

INEQUALITIES REGARDING THE ORAL HEALTH SYSTEM IN EUROPE AND ROMANIA

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DOI: <https://doi.org/10.36004/nier.cecg.III.2024.18.19>

Abstract. *The health status of the population is a complex phenomenon that expresses the health characteristics of the members of a community viewed as a whole, taking into account a series of biological, social and economic determinants. Among the socio-economic determinants that act at the individual level are financial income and the level of education. At the population level an important determining factor is represented by the national health policy. This refers to providing the population with medical personnel, financing and access to specialized medical services. In Romania, in contrast to the industrialized countries in Europe, the health policy is characterized by a chronic underfunding, with unfavorable effects on the state of oral health. Vulnerable populations, such as rural residents, as well as those with low incomes or the uninsured, have reduced access to specialized treatments due to the lack of dental offices in the respective areas, health insurance, and high costs. The improvement of public policies regarding the oral health of the population requires that the political decision-maker correctly identify the problems and find methods for an adequate budget allocation.*

Key words: *health inequality, Romania, public policies, oral health system*

JEL: *I00, I10, I15, I18*

UDC: *614.2(4:498)*

Introduction. Oral health is an essential part of a person's health and well-being and a global health priority. It also includes psychosocial aspects, general well-being, the ability to interact socially and perform professional tasks without pain,

discomfort and embarrassment. Oral diseases affect approximately 3.5 billion people or almost half of the world's population throughout life, from early childhood to old age. According to the Report published by the World Health Organization in 2023, 466 million people in the European region suffer from oral diseases, and annually approximately 70,000 new cases of oral cancer and more than 26,000 deaths from oral cancer are detected in Europe (WHO, 2023).

In terms of economic impact, it is estimated that approximately USD 113 billion is spent annually on the treatment of oral diseases in Europe, and productivity losses due to them are estimated at approximately USD 104 billion (WHO, 2023). Inequalities in oral health are caused by several social, economic, commercial, environmental factors. In addition to inequalities in oral health, there are also inequalities in the availability and accessibility of oral care in Europe. Last but not least, there are population groups whose oral health is affected by the existence of physical or mental disabilities that can constitute barriers to the provision of dental care.

The purpose of this narrative review is to present oral health inequalities caused by social determinants, namely: oral health systems in different countries and coverage of dental care from the point of view of costs, existence of health insurance and unmet therapeutic needs .

Universal models of oral health. The type of health system a country uses is based on a combination of historical, cultural, economic and political factors, largely depending on economic development (Widstrom & Eaton, 2004).

The main health models, each with advantages and disadvantages, are:

- Bismark type model;
- Beveridge type model;
- The national health insurance model;
- The private model.

The Bismark type model. It is financed by compulsory insurance contributions in different proportions depending on income and is collected at the level of insurance companies. The coverage is wide, but where it is not mandatory, there remain categories of the population without access to the benefits offered by the system. The sums resulting from the establishment of funds for the financing of health insurance are directed to the bodies or agencies that ensure their management and that contract with hospitals and family doctors or general practitioners for the services to be offered to the insured. Contracts with patients are based on the service/performance fee, and with hospitals they are based on often global budgets. Within this system, medical performances are relatively high, but the expenses they involve are the highest in Europe, because the costs of its administration are also high (Plumb, 2003).

The Bismarck model is widely praised for its emphasis on social solidarity and equality. Individuals contribute to the system based on their ability to pay, with the wealthiest in society giving more to support the less well off. Many countries use the

Bismarck model or a variation of the model. These include: Romania, Germany, Holland, Czech Republic, Slovakia, France, Austria, Belgium, Switzerland, Hungary.

