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Corman, Michael, Phillips, Peter and McCann, Leo orcid.org/0000-0002-0754-804X (2025) The Future of Paramedic Education:Problematizing the Translucent Curriculum in Paramedicine. Paramedicine. ISSN 2753-6386

https://doi.org/10.1177/27536386251338525

Special Edition – The Future of Paramedicine

The future of paramedic education: Problematizing the *translucent* curriculum in paramedicine

Paramedicine
1–10

DOI: 10.1177/27536386251338525
journals.sagepub.com/home/pam
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Abstract

This article questions the extent to which paramedic education is adequate for a changing prehospital and ambulance world and to more advanced forms of professionalism. Paramedic training and education has increasingly moved out of in-service provision. In most Anglophone societies that feature similar models of prehospital medicine, the route to the qualification of new paramedics is through university degree programmes or college certification. This is an important route for professionalizing the paramedic occupation and has served to broaden the scope of practice and to boost the status of the paramedic. There remains much to do, however, in terms of modernizing and strengthening the provision of paramedic education. Drawing on the classic sociological notion of the hidden curriculum, this article argues that reform of paramedic education is an essential element in better preparing the paramedic profession for the future. Paramedic education needs to pivot away from its overwhelming emphasis on biomedical positivism and what we call *the tyranny of the bio-psycho-medico* in order to develop a more sociologically-informed curriculum that better prepares students for the realities of what they meet on the streets – a reality that better aligns with community paramedicine – in a changing society, and to provide scope for a more Socratic introspection of the nature, culture, structure, and ethics of the paramedic role itself.

Keywords

education, paramedicine, sociology, hidden curriculum, translucent curriculum, the tyranny of the bio-psycho-medico

Date received: 9 December 2024; revised: 13 April 2025; accepted 13 April 2025

Introduction

'Are you in need of police, fire, or ambulance?' This was the question that was asked to me (Corman) immediately after dialing 911 (the equivalent to 999 in the UK and 000 in Australia) after being involved in an accident while driving my partner to work. While paramedics came and went, my program of research was forever changed. Two years after this life-changing event, I find myself observing the work of Canadian paramedics as an institutional ethnographer.[1] During one of my observations, I remember walking into the station and one of the paramedics I was observing that day was reclined in an armchair polishing her boots. She sees me and says in a calm and reassuring voice, 'It's going to be a good day today. Someone's going to die'. She went on to explain to me that whenever she polishes her boots, someone dies. I think to myself, why would she be polishing her boots then? Perhaps she wanted me to see a 'good' call? Fast forward nearly 15 years later, I have now entered the classroom as a researcher[2] to better understand the work that goes into becoming a paramedic and explore how becoming a paramedic is socially organized. In the classroom, I continuously hear talk about the 'fun stuff' from both paramedic

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students and seasoned paramedics/instructors and I note that much of the training is geared towards traumatic and complex medical cases, with an explicit focus on medical interventions and biological views of the body and psychological views of the mind. I suspect these two experiences are connected and are inseparable from what it means to be a 'competent' paramedic.

Traversing international boundaries, as a United Kingdom paramedic with 16 years of experience, I (Phillips) remember being called to the scene of a patient who set his home on fire in an attempt to take his own life. Suffice to say, this patient suffered life-changing injuries and became unhoused. Soon after the call, I ran into a manager who had also attended the call. He asked me how I was, and as I started to express how emotionally hard the call was to me – I felt very sad about the patient's situation – the manager quickly cut me off and, with a big grin on his face, explained how 'cool' the job was. Whilst I was upset by the circumstances surrounding the call, the manager typified a common attitude in ambulance services of wanting to attend major trauma and the seriously unwell, and almost willing it to happen, like the paramedic above polishing her boots. In this work orientation, or what some view as the 'culture' of paramedicine, there was a focus on the rare, practical skills at potentially life-threatening scenes as if that is what defines a paramedic.[3,4]

