Am J of Geriatric Psychiatry 29:10 (2021) 1053–1057

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.ajgponline.org

Invited Perspective

Oral health is Essential to the Well-Being of Older People

Jennifer Mary Gibney, M.S.L.P., Ph.D.[#],
Vasi Naganathan, M.B.B.S., F.R.A.C.P., M.M.ed, Ph.D., Grad. Cert. M.ed,
Mathew Albert Wei Ting Lim, D.C.D., Ph.D.

ARTICLE INFO

Article history:
Received May, 21 2021
Revised June, 6 2021
Accepted June, 7 2021

KEY WORDS:
Oral Health
Quality of Life
interprofessional teams
dental & non-dental health care workers
education & training
healthcare facilities

ABSTRACT

Although the highest attainable standard of health is a fundamental human right, oral health is often not considered an important component of overall health. Older people experience poorer quality of life due to discomfort and uncleanliness of their mouth and there continue to be barriers within health systems that contribute to this poor oral health. This paper advocates for oral health to be considered part of the basic human right to good health care and discusses how stakeholders can collaborate and work together to begin to meet the needs of this population, proposing solutions and recommendations to bring about change. (Am J Geriatr Psychiatry 2021; 29:1053–1057)

Highlights

- **What is the primary question addressed by this opinion piece?**
  Good oral health is important for overall health, comfort, and basic dignity of older members of society.
- **What is the main finding of this opinion piece?**
  There is a need for a more collaborative approach between health care workers and dental professionals. This shared responsibility for oral health may be key to improving early recognition of dental issues and implementing preventative oral health measures.

From the Centre for Education and Research on Ageing, Concord Hospital, Sydney, New South Wales, Australia; Nepean Hospital, Sydney, New South Wales, Australia; Dental Services, Alfred Health, Melbourne, Victoria, Australia; and the Maxillofacial and Dental Clinic, Royal Melbourne Hospital, Melbourne, Victoria, Australia. Send correspondence and reprint requests to Jennifer Gibney, Speech Pathology Department, Derby Street, Kingswood, NSW, 2747, Australia e-mail: Jennifer.gibney85@gmail.com
[#] Twitter: Jenny Gibney@jennifergibney3

https://doi.org/10.1016/j.jagp.2021.06.002

- **What is the meaning of the finding?**
  A paradigm shift is required to reinforce the importance of oral health as part of general health and as a basic human right, but also to support greater interprofessional collaboration to begin to address this issue.

INTRODUCTION

Good oral health is important for overall health, comfort and basic dignity of older members of society. Despite significant improvements in the oral health of populations in most developed countries, older people continue to have a disproportionate number of oral problems compared to younger people.[1–3] In developing countries, the poorer oral health of older people is often exacerbated by the cumulative effect of oral conditions from a younger age and thus can have a greater impact on health later in life.[4]

What needs to be accepted is that poor oral health is more than bad gums and teeth. Pain and infection are serious consequences of poor oral health and dental problems are a reason for more hospital admissions than most people would think, with older adults identified as a key risk population.[5–7] The interaction between oral and general health has now also been well-established, particularly in relation to many chronic conditions, such as cardiovascular disease, stroke and diabetes.[8–14] In addition, there is a growing weight of evidence suggesting the potential role of oral bacteria in the pathogenesis of dementia[15,16] and aspiration pneumonia in older adults.[17]

Although these are important concerns given the potential impact these may have on functionally-dependent and medically-vulnerable older adults, what is important to recognise is that oral health can also have a significant influence on quality of life. This has led to the FDI World Dental Federation to redefine oral health as, "multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow, and convey a range of emotions through facial expressions with confidence and without pain, discomfort, and disease of the craniofacial complex."[18]

Many older adults, however, have dental disease reflected in poor chewing ability, xerostomia and oral pain, along with halitosis, stained teeth and oral debris which can indicate inadequate mouth cleanliness and lead to a negative body image.[19] These physical discomforts can also lead to malnutrition and a weakened immune system and contribute to a reduction in Quality of Life.[19–24] However, despite the knowledge that good oral health and a functional dentition have been linked with a better oral health related quality of life, regardless of cognitive status many older people continue to suffer.[25]

Considering the significant impact oral health has beyond the mouth on overall health and quality of life, oral health should be considered a basic human right, especially given that conditions such as decay and gum disease are essentially preventable through daily oral hygiene practices and access to affordable primary health services.[26] It has been found that dental disease across the life span, even that beginning in early adulthood, can have profound effects on an individual as they age with a resultant loss of quality adjusted life expectancy, with those from lower socioeconomic groups particularly at risk.[27] Matsuyama et al [27] concluded that addressing these oral health problems early may result in improved population health and wellbeing over the life course. However, to do this effectively we need comprehensive public health strategies.[27]

