

Systems for the Provision of Oral Health Care in the Black Sea Countries. Part 7. Hungary

Peter Kivovics¹, Kinga Csado²

¹ D.M.D., B.D.S., M.D.Sc., Ph.D. Associate Professor, Semmelweis University, Department of Prosthodontics, Chief Dental Officer for Hungary, National Centre for Healthcare Audit and Inspection, Budapest, Hungary. ² D.M.D., M.D.Sc. Postgraduate Student, Semmelweis University Department of Prosthodontics, Budapest, Hungary.

Abstract

This paper gives a brief overview of the population demographics of Hungary and of the health care system for the country. It then details the system for the provision of oral health care and the dental workforce. A description of undergraduate, postgraduate and continuing dental education and specialisation then follows. The paper finishes with an outline of the costs of health and oral health care and details of health and oral health epidemiological studies in Hungary.

Key Words: Hungary, Oral Health Care, Dental Education, Epidemiology

The Country and its Population

At the end of 2009, the population of the Hungarian Republic was approximately 9.9 million, of whom 2.06 million lived in the capital city, Budapest. Almost half of the country's population resides in communities of fewer than 20,000 inhabitants. In Hungary, there are 23 cities, 199 towns, and 2,913 villages. Approximately 68% of the population lived in urban and 32% in rural areas. The ratio of males to females was 47% to 53% [1].

Based on the international database of the US Census Bureau, most Hungarian people were between 30 and 35 years old in 2010, but this is expected to increase to between 40 and 45 years old by the end of 2020 [2]. The Hungarian population has been decreasing whereas the average age is increasing year by year, which means an increasing need for the health care of the elderly.

The Hungarian Health Care System

Regulation

The Minister for Health is responsible for health and health insurance. Tasks of the Ministry cover health policy development, health sector regulation, strategic planning, and ensuring the operation of the public health network and the health care system. The National Public Health and Medical Officer Service is responsible for the direction, coordination and supervision of public health, epidemiology, health development (health protection,

health education and health maintenance), health care operation activities and the supervision of health care delivery. Quality assurance is supervised mainly by two authorities. The National Centre for Healthcare Audit and Inspection is responsible for monitoring on site in close cooperation with providers, whereas the Health Insurance Supervisory Authority acts as health consumer protector and also disseminates quality indicators. There is also a provider-accreditation process based on minimum requirements regarding human resources and equipment. *Figure 1* shows a brief structure of the organisation of the Hungarian health care system [3].

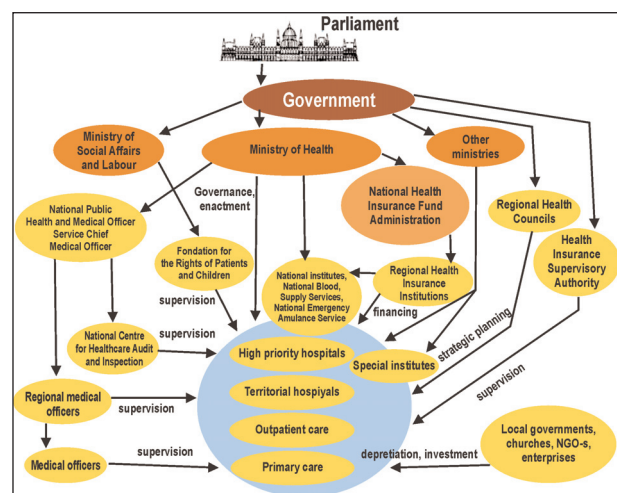


Figure 1. The organisation of the Hungarian health care system

Corresponding author: Kinga Csado, 47 Szentkirályi u. Budapest H-1088, Hungary; e-mail: kinga_csado@yahoo.com

Financing

The Hungarian health care system is basically financed by health insurance contributions collected by the Hungarian Tax and Financial Control Administration, which then transfers these resources to the National Health Insurance Fund (HIF). The HIF is a national pool, separated from the central budget. *Figure 2* outlines the financing scheme of the Hungarian health care system [3].

