Oral care needs, barriers and challenges among elderly in India

Ramesh Bharti, Anil Chandra, Aseem Prakash Tikku, Deeksha Arya, Richa Gupta
Departments of Conservative Dentistry and Endodontics and ‘Prosthodontics and Dental Material Sciences, Faculty of Dental Sciences, King George’s Medical University, Lucknow, Uttar Pradesh, India

INTRODUCTION

India occupies 2.4% of the world’s land area and supports over 17.5% of the world’s population. The demographics of India are inclusive of the second most populous country in the world, with over 1.21 billion people (2011 census), more than a sixth of the world’s population.[1]

With the population growth rate at 1.58%, India is predicted to have >1.53 billion people by the end of 2030. India has around 100 million elderly at present, and the number is expected to increase to 323 million, constituting 20% of the total population, by 2050.[2]

The rapid greying of the population comes with a number of difficulties in terms of general and oral health.[3,4] A continuing progress in the medical field has raised the longevity of life. This changing face of population offers the oral professionals to observe unique challenges to treat the rapidly growing segment of the elderly and the dependent overage population – the homebound residents and the nursing homebound residents. The old age of the residents is compounded with chronic medical problems they are suffering from and the medications they are taking.[5]

The dental needs of the elderly are changing and growing. The management of older patients requires not only an understanding of the medical and dental aspects of ageing,
but also many other factors such as ambulation, independent living, socialization, and sensory function.\[6\]

Recent surveys\[7\] indicate that older dentate people utilize dental services less than any other dentate age group. Patient utilization of dental services is predominantly a consequence of patient-perceived need for such treatment and therefore perceived need has been considered to be an accurate predictor of utilization of dental services.\[8-10\]

Although there is evidence to suggest that attitudes toward and perception of dental care are influenced by former dental experiences,\[11\] this factor is unlikely to be the sole cause for the large difference between perceived and normative needs for dental care.\[12,13\]

**AGE**

Ettinger and Beck undertook an impressive study of 2000 subjects, who were living independently and identified four age groups: 18–60 years, 60–64 years (the new elderly), 65–74 (the transition group) and >75 age group (the old elderly). It was reported that the two younger groups had similar attitudes toward dentistry and that the new elderly had significantly more favorable attitudes toward dental care than the old elderly.\[11\]

**Socioeconomic status**

Townsend et al.\[14\] demonstrated that utilization of preventive health care is highest among higher social classes. A facile explanation might be that more affluent patients are able to overcome any financial barrier to dental care.\[15\] Kiyak\[16\] has suggested that the higher social classes tend to be better educated and are potentially more likely to be familiar with and to adopt favorable attitudes toward the maintenance of oral health.

**OTHER BARRIERS TO RECEIPT OF CARE**

**Patient related barriers**

Cost has been stated to be a barrier in some studies of the receipt of care by older people who were functionally disabled or attended with a functionally-disabled partner. Most of these elderly people, it was reported, existed on lowly pensions. Studies have identified variability between different groups with some researchers reporting only 1.5–3% of subjects in the community identifying cost as a barrier. In contrast Hoad-Reddick et al. reported cost as a barrier in 29% of those elderly living alone in the community, and approximately 10% for those living in the community (but with assistance) or those in residential homes.\[13\]

Access to dental services may present a barrier as a result of physical incapacity or disability, travel problems, lack of knowledge of dental services or lack of dental services in given area.\[17\] Anzack and Branch\[18\] reported that among older Americans who would have liked to visit a dentist during the previous year, almost 50% gave their age as a reason but the inference was that decreased mobility was a factor influencing many although only 20% identified transport problems as a barrier to receipt of care. Similar values were reported by Kail and Silver.\[19\]

**Fear**

According to Todd and Ladder\[7\] most people experience some apprehension at the prospect of a dental visit, and others have identified fear as a real barrier to the receipt of care in older people.\[13,20\] Further, Locker et al.\[21\] stated that the greater the level of anxiety, the lower the rate of utilization of services. The basis of such fear is difficult to quantify and a qualitative study of adults between 16 and 59 years demonstrated that some had an indefinable generalized fear of things, some had specific fear to, for example “the drill” or “needles” or fear of a repeat of a painful visit or of reprimand from the dentist. Locker et al.\[21\] demonstrated that significantly more edentulous patients identified fear as a barrier than did their dentate counterparts. This may have been the consequence of considerably more exposure to exodontias and its inherent implications, or it may point to an underlying fear of dentistry which precluded regular (restorative) dental care.