Unfortunately, the reliance on the individual to perform daily oral hygiene and find a way to access ongoing dental care are key barriers to good oral health in older people. Older people, irrespective of whether they are from the community, a residential aged care facility (RACF) or admitted to an acute care hospital, will have some degree of premorbid poor oral health.[13,28–32] This is often the result of a gradual decline in cognitive, sensory or physical abilities that compromise the efficacy of their oral hygiene practices.[33–35] Poor oral hygiene in practice in turn can change the course of a previously healthy mouth. This is compounded by the fact older people are more at risk of poor oral health due to factors that are more common as we age such as polypharmacy, dehydration, reduced salivary flow, changes to diet, and poorer oral clearance due to oromotor changes.

These problems are further exacerbated by accessing dental care through the health system, older people face barriers such as eligibility for dental services,

waiting lists and out-of-pocket treatment costs.[36] Even if there are adequate and affordable oral health services many older adults may struggle to see any type of oral health care worker due to cognitive, hearing or vision impairments making it difficult to make a dental appointment, let alone be able to get to a dental clinic because of transportation issues or a reliance on family members or carers to take them.[37,38]

The dental profession has recognised some of the above mentioned barriers and continues to work towards adapting provision of dental care to the needs of this growing population, such as through domiciliary services.[39] However, access to such services is often still reliant on the resourcefulness of individuals or their carers. There is a need for a more collaborative approach between non-dental healthcare workers and dental professionals. This shared responsibility for the oral health may be key to improving early recognition of dental issues and implementing preventative oral health measures. The limited use of oral health professionals in healthcare facilities, hospitals and residential aged care facilities is an ongoing issue and means that these responsibilities often fall on other healthcare workers in these settings. These health care workers may not have the expertise in preventing and managing oral health problems.

We believe that a key step to improving oral health care of older people is increasing the knowledge, skills and attitudes to oral health of non-dental health care professionals.[40–42] All healthcare clinical staff should be able to assess an individual's oral health. Tools have been developed to assist with screening oral health status.[43,44] Such tools may assist non-dental professionals to develop oral care plans and evaluate their efficacy, monitor oral health status and recognise dental problems requiring referral to a dentist and oral health therapists for further advice or treatment.[43,44] For those with cognitive decline, the regular use of such tools may assist to identify concerns where individuals are no longer able to communicate their own needs.

In addition, there appears to be no consistent training of nurses and personal care workers in relation to techniques to clean someone's mouth or strategies to conduct oral hygiene care, in older people who may demonstrate care resistant behaviours.[45] Often such oral hygiene practices may need to be adapted where patients are at greater risk of aspiration due to swallowing deficits.[46] Healthcare facilities, when providing clinical placements, need to adopt these routines and procedures so as to provide consistency across all settings and patient cohorts. Likewise, support from oral health therapists and dental professionals as part of interprofessional teams in residential aged care facilities, geriatric rehabilitation units and an acute hospital ward have been found to be beneficial in these settings.[30,47–51]

The stereotypical image of an older person removing their complete dentures to place in a cup beside their bed is largely becoming obsolete as there is a greater desire for older people to maintain their natural teeth. Likewise, the perception that oral health can somehow be separated from the rest of the body, like these dentures, needs to be dispelled. Unfortunately, our healthcare systems continue to operate based on this antiquated notion much to the disadvantage of many, but particularly vulnerable older people.

There is a growing weight of evidence about how crucial oral health is not only to systemic health, but also to basic quality of life. Despite this, as a collective, our health systems continue to fail the older members of our community because we can't afford them the basic dignity to ensure their mouths are clean or free from discomfort. A paradigm shift is required to reinforce the importance of oral health as part of general health and therefore a basic human right.

AUTHOR CONTRIBUTIONS

JG-First draft and revisions, ML - First draft, VN - critical revisions.

ACKNOWLEDGMENTS

No funding to report.

No conflict of interest has been declared by the authors.

REFERENCES

1. Griffin S, Jones J, Brunson D, et al: Burden of oral disease among older adults and implications for public health priorities. Am J Public Health 2012; 102:411–418

2. Slade G, Spencer A, Roberts-Thomson K, Australia's dental generations: The national survey of adult oral health 2004-06.