The HIF provides health and oral health care for most of the population. All employees and employers are obliged to pay into this insurance company. The HIF is financed by compulsory contributions. Employers contribute 75%, while employees contribute the remaining 25%. In addition, complementary schemes and voluntary funds have more than 300,000 members and 70% of their total expenditure is spent on dental treatment. About 70% of dentists have a contract with the HIF and 20% of them work on an entirely private basis. Over half of the dentists contracted to the National Health Insurance Fund also work in independent practice [4].

Organisation of oral health care

In Hungary, the dental service is organised on two levels, basic and special dental services. For every 3,600 Hungarians, the basic dental service is available during 30 working hours a week. The special dental service is organised for every 50,000 Hungarians. The National Health Insurance Fund finances the Hungarian basic dental service from two sources. The first is a fixed sum paid monthly, depending on the number and age of the treated

population. The second is a treatment-based payment that depends on the number of treatments a month.

Expenses are financed according to a scoring system in which each type of dental treatment is worth a certain score. The value of the scores is determined by the National Health Insurance Fund.

The Dental Workforce

In 2010, 5,673 dentists were registered, among whom 4,963 were active and 710 were in retirement. There has been an increase in the ratio of female to male dentists, which mirrors that in other areas of Hungarian health care. According to the database of the National Licensing and Health Administration Office, 42.6% of the dentists were male and 57.4% were female. Approximately 664 dentists who worked in Hungary in 2010 obtained their dental qualification in another country, often Romania. The median age of the active Hungarian dentists was 50.5 years and more than 27% were older than 60 years. A pie chart, provided by Dental Section of the Hungarian Medical Chamber, indicates the distribution of Hungarian dentists according to age in 2009 (*Figure 3*). The number of dentists who have a contract with the National Health Insurance Fund was about 3392. Over the last 50 years, there has been a significant change in the dentist to population ratio and there are now more than five dentists per 10,000 Hungarians (*Table 1*) [5]. There were 1,740 dental technicians and 4,307 chair-side assistants supporting dentists, among whom 2,077 also have a dental hygienist qualification [6].

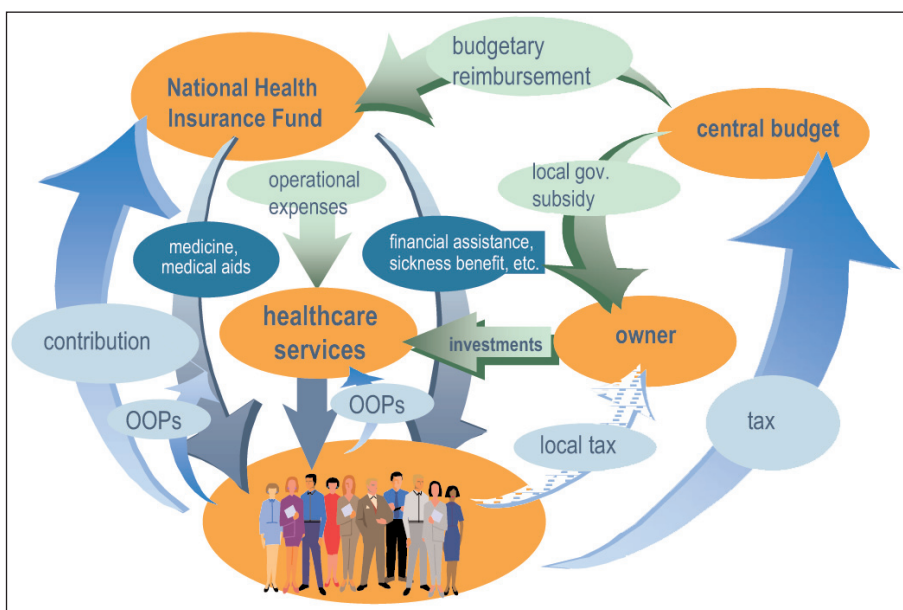


Figure 2. The financing scheme of the Hungarian health care system.