The Beveridge type model. The Beveridge model is named after the British social reformer Sir William Beveridge. This model is also known as the "universal healthcare model" and is characterized by a single, state-financed and state-organized health system. In this respect, it differs from the Bismarck model in that it is centralized, which is a major advantage because it means that the government is held accountable for how it manages health services. Under this model, health care is provided free of charge, so that even people with no income have access to health care. State healthcare funding in the Beveridge system comes directly from taxation. In Europe, this system is found in: Great Britain, Sweden, Denmark, Ireland, Portugal, Spain, Norway, Cyprus, Latvia, Italy, Finland, Malta.

The national health insurance model. It is a centralized, government-organized health care system that provides universal coverage. It is funded by government taxation, with the government providing 'national insurance' either through income tax or additional tax. The government acts as a "single payer", providing these funds to a mix of both private and public healthcare organisations. Citizens can then enjoy free healthcare while also being able to choose which healthcare provider they would like to use. Thus, national health insurance combines the best parts of the Beveridge model (free, universal coverage, funds collected through taxation) with the best parts of the Bismarck model (allows doctor choice, encourages competition between health care providers). It is found in countries like: Taiwan, Canada, South Korea.

The private health model. This healthcare system is completely decentralized, with zero government intervention in both financing and delivery. In countries using the private model, citizens are expected to pay their own healthcare costs "out of pocket" (Winkelmann et al, 2022). The main advantage of the model is that it facilitates rapid developments in the health sector. As healthcare and pharmaceutical providers compete to provide faster, more efficient and cheaper products and services, their patients benefit from more flexibility and access to the latest and best healthcare. The consequence of this healthcare system is healthcare costs that can reach the point where they become completely unaffordable for the average person, except for those who invest in comprehensive health insurance. Thus, healthcare is reserved only for wealthy people, and those with no income can end up incurring large debts if they need treatment for a major condition. Among the countries that use this model are: the United States of America, India, Indonesia, Vietnam. The characteristics of each health system, with its advantages and limitations, are presented in table 1.

Table 1. **Advantages and limitations of health systems**

Health systems	Advantages	limitation
The Bismark model	- the system ensures stable sources of income for the health system; - the emphasis is on solidarity and equality; - allows greater personal freedom, offering the possibility of choosing their healthcare providers from the private and public sector;	people who are not employees (unemployed, students, pensioners) are covered by other funds from the state budget, which is difficult to achieve in some cases
The Beveridge model	- general accessibility; - universal coverage; - administrative costs are reduced for such a system, compared to other types;	- low efficiency in managing funds; - lack of incentives for doctors; - long waiting lists; - lack of quality;
The national health insurance model	free medical assistance for all citizens;	- investments are discouraged; - encourage patients to become medical tourists;
The private model	encourages competition between providers, which leads to the improvement of services;	- medical assistance is inaccessible for people without income; - there are no incentives for prevention and health education;

Source: Russel W, available at :

<https://www.william-russell.com/blog/healthcare-systems-globally/>

Oral health system in Romania. In Romania, the oral health system is characterized by the following negative aspects that urgently require the adoption of new public health strategies and policies:

- uneven distribution of school offices throughout the country; in terms of accessibility, in the urban environment, a number of approximately 711 inhabitants have a dentist, while in rural areas, 3885 inhabitants are served by a doctor;
- the existence of a small number of dental offices under contract with the National Health Insurance House and public ones; in 2022, 16,305 private dental offices and only 36 school offices were registered in Romania;
- serving a limited number of patients, through the reduced amount of the ceiling, of only 4000 lei;
- limited coverage of the necessary procedures in the plan of complex dental treatments, by limiting the deductible operations.

Although the number of dentists has steadily increased every year, the unequal distribution in the territory has serious repercussions on the provision of specialist assistance in certain regions. In the private system, in 2022, the most doctors were in Bucharest, Timiș, Mureș, Iași, Prahova, and the lowest number of dentists was registered in Giurgiu and Călărași counties. In this context, it is imperative that there is adequate financing of oral health care, that the necessary funds are distributed equitably in all counties, regardless of social background, and that the ceiling offered by the National Health Insurance House covers the operations and procedures of a large number of patients. Prevention in Romania does not enjoy much attention, although it is known that the benefits would be great if more were invested in this component (Văidean, 2015). Prevention campaigns in the field of health exist only in a very small number, and the allocation of only 4% of the gross domestic product for health does not offer many perspectives in this regard, the funding being allocated mainly for curative purposes (Corovic et al, 2023).

