

The Ageing Nation

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Introduction

There is an old saying about the eyes being windows to the soul. But the latest medical and dental research shows that the mouth truly is a window into one's overall health. Not only does the mouth tattle on the rest of the body, oral health can actually affect overall health.

It is known that the proportion of older adults in the Indian population is increasing, life expectancy is increasing and that edentulism is declining. This means that there will be increasing demand for dental treatment from elderly patients and it is incumbent on the dental profession to ensure that their particular and growing needs are addressed.

Looking out for a loved one's health means not only keeping an eye on their nutritional intake and physical capabilities but also on their teeth and gums. For elderly people, protecting and promoting masticatory function are essential to maintain good physical and social qualities of life.

Importance of Geriatric Dentistry

Geriatric dentistry is the delivery of dental care to older adults involving diagnosis, prevention, and treatment of problems associated with normal aging and age-related diseases as part of an interdisciplinary team with other healthcare professionals.⁽¹⁾

The term geriatrics stems from a Greek word "GERON" meaning old man and IATROS means healer. It is cognate with "JARA" in Sanskrit which also means "old".

Changing Indian demographics, such as increasing life expectancy, number, and proportion of elderly adults in the population, has brought attention to the unmet oral healthcare needs of older people.

The life expectancy at birth has increased, it was 62 years in 2004 and also the total number and proportion of persons age (65 or older) has increased dramatically from 1900 to present.⁽²⁾ The population of India, including its older population, is becoming more ethnically and culturally diverse. Currently, the old age population in India is around 8% amounting to over 80 million and expected to reach 12% in 2025.⁽³⁾ The world population of elderly individuals is expected to reach 830 million by 2025, of which India alone will contribute to 110 million⁽³⁾ which means one out of every seven aged persons in the world will be an Indian.

A few unique facts regarding the elderly population in India include:

1. The rate of growth of the elderly population is faster than that of the general population
2. There is a larger proportion of women among the elderly (52% of the >60 years and 55% of the >80 years age groups).⁽⁴⁾
3. Eighty percent of the elderly population resides in rural areas.⁽⁵⁾
4. Nine percent of the elderly live alone or with persons other than their immediate family members.
5. Three fourths of the dependent elderly population is supported by their own family members.
6. Thirty percent of the elderly are below the poverty line. Only 53.5% of the urban elderly and 37% of the rural elderly possess some kind of financial assets.⁽⁶⁾
7. Only 28% of the elderly population is literate low compared with the national average.⁽⁷⁾

Although health and functional status are dynamic and variable, people are living longer and their expectations of their lifestyles and their health are changing. Has the profession embraced and incorporated this demographic

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shift into the various aspects of dental practice, including marketing and the organization and delivery of services? For example, do we propose dental treatment plans with life expectancy data in mind?

A Multi-Faceted Challenge

The burden of diseases and the risk profiles prevailing among populations are also changing dramatically. India is experiencing epidemiological transition characterized by a shift from infectious to non-communicable chronic diseases. Although malnutrition and infectious diseases such as malaria and cholera are still common, these are now accompanied by non-communicable diseases such as cardiovascular, cancer, diabetes, and depression – the so-called double burden of the disease. These diseases have a significant impact on the quality of life. Moreover, the burden of oral diseases is higher in older adults. Poor oral health among older people is primarily seen in high levels of tooth loss, dental caries, prevalence of periodontal disease, xerostomia (dry mouth), and oral pre-cancer/cancer conditions that have a major bearing on quality of life. Several oral health conditions are associated with chronic diseases, and the links between oral health, general health, and quality of life are pronounced in old age.

Substantial increase in the number of elderly in India, accompanied by rising prevalence of dental illness, indicate that future dentists will be required to treat an ever-growing proportion of elderly patients in their practice and will have to make appropriate adjustments and advancement in their professional skills.

