

Geriatric dentistry, teaching and future directions

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ABSTRACT

Background: Many nations are facing a demographic shift in the age profile of their population, leading the World Health Organization to a ‘Call for Public Health Action’ on the oral health of older people.

Methods: A search of the literature relevant to geriatric dentistry teaching was undertaken using MEDLINE, Web of Science, Eric and Psychlit. A search of dental professional school websites in Australia and policy and international practice documents was undertaken.

Results: The international literature describes requirements for geriatric dentistry courses and various approaches to teaching, including didactic teaching, practical experiences and external placements. Challenges are identified in the area of geriatric dental education. Educational institutions (with others) have an obligation to lead change, yet there appears to be little formal recognition in Australian dental curricula of the need to develop quality education and research programmes in geriatric dentistry.

Conclusions: Internationally, the inclusion of geriatrics within dental curricula has been the subject of consideration since the 1970s. The current evidence indicates that geriatrics/gerodontology is not a significant component of dental curricula. Given the projected age distribution in many countries, the need for implementation of dental curriculum content in the area of geriatrics/gerodontology is evident.

Keywords: Curricula, education, gerodontics, planning, review.

INTRODUCTION

It is predicted that more than 25% of the population in developed countries will be over the age of 65 years by 2020.¹ The ageing of the population and increasing retention of teeth, often with complex restorations, is expected to increase the demand for dental care in older people. As people age they attend dental services less frequently² and face a number of barriers to accessing dental care,^{3–5} with access often more difficult in residential aged care facilities.^{6–8} Older populations can include the younger well and healthy aged, the frail and those with a high level of dependency on others. The increasing need for dental care in this age group has led the World Health Organization to produce a ‘Call for Public Health Action’ on the oral health of older people.⁹ However, geriatric dentistry is not a dental specialty in Australia, with a limited number of available and suitably qualified dental personnel to meet the needs of this expanding patient group or advocate for their dental care.

The importance of geriatric dental education was highlighted in the 1970s and later promoted through champions such as Ettinger,¹⁰ Kress *et al.*,¹¹ and Yellowitz and Saunders.¹² In Australia, a 2001 review by Chalmers highlighted the issues for geriatric dentistry and the limited inclusion of this area in the dental curriculum.¹³ The issues raised in her review remain largely unaddressed.

Dental education has traditionally followed a structure very similar to medicine. Yet while over 50% of medical graduates in developed countries become hospital doctors, in Australia less than 5% of dental graduates end up working in hospitals while the majority choose to work in private practices in the community.¹⁴ Dental education may need to refocus on delivering curricula more aligned to the needs of our ageing community and producing students with skills in how to understand and address the respective issues and challenges. This may require different models of education and different models of care. Our models for interpreting oral health and providing care

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are moving away from the medical model to a more multidisciplinary and humanistic approach.¹⁵ MacEntee notes 'dental students should be exposed to a consilience of the science and the humanities if dentists are to address effectively the needs of an aging population'.¹⁵

In geriatric dentistry we need education that covers appropriate knowledge, relevant technical skills and the context in which older people live.¹⁶ One of the implicit challenges is that we generally deliver a first dental degree (undergraduate or postgraduate) to young students, who have limited experience in dealing with and caring for older people. Qualitative research has indicated that older individuals perceive that some clinicians and services lack an understanding of the context in which their older patients live.^{5,7,8} Additionally, the context of aged care itself is changing, with an increasingly multidisciplinary approach to care and increasing care in the home.¹⁷

The aim of this article was to review the literature relevant to geriatric dentistry education and consider the findings in the context of geriatric dentistry education in Australia. The context of education and geriatric oral care, the stakeholders and the responsibilities and implications for Australian dental professional courses were considered.

METHODS

This narrative literature review included a review of websites regarding teaching in Australian dental schools. A search of the relevant academic literature was undertaken using MEDLINE, Web of Science, Eric and Psychlit. A search of university websites in Australia and policy and practice documents nationally and internationally was also undertaken (websites reviewed 5–11 July 2013 by Wright).

Websites detailing Australian dental school curricula were reviewed (electronically and manually) to investigate six features of each dental course: (1) whether or not there was a designated course/programme dedicated to geriatric dentistry; (2) whether or not there was a dedicated course/programme director/coordinator of geriatric dentistry; (3) whether the curriculum specified the two goals of a geriatric dental programme (specific clinical experience with older people; the development of a caring attitude toward older people); (4) what was covered in the course (healthy ageing; the provision of oral health care; chronic diseases of older people; physical disabilities of the elderly; polypharmacy and salivary gland function; and cognitive impairment); (5) clinical experience in oral health care for older people; and (6) external rotations with community and/or residential aged care facilities.

