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# Are doctors team players, and do they need to be?

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**Abstract**

Evidence suggests that teamwork failures contribute to poor outcomes in hospitals and that changes in healthcare delivery have at times worked against the development of effective healthcare teams. Doctors' engagement with the concept of healthcare teams, although variable, has generally been supportive and there have been several successful initiatives. However, lack of evidence on the critical components that improve the performance of healthcare teams impedes growth in our understanding and development of effective teams. In an endeavour to improve the function of healthcare teams through education and systems change, the psychology literature remains a useful framework for studying the critical components of team processes.

The training of healthcare professionals has traditionally focused on the knowledge and skills of individual clinical practitioners. This focus is gradually changing however with modern health care increasingly being delivered by teams of health professionals with the expectation that this will lead to improved healthcare delivery processes, better outcomes for patients and lower costs compared to non team approaches.[1]

Adverse events are common in Australasian hospitals with up to 16% of all hospital admissions associated with an adverse event, resulting in disability or longer hospital stay.[2,3] Notably, failures in teamwork and communication have been found to make a substantial contribution to such adverse events and suboptimal care.[4–9] Lingard,[10] observing communication between members of operating room teams, found over a quarter of all communications failed due to poor timing, inaccurate or missing content, or failure to resolve issues. Many of these failures had observable deleterious effects, including inefficiency, tension between team members, wasted resources, delays or procedural errors.

The development of effective clinical teams however is complex and requires more than simply the grouping or clustering of health professionals in a clinical area with the expectation that they will work effectively as a team. Different professional groups have different approaches and attitudes towards teamwork,[11] which may impede the development of a well-functioning team. Changes in the educational and clinical environment can impact on the development of team structures. Furthermore, current studies provide little insight into what are the critical components that improve the performance of patient care teams.[1]

To explore the concept of team work further and whether doctors are team players it is important to firstly define what a team is.

## What is a team?

A general consensus in the literature defines a team as consisting of two or more individuals who have specific roles, perform interdependent tasks, are adaptable, and share a common goal.[12] A doctor's role within the team could include; creating a vision; managing change, coordinating tasks, maintaining or supporting team function, or active followership.

Doctors often think of teams in terms of their traditional medical team, but the wider healthcare team can be usefully considered as multidisciplinary, interdisciplinary and transdisciplinary depending on the degree of interaction between members and the degree of shared responsibility for patient care.[13, 14] Members of a multidisciplinary team work in parallel, with minimal interaction except through the doctor, who traditionally, is in charge. In transdisciplinary teams, roles are blurred as professional functions overlap, team members share knowledge, skills and responsibilities, and trust is an essential component for successful group dynamics.[13] The interdisciplinary (or interprofessional) team sits somewhere in between, where the team members work together around common tasks [14] and collaborative communication and decision-making are key elements.[13]

The clinical setting may dictate the appropriate structure for the team and an interdisciplinary team will be required where complex and diverse patient needs require input from a range of health professionals.[15]

## Changing healthcare environment affecting the development of team structures

The past 25 years has seen considerable change in the environment for healthcare delivery due to changing demographics with ageing populations, increasing complexity of healthcare, rising costs of health-related technology and increasing consumer expectations.[16] This has occurred against a background of macro health economic changes in New Zealand with experimentation with a competitive model of healthcare delivery in the 1990s, a clash of cultures between doctors and management,[17] and increasingly constrained health funding and resources in the current decade. This has challenged health professionals and medical staff in particular, to work together more effectively to reduce admissions, decrease length of stay, rationalise expensive interventions, while still endeavouring to provide high quality care.

With the increasing complexity of healthcare, doctors meanwhile have become more specialised in response to the continuing growth in scientific knowledge and technological advances. The time and energy required with subspecialisation and the maintenance of working relations with other branches of the medical profession has at times, been to the detriment of relations with other healthcare professions.[18] This medical focus has subsequently been challenged however by the changing expectations of other healthcare professions with their respective subspecialisation and the emergence of interprofessionalism.[18] Traditional medical roles and ward hierarchies have not only been questioned but changed with greater responsibility for many aspects of patient care being assumed by other health professions.

