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Oral Health Equity: Challenges and Innovations for the Uninsured

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Introduction

A nation's economic growth is intrinsically linked to the empowerment of its people i.e when individuals have the freedom and opportunity to work, they can lead healthier, more fulfilling, and productive lives, fostering a cycle of prosperity that drives sustainable development and national progress[1]. Thus, health care becomes a fundamental necessity for humans. Oral health is a vital aspect of overall health and well-being. Poor oral health has been linked to various diseases and conditions in both adults and children, including cavities and periodontal disease[2]. Oral diseases restrict activities in school, at work, and at home causing millions of school and work hours to be lost each year worldwide. Moreover, there is a psychosocial impact of these diseases that significantly diminishes the quality of life of people[3]. Despite significant advancements in global oral health, many communities—particularly underprivileged groups in developing countries—continue to face persistent challenges[4]. High cost, limited access to care, low utilization of services, and poorer health outcomes are common challenges. Dental treatment is considered to be the fourth most expensive treatment. So, oral diseases are still a serious public health problem in many parts of the world, even though it is largely preventable[6]. A review of 72 worldwide studies reported that caries prevalence in preschool children ranged from 12 to 98%[7]. Also among adolescents, avoidance of early dental disease can lead to invasive dental procedures and emergency dental visits[8]. Regular dental check-ups and preventive care are crucial in reducing disease risk and detecting other health issues.

Dental care expenditures vary by country, which can further deepen inequalities and limit access to dental services[9]. Health insurance is a social economic organization whose purpose is to facilitate medical service without financial impediments as a barrier between the individual and his/her access to the health service[10]. It is not protection against illness but security against the high costs of health services. The uninsured person has no insurance coverage that is personally responsible for all costs associated with health services and may face a significant financial burden.

Keywords: Dental Care, Empowerment, Human Papillomavirus, Oral Health

Different Disparities in utilization of oral health

Disparities that need to be analysed in all aspects of oral health care include the allocation of resources for oral health care, the actual receipt (utilization) of oral health care services, the quality of oral health care services, the oral health care workforce, and the financing of oral health care, particularly concerning the burden of payment on individuals and households[11]. Oral health care delivery system has failed to protect vulnerable populations from dental caries (i.e., tooth decay or cavities) and gingival, periodontal disease (i.e., an inflammatory condition that affects the soft and hard tissues that support the teeth), which consistently remain most prevalent of all chronic diseases over time, despite being largely preventable[12]. Moreover, the incidence of oropharyngeal cancer due to infection with human papillomavirus (HPV) is increasing, making it now the most common HPV-related malignancy in the United States, with no approved approaches for prevention and early detection of the disease[13]. There is a clear and increasing unmet need for dental treatment, along with significant disparities in healthcare delivery systems. Additionally, there is a substantial gap in community-based preventive care, particularly in rural areas of India[14]. In India the dentist-to-population ratio is 1:10,000 in urban areas whereas it drastically falls to 1:150,000 in rural areas[18]. Although, dental care is a part of primary health care, dental care services are available in very few states of India at the primary health care level. Overall, dental care utilization among the Indian adult population is low, with a pooled estimate of 23.96%. This indicates that a significant portion of the population does not seek or receive necessary dental care. Low levels of patient education contribute to underutilization of dental services. Approximately 15% of patients cited insufficient education about oral health as a barrier to seeking care[14].

Finance barrier and dental insurance limitation: The challenge of creating an integrated system of oral health and primary care delivery with a focus on equity of services is critically considered, along with the policy implications to address this is important. Studies have shown that, regardless of age, income level, or insurance type, more individuals report financial barriers to dental care than to any other form of healthcare. Government spending on dental care in India is minimal or virtually non-existent. As a result, individuals must rely on private providers, leading to significant out-of-pocket expenses. Those with limited financial resources often neglect dental care, increasing the risk of untreated dental diseases and their progression[15]. Although, India is a country of over a billion individuals, allocation of funds towards public health care is low, with no specific separate allocation for oral health-care. Many standard health insurance policies in India do not include dental treatments unless hospitalization is required. Dental coverage is typically available as an add-on with additional premiums, and even then, it may come with upper limits and specific conditions[16].

A recent Swedish study reported that financial problems and lack of social support were associated with avoiding seeking dental care[17]. In Australia, it has been reported that approximately twice the percentage of uninsured oral health people avoided dental care due to financial constraints compared to insured people[18]. In many countries, public health insurance programs do not encompass comprehensive dental care. In Japan, despite universal health coverage, individuals are responsible for 30% of dental treatment costs, which continues to pose a barrier to accessing care and exacerbates inequalities[19].

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Even in countries with dental insurance plans, many policies exclude major procedures like orthodontics, dental implants, and cosmetic dentistry, making these treatments unaffordable for many. These treatments are often considered non-essential or cosmetic, leading insurers to omit them from standard coverage. Private dental insurance plans often have high premiums, deductibles, and co-payments, making them inaccessible for lower-income individuals. Preventive dental care is essential for maintaining oral health and in reducing long-term dental costs[3]. However, some insurance policies offer limited coverage for routine preventive services and do not cover regular check-ups, cleanings, and fluoride treatments adequately. Certain plans may provide only preventive services to keep premium payments low, which typically include oral examinations, cleanings, and specific radiographs[11]. Children and the elderly, who often have greater dental needs, face significant challenges in accessing affordable care. Because in many regions, dental insurance is tied to employment, leaving retirees, unemployed individuals, and informal sector workers without coverage.

