A review of the literature on teamwork competencies in healthcare practice and training: Implications for undergraduate medical education

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Abstract

Successful teamwork is being recognized as a necessity for many aspects of effective healthcare and team training has proved effective in improving teamwork in healthcare. Therefore it is important to recognize the competencies of teamwork relevant to undergraduate medical education. This review of the literature draws on the teamwork competencies as discussed through diverse contexts of healthcare practice and health professions education and summarizes the competencies that are required with emphasis on undergraduate medical education. It highlights some practice points to medical educators; such as understanding the contexts of healthcare teams, understanding generic competencies of healthcare teamwork and understanding the specific team contexts and teamwork competencies required of trainees that should be emphasized in undergraduate education.

Introduction

The world in which healthcare professionals practice is changing and patient-care is becoming team based rather than managed by individuals. The increasing trends in specialization and division of labour in health professions training and practice, as well as the expanding scope of the concept of health and the corresponding interdisciplinary work it thus encompasses, have resulted in the emergence of such team based healthcare (Nagi, 1975; Baldwin Jr, 1996). In this background, successful teamwork is being recognized as a necessity for many aspects of effective healthcare, from acute care settings to shared care in primary or chronic care settings.

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Purported benefits of effective teamwork in healthcare include reduced medical errors, improved quality of patient care, enhanced patient satisfaction, improved staff satisfaction and retention, addressing of workload issues and reduced burnout of healthcare professionals (Clements *et al.*, 2007; Estryn-Behar *et al.*, 2007; Williams *et al.,* 1999; Mickan, 2005). Teamwork is vital for some of these benefits. For instance, many of the errors in healthcare provision, especially among trainees, have been the result of teamwork breakdowns (Risser *et al.,* 1999; Singh *et al.,* 2007; Walton, 2004). Therefore successful teamwork is an essential aspect of successful practice as a health professional and should be inculcated during basic professional education.

In this context, the concepts of collaborative learning and inter-professional education are being increasingly emphasized and team training from other domains such as aviation is being drawn upon to improve teamwork among healthcare teams. Such programmes have been successful in error reduction, improved technical performance and team member satisfaction in dynamic domains of

healthcare such as emergency medicine, surgery and obstetrics (Morey *et al.,* 2007; Risser *et al.,* 1999; Pratt *et al.,* 2007; McCulloch *et al.,* 2008). Further, a review of teamwork training, including training of medical teams, suggest that moderately positive relationships exist between team training interventions and achievement of cognitive, affective, process and performance outcomes (Salas *et al.,* 2008). Thus team training has proved effective in improving teamwork in healthcare and thus should be implemented during basic professional education.

However, members of healthcare teams are rarely trained together (Baker *et al.,* 2005a). Even in such inter-professional learning, many successful interventions have focused on improvement in learner's reactions, knowledge and skills, while only a few successful interventions, mostly in post basic education, assessed improvements in behaviour and patient care outcomes (Hammick *et al.,* 2007). Therefore, though teamwork is emerging as a key area in medical education, opportunities for implementing team training and evidence of achieving improved healthcare outcomes through such training in undergraduate education are limited. In this context, this review will focus on some of the concerns in teamwork competencies required for undergraduate medical students, which it is hoped will aid medical educators to address the challenges in teamwork learning and assessment.

Teams and teamwork in healthcare

In today's context, as explained above, health professionals are almost always required to work in teams to provide comprehensive, continuing and quality healthcare. Healthcare 'teams' and 'teamwork' have been identified as such only in the last century. According to Cooter (2004) it was only in the early 20th century that the term 'surgical teams' was used in USA to refer to the group of individuals known till then as a 'surgical firm'. Baldwin Jr (1996) describes the historical development of interdisciplinary practice after the World War II; from the establishment of Community Health Centers to provide primary care to the underprivileged, to the establishment of multidisciplinary teams in specialty oriented fields in both acute (surgery, burns) and chronic (rehabilitation, geriatrics, mental health) domains as well as in generalist primary care. To describe teamwork in healthcare it is necessary to understand the setting and function of these teams of health professionals and define teamwork in such a context.

