Education or regulation? Exploring our underlying conceptualisations of remediation for practising physicians

Citation for published version (APA):

Document status and date:
Published: 01/03/2019

DOI:
10.1111/medu.13745

Document Version:
Publisher's PDF, also known as Version of record

Document license:
Taverne

Please check the document version of this publication:
• A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
• The final author version and the galley proof are versions of the publication after peer review.
• The final published version features the final layout of the paper including the volume, issue and page numbers.
Link to publication

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
• You may not further distribute the material or use it for any profit-making activity or commercial gain
• You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the “Taverne” license above, please follow below link for the End User Agreement:
www.umlib.nl/taverne-license

Take down policy
If you believe that this document breaches copyright please contact us at:
repository@maastrichtuniversity.nl
providing details and we will investigate your claim.

Download date: 17 Sep. 2023
Education or regulation? Exploring our underlying conceptualisations of remediation for practising physicians

Gisèle Bourgeois-Law,1 Lara Varpio,2 Glenn Regehr3 & Pim W Teunissen4

CONTEXT The remediation of practising physicians is coming to the fore in several countries in response to increasing demands for physician accountability and quality improvement initiatives in health care. However, the profession continues to grapple with the concepts and processes of remediation, particularly for physicians in practice who struggle with performance issues related to clinical competence. This suggests that current conceptualisations of remediation might be contributing to this situation. This study therefore, explored how various administration-level stakeholders conceptualise remediation in order to construct a description of the nature and meaning of remediation.

METHODS Semi-structured interviews were conducted using purposive sampling across the range of Canadian stakeholders involved in the remediation of practising physicians, including regulatory authorities, universities, national certifying bodies and medical organisations. With the use of constructivist grounded theory processes, analysis proceeded apace with data collection in an iterative process, with initial insights guiding subsequent interviews.

RESULTS Participants often simultaneously held two different conceptualisations of remediation: (i) remediation as part of an educational continuum involving different degrees of support, and (ii) remediation as a regulatory process removing an individual’s educational autonomy. Interviewees moved between these two conceptualisations but did not always appear to be aware of doing so. These conceptualisations each had different implications regarding the degree to which remediation can be incorporated into professional processes of maintaining competence.

CONCLUSIONS Understanding that stakeholders frequently approach the complex issue of remediation with two different perspectives without conscious awareness of doing so may help to explain several challenges in the field, including the issues of what falls under the umbrella of remediation and who should be responsible for offering remediation support. Our findings suggest the need for conceptual clarity around remediation, both to ensure that we illuminate logistical dilemmas in enacting remediation and to address the stigma of ‘de-professionalisation’ that the provision of even minor educational supports (such as feedback) might invoke by association.
INTRODUCTION

The remediation of practicing physicians is coming to the fore in several countries in response to increasing demands for physician accountability and quality improvement initiatives in health care.\(^1\)–\(^4\) However, with few exceptions,\(^5\)–\(^7\) mechanisms to support physician remediation (i.e. bringing unsatisfactory performance up to an expected standard) remain largely underdeveloped. Even in jurisdictions with established programs, significant challenges persist, including those associated with competition for training resources with other learners, the resolution of concerns of legal liability, and the determination of which organizations are best suited to invoking, enacting and monitoring the remediation of practicing physicians.\(^8\) It seems that the ability to identify physician performance concerns continues to outpace the ability to redress them.\(^9\) This undoubtedly contributes to the stress experienced by the practitioners identified, which may further impact performance and may contribute to pushback from the medical profession with regard to revalidation in that physicians may respond that it is ‘unfair’ to tell someone that aspects of his or her practice are problematic when failing to provide the means to address the issue. Moreover, it may lead to increased legal risk for regulatory and health authorities if a serious error were to be committed by a physician previously identified as underperforming.

One reason that remediation continues to be a wicked problem\(^10\) may refer to the fact that remediation has tended to be constructed as an education issue, yet few remediation studies explicitly articulate an underlying education theory that informs this construction.\(^11\) For physicians in practice, individual learning theories have traditionally been more popular in continuing professional development (CPD),\(^12\) but are rarely and only indirectly\(^5\)–\(^7\) referred to in remediation papers. Only recently have authors started to move beyond strictly educational conceptualizations and to suggest the use of behavioural change theories to develop a remediation model.\(^13\)

Perhaps a more important issue in the persistence of remediation as a wicked problem lies in its personal, professional and collective implications. We have suggested elsewhere\(^14\) that deeper social and psychological issues may be at play, confounding our efforts to solve the problem, particularly that of professional autonomy. The literature on what it means to be a professional\(^15\) and on professional autonomy\(^16\)–\(^18\) suggests that autonomy is the defining characteristic of a professional, which would imply that remediation may be fraught because it interferes with individual clinician autonomy and, by extension, with professional status. Even more important than its threat to stature is its potential challenge of an individual’s very being in terms of his or her identity as a (medical) professional. These two aspects of remediation, its educational construction and its potential impact on professional status and identity, informed the conceptual orientation of this study.