**CARER RELATED BARRIERS**

If holistic care of older patients is to be practiced, then awareness of dental care must be present among careers of our elderly population. The onus of providing dental education for careers is they medical practitioners, registered nurses or well-meaning relatives rests on the dental profession. Studies in England have highlighted deficiencies in knowledge of basic oral hygiene among all of these careers.\[22\]

**DENTIST RELATED BARRIERS**

**Age**

Patient age has been demonstrated to affect treatment planning in that although missing teeth were scheduled to be restored, 42% of younger age groups were prescribed fixed prosthesis, while only 17% of older age groups were prescribed this option, the majority being recommended removable prosthesis.\[23\]

The determinant toward treatment is the attitude of a dentist;\[16\] some dentists who hold a negative stereotype of the elderly are more likely to provide rudimentary treatment options than dentists with positive stereotypes, although the nature of stereotype is complex.\[24\] Previous dental attendance patterns have been reported to influence treatment options\[25,26\] although it is uncertain if objectivity is possible or desirable for many irregularly-attending patients who wish merely to be relieved of pain.
Poor confidence - Several studies have demonstrated that a significant number of dentists feel some difference in the treatment of older patients, for a variety of reasons including lack of knowledge about gerontology, including drug interactions.\[27-29\]

Access and venues - Are also perceived to be determinants toward provision of care for elderly. Patients with problems of mobility, for example, are less likely to visit dental clinics where stairs have to be climbed.

Financial - An additional dental-related factor relates to remuneration and the consensus view of several studies suggests that fees for treatment on a domiciliary basis are insufficient to encourage dentists to perform more domiciliary treatment.\[20,27,30\]

The World Health Organization discussion paper on health and aging indicated, “we can afford to get old if countries, regions and international organizations enact “active ageing” policies and programmers that enhance the health, independence, and productivity of older women and men.” The time to plan and to act is now.\[31-33\]

**COMMON ORAL PROBLEMS IN THE ELDERLY**

Preventive dentistry must be concerned with the three levels of prevention in the adults, which are not fully edentulous:

- Prevent the initiation of disease
- Prevent progression and recurrence\[34\]
- Prevent loss of function and loss of life.\[35\]

Recommended oral self-care consists of tooth-brushing twice daily, use of fluoride toothpaste, daily interdental cleaning, and avoidance of sugar.\[36\] Regardless of dentate status, it is recommended that the elderly make dental visits at least every 6 months for clinical reevaluation, depending upon their ability to perform oral hygiene.\[36\]

Many older adults have difficulty achieving effective daily plaque control. Various bristle and handle designs are available in either manual or powered (electric or sonic) brushes for such patients. For patients with difficulty holding a toothbrush because of arthritis or stroke, devices are available to facilitate brushing. Wider floss, Teflon-coated floss, floss holders, proximal brushes and even electric flosses are available.

Those with reduced ability to perform oral self-care should be seen more frequently for prophylaxis. Since denture-related and other oral mucosa lesions are common in the elderly, edentulous patients should be periodically evaluated by dental professionals.\[37\]

In addition to self-care and professional care, environmental factors also have an impact on the prevention of oral disease in elders. Recent studies have shown that root caries and coronal caries rates are lower for life-long residents of fluoridated communities as compared with nonfluoridated communities; there is also benefit for older adults who began exposure to fluoridated water in adulthood.\[38,39\]

**RESTORATIVE MANAGEMENT FOR ELDERLY**

The selection of restorative techniques in older adults is more or less similar to that in younger population. However, permissible direct plastic restorative materials are preferred in the former as these restorations can be readily and inexpensively repaired or replaced. Owing to the presence of several risk factors, caries activity is quite high and, therefore, requires frequent maintenance which might not be easily done in an indirect restoration.\[40,41\]

“Smile has no age bar.” Most of the elderly lead an independent social life and are, therefore, conscious about their appearance. The esthetic treatment for elderly could range from simple recontouring procedures to bleaching, laminates and crowns. Any major esthetic rehabilitation should be undertaken only after proper occlusal and esthetic analysis to achieve predictable results.

Successful endodontic can be achieved for the elderly, if proper attention is given to the diagnosis, good quality radiographs and adapting techniques that overcome the challenges posed by calcification of the root canal system. As long as the tooth has a strategically important role to play, endodontic therapy is indicated and justified in any patient.

**PERIODONTAL TREATMENT FOR ELDERLY**

Conservative, nonsurgical treatment may be the best therapeutic option for the major portion of older adults who require periodontal therapy.