Reflecting on 15 years of research into the sociology of the paramedic profession,[5] I (McCann) can recall many interviews with both new recruits and seasoned paramedics, or moments of ethnographic observation, in which the distinct occupational practices of ambulance services and paramedic work became manifest. Ambulance stations, for example, can be intimidating places for new and junior staff, where seasoned professionals act – in the words of one paramedic – as a 'baboon pack'.[5] In such 'packs', what gets constructed as 'good' are 'trauma' calls or 'interesting' medical calls, which are often compared to the more 'boring' 'social-type' calls, which typically refer to calls where patients are suffering from known and chronic complaints, often with a psychiatric element, such as depression and anxiety. These calls, while they have always been present in the pre-hospital arena, are increasingly recognized as being more common but are often dismissed both culturally and structurally as unworthy of an ambulance response. Based on the aforementioned research, paramedics appear to get little to no credit for handling 'social-type calls' sensitively and effectively despite such calls being increasingly a core part of their role. Accordingly, it is only when new members to the service have 'proven' themselves on a 'good' call however, such as a major road traffic accident or cardiac arrest, that they become 'accepted' as 'one of us'.

In this *Scholarly Perspective,* we will argue that the education of paramedics needs a strong grounding in a critical sociology that complements and challenges what we call the *tyranny of the bio-psycho-medico* in the education and training of paramedics. We define the tyranny of the bio-psycho-medico as the entrenched and often unquestioned foci on what might be thought of as the holy trinity of paramedic education, with its main focus on 'the body' (anatomy) and bodily processes under normal (physiology) and abnormal (pathophysiology) conditions, hyper individualized psychological understandings of the self and others, and medical interventions positioned as the primary way to address health and illness in society. This bio-psycho-medico focus, we argue, often relies on the use of decontextualized data[6] and biological deterministic frames to the exclusion of social context and theory and is therefore acritical, ahistorical, and asociological, with a variety of consequences for the paramedic practitioner and those they care for. Supporting this tyranny is an overemphasis on the psychomotor domain in paramedic education, the supposed 'hard' skills or the act of 'doing' the 'fun stuff' (as one paramedic instructor described in Corman's research) of medical and traumatic interventions. This is not to suggest doing away with the more traditional competencies that form the foundation of paramedic training. Rather, there is a necessity to make the 'foundation' more 'generous'[7] by embracing new approaches in paramedicine education. As such, we call for the *sociological imagination* to be a vital component of the profession's development moving forward, both inside and outside of the classroom, and provide insights into why this is needed and how this might be accomplished in practice.

Paramedic education, 'culture', and social organization

Recently a host of official reports have heavily criticized the 'culture' of paramedicine and corollary systemic issues in the ambulance services, featuring depressing stories of occupational abuse, bullying, cliques and ostracism, and racism and misogyny entrenched in the service.[8–10] These reports do not seem to be unique to paramedicine.[11,[1]] Such reports are sobering, suggesting that, for all the advancement and professionalization of pre-hospital medicine, stark challenges remain in terms of occupational culture and conduct. How is it that inappropriate cultures persist? Thinking sociologically, culture is embedded within and shaped by broader structures and systems. While obviously not a monolith, 'ambulance culture' must come from somewhere. Does the paramedic profession, for the most part, still harbour and sustain such outdated and problematic orientations? Is the system of paramedic education doing enough to influence and change these features, or might it be complicit in their reproduction?

It is commonplace to read that the paramedic profession and paramedic education has made great progress in recent decades.[13–15] On one level, this is undoubtedly true,

particularly in relation to the expansion of clinical scope of practice and the general upgrading of paramedic status in the broader health economy. For example, many paramedics are already working in primary care settings, where more structural competencies can be viewed as essential. And this is not the only change; many University and College programs, not to mention paramedic scholars,[16] are at the forefront of change in paramedicine. In Australia, for example, and in the context of education and training, there have been attempts to move beyond the 'emergency medicine dominated curricula' to incorporate more holistic education by focusing on 'primary care and public health topics that might better address the contemporary needs of practicing paramedics'.[17] Other programs, such as the paramedic degree housed in the 'Health and Society' department at the University of Toronto, aims to 'promote an understanding of health across a spectrum of academic perspectives: from the clinical and biological health sciences to social science and humanistic ways of knowing'.[18] And these are not the only programs. Furthermore, professional bodies are increasingly acknowledging the need for a greater emphasis on social determinants of health, public and clinician well-being, and community paramedicine.[19]