Types of healthcare teams
Types of teams in healthcare have been described from a healthcare management perspective by Fried *et al.* (2000) as: work teams, i.e. continuing work units including treatment teams, emergency care teams, research teams and home care teams; parallel teams, i.e. teams to perform functions that the regular organization is not equipped to perform well such as hospital quality improvement teams; project teams i.e. time limited teams such as a team to plan a new hospital; and management teams such as hospital management boards.

Although healthcare professionals are involved in all such teams in professional practice they would mostly be working in continuing work units, or work teams. In clinical practice Black and Craft (2004) suggest that the term 'clinical team' is usually understood to mean the group of people with responsibilities for the direct clinical care of individual patients in a particular setting. They further elaborate that in hospital practice, the team has ceased to resemble the small close-knit medical firm of the past and is an extended body which is multidisciplinary (including specialists from different medical disciplines) and multi-professional, who must all work together for the best possible patient outcome. Therefore the 'ward team' consisting of physicians at different levels of expertise (from interns to the specialist) and other ward staff, function as a part of a wider team as well.

Hall and Weaver (2001) summarize team function in healthcare in a continuum from multidisciplinary to trans-disciplinary depending on the degree of interaction among team members and the degree of responsibility for patient care. In cross-professional teams Thylefors *et al.* (2005) and D'Amour *et al.* (2005) define the term 'multi-professional' as individuals from different professions working in parallel to provide care to a patient; the term 'inter-professional' as these individuals working towards a shared goal which cannot be achieved without interdependency on their complimentary skills; and the term 'trans-professional' as a blurring/ overlapping of professional boundaries in performance of such team roles.

In describing healthcare teams especially in the 'dynamic domains of healthcare' such as operating rooms, intensive care, emergency medicine, or trauma and resuscitation teams, Manser (2009) identifies that such teams work under conditions that change frequently, may be assembled ad hoc, have a dynamically changing team membership, often work

together for a short period of time and have to integrate different professional cultures. These are known as 'action teams' in team literature. Saltman *et al.* (2006) argue that health professionals practice in both 'groups' focused on individual tasks and performance goals (e.g. clinical networks, academic departments, professional bodies) and 'teams' focused on shared tasks and performance goals (e.g. rural health, emergency setting). They suggest that a health professional should be able to seamlessly oscillate between individual and team effort according to the type of group or team.

In summary, healthcare teams, either ad hoc or in continuing units, function in a continuum from multidisciplinary to trans-professional, and can be found in all aspects of healthcare from acute care in central settings including emergency medicine, surgery, obstetrics, trauma and intensive care to continuing care in central or distributed settings including community care, primary care, rural health, mental health, general practice, geriatrics and rehabilitation. The teamwork competencies of their members should be understood according to the demands in the context of such settings and functions.

Defining 'Teamwork in Healthcare'
Researchers have attempted to define 'teamwork in healthcare' as applicable to healthcare teams described above. In management literature a 'team' has been defined as a small number of people with complementary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable (Katzenbach & Smith, 1993). It is evident from the above discussion that teams in healthcare with patient-centred goals conform to this definition.

A concept analysis by Xyrichis and Ream (2008) proposes teamwork in healthcare as a dynamic process involving two or more healthcare professionals with complementary backgrounds and skills, sharing common health goals and exercising concerted physical and mental effort in assessing, planning, or evaluating patient care. Another dynamic view of teamwork through systems theory is offered in a literature review on team characteristics by Mickan and Rodger (2000), which describes teamwork as input conditions transformed via optimum throughput processes into maximal output.

In a comprehensive review of the literature on medical teams and patient safety Baker *et al.*
(2005b) draw from the team training literature and the 'action teams' in healthcare to define teamwork as performance of two or more individuals, with specific roles, performing specific tasks, and interacting or coordinating to achieve a common goal or outcome. They elaborate that teams make decisions; possess specialized knowledge and skills; embody a collective action arising out of task interdependency; and teamwork characteristically mandates an adjustment on the part of team members to one another, in an effort to accomplish team goals.

These definitions and the actual practice of healthcare teams highlight that teamwork requires health professionals, mostly from different professional backgrounds and complementary skills to coordinate, communicate and collaborate in order to perform interdependent tasks and make mutually accountable decisions towards a shared goal of improved patient care. According to the context of the teams to which they belong, health professionals should be able to recognize and perform independent tasks requiring competencies that maybe specific to their profession but which requires coordination as well as tasks requiring interdependency.