As the profession continues to struggle with logistics around remediation,\(^8\)\(^,\)\(^13\)\(^,\)\(^19\)–\(^21\) shifting the focus to how remediation is conceptualized might provide further insights into the challenges of implementing it well. Thus, as part of a larger programme of research that aims to construct a more comprehensive, consistent and nuanced understanding of the nature and meaning of remediation, this study explored the conceptualizations of remediation held by representatives from a variety of institutions that are seen as having some stake in the process of remediation in Canada.

METHODS

We chose to use constructivist grounded theory (CGT)\(^22\) for this study because, unlike classical grounded theory,\(^23\) which is rooted in positivist and post-positivist orientations, CGT rests on assumptions that social reality is the product of interpretations. This perspective is aligned with our study goals of constructing, with key stakeholders, a nuanced description of the nature and meaning of remediation. Constructivist grounded theory recognizes that ‘personal and professional background, plus experience, provide positive forces for the analysis process, thereby partly providing necessary theoretical sensitivity’.\(^22\) Thus, just as it is essential to the success of this study to understand our participants’ subjectivity, we are also aware that our own experiences inform this construction work. Each member of our research team brings a unique perspective to this research endeavour. GB-L is a physician with past experience as the director of a physician assessment and enhancement programme. LV is a PhD-trained qualitative research scientist who examines how individuals, teams, organizations
and fields co-construct one another. GR is a PhD-trained researcher with over 25 years of experience in health professions education scholarship. PWT is an obstetrician working in tertiary care and a researcher in health professions education with a particular focus on workplace learning. The research team’s backgrounds and experiences shaped the research questions posed, the data collected and the interpretations created.

Participants and sampling

Regulation is variously organised in different countries and often within countries. In Canada, medical regulation and health care are provincial responsibilities. A need for remediation is generally determined either by a provincial regulatory authority or, less often, by a regional health authority. Once remediation needs are determined, the actual remediation might be carried out by: (i) preceptors identified by the regulatory or health authority; (ii) preceptors identified by the individual and acceptable to the regulatory authority, or (iii) university CPD offices or postgraduate programmes. There is wide variability in the practices adopted by the various provinces. Consequently, the Canadian context seemed suitable to study our research questions because this variability allowed us to sample for maximum variation in terms of participants’ working conditions. The study began by using purposive sampling to recruit Canadian remediation stakeholders, or individuals in organisations that have, or might be expected to have, some degree of responsibility for the remediation of practising physicians.

After the first 10 interviews, we transitioned from purposive to theoretical sampling, inviting additional interviewees who could help to confirm or disprove elements of our descriptions and developing theory. For example, the insights offered by an interviewee who had been both a postgraduate (residency) dean and a department head helped us to determine that we needed to interview at least one other department head, as well as an individual involved in quality improvement within a health authority. In total, we interviewed 17 participants. In keeping with CGT methodology, we stopped recruiting participants when we had achieved saturation, represented by the point at which our sample size was large enough to provide the data needed to develop new knowledge around the study phenomenon, and no new concepts or considerations were being offered by participants. Participant characteristics are outlined in Table 1. Several of our participants, although not directly involved in remediation, had past experience in related areas (e.g. two of our participants had been, at one time, directors of physician assessment programmes). Because of her previous experience in working in the physician remediation field, GB-L, the principal investigator, knew several of the participants. This may have influenced individuals’ willingness to participate and their openness in interviews.

Interviews

GB-L conducted 1-hour, semi-structured interviews with participants in person (n = 7) or by telephone (n = 10), depending on the participant’s geographical proximity. These interviews were audiorecorded, transcribed by a third-party service, and anonymised during the transcription process.

