Community Dental Health (2016) **33,** 168–172
Received 7 March 2016; Accepted 4 April 2016

doi:10.1922/CDH_3719Foster05

Overcoming structural inequalities in oral health: the role of dental curricula

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Abstract: To date the role of health professional schools in addressing oral health inequalities have been minimal, as attempts have focused principally upon systemic reform and broader societal obligations. Professionalism is a broad competency that is taught throughout dental schools and encompasses a range of attributes. Professionalism as a competency draws some debate and appears to be a shifting phenomenon. We may ask if professionalism in the dental curricula may be better addressed by social accountability? Social accountability directs oral health professional curricula (education, research, and service activities) towards addressing the priority health concerns of the community, in our case oral health inequalities. Although working toward dental schools becoming more socially accountable seems like a sensible way to address oral health inequalities, it might have limitations. We will consider some of the challenges in the dental curricula by considering some of the political, structural, social and ethical factors that influence our institutions and our graduates.

Key words: *social accountability, oral health inequalities, dental curricula, professionalism, ethics*

Introduction

In many countries, including Australia, Canada and New Zealand, the dental healthcare system is provided separately from the general healthcare system, and individuals must seek dental care predominantly through the private health sector. Other countries like the UK and the USA have more complex systems that involve the provision of dental care, through a mixture of public, private and third party providers. This allows for a market-driven system. The economic and social marginalisation that exists within many populations means that the oral health of lower income people is poor (Ministry of Health, 2010). In recent years, attempts to address health inequalities have focused principally upon systemic reform and broader societal obligations, with less emphasis upon the role of health professional schools and the graduates they produce.

While dental schools exist in large to "increase (student) knowledge and hone skills," an important competency is ensuring student acquisition and consistent demonstration of the "attributes of professionalism" (Marsella, 2007). The Association for Dental Education in Europe describes professionalism as a competence that includes professional attitude and behaviour along with ethics and jurisprudence (Cowpe *et al.,* 2009). Professionalism is a broad competency needed by dentists to act effectively and efficiently and is seen as a central part of both undergraduate and postgraduate curricula (Zijlstra-Shaw *et al.,* 2012). Professionalism is also a social phenomenon since professional status is granted by society. Professionals have, therefore, an obligation to meet the requirements of the society in which they practice (Irvine, 1997).

In principle, a health professional school is in a pivotal position to address society's priority health needs by involving its stakeholders and by producing socially responsible graduates through designing appropriate educational programmes. Endeavors such as THEnet (Training for Health Equity Network, 2011), aim to promote health equity by enabling educational institutions (in particular Medicine) to use social accountability principles that meet the needs of underserved populations. The Association for Medical Education in Europe has launched ASPIRE to recognise international excellence in medical, dental and veterinary schools (ASPIRE, 2016). It goes beyond the traditional accreditation process to recognise schools and identifies world-class excellence in education. One of the four areas of excellence to be recognised is the social accountability of the school (ASPIRE, 2016).

Recent findings from New Zealand undergraduate dental students show that they believe dentists should be accountable to society in a professional context and that they are responsible for patients who present at their clinic but that there is no professional obligation to help reduce oral health inequalities by working with populations facing inequalities (Chen *et al.,* 2015).

Although working toward dental schools becoming more socially accountable seems like a sensible way to address oral health inequalities, it might have limitations. We will consider some of the challenges in the dental curricula by considering some of the political, structural, social and ethical factors that influence our institutions and our graduates.

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Professionalism in Dentistry

Professionalism is a central part of both undergraduate and postgraduate dental curricula today. A mixture of definitions of professionalism exists with some purporting the idea of putting the needs of others first (Masella, 2007; Welie, 2004), while others emphasise the building of the relationship with the patient (Trathen and Gallagher, 2009). A precise, concrete definition in dentistry is required if teaching professionalism is to be achieved (Zijlstra-Shaw *et al.,* 2012). However, the question of dentistry as a profession and professionalism within dentistry appears to draw some debate (Welie, 2004; Trathen and Gallagher, 2009). Professionalism appears to be a shifting phenomenon with the expansion of commercialism in dentistry. When surveying 924 dentists in the UK in 2013 the altruistic components of professionalism were redefined with relationships within and outside the practice that carry survival value. The professionalism factor was statistically related to the commercialism factor and it appears the social contract has become one between the dental staff, patients and the local community (Harris *et al.,* 2014). If we consider one of the definitions of a profession "*a collective of expert service providers who have jointly and publicly committed to always give priority to the existential needs and interests of the public they serve above their own and who in turn are trusted to do so*." We may ask again is dentistry a profession and would professionalism in the dental curricula may be better addressed by social accountability?

