising their own limits of expertise and seeking the help of others when needed.

6 The physician roles in detail – general competencies at individual, organisational and societal level

6.1 Medical expert

6.1.1 General competencies at individual level

Physicians must apply knowledge generally based on the highest level of international research within their discipline in the specific situation. They must perform and master the specific activity in collaboration with the patient/relatives and relevant parties according to applicable standards of quality. Furthermore, they must be aware of alternative strategies and must substantiate their choice of strategy within the boundaries of their discipline and the specific needs of the patient and the context in which they practice. They must identify and respond adequately to ethical issues as they arise in the performance of the individual tasks.

> Example: Effectively managing and performing patient consultations, diagnostic examination, therapy/procedure and follow-up, while taking into account the patient's preferences, understanding and life situation. Applying principles of ethics in everyday problems.

6.1.2 General competencies at organisational level

Physicians must understand and, on a scientific basis, reflect on their own practice and the practice of others and must evaluate and decide how to handle specific work tasks in collaboration with the extended care team and across departments, sectors and other bodies involved. Based on medical knowledge, skills and abilities, they must master the art of making analysis and propose how practices can be improved.

> Example: Leading and performing ward rounds, outpatient activities, laboratory, admission ward, surgical ward, including setting priorities for patients and allocating resources. Effectively mastering specific interdisciplinary functions and areas of responsibility such as continuity of care, conferences, shifts.

6.1.3 General competencies at societal level

Physicians must act as consultants by contributing with their medical expertise to identify healthcare problems and solutions in relation to the specialty/discipline, the profession, other professional groups and non-professional stakeholders as well as the regions, society, nationally and internationally.

> Example: Taking responsibility for supervision and guidance/advice in other specialties, institutions, etc. Giving advice to politicians/bodies.

6.2 Communicator

6.2.1 General competencies at individual level

Through appreciation and respect for their fellow human beings, physicians must command a multitude of methods and media for communication and information-

sharing. They must apply them taking into account the involved parties' capabilities, preferences and needs in the execution of the specific task in collaboration with the immediate care team.

> Example: Effectively conveying oral and written information to patients and relatives, including handling difficult conversations/delivering bad news. Delivering effective oral and written information to collaboration partners (presentation of problem, delivery of messages/information, consulting with others about patients/test results, safe communication ISBAR or closed loop communication. Maintaining appropriate records, having knowledge about and knowing how to use IT systems such as electronic patient records, email, telecommunication systems, visual and non-verbal communication forms.

6.2.2 General competencies at organisational level

Physicians must command a multitude of methods and media to share and convey information with colleagues, other professions and non-colleagues in a wider context across departments, sectors and bodies involved in the specific activities.

> Example: Effectively conveying oral and written communication in the handling of medical problems (instructions, discharge summaries, referrals). Having knowledge about various forms of communication, including non-verbal communication forms. Conducting interdisciplinary and/or multiprofessional conferences. Possessing knowledge about and using databases, network systems (IT or non-IT based), telecommunication systems and visual media.

6.2.3 General competencies at societal level

Physicians must command a multitude of methods and media to share medical research-based knowledge and must be capable of discussing professional and scientific problems with the specialty/discipline, the profession, the regions, society and internationally in a general context.

> Example: Preparing patient information and other informative material. Conveying information via scientific articles, presentations, posters, etc. and participating in awareness-raising campaigns. Using social media (Facebook, Twitter, LinkedIn, etc.).

6.3 Collaborator

6.3.1 General competencies at individual level

Physicians must initiate and implement patient-centred/interdisciplinary collaboration specific to the individual task by using the available expertise. This could be handled by a team in which the physician is responsible for ensuring that all team members know the objectives, roles and division of responsibility. Physicians must establish systems to enhance the quality of collaboration and ensure the provision of constructive feedback between collaboration partners. They must understand and decide on relevant initiatives for patient empowerment.

> Example: Negotiating a common agenda or care plan with patients and assisting them in managing their own treatment (by becoming experts of their own disease) and health. Working in partnership with relevant parties in the

execution of ward rounds, outpatient activities, within a surgical team and in connection with transfer, admission, discharge of patients. Collaborating with other professional groups and other specialties at interdisciplinary conferences.