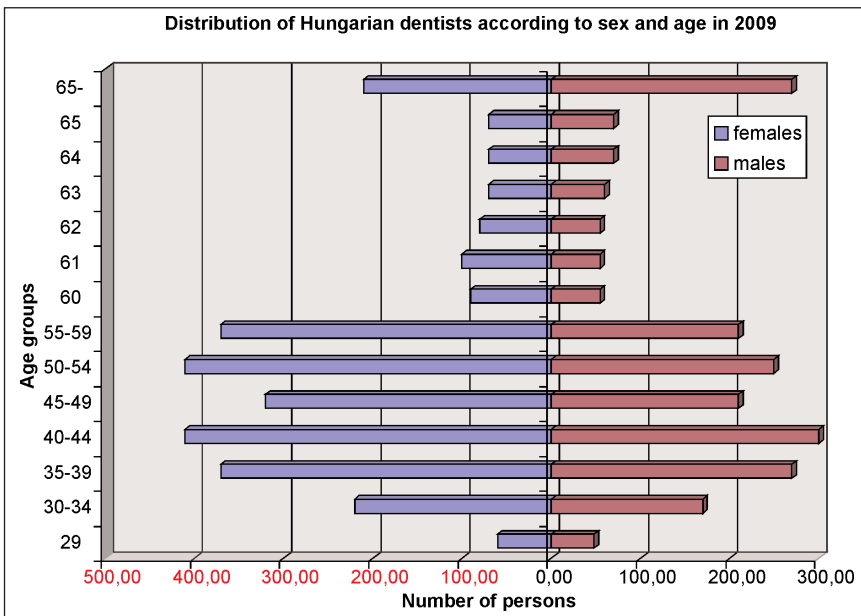


Figure 3. Distribution of Hungarian dentists according to age between 1st January 2009 and 30th June 2009.

Table 1. Number of Dentists Relative to the Population Between 1960 and 2008 [4]

Year	Population (per 1,000)	Dentists	Dentists for 10,000 persons
1960	9,961	1,278	1.28
1970	10,322	2,093	2.02
1980	10,709	3,308	3.30
1990	10,375	4,267	4.10
2002	10,075	4,843	4.80
2005	10,097	4,508	4.50
2007	10,066	4,013	3.90
2008	10,045	5,064	5.04

Dental Education

Undergraduate education

There are four dental faculties in the country. The title upon qualification is Doctor of Medical Dentistry (D.M.D.). The highest number of dental students is in the capital city, Budapest, at the Faculty of Dentistry of the Semmelweis Medical University. Dentists also graduate every year also from the medical universities of Szeged, Debrecen, and Pécs.

In May 2010, the total number of dental students registered at the four universities was 2,270. Every year, the Ministry of Health determines the number of dental students who are publicly funded. There are also a number of privately funded dental students, including some from other countries who are taught in either English or German. The numbers of these students are also limited by the Ministry. The total number of students (publically and privately funded) who entered dental schools in Hungary in

2010 was 424, of whom 195 were males and 229 females. The average yearly output of graduating dentists from the four universities in the country has increased significantly over the last few years. In 2010, 220 dental students graduated, among whom 117 were males and 103 were females. [4]

The training period at the dental faculties lasts for five years and is in ten semesters. In the first four semesters, students learn basic medical subjects and follow a similar curriculum to the medical students. However, during these first four semesters, dental students are also required to participate in further special dental preclinical courses such as preventive dentistry, dental materials, and dental technology. From the fifth semester, special dental subjects and a number of general theoretical and clinical medical courses are taught including preclinical “phantom head” courses. Practical (clinical) courses in clinical dentistry occupy the major part of the last four semesters. After graduation, students receive a Doctor of Dentistry degree (equivalent to a Master of Science degree), certifying full professional competence and allowing them to work independently and set up their own practice.

In Hungary, there are seven schools for dental hygienists, 22 schools for chair-side assistants, and four schools for dental technicians. All award a diploma on successful completion of training, which lasts for three years for dental hygienists and dental technicians and two years for chair-side assistants [4].

