DENTAL PUBLIC HEALTH, ITS IMPLICATION AND CHALLENGES IN INDIA: A REVIEW

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ABSTRACT:

Oral public health issues are grossly neglected in a developing country like India, primary reason to which is the non life threatening nature of oral health problems. Indian state governments are already financially over burdened to acknowledge the burden of oro-dental problems and its connection with the systemic health. State governments lack the capability to provide oral health services to all. Awareness is being spread, however services provided are limited only to the people living in urban areas thereby skewing the patient to dentist ratio in remote communities and in rural areas. Further challenges like lack of auxiliary staffs to provide even the basic primary services in the rural areas, lack of incentives for young dentists to work in rural areas, lack of representation from oral community amongst the policymakers have to be overcome in the future. Technological advancements like tele-dentistry should be used more frequently, new concepts like dental homes should be explored to increase the penetration of oral health services in rural areas.

KEY WORDS: Dental Public Health, Dental Auxiliary, Teledentistry, Dental homes.

Introduction:

"DPH is the science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts. It is that form of dental practice that serves the community as a patient rather than the individual. It is concerned with the dental health education of the public, with applied dental research, and with the administration of group dental care programs as well as the prevention and control of dental diseases on a community basis." This definition clearly states DPH specialists have knowledge and skills in program administration, research methods, the prevention and control of oral diseases, and the methods of financing and providing dental care services.

A specialist in DPH will:

1. Plan oral health programs for populations.
2. Select interventions and strategies for the prevention and control of oral diseases and promotion of oral health.
3. Develop resources, implement and manage oral health programs for populations.
4. Incorporate ethical standards in oral health programs and activities.
5. Evaluate and monitor dental care delivery systems.
6. Design and understand the use of surveillance systems to monitor oral health.
7. Communicate and collaborate with groups and individuals on oral health issues.
8. Advocatefor, implement and evaluate public health policy, legislation, and regulations to protect and promote the public's oral health.
9. Critique and synthesize scientific literature.
10. Design and conduct population-based studies to answer oral and public health questions.[1]

Dental Public Health provides leadership and expertise in population –based dentistry, oral health surveillance, policy development, community based disease prevention and health promotion and the maintenance of the dental safety net. It is the responsibility of DPH and the private practice model of health care delivery to assess and provide optimal oral health for all.[2,3]

The continued presence of dental diseases worldwide bears testimony to the fact that there is an urgent need for effective dental care across geographies. The cause for dental morbidity can be attributed not only to behavioral risk factors but also to the lack of access to oral health care. In developing countries like India poverty and lack of oral health providers in the rural and tribal regions are the major barriers. Access to oral health care services is limited mostly to middle and high socio-economic groups in urban areas and hence majority of the dental needs in the rural areas go unmet. The missing link can be attributed to the absence of a primary healthcare approach in dentistry. Keeping this in focus it is essential that prevention of dental diseases should be recognized as a priority. [4,5]

Oral health burden in India

Oro-dental diseases are posing a lot of health problems in India bringing about pain, agony and a lot of functional and aesthetic problems. However in addition to this it is also affecting the productivity of individuals. According to estimates, about 50% of schoolchildren are suffering from Dental caries and more than 90% of adults are having periodontal diseases. Oral pre-cancers and cancers are becoming rampant in the youth of India owing to the prevalent use of tobacco products. Though at the outset it seems that public education and motivation are bringing about their effect, however a closer look shows that the results are limited only to the middle and high socio-economic groups. People in the lower socio-economic strata are neither not aware of the consequences nor have access to oral health care service

even at the point of dire need. This in turn has resulted in health inequities being created in the population in terms of chronic and acute dental diseases. The need of the hour is a strategy which at all times would ensure availability of a skilled and culturally competent workforce to be available to provide the care that the nation demands.[6,7]

Dental Health as a Public Health issue

The reason for not considering Dental health problems as a public health issue could be because of the lack of capacity to serve the low income group of people owing to the long waiting periods and the limitation on the no.of patients who can be served. Moreover public health encompasses problems that are the largest burden on the population and directly impact the health of the population. Though WHO has a Global Oral Health Program (ORH) which works with building oral health policies towards effective control of risks to oral health, based on the common risk
factors approach, the focus is on modifiable risk behaviors related to diet, nutrition, use of tobacco and exessive consumption of alcohol, and hygiene.[2,8]

Dental Public Health in Indian Scenario:

Oral Health Policy was drafted by Dental Council of India(DCI) way back in 1985. National Oral Health Policy(1985) recommends Public Health Dentist to be appointed at Primary and Community Health Centers. It is a specialty whose practitioners focus on dental and oral health issuses in communities and populations rather than individuals patients in main areas of research like:

1. Effective use of Fluoride.
2. Healthy diet and nutrition.
3. Tobacco control.
4. Oral health of children and youth through health promoting schools.
5. Oral health improvement amongst the elderly.
6. Prevention of Oral cancers.\
7. Oral health, general health and quality of life.
8. HIV/AIDS and Oral health.
9. Oral health information systems, evidence for oral health policy and formulation of goals
10. Research for Oral health.