6.3.2 General competencies at organisational level

Physicians must collaborate in the extended multiprofessional team across departments, sectors and bodies involved in the handling of specific tasks. They must identify task-specific collaboration partners and their resources and clarify roles and responsibilities as well as contribute to the enhancement of task/workflow processes and to the development of professional expertise in the organisation.

> Example: Obtaining/delivering test results. Ensuring and facilitating appropriate patient flows. Collaborating with external partners in municipalities and other sectors, including ensuring that misunderstanding and loss of significant information do not take place at sectoral crossings.

6.3.3 General competencies at societal level

Physicians must collaborate at regional, national and international levels by involving various health professionals with the purpose of delivering the best achievable result and developing the individual specialty and the overall healthcare offer.

> Example: Establishing collaborative relationships in local, regional, national and international networks, forums and committees.

6.4 Manager / administrator / organiser

6.4.1 General competencies at individual level

Physicians must plan their own time and the time of others and the available resources within the boundaries of the individual task. They must lead care teams, while also participating constructively to the teamwork as a team member. They must have knowledge of conflict resolution and must be able to act accordingly. They must understand and contribute to quality improvement.

> Example: Managing their own time and tasks. Working in a structured manner, setting priorities for tasks and making decisions, i.e. leading emergency situations, ward rounds, outpatient activities and shifts. Assuming a leadership role and knowing the prerequisites for successful team leadership. Contributing with their own expertise and drawing on the expertise of others. Reporting adverse incidents and adverse reactions, and reporting to the various quality databases as relevant (clinical databases, quality databases, patient databases, injury analysis).

6.4.2 General competencies at organisational level

Physicians must participate actively in administrative planning of a general nature and must lead continuity of care across departments/sectors. They must understand the limits for resource allocation of the individual department or practice and must act accordingly. They must effectively chair meetings within their own discipline and in interdisciplinary contexts. They must fill formal organisational positions. They must effectively perform local quality development. They must know and understand the underlying mechanisms of errors and adverse incidents.

Example: Appropriately leading the staff associated to the department/practice, respecting the diversity of medical expertise of all collaboration partners. Preparing work schedules and educational plans. Being conscious of the allocation of resources (time management, human resources, utensils, etc.). Chairing morning meetings and interdisciplinary conferences. Filling positions of trusts and other formal positions (e.g. junior physician coordinating postgraduate medical training (UKYL), co-committees, work environment, staff representative) as well as positions in working groups, councils and committees. Initiating and implementing quality work and medical health technology assessment. Initiating and implementing medical record audits/review of medical records (perinatal audits, morbidity and mortality conferences and similar activities). Knowing the Danish Healthcare Quality Programme and facilitating accreditation. Implementing patient safety work. Handling patient complaints and communication related to the National Agency for Patients' Rights and Complaints.

6.4.3 General competencies at societal level

Physicians must have insight into management tasks at departmental and organisational level as well as at regional/national and international level, including strategic considerations and must be able to apply both theoretical and practical aspects. They must understand the healthcare system's legislative basis, organisation and priority-setting in patient care in relation to resource allocation at societal level. They must understand the management tasks at the organisational and societal level and their impact on the operation and development of the tasks undertaken by the healthcare system today and in the future – and they are expected to contribute actively to this development.

Example: Participating in physician meetings at departmental level, at which operational activities are planned and the specialty's progression is discussed. Following in the footsteps of a leader one day (role model/mentor). Participating in the planning of medical specialist education (learning objectives, training programmes, regional planning). Participating in the implementation of evidence-based measures and patient pathway package.

6.5 Health advocate

6.5.1 General competencies at individual level

Physicians must effectively plan and execute tasks taking due account of the safety of the patient, the staff and themselves, including ensuring appropriate hygiene and compliance with safety and quality procedures.

Example: Performing patient education, including emphasis on patient compliance. Providing guidance and advice about health and disease. Performing screening and preventive measures according to defined pathways and other recommendations, including obtaining information about inherent benefits and risks.