Canberra: Australian Insitute of Health and Welfare (Dental Statistics and Research Series No34), 2007:274
3. ARCPOH: Australia's Oral Health: National Study of Adult Oral Health 2017–18. Adelaide: The University of Adelaide, South Australia, 2019
4. World Health Organisation. Oral health Inequalities 2020 [cited 2021 May 21]. Available from: https://www.who.int/news-room/fact-sheets/detail/oral-health.
5. Katterl R, Anikeeva O, Butler C, et al: Potentially avoidable hospitalisations in Australia: causes for hospitalisations and primary health care interventions Australia, Australia/Oceania: Primary Health Care Research and Information Service; 2012. PHC RIS Policy Issue Review Adelaide. Primary Health Care Research & Information Service, 2012
6. Acharya A, Khan S, Hea Hoang: Dental conditions associated with preventable hospital admissions in Australia: a systematic literature review. BMC Health Serv Res 2018; 18:921
7. Northridge M, Kumar A, Kaur R: Disparities in Access to Oral Health Care. Annu Rev Public Health 2020; 41:513–535
8. Taylor G, Borgnakke W: Periodontal disease: associates with diabetes, glycemic control and complications oral diseases. Oral Dis 2008; 14:191–203
9. Marín-Zuluaga D, Sandvik L, Gil-Montoya J, et al: Oral Health and mortality risk in the institutionalised elderly. Med Oral Patol Oral Cir Bucal 2012; 17:618–623
10. Bassim C, Gibson G, Ward T, et al: Modification of the risk of mortality from pneumonia with oral hygiene care. J Am Geriatr Soc 2008; 56:1601–1607
11. Azarpazhooh A, Leake J: Systematic review of the association between respiratory diseases and oral health. J Periodontol 2006; 77:1465–1482
12. Terpenning M, Taylor G, Lopatin D, et al: Aspiration pnuemonia dental and oral health risk factors in an older veteran population. J Am Geriatr Soc 2001; 49:557–563
13. Ní Chróinín D, Montalto A, Jahromi S, et al: Oral health status is associated with common medical comorbidities in older hospital in-patients. J Am Geriatr Soc 2016; 64:1696–1700
14. Joshy G, Arora M, Korda R, et al: Is poor oral health a risk marker for incident cardiovascular disease hospitalisation and all-cause mortality? Findings from 172 630 participants from the prospective 45 and Up Study. BMJ Open 2016; 6:e012386;doi:10.1136/bmjopen-2016-012386
15. Singhrao S, Olsen I: Assessing the role of Porphyromonas gingivalis in periodontitis to determine a causative relationship with Alzheimer's disease. J Oral Microbiol 2019; 11:1563405
16. Nadim R, Tang J, Dilmohamed A, et al: Influence of periodontal disease on risk of dementia: A systematic literature review and a meta-analysis. Eur J of Epidemiol 2020; 35: 821–833
17. van der Maarel-Wierink C, Vanobbergen J, Bronkhorst E, et al: Oral health care and aspiration pneumonia in frail older people: a systematic literature review. Gerodontology 2013; 30:3–9
18. Glick M, Williams D, Kleinman D, et al: A new definition for oral health developed by the FDI World Dental Federation opens the door to a universal definition of oral health. J Am Dent Assoc 2016; 147:915–917
19. Donnelly L, Hurd Clarke L, Phinney A, et al: The impact of oral health on body image and social interactions among elders in long-term care. Gerondontology 2016; 33:480–489
20. Andersson P, Westergren A, Karlsson S, et al: Oral health and nutritional status in a group of geriatric rehabilitation patients. Scand J Caring Sci 2002; 16:311–318, a
21. Solemdal K, Sandvik L, Møinichen-Berstad C, et al: Association between oral health and body cell mass in hospitalised elderly. Gerodontology 2012; 29:e1038–e1044
22. Prakash N, Kalavathy N, Sridevi J, et al: Nutritional status assessment in complete denture wearers. Gerodontology 2012; 29:224–230
23. van de Rijt L, Stoop C, Weijenberg R, et al: The influence of oral health factors on the quality of life in older people: a systematic review. Gerontologist 2020; 60(5):e94–e378
24. van de Rijt L, Feast A, Vickerstaff V, et al: Oral function and its association with nutrition and quality of life in nursing home residents with and without dementia: A cross-sectional study. Gerondontology 2021; 31;doi:10.1111/ger.12535, eJan
25. Zenthöfer A, Ehret J, Zajac M, et al: The Effects of Dental Status and Chewing Efficiency on the Oral-Health-Related Quality of Life of Nursing-Home Residents. Clin Interv Aging 2020; 15:2155–2164
26. World Health Organisation. Oral health and the life-course 2021 [cited 2021 June 1]. Available from: https://www.euro.who.int/en/health-topics/disease-prevention/oral-health/policy/oral-health-and-the-life-course.
27. Matsuyama Y, Tsakos G, Listlet S, et al: Impact of dental diseases on quality-adjusted life expectancy in US adults. J Dent Res 2019; 98:510–516
28. Danckert R, Ryan A, Plummer V, et al: Hospitalisation impacts on oral hygiene: an audit of oral hygiene in a metropolitan health service. Scand J of Caring Sci 2015; 30:129–134
29. Loesche W, Abrams J, Terpenning M, et al: Dental findings in geriatric populations with diverse medical backgrounds. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 1995; 80:43–54
30. Andersson P, Hallberg I, Renvert S: Comparison of oral health status on admission & at discharge in a group of geriatric rehabilitation patients. Oral Health Prev Dent 2003; 1:221–228
31. Konradsen H, Trosborg I, Christensen L, et al: Oral status and the need for oral health care among patients hospitalised with acute medical conditions. J Clin Nurs 2012; 21:2851–2859
32. Gibney J, Wright F, Sharma A, et al: The oral health status of older patients in acute care on admission and day seven in two Australian hospitals. Age Ageing 2017; 46:852–856
33. Langmore S, Terpenning M, Schork A, et al: Predictors of aspiration pneumonia: how important is dysphagia? Dysphagia 1998; 13:69–81
34. Chalmers J, Johnson V, Tang J, et al: Evidence-based protocol: oral hygiene care for functionally dependent and cognitively impaired older adults. J Gerontol Nursing 2004; 30:5–12
35. Chen X, Clark J, Chen H, et al: Cognitive impairment, oral self-care function and dental caries severity in community-dwelling older adults. Gerodontology 2015; 32:53–61
36. Freeman R: Barriers to accessing dental care: patient factor. Bri Dent J 1999; 187:141–144
37. Kiyak H, Reichmuth M: Barriers to and enablers of older adults' use of dental services. J Dent Educ 2005; 69:975–986
38. Borreani E, Wright D, Scambler S, et al: Minimising barriers to dental care in older people. BMC Oral Health 2008; 8; doi:10.1186/472-6831-8-7
39. Lim MAWT, Borromeo G: Dental treatment for patients with special needs provided by domiciliary services. J Dent Maxillofacial Res 2021; 3:36–41
40. Hein C, Schönwetter D, Iacopino A: Inclusion of oral-systemic health in predoctoral/undergraduate curricula of pharmacy, nursing, and medical schools around the world: a preliminary study. J Dent Educ 2011; 75:1187–1199

