Knowledgeability and Identification: Explaining Military Interprofessional Healthcare Teams' Excellence and Readiness

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ABSTRACT The importance of successful interprofessional collaboration for effective patient care is generally acknowledged. Research into interprofessional collaboration has thus far been mainly situated in the civilian context and has mostly indicated barriers that prevent successful interprofessional collaboration. However, military interprofessional healthcare teams (MIHTs) seem to be exceptionally successful. Building on the overarching finding of the studies within this special edition—i.e., that MIHTs' readiness and excellence are in part due to healthcare professionals' "shared understanding" of what is needed to effectively serve on an MIHT—this commentary uses the theory of Landscape of Practice as a lens to further explain the processes through which healthcare professionals attain this shared understanding. Used within the fields of Health Professions Education and workplace learning, Landscapes of Practice (LoP) helps to explain how learning occurs within practice. It highlights how, by engaging within the various working environments belonging to a profession, social interactions between the various professionals within that environment form the conduit for learning. LoP highlights that the outcome of this learning process is "knowledgeability," i.e., understanding of how to engage within the field and with its players, resulting in being an acknowledged member of the field. Fostered through a process called "identification," professionals learn to see how their professional practice aligns with that of others and how to effectively collaborate with others. The commentary explains how the findings of the separate studies within this special edition strongly resonate with knowledgeability and identification. It is concluded that civilian interprofessional healthcare teams may benefit from incorporating characteristics of MIHTs in their training programs.

What are characteristics of successful military interprofessional healthcare teams (MIHTs) and how can this success be explained? MIHTs can be defined as military healthcare teams that consist of various health professionals (e.g., physicians, nurses, medics, physiotherapists, and social workers) who together take care of a wide range of patients. In this special edition of *Military Medicine*, Varpio and colleagues set out to identify the factors that contribute to successful MIHTs; however, the lessons uncovered by this research are also vitally important for civilian interprofessional healthcare team (CIHT) practices. Through in-depth, qualitative research, Varpio and colleagues unravel the characteristics that have served as the foundation upholding the excellence presently embodied within MIHTs—a foundation that can be used to better equip tomorrow's healthcare professionals. The beauty of the methodology that was used within this special edition, Grounded Theory,[1] is that it allows the exploration of social processes through the eyes of the participants who work within those processes. As such, Varpio and colleagues have amalgamated a clear and rich account based on the experiences of the men and women serving in MIHTs, which helps to explain the readiness of MIHTs: "the professional, cognitive, environmental, and operational development that an individual requires to work within military healthcare teams to sustain competent performance in both complex and unpredictable military operational settings."[2(p.124)]

Acknowledged in both the military and civilian context, effective patient care requires the successful collaboration of various healthcare professionals[3–5]: patient care is simply too complex to be a burden carried by a single health profession. Although the need for interprofessional collaboration (IPC) is evident and widely supported, research aimed at understanding and optimizing IPC has thus far been mainly situated within the civilian context and points to various barriers preventing successful IPC. Issues like professional autonomy and role boundaries,[6] power and hierarchy within healthcare teams,[7,8] and problems with mutual credibility[9] seem to plague CIHTs. Although the make-up of MIHTs and CIHTs are largely similar, MIHTs seem to suffer less from the barriers to successful IPC than their civilian counterparts.

In their research, Varpio and colleagues point to several factors that contribute to MIHTs success and readiness: leadership and followership,[10] interchangeability,[11] situational awareness,[12] camaraderie,[13] collective ethical bearing,[14] and perseverance.[15] Together, these factors speak of a "shared understanding" of what is needed to effectively serve on MIHTs.[16]

From the perspective of the field of Health Professions Education (HPE), an interesting light can be shed on these findings to further explain the success of MIHTs. One of the main goals of HPE is to understand how individuals, teams, and organizations learn in formal and informal settings to enhance these processes and optimize their learning outcomes. Because future health professionals spend a lot of

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their time training within the healthcare workplace, understanding how they learn within these settings has been the focus of considerable research attention.[17–21]

