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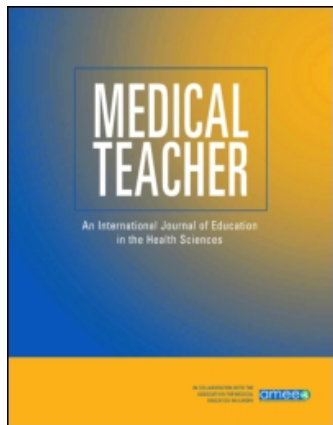
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Challenges to professionalism: Social accountability and global environmental change

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Abstract

This article explores the concept of professionalism as it relates to social change and social accountability, and expands on them in the light of global environmental changes. Professionalism in medicine includes concepts of altruism, service, professional knowledge, self-regulation and autonomy. Current dialogues around social accountability suggest that medical schools should re-orientate their strategy and desired education, research and service outcomes to the health needs of the communities they serve. This article addresses the following questions:

- How do we reconcile ideas of medical professionalism with the demands of creating a more equal, just, sustainable and socially inclusive society?
- What new challenges do or will we face in relation to environmental degradation, biodiversity loss, ecosystem health and climate change?
- How can medical schools best teach social and environmental responsiveness within a framework of professionalism?
- How do medical schools ensure that tomorrow's doctors possess the knowledge, skills and attitude to adapt to the challenges they will face in future roles? We offer ideas about why and how medical educators can change, recommendations to strengthen the teaching of professionalism and social accountability and suggestions about the contribution of an emerging concept, that of "environmental accountability".

Background: changes, concepts and challenges

Our global society is facing unprecedented threats from social inequality, financial and environmental crises and geopolitical tensions (Pang et al. 2015). In this time of global upheaval, medical students enter the profession with a desire to serve both individual patients and society. How should medical education respond to these emerging social and environmental challenges? How does professionalism align with social accountability and support engagement with social and environmental challenges?

Professionalism is a value-driven concept, variously defined in charters, statements and by task forces, but essentially offering a "social contract" between health professionals and the society that they serve (Cruess & Cruess 2008; Cruess et al. 2010). For the purpose of this discussion, we will use the definition of professionalism as a "set of values, behaviours and relationships that underpin the trust the public has in doctors" (Royal College of Physicians 2005).

A systematic review of the medical professionalism literature (Van de Camp et al. 2004) identified three key themes in professionalism:

- *Interpersonal professionalism*: meeting patient demands, altruism and service delivery.
- *Public professionalism*: accountability, submission to an ethical code and self-regulation.

Practice points

- Ideas of medical professionalism and social accountability have many overlaps.
- Both require responsiveness to the communities and society they serve – whether as medical schools, students, or graduates.
- Professionalism and social accountability will have to be increasingly adapted to respond to increasing environmental challenges and their social consequences.
- We explore a new concept of "environmental accountability" within the framework of social accountability.

- *Intrapersonal professionalism*: maintaining standards and life-long learning.

A UK definition of medical professionalism emphasises the increasing importance of mutual respect and partnerships with patients and has re-stated the continuing importance of integrity, altruism and ongoing improvement (RCP 2005). In contrast, some commentators criticise the vagueness of terms such as altruism and highlight difficulties in defining medical professionalism in undergraduate medical education (Jha et al. 2006). Concepts of social justice and accountability call for a

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stronger public voice, a re-definition of what society expects from the medical profession and challenge the idea of self-regulation, autonomy and self-governance.

Social accountability has been an important concept for medical schools for 30 years. A series of recent reviews and reports have strengthened the concept by recommending that the mission of medical schools should be explicitly aligned with the health needs of communities (and regions) they serve (Health Canada 2001; [Frenk et al. 2010](#); Future of Medical Education in Canada 2010; Global Consensus for Social Accountability of Medical Schools 2010; Future of Medical Education in Canada 2012). The Global Consensus for Social Accountability of Medical Schools (2010) defines a socially accountable medical school as one which

- Responds to society's health needs and challenges.
- Reorients its education, research and service priorities to address these needs.
- Works increasingly in partnership with other stakeholders to meet these goals.
- Assesses performance and impact against the above goals.