Intraprofessional employment changes have also had an impact on the environment for healthcare delivery. Stricter limits on working hours for resident medical staff as a result of the M10 working hours determination in New Zealand has seen a major change in the composition and structure of traditional medical teams with a decrease in the ratio of senior medical staff to resident medical staff.

Increased shift work rosters have emerged affecting traditional team structures. The continuity of medical care for patients has become more difficult in this environment. The introduction of the European Working Time Directive, which placed comparable restrictions on hours worked by resident medical officers, has also raised concerns about the effect on team structures and the continuity of patient care.[19-21]

The increasing reliance on locum medical and nursing staff in New Zealand hospitals, in conjunction with the changing work patterns of resident medical staff, may also negatively impact on the development of collaborative inter professional relationships. Higher staff turnover provides fewer opportunities to understand and appreciate respective team member's roles and capabilities and insufficient time to develop the respect and trust required for a well functioning team. The high proportion (40%)[22] of international medical graduates in the New Zealand environment may create additional challenges for effective team functioning as attitudes of doctors towards the roles of nurses, and attitudes to speaking up and challenging authority can vary across cultural groups.[23]

By contrast, changing expectations of both consumers and providers in recent years has impacted on the clinical environment with demand for greater accountability of health practitioners and with the expectation that health providers will co-operate between each other thus improving healthcare. Policy documents in countries such as the USA and United Kingdom continue to reinforce the importance of team work in the delivery of health care.[1]

## Are doctors team players?

Against this background of change, how have doctors reacted to demands to learn and work in different ways, work more collaboratively and become team players? Often doctors have not been seen as team players unless it was their team and they were the leader. Team work is complex and specific aspects of teams require compromise. Teamwork requires team members to sacrifice some of their individual autonomy, in the interest of collective decision making.[1]

The evidence on doctors as team players is mixed. In the educational environment selection processes for medical school and the competition for training posts have tended to favour individualist behaviours rather than the attributes of team players. Horsburgh et al[24] found medical, nursing and pharmacy students differed in how they believed clinical work should be organised even before they started their training. Medical students believed that clinical work should be the responsibility of individuals. In contrast, nursing students had a collective view and believed that work should be systemised, whereas pharmacy students were at a mid-point in this continuum. On the other hand, medical curriculum activities are increasingly in cooperative small groups the medical course itself may to some extent diminish competitive behaviours[25].

The interprofessional education movement was conceived as a means to improve teamwork amongst health and social care professions. Suggestions that doctors and medical students have been reluctant participants in interprofessional education have been challenged. Two surveys in the United Kingdom found that doctors were well represented in the interprofessional movement relative to their overall numbers.[18, 26] The Royal College of General Practitioners in the United Kingdom was noteworthy for the lead it gave, as it joined in conference with the other professions, in the publication of interprofessional reports.[27, 28]

In clinical practice doctors have often become team players of a sort through clinical necessity. Specific tasks in patient care have in many instances become too complex to be performed by individual practitioners and therefore teamwork is needed. Teamwork has also been seen as a way of overcoming the fragmentation of care by specialisation[1] with recognition that patients who receive care from a team of caregivers may benefit from the insights of different bodies of knowledge.[29]

The concept of "teamwork" is gradually becoming part of mainstream health care[12] as a greater understanding of the importance of teams develops. Patient care teams with doctors playing a team role have been successfully developed around patient populations such as the elderly,[30] or grouped according to disease processes such as diabetes[31] and stroke care[32] with improved clinical outcomes. There is a large body of evidence showing the effectiveness of using a team as part of disease management, especially for chronic disease (e.g., heart failure, diabetes, and hypertension)[28].

## Advantages of team

With skilled leadership and a well-functioning team, the many different skill sets of individuals can be utilised to provide more efficient and effective clinical care. Whilst some may consider decisions by consensus prone to problems, teamwork can facilitate clinical decision making. If information is shared among team members, more input can be provided into problem solving and decision making.