In those individuals for whom initial therapy alone is inadequate to resolve the periodontal problem, surgical intervention is indicated. This decision should be made only after considering the many circumstances that may override the decision to intervene surgically. Surgical treatment may consist of simple gingivectomy where there is ample attached gingiva or may involve a flap procedure such as modified Widman or apical repositioning.\[42\]

Surgical techniques are also performed to achieve crown lengthening, which may be necessary in the elderly patient who is prone to root caries and fractured teeth at or below the
gingiva. Dental implants may be a viable option for restoring the debilitated dentition in certain elderly individuals.

**PROSTHODONTIC MANAGEMENT OF ELDERLY PATIENTS**

The main aim of success of prosthodontic treatment is to maintain the teeth. If the remaining teeth have a poor prognosis, then they can be planned for overdenture abutment. Where complete dentures are provided, these can be retained using dental implants to overcome many of the problems associated with conventional replacement dentures.

**HOW CAN WE EFFECTIVELY APPROACH GERIATRIC POPULATION?**

Enhancing the dental office environment for the elderly

Delivery of health care services to the elderly in a community setting requires accessible buildings and an environment that can be negotiated with safety. Dental office reception room is intended to be comfortable and inviting space for geriatric patients. In order to allow individuals with walkers or canes to negotiate in safety, there must be a clear path of at least 28 inches wide in the room and through doorways. Tiles or wood floors should have a nonskid surface and be free of scatter rugs. A portable audio amplifier with headset can help the dental professional communicate with the very hard of hearing patients. Large type magazines, newspapers, health education brochures and patient information sheets will be appreciated by the older patients.

Geriatric dental education

It is of utmost importance for dental surgeons to be well trained, understanding and compassionate, and to be aware of the special needs of the elderly population. Kress and Vidmar surveyed 50 experts in geriatric dentistry to determine the 30 major areas of competence for a geriatric dentist. The top five categories in each domain were listed.

**Knowledge**

- Psychology and sociology of aging
- Disease of aging
- Pharmacology and drug interaction
- Biology and physiology of aging
- General medicine/systemic diseases.

**Skills**

- Ability to communicate with elderly patients and other providers
- Ability to adapt treatment plans for the elderly
- Ability to diagnose treatment needs of aging patients
- Ability to perform specialized procedures (especially prosthodontic treatment)
- Management of the elderly.

**Attitudes**

- Empathy/understanding
- Caring/compassion
- Positive attitude toward, and enjoyment of, older patients
- Respect for the elderly patient
- Flexibility in treatment planning (keeping planning realistic)

Geriatric dental education programs must address each of these categories and must be made available to all professionals and paraprofessionals providing oral health services directly or indirectly. Programs developed to prepare dental professionals to treat the geriatric patient must address the entire spectrum of “health and well-being.”

**MEDIA**

Educational newsletters and material should be circulated. A number of business and appointment cards and brochures could be printed in extra-large type. Large-print leisure and educational material should be available in the reception room. Articles on geriatric dentistry could be placed in seniors’ magazines and newspapers, and informative talks given to community groups to demonstrate a willingness and ability to treat medically compromised clients.

**COMMUNICATION**

An important element in effectively developing an awareness of oral prevention is communication skills. Communication with the older adult can be a rewarding, enriching experience especially when certain principles of adult learning are used. Communication is a two-way process. Many times questions of a patient’s history, family, or likes/dislikes are appreciated. Being a patient listener is a critical skill to develop for communicating with any individual regardless of age-and can be particularly important in dealing with the oral adult.

Remember the patient is a person first and a patient second. Individuality should be explored and nurtured. In that way, treatment can be more easily customized. Inquiring about past hobbies or areas of interest can open the door for the older adult to share part of his or her life. Though difficult to always remember, effort must be made to realize-especially with the frail-they have not always been as they appear now.
EQUIPMENT
Portable dental equipment can be used to service the functionally dependent elderly at home or in nursing homes. This equipment varies from a domiciliary valise to a portable dental office, neither housed in a van nor set up in an available room in a nursing home.\(^{[46]}\)

GOVERNMENT POLICIES
It is obvious that oral health care is not a priority in our health care system. Governments are struggling to keep up with spiraling health costs and growing demand.\(^{[47]}\) Public policy options to support geriatric oral health care, and research are limited by the government’s preoccupation with cost containment and the lack of visibility for dental programs.\(^{[48]}\)

It is, therefore, incumbent on us, as dental health care professionals, to deal with this need and provide access to care for elderly patients.\(^{[47]}\)

The dental management of geriatric population is an increasingly important aspect of dental practice because these patients have high incidence of medical problem, the dentist must be capable of detecting these diseases and understanding their relationship to dental treatment.