Suffice it to say, paramedic education increasingly, and rightfully so, aims to incorporate interprofessional practice, social determinants of health, and other progressive elements, such as a focus on improving the well-being of paramedics through a focus on the social organization of mental health and resiliency.

But such changes are not necessarily mainstream. We speculate that while some programs incorporate such important insights, they may be crowded out by other foci. For example, reflecting on Phillips' training 20 years ago, no memory of the social determinants of health, or sociology for that matter, can be recalled. However, Phillips remembers being able to 'run a damn good resuscitation'. More recently in Corman's research on the education and training of paramedics, interviews with current or recently graduated students across Canada ($n = 19$) found that very few students could recall being taught content on the social determinants of health. As one Primary Care Paramedic student put it, 'there wasn't really much at all' on this topic. For those who did recall being taught this, one Advanced Care Paramedic (ACP) student explained how it might have been, 'touched on', and if it was discussed, according to another ACP student, it was discussed 'very briefly'. This brief discussion, while not reflecting a generalizable/statistical understanding of the education and training in paramedicine across international domains, is still valid. We wonder if attempts to incorporate such content was done in a more tokenistic fashion, perhaps to satisfy regulatory/professional body criteria for inclusion of these elements, and in this sense represented a form of *curricular injustice*.[6]

Hence, the incorporation of these areas, while a sign of progress, does not necessarily correlate with uptake of such orientations. This is not unique to paramedicine. As Brooks and colleagues point out, 'The epistemological position of medicine [and the biomedical model] underpins the numerous barriers to social science learning reported in the literature'. [20] They go on to explain that, even when intentions are good, like the development of the 'biopsychosocial' model in health professions education, given the epistemological status of the 'bio' within this conceptualization of health, a displacement and subsuming of the psychosocial occurs. They write:

> The concept of the biopsychosocial model has been widely used in health professions' education as an 'antidote' to the biomedical model and adapted in ways that may have enabled additional depth (see Alder, 2009). Yet despite its appeal to students and clinicians (Russell, 2009), the biopsychosocial model has been criticised for bringing the social and psychological into the traditional scientific paradigm and continuing to suggest simple 'cause and affect' relationships. Armstrong (1987) for example argues that Engels' [the individual who first coined this] model is premised on biological 'systems' theory. There is no sociological critique of scientific knowledge, science is (still) accepted as fact and the psychosocial is 'tacked on'. As such the biopsychosocial model has posed no threat to the epistemological foundations of medical knowledge.

In a sense, the 'biopsychosocial' is still dominated by what Olsen[6] refers to as the 'the bio-bio-bio' approach. Furthermore, Onuoha, Tsai, and Khazanchi[21] discuss how, when not problematized, the bio-bio-bio approach, and what we are extending to the bio-psycho-medico approach discussed above, results in apolitical and decontextual uses of what are otherwise very critical concepts/orientations. They write:

> Curricula purportedly focused on health disparities and social determinants of health often conceptualize social and structural adversity as individual risk factors without considering politico-economic contexts, prioritize reductionist biomedical frameworks over theories grounded in lived expertise, perpetuate problematic narratives about race and class, and feign neutral objectivity in the face of explicit and engineered oppression.