A good team leader will listen to the team inviting suggestions or options for diagnosis or management with evidence to suggest that discouraging team input into decision making or "flying solo" may increase the risk of error. Tasks can be allocated more equitably between team members to ensure individuals are not overloaded, with team members supporting each other in reaching shared goals in patient care. A recent review of the literature on leadership and healthcare teams provides good evidence that effective teams can improve patient safety, and leadership is vital for teams to function effectively.[33]

Meta-analyses of randomised controlled trials show that in patients with heart failure, use of multidisciplinary teams reduce the rates of re-hospitalisation and mortality as compared with usual care.[34] Cost-effectiveness studies also show a benefit to a team approach.[35] The evidence on the use of a team approach to disease management is robust and has translated to recommendations in evidence-based guidelines.[36]

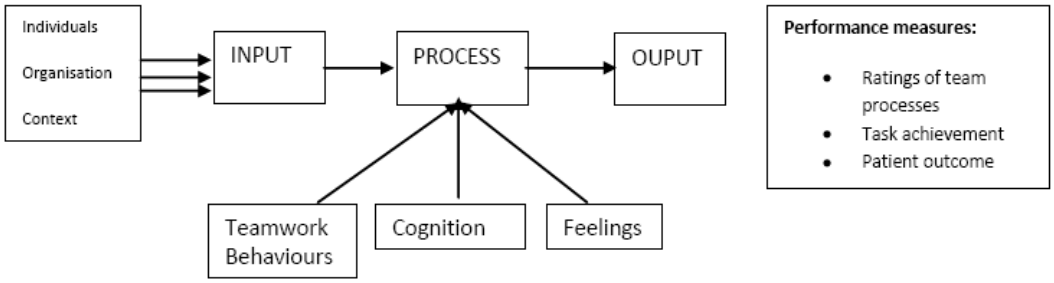
## What behaviours and skills are needed to make a team work?

Creating an effective healthcare team is an active process. It requires specific actions and skills. Review of the literature on teamwork suggests a common set of

requirements for an effective team; mutual respect and trust; shared mental models; an open environment for communication; team co-ordination.[37]

Rousseau describes a systematic framework for the study of teams, where team function is considered in terms of input (individuals, organisation and context), team processes (teamwork behaviours, cognition, feelings) and team outputs (patient and team) (Figure 1).

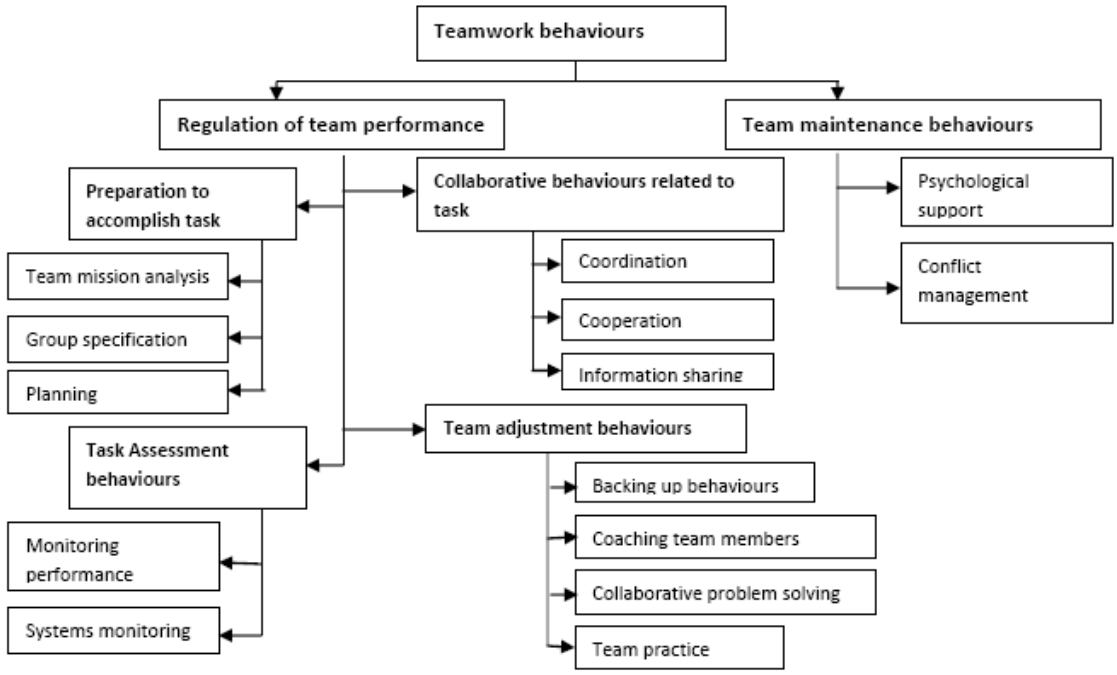
**Figure 1. A framework for studying team function (from Rousseau[38])**