Risk factors for oral diseases in the elderly can be reduced by personal home-care regimens, professionally provided preventive, diagnostic, and therapeutic care, changes in high-risk behavior, and a supportive environment.\(^{[48]}\)

Apart from a good oral physician, this age group requires a good human being and a trustworthy friend, and we should play the dual role of both a doctor and a friend. The easiest and the most effective way of treating the geriatric population is when we can mix professional treatment with the human touch.\(^{[37]}\)

REFERENCES
1. India’s population to be biggest’ in the planet. BBC News. 18 August, 2004. PubMed US Census Bureau, Demographic Internet Staff. “United States Census Bureau-International Data Base (IDB)”. Available from: http://www. Census.gov. [Last retrieved on 2011 Sep 24].
2. India’s Elderly Population: Some Fundamentals, General Knowledge Today. March, 8\(^{th}\) 2013. Available from: http://www.gktoday.in/indias-elderly-populations-some-fundamentals/.
3. Robert GH, Barry C. Practical Consideration in special patient care, delivering dental care to nursing home and homebound patients. Dent Clin North Am 1994;38:537-51.
4. Chandra S, Chandra S. Geriatric dental health care. Text Book of Community Dentistry. 1\(^{st}\) ed. New Delhi, India: Jaypee Brothers Medical Publishers (P) Ltd.; 2004. p. 239-51.
5. Panchbhai AS. Oral health care needs in the dependant elderly in India. Indian J Palliat Care 2012;18:19-26.
6. Issrani R, Ammanagi R, Keluskar V. Geriatric dentistry – Meet the need. Gerodontology 2012;29:e1-5.
7. Todd JE, Lader DA. Adult Dental Health 1988. United Kingdom, London: HMSO; 1991.
8. Branch LG, Antczak AA, Stason WB. Toward understanding the use of dental services by the elderly. Spec Care Dentist 1986;6:38-41.
9. Brodeur JM, Demers M, Simard P, Kandelman D. Need perception as a major determinant of dental health care utilization among the elderly. Gerodontology 1988;4:259-64.
10. Evashwick C, Conrad D, Lee F. Factors related to utilization of dental services by the elderly. Am J Public Health 1982;72:1129-35.
11. Ettinger RL, Beck JD. The new elderly: What can the dental profession expect? Spec Care Dentist 1982;2:62-9.
12. Kay DW. Ageing of the population: Measuring the need for care. Age Ageing 1989;18:73-6.
13. Hoad-Reddick G, Grant AA, Griffiths CS. The dental health of an elderly population in North-west England: Results of a survey undertaken in the Halton Health Authority. J Dent 1987;15:139-46.
14. Townsend P, Davidson N, Whitehead M. Inequalities in Health. London: Penguin Books; 1990.
15. Kandelman D, Lepage Y. Demographic, social and cultural factors influencing the elderly to seek dental treatment. Int Dent J 1982;32:360-70.
16. Kiyak H A. Impact of patients and dentists attitudes on older persons use of dental services. Gerodontology 1988;4:331-5.
17. McCord JF, Wilson MC. Social problems in geriatric dentistry: An overview. Gerodontology 1994;11:63-6.
18. Antczak AA, Branch LG. Perceived barriers to the use of dental services by the elderly. Gerodontics 1985;1:194-8.
19. Kail BI, Silver MM. Dental demands of elderly people living at home in Hertfordshire. Br Dent J 1984;157:94-7.
20. Fiske J, Gelbier S, Watson RM. Barriers to dental care in an elderly population resident in an inner city area. J Dent 1990;18:236-42.
21. Locker D, Liddell A, Burman D. Dental fear and anxiety in an older adult population. Community Dent Oral Epidemiol 1991;19:120-4.
22. McCord JF, Connolly M, Whittle G, Wilson MA. Determination of dental education experienced by medical students and general medical practitioners. J Inst Health Educ 1993;31:149-57.
23. Braun RJ, Marcus M. Comparing treatment decisions for elderly and young dental patients. Gerodontology 1985;1:138-42.
24. Hamilton FA, Sarli DW, Grant AA, Worthington HV. Dental care for elderly people by general dental practitioners. Br Dent J 1990;168:108-12.
25. Tuominen R, Ranta K, Paunio I. Items of dental care received by adult dentate and edentulous populations. Community Dent Health 1988;5:339-47.
26. Kay EJ, Blinkhorn AS. Some factors related to dentists’ decisions to extract teeth. Community Dent Health 1987;4:3-9.
