The healthcare system and provision of oral healthcare in European Union member states. Part 4: Greece

P. Damaskinos,[1] H. Koletsi-Kounari,[2] C. Economou,[3] K. A. Eaton*[4] and E. Widström[5]

IN BRIEF

- Provides an understanding of the system in Greece for the provision of oral healthcare.
- Enables the reader to understand how dentists practice in Greece.
- Helps the reader to appreciate the effect that the current economic crisis has had on the provision of health and oral healthcare in Greece.

GENERAL

This paper presents a description of the healthcare system and how oral healthcare is organised and provided in Greece, a country in a deep economic and social crisis. The national health system is underfunded, with severe gaps in staffing levels and the country has a large private healthcare sector. Oral healthcare has been largely provided in the private sector. Most people are struggling to survive and have no money to spend on general and oral healthcare. Unemployment is rising and access to healthcare services is more difficult than ever. Additionally, there has been an overproduction of dentists and no development of team dentistry. This has led to under or unemployment of dentists in Greece and their migration to other European Union member states, such as the United Kingdom, where over 600 Greek dentists are currently working.

INTRODUCTION

In 2016, Greece is in the middle of an economic crisis in which the government is struggling to find a balance between the demands of its European Union (EU) partners and those of its population. The country's debt and financial crisis have resulted in widening socio-economic inequalities and unemployment, and have affected health and healthcare because of reductions in public health expenditure. Austerity measures during the last six years have determined the ongoing reform of the health system, with changes in public funding and a significant reduction of 25.2% (€4 [£2.8] billion) in public health expenditure during the years 2009-2012.[1] Thus, the country's financial crisis, has not only affected peoples' daily life but has also led to a public health crisis. The effects of the economic crisis have been linked to social anxiety and distress associated with a wide range of health outcomes in both clinical and subjective measures of health. Suicide rates increased by 36% between 2009-2011, indicating that severe austerity measures and restrictive health policies increase the risk of developing depression or committing suicide.[2]

Moreover, many Greeks have reported neglecting their health by avoiding health or dental examinations or treatment because of being unable to pay the cost or because of the distance to clinics and travel expenses.[3] Furthermore, due to radical reductions in municipality budgets, public health measures such as mosquito spraying programmes have been stopped, allowing the re-emergence of locally transmitted malaria.[4,5]

The uninsured, unemployed, older people, migrants, children, and those suffering from chronic diseases and mental disorders are among the groups most affected by the crisis in Greece.[6]

The country had a population of 11,120,000 in 2013, which is spread over the mainland and a number of islands. Nearly 50% of the population lives within 50 kilometers of Athens. Unemployment is high (26% at the end of 2014) and 36% of the population is at risk of poverty or social exclusion (Table 1). According to latest data available from the

Table 1 Total population, gross national income per capita, life expectancy, total expenditure on health, unemployment rate, and population at risk of poverty or social exclusion, in Greece (2013)[7,8]

Total population (2013)	**11,128,000**
Gross national income per capita (PPP international €, 2013)	22,800
Life expectancy at birth male/female (years, 2013)	79/84
Probability of dying between 15 and 60 years m/f (per 1 000 population, 2013)	98/41
Total expenditure on health per capita (Intl €, 2012)	2,009
Total expenditure on health as % of GDP (2012)	9.3
General government debt	179.2% GDP (2014)
Gross domestic product (GDP) €/capita (2014)	23,202
Unemployment (2014)	26.5% of labour force
Unemployment male (2014)	23.6% of labour force
Unemployment women (2014)	30.2% of labour force
Population at risk of poverty or social exclusion	35. 7%

[1]Researcher, Department of Preventive and Community Dentistry; [2]Associate Professor, Head of the Department of Preventive and Community Dentistry, National and Kapodistrian University of Athens. 2, Thivon Str, 115 27, Goudi, Athens, Greece; [3]Associate Professor, Department of Sociology, Panteion University of Social and Political Sciences, Greece. 136, Syngrou Av. 176 71 Athens, Greece. [4]Visiting Professor University College London Eastman Dental Institute, Universities of Brescia and Leeds, Honorary Professor, University of Kent, TN25 4EW, United Kingdom. [5]Chief Dental Officer National Institute for Health and Welfare (THL), Helsinki, Finland, Professor in Dental Public Health, Institute of Clinical Dentistry, Arctic University of Norway PO Box 30.00271, Helsinki, Finland
*Correspondence to: K Eaton
Email: kenneth.a.eaton@btinternet.com