These concepts have moved from abstraction to implementation through two global initiatives. The Training for Health Equity Network (THEnet) offers a supportive network for schools seeking to align their work with social need and an evaluation framework (The Training for Health Equity Network 2011). The Association for Medical Education Europe's ASPIRE initiative (www.aspire-to-excellence.org) establishes principles of excellence in medical education and its social accountability framework offers clear criteria for which the first schools gained recognition in 2013.

For the purpose of this discussion, we use the definition of social accountability used by the World Health Organisation since 1995 "...the obligation (of medical schools) to direct their education, research and service activities towards addressing the priority health concerns of the community, region and the nation that they have a mandate to serve. The priority health concerns are to be identified jointly by governments, health-care organizations, health professionals and the public". ([Boelen & Heck 1995](#)). The definition makes clear that the identification of health concerns is a priority of all citizens not just governmental or professional elites.

The WHO definition has been further developed to include social responsibility, social responsiveness and social accountability ([Boelen & Woollard 2011](#)):

- *Social responsibility*: an awareness of society's priority health needs and challenges but not necessarily an alignment of educational, research or service outcomes to these needs
- *Social responsiveness*: an active identification of health needs of the community served, a mission to address these needs and programmes and outcomes aligned to address these needs.
- *Social accountability*: an active partnership with the community served (including the public voice) and a focus on how the schools (through their education, research and service activities) improve the health services and health of the communities they serve.

While the needs of individual patients and the local population are paramount to the duty of a doctor, as doctors and citizens we have responsibilities to fellow humans across the world. We are increasingly informed about (through media and travel), connected to (through trade and migration) and reliant on (for food and other goods and services) other parts of the globe. As doctors and as citizens, our actions affect other people: their environment (through climate change), working prospects and conditions (through the international labour market) and living conditions (via the development of new technologies, products and services). The inter-relatedness confers on us both benefits and responsibilities. For doctors, this includes professional responsibilities; in addition to attending to the needs of individual patients and the local population, the duty of a doctor includes recognising and responding to global threats to health.

Social accountability and professionalism

All social accountability frameworks emphasise the need for medical schools to produce graduates with skills and the disposition to meet the needs of the communities they serve. This entails an outcome-based education shaped more strongly by the public voice, strong public, patient and stakeholder partnerships, robust governance and evaluation, and the alignment of research, education and service towards improving health care. The GCSA suggests 10 strategic directions, each of which poses a direct challenge to prevailing definitions of medical professionalism such as autonomy, self-regulation, expert knowledge and altruism (Box 1).

The following discussion explores the idea of intrapersonal, public and interpersonal professionalism ([Van de Camp et al. 2004](#)) in the light of the Global Consensus statement (GCSA 2010). We extend this to consider links with professionalism and global environmental change.

Interpersonal professionalism: The element of professionalism which includes altruism, integrity and meeting patient demand ([Van de Camp et al. 2004](#)) constitutes the basis of a moral contract between the medical profession and society (RCP 2005; [Cruess & Cruess 2008](#), [Cruess et al. 2010](#)). The new models of professionalism include developing partnerships

Box 1. Ten strategic directions of the Global Consensus for Social Accountability (2010).

- 1: Anticipate society's health needs
- 2: Partner with the health system and other stakeholders
- 3: Adapt to the evolving roles of doctors and other health professionals
- 4: Foster outcome-based education
- 5: Create responsive and responsible governance of the medical school
- 6: Refine the scope of standards for education, research and service delivery
- 7: Support continuous quality improvement in education, research and service delivery
- 8: Establish mandated mechanisms for accreditation
- 9: Balance global principles with context specificity
- 10: Define the role of society

with health system stakeholders (with the public being the largest) and adapting to society's health needs. Patients and societies need support from advocates with expert knowledge advocate for individuals and communities. Community, patient and public voices co-ordinated with the voices of health professionals can strengthen health delivery and education. In the most socially accountable schools, such voices will be clear, explicit and central to schools planning and governance. As such, professionalism and social accountability have many areas of synergy.