Postgraduate education and specialisation

In Hungary, the postgraduate specialisation system for dentists has recently undergone changes. Until

2010, the government provided financial support for a limited number of residents (interns). However, this support has now ceased and the residents who wish to take part in the specialisation programmes have to pay a tuition fee. The Dental Section of the Hungarian Medical Chamber does not require any further training after graduating from a dental school before starting a private practice. Those dentists who wish to undertake specialist training do so in universities and it lasts full-time for three years for all specialties. A special committee is responsible for overseeing this training.

Specialist training is offered in the following dental specialties: dentoalveolar surgery, paediatric dentistry, conservative dentistry and prosthodontics, orthodontics and periodontology. Specialisation in maxillofacial surgery requires a general medical degree. Maxillofacial surgery residents have to attend special dental theoretical, preclinical and clinical courses, which are a significant part of their postgraduate training. The number of dental specialists working in the country according to the database of the National Licensing and Health Administration Office [6] in 2010 is shown in *Figure 4*.

Participation in continuing education and postgraduate courses has been mandatory since 1999. It is delivered mainly by the Dental Section of the Hungarian Medical Chamber, which is responsible for its supervision. There is a scoring system, with accredited continuing education courses. A dentist must achieve 250 points in five years. This represents 250 hours, and some reading is allowed and may be counted towards the total number of hours. The ultimate sanction for noncompliance is suspension from practice and the first audit of compliance took place in 2004, resulting in two dentists of retirement age needing extra training.

Health and Oral Health Care Costs

In 2009, 4.9% of GDP was spent on health care and of all health care expenditure, approximately 0.08% was spent on oral health care on a national scale [7].

Oral health care is free for children until they are 18 years; orthodontic care and prosthetic treatment are partly free if begun before the age of 16 years. Oral screening, emergency treatment, oral surgical, periodontal and partial conservative dental treatment are free for all patients, regardless their age. Patients between the age of 18 and 60 have to pay a proportion of the cost of all other

treatments and for treatment involving laboratory work (crowns, bridges and dentures). Pregnant females, military employees and chronically sick or retired people are required to pay very little for these treatments or are exempt from the costs.

Epidemiology

In comparison with most European countries, the health status of the Hungarian population has been very poor for many years. For example, life expectancy is around 68 years for men and 70 years for women. The most frequent causes of mortality are cardiovascular disease, cancers, and respiratory and digestive diseases [8].

Oral Epidemiology

Epidemiologic patterns of tobacco consumption, mainly cigarettes, have shown a steep increase in Eastern Europe [9]. In Hungary, the incidence of and mortality from oropharyngeal cancer ranks the highest in Europe both for men and women [10] (*Figure 5*). In 1997, a screening study was carried out among 300 smokers (230 men and 70 women). The results of this screening were as follows: pre-cancerous lesions were found in or around the oral cavity in 14% of this group, benign tumours in 2.33%, and malignancies in 2.66% [11].

In Hungary, death rates for cancer of the oral cavity and pharynx are among the top five countries of the 46 countries investigated worldwide [12] (*Table 2*).

Table 2. Age-Adjusted Death Rates for Cancer of the Oral Cavity and Pharynx (Per 100,000 Population). Top Five Among the 46 Countries Investigated Worldwide [10]

Country	Male (rank)	Female (rank)
Hungary	18.5 (1)	2.4 (1)
France	12.0 (2)	1.3 (7)
Croatia	11.7 (3)	1.1 (17)
Slovenia	11.2 (4)	0.9 (3-4)
Romania	11.1 (5)	1.0 (24)

The frequency of oral mucosal lesions compared to healthy status was 11.1% for men and 9.4% for women, both related to alcohol and cigarette consumption. Statistically significant correlation could be shown between prevalence of oral mucosal lesions and smoking habits ($P < \text{or} = 0.05$) and there was a significant correlation between the

