



## ROLE OF PUBLIC PRIVATE PARTNERSHIP IN IMPROVEMENT OF ORAL HEALTH IN INDIA

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### ABSTRACT

Oral diseases have remained the most prevalent disease group in India over the past three decades. In India, though oral healthcare is provided individually through public and private sectors, till now the oral health has not reached its summit. The public and private sectors have failed individually to meet the oral healthcare needs of the community. One of the best strategies to improve oral health in today's scenario is by encouraging Public-Private Partnership (PPP) and utilising the strengths of both the sectors. PPP is the best way to demonstrate how a sustainable solution can be constructed on combined business for community oral health needs. Private sector will have the opportunity to experience community benefit, while public sectors, including state government will take advantage of leveraging private capabilities and relationships to maximize the impact on their programs and local communities. Public Private Partnerships can be thought of in terms of promotive, preventive and curative oral health care to achieve the sustainable development goals. This article highlights the challenges being faced by both the sectors and various measures that have been taken by the collaborative efforts of the sectors to provide the vision of improved oral health of Indian population.

**KEYWORDS :** Public private partnership, Improvement, Oral health

### INTRODUCTION

In developing countries, especially in India, national and the state government contributes largely to health care delivery, but improper allocation of resources, scarcity of equipments, high population density and inadequate doctor to population ratio constitutes the major roadblocks in the government's efforts to serve the nation. (1) In contrast to it, private sector in India is highly efficient, better managed with resources and equipments with major advantage being easy accessibility to large group of people, especially in urban areas. Although it provides a large bulk of health services with utmost comfort, care and almost no regulation, it also leads to urban bias in the delivery of the health care services as compared to its public counterpart. Urban bias means that the entire investment on health is done in the urban areas where approximately 30% of population is present, leaving the larger section of the society (rural 70%) deprived of such health facilities. (2) Also, the public health sector has failed to deliver quality health services to the weaker section of Indian society due to resource constraints, poor accountability towards customer satisfaction, weak supervisory and weak enforcement of the regulations and legislations. (3) Due to this oral diseases still remain a public health problem in India, where majority of population belongs to rural background. Prevalence of dental caries in India is very high i.e. 50% in age of 5 years, 52.5% in 12 years, 61.4% in 15 years, 79.2% in 35-44 years and 84.7% in 65-74 years age group and similar situation for periodontal diseases being 55.4% in 12 years, 89.2% in 35-44 years and 79.4% in 65-74 years. (4) High prevalence of dental diseases has put substantial burden on each and every citizen, community and the health care system of India. The high prevalence of dental diseases in India is due to lack of awareness, improper utilization of dental healthcare resources, lack of effective screening programmes, inadequate dentist to population ratio, high cost of dental treatment in private settings, long waiting queue, lack of infrastructure, equipments and materials in the public sector. (5)

### Need for public private partnership for oral health care in India

Due to this increase in burden of dental diseases and with merits and demerits of both public and private sector and understanding the obstacles that the general population

face to access the oral health care services, there is an urgent need to establish a synergistic action and promote public-private partnership for improving the oral healthcare in India through preventive, curative and rehabilitative services especially when one is striving hard to achieve the Universal Oral Health Coverage. According to the United Nations Development Program (UNDP), the broadest definition of Public-private partnership (PPP) includes agreement frameworks, traditional contracting, and joint ventures with shared ownership. PPPs are being increasingly encouraged as part of the comprehensive development framework. The concept of PPP recognizes the existence of alternative options for providing services. ( remove education ) besides public finance and public delivery. (6,7,8) The ultimate goal of PPP in oral health context is to strengthen the oral healthcare delivery system in India and achieve the target set by WHO of "Optimal oral health for all by 2020". (9) PPP amalgamate political, economic and social forces and their strengths individually to raise awareness of the oral health needs of different sections of society cumulatively and call for an action to address disparities by designing a framework for strengthening and delivering the oral healthcare system in the country. These effective partnerships function based on combined ideas, resources, common goal and accountability. Such partnerships also bridge the gap by providing primary, secondary and tertiary level of dental care altogether. (10) Many efforts have been taken up for major oral diseases by now.

### PPP for Tobacco control in India

Tackling tobacco menace in India through PPP model can continue to be a great success. As expected in next 20 years tobacco dependence is going to be one of the largest causes of disability adjusted life years. (11) The use of tobacco products have a significant impact on the health of individuals, community and society and also affect the economic growth. (12) PPP model can provide various cost effective measures like price measures, non-price measures and the treatment of tobacco dependence to reduce adult smoking rates (12). Public sector has tried to cut the tobacco use rate by raising taxes and increasing smoke-free place policies whereas the private sector has been involved in assisting these smokers who are unable to quit, in view of the

addictiveness of tobacco products.(13) The public sector can also involve various pharmacological industries to actively participate in providing cost-effective NRTs and other pharmacological products to the health sector which in turn seems to be the best method to gain through health investment.(14) The main aim of this model in tobacco control must focus on increasing access to dependence treatments, thereby increasing the return on investment for health gain in developing countries like India.