6.5.2 General competencies at organisational level

Physicians must be alert to and respond as adequate to repeated harmful/disease-promoting factors in society, including keeping watch on systematic/accumulating problems. They must encourage health-promotion measures at institutional level.

Example: Communicating and responding to health-promotion measures such as a smoke-free hospital environment, safer hospitals programme, safe surgery and other campaigns. Complying with health-relevant hygienic instructions. Working to improve the psychological and physical work environments, including encouraging health-promotion initiatives.

6.5.3 General competencies at societal level

Physicians must contribute to the systematic collection, analysis and processing of data with the purpose of launching health-promotion initiatives at institutional and societal level. They must contribute to the dissemination of such results and participate actively in debates about health promotion in oral and written media with the bigger perspective in mind.

Example: Effectively preparing and/or implementing health-promotion initiatives at societal level, such as hygiene measures, screening programmes, psychological and physical work environments. Planning and participating in general campaigns in society to support the health and well-being of the population. Lending their expertise in connection with advice and guidance offered to other colleagues/citizens/society.

6.6 Scholar / researcher / teacher

6.6.1 General competencies at individual level

Physicians must learn the elements needed to solve the tasks. They must stay updated within their discipline and must as far as possible apply evidence-based medicine (EBM)/best practice. They must effectively attain new knowledge and make relevant information, literature and database searches and apply the data they find in a given context. They must approach their own learning systematically and take responsibility for their ongoing education within all physician roles and must develop a reflective approach to their own practices. They must teach and educate patients, relatives and staff of various educational backgrounds, including other physicians.

Example: Applying best practice including, complying with instructions and guidelines. Searching for new knowledge through critical evaluation of scientific articles, journal clubs, or participation in conferences. Guiding and supervising medical students and physicians. Teaching in patient education settings.

6.6.2 General competencies at organisational level

Physicians must contribute to systematic data collection as part of their practice for development thereof and must be able to participate in and implement research and development projects. They must participate actively in the development of their own specialty and support the use of evidence in daily practice. They must be conscious of and contribute to a positive learning environment in the department/practice and must apply appropriate learning and assessment methods.

Example. Searching for new knowledge through critical evaluation of scientific articles, journal clubs, or participation in conferences. Preparing instructions based on evidence or best practice. Guiding, supervising and offering career advice to fellow physicians and applying an array of relevant

teaching methods, as well as initiating and launching assessment. Actively contributing to a positive learning and educational environment.

6.6.3 General competencies at societal level

Physicians must design and implement research and development projects, thereby contributing with research and development of their own specialty, also internationally. They must disseminate their own knowledge and the knowledge of others through oral and written media. They must plan and implement teaching and educational activities locally and nationally. They must take responsibility for their own professional development, specialisation and continual training.

> Example: Initiating and implementing research and development projects based on their own generation of data, continuity of care, workflow analysis, adverse incidents, quality data, etc. Disseminating research results, e.g. through the presentation/publication of own studies and project reporting. Networking and attending to advisory tasks in relation to research training, students and possibly PhD students. Preparing and documenting own development/educational plan.

6.7 Professional

6.7.1 General competencies at individual level

Physicians must exhibit responsibility, diligence and conscientiousness in the performance of tasks. They must be able to evaluate their own degree of concern about unclear clinical cases and must pay attention to how this concern and uncertainty may influence clinical assessment and decisions. Likewise, they must respect the concerns and uncertainty of team members, exhibit awareness to this and manage this collaboratively. They must recognise their own limitations when tasks exceed their level of expertise and seek appropriate assistance. They must describe typical ethical dilemmas of the core tasks and must present possible models for solution. They must know themselves and act according to their own integrity and must be able to establish a good balance between work and private life.

> For example: Recognising own limitations of expertise and seeking consultation as appropriate. Following up on work tasks such as ensuring replies are given to patients/colleagues.

6.7.2 General competencies at organisational level

Physicians must be conscious of their own role in forming the department's culture and actively contribute to an optimal working and learning environment. They must recognise the professional behaviour of others and respond to unprofessional behaviours as required. They must recognise and analyse their own mistakes and unintended actions and those of others and must contribute to constructive correction thereof while showing respect for the individual, the organisation and society. They must manage undefined ethical issues, accept uncertainty and take responsibility for decisions made on the basis of limited information.