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Table 2 Dentists in the public sector, universities, and the army during 2008, 2011 and 2015[17,32]

Place of work/ year	2008	2011	2015
Health centres	313	273	212
Hospitals	254	239	187
Universities	228	212	178
Army	72	72	68
Total dentists in public sector, universities, and army hospitals	867	796	645

Global Health Observatory, and OECD, the total expenditure on health as a percentage of GDP in 2012 was 9.3, (Table 1).[7,8]

One theory is that an economic shock offers chances to strengthen the health system. In Greece this has led to a reduction in overhead costs and extended purchasing, together with a merger of health insurance funds.[9]

Unfortunately, politicians, decision makers and stakeholders appear to disagree fundamentally over the values and the directions of health reforms and 'party thinking' blocks the implementation of changes.[10]

The healthcare system in Greece, even before the economic crisis and austerity measures, was poor, inadequate and inefficient. This was due to a very wide range of problems including: over-centralisation in decision making and the administrative system; inappropriate managerial structures; poor planning and coordination; inequalities and ineffective use of human and economic resources; poor population coverage; lack of a referral system; unequal access to services; high out- of- pocket payments; unavailability of health technology assessment system; and a retrospective reimbursement system. This fragile healthcare system cannot meet the increasing needs of the population. Moreover, the number of uninsured and unemployed has increased. By 2013, there were two million uninsured people with no access to healthcare[1] and this figure seems likely to have increased further since then.

Well over 30% of the population is living in poverty.[11,12] Unemployment of parents and reduced family incomes, because of austerity measures, have affected child health and a growing number cannot afford adequate nutrition. Moreover, access to health services is not available for all children in the country.[13]

Unemployment affects all occupations, including healthcare personnel and medical professionals, many of whom have emigrated. The numbers of Greek dentists registered to work in the United Kingdom has risen from 419 in 2007 to 661 by 31 December 2014.[15]

Despite the fact that Greece has the highest dentist-to-population ratio of the European countries,[16] the country has very few dental assistants and no dental hygienists. The majority of dentists who work either privately or in the public sector do so without a dental assistant, or nurse. This is surprising, as in a recent study, those working with a dental assistant reported financial and job satisfaction.[17]

AIM

The aim of this paper is to describe the system for the provision of oral healthcare in Greece.

INSURANCE-BASED HEALTHCARE PROVISION SYSTEM

The Greek health insurance system is complex and incorporates elements from both the public and private sectors.[1,18–21] In the public sector, although a national health service –type system was established in 1983, it coexists with a social health insurance model. When the global financial and economic crisis started, the health system in Greece functioned within an outmoded organisational structure. The social health insurance system suffered from incorporating a large number of insurance funds and providers with varying organisational and administrative structures offering services that were not coordinated. This resulted in different population coverage and contribution rates from region to region, different benefit packages, and inefficient operation, leading to large accumulated debts.

In 2011, a major restructuring of the health system was introduced. All social health insurance funds were merged in a unified fund, the National Health Services Organisation (EOPYY), which covers the vast majority of the population (workforce, dependents and pensioners), on the basis of insurance status, acting as a sole purchaser of health services. The benefit packages of the various social health insurance funds merged in EOPYY were standardised to provide the same reimbursable services, creating a new common benefits package, a basic characteristic of which is the reduction and restrictions in benefits to which the insured are entitled.[19]

PAYMENT SYSTEM AND CO-FUNDING OF HEALTH AND ORAL HEALTH – CARE FOR PATIENTS

The Greek healthcare system and oral health coverage are funded via three different methods:

1. By the state budget, through the NHS and Health Units for Primary Healthcare
2. By contributions from both employees and employers through social insurance funds merged to a national health services organisation (known today as EOPYY).
3. Mainly by direct out-of-pocket payments from patients through the private sector.[17,19,20,21]

Austerity has led to a reduction in public spending and increasing tax revenues and has affected the funding of the healthcare system and contributed to a considerable increase in direct payments from patient to clinician for health and oral health, as well as to the increased health disparities and oral health inequalities.