In addition to the traditional notion of learning by acquiring new competences (i.e., the trainee being the vessel in which these competences are stored), the perspective that trainees learn through participating in day-to-day practice is favored by researchers trying to understand how individuals learn by engaging in clinical practice.[19,22] This perspective forefronts the social dimension of learning—i.e., that we learn through our interactions with others and with the environment we work within.[23] In this orientation, trainees are recognized as successful graduates as soon as they are able to effectively interact with—and to become an integral part of—the practice they aim to contribute to.[24]

A specific theoretical framework explaining how trainees learn through interaction and participation is "Landscapes of Practice" (LoP).[25] LoP can be conceptualized as the context a future professional could work in. For military medicine, LoPs might be combat situations, humanitarian aid missions, or technology-rich hospitals: each landscape requires different actions and reactions. The theory of LoP explains how learning—via engagement in these landscapes—results not only in the building of professional competence, but also in the trainees' "knowledgeability" about the practices within each particular landscape.[25] Knowledgeability is the extent to which trainees understand how a landscape's practices are relevant to them and how they themselves contribute to these practices. From the perspective of MIHTs, learning to successfully collaborate in these care teams requires that trainees know what to expect from every healthcare professional they collaborate with, what these professionals expect from them, and how these expectations can change in different settings.

The overarching finding presented in this special edition explaining the success of MIHTs—"shared understanding"—speaks of a well-developed level of knowledgeability within MIHTs and resonates throughout several studies presented in this special edition. Knowledgeability leads to understanding when to be the leader and when to be the follower within IPC[10]; it creates the conditions that contribute to the interchangeability capacity within MIHTs[11]; it instills awareness of the collective ethical bearing of a MIHT[14]; and it contributes to the situational awareness described by Cruthirds et al.[12]

The studies by Cristancho et al.,[11] Meyer et al.,[15] and Hamwey et al.[13] further highlight one of the mechanisms through which knowledgeability is fostered: "identification."[25] In order to triangulate their position within an LoP, trainees need to identify their position within the LoP in relation to the other professionals and collaborative practices realized there. Identification occurs through three processes: (1) engaging with the landscape, its practices, and practitioners; (2) imagining what roles one might fulfill in the various landscapes; and (3) aligning their own professional practice to those of the other healthcare professionals present within the landscape.[25] The conditions for interchangeability as described by Cristancho et al.[11] point to the processes of identification that are experienced by every single member of the MIHT, instilling knowledgeability within them. Identification with the LoP buoys a MIHT's perseverance, supporting the team's development of humility, mission focus, and support collaborative team effort.[15] Finally, developing confidence in one another, sharing the same overall goal, and having respect for one another clearly points to healthcare professionals' identification with the practices of the MIHT.[13]

The LoP within which MIHTs and their members engage in clinical practice is diverse. Yet, despite this diversity, an MIHT's readiness and patient care success speak of high levels of knowledgeability in its healthcare professionals. Current training of military care trainees clearly stimulates them to engage with, imagine their role within, and align with its practices stimulating strong identification with the LoP.

The body of research presented in this special edition clearly illustrates the knowledgeability characteristics and processes of identification that enable MIHTs to be successful. Although focused on MIHTs, CIHTs are well advised to harness the lessons reported herein. Leadership and followership; interchangeability; collective ethical bearing; perseverance; situational awareness; and camaraderie: these characteristics may very well hold solutions to the challenges CIHTs have faced and be the means of surmounting the obstructions that have stunted the success of CIHTs. Indeed, MIHTs may offer characteristics that could enable civilian care teams to fully reap the rewards of the meaningful partnerships that can be the foundation of interprofessional healthcare collaboration.

This special edition is the first time that the lessons from rigorous study of MIHTs have been publicly reported—hopefully it will not be the last.

CONFLICT OF INTEREST STATEMENT

The authors have no known conflicts of interest of financial or material support disclosures.

REFERENCES

1. Glaser BG, Strauss AL: *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Aldine Publishing; 1967.
2. D'Angelo MR, Seibert D, Welder MD, Cervero RM, Durning SJ: Decoding readiness: towards a ready military healthcare force. Mil Med 2019; 184(5–6): 122–6.
3. Pomare C, Long JC, Churruca K, Ellis LA, Braithwaite J: Interprofessional collaboration in hospitals: a critical, broad-based review of the literature. J Interprof Care 2020; 34(4): 509–19.
4. WHO: *Framework for Action on Interprofessional Education and Collaborative Practice*. World Health Organization; 2010.