RESULTS

Important aspects considered here are the context of geriatric dentistry; international education in geriatric dentistry; Australian education in geriatric dentistry and implications for the future of geriatric education in Australia.¹⁸

The context for geriatric dentistry

There is a significant Australian and international literature noting the increasing number of older people retaining more of their teeth, but with complex restorations requiring more dental care in later life.^{19,20} For those that are edentulous there are a range of oral health issues, often associated with denture wear.²¹ Atchison and Dolan described the development of the Geriatric Oral Health Index in one of the more highly cited papers in geriatric dentistry. However, 25 years later, many of our older people receive inadequate or no dental care and the proposed oral health check has not been adequately implemented.²² There is some exploration of alternative models of care for our increasing quantum of elders, both in Australia²³ and overseas, with models of oral health care in elders being developed and moving away from the simple medical model.¹⁵

There has been little structural reorganization of dental services or dental education curricula to adapt to the increasing demographic, service and educational challenges. There is increasing multidisciplinary engagement in oral care of the aged²⁴ with a slow but increasing engagement of allied health professionals and medical professionals in geriatric dentistry, prompting training in these various programmes.²⁵ In addition, carers in aged care are increasingly receiving training in oral care and education.¹⁸ Such engagement enables the health team to work together to achieve satisfactory oral health in the older person.

International geriatric dentistry education

The need for geriatric dentistry skills and curricula has been raised in academic literature since the early 1970s, with numerous international studies focused on curriculum guidelines for the content and delivery of programmes in geriatric dentistry.^{10,12,26–29} Since 2000, nearly all US, Canadian and European dental schools have integrated at least some aspects of geriatric dentistry into their academic curricula.^{27,30,31} Nevertheless, the format, extent and focus of geriatric dentistry education has varied widely.^{31,32}

The overcrowded nature of dental curriculum and the competition among disciplines³³ appears to influence the extent of geriatric dentistry, with over 93%

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of sixth year students studying geriatric dentistry, compared with 68% of fifth year students, 48% of fourth year students, 17% of third year students, 13% of second year students, and only 2% of first year students in European dental schools.³¹ Notably, in 2009, only one dental school in Austria and 40% of dental schools in Germany offered any lecture series or practical course in gerodontology, compared with all dental schools in Switzerland in 2004.³² Lack of time devoted to geriatric education is likely to have serious implications, with only 14.3% of graduating dental students considering themselves to be well prepared to provide geriatric oral health care.³⁴ In a Victoria, Australia study, it was reported that only 43.6% of dentists believed that they had received adequate training in the management of medically compromised patients, and only 35.3% received adequate education and training in clinical care of patients in residential aged care facilities.³⁵

The topics underlying geriatric dental programmes also vary significantly, with the majority focusing on geriatric medical problems, diagnosis and management and oral manifestations of systemic disease in the ageing.^{30,31} While many also teach about psychosocial problems and barriers to dental care for the elderly,^{36,37} few include sufficient training on geriatrics and geronto-psychiatry, diagnostics specific to ageing, geriatric medicine, prevention and therapy of oral diseases and communication skills.³⁸ This is reinforced by the findings indicating that only a few dental schools in the US, Canada, Switzerland and Sweden provide practical on-site training in geriatric hospital wards, residential aged care facilities or domiciliary care.^{31,32,39} As yet there are no adequate studies to indicate if on-site and mobile care experiences offer the best models for teaching students how to manage older patients,³³ with the risk that superficial exposure may do more damage to a student's future interest in caring for older patients.^{40,41}

To overcome these barriers, the Association of Dental Education in Europe and the European College of Gerodontology have outlined guidelines¹⁶ and provided direct recommendations on the didactic and practical education that can lead to improved patient management, treatment planning and delivery in community settings, including nursing homes and residential aged care facilities.³² Competency recommendations are extensive and include didactic content focused on geriatrics and geronto-psychiatry, diagnostics specific to ageing, geriatric medicine, prevention and therapy of oral diseases, and communication skills.³⁸ Nevertheless, while changes in attitudes towards geriatric dentistry are occurring, lack of faculty positions and staff trained as teachers for the didactic and practical courses has remained a major barrier.⁴²

In Britain and the US, dentists with special interests in frail and dependent older people are being formally recognized, and programmes are being developed in special needs dentistry or specifically in gerodontology, incorporating interdisciplinary and interprofessional efforts to design the selection and recruitment of suitable speakers.^{33,43} Unlike some other countries, Australia has no recognized speciality for gerodontology. There need to be decisions made as to whether special needs dentistry is the appropriate speciality to progress geriatric dentistry education and care in Australia or whether gerodontology should be a speciality in its own right.

Continuing professional development courses are also being offered internationally for dental professionals. These may take the pressure off schools to incorporate geriatric dental health in undergraduate studies but they may also enhance geriatric dentistry teaching by providing an environment where qualified dental professionals can get ongoing training in geriatric dentistry and then play a role in teaching and supporting dental students. There are new models evolving for geriatric education.^{44,45} Although the literature indicates that didactic teaching is often used, a range of approaches including practical sessions, placements and online learning are also used.