Olsen discusses a similar power imbalance between the epistemological status of biomedical knowledge and insights offered by the humanities and social sciences, which can render social scientific and humanities content incorporated into medical education, 'nearly inconsequential'.[6]

Although change is afoot, it is our contention that much of both the paramedic world and its educational arm remain entrenched in more mainstream, traditional paradigms, hence calls to 'examine particular ways of developing and implementing an effective curriculum that will meet the

challenges of the coming decades'.[22] Despite all the change, at the heart of paramedicine, both as a profession and in terms of how paramedics are trained and educated, there seems to be, for the most part, a hyperfocus on a rapid response, Emergency Medical Services (EMS)-based, 'you call, we haul' model,[1,23,24] and a primary focus on biological and psychological understandings of the mind and body with medical interventions being conceptualized as 'best practices' or the 'gold standard'. In other words, we wonder if the core identity of the paramedic role, for all its complexity and versatility, is still rooted in the philosophies and norms of an emergency, trauma-based clinical/biomedical realm. Look no further than how the employment norms of paramedics bear strong hallmarks of uniformed, hierarchical approaches that are often inimical to the development of more fully professional working climates, where the term 'professional' connotes working practices that feature autonomy, critical thinking, reflection, and continual learning.[5] In fact, we argue that if these aforementioned foci are not problematized, making meaningful changes in the educational and training arena will be stifled or crowded out by the more dominant/compelling paradigm of the mainstream. It is time to change the 'rules of the game' so to speak, or to transform the 'field' of paramedicine as Bourdieu might put it, to better balance the development of a paramedic habitus – a set of 'durable, transposable dispositions',[2] or in other words, a paramedic's embodied sense of the world and 'tacit feel for the game'.[25,26] Such a transformation will better reflect what paramedics actually meet on the streets and will better support their own health and wellness as front-line workers.

University or certificate level post-secondary education is a vital conduit for the establishment of professional credentials and the pursuit of a professionalization project. While much of this mission has been successful in expanding the paramedic scope of practice and enlarging the value of the paramedic profession, we argue that the explicit and implicit impetus of paramedic education still require significant change. The profession has indeed come a long way, but its educational norms still heavily privilege biomedical and trauma-focused doctrines that dominate the agenda yet remain inadequate for further developing the profession and better preparing it for a changed present and a changing future. For instance, current educational practices seem to de-emphasize the low acuity and community paramedicine calls, with more of a focus on what Simpson and colleagues call, the 'hidden high acuity curriculum'.[3] Whilst these elements do appear in curricula, their importance are often lost on students; they often do not 'stick'. This can be seen in Phillips' research highlighting how newly qualified paramedics identify so strongly with high acuity aspects of the role and have a tendency to view the low acuity as 'not what I signed up for' and 'not part of my job'.[27,28] These low acuity calls (such as to patients with chronic physical or psychiatric conditions) and calls that align more so with a community paramedic focus are increasingly a core part of paramedic care provision, and can transverse across a 'diverse range of settings' into 'primary health care, health promotion, chronic disease management and advanced clinical assessments'.[28,29]

Furthermore, the dominant orientation in paramedicine privileges *positivist ways* of knowing, which inevitably connects to the dominance of the bio-psycho-medico in paramedicine specifically and medicine more broadly.[20] In fact, positivism, which views knowledge and truth as objective and verifiable accounts of 'the real' ('the truth' is 'out there') through the deployment of quantitative technologies and their corollary assumptions,[30–32] is central to the bio-psycho-medico.[33] While a more in-depth discussion of the diverse ontological and epistemological underpinnings of the education and training of paramedics is outside the scope of this article, it is important to note that we are not suggesting other paradigms/orientations do not exist in the education and training arena of paramedicine. Rather, we argue that the more critical paradigmatic views of knowledge as socially constructed and organized are often left in abeyance or crowded out when positivist orientations central to the 'bio bio bio' approach to education and training are naturalized and normalized, resulting in one-dimensional (read decontextual and ahistorical) views of the body and mind. These orientations ultimately shape clinical practice and the systems paramedics (and other health care workers) find themselves working in. Through its focus on rote learning, applied skills, and what we call the *tyranny of the bio-psycho-medico*, too often paramedic education simply reinforces existing structures, cultures, and systems rather than challenging them.