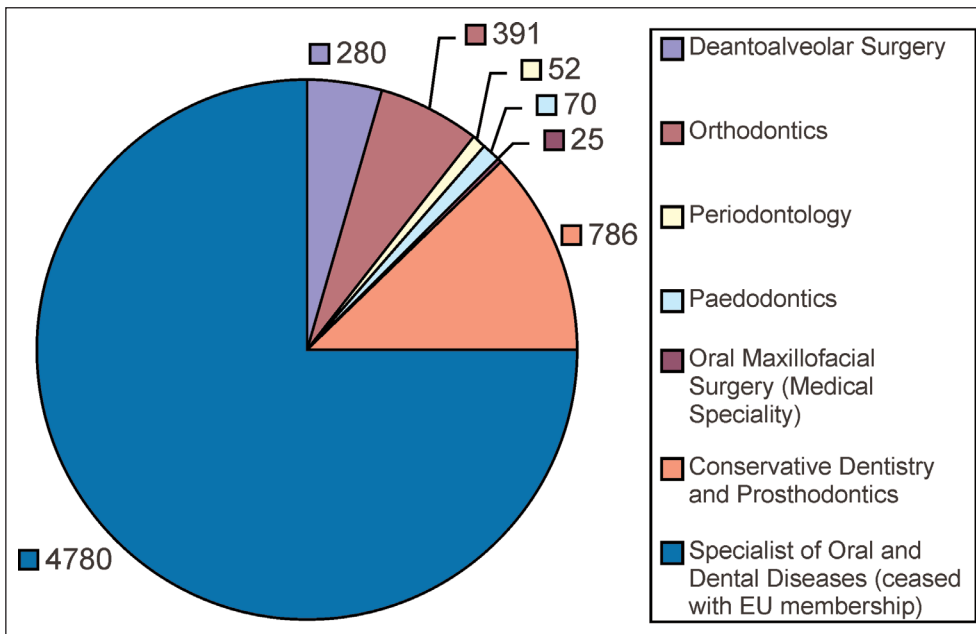


Figure 4. Number of dental specialists in Hungary in 2010 according to the different fields of specialisation.

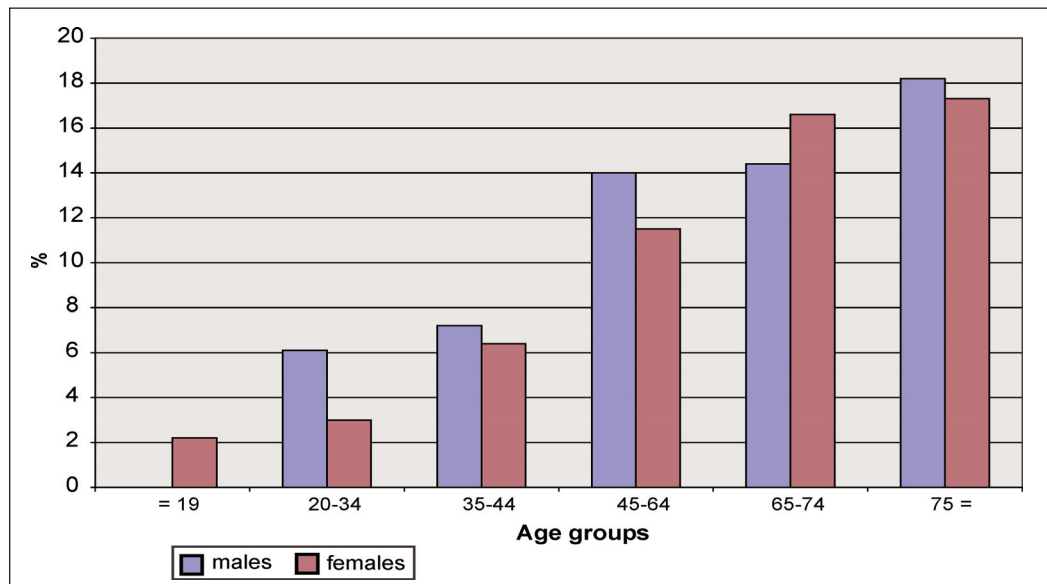


Figure 5. Distribution of oral mucosa lesions in the Hungarian population according to age and sex.

frequency of dental surgery attendance and the prevalence of mucosal lesions in the study group [13].

