

## Looking over the conceptual horizon: a living-theory of practice

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### Abstract

This paper explores the conceptualisation and implementation of public health in a medical curriculum in South Africa. Society's health needs to extend beyond treating the individual and the ill. However, healthy populations are of little interest for medical students and so population health – public health – is over the conceptual horizon of medical students.

In this paper I aim to explain my journey in exploring my educational practice of facilitating learning about public health in our medical curriculum and share my insights of the context of my practice. My inquiry is an exploration of my values of care and agency and I create meaning of my practice through a Living Theory approach to action research.

This paper introduces the multiple concurrent understanding of public health, educational tensions, constraints and points of connection between medicine and public health in the curriculum. I share my innovative practice in using the elective experience to challenge the notion that public health is over the conceptual horizon of medical students. On the contrary, public health is an eye-opener and it is other conceptual horizons that obscure meaningful engagement with medical students around public health.

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## **A departure from agency and care**

In this paper I introduce the living-theory of my practice of facilitating learning of public health in the undergraduate medical curriculum in an African context and in particular my living-theory of the context of that practice. My living-theory is a result of reading of the literature, the findings of my action research and my deepening understanding of my practice within the 'complex, multifaceted reality of intersecting aspects embedded in rich contexts' (Grbich, 2007, p. 230).

Through engaging in this inquiry I have explored my professional knowledge, my professional practice and my educational leadership through my own and others' sense of agency.

The impetus for my inquiry was three-fold: to live my professional values of agency and care in my educational practice more fully; to transform my educational practice; and to make public my personal understanding of educational practice in facilitating the learning of public health in the medical curriculum. Agency can be described as the 'individual ability to act, to choose or to decide' (Schryer et al., 2003, p. 64). Care is commonly defined as caution in avoiding harm on the one hand and as both close attention and watchful oversight on the other. Care in my educational practice is a combination of all three elements and is focused on the students in my care.

The primary purpose of my inquiry was to develop a living-theory of my educational practice, but it became clear that my practice is dominated by the context of my practice. Regehr (2010, p. 35) explains this construct of entanglement that is found in quantum physics: 'Entanglement describes a phenomenon whereby two or more objects are linked together so that one object can no longer be adequately described without full mention of its counterpart(s), even though the individual objects may be spatially separated'. The overwhelming domination of the context of medicine in which I am an outsider with its history, institutional culture and ways of being became the focus of my practitioner research. The context of my practice is not problematic but the lack of understanding of the context is.

In this paper I look both in and out from this world of meaning that I have created and recognise a range of conceptual horizons in this search for wholeness. First the paper briefly introduces the research strategy before revealing the tensions that strain and the connections that bind my educational practice. The conceptual horizons that block our understanding and my efforts to identify overcome them are described, before the paper returns to my values of care and agency as the starting point of this journey.

## **Developing my living-theory through action research**

Living Theory research was developed by Jack Whitehead (Whitehead, 1989) as a response to the problems inherent in trying to theorise the idea of the contradictory nature of life:

As we practise, we observe what we do and reflect on it. We make sense of what we are doing through researching it. We gather data and generate evidence to support our claims that we know what we are doing and why we are doing it (our theories of practice), and we test these knowledge-claims for their validity through the critical feedback of others. These theories are our living theories. (Whitehead & McNiff, 2006, p. 32)

Living Theory research resonates with my desire to transform my educational practice and to generate educational theory from my educational practice in the under-graduate medical curriculum.

The emergent nature of the research led to many concurrent, de-routing and divergent action research cycles of inquiry, some of which were unplanned for. The research can be summarised as using a concurrent embedded strategy with simultaneous data gathering and with the secondary quantitative methods embedded within the primary qualitative methods (Creswell, 2009, p. 214). Divergence is characteristic of the generative nature of action research but the data can be traced back to three primary sources: my ongoing professional activities, my meta-learning including my professional development activities, as well as the validation processes. My exploration of practice depended on a rich and diverse composition of research participants. As the focus of this paper is not on the methodology, methods or analysis approach used in this research, a simple list of the methods and the research respondents is provided in order to foster understanding of the scope of the research:

- Single semi-structured in-depth interviews conducted among ten clinicians who are responsible for 15 academic blocks or academic activities from all five years in the medical curriculum;
- A series of semi-structured in-depth interviews with the vice-dean of medicine
- Two workshops with SHSPH academic staff;
- Two semi-structured in-depth interviews with international experts;
- One semi-structured in-depth interview with a national expert;
- A paper-based survey of medical students (years 1 to 5) in 2012 (n/N= 589/1192);
- Two online surveys among all third-year medical students in 2011 (n/N= 106/236) and 2012 (n/N= 88/232);
- An online discussion among global public health experts via two special interest groups on LinkedIn;
- A record review of the block books (study guides) of all the blocks and learning activities over the entire medical curriculum and minutes of meetings from both the School of Medicine and the School of Health Systems and Public Health;
- My personal reflections;
- My validation group.

In total 822 people participated in this research.

In creating this living-theory I have used the constructivist grounded approach as suggested by Charmaz (Creswell, 2007, p. 65) in my action research and repeatedly returned to the literature and the data that was emerging from the various cycles of inquiry.