The oral healthcare system of this country is the most privatised in all EU member states. Private expenditures for dental services account for the greatest percentage of private expenditure on medical services, representing a significant part of the total health expenditures of household budgets. In 2008, dental care in Greece accounted for more than 1% of the gross domestic product (GDP) and 96% of this 1% was private expenditure. Moreover, during 2008, expenses for dental health cost 2% of total household budgets.[12,20,22] In 2014, Greeks spent a higher percentage of their household budget (on average 7.2%) on private healthcare than in any other European country.[12]

The Ministry of Health and Social Solidarity is solely responsible for health and welfare and no other ministries have health-related responsibilities.[1] Prior to 2011, dentists in contract with one or more of the 30 funds were either salaried (for example, in the Public Power Corporation, Telecommunications and Banks' funds) or worked at the funds dental practices (offices) or in their own private dental practices (offices). The main cost of dental treatment was and still is transferred to the patient. IKA was the major supplier of dental treatment until 2010, when the government abolished IKA and introduced Social Health Insurance (SHI) and a new body for health services EOPYY in 2011, and PEDY in 2014.

In spite of the merger of insurance funds, the National Bank of Greece (NBG) still has Dental Health Centres in Athens, Thessaloniki, and Patras, providing dental

treatment with very little contribution from insured individuals. Fifty five dentists, 23 dental assistants, two dental technicians, and two radiographers, together with administrative, staff run these centres.[23]

The national health service (known as ESY in Greece) is financed by the state budget via direct and indirect tax revenues and it provides for emergency, pre-hospital, primary, and in-patient healthcare. Doctors working in public hospitals and health centres, the latter reformed to Health Units for Primary Healthcare, are full-time employees, are not allowed to engage in private practice and are paid a salary. The private sector includes diagnostic centres, for-profit hospitals, and independent practices and are financed mainly from patients' out-of-pocket payments and, to a lesser extent, by private health insurance.[1]

There was a 26. 4% reduction in public hospitals expenditure during the years 2009–2011 when it reached €2.1 (£1.5) billion; the reduction was achieved though cuts in personnel, wages, and medical supplies.[6,24]

The cost of preventive oral health services was not covered by funds, with the exception of the beneficiaries of banking funds. The private sector and out-of-pocket payments made by patients act as substitutes for the gaps in insurance coverage for oral healthcare. There is general dissatisfaction with the range of existing services offered by the public sector. Out-of-pocket payments for all health expenditure increased by 1.2% in 2012 and were 28.8% higher than in 2009. The black economy consumes about 30% of out-of-pocket payments, implying corruption in the health sector.[1,25,26]

While dental public health as a percentage of the total cost for health is very low with a tendency to decrease, as mentioned previously, private expenditure on dental health represents a high percentage of household expenditure. Those with low incomes reported lower private oral healthcare expenses than the average and those in high income groups reported higher expenses for oral healthcare.[22,27,29]

During the years 2005-2009 the expenditure on oral health remained almost the same at about €2 (£1.4) billion a year, but during the financial crisis of 2010 and 2011, there was a reduction and it only reached €1.5 (£1.05) billion a year.[30]

PRIVATE INSURANCE SCHEMES

Private dentists and private hospitals play a major role, in providing dental care in the country. To pay for these services, private insurance companies have developed various insurance packages for individuals or families. These packages are flexible and are tailored to meet individual budgets. They provide for preventive dental visits (scaling once a year, periodical examinations and treatment planning are free of charge), or for emergencies in some cases. In other cases, the individual co- pays an amount that is in some cases, as much as one-fifth or more of the total cost of the specific dental treatment. During the years 2003 and 2012 there was an increase in private health insurance, but it is still lower than in many other EU member states. An explanation for this is low average household income and high unemployment.[1,6]

The public sector (statutory insurance) does not provide any possibility to upgrade existing insurance schemes.

REIMBURSEMENT OF COSTS OF ORAL HEALTHCARE

Until 1992, there were statutory insurance reimbursements of oral healthcare costs for those working in the public sector. Private dentists who had contracts with the public sector received reimbursement according the treatment provided. Because of the low fees, which had remained very low for many years, the Greek dental associations cancelled all contracts. Since 1992 dental patients have had to pay the entire cost of treatment.

PUBLIC SERVICES

The first hospital in Greece, built in 1836, the Weiler building (Military Hospital, Makriyanni), is today part of the new Museum of Akropolis. The Evangelismos Hospital, built in 1884, was the first hospital in Greece to establish a dental department (in 1927).[31]

The national health system in Greece, was introduced in 1983 and implemented in 1986, with the establishment of 131 hospitals in urban and rural areas and 203 health centres (now Health Units for Primary Healthcare) in rural areas.