#### PPP for oral cancer in India

Oral cancer is one of the major public health problems in the India and ranks 3rd among the top few. (15) The prevalence of lip and oral cavity cancer is 7.2% and is known to be second biggest killer in India.(16) This increased prevalence is due to lack of awareness about the risk factors like tobacco and alcohol use, stress etc.(17) For oral cancer private sector is mainly concerned with tertiary level of care, instead of focussing on early screening and diagnosis. There is large diversity of distribution of oral cancer among rural and urban population, with predominance among the rural population. This shows that public measures which are mainly primary and secondary prevention oriented till now have been inefficient in educating the masses.(18) The need of hour to control the rising stakes is to focus on primary, secondary and tertiary level of prevention altogether. Therefore, to overcome this menace, joint effort of PPP is justifiable as it provides affordable, accessible and strengthened primary and secondary health care system and technology to India. The robust public private partnership to fight against oral cancer could enable and strengthen the PHCs, CHCs and district hospitals to provide effective mass screening, awareness regarding risk factors mainly the harms of tobacco use and self-identification of lesions, strict and stringent policy making and decisions, cost control, community participation, capacity building programmes with the private sector and reallocation of the resources to rural settings to provide manpower that can be used in community surveillance which will eventually bring a change in quality of life of each and every citizen.(19) There has already been some efforts done for oral cancer through PPP in India as :

1. The collaboration of the Government of India (GoI) with Tata trust for the early detection of oral cancer in Indian states like Bihar, Jharkhand and Chhattisgarh and the collaboration of the Government of India with National institute of cancer prevention and research (NICPR). (20)

2. The collaboration of GoI with institutions like Apollo Hospitals to launch mobile screening vans for early detection of oral cancer among both urban and rural areas so that more and more people are covered by screening programmes. (21)

#### PPP for Dental caries in India

Dental caries is a multifactorial diseases and another major significant dental health problem in India as it affects country's economic growth (GDP) indirectly by loss of man-hours. (22) Dental caries affects at all the ages starting from childhood till the geriatric age group. Dental caries is slow progressive diseases if not halted at an earlier stage of life leads to loss of teeth or increased out of pocket expenditure on treatment. The private sector has been involved in up growing their business by providing the tertiary level of care with attractive packages to create attention among the public, with least focus on achieving Sustainable developmental goals or public health goals. The public sector lacks ability to reduce the burden due to lack of resources, size of population, major health expenditure on general health, lack of monitoring of dentist posted in PHCs and CHCs, inadequate quality of dental services. (23) Individual futile efforts need a strong collaboration to overcome drawbacks of each other.A few efforts to mention can be the development of fiscal policies

and increased taxation on cariogenic products whereby exempting taxes on healthy products like sugar substitutes, fruits and vegetables, herbal products, dentifrices and mouthwash by public sector and private sector taking role of educating people to adopt healthy lifestyle by decreased sugar consumption.(24) The joint venture can also be helpful in conducting regular dental screening camps at schools and community, supervising tooth brushing programmes, providing free toothbrush kit to the poor people, diet counselling, early identification of the lesions on teeth and regular monitoring of dentist posted in various health centres and feedback of the patients. (25)

There are certain examples of Public private partnership for dental caries as: Mumbai smiles, Colgate bright smile bright future programme and Live, Learn and laugh programme, Colgate's Keep India Smiling mission.

**Mumbai Smiles:** Mumbai Smiles is foundation that was made to create awareness about good oral hygiene practices, self-mouth examination and to provide easy access to oral health care among masses. It is joint collaboration of Wrigley's Orbit and Mumbai Smiles as an innovative effort to provide free dental checkups, self-awareness about maintenance of oral hygiene, brushing instructions and finally educating the families and the communities to opt for routine health checkups so as to ensure the maintenance of oral health as well as overall health. Mumbai Smiles in collaboration has achieved a massive success in terms of highest number of dental check-ups in 24 hours by making a new entry into Guinness book of world records.(26)

**Colgate bright smile, bright future:**It is the only innovation in terms of school children which was been brought up by collaboration of IDA and Colgate - Palmolive in 1976 to deliver oral health education to children. This campaign involved both the school children and professional dentist, so that the professional can educate the children about the basic oral hygiene instructions. One such campaign was launched in Agra in 2001 with concept of health promoting schools.The main focus of this campaign was to teach good habits to school children, correct method of brushing technique using brushing model and why correct tooth brushing is important in daily routine practice. This campaign involved various interactive sessions and modules for school and also included school teachers to motivate the students about good oral hygiene practices. This programme achieved a massive success in terms of highest number of coverage of students (both rural and urban school children) till December 2017. (27) **Live, learn and laugh programme:** This programme was initiated in 2006 with an aim to change behaviour and train the children of low socio-economic status about good oral habits and importance of good oral hygiene. The programme included free dental check-up for the children from low family income and their family members as these people lack the access to oral health services primarily. It is joint effort supported by the Federation Dentaire Internationale (FDI), Unilever's Pepsodent brand and IDA. (26)