In 2007, the average overall Decayed, Missing, or Filled Teeth (DMFT) index of the Hungarian population was 12.84 ± 6.99 . In 2001, the mean national DMFT at age 12 years was 3.3. In 2001, the percentage of 12-year-old children with DMFT 0 was 24% [14].

According to a national survey, in 2008, the mean national values of DMFT for all age groups were found between 11.79 ± 5.68 and 21.90 ± 7.61 . These values were significantly higher in women compared to men ($P < 0.05$) [15].

Thirty-two per cent of patients regularly visited their dentist and 68% patients visited a dentist only when suffering from acute complaints. The

portion of the population who visited a dentist at least once during 2009 was estimated 65%. Of these, 50% were under 18 years, 65% were between 19 and 64 years, and 80% were over 65 years. As mentioned previously, in 2008, the average number of patients for one dentist was about 2,000. The distribution of Hungarian patients attending regularly for dental visits, according to different age groups, is at Figure 6 [10].

The elderly population in Europe, and also in Hungary, has increased remarkably during recent decades. At the same time, there is an increasing demand for dental and oral care among the elderly. In Hungary, the majority of prosthetic treatment for patients over 65 years has been the provision of complete or partial dentures. Between 1985 and 2000, the percentage of edentulous adult persons

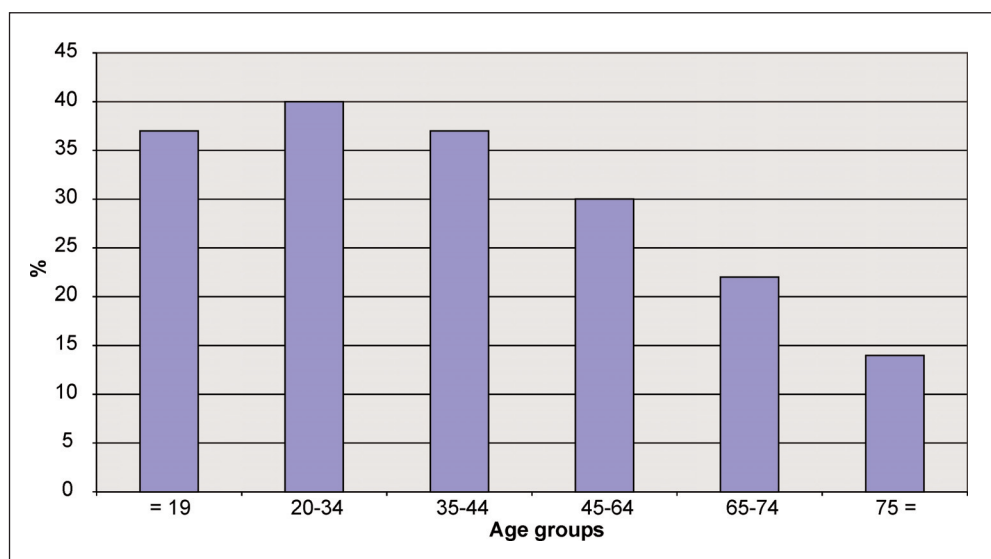


Figure 6.
Distribution of
Hungarian patients
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increased from 0.3 to 1.4 [16]. In a national epidemiologic survey in 2000, 23% of the Hungarian population was older than 60 years and 26% of them were edentulous [17]. In the latest national survey in 2008, the caries experience showed some decrease between 2000 and 2004 within the age group of 35-44 years. The prevalence of persons with 21 or more teeth had increased from 65.6% to 73.1%. This positive tendency has not taken place in the prevalence of edentulousness in this age group, as it rose from 1.4% to 1.9%. In 65-74-year-olds the level of edentulousness fell from 25.9% to

14.8% and the prevalence of persons with 21 or more teeth rose to 22.6% as compared with 13% in 2000. A positive tendency could also be experienced in the group of 65-74-year-olds in edentulousness and in the number of teeth, but further efforts are needed to reach an improved situation [15]. For edentulous patients aged over 60 years, the National Health Insurance Fund pays the fee for clinical work for one denture every four years; this way, patients have to pay only for the dental technical work involved.

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