I have generated this living-theory of my practice by reframing my practice in the light of my values of care and agency, and by critically reflecting on my educational practice and the context of this practice.

## The inclusion of public health in medicine

The inclusion of public health, or population health, in the medical curriculum can be regarded as an unpopular inclusion. While medicine focuses on the individual and the ill, public health focuses on the healthy population. Despite this difference in focus there is some agreement that public health, although peripheral, is important to medicine (Woodward, 1994, p. 391; Allan et al., 2004, p. 471; Gillam & Bagade, 2006, p. 430; Berwick & Finkelstein, 2010, p. S56; Maeshiro et al., 2010, p. 213). The argument is that ‘one objective of medical education must be to produce graduates who can think in multiples of individuals as well as fractions’ (Woodward, 1994, p. 391). However, abstract agreement does not relate to implementation and Roe (2009, pp. 19-20) highlights the resistance among American educators to include public health in the curricula of health professions. Reasons for resistance among educators include the shortage of public health specialists, the post-graduate focus of public health and the reported lack of interest among the students (Maeshiro et al., 2010, p. 214; Johnson, Donovan & Parboosingh, 2008, p. 416; Woodward, 1994, p. 390; Riegelman, 1991, p. 254). The resistance to include public health is not one-sided and medical students are reported to be uninterested as public health holds no obvious use to them in their studies (Maeshiro et al., 2010, p. 214; Woodward, 1994, p. 390; Riegelman, 1991, p. 254). What is considered important in a curriculum translates to what counts in assessment and, ‘it is inescapable that students attach most significance and devote most learning time to things that |”count” (are formally assessed)’ Gillian and Maudsley (2009, p. 128). This association between perceived importance, proportional inclusion in formal assessments and student effort is commonplace and in Canada the “inadequate methods of student assessment” was identified as a barrier to the facilitation of learning about public health (Johnson, Donovan & Parboosingh, 2008, p. 416).

At my institution, public health is theoretically included as a longitudinal golden thread over the entire six years of the medical curriculum and the School of Health Systems and Public Health (SHSPH) – my school – is responsible for the coordination, although the medical curriculum is the responsibility of the School of Medicine. The thread of public health – incorrectly coined as ‘an epidemiological approach to health’ – is one of the nine golden threads that each block chair is expected to include in each block and learning activity.

This context with the “ownership” of the curriculum within the School of Medicine, but the responsibility of the inclusion lying with the SHSPH is made more complex by the post-graduate focus of the SHSPH, the small academic staff within the SHSPH and the then prevailing attitude not to challenge the *status quo*. Within this context, two of my professional values – care and agency – were denied by my School.

This denial was in part due to my junior position that I held within the SHSPH and my status as a non-doctor but was largely due to the prevailing malaise to not challenge the status quo. However, these professional values are also personal values and flow from my own experiences as a post-graduate student when I experienced an abdication from caring among the academic staff and a frustration of any personal ability to address, in my opinion, an unfair decision that delayed my graduation. This uncaring was the polar opposite to all three elements of caring: the lack of caution in avoiding harm; the absence of close attention and personal blind spots that blinded those to what should have been watchful oversight. My personal experience explains the elevation of these two values above any others in my professional educational practice and these values have remained my true north over time. Interactions with medical students around public health are typically of short duration and so time – and effort – count. A common theme in feedback from my medical students is an appreciation of the effort to make the lecture/s interesting and the experiences meaningful. An almost ubiquitous remark is that of an “eye-opening” lecture or experience and a fresh look at public health: ‘The whole two weeks [of the elective] enriched me and opened doors that I never knew existed or to look for’.

The reasons for our inertia or adherence to the *status quo* are also rooted in the historical ‘traditions, priorities, and values of the faculty in that profession’ (Frenk et al., 2010, p. 1951). As the facilitation of learning about public health for medical students forms a minor activity of our work and the medical curriculum is in the domain of medicine, the activity had remained unexamined and unchallenged. The intention of disrupting the epistemological *status quo* was to transform our public health curriculum blueprint into one that better represents our intentions. This disruption was an unintentional response to a global challenge to the *status quo* and a renewed interest in public health in the undergraduate medical curriculum (Frenk et al., 2010, p. 195; Johnson, Donovan & Parboosingh, 2008, p. 417). This disruption was brought about through research, which encourages scepticism of orthodoxy (Nora, 2010, p. S47) while educational research challenges educational orthodoxy.

The activities undertaken during this research were, although legitimate research activities, also of a subversive nature, but subversive means are not unusual in public health and public health education. One of the international experts in this research suggested:

You have to be prepared to – um – believe that this is a subversive activity that your purpose is to subvert the existing curriculum which means a certain amount of discretion, a certain amount of interesting reading, a certain amount of seeking forgiveness rather than permission and a certain thick skin.

The use of the word “purpose” in this statement resonates with a practice that has as its purpose a more mindful, and less mindless, practice.

Our increased critical view of practice is a reflection of the global renewed interest in medical education that is reflected by the Lancet report (2010) that outlines the third major reform in medical education. The authors (Frenk et al., 2010, p. 1924) emphasise the time needed to effect transformation:

Effective education builds each level on the previous one. As a valued outcome, transformative learning involves three fundamental shifts: from fact

memorisation to searching, analysis, and synthesis of information for decision making; from seeking professional credentials to achieving core competencies for effective teamwork in health systems; and from non-critical adoption of educational models to creative adaptation of global resources to address local priorities.