Table 1 Participant characteristics

| Participants by province | Alberta, n = 1 | British Columbia, n = 4 | Manitoba, n = 2 | National, n = 2 (Certifying colleges) | Ontario, n = 5 | Quebec, n = 2 | Nova Scotia, n = 1 |
| Participants by role,* | Certifying colleges, n = 2 | CPD or former CPD deans, n = 5 | Deans, n = 1 | Department heads, n = 2 | Health authorities, n = 1 | PGME deans, n = 3 | Physician health programme, n = 1 | Regulatory authorities, n = 4 |
| Declined or did not answer | CPD, n = 3 | Deans, n = 3 | Medical associations, n = 1 | National, n = 1 | PGME, n = 2 (but one referred to colleague in another university who participated) |

* n = >17 as some participants had more than one role. CPD = continuing professional development; PGME = postgraduate medical education.
To ensure the clarity of interview prompts and their alignment with participants’ interpretations of the prompts, GB-L piloted the interview with one stakeholder. Interview questions explored how participants conceptualised the remediation of practising physicians, how they viewed physicians requiring remediation, and the political, educational and sociocultural considerations surrounding the issue of physician remediation. Questions were open-ended and made no reference to education, autonomy or other concepts that might direct participants’ responses. As per CGT methodology, questions evolved over the course of the study so that, for example, when a participant mentioned the lack of any checklist to determine when an individual should be sent for remediation, in future interviews we explored how that decision was made. A list of the interview questions is included in Appendix S1.

All interviews were carried out in the participant’s primary language (i.e. either English or French, Canada’s two national languages). Two interviews were conducted in French and then translated into English. To confirm this translation, the English documents were translated back into French by a different translator. GB-L then searched the two French documents for instances in which the meanings of the transcribed texts differed and went back to the translators when necessary to ensure that we were correctly capturing the participants’ expressions. The research team worked with all transcripts in English.

Analysis

Interviews were coded in an ongoing, iterative manner as data collection progressed. Analytic memos were written by GB-L throughout data collection and analysis.25 We revised the interview protocol as the study progressed to vet and challenge the themes we were developing with interviewees. GB-L coded all interviews, and LV reviewed portions of the coding to confirm a shared understanding and application of the themes. The research team met via telephone, video conference and in person to discuss coding and to construct the theoretical framework. We used the qualitative software DEDOONSE (SocioCultural Research Consultants, LLC, Manhattan Beach, CA, USA) to support analysis because it enabled our team to review the study data and collaborate on analysis across national borders in a secure manner.

The study received ethical approval from the University of British Columbia Behavioral Research Ethics Board (protocol no. H16-00529).

RESULTS

Our primary finding was that participants appeared to hold two different, potentially conflicting, conceptualisations of remediation. From one perspective, they saw remediation as an educational endeavour, different in degree but not in kind from continuing medical education (CME) and CPD. By contrast, participants also viewed remediation as an imposed regulatory process that involved the removal of educational autonomy, meaning the individual was no longer able to choose when, what and how much to learn, nor to independently determine when learning had occurred. These conceptualisations each had different implications regarding the acceptability of remediation and its place in the profession.

Remediation as an educational continuum

Participants conceptualised remediation, first and foremost, as a form of supported education. In elaborating this construction of remediation, participants emphasised that virtually every practitioner requires some degree of external support to practise optimally. They recognised that ‘in one sense, we’re all remediating something’ (CPD 5). This perception that remediation is synonymous with a degree of supported learning was clearly part of participants’ understanding of the broadly scoped nature of the phenomenon:

I just think it’s all part of the spectrum … when physicians acquire new skills or enhance their understanding of disease processes or pathology based on, you know, new theory or clinical trials, I mean, in one sense they are remediating their practice. To remediate is to change. (Certifying college [CC] 2)

Although these descriptions suggest that any form of supported learning might be considered as remediation, there was also a recognition of a continuum, defined by, firstly, the size of the knowledge, skill or attitude gap a physician might need to fill and, secondly, the amount of support needed to address the gap. Participants acknowledged that, although conceptually ‘we’re all remediating’, functionally the term ‘remediation’ was a label reserved for the far end of the
continuum. However, the point at which an individual would land in remediation was somewhat arbitrary. In other words, somewhere along this continuum, learning changes from a continuum of supported practice improvement effort in which all physicians need to engage to a formal remediation endeavour that aims to address a significant or problematic gap in a physician’s expertise. This was explicitly articulated by one participant:

It’s a continuum. We all have things in our work that we do well and things that we do not do so well. You know: nobody’s perfect. Nobody’s practice does not need improvement. And there may be some people whose practice needs more improvement, and those [are] the ones we call remediation. (Regulatory Authority [RA] 1)

Framing remediation as the arbitrary application of a term at some point along the educational support continuum has an important implication: although there may be some stigma attached to an individual who needs more support than an average physician, remediation should not be viewed negatively. In fact, one participant argued that ‘savvy’ physicians would actually seek out the experience labelled ‘remediation’:

[A colleague] made a really interesting comment about that. She said, you know: “Really savvy doctors would look for remediation opportunities ‘cause it’s going to be a far better educational opportunity than any sort of CME they’re going to get.” And I thought that’s such an interesting thing to say and she’s right. Because that’s a rich educational experience. I’d probably be a better practitioner if my peers came in and sat in my clinic with me and watched what I do. And that very seldom happens unless you’re in a remediation setting. (CPD 1)

When conceived of in this way, remediation becomes problematic only when the educational resources required exceed the available or commonly used resources. As participants explained, offering remediation was challenging when it was necessary to engage in ‘much more of an intensive process than just attending a CPD conference on anything’ (CPD 3).

Interestingly, when our participants spoke of remediation in this way, they concluded that the logical organisation to provide remediation support would be a university. They suggested that the only reasons why a university might not offer this support would refer to logistical issues such as lack of resources. Echoing the conclusions of many participants, one university postgraduate medical education (PGME) dean stated:

From a capability – capacity is what I’m talking about – from a knowledge point of view, like, the universities are, I think, the best equipped to do this kind of work. It’s just a capacity issue. No-one has the time and the effort to put [in] to it. (PGME Dean 1)

Remediation as a regulatory process

In addition to this conceptualisation of remediation as one end of a seamless educational continuum of increasing support, participants also expressed a second perspective, one that entailed a profound shift in the nature and meaning of remediation once the term was invoked. In this second conceptualisation, participants acknowledged that remediation is the equivalent of imposing upon – or even revoking – an individual’s self-regulatory process. Here, the defining characteristic of remediation is the individual’s loss of choice. Thus, ‘remediation is essentially directed education. So it’s education that is not recommended, but is education that’s required’ (RA 3). It is ‘a formalised process where the physician is – where that process is supervised and monitored in a way by the regulatory authority’ (RA 3). The difference between remediation as an educational continuum and remediation as a regulatory process was explicitly articulated by a CPD dean:

... inherent in quality improvement is that notion of self-audit and it doesn’t force you to make change. [In the] remediation process, by definition, you need to make change if you’re going to continue. (CPD 1)

This removal of choice impacts all aspects of the learning process. It not only mandates what the individual needs to learn and how much he or she needs to learn, but it also mandates ‘focused follow-up ... to ensure that it did happen’ (RA 3).

Although there may be efforts to mask or soften the blow of this removal of autonomy, ultimately, the loss of educational autonomy is complete:

I think very few do it on their own, seek it out. I think most of them [i.e. physicians who need remediation] are eventually brought into a position of complicity, usually through the efforts of their chief or their chief medical officer.
Maybe with some peers. I would say probably two-thirds to three-quarters of them eventually do something voluntarily that they’ve come to be convinced is going to be in their best interest. But there’s always a subset – and I would say it’s probably 25% or less – who really have to have it forced on them, either through threat of losing their privileges or through a complaint to the college or something of that nature.

(Department head [DH] 1)

Not surprisingly, in this second conceptualisation, remediation is stigmatised. It is not a process in which every physician engages constantly; it is for a select few. It is ‘the term for those guys that are actually really bad and must get better to retain the rights of, and the privileges of practice’ (CPD 5). In this conceptualisation, remediation denotes, ‘obviously somebody who is in trouble’ (CC 1).

Surprisingly, in this second conceptualisation, the point at which an individual requires remediation is also somewhat arbitrary:

There’s not … something like a checklist saying “if you have these things checked off then you have to go to remediation”; it’s really more an expert opinion/consensus kind of process.

(RA 1)

When the defining characteristic of remediation was seen to be the removal of educational autonomy, the responsibility for remediation was seen as belonging to the organisation responsible for professional autonomy (i.e. the regulatory authority). Universities could ‘provide a service’ as several university-based interviewees mentioned, but only if participants ‘realised we weren’t forcing them, that someone else was forcing them to take our programme’ (CPD 2). University offices, it appears, did not wish to be viewed as complicit in removing an individual’s autonomy.