The field of oral health is no exception to this rule of allocation of public funding in health. On the other hand, the lack of prevention programs in the field of oral health, the low allocation from the GDP and the low involvement of dentists in the prevention part and the clear explanation of all aspects of hygiene for their own patients, combined with the lack of school dental offices, lead to poor health education and, implicitly, the transfer of these tasks to the family (Murariu, 2019). Regarding the coverage of specialist dentists, in Romania there are six specialties recognized at European level, a favorable situation compared to other countries where only two are recognized, respectively, Dento-Alveolar Surgery and Orthodontics (García-Espona et al, 2023). However, specialist doctors are mostly found only in urban areas.

Inequalities in dental care coverage. Oral diseases have a profound impact on the individual level, but also on society in general. They cause pain, discomfort, reduced quality of life, impacting on fundamental activities such as eating, speaking and smiling, which in turn disrupt social and family life, leading to lost school days and reduced productivity work (Watt, 2024). In general, access to dental care services appears to be limited by the high costs of care and treatment, but health care systems are increasingly excluding dental care from their benefit packages (Palència et al, 2014). In Europe, the degree of public coverage of dental care in the adult population varies, with countries such as Spain only covering tooth extractions, while in Sweden, all types of treatment are subsidized and a special high-cost protection system is in place for the elderly ≥ 65 years (Palència et al, 2014).

According to data provided by the National Institute of Public Health, in 27 of the OECD countries, only 2.6% of the population in 2019 reported having unmet care needs due to cost, distance or waiting times (INSP, 2022). Unmet needs are generally higher for dental care than for medical care, reflecting the fact that dental care is only partially covered by public schemes in many countries, often paid out of pocket or through additional services provided by private health insurance. In addition, there is

a category of disadvantaged people, which includes the elderly, immigrants, the rural population, the precarious situation of oral health being known, predominating caries and untreated dentitions, as well as oral cancer (Listl, 2011).

In Romania, the high costs for dental assistance, the lack of health insurance in the dental sector, as well as the very low ceiling for the settlement of dental services over time, produced an unfavorable situation of the population's oral health, as it results from the study carried out by the College Dentists in Romania in 2024 (CMSR, 2024):

- 2 out of 3 children have dental caries;
- 1 in 3 children suffer from dental abnormalities;
- over 40% of adults have chronic marginal periodontitis;
- over 70% of adults have unprotected teeth;
- 2 out of 3 Romanians need dental treatment (75% of the population 0-17 years old, 78% of the population 18+, 57% of the population over 50 years old);
- more than 50% of parents declare that it is difficult for them to cover the costs of dental treatments for their children.

Recommendations regarding the reduction of inequalities in oral health systems. The report of the World Health Organization (WHO) for the European Region provides a series of recommendations with the aim of encouraging public authorities to reduce inequalities in the oral health system. They refer to:

- developing national oral health policies in line with the WHO Global Oral Health Strategy and national policies on non-communicable diseases and universal health coverage;
- allocating sufficient staff and funds for oral health within the Ministry of Health or another national public health agency;
- the implementation of policies to reduce the consumption of sugars, to protect children from the harmful effects of food marketing;
- integration of oral health services with primary healthcare services;
- establishing a new system of human resources for oral health, including professionals in the field of primary dental health care.

In **conclusion**, despite the recognition of oral health disparities in all types of health systems, insufficient efforts are being made to ensure quality specialist care in all social settings and for all categories of vulnerable people, those with low incomes, with physical and mental disabilities, ethnic minorities and rural populations.

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