The main problem that the dentist faces when treating the elderly patient is that the complexity of treatment gets compounded with ageing. The oral cavity is an important part of the body, with a crucial role in chewing, swallowing, speech, facial expressions, and in maintaining the nutritional status and systemic health, as well as self-esteem⁽⁴⁾ Factors such as mental illness, dementia, psychosis, neurosis, depression, Parkinson's disease, arthritis, stroke, and muscular fatigue, all common in the elderly, affect locomotor skills and hence the ability to seek treatment. In addition to this, the dentist's behavior and attitude toward the patient and the time that the dentist allocates for elderly patient is crucial if successful treatment is to be provided. The fear and anxiety felt by an elderly patient need to be handled with empathy. Such patients need more of the dentist's time but, often, cannot afford to pay large amounts.

Another factor worth emphasizing is that not many people want to work in this field due to lack of knowledge regarding the psychological management of these patients; the exception being those who are naturally interested in

the welfare of the elderly. Provision of oral health care requires an insight into and expertise of the many facets that have now evolved in the treatment of elderly dental patients. Coordination of services for the elderly through a multi-disciplinary team, including colleagues from geriatric medicine, is important and would contribute to meeting the dental care workload efficiently.

Access to Care

The Institute of Medicine⁽⁸⁾ defined access to care as “the timely use of personal health services to achieve the best possible health outcomes”. The report further explained that “Access is a shorthand term for a broad set of concerns that center on the degree to which individuals and groups are able to obtain needed services from the medical care system. Often, because of difficulties in defining and measuring the concept, people equate access with insurance coverage or with having enough doctors and hospitals in the geographic area in which they live. But having insurance or nearby health care providers does not guarantee that people who need services will get them”. Timely and appropriate access to health care is considered important to reduce premature morbidity and mortality, preserve function, and enhance overall quality of life⁽⁸⁾ The ageing population can be categorized into three broad functional groups – the functionally independent, frail, and the functionally dependent. The burden of oral diseases and chronic diseases is heaviest among frail and functionally dependent elderly people⁽⁹⁾ The current status of older adults' access to care can be described as “the best of times and the worst of times”. In general, many older adults living independently in their communities have no difficulty obtaining dental care. Research suggests that those who can afford care, have dental insurance, are dentate and have a pattern of regular care-seeking behaviors, believe they need care, have a regular source of care, can get to the office, can effectively communicate with the dentist and the office staff, and do not belong to ethnic or minority groups generally do not have difficulty accessing dental services.

On the other hand, the subgroups of older adults who do not have access to necessary dental services include the frail and functionally dependent elders, also described as vulnerable elders. The literature suggests that older adults who are poor, do not have insurance, are edentulous, do not believe they need care, do not have a regular source of care, have transportation difficulties and cannot get to the office or clinic, have difficulty communicating with the dentist or staff, belong to ethnic or minority groups, have “special needs”, and/or have functional and cognitive impairments are less likely to have access to needed dental care^(10,11) The “Access Triangle”, describes three factors essential to any successful access program, including:

1. An adequate workforce willing and able to provide the dental services.
2. Effective demand for care by the target population.
3. Favorable economics that allow both the patient and practitioner to participate.

Preventing Oral Diseases

Although many oral diseases of the elderly are preventable or treatable, many older people do not seek available treatment, or the oral health care needs are not being met.

Regardless of functional status, the elimination of acute dental infection and pain should be achieved for all elderly patients. Oral disease prevention is still the central focus for the elderly population as for other patient populations.

One means of preventing oral disease is to increase oral hygiene education for the elderly and their caregivers. Another means of prevention is to reduce the risk factors associated with oral diseases. This may be accomplished by personal, daily home-care regimes, professionally provided preventative and continual care, changes in high-risk behavior, and a supportive environment.

Daily home-care regimes, whether the elderly adult or the caregiver carries them out, should consist of mechanical and inter-proximal plaque removal, antimicrobial mouthrinses, and fluoride applications or rinses. Mechanical removal of plaque prevents caries and periodontal disease.

Special oral hygiene measures, however, are required for the elderly. For example, toothbrush or dental floss devices with larger handles may be provided to patients with limited manual dexterity resulting from arthritis and/or stroke.

