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INVITED REVIEW

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Oral health therapists: what is their role in Australian health care?

Abstract: The aim of this report was to examine the role of the oral health therapist (OHT) in the contemporary Australian context. The original intent of the OHT role was to address unmet community oral health need in a cost-effective manner. Although it was recognized that OHTs would need to deliver clinical treatment, particularly restorative services for children, the core of their education and their knowledge and proficiency is in oral health and public health promotion. Unmet oral health need persists, and this is especially urgent for the most disadvantaged. Some may argue that this provides evidence that OHTs should provide an expanded range of clinical services, including adult restorative treatment, and that additional training should be provided to enable this to occur. This report counters that view by showing that the current health system does not avail itself of the health promotion services that OHTs are already educated to deliver. Improved health outcomes within the Australian health system are achievable by bringing oral health into the general health system, by introducing models of care aimed at the early detection of risk and disease and by recognizing the importance of public health measures designed to prevent disease.

Key words: health promotion; oral health therapist; prevention; public health; scope of practice

The context

A health system has been defined as 'all the people and actions whose primary purpose is to improve health' (1). Somewhat counter-intuitively, health system expenditure is not directly related to better health outcomes. There is a global need to identify ways to improve the performance of health systems. This report will describe how the oral health system continues to fail to meet the oral health need that exists in Australia today. It will show that the current workforce does exist to address the problem, but that it is not being used in an effective way. Expansion of scope of practice for oral health therapists (OHTs) and dental therapists is a hotly debated topic not just in Australia but also internationally. We argue that expansion of scope of practice for these professionals is unnecessary and that currently this expansion is headed in the wrong direction. Oral health therapists are needed, but not to mimic the role of the dentist and provide restorative care for adults as well as children. Instead, their role should focus on disease prevention, both in the clinic and in the community. The underlying message is simple. Dental disease is widespread and expensive to treat and impacts negatively on the quality of life and overall health of Australians. The most disadvantaged have the poorest access to care and suffer the most from dental disease. The

Australian government has continually increased expenditure on dental care (2), yet the burden of dental disease remains high (3). More of the same will not work. What is needed is a fresh approach to maximize the efficiencies and equity of the current system, its workforce and resources and to begin to value prevention as a service and health as an outcome of the dental health system.

The Australian health system is generally held to be one of the best in the world. It is ranked 2nd, after Japan, according to the level of health enjoyed by its population, as measured by disability-adjusted life expectancy (1). Its performance in terms of level of responsiveness (characteristics such as respect for people, prompt attention and choice) is ranked 12th. If, however, success of a health system is judged by the equity of health outcomes across the population, then Australia's global ranking slips to 17th. When it comes to fairness of the way all Australians pay for their health care, we are ranked at around 26th in the world (1). The shortcomings and threats to the Australian health system have been thoughtfully articulated by the National Health and Hospitals Reform Commission Report (4). This report identifies the unacceptable inequities in health and access to services experienced by some Australians, including Indigenous populations, people with mental illness and those living in rural and remote areas. Access to dental care was also stated to be a priority issue.

While health inequities are an issue for the Australian health system overall, this problem is magnified in the area of oral health. This is in large part owing to the failure of oral health to integrate into general health at the health system level. The Australian health system is funded primarily by the Commonwealth and State and Territory governments, with a much smaller contribution by private health insurance and out-of-pocket funding (2). For oral health services however, you would be forgiven for thinking that the mouth was not a part of the body. Most dental services are funded privately, with some contribution by private health insurance. In fact, individuals funded 61.5% of the $6.7 billion spent on dental services in 2008-09, while governments funded only 22.8% (2). Confirming the scale and uneven distribution of the problem, a recent report (5) found that poor dental health costs the Australian economy (aside from costs of dental services) $2 billion annually, that children from low socioeconomic groups had 70% more caries than those from the highest socioeconomic groups and that adults on the lowest incomes were almost 60 times more likely to be edentulous than those on the highest incomes.

All Australian states and territories provide public dental services. Eligibility is via government concession card. However, publically funded dental clinics are not able to meet the needs of the population because of limited human and financial resources, with facilities mainly found in the major cities or regional centres. Owing to resource constraints and growing waiting lists, more time and resources are spent on emergency dental care in the public health system than on prevention or early detection of dental disease, which in turn increases the inequities in oral health. School dental services are controlled and funded by the States and Territories and provide free dental care to primary and some secondary school students, although this varies within Australia. The Commonwealth also contributes to dental care through programmes such as Veteran's Affairs, the Armed Forces, community-controlled Aboriginal Medical Services and support of the university education of dentists, dental therapists, dental hygienists and oral health therapists (6).