The first two shifts that Frenk et al. refer to is aimed at graduate behaviour but the third shift of “creative adaptation of global resources to address local priorities” is directed at academic staff – in this case public health academic staff – to critically rethink our current educational models. This external call to shift from complacency to revisit, rethink and transform our thinking around public health in the undergraduate medical curriculum, although reflective of personal desire, is a source of tension. However, this tension is only one tension: the most fundamental tension is a historical one.

## Historical tensions

My living-theory of practice is founded on a number of external and historical tensions. And ‘when everything interacts, nothing is simple’ (Regehr, 2010, p. 36). The historical split between public health and medicine in 1915 (Fee & Bu, 2007, p. 977) represents an immutable fundamental divide or tension that underlies our current practice and the contexts of our practice. One of the international experts regards this event as: ‘one of the tragedies of the 20<sup>th</sup> Century ... was that schools of public health and medical schools diverged in the first place at the beginning of the century’. The Welch-Rose report of 1915 advocated the independence of public health from medical schools (Fee & Bu, 2007, p. 977). The tension of that split is compounded by a further tension: Welch, who felt that the focus of public health should be on science while his contemporary, Rose, favoured a practice focus (op cit., p. 977). A further split occurred that emphasised the differences between the American model, which favoured the knowledge of public health hygiene and leadership, while the United Kingdom/European model favoured administration. These historical tensions are seldom acknowledged but have deepened and become formalised and the consequences of making these choices are seen in our understanding and our contemporary educational models of public health.

## Contemporary tensions

These historical tensions form the very fabric that, combined with the contemporary tensions that emerged in the course of this inquiry, create a web of tension. The first, and most unexpected, to emerge from this inquiry was the multiple concurrent understanding of public health.

### 1) Multiple concurrent understanding of public health

The finding that there is a multiple concurrent understanding of public health among all the five years of medical students surveyed shattered the implicit assumption that we have a common understanding of public health. “Multiple concurrency” is a term used in public health to describe multiple concurrent sexual partners and is considered a risky practice. The analysis of what medical students think public health is, laid bare a complex, and often competing, understanding of

public health while still retaining the overall shape. This response from a fourth-year student shows a complex understanding as he/she tries to express the various dimensions of public health: '[Public health] has to do with community health, epidemiology and prevention of disease via raising awareness and educating the community about disease and prevention. It is community-based health promotion and disease prevention'.

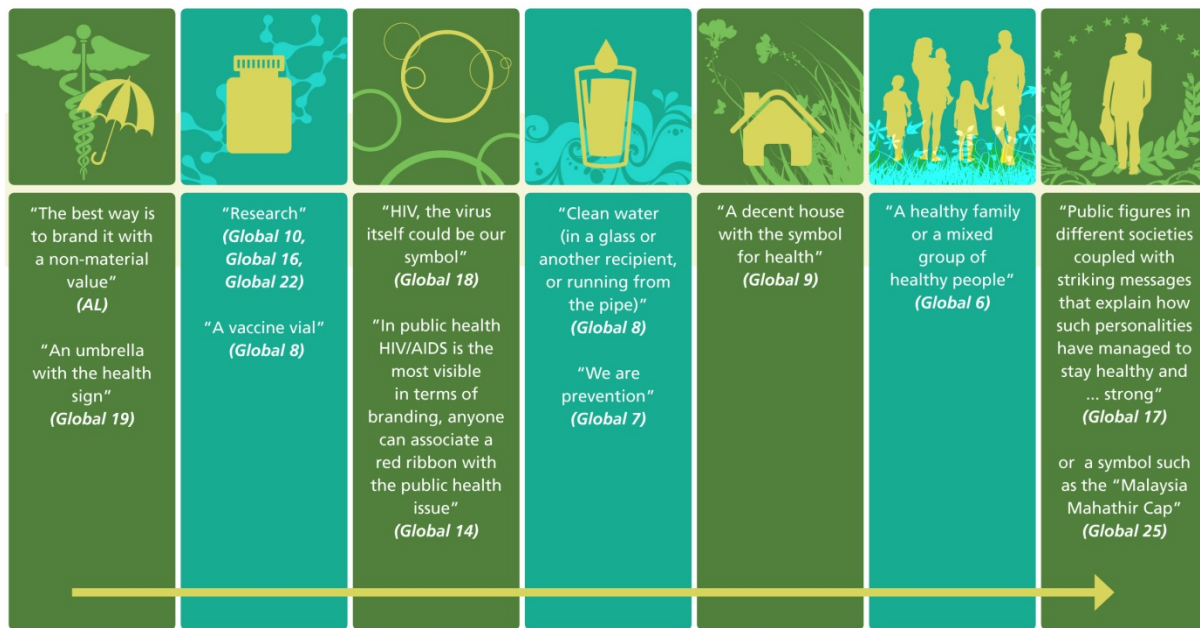
Others highlighted certain components: 'Public health is non-clinical: it is involved in epidemiology and prevention of disease,' or 'Public health is the medical speciality that involves policy making, organisation, surveillance and focuses on the health of the population. Surveillance includes research in disease trends and infectious-disease-prevention strategies'. The analysis of the first-year students' understanding revealed an unexpected complexity of understanding: 'Public health is the delivery of health care services to the public so that the country's mortality, morbidity and other health indicators can be improved so that the majority of the population achieve good health'. The reason for this level of understanding only became clear in later cycles of inquiry.