Methods to reduce gap in accessing oral health care among uninsured people: 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[19]. Dental health insurance can play a crucial role in raising awareness about oral healthcare at the grassroots level while encouraging regular dental visits. This, in turn, serves as an effective preventive measure. Prepaid dental programs, such as insurance, are recognized as effective tools for improving access to dental services. These programs, where a third party—typically an insurance provider or a government agency—directly compensates the dentist instead of the patient, further enhance accessibility and affordability of care. In several European countries, including Austria, Belgium, France, Germany, Luxembourg, Netherlands, and Switzerland, oral healthcare is financed through government-regulated or compulsory social insurance systems that provide coverage for about 180 million people across Europe[16]. Southern Europe, Norway, Ireland, and Iceland often rely on direct patient payments and private insurance, with few publicly funded services available only for specific groups of people or regions[20].

The oral health care safety net is expected to cover the one-third of the US population, notably those who are low-income, uninsured, and/or members of racial/ethnic minority, immigrant, rural, and other underserved groups. The safety net is composed of providers, payment programs, and facilities that provide clinical, nonclinical and support services which including Medicaid and the State Children's Health Insurance Program (SCHIP), Federally Qualified Health Centers (FQHCs), school-based health centers, and academic dental institutions[21]. To address disparities in access to oral health care, the Institute of Medicine and the National Research Council recommend that to expand the capacity of FQHCs to deliver essential oral health services[12]. Rural communities across the U.S. are developing oral health programs that build oral health infrastructure and capacity to decrease the prevalence and impact of oral disease, enhance access to care, and eliminate disparities. The Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (ORHP) funded rural communities to develop community-based oral health programs as part of the 330A Outreach Authority program[22].

On October 9, 2002, Hindustan Lever (HLL) announced the launch of a dental insurance programme. Customers

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can get Rs.1,000 worth of free dental insurance with every purchase of Pepsodent toothpaste via a collaboration with New India Assurance[26]. But this programme is no longer available. So, both universal and targeted interventions at multiple levels are needed to eliminate disparities in access to oral health care and end the disgrace of poor oral health as the national symbol of social inequality.

Private health insurance (PHI) plays a key role in the financing of dental care in the Australian health system. In 2012–2013, 12% of all spending on dental services was funded indirectly by individuals via PHI. The Australian PHI industry is highly regulated and is directly subsidized by the government. Key regulations include community-rated premiums, control on premium increases and limits on the types of services that can be insured. Dental insurance coverage is usually included under general treatment plans, which can be purchased separately or as part of a comprehensive policy that also includes hospital coverage[23]. A unified healthcare financing approach in India has emphasized combining payroll contributions—targeting middle-class and formal sector workers—with government revenue funds. This pooled funding has led to the introduction of schemes such as the Employees' State Insurance (ESI) and the Central Government Health Scheme (CGHS), both of which include coverage for dental treatment[3,24]. Japan's public universal health care insurance has covered almost the entire population since 1961 and this was initially regulated employer-employee arrangements, but the insurance schemes were then developed and expanded to cover nonemployees as well. Except for children, older adults, and people with lower incomes, individuals pay 30% of their total dental treatment costs in Japan[25] .

Delivery Models That Improve Access to Oral Health Care for Uninsured and Underserved Populations

The US 330A Outreach Authority program is dedicated to developing and implementing sustainable solutions to address oral healthcare challenges within communities. To ensure the long-term impact of their efforts, they are exploring various sustainability strategies, including fee-for-service models, third-party payer sources, grants, in-kind contributions, and local fundraising. For example, school-based initiatives that provide sealants and fluoride varnish applications are often more cost-effective than programs offering complex dental treatments. However, sustainability is influenced by more than just cost[22,27]. A 1992–1994 population-based survey of Central Harlem adults identified poor oral health as the most common health complaint. In response, the Columbia University School of Dental and Oral Surgery, in collaboration with community-based organizations, developed and implemented the Community DentCare Network. This initiative consists of three interconnected community-based dental programs that provide oral healthcare access to residents of Northern Manhattan across all age groups, from children in the Head Start program to the elderly. These programs offer both preventive and comprehensive treatment through fixed and mobile facilities, ensuring care is available regardless of patients' ability to pay[22].

Access to oral healthcare in New Mexico is severely limited and continues to decline. Nationally, the state ranks 49th in dentists per capita, 50th in child poverty, and first in the percentage of uninsured residents. In response to this crisis, New Mexico Community Voices has been piloting and expanding its "health commons" model. This approach fosters collaboration among various sectors, including government agencies, educational institutions, businesses, and public and

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private stakeholders, rather than promoting competition. By integrating key health services and community resources, the model enhances quality, efficiency, and capacity. At its core, neighborhood care sites serve as a vital safety net for uninsured and underinsured individuals.

First Health of the Carolinas, a private, not-for-profit healthcare network, is committed to addressing the comprehensive medical and dental needs of residents in the mid-Carolinas. It has developed an integrated model for dental service delivery, with the Foundation of First Health playing a crucial role in its success. The foundation provides both capital support and an annual disbursement to help bridge the gap between Medicaid reimbursements and program operating costs. Additionally, A National Call to Action to Promote Oral Health urges the dental profession and community-based clinics to take proactive steps in expanding access to dental care across the United States. Models that integrate basic oral health services with community-based primary care can help deliver holistic, comprehensive healthcare to the most vulnerable and underserved populations.

Conclusion

Assessing the impact of non-utilization of dental health services globally is essential for the effective allocation of resources based on population needs. This approach aims to improve oral health outcomes while keeping treatment costs low. Dental insurance plays a crucial role in achieving the United Nations' Sustainable Development Goal (SDG) 3: Good Health and Well-Being by supporting Universal Health Coverage. With private dental treatments often perceived as expensive, and many considering dental insurance as vital as medical insurance, there is a clear demand for affordable coverage. This highlights a significant gap in access to dental care and underscores the urgent need for comprehensive dental insurance solutions to improve affordability and accessibility.

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