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Roadmap for fostering Oral Health and Disease Prevention in India- A Narrative Review.

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ABSTRACT:

In recent years, importance of oral health is recognized due to its impact on general health as well as living quality of life (QOL). Besides, it increasingly realized that oral diseases are widespread, extremely expensive to treat, impossible to provide care to all affected and to a large extent preventable.

Till now, the focus of Dental professionals, administrators, policy makers and other stake holders was on provision of highly technical, curative care. Lesser attention was given to disease prevention and the preventive strategies included to a large extent, only oral health education and creating oral health awareness among people. In India, preventive measures such as use of systemic fluoride are non-existent. In India, Preventive measures such as use of systemic fluoride are non-existent. Topical Fluoride application as in the shape of fluoride varnish and mouth rinsing, pit and fissure sealing and preventive restorations are being done for a miniscule of child population

It is now widely acknowledged that merely imparting oral health messages has minimal effect on behaviour pertaining to oral health. As a result, it is necessary to periodically evolve novel techniques to effectively curtail oral health diseases [1,2]. Additionally, there needs to be greater emphasis on disease prevention. Prevention is classified into Primary, secondary and tertiary prevention. A step ahead of primary prevention is primordial prevention, wherein even before pre-disease state, the target population is prevented from adopting disease causing behaviour and practices [3]. However, health promotion would still be preferable to all other forms of prevention that is creating environment conducive for health rather than diseases. In 2005, World Health Assembly (WHS) passed several resolutions on promotion of good and healthy life styles, to combat spread of non-communicable diseases (NCD's) and in 2007, for the first time ,included oral health in NCD's for promotion of good health and disease prevention strategies. [4,5]

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Oral Disease burden in India is very high due to several reasons. Numerous surveys on dental health have been performed on a regular basis from different regions; the comprehensive data on oral health was cited in Macroeconomics and Health by Shah et al, 2005 and Oral Health in India Report of multi centric oral health survey by Shah et al, 2007. According to these reports, prevalence of various oral diseases in the population as follows: Dental Caries-40-45%, Periodontal diseases ->90%, of which advanced disease is found in 40%, malocclusion in 30% of children population, oral cancer 12.6/100,000 population, and endemic fluorosis in 17 of 32 states, affecting 66 million. Other oral diseases that compound the disease burden include oral lesions associated with HIV/AIDS; 72% of affected individuals will have oral manifestations, birth defects involving oro facial complex is found in 0.82-3.36/1000 live births, rising incidence of traumatic injuries, mucosal lesions associated with radiation and chemotherapy and various premalignant lesions etc. [6].

Keeping the huge oral disease burden and huge population size of India in mind, it is logical to provide curative treatment to all affected is almost impossible, besides being extremely expensive. It has been stated that in few low income countries, providing traditional, operative treatment would exhaust total health budget. Therefore, prevention of diseases and promoting health is the only viable option [7].

The practice of providing people and communities greater influence over the factors that affect their health and helping them to become healthier is known as health promotion. A mediating tactic between individuals and their surroundings, health promotion combines social responsibility for health with individual choice to build a healthier future.

Increasing focus is now placed on social elements of health- family, social and community factors and larger geo-political and economic factors which influence the health behaviour of individuals and society. These are termed as “Causes of the causes” [8].

Therefore, preventive approach has to shift from merely giving dental health education and increasing awareness to multi- Pronged oral health promotion approach.

The fundamental idea behind promoting good oral health is to help people prevent illness and build supportive environments that encourage long-term excellent health. This can be achieved by creating a setting where healthier choices are the easier choices.

The multipronged approach involves multi sectorial, multi-disciplinary and multi-level action. It is necessary to involve all sectors that have an impact on health and diseases, whether directly or indirectly, such as different government ministries, non-governmental organizations (NGOs), Industries, international organizations etc. [9]. The health professionals and health department should take leadership role; coordinating various activities of different sectors, towards sharing of the objectives of illness prevention and health promotion. It has been demonstrated that integrating interventions into current public health initiatives and other socioeconomic initiatives beyond the health sector can prevent at least 80% of NCDs live Cardiovascular Diseases, Stroke and Diabetes and 40% of Cancers.

For success of any programme, involvement of communities and general masses is vital. Consequently, while making decisions on any planned activity, community leaders ought to be consulted. It would have a better chance of succeeding if they saw it as their own programme rather than something that was imposed on them.

Similarly, multiple approaches can be taken for oral health promotion, which should include policy framing, organizational change, community action and finally legislation. Each of these strategies ought to focus on not just the diseases and their direct causative agents, but should also identify and correct the social determinants of health that directly or indirectly influence the disease prevalence in the community. Each country should frame its own oral health policy, depending on the type and severity of oral health problems. For example, in Africa, major and grievous oral health problems include NOMA and HIV/AIDS and hence their oral health policy and programmes are NOMA and HIV/AIDS centric. Similarly in India, Prevalence of tobacco habits in various forms; Smoking (as a specific form of cigarettes, beedies, Cigars, Hookah etc.), chewing (betel-quid, betel nuts, Pan Masala, Gutka,

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mawa etc., snuff, dentifrices etc. are widely prevalent. Hence oral health policy must be framed targeting these diseases [10].