In 2011, 239 dentists worked in public hospitals providing secondary dental treatment for medically complex patients. In the same year, 273 dentists worked in health centres.[17,32] These are spread all over the country in rural areas and the islands and provide dental treatment for people up to 18 years old, and emergency treatment for all ages, with an emphasis on preventive programmes in schools and community dentistry.[17] This is in accordance with the laws (NHS Law 1387 in 1983), and ministerial decisions (Α3β/οικ.3,686/15-3-88 και Α3β/3,984/26-3-90) which specified the range of dental healthcare available in primary health centres (Government Gazette, 1983, KESY 1984, 1985α, 1985β, 1987).

New data show a decreased number of dentists working in the public sector, due to the economic crisis, as a result of the merging of hospitals and a massive retirement of dental professionals in hospitals and health centres. Thus, hospitals and health centres are understaffed. Moreover, the average of age of dentists and other medical practitioners in the public sector is over 55 years. In 2012, there were 192 dentists working in health centres, of whom 72% reported working alone, without a dental auxiliary or other assistance.[33]

Legislation for health and healthcare (Law 3,054/ 2012) established that EOPYY (the public dental service):[34]

1. Would provide and compensate the costs of dental healthcare (prevention, diagnosis and treatment) for those insured.
2. Insured people would be eligible to receive treatment and compensation for preventive, clinical treatment and prosthetics.
3. Insured people would have the freedom to choose a dentist from the network, to receive dental prevention and treatment.
4. Dental treatment for 6-12-year-old children would be provided at no cost for:
   - Dental examination and a certificate
   - Emergency treatment
   - Scaling and fluoridation, once a year.
   - Sealants (up to four sealants)
   - Extraction of deciduous teeth
   - Orthodontic space maintainer- if needed.

The EOPYY's Administration Committee would have the right to decide on the provision of other assessments according to their budget, and to extend dental treatment to those older than 6–12 years. They would also have the right to implement protocols for dental treatment.

The reimbursement for dental treatment would be approved and recorded electronically.

The date to start implementing this scheme was 1st of January 2014. However, this has not happened.

PREVENTION AND ORAL HEALTH PROMOTION

The Greek Ministry of Health and Solidarity has not announced any new plan of action for oral health. During the years of the financial crisis, the first area to be reduced has been the budget related to oral and dental health.

The latest plan was in 2008, when the Ministry of Health announced the five-year Plan of Action for Oral Health, 2008-2012. The main goal of this plan was

to establish a policy targeting oral/dental disease prevention, oral health promotion, effective treatment, and the improvement of dental services (both in efficiency and quality) in the private and public sectors. Furthermore, the plan aimed to implement effective policies for the promotion of oral health in children, in adults at work, and elderly people, using special training programmes for disabled people, refugees, the homeless, and Roma. It also included educational programmes for the promotion of topical fluoride and environmental aspects (that is, protection from contaminated and toxic dental disposables and environmental care). This, ambitious and useful plan was not implemented, as due to the economic crisis all its aspects could not be financed.

The Greek Dentist Federation, has an ongoing project for oral health promotion in schoolchildren. Since 2001; 340,000 children (32% of all the children up to 14 years of age) in the country have been examined by volunteer dentists, and have received oral health education free of charge. Their parents signed and returned a written consent form.

There is no water fluoridation in Greece.

ORAL HEALTHCARE WORKFORCE

In 2008, the total number of dentists in Greece was 14,260. Since then there has been a slight decline to 13,919 by 2011.[17] The number of dentists per 10,000 inhabitants has increased significantly ($p < 0.05$) from 1982 (7.7) to 2007 (13.0), ranking Greece first in terms of dentists per 10,000 population, of all EU member states.[16]

Most recent data, indicated that on 1 January 2014, the total number of dentists was 13,737.[32] The majority of private dental practices (offices) are located in the Attica (the Athens region) (39, 5%), Piraeus (8%), and Macedonia (20, 9%) (Table 3). However, as in many other EU Members States, they are not distributed evenly as few choose to work in remote areas. This factor, coupled with the economic crisis has meant that inequalities are widening (Fig. 1).

Because dentists in Greece can be both salaried and practice privately, the sum exceeds the total of 13,737 registered dentists (53% are men and 47% women), for 2014 (Table 4).

There are about 4,500 dental technicians in Greece and they work in 1,400–1,500 dental laboratories, which are mainly located in Athens (50%), Piraeus (12%), and Thessaloniki.