The problem: oral health inequities

Despite some improvements in oral health over the last decades, the proportion of the Australian population experiencing poor oral health is still high (3). A social gradient of oral disease exists, and the greatest burden of disease is borne by the most socially disadvantaged: those on low incomes, people living in rural and remote areas, Indigenous people, the aged and those with disabilities. The National Oral Health Alliance (7) has been successful in uniting professional and community organizations in raising awareness and calling for action to address oral health inequities. What is needed is some practical policy to be implemented as soon as possible.

Good oral health is essential for a good quality of life. Without it, people have difficulties with many everyday functions such as eating, speaking and socializing. It impacts on relationships with others and can influence life chances (8). Most oral diseases are preventable, and so theoretically, oral health inequities are avoidable. Interventions must however acknowledge the social determinants of disease and disease risk if they are to be successful. The determinants of oral disease are largely the same as those for other chronic diseases such as diabetes and cardiovascular disease, arguing for a common risk approach to public health measures (9). The social and structural determinants of general and oral health include social norms of health knowledge, attitudes and behaviours, level of education, employment, and access to adequate housing, nutrition and health care. These 'upstream' determinants are linked to the 'downstream' determinants of health behaviours such as smoking, diet, hygiene and attending health services (9).

So, in Australia, while those who can afford it seek dental care in the private sector and children and disadvantaged adults have access, although limited, to public dental services, there are those who fall completely through the cracks. These are the people who do not qualify for public dental services and cannot afford the significant costs of private dental care. The relative paucity of government contribution to oral health implies that dental care is non-medical, elective and therefore of low priority (6).

In summary, the Australian oral health system causes an uneven distribution across the population in the level of oral health outcomes achieved, in the responsiveness of the system and in financial contribution – by the WHO definition, an unfair system (1). These inequities are set to increase given the challenges of the future: an ageing population that expects to keep their teeth, more people living with complex chronic disease that impacts on oral health and oral health care, poten-

tial workforce mismatches and a fragmented health system. The attributes of an ideal oral health system are listed in Table 1 and are helpful in understanding what is needed for the Australian oral health system to move towards a fairer model (10).

Analysis of the problem

Socioeconomic factors, beliefs, knowledge, cultural differences and the physical environment have a direct effect on the status of an individual's oral health. Availability and access to health services is very limited, particularly in the case of low socioeconomic status and Indigenous Australians. Australians eligible for public dental care (low income) have poorer oral health as measured by a number of indicators (tooth loss, untreated decay and periodontal disease) (5). The National Health and Medical Research Council of Australia Road Map (11) states that 'Poor oral health occurs more commonly among Aboriginal and Torres Strait Islander people and results in impaired quality of life from infection, pain and impaired eating'. Evidence (although limited) from previous studies emphasizes the inequities in the oral health of Indigenous compared with non-Indigenous Australians. Indigenous people suffer a higher burden of oral and systemic disease, and this can be attributed to poor access to health care for screening to detect early disease, risk assessment and preventive measures; and low levels of oral health literacy (12). Indigenous adults have been shown to have higher levels of tooth decay, higher levels of untreated tooth decay and higher levels of tooth loss and severe periodontal disease compared with non-Indigenous adults attending public dental services (13). The higher levels of periodontal disease are likely to be related to the higher prevalence of diabetes, particularly uncontrolled diabetes, in older Indigenous adults, as there is a well-established link between diabetes and periodontal disease (14). Indigenous patients have been shown to be much more likely to have extractions than are non-Indigenous patients (odds ratio 3.40; 95% confidence interval = 2.02–5.73). Of concern, these increased odds of extraction services for Indigenous patients persisted after controlling for oral disease status (15).

Table 1. **The ideal attributes of an oral health system (10)**

Integrated
Emphasis on health promotion and disease prevention
Monitors population oral health status and needs
Evidence-based
Effective
Cost-effective
Sustainable
Equitable
Universal
Comprehensive
Ethical
Continuous quality assessment and assurance
Culturally competent
Empowers individuals and communities

The oral health inequities described therefore have a significant impact on the lives of our most disadvantaged Australians. The causes of these inequities are complex. The failure of the oral health system to integrate with the overall health system, particularly with respect to funding models, underlies most of these causes. Poor access to oral health care is a major issue, and this may be caused by geographical isolation, culturally inappropriate health services, maldistribution of oral health professionals, financial constraints and inadequate infrastructure. Lack of a focus on prevention in the public sector, particularly for community level programmes, also ensures that the disadvantaged do not reap the oral health rewards enjoyed by more affluent Australians. In contrast to other health issues (16), there is a surprising lack of information on the cost-effectiveness of dealing with the burden of oral disease. Without this information, we are not using an evidence base for the interventions (treatment or preventive, individual or community based) we are asking our oral health workforce to implement.