On hidden and translucent curricula

Recent literature has started to draw attention to deficiencies in paramedic education, with the work sometimes surfacing the specific notion of *the hidden curriculum*. This idea of the hidden curriculum emerged from sociology of education, in which several authors highlighted the importance not only of the formal curriculum in terms of what school or university students are taught, but also the hidden curriculum of (usually problematic) cultural, social or political norms that are subtly passed on to students in unspoken ways.[34–37] To slightly co-opt insights from Hafferty and Franks on the hidden curriculum, if the sociological imagination is to be integrated into the education and training of paramedics, we must acknowledge 'not only the existence of a distinctive medical culture but also the presence of a decisively influential hidden curriculum'.[38]

The nature and influence of the hidden curriculum in paramedic education remains somewhat ill-defined. Some practicing paramedics direct a degree of blame at universities or colleges for confusing students' identity and not

preparing them fully for the realities of being employed as a paramedic in an ambulance setting.[39] On some level, this viewpoint mirrors the tensions which are very likely to emerge when training and education for a uniformed occupation moves from in-service to a potentially quite different university or college environment – there have been substantial difficulties with this in police education and police professionalization.[40] Conversely, there is also the argument from the perspective of university-based academics that paramedic students' exposure to practice placement in ambulance trusts/services reinforces in students a traditional 'ambulance service' role and identity structure, which is dissonant from that cultivated at university/college and which disrupts and confuses students' preparation for their professional role.[41] Similarly, other researchers have drawn attention to 'a line of fault' in how paramedics are educated and trained and how that contrasts with what they actually encounter on the streets in practice; as one paramedic adamantly explained, 'We lie about what we do. We lie to our students about what they're going to do'.[2]

Both Hill and Eaton[39] and Donaghy and Waller[41] draw on the notion of the hidden curriculum, but mostly in terms of something existing outside of the university walls. From their perspective, the hidden curriculum is something the students experience in the practice placement stage of learning. This hidden curriculum is part of the holdover of 'blue-collar professionalism' that characterizes and sustains now-unwanted 'old school' features of ambulance service employment and conduct.[42] Similarly, the research of Devenish and colleagues[43] indicates that paramedic students on practice placement are anxious to fit in, and quickly adopt the cynical and critical languages and behaviours of experienced ambulance personnel.

While we very much recognize the challenges and limitations of in-practice paramedic educational settings (especially in typically hierarchical ambulance service employers), our article refocuses attention not so much on the problems of ambulance 'culture', but on what could be regarded as a socially organized *translucent curriculum*, a curriculum that is 'partially hidden' in some respects but is highly visible in others, with both the hidden and not-so-hidden elements highly structured by a variety of social forces, notably including bio-psycho-medico positivism that dominates health professions' education and accreditation/regulatory bodies. We have coined the term 'translucent curriculum' to draw attention to the fact that the hidden curriculum is, in fact, not hidden at all. It is overt, explicit, and organized by a variety of relations, some of which are in plain sight and some of which are extralocal, harder to see and locate but nevertheless there when systematically investigated. It is virtually palpable and visible but, because the translucent curriculum is taken-for-granted, it is hard to see for many.

