

Need for Oral Health Policy in India

Gambhir RS, Gupta T¹

Departments of Public Health Dentistry, Rayat and Bahra Dental College and Hospital, Mohali, Punjab, ¹MM University, Mullana, Ambala, Haryana, India

Address for correspondence:

Dr. Ramandeep Singh Gambhir,
Department of Public Health
Dentistry, Rayat and Bahra
Dental College and Hospital,
Mohali - 140 104, Punjab, India.
E-mail: ramanig@yahoo.co.in

Abstract

Dental diseases are a significant public health menace having a substantial impact on the quality of life which in turn affects the daily performance and general life satisfaction. There is a vast difference in health status including the oral health between urban and rural population of India and in other developing countries. The existing situation demands the formulation and implementation of National Oral Health Policy in India in order to expand the oral health care to make it more affordable, and reachable. An extensive literature search was conducted using various search engines in order to include relevant information in the review. Number of keywords and their combinations were used in order to extract appropriate data. Finally 24 out of 35 articles were selected upon detailed reading. The present paper focusses on some of the important subjects that can be considered while formulation of a National Oral Health Policy for the benefits of both the dental profession and community as a whole. There is a need of dental health planners and policy makers that have relevant qualifications and training in public health dentistry to understand the unique needs and resources for the development of an effective oral health policy. Professional dental organizations can also support government programs to provide basic oral health needs of extensive underserved population of this country.

Keywords: Developing country, India, Mobile dentistry, Oral policy, Partnership

Introduction

Dental diseases are a significant public health burden in India as well as across the globe. WHO recognizes the oral health as an integral part of general health. The consequences of widespread poor oral health can be seen on the personal, population, and health systems level, as caries and periodontal disease deteriorates the individual health and wellbeing, decrease economic productivity, and act as significant risk factors for other systemic health ailments.^[1] In most of the developing countries including India, there is a limited access to oral health care services, as a result teeth are often left untreated or are extracted because of pain or discomfort.^[2] The growing incidence of some chronic diseases like diabetes can further have a negative impact on oral health. Extensive research in public health has shown

that a number of individual, professional, and community preventive measures are effective in preventing most oral diseases.

In developing countries, there is a vast difference in oral health status between urban and rural populations, with enormous and widening disparities in access to quality care, predominantly in rural areas.^[3] The sad thing is that oral health education and indeed even emergency dentistry are low on the list of priorities when it comes to health care in developing countries. This is further compounded by most countries choosing to use the little money they do have for oral health on traditional approaches of employing a very small number of fully trained dentists along with the complex equipment and expensive materials. This makes even simple treatment inaccessible to the vast majority of the population.^[4]

Access this article online

Quick Response Code:



Website: www.amhsr.org

DOI:
10.4103/2141-9248.180274

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Gambhir RS, Gupta T. Need for oral health policy in India. *Ann Med Health Sci Res* 2016;6:50-5.

There are approximately 300 dental colleges in India, and annually 25,000 graduates pass out including 5000 specialists.^[5] Moreover, as per the latest statistics, there is a concentration of only 10% of dentists where approximately 70% of the Indian population resides (rural areas) and 90% of concentration of dental professionals where only 30% of population resides (urban areas).^[6] There is plenty of dental manpower available yet the utilization of oral health care services is low. The reason for the low utilization of health care services is the high cost involved thereby widening the oral health differences across the social economic classes. Moreover, the average salary for a fresh graduate in the private sector is paid much less as compared to the government sector and job opportunities are few in the government sector. India has neither an oral health policy nor a planned oral health care delivery system. The blueprint of the National Oral Health Policy that was drafted at the 4th Conference of Central Council of Health And Family Welfare in 1995 at New Delhi aimed at developing an efficient oral health care delivery mechanism to address the oral health needs of its countrymen still remains as a draft since last 15 years due to very poorly motivated policy makers.^[7]