#### Colgate's Keep India Smiling Mission:

This is one of the recent entry into Guinness book of world records where Colgate-Palmolive India Limited collaborated with Indian Association of Public Health Dentistry (IAPHD) and first time ever with Kalinga Institute of Social Sciences (KISS), world's first University for tribal to highlight the importance of Oral health Care in India. This programme involved 26,382 people including students, tribal students, staff gathered at KISS, to brush at the same time with Colgate Strong Teeth toothpaste and Colgate toothbrush to set a new world record. This initiated on the occasion of "National tooth brushing day" i.e. 7th November to raise awareness about good oral hygiene and inculcate this habit for lifelong so that

every Indian making effective use of toothbrush in the country. This record is an important milestone in the silver jubilee celebration of Indian Association of Public Health Dentistry.” (28)

### PPP for Dental Fluorosis in India

Fluorosis is one of the major public health problems in India. Dental fluorosis is a whitish or brownish discoloration of teeth which is due to chronic ingestion of water with more than 1ppm of fluoride. Chronic exposure upto 8ppm leads to skeletal fluorosis and other serious consequences. (29) Dental fluorosis is an irreversible condition; therefore prevention is the only intervention (provision of safe water and safe food) is the best approach to mitigate fluorosis. With this objective of widening access to provide safe drinking water services sustainable, the GoI promoted PPPs. In the early 90's this PPP model was a failure due to unhealthy environment with private sector and projects that were prepared were not been agreed upon by both the sectors.(30) There have been various projects on PPP model for the defluoridation in India:

**Sachetana Plus:** Bharatiya Agro Industries Foundation (BAIF) was the first public-private partnership to mitigate the menace of high fluoride ground water fluoride problem which was implemented in Gadag, Kolar, and Tumkur districts in Karnataka. (31).

**CAREWATER and INREM Foundations:** Reverse Osmosis system was started way back in 90's, but its popularity as defluoridation came in 2005-06 in northern Gujarat. It was initially implemented by the private sectors in fluoride affected areas, as it removes 98% of fluoride from water. The recent trend is to establish a public-private partnership where private sector would be RO supplier in a contract with the village while monitoring is done by public agencies. (32)

**Project SARITA (Dungarpur, Rajasthan):** This was a pilot project of UNICEF funded to SARITA foundation for fluoride mitigation based on the Nalgonda technique and Activated Alumina filters in four villages of Dungarpur district of Rajasthan.(33)

**Fluorosis Mitigation in Nuapada District, Orissa:** The Sahbhagi Vikas Abhiyan (SVA) implemented a defluoridation program in four districts of Western Orissa namely, Nuapada, Kalahandi, Bolangir, and Burger along with People's Science Institute (PSI) in 2005. (34)

**Fluorosis mitigation project in Dhar District, MP:** This defluoridation project was started in collaboration of WaterAid (UK), VasudhaVikasSansthan, Dhar and People's Science Institute, Dehradun in 2008 in Dhar District of MP.(35) Hogenakkal Integrated Drinking Water Project: The Government of Rajasthan with Government of Tamil Nadu, with funding from Japan Bank for International Cooperation (JBIC) using Tamil Nadu's share of Cauvery river water is another milestone example for public- private partnership in process of fluoride mitigation. (35)

### PPP for pit and fissure sealant programme in India

The main aim of public private partnership is to achieve the public health goals. Dental caries has been a significant public health problem in India, with its increase in prevalence among both children and adults. The best available method to prevent the start of dental decay is by regular dental screening and use of primary preventive methods like pit and fissure sealants and topical fluorides.(34) The Government of India under National Oral Health Programme launched in 2014-15, promoted the public-private partnership for delivering the affordable, accessible and quality oral health services in India. The Centre for Dental Education and Research, AIIMS, New Delhi was identified as the National Centre of Excellence for Implementation of National Oral Health Program in FY

2014-15. (36) They started up with the pilot project 'Seal Molar' for prevention of dental caries with use of pit and fissure sealants across the countries. The pilot phase of the study included to seal 5000 molar teeth per college. This pilot project phase of pit and fissure application initiated by the ministry of health and family welfare is an excellent example for public private partnership, where financial cost of the project will be shared by the public sector, while the manpower and their skills will be utilized from the both government and private dental colleges to reduce the burden of decay in India. (37)

**Conclusion :** The public- private partnership model in India would be effective as proven by many successful programmes mentioned, if employed with principles of good governance, good harmonious relationships, sharing ideas and knowledge, fair selection, competition, transparency, healthy communication and collaborating the strengths of both the sectors. This collectively will help both the sectors in boosting not only the oral health but also the overall health, which will increase the growth and expansion of the country's economy to build a healthier India.

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