This construct of a multiple concurrent understanding was confirmed by the multiple perspectives of public health among the block-chairs, the SHSPH workshop-respondents, and the global online public-health professionals. The block-chairs were not directly asked what they thought public health was but two themes emerged from their responses to how they include public health in their blocks. The first was the boundaries of public health and the second was the state of public health.

## **2) The boundary between public health and medicine**

The boundary between public health and medicine can be conceptualised as uncertain at best. On the one hand the boundary was either described as a gap to be breached while on the other hand public health was viewed as being part of an indivisible spectrum of medicine.

This view of public health being an extension of medicine was expanded further by both the SHSPH workshop participants and the respondents in the global online forum to include the view that public health can be found everywhere: 'It's crucial for them to understand you know what public health is. But I wouldn't limit it to just only in the classroom scenario because public health is everywhere you know'. This notion that, "public health is in mainstream places and ... public health really is everywhere!" partially explains the findings from the online discussion. The analysis of the responses of which metaphors or images would be useful to convey public health to medical students revealed a spectrum (from left to right) from the most abstract or population focus to the narrowest individual focus. Between the two extremes each level shows a component of public health, either a single disease focus (HIV) or a single upstream factor such as clean water.



**Figure 1.** The spectrum of suggestions for communicating what public health is to medical students (Wolvaardt, 2014, p. 183)

However, none of the metaphors or suggested images could be considered as exclusively public health. The notion that public health is ubiquitous and overlaps with other disciplines emphasises that any attempt to draw an absolute boundary between public health and medicine will be challenging.

These various understandings of public health and the relationship between public health and medicine underline the postmodern view that 'reality is shifting and uncertain ... the world [is] complex and chaotic and reality is multiply constructed and transitional' (Grbich, 2007, p. 9).

My finding of a multiple concurrent understanding of public health challenges my understanding of my educational practice and the question is raised whether we – medical students and academic faculty – need to have a common understanding of public health. Every educational interaction with medical students, no matter how small, might be influenced by the answer.

### 3) Intentions to include public health in the medical curriculum

Woodward cautions that retreat from the classroom is not an option for public health educators (1994, p. 392) and even if retreat were an option the Health Professions Council of South Africa's (HPCSA) regulations that govern the education and training of medical doctors include the requirement that 'medical public health as a theme shall figure prominently throughout the curriculum' thereby making retreat non-negotiable (HPCSA, 2009, p. 10). This regulatory requirement to include public health in the medical curriculum creates a tension between the postgraduate focus of public health education and the requirement to include it in the undergraduate medical curriculum.



Since the inclusion of public health in the medical curriculum is not negotiable, the two internal workshops at the SHSPH focused on our curricular intentions with this inclusion and our optimal strategies for the facilitation of learning.

Our emphasis in the SHSPH discussions (both in the workshops and the interview with the national expert) placed little emphasis on creating a finite list of knowledge and skills. Rather the emphasis revolved around the desired ontological values of our students or in short – the kind of doctor we wish to graduate: ‘I would like the University of Pretoria student to understand public health as a fraternity that gives you the social consciousness of how to practise as a doctor’. Our emphasis on social consciousness suggests that the inclusion of public health in the medical curriculum contributes to the ontological nature of medicine, or becoming a medical doctor, that Ozolins, Hall and Peterson (2008, p. 608) refer to. This social consciousness is described by Frenk et al. (2010, p. 1933) as social responsibility, which is arguably the irreplaceable contribution of public health.

The second emphasis that emerged from the SHSPH discussions is that the inclusion of public health in the medical curriculum has to ensure relevance for a general practitioner who will be expected to work in the South African health system: ‘an understanding and attitude towards public health per se ... as an integral part of the practice of medicine, because if we are aiming it at medical practitioners, it must be something that's going to be relevant to each and every one of them.’

The SHSPH discussions pre-dated the national discussions around the creation of a draft competency framework for public health in the medical curriculum. The draft framework is a result of several meetings that invited all those who are involved in the facilitation of learning of public health in the medical curriculum in South Africa. The presence of such a competency framework constitutes a tension all of its own in the landscape of public health education. Such frameworks are intended to describe what competencies individuals must be able to demonstrate by the end of their studies (Lingard, 2009, p. 626). However, knowledge about public health is often socially constructed and as a result a focus on individual competency can become problematic. This tension of an individual – versus a group – competency approach is compounded by the acknowledgment that some competencies need time to develop (Hodges, 2010, p. S43). This time factor supports the choice of the longitudinal inclusion of public health as a golden thread as opposed to presenting public health in a separate block, but the questions remain regarding which public health competencies students will need time to develop and which educational strategies will allow us to achieve these competencies.