Methods of Literature search

Literature search for the present article was done both electronically and manually. Electronic search was conducted using databases like PubMed, Medline, and so on extracting relevant articles published in peer-reviewed journals. Various web-based search engines like Google Scholar were also used for finding relevant articles. Full text of the articles which were not available electronically was manually retrieved from PGIMER Library, Chandigarh electronically. A total of 35 articles were obtained during initial search which was conducted keeping in view the papers published in last two decades. However, 24 articles were finally selected after detailed reading. Various key words and their combinations were used for literature search like oral policy, India, dental profession, developing countries, developed countries, dental insurance etc. The present review also emphasized on importance of public-private partnership towards oral policy.

Oral Health Burden in India

Oral problems are emerging as one of the main public health concerns in India. Oral problems are not only causing pain, agony, functional, and aesthetic problems but also leads to the loss of working man-hours. Hence, in the long run, they are bound to have a significant impact on our economy.^[8] It is estimated that about 50% of school children are suffering from dental caries and more than 90% of the adult population is affected by periodontal disease.^[9] According to a survey, the prevalence of dental caries in children aged 5 years was 50%; 52.5% in 12 year olds; 61.4% in 15 year olds; 79.2% in 35–44 year olds; and 84.7% in 65–74 year olds.^[10] The World Dental Federation estimates that 83% of children aged 6–19 years have dental caries.^[11] The majority of 12 and 15 year

olds had a DMFT value between 1 and 3, while the majority of older adults (65–74 years) had a DMFT value between 25 and 32.^[10] Consumption of tobacco products (smoking, and smokeless form) has also increased in the recent years. Hence, oral precancers and cancers are emerging as a major threat to younger people and are increasing to alarming proportion in India. Oral cancer is a life threatening condition and the available treatment modalities are expensive and are way beyond the reach of the common person.^[12] They can be prevented and controlled by public education and motivation to a significant level. Private fee for service is the only mechanism of payment for dental care in India similar to some other developing countries. The major disadvantage of this type of payment structure is that many patients are unable to receive any care.

Barriers in Oral Health Promotion

Majority of times, our policy makers gave oral health last priority during the pilot phase of National Oral Health Care Program. They are inadequately informed about the burden of oro-dental problems and its connection with the systemic health and possibly minimal threat to the human life due to oro-dental problems makes step motherly treatment for dental public health programs.^[13] In a county like India, health is a state subject and most of the states in the country are suffering from financial burden even for subsistence rather than providing quality health care. Mostly the health care is looked after by the private sector and individual practices including nonformal medical facilities. The government is unable to provide adequate dental services to the people as treatment of majority of oral disease involves large expenses. Dental auxiliaries forms an important group of people, who can play effective role in providing oral health care services especially in the rural areas. However, there is acute shortage of registered hygienists and laboratory technicians in India.^[14] There are no registered dental nurses or chairside assistants and no denturists. This situation is becoming increasingly difficult with a decrease in the number of schools for hygienists and laboratory technicians from 40 in 1990s to 24 in 2014 with the result that there has been no increase in the efficiency of overburdened dentists.^[15] Moreover, dental graduates are unable to perceive the importance of learning prevention of oro-dental problems for the community and they are not aware of their responsibilities toward the society.^[16] The internship program is also underutilized by the dental colleges for services to the grass root level and dental health needs of our geriatric population are overlooked. School oral health education programs which enable children to learn oral health practices right from early stages are still in infancy stage in our country. Over and above, the burden of oral diseases in our country is also increasing because of fast growing population, rapid westernization, and lack of resources.^[14]

Oral Health Care Expenditure

The oro-dental problems are largely considered to be nonlife threatening except oral cancer and treatment of dental diseases are very expensive and time consuming. Huge amounts of

funds and time is needed to treat the dental caries only in school children of the country. The irony of the budget allocation in India is that, out of the total budget, the amount that is dedicated to health expenditure is very meagre (2%), and out of this amount only a minute percentage is allocated for oral health-related activities.^[16] In fact, there is no specific separate allocation for oral health in the Indian budget. India allocated only 4.9% of the gross domestic product or gross domestic income for health-related expenditures in the last financial year, whereas other smaller Southeast Asian countries with smaller populations allocate nearly the same amount or more for health-related activities.^[16]