Medical educators should focus on these varied contexts and the different roles medical graduates will encounter as they progress in their professional career in teaching teamwork.

Research on teamwork competencies in healthcare

A number of 'competencies' to become a successful team member in health professions learning and practice have been identified in literature. From a management perspective, a competency is defined as a "cluster of knowledge, skills and attitudes" (Parry, 1998). In education, Spady (1977) defines competencies as "indicators of successful performance in life-role activities (e.g. political citizen, life-long learner)" and distinguishes them "from the discrete cognitive, manual, and social capacities that serve as their enablers". He later defines outcome based education as "basing what we do instructionally on the outcomes we want to achieve, where practitioners start by determining such competencies" (Spady, 1988). Educational competencies identified in the literature on teamwork in healthcare are either the 'curriculum outcomes', or the 'knowledge, skills and attitudes' that are their 'enablers'.

Methodology of identifying teamwork competencies through review of the literature

A comprehensive search was conducted under the keywords 'medicine/ medical/ health/ healthcare' and 'team/ teamwork' and 'competency/ competencies' in the bibliographic databases medline (1078 hits), embase (458 hits) and ERIC (205 hits). The identified articles which dealt with teamwork competencies were hand-searched for relevant references. Concurrently, the outcome statements of undergraduate and resident accreditation/ supervisory bodies in medical education in USA, UK, Canada and Australia were scanned for competencies related to teamwork. The teamwork competencies were identified in the context of 'healthcare teams' described above.

Competencies in team training literature and their application in healthcare

Teamwork competency has been well described in the literature on management/ organizational behaviour. Katzenbach and Smith (1993) describe four elements essential for effective team performance; common commitment and purpose, performance goals, complementary skills, and mutual accountability. Stevens and Campion (1994) categorize the knowledge, skills and abilities required for teamwork as interpersonal (conflict resolution, collaborative problem solving, communication) and self-management (goal setting and performance management, and planning and task coordination) competencies. These competencies are similar to the healthcare related teamwork competencies described below.

Parallel to these developments, team performance has been extensively studied in high reliability contexts such as aviation, nuclear power plants and military teams. These researchers have identified competencies and developed frameworks and taxonomies (table 1) in constructing and validating teamwork measures (Fleishman & Zaccaro, 1992; Dickinson & McIntyre, 1992; Brannick *et al.,* 1995).

Table 1: Teamwork competencies in high reliability contexts

Anti-air warfare teams Dickinson and McIntyre, 1992	Military and aviation Fleishman and Zaccaro, 1992	Military air crews Brannick et al, 1995
team orientation	orientation	situational awareness
team leadership	resource distribution	leadership decision making
communication	response coordination	communication
monitoring	motivation	adaptability
feedback	systems monitoring	decision making
backup behaviour	procedure maintenance	assertiveness
coordination		

In a review of similar studies in high reliability contexts and further quantitative and qualitative analyses, Salas *et al.* (2005) identify five core components and three supporting coordinating mechanisms of teamwork; namely the components of team leadership, mutual performance monitoring, back up behaviour, adaptability, team orientation and their coordination through shared mental models, closed-loop communication and mutual trust.

Extending such team training research to healthcare; through reviews of the literature, surveys, observations, and analysis of critical incidents, researchers have identified required competencies (table 2) and even developed tools of assessment in dynamic domains of healthcare (Thomas *et al.,* 2004; Cole & Crichton, 2006; Undre *et al.,* 2006; Healey *et al.,* 2006; Frankel *et al.,* 2007; Fernandez *et al.,* 2008; Reader *et al.,* 2009).

A systematic literature review on medical team training literature by Baker *et al.* (2005a) summarizes these competencies as knowledge (shared task models, situational awareness, teammate characteristic familiarity, knowledge of team goals and task specific responsibilities); skills (monitoring, adaptability, backup behaviour, team leadership, conflict resolution, feedback, closed-loop communication) and attitude (team orientation, collective efficacy, shared vision, team cohesion, mutual trust, importance of teamwork) competencies.