There are no dental nurses as this speciality is not recognised in Greece. Nevertheless, there are an estimated 2,300 dental assistants (or auxiliaries) in Greece, who can

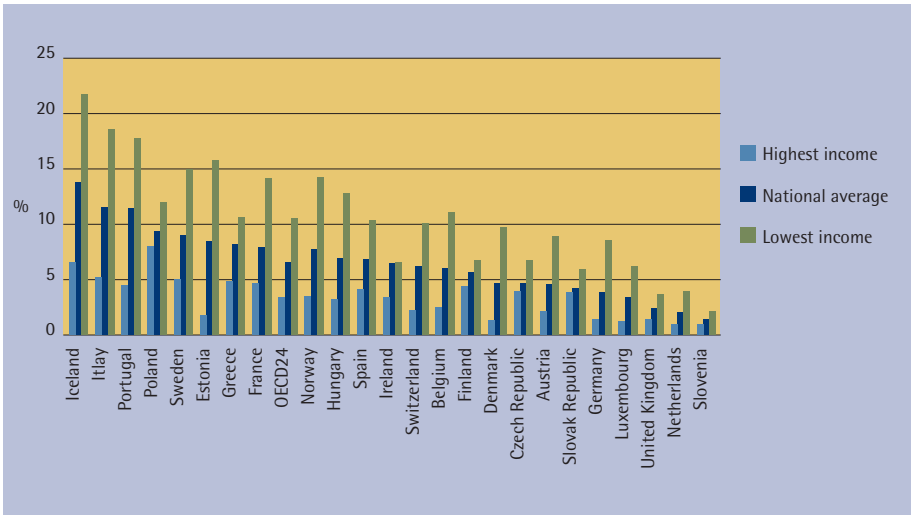

Fig. 1 Unmet needs for dental examinations, by income quintile. European countries. 2011 (OECD)

Table 3 Registered dentists (total) in local dental associations (subtotals) in Greece for the year 2014

Dental association/area	Dentists	Percent
Metropolitan area of Athens	6,533	47.6%
Attiki	5,423	39.5%
Piraeus	1,110	8.1%
Sterea Ellada & Evia	621	4.5%
Peloponesse	998	7.3%
Ionian Islands	172	1.2%
Thessalia	804	5.9%
Macedonia	2,872	20.9%
Thessaloniki	1,672	12.2%
Epeiros	345	2.5%
Crete	623	4.5%
Thrace	314	2.3%
Aegean Islands	455	3.3%
Total dentists in Greece (2014)	13,737	100%

Table 4 Employment of dentists in Greece. Private dentists, percentage of men and women, work place and specialists

Dentists in Greece – work place/ type/specialist/ 2014	TOTAL	MEN	MEN %	WOMEN	WOMEN %
Hospital NHS	187	105	56.10%	82	43. 9%
Health centres NHS	212	109	51.40%	103	48. 6%
Insurance clinics	692	339	49.00%	353	51. 0%
Universities	178	126	70.80%	52	29. 2%
Only salaried	534	263	49. 3%	271	50. 7%
Salaried and private dentist	881	519	58. 9%	362	41. 1%
Private dentists	11,902	6,361	53. 4%	5,541	46. 6%
Army dentists	68	65	95. 6%	3	4. 4%
Dentists with no private dental office	917	426	46. 5%	491	53. 5%
Total	15,571*	8,313*	53. 4%	7,258*	46. 6%

*These figures are higher than the total number of dentists working in Greece as some have more than one employment

assist dentists but who cannot work in the patient's mouths. Dental assistants are trained either in state or private schools by the Organisation of Vocational Education & Training (I.E.K.) or more frequently by private dentists.

Region of Attica provided examinations twice a year and successful candidates took a certificate that ensured they have the knowledge to work as dental assistants. However, since 2012 no one has applied to take the examinations. In part, this is explained by the plethora of dentists and because some young dentists work as dental assistants for a few years with an experienced dentist; there is no demand for other certified dental assistants.