Even till date, focus of the Indian public health system is to control spread of communicable diseases, reduce maternal and infant mortality rates. Flagships program by Government of India “National Rural Health Mission” envisages the same. Amidst all this, there is little focus on Oral health and Oral diseases as it is regarded as Neglected Epidemic, because oral health problems do not directly cause mortality or even affect the major health indicators. Cost-effective preventive measures even though available are not being utilized, hence aggravating the disparities.[2]

Existing dental Health Infrastructure: The principal unit of administration in a state in India is a district, which is further divided into community development blocks. There are 2,424 such blocks in India, each of which caters to a population of 80,000 to 120,000. Health services in rural areas are administered through the primary health centres (PHC), one in each block. These primary health centres meet the needs of 20,000 to 30,000 people; there are 21,854 such centres. Each PHC further has eight to ten sub enters, each responsible for providing health services to 3,000-5,000 people; there are 132,730 such sub enters. These sub enters are the most direct contact point between the primary health care system and the community. In 2006, there were a total of 1,043 dentists posted at the PHC level in different rural areas. Thus not even 20 percent of the existing primary health centres in India have the services of a dentist available for the population. Also, there are no set criteria for posting a dentist at the PHC level in rural areas around the country.[9,10]

Oral Health Care Expenditure

Despite the high number of public health issues which are widespread in India, a look at the amount allocated for healthcare in the annual budget has been a meager 4.9 percentage of gross domestic product (GDP) or gross domestic income (GDI) in the last financial year. This is in contrast to other smaller Southeast Asian countries with smaller populations which allocate nearly the same amount or more for health-related activities.

Issues of the Dental Workforce in India

1. **Deficient Manpower Planning and Projection:**

a) Geographic Imbalance: Even though there has been an increase in the number of colleges to meet the oral health care demands of the society, the growth is restricted to the urban areas only. Most dentists prefer urban or capital areas as their workplace and refuse to take up any job in rural areas. Hence there is a dearth of skilled manpower in remote areas. This challenge can however be overcome by providing incentives to dentists for opting to work in rural areas. [3]

b) Dentist-population Ratio: Increase in the number of dental colleges has gradually led to a better dentist to population ratio. The ratio has improved from 1:80,000 in 1980s to 1:42,500 in 1090s to 1:30,000 at present. However owing to the geographical imbalance in the distribution of dental colleges the ratio is 1:10,000 in urban areas as compared to 1:2, 50,000 in rural areas. Almost three-fourths of the total number of dentists is clustered in urban areas, which accounts for one-fourth of the country's population. This is in great contrast to the physician population ratio, which was 1:2,400 in 2000 and is 1:1,855 at present. In order to address the changing ratio between patients and dentists, technological advances can be used to better the system's ability to deliver care[5]

c) Lacking Dental Auxiliaries: There are district hospitals in India where no dental services are available; Dental Auxiliaries should be posted at such locations to provide primary oral healthcare services. According to the records of 1990 there were 3,000 registered hygienists and 5,000 laboratory technicians in India. This implies that there was one hygienist for seven dentists and one laboratory technician four dentists. It should have ideally been a 1:1 ratio. The situation is only worsening with a decrease in the number of colleges for hygienists and laboratory technicians from forty (20+20) in 1990s to twenty (10+10) in 2000. [4,5]

2. The changing disease pattern affecting the work force

With increasing awareness about oral health hygiene, there has been a decline in certain diseases in urban areas and at the same time there have been much more complex and critical cases being spotted due to changing living patterns of the affluent people. The dental workforce should be better equipped to cope up with these changes.

The two most prevalent diseases are dental caries and periodontal diseases, followed by malocclusion and oral cancers. Moreover, about 40-50 percent of children have malocclusion, and 40 percent of all cancers reported in India are oral cancers. With the change in the disease patterns it is essential to change the service mix from therapeutic to prevention based. The demand for treatment of periodontal disease, endodontics, dental implants, cosmetic surgery, and adult orthodontics has been on the rise with an increase in awareness about dental health. The demand for aesthetic dentistry has also increased among the affluent of the country. The workforce should be able to sustain and satisfy such changing demands.[4]

3. The changing role of women in the Dental work force

India has a comparatively low female to male ratio in the general population as compared to the Western countries and also a few Southeast Asian countries. India has only 24% of its female population as working professionals. However unlike most of the fields of work which provide employment in India, dentistry is a field that has seen an increase in the number of women professionals since the last quarter of the past century. This is reflected in the greater number of female than male applicants to dental schools. [4]

Approaches to improve access to dental care services:

Understanding the hindrances that people face in accessing health care services it is essential to find ways to improve the timely access to dental care.