Simultaneous conceptualisations

These two differing conceptualisations of remediation were not mutually exclusive. They were held simultaneously, to greater or lesser degrees, within similar stakeholder organisations and frequently by the same individuals. Slippage and confusion between the two simultaneously held conceptualisations were epitomised by participants’ ubiquitous references to a ‘bell curve’, referring to a normal distribution of physicians’ performance. When invoking this reference, participants talked about variation in learning and improvement needs, with different degrees of remediation along the curve. The bell curve references the first model, remediation as an educational continuum, with those at the lower end of the curve simply needing progressively higher levels of support because of progressively increasing performance gaps.

However, participants also appeared to use the lowest portion of the curve to reference a qualitatively different group, referring to the population at the tail end of the curve as a distinct group:

… a select group, you know, who are way outside of the curve, maybe 1% or 2–3% of the numbers I hear, you know, of physicians that I would look at, that are really in trouble. (CPD 3)

… the bottom tail, that 2.5% or less that are struggling to sustain, you know, the quality of care throughout their whole professional lives. (CC 2)

I think it’s probably in that sort of 5%. It’s not a big number. I think it’s sort of your bell curve kind of thing that it’s probably the tailing 5%. (RA 4)

Although participants did not always knowingly or explicitly distinguish between the two conceptualisations, they did notice and identify some of the consequences of failing to do so. For example, participants recognised that failure to distinguish between the concept of remediation as an educational continuum and the concept of remediation as a regulatory process could stigmatised remediation processes, as well as other points along the continuum of educational supports:

I don’t believe that currently we have a general professional sense of what quality improvement is. It seems to me from my dealings with this in education circles is that physicians think that, you know, quality improvement, quality assurance means that someone doesn’t think you’re doing a good job. And that if you have to get involved with quality improvement, it’s not quite as bad as remediation. But something’s not quite right with your practice and therefore you have to improve the quality a little bit … And it’s a certain sense of entitlement that I’ve become a doctor now and so I know what’s best and therefore, you know, don’t question me … So when you talk about remediation in that context, then it’s more
negative than just trying to improve what you’re doing. (Health authority [HA] 1)

... docs right now don’t trust the [performance improvement] process. So they kind of just try to get through it and nothing good ever happens. But they don’t engage with it in a way of looking at it – here’s an opportunity I can improve. (CPD 3)

Hence, although regulatory authorities might develop physician performance improvement initiatives as a means of ensuring competent care across the profession, practising physicians equate this process with ‘remediation lite’ and view it as threatening.

DISCUSSION

The aim of this study was to understand how remediation is conceptualised by those in organisations that have a stake in the process. Our findings suggest that most of these individual stakeholders simultaneously hold two differing conceptualisations of remediation: remediation as an educational process on a continuum of learning, and remediation as a regulatory process. That is, all interviewees described remediation as part of an educational continuum and most also viewed it – explicitly or implicitly – as a regulatory process. Interviewees moved between the two conceptualisations but did not always appear aware that they were doing so. Importantly, the two framings have different implications for the degree to which remediation can be easily incorporated into the professional processes of maintaining competence.

Our participants’ propensity to conceptualise remediation as an educational process and part of the educational support continuum mirrors the emphasis seen in the literature and appears to be consistent across (at least Western) healthcare systems. For example, in the UK, where doctors are employees, the National Clinical Assessment Service framework suggests that remediation ‘should still be seen as part of an educational continuum for improving practice’. Also consistent with the literature, most of our interviewees did not formally reference education theories although they frequently indirectly referenced adult learning principles such as helping individuals identify their own learning needs. This suggests that the remediation community may need to become more conscious of which underlying educational theories underpin remediation programmes and to consider whether alternative theories, whether educational or, more broadly, change theories, might prove more helpful in the remediation of practising physicians.

