

Recognising Oral Health as a Public Health Issue

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ABSTRACT

Oral health encompasses the well-being of the teeth, gums, and the entire oral-facial system that enables functions like speaking, smiling, and chewing. Poor oral health can lead to dental caries (tooth decay), periodontal (gum) diseases, tooth loss, and oral cancers. These conditions are not only painful but also contribute to difficulties in eating, speaking, and social interactions, thereby diminishing quality of life. Moreover, emerging research highlights connections between oral health and systemic conditions such as cardiovascular diseases, diabetes, and adverse pregnancy outcomes.

For these reasons World Health Organisation calls for oral health to be promoted through a common risk factor approach. It is about recognising oral health as a health issue public health to promote it and reduce social health inequalities.

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Definition

There is a need to agree on what constitutes a public health problem with a definition that would be “an area of expertise, defined by evidence, using scientific methods, of a specific set of problems (relating to the collective determinants of health) and calling for the intervention of special institutions (public or private) aimed either at population groups or at individual behaviour [1].

Following this definition, oral health is, in theory, a public-health problem. Firstly, dentistry is an area of expertise with dedicated health professionals, dental surgeons - and even other oral health professionals such as hygienists in some countries - who take care of oral health within the health system. Dental medicine is a medical profession, with a six-year academic and university education and a common entrance, or even shared specialities, with the other medical professions. This area of expertise also incorporates a research component with laboratories integrated into universities or large research organisations, covering both the experimental field and basic, translational or public health research [2].

Oral Health as a Public Health Issue

The prevalence of oral diseases constitutes a significant public health challenge. Globally, oral diseases affect approximately 3.5 billion people, with untreated dental caries being the most common condition. In the United States, disparities in oral health persist, disproportionately affecting marginalized communities. Factors such as socioeconomic status, education, and access to care play pivotal roles in these disparities [3].

Strategies for Addressing Oral Health in Public Health

Oral health is an essential component of overall well-being, yet it remains one of the most neglected areas in public health. The burden of oral diseases affects billions globally, with significant disparities across different socioeconomic and demographic groups. To address this pressing issue, it is crucial to implement comprehensive strategies that improve access to care, promote education, and strengthen policies [4].

Policy Development and Regulation

Effective policy development is critical in addressing oral health disparities. Governments and public health organizations can adopt measures such as:

- Water fluoridation to prevent dental caries.
- Regulation of sugar content in food and beverages to reduce the risk of dental decay.
- Implementing oral health policies that prioritize vulnerable populations.

These strategies ensure preventive measures are widely accessible and effective in minimizing the prevalence of oral diseases.

Integration of Oral Health into Primary Care

Incorporating oral health services into primary healthcare systems can significantly improve access to care, especially in underserved communities. This involves:

- Training primary care providers to screen for oral health issues and provide basic interventions.
- Establishing referral systems to connect patients with specialized dental care when needed.
- Integrating oral health assessments into routine medical check-ups.

Enhancing Access to Care

Access to affordable and quality dental care is a major barrier for many individuals. Strategies to address this include:

- Expanding public insurance programs to cover dental services.
- Subsidizing dental care for low-income populations.
- Increasing the number of dental clinics and professionals in rural and underserved areas [5].

Public Health Campaigns and Education

Raising awareness about the importance of oral health is essential in encouraging preventive behaviors. Public health campaigns can:

- Educate individuals about proper oral hygiene practices, such as brushing, flossing, and regular dental visits.
- Promote healthy dietary choices that reduce the risk of oral diseases.
- Target schools and workplaces to disseminate oral health information effectively [6].

Research and Data Collection

Investing in research and data collection is critical for understanding oral health trends and evaluating the effectiveness of interventions. This includes:

- Conducting studies on the relationship between oral health and systemic diseases.
- Developing surveillance systems to monitor oral health outcomes.
- Identifying gaps in care and barriers to access [1,3].

Community-Based Interventions

Engaging communities in oral health initiatives can lead to sustainable improvements. These interventions may involve:

- Mobile dental clinics providing services to remote areas.
- Training community health workers to deliver oral health education and services.
- Partnering with local organizations to address specific community needs [2,3,7].