We argue that part of the reason why the social organization of 'ambulance culture' is so normalized relates, in part, to the translucent curriculum that guides the education and training of paramedics in terms of what is actually taught, assessed, and valued inside and outside of classroom settings. A fuller analysis of the nature of paramedic education needs to consider both the visible and the hidden, the seen and the unseen, the abstract and the real. Connected to this, paramedic education, like other health professions' education,[6] heavily privileges biomedical ways of knowing and doing. As previously mentioned, this results in an over-emphasis on knowing the body in decontextual and ahistorical ways, as if it occurs in a social vacuum (in sociology, the body, and biology for that matter, never stands alone).[44] This orientation further results in an explicit focus on medical interventions, primarily invasive procedures and life-saving interventions. While important (they can be lifesaving), such an orientation not only structures the education of paramedics vis-à-vis various governing bodies, but also shapes what counts as 'the fun stuff' in paramedicine and the 'operator culture'[45] of ambulance work. What paramedicine is 'really supposed to be about' is regularly rehearsed in the practices and discourses that circulate paramedic domains, such as in the vehicle cab after a patient is dropped off, at ambulance stations in between calls, or in the corridors of hospitals, out of earshot of patients and managers, or in the 'interesting' types of stories told inside the classroom or on and off the streets. We argue that while the focus on teaching and assessing biomedical skills and knowledge is the explicit and essential curriculum of paramedic education, its hidden curriculum is the unspoken norms around the core purpose of the paramedic as an expert in emergency-focused clinical interventions. Connected to this is the downgrading of community practice and social care, and a neglect of how social factors shape 'the body'[44] and experiences of health and illness,[46–48] which must also be elevated to essential status. Also hidden (and sometimes not so hidden) are the consequences of this one-dimensional focus. We contend that the tyranny of the bio-psycho-medico has implications for how paramedics view their patients and themselves. Consider what gets constructed as 'good', 'shit', or 'bullshit' patients and how these often fall along racialized, classist, ageist, sexist, and ableist lines,[1,49] or how certain 'clientele' are viewed as 'bums', 'junkies', or 'piece of shit' patients – all language (Corman) heard in the classroom during his training. When patient constructs remain captured by ahistorical and asociological biomedical assemblages of body parts and processes – as objects to be worked up and worked on[50] – and hyper psychological understanding of the self and others, it is no surprise such patients get demarcated as worthy or not.[1,49,51]

While for many, being a paramedic is 'the best job I've ever done',[5] there is also a burnout epidemic[5,23,52–56] and 'mental health crisis' in paramedicine.[57] According to one study, 'Current post-pandemic reports suggest retention of EMS professionals has devolved to more than one-third of new hires turning over within the first year of employment'.[54] Furthermore, frames used to understand

and address this social problem often deploy a hyper-individualized lens of psychology and neoliberalism.[58] A sociological lens is needed in order to draw attention to how personal troubles are in fact public issues[59] and how mental health and resilience on the front lines of health and human services is socially organized.[23] We must move away from focusing solely on individualized solutions to what is otherwise socially structured violence meted out to front-line workers.

While problems relating to outdated norms and improper role models do exist on the job, problems also exist in other areas of the profession. There is a network of institutions that influence education and work-based learning customs and practices, which further shape how student paramedics think about aspects of their role, their behaviour and their identity, and how they view their patients. These institutions have an overarching macro influence on student paramedics' journeys. One can forgive the media and public for their portrayal of the paramedic profession because how would they know any better? For example, media notions of being a paramedic are dominated by public safety and emergency response – the paramedic as life-saver[60] and trauma junkie.[61] But there are those inside the profession whose depiction of paramedicine could be more grounded: this includes some persons working in and managing ambulance services, educators in universities and colleges, leaders, regulatory bodies, and professional bodies charged with representing paramedics' interests. These institutions are sometimes complicit in embedding a curriculum that is not so much hidden but explicit in its messaging to students about the role of a paramedic, thus forming the contours of its translucency.

Far from challenging prevailing, non-nuanced and ahistorical views of paramedicine, these norms and expectations are sometimes further cemented by this network of institutions through the design of curricula and the regulation and standards that guide them. For example, most, if not all, curricula will summatively assess students in leading a resuscitation.[19] This speaks to a core identity that the profession holds about itself, one that is grounded in its roots as a trauma-focused, emergency service, with noted gaps in supporting paramedics in 'assessing and managing low-acuity clinical conditions'.[62,63] The emphasis that these types of assessments have in paramedic curricula is legitimized by the interpretation and implementation of curriculum guidance from regulatory and professional bodies, and by ambulance trusts/services who, as key stakeholders in paramedic education, want assurance that graduates have been assessed in what is seen as a fundamental area. Furthermore, it seems that most forms of high stakes summative assessment for student paramedics solely focus on identifiable (read positivist) skills and tasks that are easily quantifiable, and therefore rendered 'objective', 'measurable', and ultimately certifiable.[22] This further reinforces the translucent curriculum and its focus on privileging certain and very specific ways of knowing and doing; a way of knowing and doing aligned with and structured by the tyranny of the bio-psycho-medico.