Loss of Working Hours

Dental diseases greatly affect day to day activities of an individual which are essential for livelihood. Dental pain causes loss of concentration on the work and the person may not be able to work at all. This factor can bring serious economic implications on the country. So we can very well understand the social and economic implications due to neglect of oral health. As 26% of the Indian population is living below the poverty line and depend on daily earning; the loss of working hours is significant in the Indian context.^[17] The situation can be even worse for those families having a single earning member who is suffering from a dental ailment stopping him from working for one full day. This could lead to serious situation for food and daily needs for the whole family of 4 or 5 persons.^[17]

Improving Geriatric Oral Health

As a result of advances in public health and medical field, the life expectancy of persons is on the increase. Developing countries' provide residence to two-thirds of the world's elderly population. Therefore, vast population should receive the attention from policy makers who will be in demand of health services including oral health as the age progresses.^[18] Government of India has to ensure that every elderly individual should receive quality oral health care and that too at an affordable cost. The framework of the National Oral Health Policy should integrate oral health with the general health policy so that oral health-related quality of life of these people is improved. There is an urgent need to create an oral health data bank for Indian geriatric population. Number of geriatric researchers should be increased by additional funding from both government and private agencies. Geriatric dentistry should be strongly promoted in both the undergraduate and postgraduate dental curriculum by changing the mind sets of policy-makers, students and academicians.^[18]

Strategy to Improve Oral Health of Children

Oral diseases affects the quality of life of children and account for pain, impaired aesthetics, recurrent infections, eating troubles, sleeping difficulties, emergency visits to dentists and hospitals, poor ability to learn, insufficient nutrition, and

improper growth and development.^[19] Dental caries affects the children socially as well as psychologically. Furthermore, treating dental caries in children is expensive not only due to the direct costs of treatment but also the indirect costs such as the time taken off by the parents to take the child to a dentist.^[20] Table 1 depicts a model for National Oral Health Policy incorporating activities to specific age-groups.

Street Dentistry: Tackling Quackery

Street dentistry, a form of quackery, is practiced mostly in rural and remote places of West Uttar Pradesh region of India. It is the practice of unproven, ineffective medicine, usually in order to make money, or to maintain a position of power.^[21] Many of the quacks claim to have learnt the art of dentistry from their ancestors, but there are some quacks who are practicing dentistry after working previously as an assistant or seeing some professional work in a dental office. The procedures carried out by these quacks are very undesirable, harmful, and sometimes dangerous to the patients. In medical field, there are many policy matters discussed to give quacks formal training and absorb them in the healthcare system. On the dental side, these matters have to be carefully analyzed.^[22] These quacks may thrive to earn money by practicing quackery until and unless Government intervenes, takes them into the health system, and provides a stable means of income. The Government and Dental Council should put forward a strong policy to culminate this unethical practice of harming the population.

Public-private Partnership

Delivery of health care is largely the responsibility of the state and national governments, but sinking funds, substantial work burden, lack of equipments, and high absenteeism crop up as roadblocks hindering the government's efforts. In contrast to this, in India, people perceive private sector to be easily accessible, better managed, and more efficient [Table 2]. The private sector provides a large volume of health services, but with little or no regulation.^[22] The private sector is not only India's most unregulated sector, but also its most potent and untapped sector, and more urban biased than its public counterpart. Public-private partnership (PPP) may be one of the effective means in reaching the pinnacle of excellence in oral health. It aims to increase the public expenditure on health aspects and reduces regional imbalances in health, pooling resources, optimization of health manpower, community participation, and ownership.^[23] It brings convergence of private sector interests and public sector goals. Access to dental services by rural and urban poor, marginalized segments of the population like slum dwellers can be increased through this approach. A recent study was conducted to survey the current practices of PPP in health education in Udaipur city in Rajasthan.^[24] Results of the survey showed that most of the PPP were involved in delivering health education, mostly concentrated on general health. Only few of them were involved in oral health education.