Economic and Social Implications

The economic burden of oral diseases is substantial, encompassing direct treatment costs and indirect costs due to productivity losses. In low- and middle-income countries, the lack of access to preventive and curative dental services exacerbates these economic challenges. Socially, individuals suffering from oral diseases may experience stigma, leading to reduced self-esteem and social isolation [8].

Development of Oral Health Education Tools

Oral health education is a cornerstone of preventive dentistry and public health. Developing effective education tools is essential to promote oral hygiene, prevent oral diseases, and improve overall health outcomes. These tools must be accessible, culturally appropriate, and evidence-based to address the diverse needs of populations [9].

Importance of Oral Health Education

Oral health education aims to raise awareness about the importance of maintaining good oral hygiene and its connection to overall health. Poor oral hygiene can lead to conditions such as dental caries, periodontal diseases, and even systemic issues like cardiovascular diseases and diabetes. Education tools empower individuals to adopt preventive behaviors, such as regular brushing, flossing, and dental check-ups.

Principles of Developing Effective Tools

Effective oral health education tools should be designed with the following principles in mind:

- **Clarity and Simplicity:** Use clear language and visuals to convey information effectively.
- **Cultural Sensitivity:** Tailor content to respect the cultural beliefs and practices of target populations.
- **Evidence-Based Content:** Base educational materials on the latest scientific research and best practices.
- **Engagement:** Incorporate interactive elements to encourage participation and retention of information.
- **Accessibility:** Ensure tools are accessible to people with varying levels of literacy and those with disabilities [7,9,10].

Types of Oral Health Education Tools

A wide range of tools can be developed to cater to different audiences and settings. These include:

- **Printed Materials:** Brochures, posters, and booklets are cost-effective and easy to distribute.
- **Digital Tools:** Mobile apps, websites, and videos provide interactive and engaging ways to learn about oral health.
- **Educational Kits:** Hands-on kits with models, toothbrushes, and toothpaste for demonstrations.
- **Community-Based Tools:** Tools designed for use in schools, workplaces, and community centers.
- **Games and Activities:** Interactive games, quizzes, and puzzles make learning fun for children [11].

Steps in Developing Oral Health Education Tools

The process of creating effective tools involves several steps:

- **Needs Assessment:** Identify the target audience, their oral health challenges, and learning preferences.
- **Content Development:** Gather evidence-based information and tailor it to the audience's needs.
- **Design and Layout:** Create visually appealing and user-friendly designs that enhance understanding.
- **Pilot Testing:** Test the tool with a small group to gather feedback and identify areas for improvement.
- **Implementation:** Distribute the tools through appropriate channels, such as dental clinics, schools, or online platforms.
- **Evaluation:** Assess the effectiveness of the tools in achieving desired outcomes and make necessary revisions [12].

Challenges in Developing Education Tools

Developing oral health education tools comes with several challenges:

- **Resource Constraints:** Limited funding and materials can hinder tool development.
- **Cultural Barriers:** Overcoming language and cultural differences requires careful planning.
- **Technological Access:** Digital tools may not reach populations with limited internet access.
- **Engagement:** Ensuring sustained interest and participation can be difficult, especially for certain demographics.

Success Stories and Best Practices

Several successful initiatives serve as models for developing effective oral health education tools:

- The use of animated videos in schools to teach children about proper brushing techniques.
- Community health campaigns utilizing mobile dental clinics and interactive sessions.
- Apps that track oral hygiene habits and provide reminders for dental check-ups.

Future Directions

The future of oral health education lies in innovation and technology. Virtual reality, gamification, and AI-driven personalized education are emerging as promising approaches. Collaborative efforts between healthcare providers, educators, and policymakers will be critical to ensure the development and dissemination of impactful tools [13].