Oral hygiene should be provided as part of general hygiene for patients who have compromised cognitive function and live in long-term care facilities. Regardless of dentate status, it is recommended that the elderly make dental visits at least every 6 months for clinical re-evaluation and depending upon ability to perform oral hygiene for prophylaxis. Those with reduced ability to perform oral self-care should be seen more frequently for prophylaxis.

In addition, high-risk behavior, such as consuming a diet high in sugars and starchy foods, should be curbed and a balanced diet should be instituted.

Although specific health problem management during dental treatment of the elderly remains a real challenge

for dentists, treatment of oral diseases themselves is equally challenging. Many treatment modalities are still empirical. Dentists should be aware of advances in dental materials and new treatment modalities for diseases commonly seen in geriatric patients.

Role of Health Care System: Policies and Programs of the Indian Government

Across the globe, steps have been taken by various countries to provide social systems for the elderly and other disadvantaged groups. Such systems ensure that senior citizens are not deprived of their most basic needs when they lack the resources to fulfill them. The policies and programs of the Indian government for the elderly include National Policy on Older Persons, National Social Assistance Programme, The Indira Gandhi National Old Age Pension Scheme, Insurance Coverage, Old Age Social and Income Security, Annapurna Scheme, Reverse Mortgage System, Integrated Programmes for Older Persons, The Senior Citizens (Maintenance, Care and Protection) Act, and National Rural Health Mission.⁽¹²⁾

Goal

The goal of oral health care for the elderly is “Successful Ageing”. An older person is considered to be ageing successfully when he/she is able to maintain healthy oral tissues and natural functional dentition throughout his/her remaining adult life with all the social and biological benefits such as aesthetics, comfort, ability to chew, swallow, taste, speak competently, and be free from oral pain.

Barriers to Health Care

The current barriers to improving access to care by older adults include the education and training of the dental workforce; the extent to which older adults understand and perceive the importance of oral health and consequently, demand dental care; the capacity in our current system of dental care delivery; and the degree to which private or public financing is available to support the delivery of dental services.

Calls to Action

The aim of health care for elderly should be to provide quality services closest to their home, keep them functional, and enable the elderly to return to the community soon after treatment. Furthermore, the system should have full knowledge of its users – their financial status as well as socio – cultural resources. It is important to note that in case of the elderly, the goal of health care should be to ensure “functionality” as soon as possible, given that “cure” is not an option.

It therefore, requires several levels of intervention – primary care at community level, specialized care by internists or geriatricians, and specific intervention by physicians, surgeons, *etc.* The function of the primary care is to provide curative and rehabilitative services. In addition to the acute health problems, the primary healthcare professionals should be required to manage chronic non-communicable diseases after their diagnosis on a long-term basis. Among the secondary level health facilities, which mainly include the district hospitals, sub-district, and medium size private hospitals, it is seen that India has about 12,000 hospitals and 7 lakh beds. Most of these beds are under the public sector.⁽¹³⁾ At district hospitals and community health centers, the facilities for dental treatment are poor. This is largely because of inadequate funds, which result in short supply of materials and poor maintenance of dental equipment. Hence, the need of the hour is to set up geriatric wards that would fulfill the specific needs of geriatric population by provision of distinct Out Patient Department OPD services. Providing screening services as well as curative and rehabilitative services and convalescent homes to provide long-term care, which may be a part of designated hospitals, is also a priority.

At the tertiary care level, which comprises of super speciality and medical college services, there is a need for provision of geriatric wards and separate OPDs. A “multi-disciplinary team” specifically trained to meet the needs of the geriatric population need to be created. Elderly patients from poor and low-income facilities should be supplied with free or reasonably priced treatment through public-private partnership.

Day care hospitals could play an important role in providing close supervision and follow-up of patients with chronic diseases. Moreover, the cost of a day care center is comparatively less than that of a nursing home. India has a very few hospices that can provide terminal patient care. Hospices should be set up at the district level Non Governmental Organization NGOs, charitable organizations, and faith-based organizations, which could play an important role in this area.