The increasing fragmentation and diversification of the health professions challenges traditionally defined roles, expert knowledge boundaries and self-regulation within each professional group. It also provides opportunities for links with social accountability by aligning more closely to society's needs. For doctors, professionalism increasingly implies patient focus and flexibility in roles, skills and approaches just as social accountability implies that medical schools must develop a community focus and flexibility in determining outcome measures and delivery of training.

Public professionalism: For some, autonomy holds a central place in definitions of professionalism (Eraut 1994). For others, a focus on autonomy risks benefiting professional or governing elites over broader societal needs (Freidson 1994; Bottery 1998). Key professionalism themes such as autonomy, self-regulation and submission to an ethical code (Van de Camp et al. 2004) are challenged by social accountability concepts: both accept a relationship to societal needs, but disagree at the sites where professional autonomy and social accountability clash.

Intrapersonal professionalism: Life-long learning, maintaining standards and professional knowledge are central features of intrapersonal professionalism (Van de Camp et al. 2004). While there is consensus that life-long learning and professional knowledge should encompass scientific and clinical understanding, is the notion of professional knowledge an outdated concept within an era of increased public/patient representation and a more informed society where knowledge is freely shared, accessible and owned by all? Social accountability asks schools to adapt to society needs and to changing roles in health care delivery. Both present a challenge to defining professional knowledge for doctors and for educators seeking to teach professionalism to tomorrow's doctors.

Environmental changes, social accountability and professionalism

The GCSA (2010) highlights the importance of responsiveness to new societal challenges. Foremost is the need to protect ecosystems which provide the foundations of life and health. Many social determinants of health, from food and water to safe communities and healthy economies, are dependent on the health of ecosystems in which they exist and from which they draw their resources. The human population is seven billion and expected to reach nine billion by 2040, raising food, energy and water requirements by 50%, 45% and 30%, respectively, by 2030 (United Nations 2012). There is scientific consensus that our species has altered the biosphere's

equilibrium. Further disruption may result in major destabilisation of our planet (Rockstrom et al. 2009). In little more than a century, humans have burnt fossil fuels accumulated over billions of years, releasing carbon dioxide faster than it can be absorbed by carbon sinks (such as forests). The resulting increase in global temperatures and extreme weather events gives rise to death, injury, ill health or disrupted livelihoods, particularly in those countries least able to respond (Costello et al. 2009; Intergovernmental Panel on Climate Change 2014).

If social accountability is best understood as an alignment of the medical school with the needs of the community served, professionalism can be seen as an individual's alignment with society's needs. Any consideration of social accountability and professionalism must consider new challenges arising from global environmental change. As a first step, medical schools should encourage honest discussions about environmental determinants of health (e.g. water, land, air, and climate change) and their effect on social determinants (e.g. social injustice, nutrition, conflict, and migration). Tomorrow's doctors must understand and address the social and environmental challenges faced by the communities they serve, helping them to mitigate their own impact on the ecosystem. In that way, they can help ensure that the health services, policies, education and research they are responsible for promoting the long-term health of the planet and the communities that live within it.

Professionalism codes and the social accountability consensus both offer frameworks to prepare our graduates for the global environmental changes they will encounter. As medical practitioners and educators, we have previously demonstrated individual and institutional leadership in the dissemination of penicillin, the control of tobacco and the implementation of car seat belt laws. Environmental sustainability is an even larger threat to human health. We now discuss how it relates specifically to each dimension of professionalism.

Interpersonal professionalism requires doctors to be responsible, responsive and accountable in terms of the sustainability of services that they deliver. Sustainable health-care systems meet the health needs of the current generation without overly compromising the ability of tomorrow's doctors to meet their generation's health needs. A sustainable healthcare service uses resources more efficiently, focuses on prevention, avoids low value procedures, streamlines care to avoid waste, chooses low-carbon technologies wherever possible and fosters patient autonomy to manage their own care (Mortimer 2010). This requires medical educators to prepare graduates to manage low-carbon health systems, support the health and environment of their local and global communities, and help their patients identify and enact behaviours which benefit their health and their environment.