A possible policy response

Despite government funding for public dental services increasing steadily over the past decades, this continues to go nowhere near meeting the needs of eligible patients (17). There is currently much debate about proposed changes to the funding model such as introducing a universal dental access scheme (17); however, the extraordinarily large investment required to implement such a scheme is extremely unlikely 'in the context of a difficult fiscal environment' (4, 17). Regardless of any proposed changes to the funding model, it is imperative that improvements to the performance of the oral health system are made, that is, using currently available resources more effectively to reduce oral health disparities. The challenge to raise the profile of oral health in health policy is also occurring internationally, and in the United States, a report entitled *Advancing Oral Health in America* was recently released by the Institute of Medicine (18). Evidence-based preventive services (both individual and community) and workforce innovation were among the key recommendations in this report for maximizing the impact of limited resources. Almost a decade earlier, however, Australia's National Advisory Committee on Oral Health had delivered an outstanding report, which articulated these very issues and proposed a wide-ranging plan for addressing the problem in this country. This was the *National Oral Health Plan 2004–2013* (6). While this plan has provided a comprehensive framework for public oral health research in Australia, it deserves more attention by those responsible for policy development. Moreover, it is timely that this plan is revisited to address the current issues and to support oral healthcare policy development for the subsequent decade and beyond.

Oral health therapists are tertiary-qualified oral health practitioners who have knowledge and proficiency in the areas of dental hygiene, dental therapy, oral health education and promotion, as well as public health and health promotion (19).

Oral health education is performed by OHTs to raise awareness and change oral health behaviours of an individual. Traditional models of oral health education were ineffective because of their didactic delivery and failure to acknowledge the patient's individual context, readiness for change and motivations, that is, the social determinants of health. Interventions using motivational interviewing techniques have proved effective, however (20), and it is this type of evidence-based health education that we suggest OHTs should be providing for their patients. Health promotion is another activity that OHTs are educated to undertake, and it consists of initiatives designed to enhance the health of a community and does not need to be confined to oral health issues.

Oral health therapy is a relatively new health profession, with the first Bachelor of Oral Health Program being created in Queensland (jointly by The University of Queensland and Queensland University of Technology) in 1998 (21). This new profession took the skills of two existing professions, dental therapy (oral health care for school-aged children, including restorative treatment and extractions) and dental hygiene (preventive oral care for all ages) and embedded these clinical skills in a preventive framework – prevention not just for individuals, but for communities. Oral health therapy is therefore a discipline that is complementary to dentistry with public health and the behavioural sciences at its core. It is a common misconception that OHTs are simply a combination of a dental therapist and a dental hygienist, and the term 'dual-trained' is commonly used. This definition limits the concept and potential of the OHT as originally intended. Oral health therapists in Australia are required to work in a structured relationship with a dentist (supervision) and cannot practise independently (22). While OHTs are employed throughout Australia, in both the private and public sectors, they are not utilized to best effect in the current health workforce given their skills and knowledge. In the public sector, they are almost totally confined to providing individual oral health care for children, and only a handful are employed in health promotion roles. The 2006 workforce data (23) show that there were 371 practising OHTs in Australia (1.8/100 000 population) with 62.0% employed in the private sector, 34.3% working in the school dental service, 2.4% in the community dental service or dental hospitals and 1.3% in teaching roles. Of concern and despite their education and training in this area, only 2.1% of the average hours worked by OHTs was spent on oral health promotion activities.

Expanding the scope of practice for oral health practitioners (OHTs and dental therapists) has received much attention in recent years. The proposed expansion of scope would enable these practitioners to place restorations for adult patients, purportedly to address unmet need. The Dental Board of Australia's revised scope of practice definition (22) replaces the previous list of duties with a requirement to having received the education required and possessing the competence to perform procedures. This allows for the graduate competencies to be determined to some extent by the education provider. All programmes must however be accredited by the Australian Dental Council. In Victoria, therapists and OHTs already provide direct restorative care to adult patients up to 25 years. Recently, a 6-month bridging programme was piloted to upskill therapists in that state to provide restorative care to adults aged over 25 years (24). Of the 10 self-selected and experienced therapists who participated in the programme, eight were assessed at the completion of the programme to be clinically competent to treat adults without the supervision or prescription of a dentist. Already, the oral health curriculum is changing with one institution training OHTs to place 'simple' restorations in adult patients of any age (25). In a 3-year (equivalent) programme, the challenge is to ensure that such a significant addition does not impact the emphasis placed on other aspects of the programme, such as health promotion.