1. Proper referrals from medical professionals: It is the common instinct of people to neglect dental problems as dental problems are not life threatening. This ignorance towards dental care can however be overcome by increasing referrals from medicos, by conducting informative sessions for medical personnel, counseling parents regarding infant's oral health problems explaining health and financial benefits of treating dental caries in the formative years rather than delaying it.

2. Compulsory rural postings or internships for the dental students: Compulsory posting of 3 months in rural areas has been a top agenda and this initiative has been backed by Ministry of Health and Family Affairs to address the dearth of medical workforce in rural areas. Providing extra incentives to dentists willing to work in rural areas can attract young professionals, thereby balancing the biased urban-rural skew. Moreover colleges should coordinate with primary health centers for catering to underprivileged patients. [11]

3. Tele-dentistry: Tele-dentistry is defined as "The practice of using video-conferencing technologies to diagnose and provide advice about treatment over a distance."This new clinical dimension can be used to increase the rural penetration of oral health care services. Tele-consultation could be direct (between the patient and the expert) or indirect (between the patient's medical doctor general practitioner and the expert). [12]

4. Dental homes: Dental home is a platform where a patient-doctor relationship is nurtured in a family-centered way. It serves as place for preventive oral health supervision and emergency care and can also serve as a repository for records. In order to make the concept as successful as it is in western countries a three pronged strategy should be followed consisting of utilizing existing networks health care delivery systems in India such as the Integrated Child Development Services Scheme and National Rural Health Mission and may include screening, information regarding basics of dental disease developmental processes and their early active intervention. [13]

6. Dental insurance: Dental insurance which is still in its nascent stage in India would help an individual to go through minimal essential dental treatments at affordable prices. This will benefit would drive people to pay the insurance premiums. The plans usually cover basic dental treatments for the patients. However Indian Dental Association is trying to bring about a dental healthcare policy which covers all type of dental treatments. Dental insurance companies could join hands with the multinational companies to improve the access to dental care of their employees. [3]

Barriers in Oral Health Promotion

Implementation of the National Oral Health Care Program in the pilot phase brought about the perception that most of the times the policymakers give oral health the last priority. Dental public health problems are often given the last priority as people are inadequately informed about the burden of oro-dental problems and its connection with the systemic health.

In India one of the major reasons for dental health care being widely ignore is that in India health is a state subject and most of the states are financially burdened for subsistence ,leave alone providing quality health care. Oral treatments are very expensive and it has not been possible for government institutions to provide dental services to all. Problems such as dental graduates not being able to perceive the importance of learning prevention of oro-dental problems for the community , the dental internship programs being underutilized by colleges for services at the grass root level to the geriatric population, lack of organized school oral health education programs for children. Adding to these problems is the fast growing population and lack of resources to meet the needs of the society.[14,15]

The evidence base for controlling oral diseases:

Importance of prevention of oral diseases should be promoted along with chronic disease prevention and general public health issue promotions. Understanding oral health issues is no more an individual concern, but is a part of complex set of influences that include individual, family, community or neighborhood characteristics, and health system factors. Political willingness as shown in the Ottawa Charter for Health Promotion is needed to eliminate social inequalities in oral health.

Challenges for the future:

It is essential for research findings to be translated to policy and equally important to practice them. Although guidelines have been developed for the clinical prevention of oral diseases and community prevention of dental caries, the practice of evidence-based interventions is rarely evaluated or reported. The future is faced by challenges like translation of knowledge and experience in oral disease into programs, indulging more into research capacity building in order to recognize research as the foundation of oral health policy. The WHO has noted that decisions on health care are still often made without a solid grounding in research evidence and hence the World Health Report for 2012 was on the theme of ‘‘No Health without Research.[16-21]

Conclusion:

The immediate challenge is to address the skewed distribution of dentists between urban and rural areas. Programs should be conducted to enhance oral health literacy and lessen social inequalities. Auxiliary staffs should be appointed in rural areas to provide primary oral care services. Implementation of community development programs and behavioral strategies is necessary to benefit the disadvantaged population. It would be more beneficial to identify high risk groups amongst the underprivileged and target dental health education and promote regular dental attendance.Children should be made aware about oral hygiene and its importance through sessions which would be a compulsory part of their curriculum. This would help raising awareness and hence tackling oral diseases like caries at an earlier stage.

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