Table 2: Teamwork competencies in dynamic domains of healthcare

Neonatal resuscitation Thomas et al, 2004	Truama care Cole & Crichton, 2006	Surgery Undre et al, 2006	Healey et al, 2006	Frankel et al, 2007	Intensive care Reader et al, 2009	Emergency medicine Fernandez et al, 2008
information sharing	Leadership	communication	communication	communication	team communication	mission analysis,
inquiry	team management	corporation	corporation	corporation	team coordination	goal specification
assertion	Role competence	coordination	coordination	coordination	team leadership	strategy formulation
goal sharing	conflict resolution	shared leadership	leadership	situational awareness	team decision making	monitoring
teaching		monitoring	monitoring			backup behaviour coordination debriefing
plan evaluation workload management environment awareness leadership						leadership
communication						team cognition closed-loop communication

Based on the above team training literature and their application to healthcare, teamwork competencies, especially in 'acute teams', can be grouped into the domains of shared understanding of context (including shared vision, shared mental models, situational awareness), team leadership (including decision making, conflict resolution, adaptability), team support (including mutual trust, team orientation, mutual performance monitoring, backup behaviour) and communication (including feedback, closed-loop communication). Thus a team member should establish and maintain a shared understanding of the team context and tasks, should perform team processes where leadership is important, should also perform team processes where support is important, and effectively communicate to perform these. This grouping is neither hierarchical or context specific but rather describes different, though sometimes interrelated, 'life-role activities' a team member encounters which may require varied combinations of knowledge, skills and attitude competencies. For instance, attitudes of trust and team orientation, based on which the skills of mutual performance monitoring and backing up at times of high workload should be practiced, are required to support other team members.

There are several issues that need to be recognized in identifying these competencies through the team training literature. Militello *et al.*

(1999) in evaluating existing team performance models, correctly identify that the competencies have been described at different levels of abstraction. This is evident even in the studies and frameworks described above and the subsequent grouping derived is an attempt to classify them at a higher but equal level of abstraction. Further, in a review of team training studies of competencies from aviation team training Lenne (2003) cautions that very little seem to be understood about processes in distributed teams. In the next section competencies in distributed teams will be described according to the above grouping where appropriate.

Competencies in inter-professional practice and education
Researchers and practitioners have also identified inter-professional teamwork competencies (table 3) through studying or reviewing inter-professional teamwork in practice and education (Braithwaite & Travaglia, 2005; D'Amour *et al.,* 2004; Hall & Weaver, 2001; Hammick *et al.,* 2009; Oandasan & Reeves, 2005). Researchers have also attempted to identify competencies in the different contexts of inter-professional care (table 4) such as general practice (Atkinson *et al.,* 2007), primary and community care (Xyrichis & Lowton, 2008; Patel *et al.,* 2000), family medicine (Delva *et al.,* 2008) and paediatric rehabilitation (Nijhuis *et al.,* 2007) among others.

Table 3: Teamwork competencies in interprofessional practice and education

Interprofessional practice	Interprofessional collaboration	Interprofessional education	Interprofessional education	Interprofessional education
Braithwaite & Travaglia, 2005	D'Amour et al, 2004	Hall & Weaver, 2001	Oandasen & Reeves, 2005	Hammick et al, 2009
understand other professionals roles & responsibilities	willingness to collaborate	identify professional roles & explore overlapping responsibilities	knowledge of professional roles of one's own and other team members	listening
assessment of group dynamics	trust	skills to guide members through stages of group development	skills of working with other health professionals	encouraging
Communication	communication	communication skills	willingness to work with others	clarifying and summarizing
conflict resolution	mutual respect	conflict resolution skills	resolving conflicts	organizing
Leadership		leadership skills	respect	time management
Delegation			tolerance	constructive criticism
mutual trust and respect				giving feedback
dealing with uncertainty				direct communication
ability to share goals				valuing and appreciating
Adaptability				compromising
Flexibility				peacekeeping

While illustrating the significant overlap of these with the teamwork competencies described in the dynamic domains of health care, these highlight competencies required to cross professional boundaries and resolve associated issues of leadership and professional roles; and manage communication issues in dispersed teams. Thus there is more emphasis on aspects such as understanding each other's professional background and its impact on roles and responsibilities in the team and understanding when and how to involve other healthcare professionals in dispersed teams (shared understanding of context), willingness to collaborate with other professions (team support), communicating with respect/ clarity and regular review (communication), teaching other professions and patient centred integrative care.

Medical educators in undergraduate education should focus on preparing students with such generic competencies to effectively function in teams in different settings.