Public professionalism requires doctors to adhere to ethical and professional codes. The UK Royal College of Physicians (RCP 2010), the UK Academy of Medical Royal Colleges (Maughan & Gibbs 2014) and the American Nursing Association (2010) are among professional bodies highlighting that health professionals must exhibit environmental responsibility and environmental stewardship. Priority learning objectives identified in a UK-wide consultation highlight that sustainability issues bring to light new ethical tensions, for

example, in relation to resource use and allocation (Thompson et al. 2014; Sustainable Healthcare Education Network 2015). This requires professionals to understand their own values and articulate their judgement in challenging situations, be conscious of their responsibility to protect individual and public health and be aware of their role in being a health advocate especially for those who lack a political voice. Being a health advocate will increasingly mean being an advocate for the health of the ecosystems which sustain us.

Intrapersonal professionalism: Many doctors live socially and environmentally responsible lives but, as most citizens, few doctors go beyond individual behaviour change to advocate for social justice or ecosystem health. Indeed, most of us contribute disproportionately to the problem: we are high earners (contributing to social injustice), high consumers (contributing to environmental degradation) and high polluters (large carbon footprint, high water use, big cars, and relatively extravagant lifestyles). Do we have a professional duty to learn, teach and speak out before the impacts on human health become irreversible? We argue this needs consideration as part of intrapersonal professionalism in medicine, within our development of social accountability in medical schools and begins with our own contribution as medical educators.

Recommendations

A number of medical schools have initiated experiments in institutional practice and curriculum design to harness professionalism and social accountability to address the environmental determinants of health. These practical, local actions raise students' sense of social justice, social accountability and environmental responsiveness, contribute to their understanding of the tenets of professionalism and their ability to enact sustainable professional practice.

Core curriculum

To help foster outcomes-based education in terms of the environmental aspects of social accountability, three overarching learning objectives have been proposed (Thompson et al. 2014) which can be mapped to the strategic directions from

the Global Consensus statement on social accountability (Table 1).

Optional or student-selected components

Student-selected components of the curriculum allow motivated students to develop entrepreneurial ideas and also shift the awareness of other students and professionals, including develop ideas of social accountability and environmental responsiveness (Lausten 2005). Inspired by *Healthcare without Harm's* "Global Green and Healthy Hospitals" (Health Care Without Harm 2015), one medical school in Sao Paulo, Brazil, undertook to address sustainability issues through links with members of the public and professionals in other disciplines. Starting in 2013 with 10 medical students per year, a project was developed with a 400-bed hospital. Students developed links with local farmers to provide fresher, pesticide-free foods at the hospital, thus reducing 'food miles' and carbon emissions. The project brings together ideas of public professionalism and social accountability. Students gain awareness of the interdisciplinary responses required to address sustainability challenges, and an understanding of relationships between sustainability, citizenship and public health.

Medical electives are another student-selected area of the curriculum where schools can help reinforce and merge the teaching of professionalism, social accountability and environmental responsiveness. Schools can help shape the principles underlying electives to ensure that they are ethically and environmentally sound (Johnson et al. 2012). While often of profound individual benefit, electives can be both environmentally destructive (not least through the carbon footprint of international travel) and locally poorly integrated into host communities. Medical schools should encourage students to reflect on their impact (socially, ethically and environmentally) and consider professionalism and social accountability alongside medical learning and personal development in electives reports.

Table 1. Social accountability: Strategic directions and learning objectives for sustainable health care.