DENTAL EDUCATION

Dental education in Greece is offered by the two dental schools, one in Athens and the other in Thessaloniki. The total number of students who enrol each year in both universities is about 280. In some people's opinion this number should be reduced because the country's oral health workforce is already too large for the needs of the population.[17]

Both dental schools offer a five-year undergraduate programme. In Athens this leads to a Doctor of Dental Surgery degree (DDS). Additionally, the Athens Dental School provides two cycles of postgraduate studies (postgraduate speciality diploma or doctorate). During the academic year 2013–2014, undergraduate students totaled 640, and postgraduate students 175.[35]

At the Dental School in Thessaloniki, 770 undergraduates and 189 postgraduate students are registered. They study during a five-year undergraduate programme, which leads to a Doctor of Dental Surgery Degree (DDS). Furthermore, the School of Dentistry provides two cycles of postgraduate studies. The first cycle is two or three years in duration and leads to a postgraduate speciality diploma (MSc). The second cycle is three years in duration and leads to a doctorate.[36]

Between 2009 and 2014, 646 dental students graduated from the Athens Dental School and 599 graduated from the Thessaloniki Dental School.

After graduation they have to get a permission to work as a dentist. This special permission is issued by the regional authorities and then the dentist has to register with the local dental association (in his/her area).

Dental technicians are trained at technological educational institutions (T.E.I.), but dental technician assistants are trained at EPAS (ΕΠΑ.Σ), thus in secondary technical education where there is a special training for dental technician assistants (Legislation 1245/τΒ/01-07-2008).

Dental technicians on completion of training at T.E.I. (eight semesters), have a six months period of practical training, in specific placements in the state sector, as well as in private enterprises. They are able to register with the dental technician association (where they live) and practice only after successfully passing the state examinations for dental technicians offered by the Ministry of Health once a year (Legislation 1666/86 and Min. Resolution 7,456/94).[37]

Continuing professional education

In 2009, the Hellenic Dental Federation proposed a compulsory 150 hours of credits (CPE) for dentists over a five-year period to be able to renew their professional licence[17]. This proposed system has not yet been activated by law. However, continuing professional education is compulsory for dentists working in the national health service. According to legislation 1397/1983, one hundred hours in a five year period are required, of which 80 hours are on topics specified by an education committee and 20 hours from the dentist's free choice.

SPECIALIST TRAINING

Orthodontics and oral and maxillofacial surgery are the two dental specialties recognised in Greece. Training for oral and maxillofacial surgery has two phases; the first one is 12 months for surgery training and the second one is 48 months duration in oral and maxillofacial surgery. Oral and maxillofacial surgery in Greece is the first specialisation that introduced a pre-selection system through examinations and the prerequisite that trainees must have a degree from both dental and medical schools.

Orthodontic training lasts for three years and is delivered at Athens Dental School (Greek Official Gazette 260/12.4.1994) and Dental School of Thessaloniki (Greek Official Gazette 331/4.5.1994). Training is according to European Directive 78/687/EEC.

In addition, there are many master courses at the Universities in Athens and Thessaloniki in all areas of dentistry (that is, endodontics, prosthodontics, community dentistry, paediatric dentistry, and periodontology) and many young Greek dentists take specialist training in these areas outside Greece.

COSTS OF ORAL HEALTHCARE

In 2011 it was estimated that the current 27 EU member states spent €79 (£54) billion and the trends suggested that this would rise to an estimated € 93 (£ 65) billion by 2020.[38] The total spend for oral health in Greece for the year 2010 was 1.1 per cent of GNP.[39] In comparison, in Germany, where only 0.7 per cent of GNP was spent on oral health during 2012.[40] However, this 0.7% cost an estimated €22.7 (£16) billion.

EPIDEMIOLOGY

During 2005–2007, there was a national programme 'Assessment and Promotion of the Oral Health of the Hellenic Population'. The study was conducted under the auspices of the Hellenic Dental Association, in collaboration with the dental schools of Athens and Thessaloniki. This pathfinder study's sample was 6,048 individuals aged 5, 12, 15, 35–44, and 65–74 years from urban and rural areas, using a stratified cluster sampling methodology. The results according to age groups examined were as follows:

Severe, periodontal conditions were frequent among 65–74-year-old Greeks. Regular tooth brushing (≥ twice a day) was claimed by only 25.3% of the respondents. Most reported that they brushed their teeth once a day (33.0%).[41]

Complete edentulousness affected 0.3% of individuals aged 35 to 44 years and 31.5% of those aged 65 to 74 years. Most middle-aged adults (92.1%) had at least 21 natural teeth, while the corresponding percentage for the senior citizens was 23.1%. The mean number of missing teeth was 5.2 in middle-aged adults and 21.6 in senior citizens.