Health System Limitations

As a result, diseases develop without symptoms, and people see no benefit. Only when a loss of independence is felt is the presence of the disorder perceived (often through severe pain that interferes with daily activities), and the need for care emerges. But access to the dental care system is disrupted by difficulties that are thought or experienced during visits to the dentist's office. These obstacles are accentuated by the fact that the dental care system is isolated from the rest of the health system with educational or medico-social actors who interact little with it. In a context where the availability of care is often limited, the most vulnerable sometimes give up dental care before even entering the health care system [14]. They then develop attitudes of self-medication and seek care mainly in emergencies, where anxiety and pain are potentiated. When treatment is continued, the overall state of oral health often requires the implementation of a long and therefore complex management, not always compatible with the constraints inherent to precariousness. As a result, socially determined health conditions are compounded by the use of socially conditioned care in a health system that is poorly adapted to the dental needs of the most vulnerable. As a result, the ultimate goal of improving oral health and reducing inequalities in oral health is difficult to achieve if this process cannot be interrupted at the outset by intersectoral education or health promotion interventions [6,15].

Conclusion

Recognizing oral health as a public health issue is imperative for the development of comprehensive health strategies that address the needs of the whole person. By implementing policies that promote oral health, improving access to care, and investing in education and research, societies can reduce the burden of oral diseases and enhance overall health outcomes.

Ultimately, oral health promotion strategies can be effective in preventing oral diseases such as tooth decay, especially in vulnerable groups. However, these strategies need to be integrated into a broader health promotion approach with public actors, educational teams, health professionals who take up this issue to work together with children and parents for appropriate, effective and equitable oral health promotion. The combination of different actions, based on scientific evidence, built on a long-term basis and carried out in a multidisciplinary way, can lead to a positive evolution of oral health for all.

References

1. Petersen PE, Kwan S (2011) Equity, social determinants and public health programmes—the case of oral health. *Community Dentistry and Oral Epidemiology* 39: 481-487.
2. Petersen PE, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C (2005) The global burden of oral diseases and risks to oral health. *Bulletin of the World Health Organization* 83: 661-669.
3. Centers for Disease Control and Prevention (CDC). Health Disparities in Oral Health <https://www.cdc.gov/>.
4. World Health Organization (WHO) (2024). Oral health https://www.who.int/health-topics/oral-health#tab=tab_1.
5. Bagramian RA, Garcia-Godoy F, Volpe AR (2009) The global increase in dental caries: A pending public health crisis. *American Journal of Dentistry* 21: 3-8.
6. Allukian M (2003) Oral diseases: The neglected epidemic. In: Scutchfield FD, Keck CW, editors. *Principles of Public Health Practice*. 2nd ed 98: 82-85.
7. Jones M, Lee JY, Rozier RG (2007) Oral health literacy among adult patients seeking dental care. *Journal of the American Dental Association* 138: 1199-1208.
8. National Institute of Dental and Craniofacial Research (NIDCR) (2005) The invisible barrier: Literacy and its relationship with oral health. *Journal of Public Health Dentistry* 65: 174-192.
9. Daly B, Batchelor P, Treasure E, Watt R (2017) *Essential Dental Public Health*. Oxford University Press.
10. Jackson SL, Vann WF, Kotch JB, Bhavna TP, Jessica YL (2011) Impact of poor oral health on children's school attendance and performance. *Am J Public Health* 101: 1900-1906.
11. *Community Dentistry and Oral Epidemiology*. Journal Information <https://onlinelibrary.wiley.com/journal/16000528>.
12. Enjary C, Tubert-Jeannin S, Manevy R, Roger-Leroi V, Riordan PJ (2006) Dental status and measures of deprivation in Clermont-Ferrand, France. *Dental public health, Community Dent Oral Epidemiol* 34: 363-371.
13. Glick M, Williams DM, Kleinman DV, Vujicic M, Watt RG, et al. (2016) A new definition for oral health developed by the FDI World Dental Federation opens the door to a universal definition of oral health. *Br Dent J* 221: 792-793.
14. Benzian H (2021) The return of oral health to global health - reflections on the 148th WHO Executive Board Meeting International Health Policies <https://www.internationalhealthpolicies.org/featured-article/the-return-of-oral-health-to-global-health-reflections-on-the-148th-who-executive-board-meeting/>.
15. Peres MA, Macpherson LMD, Weyant RJ, Daly B, Venturelli R, et al. (2019) Oral diseases: A global public health challenge. *Lancet* 394: 249-260.

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