Table 1: Model for infant and child oral health promotion age-wise activities

Age group (years)	Setting	People to engage with	Scope, components and tools
0-2	Primary healthcare centers, Anganwadi branches	Anganwadi workers (direct contact), parents (indirect contact)	Oral health education: For Anganwadi workers using a DVD on infant oral care and for parents using printed booklets
2-3	Primary healthcare centers, Anganwadi branches	Anganwadi workers and parents (direct contact)	Oral health education: For parents using printed booklets fluoride varnish program in mobile dental van/or dental satellite centers
3-6	Preschools	Preschool teachers and parents (Parent-Teacher Associations)	Tooth-brushing program with fluoride toothpaste in combination with the mid-day meals scheme and hand washing
6-16	Schools	School teachers and parents (Parent-Teacher Associations)	Tooth-brushing program with fluoride toothpaste in combination with the mid-day meals scheme and hand washing

DVD: Digital video disc

Table 2: Dental health care: Public versus private sector**Public/government sector**

Minimal dental treatment is provided by government rural hospitals
Only basic dental treatment is given at government civil and district hospitals

Except drinking water de-fluoridation, fluoride supplements and some anti-tobacco activities, no other primary preventive dental measures are undertaken

Private sector

Dental institutes offer treatment at low-cost except solo dental practices

Oral health awareness is promoted by state dental associations, pharmaceutical companies, and NGOs

No insurance policy covers out-patient dental treatment costs.
Recently, new policies have been launched but their coverage potential is not yet clear

NGOs: Nongovernmental organizations

Mobile and Portable Dental Services

The distribution of dental manpower between rural and urban areas reflects a glaring contrast. About 80% of dentists work in major cities catering to the oral health needs of around 31% of urban population. In rural India, one dentist is serving over a population of 250,000.^[25] Alternate modes of providing dental services other than traditional dental clinics and private hospitals should be implemented to overcome the present discrepancy in the delivery of oral health care between rural and urban population with special emphasis on covering the underserved population. Mobile and portable dental services may offer a viable option to address the issues of oral health-care delivery for an extensive underserved population in a developing country like India with scarce resources.^[26] The successful implementation and execution of oral health-care delivery using the mobile and portable dental services rely largely on collaborative efforts of the following:

- Professional dental organizations
- Nongovernment organizations
- Government sector
- Local civil society.

Portable dental units can be of advantage in places like naturally isolated areas such as high altitudes or dense forests, military and missionary programs, or disaster situations where

mobile dental units cannot be transported.^[27] Portable systems are smaller and more compartmentalized as compared to mobile vehicle systems. They can be transported easily, are time efficient, and relatively require less equipment.

Dental Insurance Policy

Unlike most western countries, specific dental insurance plans are not common in India. Indian Dental Association has been striving to bring out a new all-inclusive oral and dental health care insurance scheme. However, it has been unable to achieve anything substantial in this front. We, as oral health care workers, are capable to reach every class and village across the country. Dental health insurance can also bring about dental health care awareness percolating at the gross root levels. It would serve as a good motivation to the people to regularly visit the dentist and this in turn serves as an effective preventive measure. If we have to create the awareness and pass on the benefits of longevity of teeth across the society, dental profession should impress on to the policy makers to have beneficial dental insurance schemes for the masses.^[28]

Oral Health Care Reforms in Developed Countries

The government in most of the developed countries made a commitment to oral health and dentistry by formulating policies to improve the oral of the population, particularly children and to increase access to primary care dental services. The public health outcomes framework (2013–2016) of England includes “tooth decay in 5-year-old children” as an outcome indicator.^[29] The National Health Service (NHS) outcomes framework (2014–2015) includes indicators related to patients’ experiences of NHS dental services and access to NHS dental services.