Inequalities in oral health existed and were influenced by gender and education.[42] Among the 35–44-year-olds, men and those having a higher educational attainment had significantly lower DMFS values than women (OR = 1.679, CI: 1.243–2.267) and greater than 12 years of education (OR = 0.321, CI: 0.193-0.535 respectively). Educational level was the only predictor of DMFS in senior citizens (OR = 0.279, CI: 0.079-0.992). The mean RDFS score of the middle-aged adults significantly correlated with education (OR = 0.346, CI: 0.180-0.664).[43]

The first national oral health pathfinder survey of children in Greece was in 1987. At that time the mean DMFT index was 4.3 for 12-year-olds.[45] Dental caries experience in 5, 12 and 15-year-old children in Greece varies considerably between the different districts. In 2011, the mean dmft/DMFT value for each age group was 1.77, 2.05, and 3.19, respectively. Moreover, 64%, 37%, and 29% of them, had no obvious dentinal caries.[44] These results confirmed the reduction in dental caries during the last 15 years.

The most recent data for dental caries level among 12-years-olds in Greece is at the relatively low level of DMFT, from 1.2 to 2.6. Recent epidemiological studies in Greece which have examined children found that decayed, missing and filled deciduous teeth (dmft) and unmet restorative treatment needs (UTN) of 6-year-olds were 1.54 and

84.6% respectively, and the DMFT and UTN at 12-year-olds were 1.35 and 71.8% respectively.[46] The prevalence of dental caries in 5-year-old, preschool children in Athens, was 16.5%.[47]

Furthermore, preliminary results from a cross-sectional study exploring the social gradient in oral health of 65-year-olds and over revealed a social gradient in both clinical and subjective measures of health. Significant statistical differences were present for life satisfaction, loneliness, and missing teeth according to personal income (p <0, 05). DMFT was associated with the frequency of brushing teeth or dentures, perceived general health, perceived oral health and perceived social status. Education, income, and cognitive function partly explained the gradient in this population.[48]

RECENT CHANGES, THE ECONOMIC RESSESSION, AND NGO'S

This section explains some of the strategies that have been employed in health and oral healthcare to ameliorate the effects of the recession and the role that non-governmental organisations (NGOs) have played.

As part of a plan to improve efficiency and cut costs, e-health systems, such as e-prescribing, electronic healthcare records and an electronic referral system were introduced in 2010. Preliminary results revealed that a cost reduction of 32% for diagnostic tests occurred between 2009 and 2010.[49]

Moreover, a significant contribution to healthcare and oral healthcare and prevention is now made by NGOs. The healthcare, including oral healthcare needs of the population are now greater than they were before 2009 and treatment costs more. NGOs provide healthcare services and medication free of charge. NGOs are funded by donations, sponsors, state sponsorship and European and International funds and support. Their free services include: primary healthcare, preventive medicine, mental healthcare, minor operations, dental examinations and dental treatment for children, migrants, uninsured, and other vulnerable groups, which are all provided in the NGO's clinics and centres.

In 2013, the Greek government, under the pressure from those with a social conscience and 1.3 million unemployed individuals, introduced a new measure called, the 'health voucher' but it took some time to implement. The health voucher provides access to primary health preventive examinations free of charge, in public health centres.[50,51]

'Medicine du Monde' (MdM), has one mobile dental clinic in Greece which is staffed, at different times, by one of 50 volunteer dentists and which offers dental examinations in schools in the very poor areas of Attica (Athens and its region) and the small islands. MdM also provides dental treatment for children in their two dental clinics, one in Athens, and the other in Perama. During the years 2013–14, MdM, the Ministry of Health (General Secretary for Public Health) and Municipality of Athens carried the project 'Adamantiada' for the elementary schools of Athens, providing dental examinations and topical fluoridation for 7,500 school children. According to treatment needs, they referred children for almost 7,000 dental and 1,500 orthodontic treatments to the dental clinic in the central offices in Athens. The programme continues and is partly funded by the European Social Fund.

Another MdM initiative is the 'Smile' project. This project provides treatment free of charge for very poor families.[52,53]

DISCUSSION

As has been described, in spite of the fact that there are 13,737 dentists in Greece and 11,902 private dental practices (offices), there are increasing inequalities and unmet needs in the oral health of the Greek population. The provision of oral health in Greece is a complex combination of public and private services, unevenly distributed geographically. There is an increased demand at the public dental health clinics in hospitals, health units and the clinics of the dental schools, where payments are very low. In general, it can be said that the majority of the population has no insurance for oral healthcare.