Geriatric dental education in Australia

After reviewing the curriculum details from the web for Australian dental and oral health/hygiene schools using the criteria outlined above, we determined that there was limited information regarding geriatric dentistry in the curricula for dental and oral health/hygiene programmes. Only two programmes (both in dental courses) mentioned any special lectures focusing on geriatric dentistry in their online information. A number of dental and oral health courses referred to clinical practice covering a full age range of care. Conversations with staff from different university courses (both dental and oral health) indicate that elements of geriatric dentistry are covered within 'comprehensive' subjects or in specialist disciplines such as oral medicine and special needs. Some courses, especially within oral health programmes, give research or community placement electives which students may, but are not obliged to, participate in involving older people. Some dental schools are 'mapping' elements in their four- or five-year course of study which related to dentistry for older people – and describing this as their programme. But there were no substantive integrated programmes focusing solely on the oral health needs of older people.

The Australian Government has recognized the challenges faced by an ageing Australian community

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through its recent Productivity Commission Inquiry – Caring for Older Australians (June 2011) and funding reforms within the Living Longer Living Better – Aged Care Reform Package (April 2012). However, this has not translated to funding support for teaching gerodontology in dental schools. Educational institutions have an obligation to lead change, yet there appears to be little formal recognition in Australasian dental curricula for the need to develop specific education and research programmes in geriatric dentistry. This contrasts with the development of specific geriatric dental programmes in North America^{15,30} and to some extent in Europe.^{31,32}

DISCUSSION

The literature indicates that there is an increasing need for geriatric dental care^{41,46} and an unmet need for professionals with appropriate skills to provide such care.^{16,24} Geriatric oral care is increasingly seen as a multidisciplinary concern with training involving a wide range of health professionals from carers to dentists and a range of dental and health professionals.²⁴ Geriatric dentistry has a varied place and importance in dental curricula internationally and the education is delivered by various modes of delivery.

Although the theme of concern regarding adequate dental care in older people is evident in the literature, there is little evidence from the literature or dental school websites that there has been substantial progress in this area in Australia. One of the challenges is the lack of a clear group to drive geriatric dentistry teaching in Australia and the delivery of services. Internationally, these issues have been considered for several decades, but geriatric dental education still requires significant development. There is a range of approaches to teaching geriatric dentistry but often it is not a significant part of the curriculum. We need to ensure we educate for future needs and follow best evidence internationally to achieve this.

We must not only focus on dental schools when discussing this deficit. Currently there are no clear guidelines regarding dental care for older adults and related curriculum content for geriatric dentistry. This results in varying levels of geriatric content in dentistry courses.⁴⁴ We must also consider how the broader health system has neglected or not managed to support oral care for this group.

Accrediting bodies (working with stakeholder groups) need to reinforce geriatrics and lifespan approaches to dental health education, and provide specific, testable, tangible standards and outcomes, and/or evidence of appropriate geriatric dentistry education coverage and competencies. The Australian Dental Council also has an important role in shaping the educational directions to meet the changing

patterns of the Australian community's oral health needs.⁴⁶ Their list of more than 50 discipline topics recognizes paediatric dentistry (at the other end of a life-course), but includes geriatric dentistry under the banner of 'special needs dentistry'. Given the international and regional calls for greater recognition of the needs of our growing older generations, it is important to consider a specialty for the later years of life as well as paediatric dentistry.

Although we want to move away from a solely science perspective in our teaching content, we do want to design our geriatric dentistry teaching around a strong evidence base and recognition of changing community profiles and health, including oral health needs. Failure to respond to this growing demand may lead to alternative health providers filling the gap. This article is limited to the published literature and there may be outstanding educational programmes we are not aware of. Also, due to the nature of the review, we have not acknowledged the individual champions in this area.

CONCLUSIONS

In conclusion, despite the call for geriatric dental education in the late 1970s and Chalmer's review of how to meet this need in Australia more than a decade ago,¹³ geriatrics/gerodontology is still not a significant component of dental curricula in this country. The oral health status of institutionalized older Australians remains poor: 'the majority of older Australians are eligible to use public-funded dental services, but barriers limit their access to these services; few Australian public or private dental services are designed with a geriatric focus; geriatric dental education does not have a high profile in Australian dental schools; no specialty exists in Australia for geriatric dentistry, nor is there a national geriatric dentistry association.'¹³

Moreover, with our growing ageing population, to do nothing is not an option. It is time for academics, dental professional and policy makers to advocate for a world where social justice is valued, and promote geriatric dentistry education. That change could be accelerated by refocusing our direction in terms of models of care and geriatric dental education. This involves bringing together multidisciplinary groups to facilitate the integration of an inter-professional health care team to review the public health implications, government support and leadership that is urgently needed. To achieve this requires developing and embedding the health challenges and demands of our older population into the curricula of undergraduate and graduate dental students, with emphasis on more holistic geriatric dentistry covering not only advanced treatment but also quality of oral care at end-of-life and understanding of social context. To

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support this, there is an urgent need to adequately skill academics/tertiary educators to develop more appropriate education and research associated with general health and quality of life of older people. Given the projected age distribution in many countries, as this literature review indicates, in order to build strong future directions for geriatric dentistry education, Australia needs to learn from other nations and demonstrate leadership in this important area.

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DISCLOSURE

The authors have no conflicts of interest to declare.

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