The relevance of teamwork competencies for trainees

Most teamwork contexts and competency frameworks described above are broadly addressed at all health professions and many are applicable for medical professionals at all levels of expertise. However, some contexts and competencies may be more relevant than others to trainees. Hughes *et al*, (2008) state that teamwork skills in undergraduate medical education may include, among others, group work skills, skills of reflection and analysis and skills of effective feedback. Singh *et al.* (2007) highlight the significance of patient safety for trainees through a study of malpractice claims that conclude that teamwork breakdowns contributed to 70% of errors among trainees, with lack of supervision, handoff problems and lack of clear lines of responsibility significantly higher among such trainee errors. Burke *et al.* (2000) discuss that role ambiguity and uncertainty about degree of competence, leadership and responsibility effects trainee performance in multidisciplinary mental health teams. Outcome statements and teamwork competencies for trainees and medical students attempt to further clarify these.

Table 4: Teamwork competencies in different contexts of interprofessional practice

General Practice	Primary Care	Family Medicine	Primary & Community care	Paediatric Rehabilitation
Atkinson et al, 2007	Patel et al, 2000	Delva et al, 2008	Xyrichis & Lowton, 2008	Nijhuis et al, 2001
effective information transfer and review	well defined roles, tasks and responsibilities	understanding team member roles	resolving interprofessional conflict	communicate to share information & manage conflict
clear and concise referral	overlap attending to patient issues	commitment to role obligations	enhanced communication	decision making & problem solving
clear roles and responsibilities	communication based on professional expertise	recognizing contributions of all members	clear team goals	sequencing and coordinating services
Regular problem solving	communication based on patient management needs	planning change	mutual respect and trust	joint assessment and consultations
group professional development		importance of teamwork	effective feedback by audit	goal setting
		communication with respect	regular meetings	team meetings
		sharing of information	clarity in leadership	commitment to the team
		mutual support	continuity of team members	common understanding
		team review meetings	proximity of team	shared responsibilities
			organizational support	Trust
				Flexibility
				role blurring

Competencies expressed as educational outcomes by professional organizations in medicine

With the recognition of outcome based education as a model for medical education, many professional bodies, drawing on existing literature, public opinion and expert opinion, have issued outcome statements regarding the competencies a resident or intern should achieve, which identify teamwork competencies in domains such as communication, collaboration and leadership.

As listed in Table 5 these include the competencies in the CanMEDS physician competency framework by the Royal College of Physicians and Surgeons in Canada (Frank and Danoff, 2007), in the 'Outcomes Project' by the Accreditation Council for Graduate Medical Education in USA (Rider & Keefer, 2006), in the Australian Curriculum Framework for Junior Doctors (Postgraduate Medical Education Councils of Australia, 2006), in Tomorrow's Doctors in UK (General Medical Council, 2003) and emphasizing the patient safety aspect in the National Patient Safety Education Framework in Australia (The Australian Council for Safety and Quality in Health Care, 2005).

Competency statements in undergraduate education

Table 6 lists competencies of teamwork in healthcare identified for undergraduate education by researchers and educators through review of curricula for the changing practice environment (Halpern *et al.*, 2001), through review of quality standards for interprofessional capability (Walsh *et al.*, 2005), through application of an outcome based model for medical schools curricula (Simpson *et al.*, 2002) and through stakeholder surveys in acute care (Perkins *et al.*, 2005).

*Table 5: Teamwork competencies in outcome/ competency frameworks
by professional and educational organizations*

CanMEDS framework	ACGME outcomes project	Australian Curriculum Framework for Junior Doctors	Tomorrow's Doctors	National Patient Safety Education Framework (for interns)
Frank & Danoff, 2007	Rider & Keefer, 2006	PMECA, 2006	GMC, 2003	ACSQHC, 2005
understanding roles and responsibilities	respect and empathy	Identify the different types of healthcare team	understand & respect roles and expertise in team	understand characteristics of effective teams
recognizing one's own roles and limits	clear and specific questioning/ responding	Include the patient & carers in the team	willingness to lead in uncertainty and change	understand barriers to forming multidisciplinary teams
shared decision making	clear communication	respect the leadership role	importance of working as a team	identify own values & assumptions
sharing of information	constructive feedback	understand/ respect team roles	time management	describe roles of team members
conflict resolution	conflict resolution	Resolve conflicts	dealing appropriately, effectively, & in patients' interests, with problems in performance, conduct or health of colleagues	filter & accurately record information
leadership	collaborative teaching	recognize teams extend beyond the hospital		ensure accurate, timely information transfer
delegation		Flexibility		manage effective shift handovers
constructive negotiation		preparedness to adopt roles		ensure care in dispersed teams
mutual respect for diversity		understand team member responsibilities	sensitive & effective communication	understand psychosocial factors affecting team interactions
Learning together		preparedness to change		
				Recognising professional limits