The draft competency framework represents substantial progress in collaborative thinking amongst multiple institutions but when the SHSPH's curricular aspirations and intentions were compared with the draft competency framework, a number of epistemological and ontological intentions were found to be at odds with each other. So although the draft framework represents agreement it also represents a potential tension between national and institutional intentions and aspirations. This tension is not yet problematic because the agreement of common competencies does not yet crowd out the unique characteristics of each individual curriculum (Johnson, Donovan & Parboosingh, 2008, p. 417). Gillam and Maudsley (2009, p.

130) emphasise that medical schools should (among other activities) ‘take a pragmatic approach to the “need to know” versus “nice to know” in the curriculum’. This approach of focusing on the “need to know” is aligned with the draft proposed competency framework but does not accommodate our own aspirations described as the development of social consciousness.

In addition, when viewed against other trends in medical education, the current version of the draft public health competency framework does not entirely promote the “new professionalism” that Frenk et al. (2010, p. 1951) refer to as there is no:

... set of common attitudes, values, and behaviours...as the foundation for preparation of a new generation of professionals to complement their learning of specialties of expertise with their roles as accountable change agents, competent managers of resources, and promoters of evidence-based policies.

It can be argued that our own institution does not entirely promote this ‘new professionalism’ either. Our Charter for Professionalism for medical students has three main areas: professional competence, ethical values and personal attributes. With the exception of “honesty” and “social justice” which is described as ‘contribute to betterment of society while distributing health care resources fairly’, all the other values are patient-related such as ‘patient autonomy for informed decisions’. And the described personal attributes such as respect, demeanour and punctuality are attributes that have more to do with conforming than performing – so although arguably desirable, these attributes are unlikely to result in change agents. The low profile of values in both our Charter and the proposed draft public health competency framework suggest that this is a neglected area in medical education and one which public health with its broad population view could address. Interestingly only social consciousness – but perhaps this is the definitive value for public health – emerged from our workshop discussions. No overt mention was made of values (either personal or for students) in any of the interviews with the block-chairs.

This tension between institutional and national educational intentions and aspirations of including public health in the medical curriculum and between both of these and the global third generation of reform is only one example of the search for relevance.

#### **4) The search for global and local relevance**

The in-depth interviews with the block-chairs revealed an inherent tension in the curriculum. Medical curricula in Africa are under pressure to ensure a balance of global and local relevance in their curricula. This tension is unavoidable as the global-local dichotomy is in the institutional vision of being a ‘leading research-intensive university in Africa, recognised internationally for its quality, relevance and impact, as also for developing people, creating knowledge and making a difference locally and globally’ (University of Pretoria, 2013); the regulations that govern the education and training of medical students: ‘ensuring relevance to [local] health needs while satisfying international standards of excellence’ (HPCSA, 2009) and in third global reform in medical education that refer to: ‘locally responsive and globally connected teams’ (Frenk et al., 2010, p. 1951).

The question arises whether the inclusion of public health in the medical curriculum compounds, or relieves, this inward-outward tension in the search for both local and global relevance.

### **Strategies for including public health in the medical curriculum**

Possible strategies on how to include public health in the undergraduate medical curriculum emerged from both the longitudinal interviews with the vice-dean of medicine, the interviews with the block-chairs and the two SHSPH workshops. The approach of adopting institutional-level formal strategies to include public health was at odds with those who make use of a number of personal strategies for inclusion. Among those who make use of their own personal strategies, there were some who were not consciously aware of their personally-held theories of public health or the strategies that they employ for its inclusion. As a result there is tension between the formal strategies for the facilitation of learning and the more personalised strategies of engagement.

However, the most prominent tension was the university's choice of opting for a strategy of including public health as a golden thread to be included over the entire curriculum as opposed to the choice of a block on public health. This institutional choice has both intended and unintended consequences. Those universities who opt for a separate block on public health have to accept the isolation that "accentuates the challenge faced by medical educators in trying to teach public health effectively within a medical culture that values acute care of individual patients and their families over population-based health protection, health promotion, and disease prevention" (Tyler et al., 2009, p. 1307). On the other hand those universities, which opt for an integrated thread approach – our university being one of them – have to struggle to establish the profile of public health within the clinical context. However, the choice has been made and the consequences must be borne.

### **Curricular emphasis in the medical curriculum**

An analysis of the block books was conducted to explore the extent to which public health topics are contained in either the block outcomes – learning objectives or described learning activities. In addition, a judgment was made on the required cognitive domains with the use of Bloom's taxonomy (Krathwohl, 2002, p. 212).

The analysis of the block books is arguably crude as these documents are designed with the students in mind and not this secondary use. The analysis was useful to map out where public health topics are included in our medical curriculum. In addition, several possible weaknesses such as occupational health and medical economics emerged in the analysis. Health (or medical) economics was coded as a public health topic despite being defined as a separate golden thread in our curriculum. The reason for the inclusion of medical economics in the analysis was that health economics performed the worst amongst the public health topics in the annual American graduate questionnaire that surveys all American and Canadian

graduates. Almost 63 per cent were of the opinion that instruction was inadequate in this regard (Maeshiro et al., 2010, p. 214). The American graduation questionnaire is a rare example of a national instrument that collects longitudinal data on the educational experience of medical students and where some results are published. This tool was useful as a standardized instrument and one that allowed some comparison between the trans-Atlantic experiences.