An oral health policy called “Affordable Care Act” was formulated by American Dental Association to include a dependent coverage policy that extends parents’ or guardians’ health insurance to adults aged 19–25.^[30] This dependent coverage policy was associated with an increase in private dental benefits coverage and dental care utilization, and a decrease in financial barriers to dental care among young adults aged 19–25.

As part of state-wide health reform in 2006, Massachusetts expanded dental benefits to all adults ages 19–64 whose annual income was at or below 100% of the federal poverty level.^[31] This reform led to an increase in dental care use among the Massachusetts adult population, driven by gains among poor adults. Compared to the prereform period, dental care use increased by 2.9% points among all nonelderly adults in Massachusetts, relative to all nonelderly adults in eight control states. This experience provides evidence that providing dental benefits to poor adults through Medicaid can improve dental care access and use.^[31]

Routine dental check-ups for children are mandatory for early diagnosis and treatment of dental problems. Under a reform of Israel's National Health Insurance Law in 2010, free dental services were offered to children up to age 12.^[32] A survey was conducted to examine the use of dental services for children and the factors affecting mothers' decision to take their children for routine check-ups. It was found that mothers' sociodemographic status and oral health beliefs affected their decision to take their children for dental check-ups. After the reform, the frequency of children's dental check-ups significantly increased among vulnerable populations. Therefore, the reform has helped reduce gaps in Israeli society regarding children's dental health.^[32]

Conclusion

Government has the ultimate responsibility of the health of its citizens. It is clear from the above discussion that India strongly needs an oral health policy that can be formulated on the basis of discussed aspects. In India, policy makers have not included oral health in public health policies, a change that could have led to improvement in the differences in health status of urban and rural population. Like in developed and few developing countries, oral health deserves to be included in family health policies. Local efforts may also be needed to engage more private practitioners in case of underserved. It is important to launch preventive, curative, and educational oral health care programs integrated into the existing system utilizing the existing health and educational infrastructure in the rural, urban, and deprived areas. Family, that is, parental attitudes toward the importance of oral hygiene, plays a major role in the preservation of healthy children's teeth. Oral health education can be imparted to parents involving health workers, teachers in order to raise their awareness regarding importance of oral health. More studies focusing on parents' attitude toward taking their children to dentists should be conducted.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Singh A, Purohit BM. Addressing oral health disparities, inequity in access and workforce issues in a developing country. *Int Dent J* 2013;63:225-9.
2. Petersen PE. Priorities for research for oral health in the 21st century – The approach of the WHO Global Oral Health Programme. *Community Dent Health* 2005;22:71-4.
3. Singh A. Oral health policies in developing countries. *J Public Health Policy* 2010;31:498-9.
4. Oral Health in Developing Nation, British Dental Health Education. Available from: <http://www.dentalhealth.org>. [Last accessed on 2015 Mar 20].
5. Sivapathasundharam B. Dental education in India. *Indian J Dent Res* 2007;18:93.
6. National Oral Health Policy, India. Prepared by Core Committee, Appointed by the Ministry of Health and Family Welfare, Government of India; 1995. Available from: <http://www.aiims.edu/aiims/events/dentalworkshop/nohc-prog.htm>. [Last accessed on 2015 Mar 20].
7. Reddy KV, Moon NJ, Reddy KE, Chandrakala S. Time to implement National Oral Health Policy in India. *Indian J Public Health* 2014;58:267-9.
8. Kishore KM. Public health implications of oral health-inequity in India. *J Adv Dent Res* 2010;1:1-10.
9. Kaur J. Dental education and oral health problems in India. *Indian J Dent Educ* 2009;2:167-71.
10. Bali RK, Mathur VB, Talwar PP, Chanana HB. National Oral Health Survey and Fluoride Mapping, 2002-2003, India. Dental Council of India; 2004.
11. FDI World Dental Federation. Data Mirror; 2011. Available from <http://www.fdiworldental.org/content/datamirror>. [Last accessed on 2015 May 25].
12. Parkash H, Duggal R, Mathur VP. Final Report and Recommendations, Formulation of Guidelines for Meaningful and Effective Utilization of Available Manpower at Dental Colleges for Primary Prevention of Oro-dental Problems in the Country. New Delhi: AGOI- WHO Collaborative Programme; 2007.
13. Yadav P, Kaur B, Srivastava R, Srivastava S. Oral health disparities: Review. *IOSR J Dent Med Sci* 2014;9:69-72.
14. Tendon S. Challenges to the oral health work force in India. *J Dent Educ* 2004;68:28-33.
15. Dental Council of India Dental Hygienists Course Regulations. Available from: <http://www.dciindia.org.in/Dentistact1948.aspx>. [Last accessed on 2015 Jul 26].
16. Parkash H, Shah N. National Oral Health Care Programme: Implementation Strategies. New Delhi: National Oral Health Care Programme, Govt. of India; 2001.
17. Singh A, Purohit BM. Targeting poor health: Improving oral health for the poor and the underserved. *Int Aff Glob Strategy* 2012;3:1-6.
18. Singh A, Purohit BM. Addressing geriatric oral health concerns through national oral health policy in India. *Int J Health Policy Manag* 2015;4:39-42.
19. Sheiham A. Oral health, general health and quality of life. *Bull World Health Organ* 2005;83:644.
20. Sheiham A. Dental caries affects body weight, growth and quality of life in pre-school children. *Br Dent J* 2006;201:625-6.