What is Social Accountability?

The World Health Organization (WHO, 1995) defines the social accountability of health professional schools as "*The obligation to direct [health professional] education, research, and service activities towards addressing the priority health concerns of the community, the region, and the nations [health professionals] have a mandate to serve*" (Boelen and Heck, 1995).

While the WHO definition seems quite clear, social accountability is a term that is often used interchangeably with other similar terms, such as "social responsibility". According to Boelen and Heck, a health science faculty can be socially responsible when it responds to societal needs and acts proactively to fulfill those needs. However, being socially responsible does not capture the idea that a faculty can and should be held to account by its stakeholders. For that reason the WHO suggests social accountability should be the key concept driving curricula design and administration (Boelen and Heck, 1995).

Why social accountability and oral health inequalities matter

Research suggests that low-income adults with poor oral health are often unhappy with the appearance of their teeth and that, regardless of income, they value good oral health (Bedos *et al.,* 2009; Fitzgerald *et al.,* 2015). These studies draw on the complex issues of cost, the state's involvement and relationships with differing providers. The relationship between economic deprivation and poorer oral health is well known with the cost of care being identified as a major barrier (Fitzgerald *et al.,* 2015). From a political standpoint oral health should be considered an important issue. Disadvantaged Canadians also identified that unsatisfactory dental appearance weakened their self-esteem, which in turn limited their ability to be socially and professionally active (Bedos *et al.,* 2009). Poverty has been shown to influence poor oral health (Poulton *et al.,* 2002), which in turns reinforces poverty (Bedos *et al.,* 2009).

More recently the Commission on Social Determinants of Health (CSDH) was set up by the WHO to get to the heart of the complexity that defines health and how the structure of societies are affecting population health (Solar and Irwin, 2010). They developed a framework to show how social, economic and political mechanisms give rise to socioeconomic positions, whereby populations are stratified according to income, education, occupation, gender and ethnicity/race.

Any serious effort to reduce oral health inequities will involve changing the distribution of power by restructuring social and political institutions to the benefit of disadvantaged groups. It is clear from this framework that action on the social determinants of health inequities is a political process that engages both the agency of disadvantaged communities and the responsibility of the state (Solar and Irwin, 2010). This in turn implies that institutions such as dental schools should be configured so that they are socially accountable and work towards alleviating oral health inequality.

Social accountability as a remedy for oral health inequalities

THEnet has developed a model and a philosophy that endeavors to take a participatory approach: governance and strategies are planned with meaningful input from all relevant stakeholders, particularly local government and communities, with a primary focus on the priority health and social needs of their community. They claim that a Faculty is socially accountable when it seeks to engage with all issues that impact on the social determinants of health (THEnet, 2011).

When considering social accountability as an outcome, we have to recognise it at the institutional level (evaluation) and at the individual level (assessment) (Leinster, 2011). At the institutional level THEnet has described a framework to account for the four principles that the WHO suggests delineate social accountability – relevance, quality, cost-effectiveness and equity. Their framework clarifies the idea of Conceptulisation, Production and Usability into planning, doing and impact (Boelen and Woollard, 2009).

THEnet has also identified the need to assess "Are our education interventions having the desired effect on the behaviour and practice of our graduates?" Several longitudinal studies have demonstrated that curriculum does have an impact on students' views, and therefore it is important that curriculum should positively influence views (Crandall *et al.,* 1993; Habibian *et al.*, 2011; Holtzman and Seirawan, 2009; Pottie and Hostland, 2007). THEnet has advocated using the Medical Students Attitudes towards the Medically Underserved (MSATSU), a questionnaire developed in 1993 and further modified in 1998 by Crandall et al. Within this questionnaire is a 23-item scale to be completed that specifically addresses student's attitudes as health professionals to providing indigent access to health care (Crandall *et al.,* 1993). This questionnaire has been used in medicine, pharmacy and dentistry (Crandall *et al.,* 1997; 2008; Habibian *et al.,* 2011).

