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As a response to the changing environment and a call for increased accountability to society, medical specialist education is adopting competency-based approaches. Competency-based medical education aims to better prepare physicians for their future work by defining the ultimate learning outcomes that inform undergraduate curricula and postgraduate clinical workplace learning. Although there is an extensive body of literature about how to best assess the defined competencies, little research has focused on how competency frameworks inform comprehensive clinical workplace learning. This thesis addresses this gap in the literature and provides novel insights in opportunities and drawbacks of competency-based approaches.

Chapter 1 sets the stage of this thesis. It begins with a quotation of a clinical supervisor that illustrates that for residents in order to become good physicians, they need to develop skills that go beyond the knowledge domain. This is exactly what competency frameworks intend to do; they make aspects of the medical profession explicit that were previously only treated implicitly. The most widely adopted competency framework is the CanMEDS framework. It comprises of seven roles: the central role of Medical Expertise and six surrounding ‘intrinsic roles’: Communicator, Collaborator, Leader, Professional, Health Advocate and Scholar. As a vital part of the transition towards competency-based education, practice and research up to date have strongly focused on the development of valid and reliable assessment instruments for these roles. Residents’ learning is situated in the clinical workplace, where legitimate participation in real clinical activities is central to learner’s development. Mere access to clinical activities is, however, not enough. Residents require deliberate support in order to optimise their experiential learning. Feedback is a vital element of that support and has been strongly endorsed by learners and educators alike as an indispensable element of effective clinical workplace learning. Although we know that all these separate elements are crucial for workplace learning, it remains unclear how clinical activities, support from supervisors and feedback, give shape to competency-based postgraduate training in practice. This thesis aims to provide insight into how postgraduate curricula, informed by CanMEDS, operate in practice.

Chapter 2 reports on how we designed and evaluated a feedback system to guide supervisors in adopting CanMEDS roles into their supervisory conversations with residents. The implementation of the CanMEDS framework challenges clinical supervisors to expand attention beyond medical expertise, including the six intrinsic roles. That had turned out to be difficult in practice. To facilitate this, we assigned the CanMEDS roles to a variety of professional situations in which they could be observed and evaluated. We found that all roles were covered in the written feedback. Apparently, the feedback
system offers enough structure to guide supervisors in incorporating the intrinsic roles in their feedback. Furthermore, we evaluated quality of supervisor’s written feedback. Although quality of feedback overall was good, feedback on collaborator, manager and reflective professional often lacked improvement points and feedback on reflective professional was often not specific. We, therefore, recommend additional faculty training in order to provide supervisors with additional guidance on how to better address especially these roles that seem to lack behind. This study shows that it is possible to develop a feedback system in which feedback is provided on different CanMEDS roles. The system is generalizable to different authentic situations and roles. It may easily be expanded and be tailored to other workplace-based training settings.

Chapter 3 describes a longitudinal quasi-experimental controlled study with a pre-test/post-test design. We evaluated whether a short and simple, and therefore feasible, training session would help improve the quality of feedback residents receive from their clinical supervisors. Half of the internal medicine specialists in seven hospitals attended a 2,5-hour training session during which they practised giving feedback in a simulated setting using video fragments and role play. The control group did not receive any training. Residents rated the quality of supervisors’ verbal feedback with a questionnaire and the research team analysed completeness of supervisors’ written feedback. The data show a significant increase in the quality of feedback after the training, that persisted up to six months after the training. This is a promising outcome since it is a feasible approach to faculty development in the clinical workplace setting that is always pressed for time.

Chapter 4 presents a qualitative study in which we analysed what supervisors say in their feedback on CanMEDS roles, by applying critical discourse analytical tools to supervisors’ written feedback. The results indicate that the way roles are constructed in the postgraduate curriculum-in-action was considerably different from how they are described on paper. The role of Collaborator was constructed in two different ways: a cooperative discourse of equality with other workers and patients; and a discourse, which gave residents positions of power—delegating, asserting and ‘taking a firm stance’. Furthermore, efficiency -being fast and to the point- emerged as an important attribute of physicians. Patients were seldom part of the discourses and, when they were, they were constructed as objects of communication and collaboration rather than partners. This study’s findings suggest that it takes more than a competency framework, evaluation instruments, and supervisor training to change clinical workplace learning. The findings showcase that a curriculum change in clinical workplace learning might actually require organisational change.

Chapter 5 continues with a constructivist grounded theory study employing ethnographic and interview techniques to gather authentic clinical workplace learning data. Given the fact that residents’
training relies heavily on learning through participation in the workplace under the supervision of a specialist, this study begins to unravel how CanMEDS informs practice-based learning and daily interactions between residents and supervisors. More explicitly, this study explores how the CanMEDS framework informs residents workplace-based learning outside of assessment situations. We used sensitising insights from Communities of Practice Theory. The study shows that CanMEDS roles occurred in an integrated fashion and usually remained implicit during interactions. The language of CanMEDS was not adopted in clinical practice, which seemed to impede explicit learning interactions. The CanMEDS framework did not really guide supervisors’ and residents’ practice or interactions. It was not explicitly used as a common language in which to talk about resident performance and roles. Therefore, the extent to which CanMEDS actually helps improve residents’ learning trajectories and conversations between residents and supervisors about residents’ progress remains questionable.

Chapter 6 provides a general discussion in which the main findings of the chapters are summarised, evaluated and placed in the light of other literature. The findings of the studies in this thesis indicate that although some efforts lead to promising results, an expanded focus, that not only focuses on medical expertise but encompasses all CanMEDS roles, may not readily be achieved. On the one hand, improved feedback on the defined competencies can be accomplished with carefully designed feedback systems and faculty training. On the other hand, the extent to which CanMEDS actually impacts workplace learning practice may be rather limited. These outcomes are important for practice, as they highlight both how competency-based approaches can be best leveraged as important pitfalls that remain to be addressed. Methodological considerations of this thesis regarding its relevance, design choices and transferability are discussed. All chapters in this thesis reflect the importance of connecting frameworks to clinical practice but also showcase that true curricular change in postgraduate medical training inevitably seems to mean organisational change is needed.