27. MacEntee MI, Dowell TB, Scully C. Oral health concerns of an elderly population in England. Community Dent Oral Epidemiol 1988;16:72-4.
28. Niessen LC, Gibson G. The geriatric patient. In: Stefancic SJ, Nesbit SP, editors. Treatment planning in Dentistry. St Louis: Mosby; 2001. p. 223–44.
29. Pomer A, Landt H. Evaluation of the need, perceived by general practitioners, for further education in geriatric dentistry. Gerodontics 1988;4:18-22.
30. Berkey DJ, Call RL, Gordon SR, Berkey KG. Barriers influencing dental care in long-term care facilities. Gerodontics 1988;4:259-64.
31. Tuominen R, Ranta K, Paunio I. Items of dental care received by adult dentate and edentulous populations. Community Dent Health 1988;16:72-4.
32. Johnson CS. Ageing and healthy life expectancy: Will the extended years be spent in good or poor health? J Indian Acad Geriatr 2008;4:64-7.
33. Pyle MA, Terezhalmy GT. Oral disease in the geriatric patient: The physician’s role. Clin J Med 1995;62:218-26.
34. Oral health and the older adult: Kenneth Shay: Crest ©Oral‑B ® at dentalcare.com continuing education course. [Last revised on 2012 June 13].
35. Mandel ID. Preventive dentistry for the elderly. Spec Care Dentist 1983;3:157-63.
36. Yeh CK, Katz MS, Saunders MJ. Geriatric dentistry: Integral component to geriatric patient care. Taiwan Geriatr Gerontol 2008;3:182-92.
37. Rai S, Kaur M, Goel S, Bhatnagar P. Moral and professional responsibility of
oral physician toward geriatric patient with interdisciplinary management-The time to act is now! J Midlife Health 2011;2:18-24.
38. Stamm JW, Barling DW, Imrey PB. Adult root caries survey of two similar communities with contrasting natural water fluoride levels. J Am Dent Assoc 1990;120:143-9.
39. Hunt RJ, Levy SM, Beck JD. The prevalence of periodontal attachment loss in an Iowa population aged 70 and older. J Public Health Dent 1990;50:251-6.
40. Saunders RH Jr, Meyowitz C. Dental caries in older adults. Dent Clin North Am 2005;49:293-308.
41. Atkinson JC, Grisius M, Massey W. Salivary hypofunction and xerostomia: Diagnosis and treatment. Dent Clin North Am 2005;49:309-26.
42. Steinberg BJ, Brown SS, Rose LF, Cohen DW. Successful periodontal treatment for the elderly. Dent Clin North Am 1989;33:101-8.
43. Epstein CF. Geriatric dentistry. Dent Clin North Am 1989;33:43-50.
44. Otsuni E, Mohi GR. Communicating with elderly patients. Dent Econ 1994;84:27-30, 2.
45. Kress GC Jr, Vidmar GC. Critical skills assessment for the treatment of geriatric patients. Spec Care Dentist 1985;5:127-9.
46. Antczak A, Branch LG. Perceived barriers to the use of dental services by the elderly. Gerodontics 1985;1:194-8.
47. Morreale J. In support of geriatric dentistry at the undergraduate level. J Can Dent Assoc 2007;73:149-50.
48. Gershen JA. Geriatric dentistry and prevention: Research and public policy. Adv Dent Res 1991;5:69-73.

How to cite this article: Bharti R, Chandra A, Tikku AP, Arya D, Gupta R. Oral care needs, barriers and challenges among elderly in India. J Indian Prosthodont Soc 2015;15:17-22.

Source of Support: Nil, Conflict of Interest: None.

New features on the journal’s website

Optimized content for mobile and hand-held devices
HTML pages have been optimized of mobile and other hand-held devices (such as iPad, Kindle, iPod) for faster browsing speed. Click on [Mobile Full text] from Table of Contents page.
This is simple HTML version for faster download on mobiles (if viewed on desktop, it will be automatically redirected to full HTML version)

E-Pub for hand-held devices
EPUB is an open e-book standard recommended by The International Digital Publishing Forum which is designed for reflowable content i.e. the text display can be optimized for a particular display device. Click on [EPub] from Table of Contents page.
There are various e-Pub readers such as for Windows: Digital Editions, OS X: Calibre/Bookworm, iPhone/iPod Touch/iPad: Stanza, and Linux: Calibre/Bookworm.

E-Book for desktop
One can also see the entire issue as printed here in a ‘flip book’ version on desktops. Links are available from Current Issue as well as Archives pages.
Click on View as eBook