The block-book analysis also reflected the possible depth of the inclusion of public health in the form of the learning outcomes etc. and most of the public health inclusions were found to be at the lowest level of Bloom's taxonomy namely knowledge. While this finding is aligned to the proposed competency framework it is most definitely at odds with the SHSPH curricular intentions and the reliance on lectures puts long-term retention of knowledge at possible risk.

The analysis revealed an unknown inclusion of several public health topics in the first block, which is prior to when medical students arrive at our campus. This finding explained the first-years' unexpected sophisticated definitions of public health in the paper-based survey.

### **Constraints to including public health in the medical curriculum**

An exploration of the experienced constraints to including public health in the medical curriculum revealed: academic staff's time, academic staff's interest and availability, medical students' interest, and assessment opportunities. These constraints emerged from both the SHSPH workshop participants and the block chair interviews and are similar to those described in the literature (Maeshiro et al., 2010, p. 214; Johnson, Donovan & Parboosingh, 2008, p. 416; Woodward, 1994, p. 390; Riegelman, 1991, p. 254S).

All of these historical and contemporary tensions combine into a web of tensions in our context which is both complex and messy but: 'we need to address head-on the inconsistencies, irregularities, and downright messiness of the empirical world – not scrub it clean and dress it up for a special occasion of a presentation or a publication' (Clarke, 2005, p. 15).

Within this messy and entangled web of tensions and constraints there are areas of synchronicity or points of connections that emerged from this inquiry.

### **Points of connection**

The points of connection in my living-theory signify the points where the tension is at its lowest or where the possibility to heal the breach between public health and medicine is most likely.

The two connective points in understanding public health – public health is ubiquitous and public health is part of the indivisible spectrum of medicine – are at the centre of the connections. Although part of the spectrum of medicine, public health is that part of the spectrum that is invisible to the medical students.

Riegelman (1991, p. 254) describes this as "student myopia" or the inability to see the big picture of public health. Although there are agreed points of connection, there were still those who thought that where public health was visible in our curriculum it would be more palatable to medical students if it were hidden.

The first point of connection in the discussion of facilitation of learning strategies was experiential learning. Experiential learning in the form of community engagement and field placements is acknowledged as a powerful learning strategy in public health (Maeshiro et al., 2010, p. 216; Tyler et al., 2009, p. 1310), but the lack of public health specialists hamper the strategy (Johnson, Donovan & Parboosingh, 2008, p. 416). This point also partially supports the agreement between both the SHSPH workshop participants and block-chairs that our educational efforts in public health need to be exciting.

The second point of connection was that "clinicians can teach public health". This second point is a useful point of agreement, because if '... public health is to be integrated into the daily practice of doctors, then the learning about public health cannot be separated from the learning about medicine' (Wolvaardt, 2014, p. 232). Other educational strategies identified by the SHSPH workshop participants included role-modeling, strategies to promote the bigger picture of public health and finally, strategies of engagement.

These strategies of engagement focused on both strategies of engagement with the School of Medicine and strategies of engaging the medical students. The discussions around engagement with the medical students caused a paradigm shift in our thinking about the perceived twin barriers of limited time and space in the curriculum. This paradigm shift happened in our second workshop where we focused on exploring optimal strategies to facilitate learning about public health among our medical students and where we made a conscious decision not to constantly return to what is (our current situation) or what can't be (our understanding of our current barriers). Once we broke through the confines of our own thinking that the lecture hall is not our boundary, we all starting talking simultaneously about what the possibilities could be. In this moment of fracturing our cemented ideas of reality we seemed to be released to see fresh opportunities. This seismic shift in thinking allowed us to look over this conceptual horizon so that we could identify two opportunities where we could use the newly identified uncontested space in the medical curriculum. The first uncontested space was the use of social media.

One potential barrier to any facilitation of learning strategy that makes use of social media is the extent to which medical students use social media. Although it was assumed that they do use social media we did not know which types and to what extent. This use was explored via the medical student survey and a key finding was although medical students use a variety of social media daily, or more frequently, Facebook was the most widely and frequently used (74.8% of the 595 medical student respondents). A secondary finding, although tentative, was promising. One of the items on the medical student survey included a ten-item knowledge test that explored medical students' understanding of what constitutes public health. An ANOVA test was used to explore associations between the public health knowledge scores and the different types of social media. A significant association was found between the public health knowledge score and the use of Facebook. Those who use Facebook daily, or more often, scored higher in the test ( $p < 0.000$ ). This association

( $\chi^2=14.55$ ;  $p=0.002$ ) was confirmed through nonparametric testing (Kruskal-Wallis' equality of populations rank test). Although a ten-item knowledge-score is problematic (poor reliability and validity that can be addressed by increasing the number of test items), the finding is suggestive that Facebook is a strategy worth exploring.

The second strategy to use an uncontested space in the curriculum was the identification of an unused opportunity in the third year. Third-year medical students are given a one-month opportunity to attend an elective in the area of their interest. Students have to design their own learning opportunity and as a result few, and none since 2007, choose to do their elective in public health. This situation is not surprising due to the low profile of public health and that medical students 'cannot choose what they do not know' (Wolvaardt et al., 2013, p. 15).