5. Interprofessional Education Collaborative Expert Panel: *Core Competencies for Interprofessional Collaborative Practice: Report of an Expert Panel*. Interprofessional Education Collaborative Expert Panel; 2011.

6. Freidson E: *Profession of Medicine: A Study of the Sociology of Applied Knowledge*. University of Chicago Press; 1988.

7. Cohen Konrad S, Fletcher S, Hood R, Patel K: Theories of power in interprofessional research – developing the field. J Interprof Care 2019; 33(5): 401–5.

8. Paradis E, Whitehead CR: Louder than words: power and conflict in interprofessional education articles, 1954–2013. Med Educ 2015; 49(4): 399–407.

9. Hall P: Interprofessional teamwork: professional cultures as barriers. J Interprof Care 2005; 19(Suppl 1): 188–96.

10. Barry ES, Bader-Larsen KS, Meyer HS, Durning SJ, Varpio L: Leadership and followership in military interprofessional healthcare teams. Mil Med 2021; 186(S3): 7–15.

11. Cristancho S, Field E, Bader-Larsen KS, Varpio L: Interchangeability in military interprofessional healthcare teams: lessons into collective self-healing and the benefits thereof. Mil Med 2021; 186(S3): 16–22.

12. Cruthirds DF, Bader-Larsen KS, Hamwey M, Varpio L: Situational awareness: forecasting successful military medical teams. Mil Med 2021; 186(S3): 35–41.

13. Hamwey M, Bader-Larsen KS, Cruthirds DF, Varpio L: The ties that bind: camaraderie in military interprofessional healthcare teams. Mil Med 2021; 186(S3): 42–47.

14. Meyer HS, Bader-Larsen KS, Artino A, Varpio L: Ethical bearing is about our conduct: ethics as an essential component of military interprofessional healthcare teams. Mil Med 2021; 186(S3): 23–28.

15. Meyer HS, Durning SJ, Bader-Larsen KS, Hamwey M, Varpio L: Perseverance: an essential trait of military interprofessional healthcare teams. Mil Med 2021; 186(S3): 29–34.

16. Varpio L, Bader-Larsen KS, Durning SJ, et al: Military interprofessional healthcare teams: identifying the characteristics that support success. Mil Med 2021; 186(S3): 1–6.

17. Rees CE, Crampton P, Kent F, et al: Understanding students' and clinicians' experiences of informal interprofessional workplace learning: an Australian qualitative study. BMJ Open 2018; 8(4): e021238.

18. Nisbet G, Lincoln M, Dunn S: Informal interprofessional learning: an untapped opportunity for learning and change within the workplace. J Interprof Care 2013; 27(6): 469–75.

19. Yardley S, Teunissen PW, Dornan T: Experiential learning: transforming theory into practice. Med Teach 2012; 34(2): 161–4.

20. Teunissen PW: Experience, trajectories, and reifications: an emerging framework of practice-based learning in healthcare workplaces. Adv Health Sci Educ Theory Pract 2015; 20(4): 843–56.

21. Olmos-Vega FM, Dolmans D, Guzman-Quintero C, Echeverri-Rodriguez C, Teunnissen PW, Stalmeijer RE: Disentangling residents' engagement with communities of clinical practice in the workplace. Adv Health Sci Educ Theory Pract 2019; 24(3): 459–75.

22. Sfard A: On two metaphors for learning and the dangers of choosing just one. Educ Res 1998; 27(2): 4–13.

23. Kahlke R, Bates J, Nimmon L: When I say … sociocultural learning theory. Med Educ 2019; 53(2): 117–8.

24. Wenger E: *Communities of Practice: Learning, Meaning, and Identity*. Cambridge University Press; 1999.

25. Wenger-Trayner E, Wenger-Trayner B: Learning in a landscape of practice. A framework. In: Wenger-Trayner E, Fenton-O'Creevey M, Hutchinson S, Kubiak C, Wenger-Trayner B, eds. *Learning in Landscapes of Practice. Boundaries, Identity, and Knowledgeability in Practice-Based Learning*. Routledge; 2015: 14–29.