Research Article ISSN 2639-9490

Oral Health & Dental Science

Evaluation of Polypharmacy in Dental Practice

Ignacio Christian Marquez*

A.T. Still University - Missouri School of Dentistry and Oral Health, St. Louis, MO 63104 USA.

*Correspondence:
Ignacio Christian Marquez, A.T. Still University - Missouri School of Dentistry and Oral Health, St. Louis, MO 63104 USA.

Received: 28 Dec 2023; **Accepted:** 30 Jan 2024; **Published:** 07 Feb 2024

Citation: Ignacio Christian Marquez. Evaluation of Polypharmacy in Dental Practice. Oral Health Dental Sci. 2024; 8(1); 1-2.

Keywords

Dental practice, Oral health, Polypharmacy.

The World Health Organization (WHO) defines health as a "state of complete physical, mental and social wellbeing, not just the absence of disease or infirmity [1]." This definition portrays health as a positive attribute, not just the absence of a negative one. In fact, the arguments that health is a positive attribute with specific causes have their origins in debates which stretch back to the middle of the last century. Likewise, the WHO defines oral health as the state of the mouth, teeth and orofacial structures that enables individuals to perform essential functions, such as eating, breathing, and speaking, and encompasses psychosocial dimensions, such as self-confidence, wellbeing, and the ability to socialize and work without pain, discomfort, and embarrassment. Oral health varies over the life course from early life to old age, is integral to general health and supports individuals in participating in society and achieving their potential.

Untreated oral diseases affect almost half of the world's population. Global case numbers have increased by one billion over the last 30 years, a clear indication that many people do not have access to appropriate oral health care, which includes prevention, risk protection, and restorative and rehabilitative services.

The consequences of untreated oral diseases, including physical symptoms, functional limitations, and detrimental impacts on emotional, mental, and social well-being are severe and debilitating. For those able to obtain treatment, the costs are often high and can lead to a significant economic burden. Oral health plays a major role in well-being and self-esteem, while oral diseases heavily affect quality of life, productivity, and ability to work as well as social participation [2].

Oral health is an integral part of general health, sharing common causal pathways and affecting each other in a bi-directional fashion. In recent decades, many studies have assessed the potential link between poor oral health and a range of chronic diseases [3]. The strongest and most consistent evidence has shown an association between severe periodontal disease and diabetes mellitus; clinical interventions to treat severe periodontal disease have shown improvements in diabetes status [4,5]. Evidence also exists of an association between severe periodontal disease and cardiovascular disease and, to a lesser extent, cerebrovascular disease, and chronic obstructive pulmonary disease [6-8]. In addition to severe periodontal disease, associations have been found of caries and tooth loss with other conditions such as cognitive decline, certain cancers, and pneumonia. These associations are underpinned by shared biological (infection, inflammation, microbiome, and immune responses), behavioral and wider social risk factors. It is important, however, to recognize that the nature of associations between poor oral health and other chronic diseases is not necessarily causal and is often weak compared to other key risk factors. More high-quality research is needed to understand fully the potential shared pathways between oral diseases, poor oral health and other general diseases and conditions, the coexistence of multiple health conditions, as well as the impact of oral health interventions on general health [9].

Industrialized countries experienced rapid growth in life expectancy in the middle of the last century. Researchers began to try to explain the changing pattern of disease seen in these countries. Historical observation suggested that all societies go through three phases of health and illness as they modernize. In ancient times, when humans lived exclusively off the land and close to their animals, they experienced a phase of plagues and famine, during which mortality was high and life expectancy was perhaps not much more than 30 years. With industrialization came a phase of 'receding pandemics', during which life expectancy

rose from under 30 to about 50. The third phase in this transition arrived when technology was able, largely, to eradicate infectious disease as a major cause of premature death. Life expectancy increased rapidly and chronic disease affecting the elderly emerged to become the main health challenge.

This pattern of transition from a high birth rate, high mortality society to one of low birth rate, low mortality and prolonged life expectancy has been described as the "epidemiological transition [10]."

Polypharmacy is defined as use of multiple medications (>5) and is common in the elderly adult population. Polypharmacy typically results from the accumulation of treatments for chronic medical conditions such as hypertension, diabetes, coronary artery disease, and psychiatric illnesses. It is associated with problems such as increased risk of falls and adverse medication events. Elderly patients take an average of two to nine medicines per day, and prevalence of polypharmacy in the elderly is 11.5%–62.5%. Elderly patients are at higher risk of adverse drug reactions due to metabolic changes and reduced drug clearance. Evaluation of polypharmacy is an important part of clinical assessment of the elderly population. This process involves performing an adequate medication reconciliation, including supplements, followed by systematic evaluation of medications looking for benefits and harms. It then involves discussing goals of care with the patient and, if necessary, creating a deprescribing plan. When prescribing new medications, prescribers should consider starting at the lower end of the dosing range and increasing only after monitoring for benefits and harms [11].

References

1. World Health Organization. Constitution of the World Health Organization: basic documents. Geneva WHO. 2006.
2. Global oral health status report: towards universal health coverage for oral health by 2030. World Health Organization. 2022.
3. Seitz MW, Listl S, Bartols A, et al. Current knowledge on correlations between highly prevalent dental conditions and chronic diseases: an umbrella review. Prev Chronic Dis. 2019; 16: 132.
4. Gooch BF, Griffin SO, Gray SK, et al. Preventing dental caries through school-based sealant programs: updated recommendations and reviews of evidence. J Am Dent Assoc. 2009; 140: 1356-1365.
5. Aiuto FD, Gable D, Syed Z, et al. Evidence summary: the relationship between oral diseases and diabetes. Br Dent J. 2017; 222: 944-948.
6. Batty GD, Jung KJ, Mok Y, et al. Oral health and later coronary heart disease: cohort study of one million people. Eur J Prev Cardiol. 2018; 25: 598-605.
7. Manger D, Walshaw M, Fitzgerald R, et al. Evidence summary: the relationship between oral health and pulmonary disease. Br Dent J. 2017; 222: 527-533.
8. Gaeckle NT, Pragman AA, Pendleton KM, et al. The oral-lung axis: the impact of oral health on lung health. Respir Care. 2020; 65: 1211-1220.
9. Watt RG, Serban S. Multimorbidity: a challenge and opportunity for the dental profession. Br Dent J. 2020; 229: 282-286.
10. Burns H. What causes health?. J R Coll Physicians Edinb. 2014; 44: 103-105.
11. Badri B, Stacey S, Konwinski B. Clinical management of polypharmacy in the elderly population. OFP. 2023; 15: 28-34.

© 2024 Ignacio C Marquez. This article is distributed under the terms of the Creative Commons Attribution 4.0 International License