Having explored dental students attitudes towards social accountability in a dental school in New Zealand using the MSATSU as a guide, it was clear that the domains put forward by Crandall *et al*., were not relevant or clear to this generation of students (Chen *et al.,* 2015). The domains of societal expectations, dentist/student responsibility, personal efficacy and access to care were not distinguishable and there appeared to be significant thematic overlap. If the behaviours and attitudes of individual graduates are significant components of defining social responsibility, new methods of assessment need to be developed that reflect the central elements of social accountability. To date discussion of social accountability within dentistry have occurred in the absence of a clear explanation of the concept or its application by dentists (Dharshami *et al.,* 2007).

When comparing the empirical evidence about the tangible impacts of social accountability across a broad range of initiatives (not just oral health inequalities), the results are mixed (Fox, 2015). There also appears to be limits to the conceptual frameworks usually applied to social accountability. A recent meta-analysis considering citizen-state engagement interfaces found that strategic approaches had a greater impact compared to more tactical approaches on social accountability (Fox, 2015). Enabling environments for collective action, combined with bolstered state capacity to respond to citizen voice are more promising. Sandwich strategies that are mutually empowering, through state-society synergy enable environments by emboldening citizens to exercise voice, which in turn can trigger and empower reforms, which can then encourage more voice. That is "*voice needs teeth to have bite – but teeth may not bite without voice"* (Fox, 2015).

There is a need for an agreed method of measuring graduates social accountability in the long term that is conceptually sound. Consideration into the recent advances in the "state-society synergy" conceptual framework for understanding institutional change needs to be considered (Evans, 1996).

Challenges to dental education addressing oral health inequalities via social accountability

Most societies expect dentists and other health care workers to place a high priority on society's welfare, a belief that is at the core of most debates on health care and distributive justice. There is a prevailing belief that social responsibility in dentistry is subordinate to the economic imperative, which runs at odds with the policies and practices, which might improve access to care particularly for lower-income individuals. It is not that simple, however as theoretically, the concept of social responsibility is influenced by a range of viewpoints (recipient, provider, society) and subject to multiple influences (political, professional, economic, philosophical) all of which have surfaced in recent studies (Bedos *et al.,* 2009; Chen *et al.,* 2015; Dharshami *et al.,* 2007; Fitzgerald *et al.,* 2015; Harris *et al.,* 2014; Levesque, *et al.,* 2015).

Factors such as resources and the structure of health services also have a large effect on health professionals' attitudes and behaviours when they practice (Leinster, 2011). These elements are strongly influenced by the prevailing economic and political climate where a dental school is situated and when resources are tight the willingness to serve society in the public interest may be a casualty (Harris *et al.,* 2014). For a school to be socially accountable one needs to consider the environment that the graduates are going to practice in. This is not directly under the control of the dental school. Thus a dilemma is presented to the Faculty with respect to deciding what extent it should produce graduates who fit the existing health structures or instead attempt to influence those structures to fit the principles of social accountability. In New Zealand, adult patients pay for their dental care with no subsidy available and very little insurance cover. Students from this dental school strongly agreed that there needs to be change to the dental health care system in New Zealand from a structural and political level to address oral health inequalities, rather than individual dentists assuming greater responsibility (Chen *et al.,* 2015). In this instance we can change the curricula for our students to be more socially responsible but without change also occurring at a government level, students feel as if they cannot be agents of change. However, the debate is also if our graduates feel that they want the system to change. There are reports suggesting they value the market-driven approach of dentistry. Dentistry is regarded as a profession that many people choose because of the living standards it can provide. Although many may be interested in caring for patients, they are also motivated by the wish to earn a high income (Dharamsi *et. al.,* 2007; Levesque, *et al.,* 2015; Masella, 2007).

Several qualitative studies have explored what impact changes to the curricula may have on student's attitudes and beliefs towards their role in society as dental professionals. These interventions include participation in outreach community health programs and modules such as PACS (Professionalism and Community Service) at the University of British Columbia, which is based upon community service-learning. The objective of this programme is to encourage students to understand the challenges that vulnerable segments of the population face and to learn about the social determinants of health, outside the classroom, so they may ultimately be socially responsible professionals. The study found that students argued about where the primary responsibility for the care of the disadvantaged should lie: the dentist, the dental profession, or the society either separately from each other or working collaboratively (Brondani, 2012). Findings from the programme additionally revealed that despite students having exposure to community service learning, socially irresponsible students and dentists may always exist. This would be attributed to the variety of personalities, and the values of students.

