Chapter x.x.x

TEACHING THE RURAL DETERMINANTS OF HEALTH

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Introduction

Rural sites of teaching and learning afford excellent opportunities for students to understand, experience and learn about the broader issues in health and health care – why and how people get ill; the influence of families, communities and society on health and help-seeking behaviours; as well as how global issues such as climate change and globalisation of trade impact on health. Collectively termed the 'social determinants of health' by the World Health Organisation (WHO), these issues were the subject of a high-level commission in 2008, led by Sir Michael Marmot.[1] As the factors contributing to health and illness in rural areas have a particular profile, the 'rural determinants of health' have been delineated as being more specific to the rural context.[2]

There is a hierarchy of knowledge about health from molecular to societal levels, with a disproportionate focus in medical education on issues at a level 'below' that of the individual, who is identified as a patient. Students spend most time studying the anatomy, physiology, pathology, microbiology and pharmacology of disease at the level of atoms, molecules, cells, body structures and organ systems. Relatively little attention is paid to the issues of illness and disease beyond the individual level – in families, communities and societies as well as in the world as a whole. However, it is becoming increasingly obvious that medical practitioners cannot avoid engaging with the bigger issues.

Manchanda uses the idea of 'upstream doctors'[3] who attempt to address the social determinants, invoking the metaphor of a river to indicate the need to tackle problems closer to their source before they inevitably cascade 'downstream'. The linear logic of this metaphor assumes that health problems can be solved by doctors working on the social determinants of health, by blocking or diverting or changing the 'river' of disease in some way, and that these changes will then result in less harmful downstream effects. But social, economic and political problems are

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inevitably complex and resistant to linear solutions by health professionals, especially if they act in isolation.

In a rural situation, there are fewer role players and the context is less complex than in urban settings. It may be possible to see a whole community geographically from a high point, or socially at a community gathering. Relationships are often more personal and there is more interdependence and reliance between people than in urban areas. Even though distances are greater between homesteads, farms and settlements, there is often a greater level of social cohesion that allows visiting students to rapidly gain an understanding of the situation with respect to the health of a community. The impact of the broader determinants of health are also visible through critical events in rural areas – such as drought or flooding or the effects of unemployment and isolation. These may manifest in clinical presentations such as malnutrition, tuberculosis, drug and alcohol abuse, or anxiety and depression.

This chapter addresses teaching and learning that makes the links between the invisible mechanisms that produce the all too tangible clinical problems that are inevitably expressed in rural practice: how to think about them, where to start, how to teach and assess them, and what we hope students will learn and take away with them.

Inequalities, inequities and iniquity in health

A conceptual framework is useful as a starting point, to ground the learning discussion in a way of thinking that includes multiple perspectives.

Understanding inequalities in health is one frame for the discussion of rural medical education. A default assumption in rural health is that this revolves around the measurable differences between rural and urban areas in terms of access to services, health behaviours and health outcomes. But the rural-urban dichotomy is only one axis of inequality: there is also the public-private divide, as well as enormous inequalities in class, gender, race, ability and age.

Inequity is the major global challenge of our era, and the source of much violence, crime, migration, illness and disease. Inequality is not the same as inequity, however. While inequality merely means that there is a difference or a disparity between two groups or situations, 'inequity' implies that there is something unfair about a particular difference and that this needs to be addressed. A definition of health inequity is "differences in health that are avoidable and unjust".[4] By contrast, 'iniquity' refers to the deliberate perpetration of injustice.

There are three fundamentally different kinds of inequity, all of which are destructive of human lives and of human societies: vital inequity, material inequity, and existential inequity.[5]

- **Vital inequity** refers to health and longevity. This is familiar to those who have studied the patterns of public health, which show clearly that morbidity is greater and life expectancy is shorter for those from lower social classes, across the board. In most countries, but particularly in low- and middle-income countries, health status is significantly poorer in rural than in urban areas.
- **Material inequity** is clearly about access to resources. Most commonly (though not necessarily most accurately) this is measured by countries' Gini co-efficient which compares incomes of the richest and the poorest groups in a country. There are enormous inequities between rural and urban areas with respect to income, wealth and resources for health, including human resources.
- **Existential inequity** refers to the lived experience of inequity. It
  "means denial of (equal) recognition and respect, and is a potent generator of humiliations, for black people, (Amer–)Indians, women in patriarchal societies, poor immigrants, low castes and stigmatized ethnic groups. It is important to note here that existential inequality does not only take the form of blatant discrimination; it also operates effectively through more subtle status hierarchies."[5]
  This form of inequity also applies to rural citizens, who are too often 'othered' and regarded as backward or less educated than city people, or simply not viewed as important enough to be worthy of consideration.