Universities and colleges are also at the heart of this issue. Marketing material aimed at student recruitment often seem to contain texts, images, and videos that prioritize exciting calls and capturing the imagination of prospective applicants rather than accuracy about the role.[3] There may be prominent images of paramedics working with air ambulance crews – a once-in-a-career major incident – working with Hazardous Area Response Teams responding in treacherous conditions using specialist equipment, or simply treating traumatic or medical emergencies. More subtly, educators are typically drawn from the same institutions of ambulance service practice and are therefore culturally ingrained with experience of working *on the streets*. These educators design curricula, interact with students and promote ways of 'being a paramedic', which tend to include certain norms around behaviour, viewpoints and language about the profession and the patients they meet day in and day out, and what counts as 'competency'. And so the social reproduction of the tyranny of the bio-psycho-medico reigns supreme, unchallenged unless students are encouraged to develop a sociological imagination in which they might begin to break this cycle.

Conclusion

Our argument in this short *Scholarly Perspective* is that paramedic education, for all its expansion and change in recent decades, still has room to progress. We draw on the classic sociological notion of the hidden curriculum to argue that paramedic education, for the most part, remains wedded to the roots of an outdated, restricted and problematic EMS-type 'rapid response' model of health delivery. Paramedic education has not yet adapted to properly prepare graduate paramedics for the changed nature and role of ambulance practice and community paramedicine. Not only this, but the asociological views of the mind and body embedded within paramedic education serve to reinforce many problematic entrenched cultural norms and broader systemic issues, such as hyper-individualized understandings of mental health and resiliency and homogenized (read biological and psychological) understandings of patients. The narrowness of paramedic education's explicit focus and content, and the problematic nature of its hidden and not so hidden curriculum that prizes 'real' emergencies and biomedical models above all other elements of paramedic practice, means that paramedic education is failing to ask difficult questions of itself and of the profession it helps to develop and sustain.

Like others, we view paramedics as having 'untapped potential',[64] and we must start in the classroom to realize such potential. Taking a sociological stance means exploring the systems and structures that produce and reproduce social

phenomena. Following the classic work of C. Wright Mills,[59] nourishing one's sociological imagination involves questioning 'taken for granted' knowledge about the world and considering instead how modern life is socially constructed and organized. In this light, literature from the sociology of health and illness[65] has generated profound insights into the complex interface between health, illness and society, insights that we argue should be considered 'foundational' to paramedic education and training. Sociological insights on professional powers, the social determinants of health, the social organization of mental health and resiliency,[58,66,67] structural competency and structural violence,[68,69] the illness experience, the sick role, medicalization and the social construction of scientific and medical knowledge, and the bio-social complex,[70,71] not to mention the role of critical sociological theory and research in moving beyond hegemonic and binary ways of knowing, can help us move beyond the tyranny of the bio-psycho-medico. And, the evidence suggests this is good for both the patient and the health practitioner. As Chislom and Bhugra note:

> A growing evidence base suggests that integration of the arts and humanities into health professions education can improve a variety of clinically relevant skills and attitudes, including observation, critical thinking, empathy, tolerance of ambiguity, and capacity for wonder, as well as support professional identity formation and teamwork.[72]

To be clear, the bio-psycho-medico matters – it can and does save lives and should remain a central component of paramedic training. However, we argue that positivist understandings of the bio-psycho are one-dimensional and need to incorporate how peoples' everyday lives, including their minds and bodies, are shaped by what Dorothy Smith calls 'ongoing social and historical processes'.[4] In other words, what counts as the 'foundation' of paramedic education and training needs to move beyond the bio-psycho-medico; while 'clinical sciences such as anatomy, physiology, pathophysiology, and pharmacology' are and should be central to the education and training of paramedics,[22] viewing the foundation of paramedic training in these terms only does an injustice to the complexities of human biology, health and illness, and paramedic practice. Also, healthcare and health professions education is a 'pernicious colonizing force' and is therefore a 'strategic and ethically necessary site for decolonizing action'.[74,75] To be successful in this project of decolonizing healthcare, the foundation of education and training must be a site of transformation, both in terms of pedagogical approaches used[76] and in the substantive content taught. We therefore argue that a strong dose of the sociological imagination is one change that would support a variety of needed transformations in health professions education within the context of paramedicine.

