

Universal Oral Health Coverage: A Case Study in Haryana

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Abstract

The review was undertaken to evaluate the pattern, type, characteristics and availability of oral coverage in Haryana. This was established by focussing on the levels of accessibility and availability of oral health care infrastructure and to address the strengths, challenges, issues, barriers and opportunities for promotion, prevention and cure of oral diseases in Haryana. Literature survey was carried out in March 2021 in electronic databases such as PubMed and Google Scholar using key words such as “dental manpower [AND] Haryana”, “Oral health care [AND] Haryana”, “Oral disease [AND] Haryana”, “Oral health infrastructure [AND] Haryana”. After scrutinizing all retrieved data only six highly relevant articles were included in the final analysis. It was established that Universal Oral Health Coverage in Haryana needs a foresighted vision and consistent efforts based on the evidence.

Keywords: Universal Oral Health Coverage, Dental Manpower, Burden of Oral Diseases.

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INTRODUCTION

World Health Organization (WHO) in 1948 with its establishment sets an objective of "the attainment by all people's the highest level of health". Despite the long year of hardship and perseverance the health remains to be still the luxury of riches and over time inequalities have either remained the same or have widened in recent decades [1]. WHO(2010) defines Universal Health Coverage (UHC) as "ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. WHO came up with the theme of the year 2018 and 2019 as "Universal Health Coverage". The main objective of WHO behind this scheme was that every country must develop a health system that is not only efficient and easily accessible but also affordable for the poor sections of the society. But the sole concept is not only financing the health services but also on improvising the health care delivery system, health workforce, health facilities and information system, governance, and legislation [2].

Oral health forms an important part of general health. It not only affects the individual but also the broader health system and economy. Oral health was included in the Sustainable Developmental Goals along with Non-Communicable diseases (NCD) as they share common risk factors in form of behavioral, lifestyle, biological and psychosocial factors [3]. Alike NCD oral health care facilities also face a disproportionate distribution with a staggering proportion of 68.8% rural population served with 10% of the dentists [4]. Not only in terms of manpower but also economically have they posed a great deal on an individual's pocket. Oral diseases are the fourth most expensive disease to treat [5]. Such high expenses and excessive privatization of the oral health care system may further push the disadvantaged population out of the accessibility and affordability zone. Hence, the concept of UHC must also encompass oral health as an important component with reinforcement and reorganization of oral health-care delivery systems.

The health care system of India is a three-tier system organized at the primary, secondary and tertiary levels. Oral health care has its provision in this system only but mostly at the tertiary level. A major portion of

the Indian population's oral needs is taken care of by the wide growing private sector. Haryana is one of the 28 states of India in the northern region catering to a population of 25.35 million people. Haryana has been divided into 6 administrative divisions, 22 districts 140 community development blocks, 6848 villages, and 6222 village panchayats [6]. Despite having a good health care system the burden of oral diseases is ever rising and has been continuous neglect from both the personal and political point of view.

The study was undertaken to evaluate the pattern, type, characteristics, and availability of oral coverage in Haryana. This was established by focusing on the levels of accessibility and availability of oral health care infrastructure and addressing the strengths, challenges, issues, barriers, and opportunities for promotion, prevention, and cure of oral diseases in Haryana.

MATERIALS AND METHODS

The analysis was done based on data extraction from online electronic databases and public Indian official websites. Search engines like Google Scholar and PubMed were thoroughly searched for keywords like "dental manpower [AND] Haryana", "Oral health care [AND] Haryana", "Oral disease [AND] Haryana", "Oral health infrastructure [AND] Haryana". Twenty-two articles were searched based on titles, 16 were excluded after reading the abstract. After scrutinizing all retrieved data only six highly relevant articles were included in the final analysis. Public websites including the Central Bureau of Health Intelligence, Dental Council of India, Haryana State Dental Council, and Department of Health, Haryana were searched. Information regarding the number of dentists all over India was retrieved from the Central Bureau of Health Intelligence. The number of dental colleges in Haryana, number of BDS and MDS seats was retrieved from the Dental Council of India. Haryana State Dental Council website was used to retrieve the number of registered dentists, and dental auxiliary in the state. Data pertaining to budget, dental manpower available in public infrastructure, and various oral health schemes implemented in the state were collected from various government official documents.

DISCUSSION

Oral Disease burden in Haryana: There are no recent systematic state-wise data on oral disease burden in India. The oldest literature available was NOHS 2002-2003 [7]. According to NOHS- Haryana data, the prevalence of caries varies from 40.7%- 79.5%, with mean DMFT varying from 1.3-12.8 for the index age groups.

The prevalence of periodontal signs (BOP, calculus/pocket) in 5 years old was reported least at 16.9%, whereas highest in 35-44-year-old (88.9%). The

people belonging to the age group of 65-74 years showed the highest prevalence of Loss of Attachment i.e. 45.6%.