"Teamwork Behaviours" can be further considered in terms of behaviours required for maintaining a team, behaviours required to accomplish a task, and behaviours required to ensure collaboration between team members (Figure 2). Several factors will affect the requirement for and type of teamwork behaviours. These are related to the nature of the task (task complexity, interdependence of tasks allocated to different team members).

A complex task may require diverse teamwork behaviours and collaborative behaviours in order to accomplish the task; an unstructured task with ambiguous outputs requires high levels of preparation to accomplish the task (i.e. working out what needs to be done) and "task assessment behaviours" (i.e. monitoring how the situation is progressing in response to actions). For example, to save the life of a rapidly deteriorating patient, the team may need to specify roles and coordinate tasks to ensure timely treatment; a team member may need to challenge an authority figure[23, 39] to ensure collaborative problem solving and avert inappropriate management decisions. In highly structured tasks where each team member knows exactly what is to be done there is less need for these behaviours.

**Figure 2. Analysis of teamwork behaviours (adapted from Rousseau[38])**




## Initiatives in creating healthcare teams

One approach to improving teamwork in healthcare has been interdisciplinary education. Hall and Weaver[14] conducted a comprehensive review of the literature from the 1970s on interdisciplinary education of the healthcare team. There were two main themes identified in the literature: system issues and content issues. System issues include availability of an interdisciplinary education curriculum, timing of the intervention (although there is no clear consensus), non-traditional nature of teaching methods, need for faculty development to address motivation to participate, institutional support, and participants' characteristics.

Content-related issues include learning about the roles of other health professionals (maintaining professional role demarcation) rather than learning how to do each other's jobs (role blurring) and the need to learn skills in group work, communication, conflict resolution and leadership. Interdisciplinary initiatives frequently only address the component of learning about the capabilities of people from other disciplines and can fail if they do not actually address the entire process involved in teamwork.

Simulated learning environments may be a way forward for the future. They provide an opportunity for multidisciplinary teams to work together on relevant clinical tasks to develop and practise a range of skills including communication, task co-ordination, sharing information, collaborative problem solving.[40-43]

Recent initiatives in Australia relating to interprofessional education include the "Learning and Teaching for Interprofessional Practice in Australia"[44] which made

recommendations on the integration of interprofessional education into health professional training.

## Where to from here?

The New Zealand Health and Disability Commissioner places obligations on health providers with regards to team work and communication. Right 4(5) of *The Code of Health and Disability Services Consumers' Rights* states that, "Every consumer has the right to co-operation among providers to ensure quality and continuity of services". We propose that doctors should be equipped, with the knowledge, skills and attitudes required to work effectively in healthcare teams as leaders and participants. With current evidence, a curriculum for leadership and teamwork should be integrated into the curriculum for undergraduate and postgraduate medical education.

Evidence suggests that teamwork failures contribute to poor outcomes in hospitals and that changes in healthcare delivery have at times worked against the development of effective healthcare teams. Further systems research to better define organisational structures which facilitate or work against the development of healthcare teams, and research into innovations to foster the formation of effective teams is required.

Doctors' engagement with the concept of healthcare teams although variable, has generally been supportive, with several successful initiatives; however, lack of evidence on the critical components that improve the performance of healthcare teams impedes growth in the understanding and development of effective teams. The psychology literature remains a useful framework for studying the critical components of team structure and function, and further research could identify these critical components in an endeavour to improve the performance of healthcare teams.

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