Setting up of treatment centers with relevant infrastructure, which takes into consideration the requirements of the ambulatory and non-ambulatory elderly, will have a substantial impact on meeting the needs of geriatrics. For the ambulatory elderly, oral healthcare services need to be provided at the chair side in a hospital setting with suitable rails, ramps, lifts, wheel chairs, and a walker for transfer to a dental office, all of which needs evaluation prior to the appointment.

Non-ambulatory elderly requires a different delivery system. Residents in old-age homes, housebound elderly,

older persons in long-term care geriatric wards, and those in special care units like institutes for the mentally challenged and in hospices need on-site dental services that can be provided with portable equipment.

Awareness and knowledge would facilitate the setting up of separate healthcare units for the elderly along with oral healthcare clinics and involvement of multi-disciplinary teams, mobile oral health services, domiciliary services in the urban and rural areas, and provision of systematic oral health care.

Is Dental Workforce Well Prepared in Geriatric Dentistry?

In 1972, a World Health Organization commission⁽¹⁴⁾ concluded that “education in inextricably interwoven with the health services system”. This statement cannot have more direct implication than in the field of geriatric dentistry. Patient and community health outcome are shown to be directly related to the education of health practitioners. Quality of health care by graduates, especially to the elderly, is likely to be related to their education.

Keeping in view the transformation in the nation’s demographic profile, which will have far-reaching consequences in this millennium on socio-economic conditions and the health resources of India, it is the responsibility of the dental profession and the educationists to ensure that India has an adequate number of dentists with the appropriate knowledge and skills to treat the elderly.

Education in geriatric medicine is in its infancy in India and geriatric dentistry is non-existent. The need for geriatric dental education was realized in the late 1970s. Yellowitz and Saunders⁽¹⁵⁾ Kress and Vidmar,⁽¹⁶⁾ and Ettinger⁽¹⁷⁾ were the pioneers who championed the cause for special education needs for geriatric dentistry.

India has the highest number of dental schools in the world; at present, there are 270 dental schools in the world. In all the subjects of undergraduate and post-graduate curricula, geriatric dentistry does not figure anywhere, except brief mention of age changes in dental and oral tissues. Students at both undergraduate and post-graduate levels are trained to provide oral health care at community level to residents in remote areas, including elderly patients, through a mobile dental van and dental camps. However, no training is given for oral care provision to patients in long-term care facilities or for the home bound elderly.

Hence, the need of the hour includes the development of geriatric dentistry as a separate subject in India; it should be introduced initially in undergraduate teaching

without any delay and subsequently post-graduate facilities will have to be developed. Undergraduate teaching is essential to establish the pattern of thought and provides the academic and clinical training to enable students to provide oral health care to the elderly.

Simultaneously, upgradation of the existing infrastructure is required for provision of oral health services in a hospital setting such as in the dental operatory and geriatric wards, efforts must be directed at the development of outreach services for domiciliary care with portable equipment.

The Future

The aging and diversity of the Indian population are placing new demands on the oral health profession. In order to adapt to the changing dental needs of older adults, new strategies in education, policy, and workforce must be implemented to ensure the oral health of the population.

Geriatric dentistry will experience a boom in demand over the next couple of decades and the dental profession must prepare itself for this. The dental workforce must also become more diverse and receive more training in geriatric dentistry.

Some experts have proposed that geriatric dentistry be granted dental specialty status; others have called for mandatory continuing education credits to be completed in geriatrics by all dental professionals.⁽¹⁸⁻²¹⁾ Both concepts would be positive steps toward filling the voids that currently exist in oral care for older adults.

Currently, there are no local, state, or federal regulations regarding the training of the non-dental work force involved in the daily care of the elderly. A strategy such as this could drastically improve oral outcomes for elderly.

By looking at the past, analyzing strategies that are currently working and planning for the future, we, as dental professionals, can strive for a healthier generation of older Indians. If we ignore the trends and warning signs, we will remain in a perpetual state of decay. The success we desire for the future begins with what we know today and what is taught and passed to the future generations of dental providers.

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