21. Webster's Online Dictionary. Search Term "Quackery". Available from: <http://www.websters-online-dictionary.org/definition/Quackery>. [Last accessed on 2014 Mar 27].
22. Sandesh N, Mohapatra AK. Street dentistry: Time to tackle quackery. *Indian J Dent Res* 2009;20:1-2.
23. Chavan S, Kemparaj U, Baghele ON, Rajdha A. Public-private partnership to enhance oral health in India. *J Interdiscip Dent* 2012;2:135-7.
24. Reddy JJ, Multani S, Bhat N, Sharma A, Singh S, Patel R. Role of private-public partnership in health education: A survey of current practices in Udaipur city, Rajasthan, India. *Int J Prev Med* 2013;4:1086-94.
25. Ahuja KN, Parmar R. Demographics and current scenario with respect to dentists, dental institutions and dental practices in India. *Indian J Dent Sci* 2011;3:8-11.
26. Ganavadiya R, Chandrashekar B, Goel P, Hongal S, Jain M. Mobile and portable dental services catering to the basic oral health needs of the underserved population in developing countries: A proposed model. *Ann Med Health Sci Res* 2014;4:293-304.
27. Lamb R. *Portable Mission Dentistry*. 4th ed. Broken Arrow, Oklahoma: World Dental Relief; 2008
28. Toor RS, Jindal R. Dental insurance! Are we ready? *Indian J Dent Res* 2011;22:144-7.
29. Local Authorities Improving Oral Health: Commissioning Better Oral Health for Children and Young People, Public Health England. Available from: <http://www.gov.uk>. [Last accessed on 2015 May 27].
30. Vujicic M, Yarbrough C, Nasseh K. The effect of the Affordable Care Act's expanded coverage policy on access to dental care. *Med Care* 2014;52:715-9.
31. Nasseh K, Vujicic M. Health reform in Massachusetts increased adult dental care use, particularly among the poor. *Health Aff (Millwood)*. 2013;32:1639-45.
32. Shahrabani S, Benzion U, Machnes Y, Gal A. The use of dental services for children: Implications of the 2010 dental reform in Israel. *Health Policy* 2015;119:117-26.

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