All Bachelor of Oral Health programmes within Australia are accredited by the Australian Dental Council and are designed to provide graduates who can provide oral health promotion for individuals and the community; diagnose and recognize oral conditions; plan and deliver clinical and preventive treatment (within scope of practice); evaluate care; and collaborate with other dental and general health practitioners (19, 26). Opportunities for OHTs to perform their full scope of practice are limited by the health system. It is proposed that the health system reviews its utilization of these oral health professionals to maximize their contribution to the oral health of all Australians. Career pathways should be structured to ensure that the public sector attracts and retains OHTs and that there are opportunities for them to perform the entire spectrum of their current scope of practice. Oral health therapists should be utilized to ensure access to oral health care for children is safeguarded, provide preventive oral health care to adults and undertake screening risk assessments focused on the early detection of disease. Oral health therapists are also the appropriate health professionals to identify public health measures that integrate oral health into general health campaigns to maximize benefits and opportunities, for example tobacco cessation, healthy eating and encouragement of regular preventive health checks. Working with other health professionals, OHTs could improve awareness of oral health issues interprofessionally and help integrate oral health care into the general healthcare plan for individuals. It is also important that OHTs contribute to the evidence base of oral health by undertaking research in clinical and public oral health.

Recommendations

Oral health therapists have a broad range of skills which include risk assessment and health promotion. These skills are largely underutilized in the current health system. It is proposed that a new model of care (MOC) is implemented in which the role of OHTs is strengthened to make best use of these skills and knowledge and to assist the current health workforce in the early detection of disease and of risk for disease, the promotion of health and holistic health care. Because the education for OHTs is shorter than that for dentists, costs of employing an OHT are somewhat lower, although the costs of required supervision by a dentist must be taken into account. More importantly though,

Table 2. **Roles for the oral health therapist in the proposed comprehensive model of care**

Risk assessment	Includes oral examination (screening for mucosal, periodontal and dental disease) and assessment of risk factors (including social and structural determinants of disease)
Referral	To appropriate health professionals within the health system based on initial 'triage'. This would primarily be to a dentist, but may also be to medical practitioners based on systemic risk assessment
Provision of oral health care	As needed and within scope of practice
Receiving referrals	From other health professionals within the health system to reduce the impact of poor oral health on other systemic conditions
Health promotion	To enhance oral and general health: one consistent healthy lifestyle message.
Health behaviour change management	Provision of tobacco cessation support and assistance, dietary counselling, oral health education
Interprofessional liaison	Working with other health professionals within the general healthcare team to facilitate an understanding of oral health and to integrate oral health into health management plans for individuals

the education is different to that of dentists and provides a complementary contribution to patient care. The proposed MOC has been designed to be a more effective use of the oral health workforce and to shift the focus from simply treating oral disease to helping patients achieve and maintain health through early detection of disease and of disease risk. It has also been designed to be patient-centred and to approach health as a whole of body concept. Roles for the OHT in the proposed MOC are listed in Table 2.

There are a number of further recommendations that would enhance the performance of the oral health system and that would complement the expanded role of the OHT. Provision of appropriate item numbers for a range of preventive services such as smoking cessation would enable the health system to start counting/valuing health instead of disease. Review of oral health data collection in the public sector should occur to ensure that the data are useful, reliable and available for analysis on local and national levels. Accurate and relevant measures of disease and determinants of disease are needed for evaluation and planning. Indigenous participation in all aspects of the oral health workforce should be actively encouraged and comprehensively supported. There should be an adequate focus on cultural safety, public health and behavioural science in the undergraduate curricula of all oral health professionals (27). Prospective modelling of oral health workforce needs must occur, and monitoring should ensure that this matches with the size and nature of the workforce graduating from universities. Research evidence for the cost-effectiveness of oral health interventions (treatment and preventive, individual and community) (28) is urgently needed. Finally and importantly, the comprehensive and insightful National Oral Health Plan (6) should be re-evaluated and updated.

Conclusions

It is widely acknowledged that the current health workforce must adapt to meet present and future challenges in oral and general health. Currently, there are significant proportions of the population, including Indigenous Australians, who are unable to access appropriate health care. While delivery of clinical services will continue to be necessary, the utilization of OHTs as described in our proposed MOC, along with the growing numbers of dental graduates from the growing numbers of dental schools, will be able to meet this need. Oral disease is almost totally preventable. Why then is there such an imbalance between investment in treatment and prevention in the oral health system? Do we really need more treatment providers? What is critically needed is for the health system to recognize the importance of prevention of oral disease and allow OHTs to practise to their full current scope of practice. Reduction in chronic disease risk, including oral disease, requires a multifactorial and multidisciplinary approach. Early detection of disease enables earlier treatment and improved health outcomes. A model of care which is responsive and includes oral health and in which the healthcare team works with the individual and the community to reduce their risk of chronic disease is likely to have significant benefits particularly in populations at high risk such as Indigenous communities. The big challenge is to gain an effective stewardship of the oral health system, characterized by an evidence-based approach that informs the development of coordinated policy to address health inequities at their roots. None of this can occur without an inclusive and long-term vision particularly in relation to oral health policy and the health system overall.

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