The prevalence of fluorosis varies from 29.8%- 45.2%, wherein most cases were belonging to either the category of very mild/ mild fluorosis. Oral mucosal lesions were reported mostly in the age group of 65-74 years and malocclusion in the age group of 35-44 years. The prosthesis need in the case of age-group 65-74 years was 37.1%.

A cross-sectional study was done by Sahil Handa *et al.* [8] in the Gurgaon district of Haryana in WHO index age groups to find out the burden of oral diseases in the population. It was observed that out of 810 participants 44.9% had dental caries mostly belonging to the age group of 15 years. The prevalence of periodontitis was found to be 65%. Malocclusion was found in 46% of participants, among which 21.19% of subjects suffered from handicapping forms of malocclusion. Dental fluorosis was prevalent in 46% of individuals among which 9.6% had a severe type of fluorosis. In another cross-sectional study done by Savita Solanki *et al.* [9] in 2019 in Bhadurgarh district of Haryana to observe the tobacco use prevalence, oral mucosal lesion, and periodontal status in a rubber factory worker it was observed that out of 3290 workers 78.2% workers use both form of smoking and smokeless tobacco and 41.2% were found to be having oral mucosal lesion, most commonly leukoplakia (10.1%). The periodontal diseases were observed in 87.4% of the participants.

The evidence regarding the prevalence of diseases is scattered and feeble and lacks basing not only for Haryana but for a complete nation. More researches following a standardized procedure must be followed to collect the data using the existing dental education system in the district.

The dental education system in Haryana: There are a total of 11 dental colleges in the state among which only one is government-funded and the rest are private. There are only 10 dental colleges that offer post-graduation courses. A total of 950 permitted seats are there for BDS graduates and 271 for MDS post-graduates in 9 specialties every year [10]. This together comprises of only 0.4% of that available in whole India. Out of 271 post-graduation seats, only 13(5%) are available for public health dentistry which represents quite a horrid situation in the state. Public health dentists can support a lot of research in the field of epidemiology of oral disease and in observing the recent trend pattern. Anyhow the available existing manpower i.e. BDS interns should be well utilized not only in collecting the data but also in oral health promotion on a mass level in an integrated manner. This will not only help serve the community but will

even develop the future workforce who is more aware of the national needs.

Oral health care infrastructure: The Public sector of the Haryana Health care delivery system is vastly spread in villages. There are 2650 sub-centers, 531 PHCs, 128 CHCs, and 68 GH, 11 polyclinics, 11 urban health centers, and 4 dispensaries in Haryana [11]. Haryana is one amongst the very few states that have a dental surgeon posted at primary health care centers. This strategy provides a great opportunity in strengthening the oral health infrastructure within the state. Secondary and tertiary care is available at sub sequential higher levels. A deep insight into the available manpower is needed to ensure oral coverage in Haryana.

Dental manpower: As of 31/12/2018 there are 11602 registered dentists in State Dental Council [12]. According to DCI, there are 163 Dental hygienists and 123 dental mechanics registered under Haryana State Dental Council which ranks 6th among India [10].

As of 2019, there are a total of 691 seats sanctioned for dental surgeons, out of which 634 are in a position posted in various PHC, CHC, and DH [13]. Only 5.4% of the registered dentist's in-state work under the government sector. The current scenario makes the distribution of dentists in rural and urban areas very disproportionate with D: P ratio in rural areas is 1: 26040 and in urban areas D: P- 1:806.

According to the rural health statistics 2018-2019, Haryana caters to the most number of dentists posted at PHCs nationwide (312) [14]. 89 dentists are posted in CHC all over the state. Although the state encounters a shortage in manpower, the strategies must be planned to use the available manpower efficiently. The private sector forms the major dental care providers alike the whole nation status. More focus must be made on oral health promotion and prevention. Focusing on promotion and prevention is more cost-effective modalities rather than treatment of oral diseases. Oral diseases are the fourth most expensive disease to treat [5]. The consideration must be made towards moving more funds towards prevention and promotion.

Budget allocation for oral health: Out of the total expenditure made by the Haryana government only 4% goes to health and family welfare. Haryana government allocates Rs 439298.38 to the health sector in the FY 2018-2019. The spending of the Haryana government on health infrastructure stood 16th in the complete state list of India [15]. But there has been no separate budget allocation towards oral health services. Steps should be taken by the state dental council and state/ regional branches of IDA to increase funds in the areas of dental research and training programmes. These programmes and policies should be encouraged by the state government by giving appropriate permission and sanctions of the needed fund.

Schemes and Infrastructure implemented by Haryana Government: The government of Haryana has implemented many schemes to make oral health affordable, accessible, and to have a quality equitable distribution to all the citizens of the state [11]. Regularly working dental clinics in PHC/CHC/DH providing all range of services ranging from diagnosis and oral health promotion to oral surgical procedures are made functional.

The extensively implemented scheme was the Mukyamantri Muft Ilaj Yojana launched on 01 January 2014, under which 21 types of dental treatment-including restorations, RCTs, extractions, Impactions and even higher treatment like IMFs, indoor patient services, X-Rays, and prescribed medicines are provided for free in any government hospital or government setup in medical college.