In Greece the national health system was founded in 1983. It struggled to keep within budget before the financial crisis. Since 2009, the increasing public debt, and hospitals' debt to suppliers, and understaffing for some medical and dental units have increased health inequalities more than ever. Some hospitals provide dental treatment for children, although these hospitals are not for children and do not have adequate staff or equipment. At one hospital the only days emergencies are accepted free of charge for children are Mondays and Thursdays and every second Sunday. This problem requires immediate solution. Those in most need are those from low-income groups.

There is no current plan from the Ministry of Health for oral health, and this is a real gap in public health. Some would argue that the government should finance and establish priorities and a policy targeting oral disease prevention, oral health promotion, effective treatment, and efficient oral services both in the private and public sector. However, in the current economic climate this will not happen. Others would argue that the large number of dentists rarely working with dental nurses, and absence of dental hygienists is a very inefficient way to deliver oral healthcare. Furthermore, without the support of Greek dentists, no plans, whether they originate from government or insurance companies, will succeed.

The Greek Dental Association's strategy and approach to oral disease prevention and health promotion is that it should aim to minimise inequalities, and the prevalence of oral disease in low-income populations. The current crisis emphasises the need to prevent chronic diseases and to integrate the prevention of oral diseases into any plans. One major step would be a list of recommendations, which included World Health Organisation (WHO) guidelines for sugar consumption. Thus, addressing the prevention of obesity and type 2 diabetes, as well as dental caries.[54,55]

One encouraging aspect is that in spite of the economic crisis, the most recent epidemiological studies have indicated that the prevalence of dental caries in children has declined and the number of caries-free subjects has increased. This trend follows the pattern seen in other developed countries. Improved children's oral health may be attributed to the overall lifestyle changes that lead to the adoption of better oral hygiene and nutrition habits, as well as to the effective use of fluorides; yet, oral health disparities still exist in children. Children who live in areas with lower incomes present a significantly greater risk of higher caries levels and poorer oral hygiene compared to those living in more affluent areas. Moreover, children with immigrant backgrounds have a higher likelihood to present poorer dental health compared to their Greek peers.[46]

Aiming for better health and oral health outcomes for the population should include the promotion of healthy lifestyles in reducing any risk factors and behaviours. The Greek policies in oral health, should be based on the integration of oral health into national and community health programmes, and the promotion of oral health as an effective dimension for the development of a policy for a more equal society and to overcome health disparities.

Recently, the European commissioner for Health and Food Safety, Dr Vytenis Andriukaitis, in his letter to EU Ministers of Health, stressed the need for health priorities addressing prevention, promotion, protection and preventable chronic diseases. In his letter, he made it clear that 'Europe needs efficient, effective and sustainable health systems able to meet the needs of their citizens for generations to come.'[56]

In January 2015, the newly elected Greek government started a programme to alleviate the humanitarian crisis in the country by giving uninsured and very poor people access to healthcare and medication free of charge. One of their actions is to ensure that value added tax (VAT) for medicines, including toothpaste, is maintained at present levels and not increased, in line with the general VAT increase that is taking place.

Data from the Ministry of Health, revealed that during the economic crisis, utilisation of public sector services during 2011 increased by 21.9% compared with 2010.[5]

Greece's public sector is not able to provide oral healthcare for all. Thus, as previously described, there are growing numbers of private foundations and NGOs active in the health and oral health sector. The challenge to provide oral healthcare for all the people in the country remains.

The need to reduce the number of students in the two dental schools in Greece for the next few years is fundamental. However, it must be highlighted that there should be an emphasis on enhancing education and ethical responsibilities for dental graduates focusing on public health sciences and community services. A programme that could provide education, training experience and temporary work in understaffed public health centres and hospitals for dental students and fresh graduates would be beneficial for both the public and dental students and new dentists. These public healthcare centres could include prisons, nursing homes, psychiatric hospitals, hospitals, institutions for persons with severely impaired cognitive functioning, and community health centres.[57]

CONCLUSIONS

The economic crisis has affected general health and oral health. People cannot afford to pay for healthcare and are exasperated. Unfortunately, oral health has always been largely funded by payment from patients direct to private dentists, and there has been a very low level of public funding for oral healthcare. The consequence has been that increasing numbers of Greeks cannot afford private oral healthcare and often cannot access public oral healthcare. As a result, oral health inequalities and disparities have increased.

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