> Example: Giving constructive feedback on inappropriate behaviours of colleagues. Initiating and completing debriefing following extreme events and adverse incidents.

6.7.3 General competencies at societal level

Physicians must pay notice to principle questions in the debate about ethical issues, including coordination and prioritisation of diagnostic and therapeutic initiatives for patient groups. They must reflect on and discuss how the specialty can contribute effectively to the debate based on medical knowledge, skills and abilities. They must demonstrate awareness to the fact that society expects physicians to behave ethically and professionally, also outside working hours and in the public debate. They must contribute to the public debate on a serious and analytical basis. They must respect the balance between safeguarding the interests of patients/consumers, respecting resource allocation and responding to societal needs.

> Example: Participating in dialogue and debates about the possibilities, boundaries and development of the specialty/healthcare services, and writing commentaries, letters of debate, feature articles.

7 Conclusion and recommendation

The Working Group recommends that the revised descriptions of the seven physician roles of medical expert, collaborator, communicator, manager/administrator/organiser, health advocate, scholar/researcher/teacher and professional, be implemented in postgraduate medical training. We recommend that the Danish Health and Medicines Authority devise a model to spread the knowledge about the revised roles. This should cover information, understanding and application of the roles, including how the individual specialty societies are to use the roles in their work with future curriculum and how the roles are to be integrated in portfolios, educational and assessment programmes, professional profiles as well as in daily practice.

In promoting the seven revised roles, it could be useful to create a graphical illustration of the seven roles of physicians and their interconnections and positions. We consider this expedient because the connections between the roles in Denmark are considered somewhat different from the roles illustrated by the CanMEDS diagram.

8 Appendix A. Terms of reference of the Working Group on Physician Roles

Background
The seven roles of physicians (medical expert, communicator, collaborator, manager, health advocate, scholar and professional) have been implemented in postgraduate medical training in Denmark. Descriptions of competencies for each of the roles have helped embed the roles concept into the culture of postgraduate medical training. However, Danish and international experience suggest that the content of the roles is interpreted differently by various stakeholders, and not all roles are perceived as equally relevant for all specialities or activities. Moreover, there is a need to consider the roles as being more integrated in medical practice. Thus, the Danish Health and Medicines Authority recommends in its report "Postgraduate medical training in Denmark – status and future perspectives" to commence work to revise the seven physician roles and make them more nuanced in relation to the various specialties. In addition, the report suggested that the role concept should also include ethical aspects and that the interrelationship and hierarchical structure of the roles should be brought up-to-date.

Purpose
To revise the descriptions of the seven roles of physicians, including rephrasing the definitions and the content of core competencies/physician roles to bring them up-to-date and supportive of the needs of the Danish healthcare services.

Tasks
To prepare a recommendation and general presentation of the physician roles concept based on chapter 10 of the report "Postgraduate medical training in Denmark – status and future perspectives" and other relevant material. This presentation must be suitable for insertion in the general learning objectives prepared by the Danish Health and Medicines Authority or inclusion as an appendix.

Organisation of the work

Composition of the Working Group
The Danish Health and Medicines Authority appoints the Chairman and the Working Group members.

Time frame
Work is to be completed by the end of December 2012.
The Working Group reports to the Danish Council on Post-graduate Medical Training.
The Working Group submits a report including a general presentation of the definitions of the physician roles to the Danish Health and Medicines Authority and the Danish Council on Post-graduate Medical Training.

9 Appendix B. Additional literature

The list below includes the underlying literature used in the preparation of the revision of the seven physician roles.

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New Danish illustration of the seven roles of physicians (Danish Health and Medicines Authority, 2013)

Danish	**English**
Medicinsk ekspert/lægefaglig	Medical expert
Kommunikator	Communicator
Samarbejder	Collaborator
Leder/administrator/organisator	Manager/administrator/organizer
Sundhedsfremmer	Health advocate
Akademiker/forsker/underviser	Scholar/researcher/teacher
Professsionel	Professionel