However, even this shift in emphasis from learning to practice change may be insufficient to redress the underlying difficulties in invoking remediation because it fails to address the sociological implications embedded in the regulatory aspect of the process. The literature is fairly silent about the implications of remediation as a regulatory process and the associated removal of autonomy. The grey literature from the UK, where remediation is viewed in many cases as performance management, mentions ‘clinical governance’, but the principles are all educational. This silence regarding the regulatory aspect of remediation may simply derive from the fact that it appears obvious, but the underlying implications may not be fully appreciated. As sociologists consider autonomy to be the defining characteristic of a professional, we would argue that the invocation of remediation may be considered at least a temporary de-professionalisation. Importantly, this removal of professional autonomy and the resultant de-professionalisation do not seem to be intended as overt punishment. In fact, we interpret our participants’ emphasis on the continuum of support, at least in part, as an effort to avoid a framing of remediation as punishment. Rather, the intended goal of remediation is to support the practitioner’s return to competent practice. The resulting de-professionalisation therefore might be considered as an unintended consequence of invoking the regulatory process of remediation. Even if not intended as punishment, the implications of this aspect of the remediation process may be profound.

Educational activities are generally not associated with stigma; as our participants noted, everyone has gaps, and everyone can improve. The stigma lies in the loss of autonomy, in no longer being in control of one’s continuing education or one’s practice, and in the perception that one has lost an important component of one’s professional identity. Therefore, restructuring remediation to enable the retention of autonomy to the fullest possible extent might soften the stigma and increase the willingness of physician organisations not traditionally involved in remediation to support the process in various ways.
Limitations

This study was conducted in the Canadian context at a particular point in time and we acknowledge that findings might differ in different contexts. For example, Canadian physicians are generally independent contractors rather than employees of the state, such as they are in the UK where remediation appears to be viewed as performance management. Conversely, Canadian culture is not as fiercely individualistic as American culture, which has seen several states enact laws that forbid mandatory CME programmes that aim to measure core competencies in medicine. Given the high variability in the provincial practices that inform our research, we posit that our findings may transfer to other contexts, but further research is needed to determine the extent to which this is in fact the case.

Additionally, for this study, we specifically targeted those who had an administrative stake in the process of remediating physicians in practice. As such our participants may not be representative of the broader practice community. We suspect that, relative to the physician ‘in the trenches’, they are likely to be more supportive of performance improvement initiatives and the resultant identified need for supported practice change, but we currently have no data to verify this. Further, we cannot say to what extent our findings will apply to other points in the education process, or whether, for example, the loss of autonomy is as much a concern in the postgraduate or undergraduate education realms. Perhaps most importantly, we do not know whether and how those engaged in the process of remediation (preceptors and remediatees) are influenced by these conceptualisations during the actual activity of remediation.

CONCLUSIONS

Remediation stakeholders simultaneously view remediation as one end of a continuum of educational support and as the removal of educational autonomy, or as a de facto de-professionalisation of the individual involved. Understanding that stakeholders frequently approach the complex issue of remediation with two different perspectives without conscious awareness of doing so may help to resolve several challenges in the field, including the questions of what falls under the umbrella of remediation and who should be responsible for offering remediation support. Our findings suggest the need for conceptual clarity around remediation both to ensure that we illuminate logistical dilemmas in enacting remediation and to address the stigma of ‘de-professionalisation’ that even minor educational supports (such as feedback) might invoke by association. Until we acknowledge and address the dichotomy of remediation as both educational and regulatory, the profession will continue to struggle with logistics, and organisations focused on supporting physicians, such as medical associations and CPD offices, will hesitate to become involved, to the detriment of the public, the individuals requiring remediation and the profession as a whole.

DISCLAIMER

The views expressed in this manuscript are those of the authors and not necessarily those of the Department of Defense or other American federal agencies.

Contributors: all authors contributed substantially to this paper. This study is part of GB-L’s PhD programme. GB-L conceptualised the study, collected, analysed and interpreted the data, and drafted the manuscript. LV contributed methodological expertise, reviewed codes and contributed to the analysis and interpretation of data. GR and PWT contributed substantially to the study conception and to the analysis and interpretation of data. LV, GR and PWT critically revised the manuscript and worked closely with GB-L on the development of the manuscript, providing guidance with regard to organisation, clarity and other aspects of writing for academic journals. All authors approved the final manuscript for submission and have agreed to be accountable for all aspects of the work.

Acknowledgements: none.

Funding: this study was supported by the Royal College of Physicians and Surgeons of Canada.

Conflicts of interest: none.

Ethical approval: this study was approved by the University of British Columbia Behavioral Research Ethics Board (protocol no. H16-00529).

REFERENCES


**SUPPORTING INFORMATION**

Additional supporting information may be found online in the Supporting Information section at the end of the article.

**Appendix S1.** Semi-structured interview questions.

Received 20 April 2018; editorial comments to authors 3 July 2018; accepted for publication 31 August 2018