41. Mowat S, Hein C, Walsh T, et al: Changing Health Professionals' Attitudes and Practice Behaviors Through Interprofessional Continuing Education in Oral-Systemic Health. J Dent Educ 2017; 81:1421–1429
42. Ajesh G, Rojo J, Alomari A, et al. Oral Health Matters: Enhancing the undergraduate nursing curriculum. Aust Nurs Midwifery J 2020;https://www.researchgate.net/publication/339301624.
43. Hebling E, Pereira A: Oral health-related quality of life: a critical appraisal of assessment tools used in elderly people. Gerodontology 2007; 24:151–161
44. Chalmers J, King P, Spencer A, et al: The oral health assessment tool-validity and reliability. Aust Dent J 2005; 50:191–199
45. Gil-Montoya J, Ferreira de Mello A, Cardenas C, et al: Oral health protocol for the dependent institutionalised elderly. Geriatr Nurs 2006; 27:95–101
46. Lim MAWT: Basic oral care for patients with dysphagia: a special needs dentistry perspective. JCPSLP 2018; 20:142–150
47. Tashiro K, Katoh T, Yoshinari N, et al: The short-term effects of various oral care methods in dependent elderly: comparison between toothbrushing, tongue cleaning with sponge brush and wiping on oral mucous membrane by chlorhexidine Gerodontology. Gerodontology 2012; 29:e82–e870
48. Sloane P, Zimmerman S, Chen X, et al: Effect of a person-centered mouth care intervention on care processes and outcomes in three nursing homes. J Am Geriatr Soc 2013; 61:1158–1163
49. Peltola P, Vehkalahti M, Simoila R: Effects of 11-month interventions on oral cleanliness among the long-term hospitalised elderly. Gerodontology 2007; 24:14–21
50. Gibney J, Wright F, D'Souza M, et al: Improving the oral health of older people in hospital. Australas J Ageing 2018; 38:33–38
51. Zhang J, Wang Z, Li Y, et al: Effects of a caregiver training program on oral hygiene of alzheimer's patients in institutional care. J Am Med Dir Assoc 2021; 9, FebS1525-8610 (21)00106-7