While the topics discussed above are suggested for inclusion in the education and training of paramedics, with relevant sources cited throughout this article, we argue that while independent courses oriented to this content are important, such insights should not stop at one-off courses but should be integrated throughout the entire curriculum. In other words, we contend that sociological foci can effectively be implemented throughout curricula, not only through use of discrete modules/classes, but through designing a curriculum where a sociological approach to health and wellness underpins all learning that takes place. Important skills such as managing the critically unwell should not be 'lost' to sociological foci but should instead be augmented by the ontological and epistemological insights a critical sociology has to offer. Ultimately, we do not want sociology courses, or other social science and humanities courses for that matter, in paramedic education to become, ''just another course,' usually offered for the wrong reasons and usually at a time when it is least likely to interfere with other, 'more important' subjects'.[38]

In addition to the aforementioned, a refocus of the medico from downstream and reactive health care to upstream medicine[47] is necessary to nudge or even push paramedicine away from its mid-20th century roots characterized by its focus on a rapid response, 'you call, we haul' approach.[2] Connected to this, higher education in paramedicine ought to be about developing, in part, a critical perspective on the complex interface between health, illness, and society and providing students and practitioners the analytical tools to question the underlying assumptions of the profession and its knowledge base. In doing so, future paramedics will be better equipped to support their patients in more equitable and empathetic ways, and perhaps play a role in bridging the upstream/downstream divide.[48] A sociological imagination in paramedicine will also support the (re)design of both educational and perhaps the delivery of paramedic services in ways that center the health and well-being of not only patients but also the student and the front-line worker once they enter practice, and ultimately begin to address the root of structural violence/the burnout epidemic in EMS.[23]

How the roles and identities of social groups are developed and structured are complex interactive processes that unfold over time and not under the conditions of an individual's choosing. We believe that, if the profession is to continue to grow and to progress, more attention needs to be paid to the cultivation and inclusion of critical sociological perspectives into the explicit and not so explicit curriculum of paramedic education. Challenging and addressing paramedicine's translucent curriculum is one part of a broad spectrum of efforts aimed at further progressing the development of this unique profession so it can further improve the service it provides to the public and be more sustainable for its front-line workers.

Acknowledgements

The authors would like to thank the reviewers and editors for their insightful feedback on early versions of this article.

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Michael K. Corman: Conceptualization; Writing – original draft; Writing – review & editing.
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Leo McCann: Conceptualization; Writing – original draft; Writing – review & editing.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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Notes

1. While M. E. Turpel-Lafond has faced significant criticism for misrepresenting her identity as a person of Indigenous background,[12] in deciding to use a source where this individual was the lead author, the following questions were considered: 'Is the report well researched and documented/peer reviewed? Does the content meaningfully relate to her fraudulent identity claims? Would omitting the research negatively impact members of Indigenous communities more than using it would?' (Amie McClean, Personal Correspondence). The authors of this article take very seriously any misrepresentation of Indigenous status or identity; after extensive consideration we have decided to use this research in this article.
2. Dispositions, according to Jenkins,[26] refers not only to attitudes but also to 'cognitive and affective factors: thinking and feeling … everything from classificatory categories to the sense of honour' (p. 76).
3. Based on early findings from a qualitative content analysis of paramedic educational recruitment material in Canada (King-Roskamp and Corman. See also Jonston, Cameron, and Batt[60]).
4. Smith writes, 'each moment of action is conditioned by what is historically given and reshapes the already given in moving into the future'.[73] We borrow this concept and adapt its use here to simply draw attention to how the social is happening and shapes 'the everyday' of and for people.

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