Why should medical students, or their teachers, be concerned with issues of equity and inequality? The common biomedical perspective regarding these issues is that "it's not my problem", and many clinicians would rather focus on fixing something tangible and feasible, most often the next patient's presenting problem, than "waste time" on worrying about political, economic or social issues that they feel they can do nothing about. But those issues are precisely the original causes or contributing factors to the patient's illness, and ignoring them often means fixing the immediate problem and sending the patient back to the situation that caused the illness in the first place.[6]

Further, medical students are often drawn from well-educated and privileged backgrounds, and are often more interested in complying with society's expectations, including the exalted status that doctors are offered. This runs counter to doing community-oriented work that is less socially powerful. This should be explicitly challenged by medical educators. Henri Giroux,[7] a proponent of critical

pedagogy, writes about the secondary education system in the USA. In this quote, the word 'doctors' has been substituted for 'teachers':

> *"We must get away from training [doctors] to be simply efficient technicians and practitioners. We need a new vision of what constitutes [medical] leadership so that we can educate [doctors] to think critically, locate themselves in their own histories, and exercise moral and public responsibility in their role as engaged critics and transformative intellectuals."*

The rural determinants of health

The use of critical realism[8] as a theoretical lens gives us a framework for keeping these big picture, and somewhat intangible, issues in perspective. At a population level the complex interplay of the many factors that influence health is difficult to comprehend. Nevertheless, helping medical students to see the structural inequalities as expressed through an individual patient's illness is quite feasible in any context – but is particularly possible in a rural context where there are fewer actors and relationships are more immediate.

The 'social determinants of health'[9] is now a familiar phrase employed to broaden the approach to clinical problems to include patients' contexts and predisposing factors. While 'social' could imply that the determinants of health are simply to do with the way human beings interact with one another, it could also signal a broader set of factors that play a role in health, including historical, political, economic and environmental forces. The 2008 report of the landmark WHO Commission on the Social Determinants of Health clearly states that

> *"avoidable health inequalities arise because of the circumstances in which people grow, live, work, and age, and the systems put in place to deal with illness. The conditions in which people live and die are, in turn, shaped by political, social, and economic forces."*[1]

With respect to access to health services, Tudor-Hart's 'Inverse Care Law' asserts that

> *"[t]he availability of good medical care tends to vary inversely with the need for it in the population served. This inverse care law operates more completely where medical care is most exposed to market forces, and less so where such exposure is reduced. The market distribution of medical care is a primitive and historically outdated social form, and any return to it would further exaggerate the maldistribution of medical resources."*[10]

This observation applies as much to urban-rural comparisons as to the private-public dichotomy in systems of care to which he ascribed the inequities.

In rural and remote areas it is obvious that the geographical situation and dynamics play a major role in health behaviours and access to services as well as in health outcomes. Hence the phrase 'rural determinants of health' seeks to differentiate these aspects from the more general 'social' perspective. The 'real' rural determinants of health have been described diagrammatically across a range of immutable factors such as geography and history, through economic and political factors which change over time, to social and health system factors which are amenable to change through activism and governance.

Teaching the rural determinants of health means deliberately and intentionally bringing these rural "conditions in which people live and die" into the teaching and learning process, together with the political, social and economic forces that shape them.