An oral health Pakhwara (fortnight), is celebrated in the State every year from 1st September to 15th September. During oral health, Pakhwara dentists undertake awareness activities with regards to oral health with special emphasis on patients with special needs mainly by emphasizing both promotive and preventive aspects of dental health.

Dental Surgeons working in PHCs and CHCs have been designated as Member Secretary (convener) of SKS (Swasthya Kalyan Samiti) and have also been involved in mainstreaming where they are performing duties in various National and State Health Programmes e.g. Rashtriya Kishore Swasthya Karyakram (WIFS), Monitoring Pulse Polio Immunization, Diarrhoea Prevention, and Hygiene Programme.

Dental surgeons are also posted under the Rashtriya Bal Swasthya Karyakram Yojana to undertake the screening for dental conditions in Anganwadi centers and Government schools. Under the scheme, IEC material has been developed and regulated. Dental screening for children has been undertaken and on detection of any disease, they are referred to nearby clinics.

PHC serves for oral health promotion and prevention activities whereas facilities above PHCs were made equipped with fully loaded Electrical/Hydraulic Dental Chairs/Units (Compressor, Ultrasonic scaler, Airtor, Micromotor, Light Cure, etc.), Dental x-ray unit. Mobile Dental Vans in two districts of Ambala and Hisar and Facility of OPG in three District Hospitals of Panchkula, Hisar, and Karnal have been provided.

Various CDE programmes and induction training programmes are undertaken for dental surgeons to regularly update their clinical knowledge as well as gain information on all the health programmes whether conducted by the state/ national government.

After India envisages on the Ayushman Bharat scheme, it was adapted by Haryana as well and free oral and maxillofacial surgeries ranging from Rs 5000- Rs 15000 were made free for the population under below poverty line.

An oral health awareness campaign was undertaken from September 9, 2019- October 19, 2019, to make people aware of the preventive and curative treatments available for oral diseases. The campaign envisages the participation of all civil surgeons.

Ashish Vashisht *et al.* [16] in 2016 reviewed the status of government oral health infrastructure in Haryana. He reported that out of 166 dental surgeons posted in 133 Dental care units across the state 93.4% were graduates and only 6.6% were postgraduates. Half of the PHCs don't even have an exclusive toilet facility. Dental technicians were available in only 28.1% of the DCUs. Only 1.2% of DCUs had dental hygienists and 0.7% had a dental nurse. Ultrasonic scalers were present in a majority of the DCUs but only very few had IOPA X-Ray unit. It was inferred from the study that the current situation of the public oral health infrastructure is quite dismal and efforts need to be made to meet the need for dental diseases in the community. More focus was on diagnosis, prescription, and treatment rather than on promotional and preventive activities.

Strengths: The most solid point in the oral health care delivery system of Haryana is the availability of a large number of Dental surgeons in PHCs. A well-planned training programme along with IEC distribution materials can be organized for their training purpose on oral health promotional and preventive aspects and they can be motivated to further train the community workers such as ASHA, ANMs, community leaders which will lead to wider dissemination of the knowledge.

Weakness: The major weakness of the oral health care delivery system in Haryana is the presence of only one government dental college across the state. It quite compromises the availability of much funded dental research and surveys across the state. Another weakness is fewer seats present for the graduates pursuing public health dentistry as a specialist branch.

Another weakness lies in the major misdistributions of the dentist in various districts. Districts like Mewat are severely underserved not only in oral health but in general health parameters as well.

There is little research on the burden of oral diseases taking the state as a unit, as well as no proper data pertaining to the availability of the manpower in various regions. No separate fund allocation towards oral health. Only 5 % of the registered dentists are practicing in the public sector.

Opportunities: The weakness and evidence created in the review will help the current documentation of the available resources and manpower in the state and will further guide towards the collection of more concrete data.

A large sector of oral health is catered to by private practitioners and private institutions. Encouraging private institutions to adapt 4-5 PHCs will help reduce the burden on the public sector and will also lead to fulfilling the community need as well as increasing awareness within the community. Posting interns from all the dental colleges in a rural setting will help to strengthen the system.

Threats: An increase in the privatizing of dental education has raised serious concern about the quality of education provided. Majority of the dental institutions as well as dentists clustered in the growing metropolitan cities of the state, rendering the needs of the rural population unmet. Fewer job opportunities in the government sector.

Lacks of authentic and valid data for assessment of community demands, as well as the lack of an organized system for monitoring oral health care services, need to guide planners.

CONCLUSION

Oral health is far away from achieving universal coverage in Haryana. The 65% population residing in rural areas of the state is catered with just 5.4% of the public health infrastructure. When the population residing in rural areas will be served appropriately with the oral health infrastructure to be more emphasized on preventive and promotive services and the provision of equally distributed quality oral health services become accessible, available, and affordable for all; at that time it can be said that Universal Oral Health Coverage is achieved.

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