Type of learning	Learning objective for sustainable health care (Thompson et al. 2014)	Global Consensus on Social Accountability for Medical Schools (GCSA 2010)
Knowledge (Outcome 1)	Describe how the environment and human health interact at different levels	1: Anticipate society's health needs 9: Balance global principles with context specificity
Ethical reasoning (Outcome 3)	Discuss the duty of a doctor to protect and promote health in light of our dependence on the local and global environments	6: Refine the scope of standards for education, research and service delivery 10: Define the role of society
Leadership Skills (Outcome 2)	Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems	2: Partner with the health system and other stakeholders 3: Adapt to the evolving roles of doctors and other health professionals 7: Support continuous quality improvement in education, research and service delivery

These objectives are based on more detailed priority learning outcomes developed by the Sustainable Health Education (SHE) Network following wide consultation in response to a request from the UK's General Medical Council (GMC). While broadly following the structure of the GMC's *Tomorrow's Doctors*, they provide a template for both undergraduate and postgraduate training. The objectives and learning outcomes, particularly those for the "doctor as a professional", provide a framework which can help all medical schools link ideas of professionalism, social accountability and environmental responsiveness (SHE 2015; Table 2).

Policy

Finally, medical schools should review policies related to areas of social or environmental impact and use the ensuing debate to enhance an understanding of behavioural choices and system complexity. For example, should staff and students be encouraged to attend international conferences without consideration of their environmental impacts and the institutional and professional responsibilities outlined above? The UK's Sustainable Development Unit has produced a practical guide for sustainable meetings (SDU 2013) and Green Impact (NUS 2015) offers universities a framework to analyse and reduce their environmental impact, and the opportunity to involve staff and students in doing so.

Further debate

There will be considerable variation in the approaches used by different schools and educators to develop professionalism and social accountability norms and behaviours. Some will be more willing to explore difficult issues, such as the extent to which local populations are able and willing to define their own health needs whether doctors become 'agents of the public' over 'agents of the state'; and how to balance the various priorities of the public, health professionals and the state in health promotion and disease treatment.

Because the concepts of social accountability and environmental responsibility are normative, a diversity of opinions is both useful (to promote discussion and engagement with new issues) and potentially uncomfortable. To what extent does the responsibility of a doctor extend to his/her personal behaviour and leisure time? Is it a doctor's role to make overuse of resources socially unacceptable? Where do personal responsibility and action overlap with concepts of professionalism?

We suggest that each medical school has a duty to encourage such debates among its staff, stakeholders and students. Sustainable health service models have clear benefits for individual and societies. Engaging medical students in debates about professionalism and social responsibility regarding global social and environmental challenges may focus debate regarding public health issues and their role as global

citizens and may lead to new concepts of professionalism linking social accountability and what we may term "environmental accountability".

Conclusions

The concepts of medical professionalism and social accountability have many agreed overlaps: service, altruism, partnerships with community, public and patients, development of knowledge and skills responsive to communities' needs. Our greatest health challenge in future will arise from the consequences of global environmental change. To be professional in future will require environmental responsiveness from doctors; to be socially accountable will require environmental responsiveness from medical schools, medical education and medical curricula. A debate is needed across medical schools to explore the synergy and tensions within professionalism and social accountability. We suggest a new concept of "environmental accountability" may need to be developed within the existing framework of social accountability.

We predict that medical schools in 2025 will offer curricula exploring professionalism, social accountability and environmental accountability, that our graduates will better understand their responsibilities to the societies they serve and that our educational and research activity will be appropriately aligned with the current and emerging challenges posed by real and pressing environmental changes.

Glossary

Environmental accountability: the obligation (of medical schools) within the social accountability framework to ensure their education, research, and service activities help to actively develop, promote, and protect environmentally sustainable solutions to address the health concerns of the community, region, and the nation that they have a mandate to serve.

Table 2. Educating for sustainable healthcare; priority learning outcomes (SHE 2015).

Outcome 3 Doctor as professional

Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

- Explain how the health impacts of environmental change are distributed unequally within and between populations and the disparity between those most responsible and those most affected by change
- Recognise and articulate personal values concerning environmental sustainability, given the relationship between the environment and the health of current and future generations
- Discuss ethical tensions between allocating resources to individual patients and protecting the environment upon which the health of the wider community depends
- Demonstrate awareness of organisational sustainability policies and the legal frameworks for reducing carbon emissions

For full Education for Sustainable Healthcare Priority Learning Outcomes, see

<http://sustainablehealthcare.org.uk/sustainable-healthcare-education/priority-learning-outcomes>

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