Social accountability in rural medical education

The responsibility for orientating medical education towards the priority needs of the communities that it serves lies with each medical school as a whole, and not only with the planners and implementers of curricula. The concept of social accountability[11] has been championed globally by those medical schools that serve predominantly rural communities, and they have developed the field for others in urban contexts to follow.[12]

The identification of so-called 'reference populations' is a key concept in the social accountability approach and relates to the contexts from which students are selected, where they are trained, and where they end up practicing after graduation.[13] Rural communities are more easily delineated, and there is often little if any duplication of services – in contrast to cities which may contain a number of medical schools serving overlapping populations. In Australia the rural lobby is succeeding in championing a socially accountable agenda through strong leadership, government seed funding, rigorous research and consultation, and a political campaign to support rural training.[14]

A conceptual framework[15] has been developed for socially accountable medical education from an analysis of the internal and external factors influencing four rural medical schools in Australia and the Philippines. These faculty, university and regional-level frameworks assist significantly in orienting and stimulating medical schools to address the wider determinants of health within their local contexts, as well as providing tools for quality assurance and best practice in socially accountable rural medical education.

(Social accountability is also addressed in Chapter 1.1.3 of the Guidebook: "From the village to the globe: The social accountability of rural health practitioners".)

Teaching and assessing the rural determinants of health

A variety of educational practices have been used to teach the social determinants of health (SDH).

An American study[16] using the Delphi technique amongst educators, researchers, students and community advocates, managed to develop an SDH curricular consensus guide for teaching the SDH to medical students. The study concluded that SDH should comprise 29% of the total curricula and be taught continuously throughout the curriculum, with the highest ranked items regarding knowledge, skills and attitudes being *"appreciation that the SDH are some of the root causes of health outcomes and health inequities"* and "*how to work effectively with community health workers*".

Helpful precedents for planning curricula can be found in specific courses teaching concepts such as 'critical health literacy'[17], 'structural competence'[19], 'social medicine'[20], or using the SDH as a framework.[18]

Structural competence is defined by Metzl as

> *"the trained ability to discern how a host of issues defined clinically as symptoms, attitudes, or diseases ….. also represent the downstream implications of a number of upstream decisions about such matters as health care and food delivery systems, zoning laws, urban and rural infrastructures, medicalization, or even about the very definitions of illness and health."* [19]

The idea of 'social medicine' refers to the idea that health and disease emerge through complex interactions between biology and the social environment. However, such circumscribed courses run the risk of being dismissed or seen as irrelevant if they are too theoretical, out of context and isolated from clinical medical education. Integration is key to this challenge, and rural sites for medical education, where the significance of context is foregrounded, are ideal for this process of learning. Successful outcomes have been described in child health[21,22] and women's health[23] programmes for medical students and residents.

Case studies

The most powerful and relevant teaching involves case studies of clinical presentations – unpacking the broader issues that have brought a particular patient into a hospital bed, or an emergency presentation.[24]

Understanding where the person is from, how the illness started, what steps they took as the illness escalated, how they got to the hospital, how it feels to be in their shoes, and what they are hoping for, could be regarded as nothing more than good clinical practice with a listening ear. Explicitly linking elements of the patient's condition to the broader determinants of health is a further level of understanding that requires specific pedagogical steps – getting students to identify the upstream issues and explain the mechanisms that led to the presentation.

A further step is identifying the points in the development of the illness or disease when it may have been prevented or mitigated through earlier screening or a specific intervention, such as smoking cessation. Ward rounds using this approach can generate a portfolio of case studies that can be graded according to a rubric.

Case study: A tutorial in internal medicine

On a ward round in a tertiary level hospital in Cape Town, South Africa, three medical students in their 4th year (of 6 years) of training encountered a 35 year-old man in the medical wards with advanced chronic renal failure, needing regular dialysis. Stimulated to find out where he was from and the reasons behind his condition, they discovered that he had left his family in a rural province and come to the city specifically to seek medical care, since he felt that he was getting steadily worse at home, and access to specialist care at the local hospital was difficult. He stayed with some relatives in an informal settlement on the outskirts of the city and gained access to the health system through a local clinic, from which he was referred for specialist care to the tertiary teaching hospital.

As he did not have a fixed address in the city, however, he was deemed unsuitable for the renal transplant programme, the criteria for which included feasible follow-up by the renal physicians. The patient himself was nevertheless hopeful, and grateful for the care he had received up to that point, but the logistics of chronic dialysis twice a week were challenging, and would require a major change to his living arrangements. The students empathised with the patient, and felt upset by the unfairness of the system.