In order to explore this strategy, we designed a community-based public health elective in 2011. An online SurveyMonkey asked this group what factors – such as time, distance, and learning opportunities – they take into consideration when making an elective choice. The survey also asked how many would be interested in a public health elective. These design elements were taken into account when planning the elective with the identified community-partner.

Quite famously no-one enrolled for this option (Wolvaardt et al., 2013, p. 17). This result was unexpected, as the SurveyMonkey results had suggested significant interest. As all students have to hand in their elective choices to a central office for administrative purposes it was possible to review the actual choices. What was not known at the time of the design is that approximately 30% of the class split their elective period so that they could explore more than one area of interest and therefore the original design of one month, although aligned to the institutional requirement, was identified as a barrier. In 2012 the elective was shortened to one week with an option to extend to meet this perceived need and six students participated in the public health elective. The same model was repeated with six (2013) and nine (2014) students enrolling. Interestingly in all three years there were students who extended their elective period to the original one-month period which suggests that it is not public health that holds no interest, but rather that the multiple understanding of public health that refracts their interest. The feedback from the 2012 and 2013 elective participants (2014 elective is still pending) suggest that by participating in the elective these students could overcome their own conceptual horizons on what public is and their eyes were opened to both the work of non-governmental organisations in health care and to the communities in the inner city: 'Thank you for organising an eye opening experience! The world of medicine has opened up a lot bigger in my mind! I definitely learned some important things that I would never have gained through a simply clinical elective'. The notion that public health is everywhere but hidden in plain view also emerged from the medical students' experience: 'The whole two weeks enriched me and opened doors that I never knew existed or to look for'.

The medical students' inability to see over the conceptual horizon of public health also described by Woodward (1994, p. 390) is compounded by more conceptual horizons that emerged in this living-theory. On the other hand, these

points of connection also represent ideas and opportunities to overcome the conceptual horizons of public health.

## Conceptual horizons

My living-theory is constructed upon various layers of conceptual horizons. The first conceptual horizon is also described in the literature – medical students' inability to see the population or public health perspective (Woodward, 1994, p. 390; Riegelman, 1991, p. 254) and the related inability to identify a public health specialist (Tyler et al., 2009, p. 1310). However, my own innovative practice of designing and presenting a public health elective as part of innovative approach to curriculum design challenges this conceptual horizon of medical students' lack of interest. My living-theory of practice claims that in contrast with the orthodox thinking that public health is over the conceptual horizon of medical students, public health is an 'eye opener' to the world of medicine.

From my inquiry the multiple concurrent understanding of public health is suggestive of lack of clarity of what public health is. However, the counter-argument is that if public health is ubiquitous then multiple perspectives are the most authentic representation of public health and views of public health are seen through a kaleidoscope rather than a lens. This construct of a multiple concurrent understanding of public health is the most complex conceptual horizon in this inquiry and is the foundation for every other interpretation or understanding of practice. However, it is not only the medical students' understanding that forms this conceptual horizon. Every clinician has their own conceptual horizon based on his or her own undergraduate experience of public health (typically visits to a local sewerage farm or abattoir) which is substantively different from the current ecological approach to population health.

Two indistinct boundaries, although they cannot be considered as conceptual horizons, are barriers nonetheless. The first is that there is a lack of distinction of the boundary between public health and medicine. The interviews with the block-chairs resulted in a fresh insight: that clinicians seldom identify the public health learning opportunities in their blocks as 'public health'. This conceptual horizon is not surprising because the boundary lines are neither absolute nor well described. Nor is this phenomenon rare and Riegelman refers to this condition as "physician myopia syndrome" (Riegelman, 1991, p. 254). The second boundary is the lack of distinction between public health and medicine because if public health is ubiquitous then no clear distinction will ever be possible as the trained eye can see it everywhere.

Upon reflection it became clear that my School's immobility and lack of engagement with the undergraduate medical curriculum was a conceptual horizon of its own and the act of engagement and discussion highlighted others. The first of these was our curricular intentions, which had remained unexamined. By examining our curricular intentions we challenged our implicit assumptions and reached a deeper understanding of our epistemological and ontological intentions. By doing so we overcame the obvious listing of knowledge themes and skills that characterises the draft competency framework to rather describe our aspirational intentions of becoming a doctor that Ozolins et al. (2008, p. 608) refer to.

The parallel emergence of the discourse on public health competencies for medical students and the development of a draft competency framework can be viewed either as a conceptual horizon or as a forced perspective; and although the greater part of the listing of knowledge themes and skills in the framework is not challenged, our emphasis on the relevance of public health to clinical practice is certainly at odds with some of the inclusions.

Another more tangible conceptual horizon in our practice was the inability to see that the medical curriculum, and therefore opportunities to include public health, extended beyond the geographical borders of our campus. Contrary to expectations, aspects of public health are actually included in the first six months of study, which takes place prior to the arrival of students at our campus. It was only through the feedback from first-year medical students regarding their opinions on the adequacy of their educational experience that made us aware of these inclusions.