In summary these studies and competency statements on trainees draws attention to some specific and challenging teamwork contexts encountered by interns and residents, such as patient handovers, acute and critical care situations such as cardiac arrests, ensuring continuity of care through distributed teams and learning while performing. Further, in addition to highlighting the well explored competencies in team training and inter-professional practice, these also emphasize some of the aspects important to recent graduates and postgraduate trainees such as assertiveness, negotiation, coping with uncertainty and valuing others' expertise in decision making (leadership); knowing one's responsibilities and limitations (shared understanding), dealing with other team members in the context of patient interests (team support) and teaching/ learning together in healthcare team environments.

Medical educators should focus specifically on these team contexts that a graduate will encounter and the relevant competencies.

*Table 6: Teamwork competencies in outcome/ competency frameworks
in undergraduate medical education*

Teamwork competencies in US curricula Halpern et al, 2001	Interprofessional Capability Framework in UK Walsh et al, 2005	Scottish Doctor Learning Outcomes project Simpson et al, 2002	Teamwork & communication in care of acutely ill Perkins et al, 2005
Team techniques to assess, coordinate & improve healthcare	leading/ participating in a team for integrated patient focused care	involvement of patients & other members of the healthcare team	recognizing one's limitations and when to call for help
learning roles and processes to work collaboratively	implementing integrated assessment and plan of care	transfer of information oral, written & electronic	Understanding to deal with emotions in critical incidents
valuing contributions of others	interpersonal communication	recognition of own limitations	good time keeping, punctuality
team leadership	sharing unprofessional knowledge	importance of teamwork	good communication skills
group dynamics	co-mentoring of peers	working in emergency care teams	ability to work as part of a multi-professional team
cognitive styles	respect	trust and respect	
delegation	understanding team structures	behaviour/ relationship principles	
Teamapproach in patient education	understanding group dynamics	shared decision making	
	understanding professional roles of team members	Involving other professions beyond the hospital when needed	
	feedback and monitoring	coping with uncertainty and error	

Table 7: Summary of teamwork competencies in healthcare

	Team training & dynamic domains of healthcare	Competencies emphasized additionally in Interprofessional practice	Competencies emphasized additionally in Undergraduate education
Shared understanding	Shared vision Shared mental models Situational awareness	Understanding impact of professional background on roles & responsibilities Involving professionals in dispersed teams	Understanding contexts such as patient handovers Knowing one's limitations
Team leadership	Decision making Conflict resolution Adaptability	Prioritizing patient-centred integrative care	Assertiveness Valuing others' expertise in decision making
Team support	Mutual trust Team orientation Performance monitoring Backup behaviour	Willingness to collaborate with other professions Teaching other professions	Dealing with other team members in patients' interests Teaching/ learning together
Communication	Feedback Closed-loop communication	Communicating with respect/ clarity Regular review	Clarity and accountability

Conclusion

Teamwork in healthcare is becoming increasingly emphasized in healthcare practice and health professions education, as improved teamwork have resulted in many benefits including improved quality of care and error reduction. Therefore team training is essential for medical education, especially from a perspective of improving inter-professional collaboration and patient safety. Researchers and educators have identified teamwork competencies relevant to healthcare from acute, centralized settings to continuing care in dispersed settings through research in team training in high reliability contexts and in inter-professional practice. A summary of such competencies, highlighting competencies in inter-professional practice and undergraduate medical education where further emphasis was found, is given below.

Educators in undergraduate medical education need to distinguish the teamwork contexts and competencies required as a medical professional and which of those are essential for a trainee. They need to focus especially on these team contexts that a graduate will encounter and the relevant competencies, while preparing the students with generic competencies applicable to the variety of team contexts in healthcare.

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