In the discussion following the presentation, the students were encouraged to discuss the likely causes of chronic renal failure in rural areas, the ethical aspects of the transplant programme criteria, the influence of the patient's precarious social situation in the city on his prognosis, and the feasibility of successful long-term dialysis. They discussed the historical, geographical, economic and social determinants of his health, with much debate around the advantages and disadvantages of finding a place in the city versus returning to his rural home for ongoing care.

The tutorial concluded around the principle of fairness and equity in health care, and the students committed to following up the patient in a discussion with the renal physicians.

Home visits

Home visits are often the most striking experiences through which medical students may understand the importance of context.

Setting up a home visit with a willing patient who has a chronic condition – or even getting the student to follow a patient home from a regular consultation or after being discharged from a hospital admission – highlights the different roles that the student should be encouraged to play outside of the medical context. If the student is well prepared with questions about the patient's environment, and if they have a dose of curiosity, these encounters can be transformative learning experiences for students, as they take place on the patients' terms. A facilitated feedback session is essential to make sense of their experience, which can be further enhanced by a written assignment that reflects on significant learnings.

A useful framework for structuring a home visit and the write-up is the simple three-step process of 'what', 'so what' and 'what next':

- **What?** (descriptive) i.e. what happened? What did you notice? What was unexpected? What was the most significant learning? What did you feel?
- **So what?** (analytical) How do you understand the issues that were presented? Why are things as they are? Why did things happen the way they did? What do they mean? Which of the social determinants of health played a role, and how? How could it have been different?
- **What next?** (action-oriented) What follow-up actions are needed? What are the implications of this learning for other patients, or future situations?

Referrals

Another very useful learning exercise from a rural site is for a student to accompany a patient who is being referred to a regional or urban centre for further management at a secondary or tertiary level of care. Negotiating the journey, helping to manage communication, the practical skills required for ambulance transfers, as well as the implications of appropriate specialist care, inculcate an understanding of the health system that no classroom lecture can approximate.

Making sense of the experience through a structured reflective essay that requires the student to articulate the connections that they make about the organisation and accessibility of the health system, is a useful way of deepening their learning.

Other approaches

A range of other innovative educational projects can bring learning alive. Photovoice projects for example, have been used to draw links between poverty and health care.[25] Asking students to identify a role model and describe why they chose that person, helps them to articulate some of the characteristics and attitudes that they may need to develop themselves.

While none of these exercises is exclusive to rural medical education, the setting of a rural health service links and infuses students' experiences with a context that may, in fact, teach them more than the actual content of the assignments.

Practice pearls

- While specific modules, projects and courses dedicated to addressing the social determinants of health are helpful, a key strategy is integrating 'big picture' thinking into routine clinical teaching and learning in various clinical disciplines.
- Including the social determinants of health in a discussion of appropriate patient presentations allows for an appreciation of contextual factors in *every* clinical situation.
- The rural context provides an advantage in terms of demonstrating contextual relevance, because the geographic, social, economic and historical determinants of health are more obvious.
- Home visits can be transformative learning experiences for students if they are well structured, as they take place on the patients' terms and instil an understanding of the importance of context.

- A range of other teaching methods centred around patients' real circumstances, can bring alive the learning of the rural determinants of health.

What to do

- Integrate the teaching and learning of 'structural competence' into clinical care of specific patients.
- Include the following questions in the discussion of appropriate patient presentations:
  - Where is this patient from? What is it like to live there? What are the conditions in that environment that may have contributed to their medical condition? What challenges are they likely to face on returning home [after discharge from hospital]?
  - Who is this person? What is it like to be in their shoes? What are they feeling, or hoping for, or fearing?
  - Who else is like this patient? What group of people does this patient represent, who may be at risk of a similar illness or presentation?
  - How could we think about intervening in that group to prevent or ameliorate similar [potentially end-stage] presentations in other people in the future?
  - What agencies exist at a community or local level that could assist in such interventions?
- Look for opportunities for students to undertake home visits to appreciate the role of context on illness.

What not to do

- Don't avoid the wider context of a patient's illness when considering a clinical problem.
- Don't minimise the role of 'social factors' in patient presentations, or even dismiss them as irrelevant to management.
- Don't just deal with the individual patient, but broaden the discussion to the population at risk.

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