As an example of organizational change, dental clinics can take up an expanded role of "Tobacco Cessation Clinics" as dentists can visualize early oral changes and they invest more time interacting with their patients providing dental curative treatment and can easily develop personal rapport, they are ideally placed to provide tobacco cessation counselling and support to their patients [11].

As mentioned earlier, community action and participation is crucial for any programme promoting public health.; be it nutrition, immunization, sanitation, or as for oral health. An illustration of dental health-related community action is demonstrated in Chaing Mai, Thailand, whereby the neighbourhood actively participates in order to encourage better dental health for itself.

An excellent example of a role of legislation in health promotion and disease prevention is against tobacco-where excise duty on tobacco, pricing, sale, and its use in public place comes under the domain of legislation [12]. Other areas where legislation can create health promotion and safety for the people are; effective infection control and waste disposal policy in all health care delivery facilities, especially in dental practice and compulsory rural posting of interns and fresh medical graduates.

Health promotion activities can be led in multiple settings such as schools, nurseries, youth centres and colleges, at work places and community centres and in Indian context, even at religious gatherings. School based oral health promotion programme has been exhaustively dealt and impact of health promotive schools in few countries on dental caries and oro facial trauma among children has been documented.

It is stated that over 1 billion children and through them, the school staff, teachers and community as a whole could be reached. Creating healthy, clean and stress free environment, promoting healthy meals and snacks in schools, avoiding unhealthy high sugar snacks, and soft drinks in school canteens, keeping the school premises alcohol and tobacco free, preventing injuries among the aforementioned are minimum measures that all schools can adapt. Further oral health promotional activities include; inclusion of chapters on oral health, organizing health mela, debates, skits/dramas etc. and conducting community outreach programme through schools [13].

Implementing a common risk factor strategy

Numerous non-communicable diseases (NCDs), including diabetes, obesity, heart disease, stroke, and cancer, have similar risk factors with oral diseases. Poor dietary practices, poor hygiene, smoking, excessive consumption of sugar, alcohol in various forms and trauma are few of the causative factors, which along with their social determinants can be targeted for control these NCDs along with oral diseases. Furthermore, not only the strategy becomes cost effective as duplication of efforts is eliminated yet, it also inhibits conflicting messages. This approach calls for partnership building with other health professionals to be effectively implemented.

There are several preventive strategies that have been described that can be used to stop dental and oral health issues. The high risk approach involves screening of general population and identifying high risk individuals. This approach has several disadvantages: the screening has to be effective with high sensitivity and specificity. Since it is applied after the disease has set in, it is of limited value for primary prevention, as it does not target the underlying causative factors and hence new cases would be emerging.

Another approach is population based approach. It aims to address the underlying causes of disease and hence minimizes the probability of disease to the whole population. An example of population based preventive approach is water or salt fluoridation. A third approach which is known as directed or targeted population approach is directed towards susceptible high risk sub group of population, based on epidemiological data, obviating the need for primary screening. This approach is most suited for promoting dental health and preventing diseases. For example, tobacco users and HIV carriers

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can specially be targeted for prevention of oral carcinoma.

WHO resolution no. 60.17 has provided a number of recommendations for oral health promotion and integrated disease prevention. It recommends regular, periodic surveillance of oral diseases and to establish a health information system. This would help to keep the goals of oral health in tune with international standards. It also recommends human resource and work force planning, scaling up capacity of oral health care personnel, including programme managers and proper budgetary allocation [14,15].

Conclusions and Recommendations.

- Focus needs to shift from highly technical, sophisticated tertiary, individualized care to community oriented, preventive and health promotive care using CRF approach to reduce health inequalities.
- Strengthen capacity of program managers and public health work force by continuous professional development programs structured on evidence based knowledge.
- Simple cost effective interventions along with utilization of Primary health care systems.
- Creating a health supportive school environment aiming at developing healthy life styles and self-care practice in children.
- A population approach that is directed or targeted could be deployed to some identified high-risk groups, like as tobacco users, HIV carriers for cancer control. Health Care Workers can be trained in oral health education, pain relief and referral.
- Para dental man power could be utilized for noninvasive reversible preventive and interceptive procedures like pit and fissure sealing and ART.
- Promotion of healthy diet, low in sugar and high in vegetables and fruits in accordance with the WHO universal strategy on diet, physical activity and health (DPAs).
- Involve oral health professionals in tobacco cessation programmes and for primordial prevention, by effective use of fluorides.
- Oral cancer prevention by screening early diagnosis and referral. Screening for HIV/AIDS related oral diseases, early diagnosis, prevention and treatment.

The final aim being advancing oral health, general health and wellbeing through a life course perspective in health promotion, integrated disease prevention and age friendly primary health care.

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