One conceptual horizon that was overcome in this inquiry was the paradigm shift in our thinking about our optimal strategies for the facilitation of learning about public health in our medical curriculum. By designing new and innovative strategies such as the use of social media and the design of a public health elective, we have challenged our acceptance of educational orthodoxy. In addition, our strategy of engagement with the School of Medicine challenges our previous malaise and inertia. If the quantum physics of Regehr (2010, p. 35) is revisited, we can claim that, by interfering with the status quo and engaging with the entanglement that characterises our context, we have released a positive life-giving energy to our practice (Whitehead, 2012, p. 3). This new energy, and in some cases renewed energy, is a result of our paradigm-shift in thinking about what is public health, our insight into what our intensions are and finally identifying spaces where we can realize our vision. This energy has wrought changes, not only in our practice but in the practice of others with visible positive engagement with not only the block-chairs and the organizational structures that steward developments in the medical curriculum. Our research has brought form and meaning to our common experiences and has provided a platform for a new person in our School whose portfolio revolves around the inclusion of public health in the medical curriculum. This combination of clarity and energy has brought our vision into focus and our intentions into view.

Moreover, energy is needed because 'public health education needs to be participative and delivered with passion' (Gillam & Maudsley, 2009, p. 129). My refusal to retreat from the classroom and my agreement with Tosteson that 'we must acknowledge ... that the most important, indeed the only, thing we have to offer our students is ourselves. Everything else they can read in a book' (1979, p. 693) is my claim to have lived my values of agency and care in my educational practice.

## **A return to agency and care**

The aspects of my educational practice in which my values of agency and care were denied have been outlined. This denial of these values provided the impetus for my practitioner research and this research has, in turn, made it possible to construct my living-theory of practice as a world with meaning. This meaning has been built,



not only by understanding my educational practice but, more specifically, by understanding the context of that practice more fully. By engaging in activities and conversations – sometimes possibly subversive – to construct meaning of my educational practice and the context of that practice, I continue to live my value of agency.

Exercising my sense of agency is part of my professional development and academic citizenship (Frenk et al., 2010, p. 1946). Through the realisation of my sense of agency, I claim to have contributed to my professional development as an accountable practitioner and claim to be a citizen in the world of public health.

Lack of agency results in, ‘anxiety, demoralization, and sense of loss of control’ (Berwick & Finkelstein, 2010, p. S63) and by exercising my agency in not only understanding my practice but more importantly in the context of my practice, I have lived out, and continue to live out, my value of agency. In this process I claim to have had an educational influence on my own learning, the learning of my colleagues and the medical students involved. In addition, as a result I have turned back the feelings of demoralisation and helplessness in my educational practice that is evident in this extract from a 2008 memo arguing for transformation of the public health content of a block:

But when one considers that it is apparently the worst rated block of under-graduate MBChB studies it is very unrewarding and with a sense of fatalism that one has to stand in front of the class with the usual programme/lectures.

Agency is linked to leadership (Federmann, as cited in Maeshiro, 2008, p. 320) and if agency is a ‘prerequisite for leadership then an educational practice context that does not promote agency does not promote leadership’ (Wolvaardt, 2014, p. 341). By engaging in this inquiry I have demonstrated educational leadership and have been personally transformed in the process. In short, I exercise the right to be concerned about my practice, the self-determination to be able to do something about it and finally the freedom to involve others in caring.

My living-theory is constructed out of a complex internal and external landscape of conceptual horizons, points of connection and a web of tension. This complexity replaces the ‘imperative of simplicity’ that characterised our acceptance of orthodoxy in medical education (Regehr, 2010, p. 31) and the effect of our actions continue to, thankfully, ‘bloom into unpredictability at a moment’s notice’ (op cit., p. 35).

My practitioner research has yielded ‘knowledge about practice that does not arise from daily practice alone’ (Dinkelman, 2003, p. 9). Engaging with the bigger picture of public health, the broad context of our practice and the bigger picture of our educational intentions has allowed me to theorise my practice as a practitioner researcher.

I have used my living-theory to make sense of my research findings, and used my research findings to construct my living-theory so that ‘the interplay helps us to produce theoretically structured descriptions [beyond] ... the empirical world that are both meaningful and useful’ (Ragin, as cited in Ten Have, 2004, p. 9).

The messy and complex context of practice and the messy and complex practice of facilitating learning about public health among medical students is typical of a postmodern tradition and through a Living Theory approach to action research I have been able to – to some extent – create meaning about the contradictory nature of life (Whitehead & McNiff, 2006, p. 34). As an agent for educational change, I have actively constructed a world with meaning (Bourdieu, 1984, p. 2). This world with meaning ‘assumes an obdurate, yet ever-changing world but recognises diverse local worlds and multiple realities, and addresses how people’s actions affect their local and larger worlds’ (Charmaz, 2006, p. 132).

In trying to theorise my practice, I had to look over my own conceptual horizon of practice, to look beyond the self, to see the bigger picture of the context of my practice and, in this expanded gaze, understand my educational practice better – because, in this inquiry, my “context is the irreducible covariate” in a complex world (Howell, as cited in Regehr, 2010, p. 36). However, this irreducible covariate of context cannot remain unaffected by our action research or our practice and so this living-theory continues to evolve and transform. By producing this living theory of a world with meaning, I invite others to enter my practice and my practice context and reframe their own practice in meaningful ways.

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