Inter-professional education initiatives have also sought to incorporate the concept of social accountability into assessment. Three New Zealand institutions combined to introduce a pilot programme for final year under-graduate students in a rural region with the highest proportion of socio-economically deprived populations. A project task was designed which involved the development of a community education resource that could be of immediate benefit to the population, with the view of creating the opportunity for students to experience activities that would facilitate acquisition of skills and values towards social responsibility (Gallagher *et. al,* 2015). The students believed in the value of their work and this was reflected on the community. There were reports from one of the community organizations that by incorporating data generated from the project, they were able to secure external contracts and government funding. (Gallagher *et al.,* 2015).

A dental school in the United States also reported on the effects of service-learning experience on a group of dental students' beliefs about cultural competence, professionalism, career development and perceptions about access and disparities issues (Behar-Horenstein *et. al,* 2015). Prior to the beginning of dental school, students voluntarily participated in a six-week service-learning programme in which they interned in an at-risk setting in order to experience the delivery of health care there. The students were asked to complete a writing assignment and gave them an opportunity to capture their experiences, actions and emotions while providing researchers with insight into the students' process of understanding the integration of these activities with their training.

> "*The experience will give me insight into the different types of jobs and roles that might be available to me in the future*".

One student expressed that she could initiate improving the fit between providing patient care and information by "attending community meetings and advocating for funding and even sharing my experiences/observations through this program with some of the leaders of the community" (Behar-Horenstein *et al.,* 2015).

However, even though there is evidence of students' perception of their role in being advocators, a recurring theme in these studies was that they believed that society has the ultimate responsibility for providing dental care for the disadvantaged over individuals.

> "*The students also believed that poverty relief was a duty of the government. They expressed varying levels of criticism about the way the government addresses the problem. A few students argued that even though the government provided opportunities for those living in poverty to break the poverty circle, many of them wasted those opportunities and opted for a lifestyle discordant with profitable life*" (Reis *et al.,* 2014).

That many dental students perceive poverty as a distant issue and as the responsibility of the government or of the poor individual themselves and do not plan to work with patients living in poverty in the future raises the challenge to dental schools to adopt strategies to increase students' critical consciousness of oral health inequities (Reis *et al.,* 2014).

In part students who enter dental professional programmes have clear expectations of what they should learn, the importance of that learning, its perceived relevance to practice, and what experiences they can expect during their studies (Hammick *et al.,* 2007) and on into practicing life. Dental students expect to become competent health professionals by undertaking a curriculum that encompasses diagnosing oral problems, undertaking comprehensive clinical examinations and performing dental procedures. These learning-related characteristics are referred to as student presage factors and have a direct impact on the way students choose to process tasks (Biggs and Tang, 2007; Reeves *et al.,* 2006). Presage factors exist before the learning experience, influence its creation, conduct and learning outcomes. It is not surprising then that dental students before commencing dental school have perceptions of their role and how they will practice as health practitioners when they graduate.

It appears in dentistry that young people seeking social status and wealth are being lured to this profession (Welie, 2004). However, being a professional is not, nor should be, about privileges and rights. That the socio-demographic make up of many students within dental schools worldwide do not mirror the society they are serving is therefore of no surprise (Crampton *et al.,* 2012). The social stratification can only be redistributed if there is change, with students from disadvantaged groups being able to gain entry into dentistry. Many institutions have strategies to address their role in producing socially accountable graduates with changes to their admission policies (Crampton *et al.,* 2012). Despite education interventions designed to increase student exposure and awareness to vulnerable populations and to foster socially responsible physicians, the majority of students continue to seek graduate jobs in the private sector of urban areas. It appears still that the focus is on local, regional and national needs but dentistry (or oral healthcare) is a global profession. Are addressing global oral health needs a component of social accountability? The flow of dentists and dental specialists from poorer countries to wealthier countries is also a dilemma facing dental and other health care professional educators worldwide (WHO, 2010).

Conclusion

How dental educators aim to prepare their students to be socially accountable professionals so they understand that there is no conflict between "doing well" and "doing good" will continue to be a challenge. This is not new as twenty years ago, Entwistle asked, "Are we creating socially responsible dental professionals?" and raised a series of related questions that are equally relevant today. These include issues affecting access to care, such as poverty, cultural differences and the practice of dentistry in a market-driven society (Entwistle, 1992). Creating professional and socially responsible graduates may not be enough to address the oral health inequalities present today. Dental schools need to consider the overall role of delivering socially accountable graduates that are change agents with the capacity to work on health determinants and contribute to adapting the health system to improve oral health outcomes for all.

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